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Central Bullitt County Traffic Master Plan

Report

City of

Shepherdsville, Kentucky

June 2026

STRAND ASSOCIATES®

Report for the

City of Shepherdsville, Kentucky

Central Bullitt County Traffic Master Plan

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OVERVIEW

The City of Shepherdsville (City), Kentucky, has experienced rapid population growth in recent years, driven largely by its proximity to the City of Louisville (Louisville) and the continued expansion of logistics and manufacturing centers along the Interstate 65 (I-65) corridor, which runs through the center of the City. As neighborhoods continue to grow, the City is transitioning from a small-town community into a more suburban environment. As such, the City is actively engaged in revitalizing its downtown area with new build and redevelopment projects. These projects, which include an aquatic center, skatepark, and amphitheater, are expected to attract additional businesses, residents, and visitors to the community.

The location of the City along the I-65 corridor has provided the opportunity for growth but also has a significant impact on traffic within the community. I-65 is a heavily traveled roadway that experiences incidents and crashes that impact its capacity and leads to significant traffic volumes going through the City as an alternate route. When these events occur, the City can be reduced to gridlock.

While the City's growth has brought economic benefits, it has also presented challenges, such as increased traffic congestion on major City routes. In an effort to address the rapid population growth, the City has initiated development of a long-range transportation planning study to begin the process of improving the vehicular and pedestrian networks throughout the City and greater Bullitt County (County) area. This study will identify priority sidewalk projects, assess the performance of potential new bypass routes for traffic traveling north-south through the County, and provide recommendations for roadway improvement projects at existing intersections and roadways to address the needs of the growing population.

A. Existing Pedestrian Network

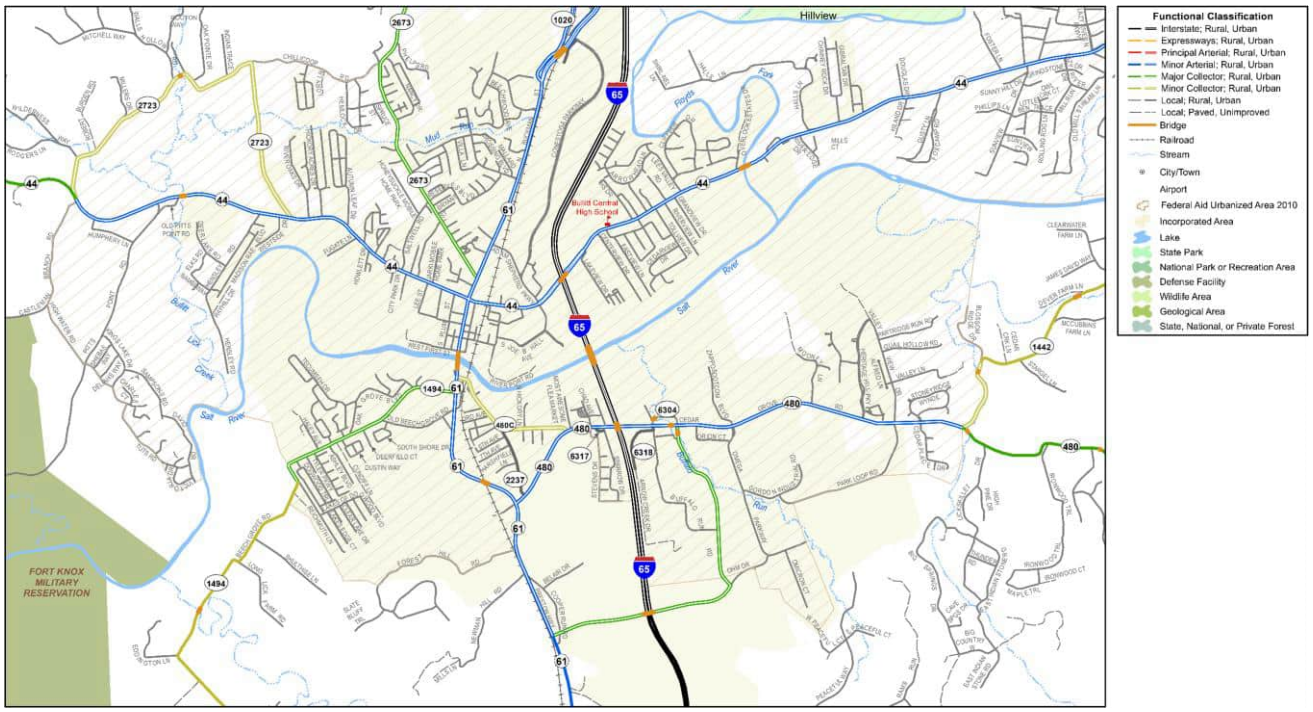
Though many City roads are accompanied by sidewalk on one or both sides of the road, the sidewalk network has many gaps that prohibit pedestrians from traveling continuously between neighborhoods, businesses, and public spaces. The City has completed several recent projects to reduce the network gaps, including adding additional sidewalks along Kentucky Route (KY-) 480 as part of the I-65 Double Crossover Diamond Interchange project and filling sidewalk gaps along Conestoga Parkway. Additionally, the developing Buckman Street Streetscape project demonstrates the City's desire to revitalize the downtown area and encourage non-vehicular travel; however, additional efforts are needed to accommodate the expected increase in pedestrian and bicyclist activity in and around the downtown area.

B. Existing Vehicular Network

The existing major roadway network of the City is supported by I-65, which serves as the City's primary regional transportation route. I-65 runs north-south through the City and provides direct access to downtown Louisville to the north and the cities of Bowling Green and Nashville, Tennessee to the south, making it critical for commuter traffic and freight movement. Key interchanges within the City include Exit 117 onto KY-44 and Exit 112 onto KY-245.

The main east-west arterial through the City is KY-44, also known locally as Fourth Street and Shepherdsville Road. KY-44 is classified as an urban minor arterial roadway and functions as the City's main route between I-65, the downtown area, the City of Mount Washington (Mt. Washington) to the east, and neighborhoods in the western County. KY-61, also known as Buckman Street in the downtown area

and Preston Highway elsewhere, is another urban minor arterial roadway and serves as the principal north-south non-interstate route. Additional supporting routes include KY-480 (Cedar Grove Road) near the industrial park, which connects the City to the rural eastern County, and KY-245 (Clermont Road) near the southern edge of the City, which links I-65 to the cities of Clermont, Lebanon Junction, and the Bernheim Forest area. The functional classifications for the roadways in the City's area are shown in Figure 1.



Source: Kentucky Transportation Cabinet Functional Classification Resources

Figure 1 Functional Classification of Major Roadways in the City

1. Existing Traffic Congestion Issues

The City experiences notable traffic congestion largely because of its geographic position along the Salt River and the two routes available to cross it: I-65 and KY-61. When incidents occur on I-65, many drivers reroute to KY-61 (as the only other route available to cross the Salt River) often causing gridlock conditions throughout the downtown area. Additionally, recurring congestion during peak hours often influences many non-local drivers to use KY-61 instead of I-65 when traveling through the City. This increase in traffic highlights the need for additional crossings over the Salt River to provide options that potentially avoid the downtown area and improve roadway network connectivity.

Additionally, many residents of the City express ongoing frustration with the recurring traffic along KY-44, which has become one of the most congested routes. KY-44 serves as the City's primary east-west corridor and a key connector to I-65, drawing large volumes of commuter traffic travelling to and from Louisville. In addition to the heavy traffic volumes, the closely spaced commercial driveways and frequent turning movements along KY-44 further disrupt traffic flow, leading to stop-and-go conditions.

ANALYSIS AND RESULTS–PEDESTRIAN NETWORK

A. Pedestrian Network Model

A map of the existing sidewalk network was developed to evaluate the need for proposed pedestrian improvement projects. Kentucky Transportation Cabinet's (KYTC) Bicycle and Pedestrian Facility Inventory Map and aerial imagery from Google Earth were used to develop the existing sidewalk network map. In-person site visits supplemented the preliminary mapping and addressed recently completed updates to the sidewalk network. The final sidewalk network mapping distinguishes between corridors with sidewalks on one side and those with sidewalks on both sides to better reflect existing conditions. It also includes new and future developments, such as the park and the aquatic center, to highlight areas where pedestrian activity is expected to increase.

B. Proposed Sidewalk Projects

Once the existing sidewalk mapping was finalized, gaps in the network were identified by evaluating the connectivity between key pedestrian origins and destinations. These areas of consideration included neighborhoods, schools, restaurants, industrial parks, and recreational areas. On April 1, 2026, the project team met with representatives from the City to review these findings and finalize a list of nine priority sidewalk projects. These projects reflect community needs and planning objectives and are presented in the following in an approximate rank of importance:

1. Joe B. Hall Avenue–Provides a connection from the aquatic center to the railroad bridge and downtown area.
2. Bullitt Lick Middle School Road–Provides a connection from the Mallard Lake subdivision to the downtown area and the new park entrance on KY-44.
3. South Plum Street from KY-44 to West Joe B. Hall Avenue–Provides a connection from KY-44 to the park and Joe B. Hall Avenue.
4. West 3rd Street from Lee Street to KY-61–Provides a connection from the park to KY-61 and Joe B. Hall Avenue.
5. KY-44 between Railroad and Adam Shepherd Parkway–Fills in the sidewalk gap and provides a connection between the downtown area and east side of the City.
6. KY-61 Salt River Bridge–Improves sidewalk infrastructure along the bridge.
7. KY-61 Salt River Bridge to KY-480C and Beech Grove Road–Provides a connection from the neighborhoods south of the Salt River to the downtown area.
8. Cedar Grove Road (two segments)–Fills in the gaps along KY-480 to connect to KY-61 and the downtown area.
9. Salt Well Road from West Blue Lick Road to KY-44–Provides additional connections to the park.

Note that this list includes a proposed sidewalk along KY-44 between the railroad and Adam Shepherds Parkway (No. 5). This segment is included to reflect the City's desire to add a sidewalk as a part of the KYTC KY-44 widening project (KYTC Item No. 5-150.02).

The proposed sidewalk connections are shown in Figure 2. See Appendix A for additional pedestrian network figures.

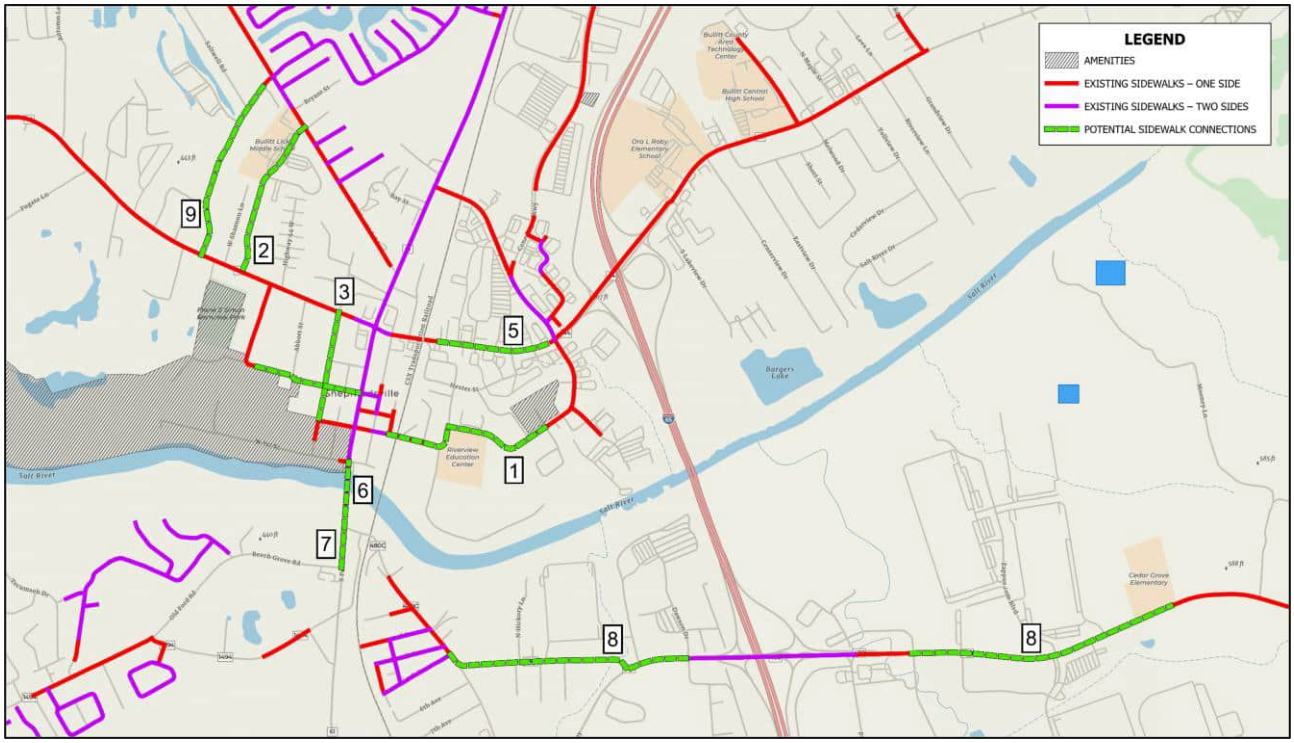


Figure 2 Proposed Sidewalk Connections

C. Cost Estimate Analysis

1. Opinion of Probable Construction Costs (OPCC)

Estimated construction costs were determined based on the approximate length of each proposed sidewalk segment with an assumed 5-foot width. Concrete unit prices were based on KYTC's April 2026 base price data; it was then assumed that the cost of the sidewalk represented 20 percent of the total cost for rural areas and 16.5 percent of the total cost for urban areas. Rural areas were characterized by minimal drainage costs, minimal utility relocations, and less alignment restrictions. A 30 percent contingency was applied to the cost estimates to account for uncertainty at the planning level.

A planning-level OPCC was also conducted for widening the pedestrian sidewalk along the KY-61 bridge. Based on an analysis of existing conditions, it was determined that the current bridge configuration does not easily accommodate sidewalk widening. The existing railings are substandard for pedestrian routes, and the deck drains and 30-foot curb-to-curb width would prohibit extension of the existing curb onto the bridge deck to create a widened sidewalk. Constructing an adequate pedestrian sidewalk would likely require the addition of a new girder line to widen the structure. This approach would also require abutment and pier foundation extension to support the girder line, bridge deck extension, new exterior pedestrian railing installation, and potential installation of a

concrete barrier to separate vehicular and pedestrian traffic. With these additional components considered, the estimated construction cost was determined using a unit cost of $250 per square foot of proposed girder line.

The nine sidewalk projects are listed in order of estimated OPCC in Table 1 below.

Sidewalk Project	Construction Cost
KY-44 between Railroad and Adam Shepherd Parkway	$ 0
KY-61 Salt River Bridge to KY-480C and Beech Grove Road	$ 336,759
West 3rd Street from Lee Street to KY-61	$ 905,995
South Plum Street from KY-44 to West Joe B. Hall Avenue	$ 915,625
Bullitt Lick Middle School Road	$ 984,863
Salt Well Road from West Blue Lick Road to KY-44	$ 1,069,427
Joe B. Hall Avenue	$ 1,303,267
KY-61 Salt River Bridge	$ 1,800,000
Cedar Grove Road (two segments)	$ 2,172,310

Table 1 Pedestrian Planning-Level OPCC

Additional details regarding the pedestrian network OPCCs are included in Appendix B.

2. Right-of-Way (ROW) Acquisition Costs

Estimated ROW acquisition costs were determined based on land values of comparable plots, as recorded in the County Property Valuation Administrator (PVA) records. An average width of 10 feet was used to determine fee simple real estate and easement costs. Easement costs were considered to be 20 percent of the acquisition costs. The total cost included a $10,000 acquisition service per parcel and a 30 percent contingency. The nine sidewalk projects in order of estimated ROW acquisition cost are listed in Table 2.

Sidewalk Project	ROW Acquisition Cost
KY-44 between Railroad and Adam Shepherd Parkway	$ 0
Bullitt Lick Middle School Road	$ 0
KY-61 Salt River Bridge	$ 0
KY-61 Salt River Bridge to KY-480C and Beech Grove Road	$ 92,975
West 3rd Street from Lee Street to KY-61	$ 180,489
Joe B. Hall Avenue	$ 226,122
South Plum Street from KY-44 to West Joe B. Hall Avenue	$ 260,465
Salt Well Road from West Blue Lick Road to KY-44	$ 409,430
Cedar Grove Road (two segments)	$ 730,622

Table 2 Pedestrian Planning-Level ROW Acquisition Costs

Additional details regarding the sidewalk ROW cost estimate are included in Appendix B.

ANALYSIS AND RESULTS–VEHICULAR NETWORK

The existing roadway network was evaluated for current peak hour weekday level of service (LOS) during normal conditions. This information was considered in conjunction with the overall daily traffic that was provided for the bypass route evaluation to determine whether there were any existing intersection modifications that should be considered in the near term. The primary intersection operations were also considered with the three primary bypass route alternatives to see the impact on the existing intersections from the traffic volume redistribution.

The traffic analysis was completed using Synchro-12 outputting Highway Capacity Manual (HCM) 7th Edition reports.

A. Bypass Route Alternatives

The project team, in coordination with representatives from the City, developed six alternative bypass route alignments in and around the City. These alternatives were considered to address existing and anticipated traffic congestion issues, with an emphasis on reducing congestion in the downtown area and along KY-44. Descriptions for each bypass alternative are provided in the following list:

Bypass Route 1–Runs from KY-480 to Bells Mill Road and KY-44.
Bypass Route 2–Runs from KY-480 to KY-61 south of Bells Mill Road.
Bypass Route 3–Runs from KY-480 to Joe B. Hall Avenue between KY-61 and I-65.
Bypass Route 4–Runs from KY-480 to KY-245 east of I-65.
Bypass Route 5–Combines Bypass Routes 2 and 4.
Bypass Route 6–Runs from KY-1020 to KY-61 on the west side of the City.

Figure 3 shows the general bypass routes around the City. See Appendix C for full bypass route figures.

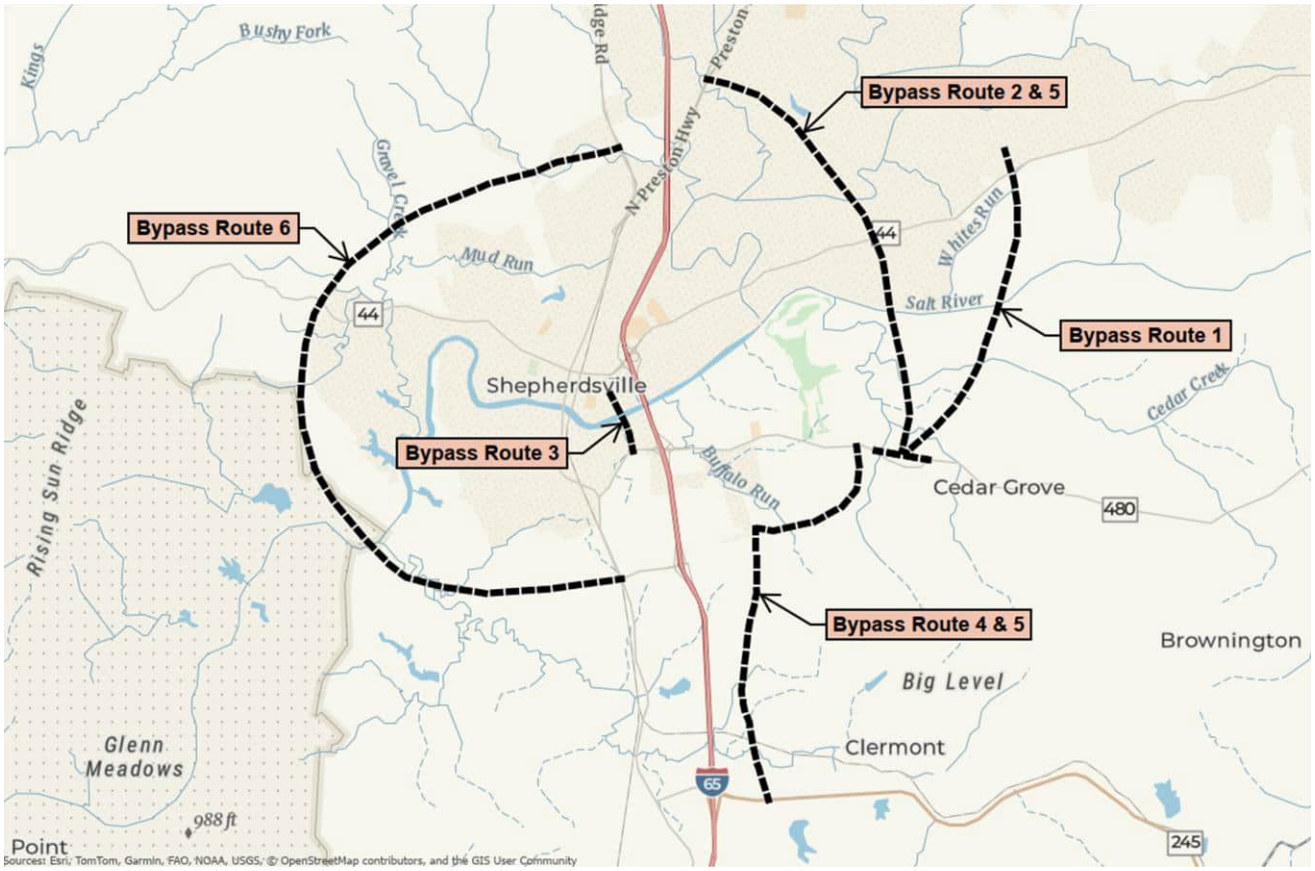


Figure 3 Preliminary Bypass Routes

B. Existing Vehicular Network Performance

1. Data Collection

Existing traffic conditions throughout the City were analyzed using recent turning movement counts (TMC) provided by the Kentuckiana Regional Planning and Development Agency (KIPDA) through StreetLight Data (StreetLight). StreetLight TMCs are largely based on Global Positioning System (GPS) and Connected Vehicle travel data rather than manual collection, though the data still provides the number of vehicles approaching and exiting each leg of an intersection. Additionally, StreetLight does not provide data for individual days, but rather as averages for certain days of the week. For this analysis, the traffic volume data for weekdays (Monday through Thursday) between January 1 and December 31, 2025, was evaluated. Table 3 summarizes the morning (AM) and evening (PM) peak-hour times, as well as their representative peak-hour factors (PHF), for the 25 analyzed intersections.

Intersection	AM Peak Hour	AM PHF	PM Peak Hour	PM PHF
KY-61 and Bells Mill Road	7:00 AM to 8:00 AM	0.88	4:30 PM to 5:30 PM	0.93
Bells Mill Road and Lodie Drive	7:00 AM to 8:00 AM	0.85	4:30 PM to 5:30 PM	0.92
KY-61 and Conestoga Parkway	6:45 AM to 7:45 AM	0.88	4:45 PM to 5:45 PM	0.94
KY-61 and Adam Shepherd Parkway	7:00 AM to 8:00 AM	0.91	4:45 PM to 5:45 PM	0.96
KY-61 and KY-44	6:30 AM to 7:30 AM	0.86	4:45 PM to 5:45 PM	0.98
KY-61 and 3rd Street	7:00 AM to 8:00 AM	0.87	4:45 PM to 5:45 PM	0.97
KY-61 and 2nd Street	6:30 AM to 7:30 AM	0.93	4:45 PM to 5:45 PM	0.98
KY-61 and KY-480C	6:30 AM to 7:30 AM	0.94	4:45 PM to 5:45 PM	0.99
KY-61 and KY-480	7:00 AM to 8:00 AM	0.89	4:30 PM to 5:30 PM	0.95
KY-61 and Ohm Drive	6:30 AM to 7:30 AM	0.75	4:30 PM to 5:30 PM	0.95
KY-44 and Salt Well Road	6:30 AM to 7:30 AM	0.84	4:45 PM to 5:45 PM	0.98
KY-44 and Lee Street	7:15 AM to 8:15 AM	0.50	4:00 PM to 5:00 PM	0.54
KY-44 and Adam Shepherd Parkway	6:30 AM to 7:30 AM	0.90	4:30 PM to 5:30 PM	0.98
KY-44 and I-65 South Ramps	6:30 AM to 7:30 AM	0.94	4:15 PM to 5:15 PM	0.98
KY-44 and I-65 North Ramps	6:30 AM to 7:30 AM	0.87	5:00 PM to 6:00 PM	0.98
KY-44 and Bells Mill Road	6:45 AM to 7:45 AM	0.93	5:00 PM to 6:00 PM	0.96
Bells Mill Road and Cammi Drive	6:45 AM to 7:45 AM	0.94	5:00 PM to 6:00 PM	0.93
KY-480C and Old Preston Highway	7:15 AM to 8:15 AM	0.81	4:30 PM to 5:30 PM	0.94
KY-480 and Old Preston Highway	6:15 AM to 7:15 AM	0.91	4:30 PM to 5:30 PM	0.94
KY-480C and KY-480	6:15 AM to 7:15 AM	0.90	4:30 PM to 5:30 PM	0.93
KY-480 and Omega Parkway	5:45 AM to 6:45 AM	0.78	4:30 PM to 5:30 PM	0.99
KY-480 and Ridge Road	6:30 AM to 7:30 AM	0.92	4:30 PM to 5:30 PM	0.94
Clermont Road and Chapeze Lane	7:00 AM to 8:00 AM	0.95	4:15 PM to 5:15 PM	0.99
W. Blue Lick Road and Salt Well Road	6:45 AM to 7:45 AM	0.88	4:45 PM to 5:45 PM	0.97
Adam Shepherd Parkway and Conestoga Parkway	6:45 AM to 7:45 AM	0.86	4:30 PM to 5:30 PM	0.96

Table 3 Intersection AM and PM Peak Hours and PHF

The HCM indicates that a PHF less than 0.88 for a rural corridor and 0.92 for an urban corridor is indicative of a recognizable increase in volumes during a 15-minute period in the peak hour. In general, the PHFs exhibited during the morning commute indicate there is a noticeable peak in traffic during the peak 15-minute period when compared to the evening peak hour.

Signal timing and phasing at signalized intersections were optimized using Synchro-12.

2. Traffic Redistribution

The effect of each bypass route alternative on the existing vehicular network was evaluated by determining the percent difference in existing and building traffic volumes at the 25 analyzed intersections. These percent difference values were determined from the Travel Demand

Models (TDM) provided by KIPDA and were used to adjust the turning movement counts at each approach (additional details regarding KIPDA TDMs are discussed later in Section C, "*Forecasted Vehicular Network Performance*"). Percent differences between 95 and 105 percent were considered negligible and disregarded. Traffic volumes were rounded up to the nearest integer.

Additionally, proposed intersections along each bypass route alternative were analyzed. The TDMs did not record TMCs for any of the existing or proposed intersections; for the proposed bypass route intersections, TMCs were calculated using the annual average daily traffic (AADT) traffic volumes recorded in the TDMs. To calculate the peak-hour approach volumes, it was assumed that the daily receiving traffic volume for each approach was 50 percent of the AADT, and that the K-factor for the approaches was a conservative value of 0.10. Traffic was then balanced proportionally within each intersection. Turning movement counts for proposed bypass route intersections are included in Appendix D.

A PHF of 0.90 was assumed for the proposed intersection movements. Additionally, a conservative truck percentage value of 9 percent was assumed for the movements and mimicked the combined percent-single and percent-combo value of the KY-61 Salt River crossing, as recorded in the KYTC Traffic Count Reporting System. The proposed intersections models were signalized and had a cycle length of 100 seconds. Cycle splits were optimized in Synchro-12.

3. Intersection Operations and Results

Table 4 shows the traffic modeling output for the existing study intersections.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Operations	LOS E or F Movements	Overall Intersection Operations	LOS E or F Movements
KY-61 and Bells Mill Road (U)	LOS C		LOS D	
Bells Mill Road and Lodie Drive (U)	LOS B		LOS B	
KY-61 and Conestoga Parkway (U)	LOS C		**LOS E**	WBL
KY-61 and Adam Shepherd Parkway (S)	LOS B		LOS B	
KY-61 and KY-44 (S)	LOS D	EBL, WBL, NBL, SBL	LOS D	EBL, WBL, NBL
KY-61 and 3rd Street (U)	LOS B		LOS C	
KY-61 and 2nd Street (U)	LOS C		LOS C	
KY-61 and KY-480c (U)	LOS B		LOS B	
KY-61 and KY-480 (U)	LOS B		LOS C	
KY-61 and Ohm Drive (U)	LOS C		LOS B	
KY-44 and Salt Well Road (U)	LOS C		LOS B	
KY-44 and Lee Street (U)	**LOS E**	NBL/R	LOS B	
KY-44 and Adam Shepherd Parkway (S)	LOS D	EBL, SBL	LOS D	EBL, WBL
KY-44 and I-65 Southbound (S)	LOS C		LOS C	SBL
KY-44 and I-65 Northbound Off-Ramp (S)	LOS C		LOS C	
KY-44 and Bells Mill Road (S)	LOS B		LOS B	
Bells Mill Road and Cammi Drive (U)	LOS B		LOS B	
KY-480C and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and KY-480C (U)	LOS B		LOS B	
KY-480 and Omega Parkway (S)	LOS C		LOS C	
KY-480 and Ridge Road (U)	LOS B		LOS B	
Clermont Road and Chapeze Lane (U)	LOS C		LOS C	
Salt Well Road and West Blue Lick Road (U)	LOS B		LOS B	
Adam Shepherd Parkway and Conestoga Parkway (S)	LOS C		LOS C	

Note: U=Unsignalized S=Signalized

Table 4 Existing Intersection Operations

Table 5 shows the traffic model output for the study area with Bypass Route 1 implemented.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Operations	LOS E or F Movements	Overall Intersection Operations	LOS E or F Movements
KY-61 and Bells Mill Road (U)	LOS C		LOS C	
Bells Mill Road and Lodie Drive (U)	LOS B		LOS B	
KY-61 and Conestoga Parkway (U)	LOS C		LOS D	
KY-61 and Adam Shepherd Parkway (S)	LOS B		LOS B	
KY-61 and KY-44 (S)	LOS D	EBL, WBL, NBL, SBL	LOS D	EBL, WBL, NBL
KY-61 and 3rd Street (U)	LOS B		LOS C	
KY-61 and 2nd Street (S)	LOS A		LOS B	
KY-61 and KY-480c (U)	LOS B		LOS B	
KY-61 and KY-480 (U)	LOS B		LOS C	
KY-61 and Ohm Drive (U)	LOS C		LOS B	
KY-44 and Salt Well Road (U)	LOS C		LOS B	
KY-44 and Lee Street (U)	**LOS E**	NBL/R	LOS B	
KY-44 and Adam Shepherd Parkway (S)	LOS D	EBL, NBR	LOS D	EBL, WBL
KY-44 and I-65 Southbound (S)	LOS D		LOS C	SBL
KY-44 and I-65 Northbound Off-Ramp (S)	LOS C		LOS C	
KY-44 and Bells Mill Road (S)	LOS B		LOS B	
Bells Mill Road and Cammi Drive (U)	LOS B		LOS C	
KY-480c and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and KY-480C (U)	LOS A		LOS B	
KY-480 and Omega Parkway (S)	LOS C		LOS C	NBL
KY-480 and Ridge Road (U)	LOS B		LOS B	
Clermont Road and Chapeze Lane (U)	LOS C		LOS C	
Salt Well Road and West Blue Lick Road (U)	LOS B		LOS B	
Adam Shepherd Parkway and Conestoga Parkway (S)	LOS C		LOS C	
Bypass Route 1 and Bells Mill Road (S)	LOS C	WBR	LOS C	WBR
Bypass Route 1 and KY-44 (S)	LOS D	NBR, SBR	LOS D	NBR, SBR
Bypass Route 1 and Ridge Road (S)	LOS B		LOS B	
Bypass Route 1 and KY-480 (S)	LOS C		LOS C	

Table 5 Future Bypass Route 1 Intersection Operations

Table 6 shows the traffic model output for the study area with Bypass Route 2 implemented.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Operations	LOS E or F Movements	Overall Intersection Operations	LOS E or F Movements
KY-61 and Bells Mill Road (U)	LOS C		**LOS E**	WBL
Bells Mill Road and Lodie Drive (U)	LOS B		LOS B	
KY-61 and Conestoga Parkway (U)	LOS C		LOS D	
KY-61 and Adam Shepherd Parkway (S)	LOS B		LOS B	
KY-61 and KY-44 (S)	LOS D	EBL, WBL, NBL, SBL	LOS D	EBL, WBL, NBL
KY-61 and 3rd Street (U)	LOS B		LOS C	
KY-61 and 2nd Street (S)	LOS A		LOS B	
KY-61 and KY-480c (U)	LOS B		LOS B	
KY-61 and KY-480 (U)	LOS B		LOS C	
KY-61 and Ohm Drive (U)	LOS C		LOS B	
KY-44 and Salt Well Road (U)	LOS C		LOS B	
KY-44 and Lee Street (U)	**LOS E**	NBL/R	LOS B	
KY-44 and Adam Shepherd Parkway (S)	LOS D	EBL	LOS D	EBL, WBL
KY-44 and I-65 Southbound (S)	LOS C		LOS C	SBL
KY-44 and I-65 Northbound Off-Ramp (S)	LOS C		LOS C	
KY-44 and Bells Mill Road (S)	LOS B		LOS B	
Bells Mill Road and Cammi Drive (U)	LOS B		LOS B	
KY-480C and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and KY-480C (U)	LOS B		LOS B	
KY-480 and Omega Parkway (S)	LOS C		LOS C	
KY-480 and Ridge Road (U)	LOS A		LOS A	
Clermont Road and Chapeze Lane (U)	LOS C		LOS C	
Salt Well Road and West Blue Lick Road (U)	LOS B		LOS B	
Adam Shepherd Parkway and Conestoga Parkway (S)	LOS C		LOS C	
Bypass Route 2 and KY-61 (S)	LOS D	WBL, SBL	LOS D	WBL, SBL
Bypass Route 2 and KY-44 (S)	LOS C		LOS C	
Bypass Route 2 and Ridge Road (S)	LOS A		LOS A	
Bypass Route 2 and KY-480 (S)	LOS B		LOS B	

Table 6 Future Bypass Route 2 Intersection Operations

Table 7 shows the traffic model output for the study area with Bypass Route 3 implemented.

Location	Intersection Operations			
	AM Peak Hour		PM Peak Hour	
	Overall Intersection Operations	LOS E or F Movements	Overall Intersection Operations	LOS E or F Movements
KY-61 and Bells Mill Road (U)	LOS C		LOS D	
Bells Mill Road and Lodie Drive (U)	LOS B		LOS B	
KY-61 and Conestoga Parkway (U)	LOS D		**LOS E**	WBL
KY-61 and Adam Shepherd Parkway (S)	LOS B		LOS B	
KY-61 and KY-44 (S)	LOS D	EBL, WBL, NBL, SBL	LOS D	EBL, WBL, NBL
KY-61 and 3rd Street (U)	LOS B		LOS C	
KY-61 and 2nd Street (S)	LOS A		LOS B	
KY-61 and KY-480c (U)	LOS B		LOS B	
KY-61 and KY-480 (U)	LOS B		LOS C	
KY-61 and Ohm Drive (U)	LOS C		LOS C	
KY-44 and Salt Well Road (U)	LOS C		LOS B	
KY-44 and Lee Street (U)	**LOS E**	NBL/R	LOS B	
KY-44 and Adam Shepherd Parkway (S)	LOS D	EBL, NBR, SBL	LOS D	EBL, WBL
KY-44 and I-65 Southbound (S)	LOS C		LOS C	SBL
KY-44 and I-65 Northbound Off-Ramp (S)	LOS C		LOS C	
KY-44 and Bells Mill Road (S)	LOS B		LOS B	
Bells Mill Road and Cammi Drive (U)	LOS B		LOS B	
KY-480C and Old Preston Highway (U)	LOS A		LOS A	
KY-480 and Old Preston Highway (U)	LOS A		LOS B	
KY-480 and KY-480C (U)	LOS B		LOS B	
KY-480 and Omega Parkway (S)	LOS C		LOS C	
KY-480 and Ridge Road (U)	LOS B		LOS B	
Clermont Road and Chapeze Lane (U)	LOS C		LOS C	
Salt Well Road and West Blue Lick Road (U)	LOS B		LOS B	
Adam Shepherd Parkway and Conestoga Parkway (S)	LOS C		LOS C	
Bypass Route 3 and Joe B. Hall Avenue (S)	LOS B		LOS B	
Bypass Route 3 and KY-480 (S)	LOS B		LOS B	

Table 7 Future Bypass Route 3 Intersection Operations

The existing traffic modeling indicates that there is persistent congestion during the peak hours along KY-44 from KY-61 through I-65. The congestion is caused by a combination of the traffic volumes and the traffic signal timings required due to the split phasing of several approaches. Additionally, higher volume left turns onto state highways could see increased delays.

The three bypass alternatives do cause some reductions and shifts in traffic along KY-61 and KY-44 during the regular weekday peak hours. However, reductions in traffic volumes are not enough to eliminate the longer delays on the signalized intersection movements. The traffic signal operations will require revisions to the timings and potentially some geometric modifications to eliminate the split phased operations to allow for improved operations.

The bypass intersections generally require single left- and right-turn bays to be able to accommodate the anticipated increases in traffic. Modeling indicated that operations at the bypass intersections are generally LOS D or better. There are still some individual movements operating at LOS E; as the alternatives are further developed, there can be some additional traffic signal timing modifications that can address those as traffic volumes are refined.

3. Recommendations for No-Build Roadway Modifications to Existing Intersections

There are several intersections that could benefit from adjustments in the No-Build scenario.

The KY-61 and KY-44 intersection shows overall operations at LOS D, but there are several movements at LOS E during the peak hours. The City should discuss with KYTC whether there are traffic signal timing adjustments that could be considered. When a project occurs near the intersection, the addition of right-turn bays and associated traffic signal overlap phases could also improve performance at the intersection.

The KY-44 and Adam Shepherd Parkway intersection also shows overall operations at LOS D with several LOS E movements. The northbound (NB) and southbound (SB) legs of the intersection are split phased, which reduces the overall efficiency of the intersection. If the geometry can be revised to eliminate the split phase operation, the intersection may be able to operate with fewer or no movements at LOS E. The City should discuss this intersection with KYTC for signal timing adjustments or potential geometric changes when a project is in the area.

The KY-61 and Conestoga Parkway intersection should be evaluated for potential signalization. The modeling results indicate that left-turn movements from Conestoga Parkway are difficult during high-volume periods on KY-61.

C. Forecasted Vehicular Network Performance

1. Travel Demand Modeling

The KIPDA TDM was used to forecast and evaluate traffic conditions across the city for the horizon year of 2050 with each proposed bypass alternative in place. A No-Build scenario was also evaluated to use as a baseline for comparison. The TDM analysis was limited to weekdays during months when school is in session (January to April and August to December). The six bypass route alternatives were modeled with one lane in each direction.

Once the TDMs for the seven scenarios were received, daily traffic volumes were compiled for key roadway segments throughout the City and surrounding areas. Color-coded map figures for the daily traffic volumes, as well as the percent difference from No-Build, were created with this data using

ArcGIS Pro. Figures 4 through 9 show the overall traffic volumes for the roadway segments with the various bypass alternatives in place. See Appendix D for the bypass traffic volume and comparison figures.

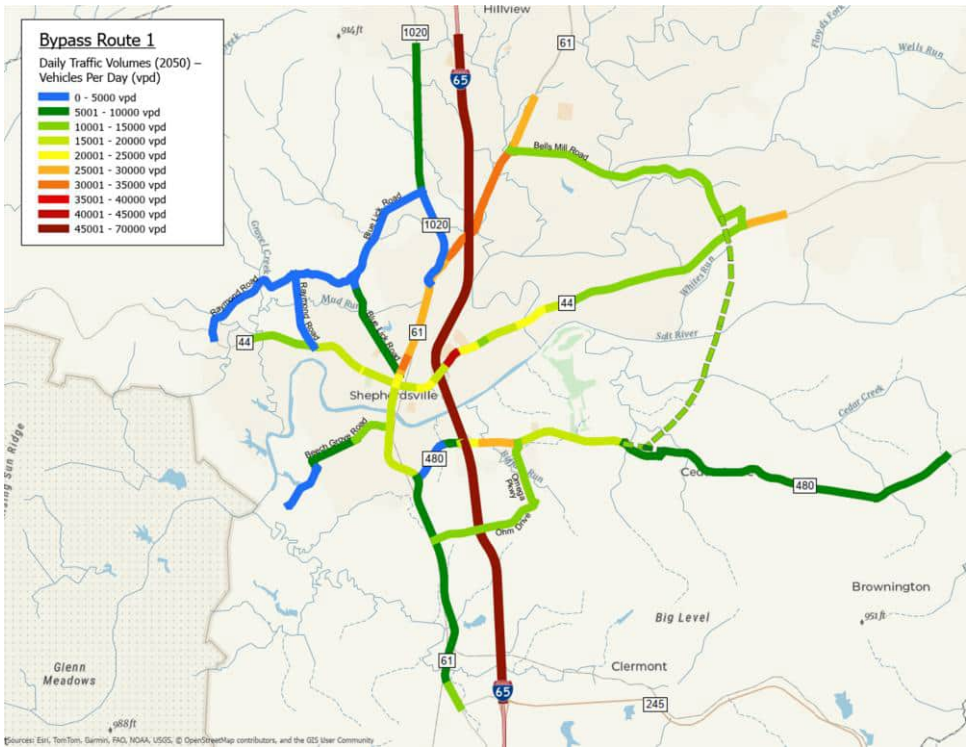


Figure 4 Bypass Route 1 Daily Traffic Volumes

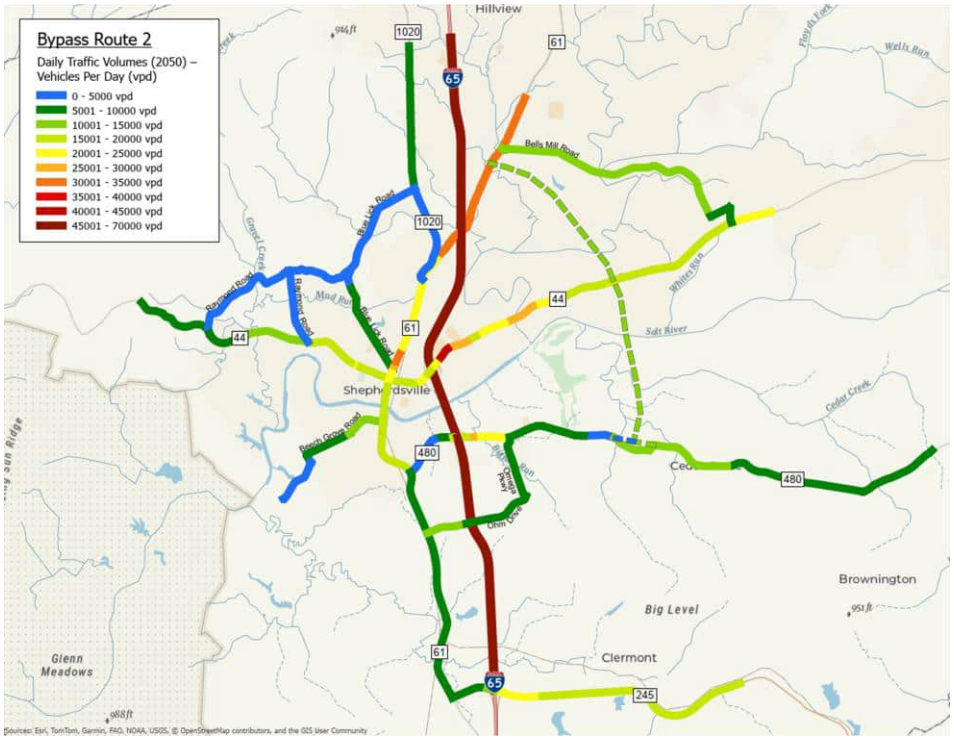


Figure 5 Bypass Route 2 Daily Traffic Volumes

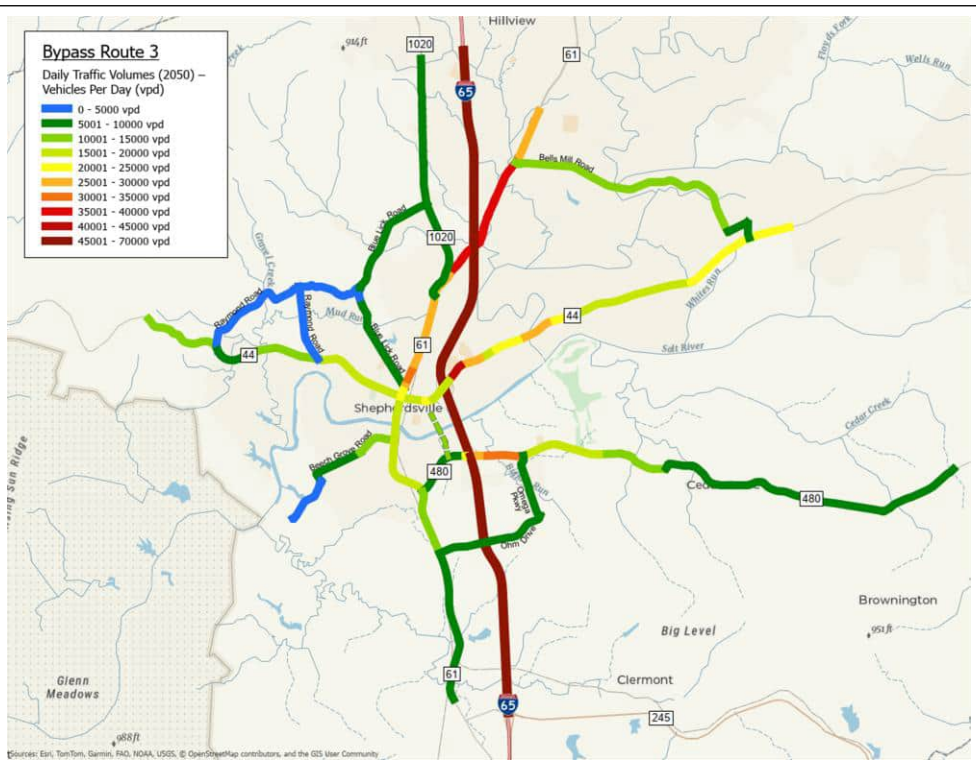


Figure 6 Bypass Route 3 Daily Traffic Volumes

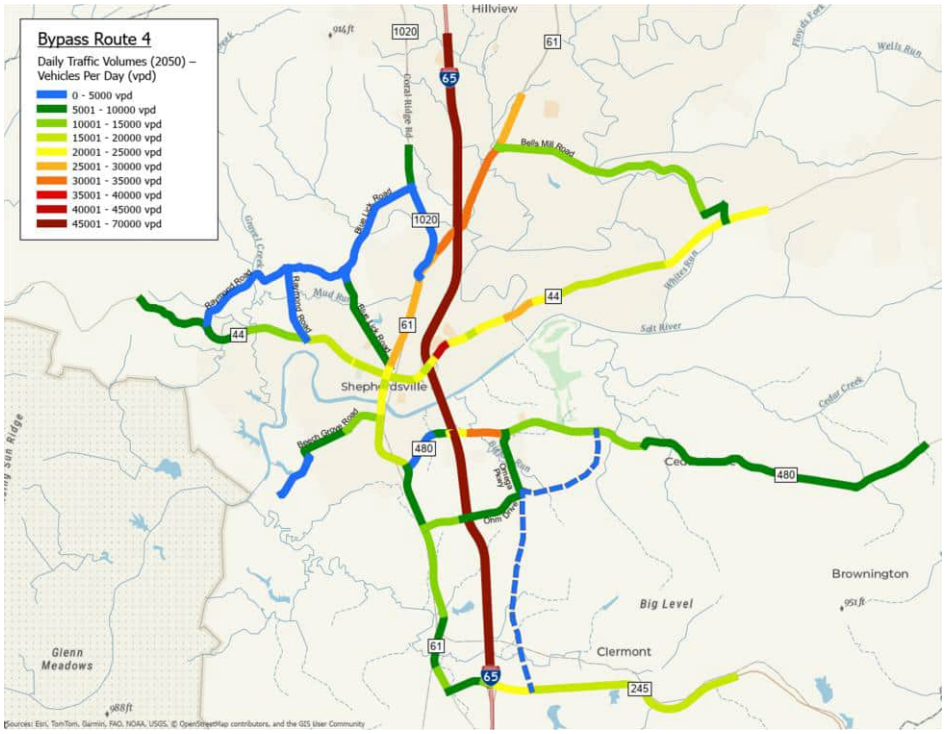


Figure 7 Bypass Route 4 Daily Traffic Volumes

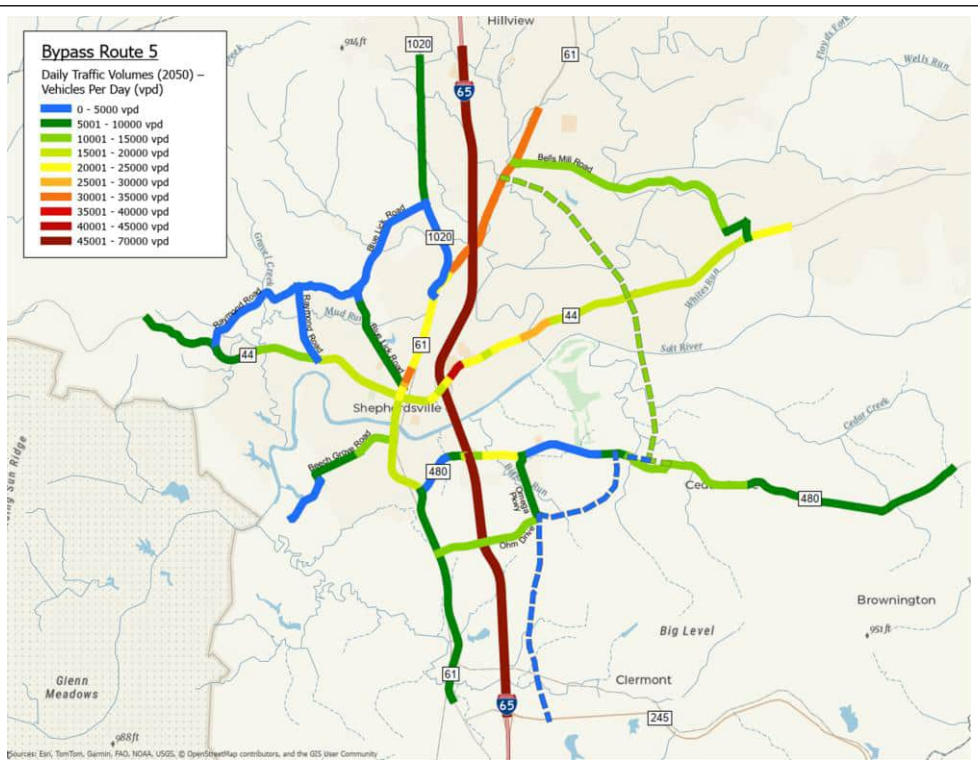


Figure 8 Bypass Route 5 Daily Traffic Volumes

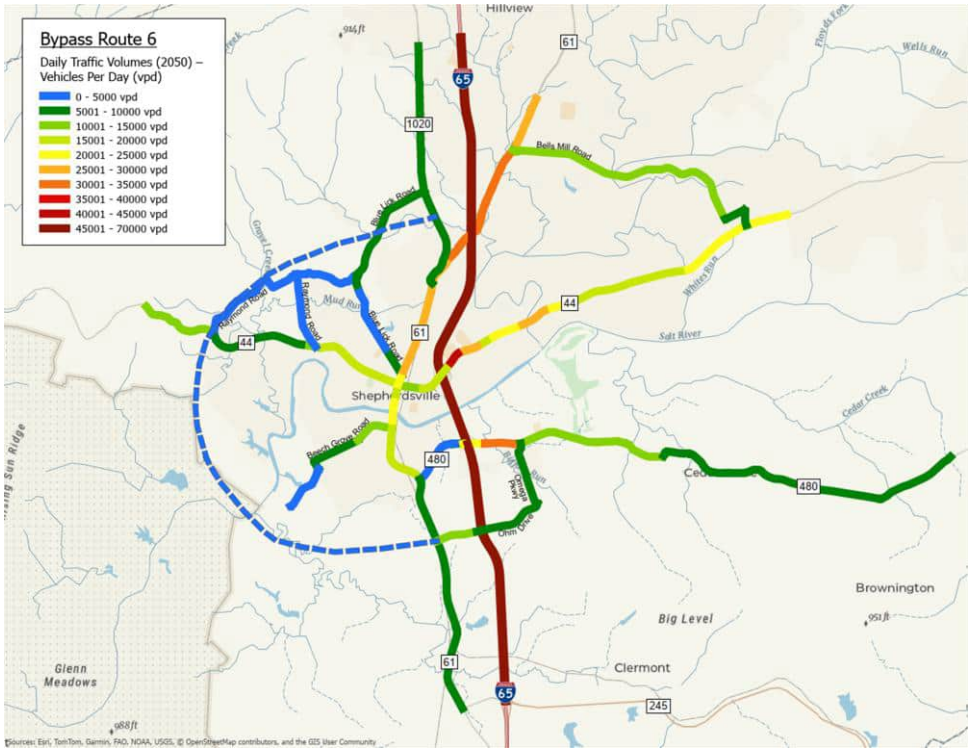


Figure 9 Bypass Route 6 Daily Traffic Volumes

2. Bypass Route Alternatives Analysis

Using the daily traffic volume and percent difference from No-Build figures, the following conclusions were gathered for each bypass route alternative:

a. Bypass Route 1–Travel demand modeling shows that the bypass primarily serves traffic to/from the east side of the City (including Mt. Washington) to the logistics park area. This is shown with the increase in traffic volumes along KY-44 east of the bypass, and on Ohm Drive, Omega Parkway, and KY-480 west of the bypass.

b. Bypass Route 2–With Bypass Route 2 in place, travel demand modeling shows an increase in traffic from KY-480 southeast of the City, as traffic uses this bypass to access KY-61 North. Traffic on Ohm Drive and Omega Parkway show increases as well.

c. Bypass Route 3–Bypass Route 3 offers a new bridge connection between KY-61 and I-65 and provides the largest volume reductions over the Salt River on the existing bridges. Volume redistributes to the state highways that have existing residual capacity in the City.

d. Bypass Route 4–Travel demand modeling shows that Bypass Route 4 causes an increase in traffic to/from KY-480 and KY-245 east of the bypass. Minimal traffic reduction and some volume increases occur within the downtown area. In general,

Bypass Route 4 generates little change in traffic patterns throughout the City. This bypass route has the second-lowest volume of daily traffic.

e. Bypass Route 5–Providing a full bypass route from KY-245 to KY-61 on the east side of I-65 does not show a major benefit to downtown traffic when compared to the results from only using Bypass Routes 1 or 2.

f. Bypass Route 6–This route has the lowest volume of daily traffic and does not significantly reduce traffic on the existing, congested roadways. It shows that the best results for providing traffic volume relief should focus on the areas within the City or to the east of the City.

Based on the TDM results, it was concluded that of the six alternatives, Bypass Routes 1, 2, and 3, merited further analysis.

3. I-65 Lane Closure Event

For each of the three bypass route alternatives selected for further analysis, a collision scenario was modeled using KIDPA's TDM to reflect the recurring congestion caused by crashes on I-65 and to evaluate how traffic would reroute throughout the City under these conditions. In the scenario, a vehicular crash occurs in the median area near the KY-44 exits and reduced NB and SB traffic from three lanes to one lane.

As expected, in the No-Build and Bypass Route 1, 2, and 3 collision models, much of the traffic is rerouted to KY-61, with significant congestion and bottlenecking seen at the bridge crossing. In the three bypass alternative models, the bypass volumes are between 25,000 and 30,000 vehicles per day (vpd). See Appendix D for I-65 Closure Scenario figures.

D. Bypass Preliminary Alignments

For each bypass route alternative that was carried forward for additional analysis, a high-level design was modeled using OpenRoads Designer. The bypass routes were designed with two 12-foot lanes, 6-foot paved shoulders, and 2-foot earth shoulders. The typical section features a 1.75-inch asphalt surface, two layers of 3-inch asphalt base, and a 4-inch dense graded aggregate (DGA) subgrade. Fill slopes varied by location but were generally modeled at 3:1, or 2:1 where guardrail was assumed. Ditches were modeled as 2-foot flat bottom ditches with 4:1 foreslopes and varying backslopes.

Vertical profiles were designed with a maximum grade of 6 percent, in accordance with KYTC's Highway Design Guidance Manual, assuming a 55 miles per hour (MPH) corridor and mountainous terrain. Horizontal alignments targeted near 90-degree angles at the Salt River and other stream crossings to minimize bridge lengths. In addition to spanning the Salt River, Bypass Routes 1 and 2 would also require bridge crossings over Lickskillet Creek and Cedar Creek; Bypass Route 2 also requires a bridge over Floyd's Fork. Bridges and roadway banking were designed to sit above the streams' 100-year floodplain, as reported by the Federal Emergency Management Agency's (FEMA) flood maps. Bridge lengths and box culvert barrel lengths for each bypass route alternative were designed as follows:

1. Bypass Route 1
   - Lickskillet Creek Tributary: Box Culvert, 125-foot barrel length
   - Cedar Creek: Bridge, 450-foot length
   - Salt River: Bridge, 900-foot length

2. Bypass Route 2
   - Lickskillet Creek Tributary: Box Culvert, 125-foot barrel length
   - Cedar Creek: Bridge, 515-foot length
   - Salt River: Bridge, 750-foot length
   - Floyd's Fork: Bridge, 650-foot length

3. Bypass Route 3
   - Salt River: Bridge, 1100-foot length

It should be noted that the model is conceptual in nature and contains simplifications and inaccuracies. See Appendix E for additional modeling information, including plan and profile sheets.

1. Planning-Level OPCC Analysis

The proposed bypass alignments were used to generate planning-level OPCC to provide for comparison between the alternatives.

Paving quantities were determined from the model using an assumed value of $115.00 per ton for asphalt surface, $105.00 per ton for asphalt base, $34.00 per ton for DGA crushed stone base (CSB), $10 per cubic yard of excavation for Bypass Routes 1 and 2, and $30 per cubic yard of excavation for Bypass Route 3. Quantities are listed in Table 8.

	Bypass Route 1	Bypass Route 2	Bypass Route 3
Asphalt Surface	8,885 tons	11,805 tons	1,384 tons
Asphalt Base	24,681 tons	32,793 tons	3,846 tons
DGA CSB	40,895 tons	54,276 tons	6,396 tons
Cut	673,891 cubic yards	390,786 cubic yards	4,474 cubic yards
Fill	65,637 cubic yards	330,420 cubic yards	9,252 cubic yards

Table 8 Preliminary Bypass Route Quantities

The assumed bridge spans for all three bypass route alternatives exceed 450 feet. Based on these span lengths, it was assumed that all bridge structures would be constructed with prestressed girders or steel girders. A value of $275 per square foot of bridge deck, and an assumed bridge width of 30 feet, was used to estimate bridge costs. A value of $4,500 per linear foot of barrel length was used to estimate box culvert costs.

The planning-level OPCC for the three bypass routes are presented in Table 9.

	Bypass Route 1	Bypass Route 2	Bypass Route 3
Pavement	$ 11,742,654.93	$ 10,554,112.65	$ 914,700.18
Bridge/Culvert	$ 11,700,000.00	$ 16,361,250.00	$ 9,075,000.00
Lime Stabilization	$ 500,000.00	$ 500,000.00	$ 100,000.00
Additional Paving Costs	$ 250,000.00	$ 300,000.00	$ 50,000.00
Clearing and Grubbing	$ 300,000.00	$ 350,000.00	$ 75,000.00
Staking	$ 125,000.00	$ 150,000.00	$ 20,000.00
Additional Roadway Costs	$ 250,000.00	$ 300,000.00	$ 40,000.00
Channel Lining	$ 500,000.00	$ 500,000.00	$ 75,000.00
Additional Drainage Costs	$ 1,000,000.00	$ 1,000,000.00	$ 100,000.00
MOT, Striping, and Signing	$ 1,000,000.00	$ 1,000,000.00	$ 100,000.00
Mobilization (5%)	$ 1,368,382.75	$ 1,550,768.13	$ 527,485.01
Demobilization (1.5%)	$ 410,514.82	$ 465,230.44	$ 158,245.50
TOTAL	**$ 29,146,552.50**	**$ 33,031,361.22**	**$ 11,235,430.70**
WITH 30% CONTINGENCY	**$ 37,890,518.24**	**$ 42,940,769.59**	**$ 14,606,059.90**

Note: MOT=Maintenance of Traffic

Table 9 Bypass Route Planning-Level OPCC

Estimated ROW acquisition costs were determined based on land values of comparable plots, as documented in the Bullitt County Property Valuation Administrator (PVA) records. High-level proposed ROW and easement lines were determined in OpenRoads Designer, and the resulting fee simple and easement acquisition acreage was measured. Using the PVA land values priced per acre, acquisition costs were determined. Easement costs were considered to be 20 percent of the acquisition costs. The total cost also included a $10,000 acquisition service per parcel and a 30 percent contingency. A summary of this process is included in Table 10.

Bypass Route No.	Affected Parcels	Acres of Fee Simple	Acres of Easement	Land Value per Acre	Fee Simple Acquisition Cost	Easement Acquisition Cost	Total Cost (with 30% contingency)
1–North of Salt River, north of Alpar Lane	15	3.39	3.79	$ 25,000	$ 84,698	$ 18,933	$ 329,720
1–North of Salt River, south of Alpar Lane	10	4.83	7.52	$ 8,000	$ 38,660	$ 12,024	$ 195,890
1–South of Salt River	24	13.77	19.71	$ 7,000	$ 96,375	$ 27,598	$ 473,165
2–North of Salt River, north of KY-44	10	13.43	27.97	$ 17,000	$ 228,336	$ 95,104	$ 550,472
2–North of Salt River, south of KY-44	23	4.52	8.43	$ 10,000	$ 45,182	$ 16,861	$ 379,656
2–South of Salt River	14	11.13	20.61	$ 8,000	$ 89,022	$ 32,972	$ 340,592
3–North of Salt River	3	1.28	1.85	$ 70,000	$ 89,754	$ 25,901	$ 189,352
3–South of Salt River	3	1.95	2.74	$ 15,500	$ 30,289	$ 8,487	$ 89,408

Table 10 Bypass Route Planning-Level ROW Costs

The total preliminary costs determined for the bypass routes alternatives are shown in Table 11.

	Bypass Route 1	Bypass Route 2	Bypass Route 3
OPCC	$37.9 million	$42.9 million	$14.6 million
ROW	$1.0 million	$1.3 million	$0.3 million
TOTAL	**$38.9 million**	**$44.2 million**	**$14.9 million**

Table 11 Bypass Route Total Planning-Level Costs

D. I-65 Lane Closure Cost Analysis

Between 2023 and 2025, the average full northbound or southbound lane closure event on I-65 lasted approximately 3 hours, as reported by TRIMARC and online news sources. Vehicular collisions caused all full lane closure events during this study period. Methodology from the United States Department of Transportation (USDOT) was used to quantify the economic impact of a full I-65 northbound or southbound

lane closure event by determining the direct user costs, with the direct users being the motorists traveling on the interstate.

Key inputs for the cost analysis included Kentucky wage data and interstate traffic characteristics. According to the Bureau of Labor Statistics, the median hourly wage in 2024 for Kentucky was $21.99, while the average hourly wage for truck drivers was $29.40. To account for total compensation, including benefits, a multiplier of 1.45 was applied, resulting in estimated hourly costs of $31.89 for general travelers and $42.63 for truck drivers. The value of travel time savings (VTTS) was then applied, with personal travel time being valued at 50 percent of the median hourly wage and business time (which includes truck travel time) being valued at 100 percent.

Interstate traffic volumes were determined from KYTC's Traffic Count Web site, which indicated an average annual daily traffic (AADT) of 91,452 vehicles on I-65. Assuming that one-half of this AADT value travels in each direction, and that the peak-hour volume is 10 percent of daily traffic, it was determined that approximately 4,573 vehicles travel per hour in one direction. Additionally, the traffic composition along I-65 near the City was estimated as 60 percent personal vehicles, 10.5 percent business vehicles, and 29.5 percent trucks.

Using these inputs, the cost of a full-lane closure event was calculated by multiplying total compensation cost, VTTS rate, peak hourly volume, and the percentage of each vehicle type. This resulted in estimated costs of $43,750 per hour for personal travel, $15,313 per hour for business travel, and $57,510 per hour for truck travel. Altogether, the total direct user cost of a lane closure was approximately $116,573 per hour. Given the average duration of 3 hours, the total estimated cost per closure event is approximately $350,000. It is important to note that this estimate reflects only direct user delay costs and does not account for other impacts such as vehicle operating costs, environmental effects, emergency response expenses, or freight delivery delays and other economic disruptions.

A visual summary of the I-65 Lane Closure Cost Summary is shown in Figure 10.

KY estimated earning rates per hour:
KY Median Hourly Wage, 2024–$21.99
KY Average Truck Driver Hourly Wage, 2024–$29.40

KY estimated total compensation cost:
General–$21.99 × 1.45 = $31.89 per hour
Trucks–$29.40 × 1.45 = $42.63 per hour

KY estimated VTTS:
Personal–50 percent of the median hourly wage
Business–100 percent of the median hourly wage

AADT volumes for I-65:
91,452 VPD for both lanes → 91,452 / 2 = 45,726 vpd in each direction (NB and SB)

PHV assumed to be 10% of the daily volume:
45,728 VPD × 10% = 4,573 vehicles per hour (vph)

Percent of traffic along I-65 over the City:
Personal–60 percent
Business–10.5 percent
Truck–29.5 percent

Final closure event cost estimate:
Total Compensation Cost × VTTS rate × PHV × Percent of Traffic
Personal–$31.89 × 50% × 4,573 vph × 60% = $43,750 per event per hour
Business–$31.89 × 100% × 4,573 vph × 10.5% = $15,313 per event per hour
Truck–$42.63 × 100% × 4,573 vph × 29.5% = $57,510 per event per hour

Total=$116,573 per event per hour→ approximately $350,000 per average event (3 hours long)

Figure 10 Summary of the I-65 Lane Closure Cost Analysis

COMMUNITY RESPONSE

An open-house style Public Information Meeting (PIM) was held on May 12, 2026, from 5 P.M. to 7 P.M. at City Hall. At the PIM, the team presented 22 bypass-related figures and two sidewalk-related figures. The bypass figures showed the six proposed bypass alternatives, with Bypass Routes 1, 2, and 3 being considered for further analysis. Additional bypass figures depicted daily traffic volumes (2050) on major City routes with each bypass route in place, and the percent difference from a No-Build scenario. The sidewalk figures showed existing and potential sidewalk connections, presented on aerial imagery and street map backgrounds. Representatives from the design team and the City attended the PIM and were available to discuss the traffic planning study with community members.

A total of 69 attendees signed in for the PIM, though overall attendance was approximately 90 people. Following the PIM, a total of 128 online Microsoft Form survey submissions, six hard-copy submissions, and one e-mail submission were received. The following section summarizes the meeting attendees, general comment themes, and alternative ideas proposed by the community.

A. Microsoft Form Survey Responses

Approximately one-half of the survey participants resided in the City, followed by rural County, then Mt. Washington. The survey sample was heavily weighted towards mid-career adults, with the largest age group of participants being 46 to 50 years old; minimal representation was seen in the under 30 and over 66 age groups. Approximately 40 percent of participants worked in the County.

1. Pedestrian Network

Participants were asked to select one or more proposed sidewalk options they were most likely to use. The results are ranked in the following:

1. KY-44 between Railroad and Adam Shepherd Parkway..... 28 votes
2. Cedar Grove Road (two segments)..... 26 votes
3. Joe B. Hall Avenue..... 25 votes
4. KY-61 Salt River Bridge (improved)..... 20 votes
5. KY-61 Salt River Bridge to KY-480c and Beech Grove Road ..... 17 votes
6. South Plum Street from KY-44 to West Joe B. Hall Avenue ..... 17 votes
7. Bullitt Lick Middle School Road ..... 14 votes
8. West 3rd Street from Lee Street to KY-6 ..... 19 votes
9. Salt Well Road from West Blue Lick Road to KY-44..... 8 votes

Participants were then asked to provide any additional locations or routes in the City where sidewalks would be beneficial. Noteworthy responses included the following:

- At the West Blue Lick Road and KY-61 intersection
- Along the entirety of KY-44
- Around the Central Library
- Along Hebron Lane
- More accessible connections from Bullitt Central High to Buckman Street
- Both sides of Paraquet Springs Drive
- Throughout the City subdivisions
- Throughout the Pleasant Grove area

Participants were also asked to provide open-ended comments relating to the existing and proposed pedestrian network. Several respondents expressed support toward the proposed sidewalk connections, emphasizing that sidewalks improve pedestrian safety and accessibility. Some respondents highlighted specific needs, such as safer crossings over the Salt River and along busy roads, as well as reducing vehicle speeds where sidewalks are added. However, a notable portion of respondents expressed apathy toward sidewalk connection improvements and advised that traffic congestion issues should take precedence. A smaller group expressed broader opposition toward sidewalks, preferring less development in general. Overall, while there is clear support for an improved pedestrian network, many respondents remain unconvinced of its importance relative to other transportation concerns.

2. Bypass Routes

Participants were asked to rate their likelihood of using each of the six bypass routes on a scale of 1 to 10, where 1 indicates very unlikely and 10 indicates very likely. These responses were evaluated using the Net Promoter Score (NPS) method to assess likelihood of use. In the NPS framework, participants are grouped into three categories: Detractors (0 to 6), Passives (7 to 8), and Promoters (9 to 10). The final NPS value is calculated by subtracting the percentage of Detractors from the percentage of Promoters, with Passive scores being disregarded. The resulting score ranges from -100 to +100; less than zero indicates significant room for improvement while greater than zero is considered positive. Scores above 70 are exceptional. Results for each bypass are listed in the following:

Bypass Route 1	-46
Bypass Route 2	-36
Bypass Route 3	-29
Bypass Route 4	-78
Bypass Route 5	-57
Bypass Route 6	-72

The NPSs for the six bypass routes are significantly negative, indicating that Detractors heavily outweigh Promoters in every design. The three bypass designs considered for further analysis have the strongest results, though they are still less than a positive benchmark. Bypass Routes 4 and 6 have the weakest results, indicating a strong sense of dissatisfaction.

Participants were also asked to provide open-ended comments relating to the proposed bypass routes. The resulting feedback was largely negative, with many respondents questioning whether the proposed bypass routes will effectively solve existing traffic issues. Additional key themes are listed in the following:

- Preference for improving performance on existing roads, particularly KY-44, KY-61, and KY-480
- Strong desire for a new I-65 access point from KY-61, particularly at mile marker 119
- Concerns about community and environmental impact
- Concerns that the proposed bypass routes do not address east-west traffic congestion

Participants were then asked to comment on the bypass routes under consideration for further analysis. Again, comments on Bypass Routes 1, 2, and 3 exhibited mixed opinions but leaned negative and expressed concern about their effectiveness in relieving traffic throughout the City. Specific comment themes for each bypass design are listed in the following:

a. Bypass Route 1
   - Concerns that this option would add traffic to already congested areas
   - Concerns that KY-480 and Bells Mill Road are not designed for high traffic volumes, especially semi-trucks
   - Concerns that this option is too indirect to be used by local drivers
   - Criticism related to farmland and community displacement
   - Criticism related to negative impacts on residential areas

- Criticism related to the lack of traffic performance improvement on KY-44

b. Bypass Route 2
   - Concerns that this option would add traffic to already congested areas
   - Concerns that KY-480 is not designed for high traffic volumes, especially semi-trucks
   - Concerns that this option is too indirect to be used by local drivers
   - Criticism related to farmland and community displacement
   - Criticism related to negative impacts on residential areas
   - Criticism related to the lack of traffic performance improvement on KY-44
   - Often regarded as the better option when compared to Bypass Route 1

c. Bypass Route 3
   - Frequently regarded as the best option by respondents
   - Considered to have less impact on neighborhoods, farmland, and environment
   - Concerns that this option would increase traffic in the downtown area
   - Concerns that this option would not alleviate existing traffic issues

3. I-65 Lane Closure Event

For Bypass Routes 1, 2, and 3, participants were shown the roadway network performance during an I-65 collision scenario reducing both NB and SB interstate traffic from three lanes to one lane. Participants were asked to choose which of the three bypass route options has the greatest traffic relief benefit when I-65 has lane closures. Percentage results are listed in the following:

Bypass Route 1	28%
Bypass Route 2	28%
Bypass Route 3	39%

Participants were then asked to comment on each bypass as a closure relief. Feedback for the three options was predominantly negative, with only a small number of respondents expressing approval. Key themes for the three bypass routes as a closure relief are:

a. Bypass Route 1
   - Criticism related to shifting congestion rather than eliminating it
   - Concerns that Bells Mill Road and KY-480 are not designed for high traffic volumes, especially semi-trucks
   - Concerns that this option worsens conditions on City roads
   - Concerns that this option mainly benefits local trips not broader regional travel

b. Bypass Route 2
   - Criticism related to shifting congestion rather than eliminating it
   - Concerns that this option worsens conditions on City roads
   - Several respondents noted improved traffic distribution and reduced congestion on KY-44 when compared to Bypass Route 1

c. Bypass Route 3
- Criticism related to worsening existing conditions
- Criticism related to shifting congestion rather than eliminating it
- Concern that this option worsens conditions on City roads
- Concerns that this option is redundant, as the KY-61 bridge already exists
- Several respondents regarded this option as the “best” or “most sensible” and would work as a closure relief

B. Other PIM Responses

In addition to the 128 Microsoft Form survey results received, six hard-copy responses and one e-mail submission were reviewed. The hard-copy response sheet was open ended and did not include specific prompts; participants were to provide general comments on any aspect of the project. In general, these comments reflected the sentiments of the Microsoft Form survey and/or were irrelevant to the project’s scope.

The e-mail response was sent on May 18, 2026, from a registered Professional Engineer community member. The e-mail contained 138 questions regarding the proposed bypass designs and one PowerPoint presentation outlining alternative design suggestions.

Full results of the online public comments and the other comments received are included in Appendix G.

CONCLUSIONS

A. Sidewalk Projects

Enhancing the pedestrian network is a key priority of the City as downtown redevelopment continues. For City-owned roadways identified in the proposed pedestrian projects, improvements should be implemented as funding and project opportunities become available.

For roadways under KYTC jurisdiction like KY-44, the City should continue to advocate for sidewalks on both sides of the road during the planning and design of upcoming rehabilitation or reconstruction projects.

B. Bypass Routes

Bypass Routes 1, 2, and 3 have shown utility from a traffic perspective to potentially provide benefits to the downtown area. The alignments discussed in this report are preliminary and are intended to provide a reasonable scale of reference for initial comparisons and a general idea of the impacts. As is anticipated, the longer paths of Routes 1 and 2 result in significantly greater costs than Route 3. However, they could potentially provide for redevelopment opportunities around the exterior of the City. The three bypass alternatives should advance to a more formal National Environmental Policy Act (NEPA) evaluation, where their alignments, impacts, costs, and benefits can be further refined to identify a preferred alternative.

C. Existing Roadway Intersection Updates

The existing Synchro modeling did indicate congestion issues along KY-61 and KY-44. The following are recommendations for the City to consider even if the bypass routes are not implemented.

The KY-61 and KY-44 intersections show overall operations at LOS D, but there are several movements at LOS E during the peak hours. The City should discuss with KYTC whether there are traffic signal timing adjustments that could be considered. When a project occurs near the intersection, the addition of some right-turn bays and associated traffic signal overlap phases could also improve performance at the intersection.

The KY-44 and Adam Shepherd Parkway intersection also shows overall operations at LOS D, but with several LOS E movements. The NB and SB legs of the intersection are split phased and that leads to inefficiency in the intersection. If the geometry can be revised to eliminate the split phase operation, the intersection may be able to operate with fewer or no movements at LOS E. The City should discuss this intersection with KYTC for signal timing adjustments or potential geometric changes when a project is in the area.

The KY-61 and Conestoga Parkway intersection should be evaluated for potential signalization. During high volume times on KY-61, traffic has difficulty making a left-turn from Conestoga Parkway.

APPENDIX A
PEDESTRIAN NETWORK FIGURES

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LEGEND

- AMENITIES
- EXISTING SIDEWALKS – ONE SIDE
- EXISTING SIDEWALKS – TWO SIDES
- POTENTIAL SIDEWALK CONNECTIONS

N

SKATEPARK

PARK MASTER PLAN

AQUATIC CENTER

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

FIGURE 1

STRAND ASSOCIATES®

SHEPHERDSVILLE – POTENTIAL SIDEWALK CONNECTIONS

CENTRAL BULLITT COUNTY TRAFFIC MASTER PLAN

THE CITY OF SHEPHERDSVILLE, KENTUCKY

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LEGEND

- AMENITIES
- EXISTING SIDEWALKS – ONE SIDE
- EXISTING SIDEWALKS – TWO SIDES
- POTENTIAL SIDEWALK CONNECTIONS

N

SKATEPARK

PARK MASTER PLAN

AQUATIC CENTER

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

FIGURE 1

STRAND ASSOCIATES®

SHEPHERDSVILLE – POTENTIAL SIDEWALK CONNECTIONS

CENTRAL BULLITT COUNTY TRAFFIC MASTER PLAN

THE CITY OF SHEPHERDSVILLE, KENTUCKY

LEGEND

- AMENITIES
- EXISTING SIDEWALKS – ONE SIDE
- EXISTING SIDEWALKS – TWO SIDES
- POTENTIAL SIDEWALK CONNECTIONS

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PARK MASTER PLAN

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SHEPHERDSVILLE – POTENTIAL SIDEWALK CONNECTIONS

CENTRAL BULLITT COUNTY TRAFFIC MASTER PLAN

THE CITY OF SHEPHERDSVILLE, KENTUCKY

STRAND ASSOCIATES®

FIGURE 1

SHEPHERDSVILLE – POTENTIAL SIDEWALK CONNECTIONS
CENTRAL BULLITT COUNTY TRAFFIC MASTER PLAN
THE CITY OF SHEPHERDSVILLE, KENTUCKY

LEGEND

- AMENITIES
- EXISTING SIDEWALKS – ONE SIDE
- EXISTING SIDEWALKS – TWO SIDES
- POTENTIAL SIDEWALK CONNECTIONS

SKATEPARK

PARK MASTER PLAN

AQUATIC CENTER

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STRAND ASSOCIATES®

FIGURE 1

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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APPENDIX B
PEDESTRIAN NETWORK OPCC

Cost includes:		**SIDEWALK 1**	**SIDEWALK 2**	**SIDEWALK 3**	**SIDEWALK 4**	**SIDEWALK 5**	**SIDEWALK 6**	**SIDEWALK 7**	**SIDEWALK 8**	**SIDEWALK 9**	**NOTES**
Materials	**Description**	Joe B. Hall Ave.	... School Road	Plum Street	W. 3rd Street	KY-44 (KYTC)	Bridge	KY-61	KY-480	Salt Well Road	
Construction	**Length (ft)**	2530.056	2223.149	1503.846	1480.594			551.353	7090.352	2510.080	
Drainage	**Length (yd)**	843.352	741.050	501.282	493.531			183.784	2363.451	836.693	
Structures	**Width of SW (yd) – 5 FEET**	1.667	1.667	1.667	1.667			1.667	1.667	1.667	
Striping	**SW Thickness (yd) – 4 INCHES**	0.111	0.111	0.111	0.111			0.111	0.111	0.111	
Earthwork	**Sidewalk area (sq yd)**	2811.174	2470.165	1670.940	1645.104			612.614	7878.169	2788.977	
Clearing and grubbing	**Concrete unit price**	$ 58.84	$ 61.34	$ 69.55	$ 69.90			$ 84.57	$ 42.42	$ 58.99	Base Date: 4/15/2026
ETC.	**Concrete price total**	$ 165,414.60	$ 151,517.31	$ 116,213.95	$ 114,991.57			$ 51,809.03	$ 334,201.39	$ 164,527.18	
		RURAL/URBAN SECTIONS: ASSUMING THAT CONCRETE PRICE REPRESENTS 20%/16.5% OF THE TOTAL COST									
	RURAL/URBAN	URBAN	RURAL	URBAN	URBAN	URBAN	URBAN	RURAL	RURAL	RURAL	
	TOTAL COST	$ 1,002,512.71	$ 757,586.53	$ 704,326.99	$ 696,918.59			$ 259,045.17	$ 1,671,006.96	$ 822,635.91	
	TOTAL COST PLUS 30% CONTINGENCY	$ 1,303,266.52	$ 984,862.48	$ 915,625.09	$ 905,994.16	$ -	$ 1,800,000.00	$ 336,758.73	$ 2,172,309.05	$ 1,069,426.69	

RANK	SIDEWALK	ROW Acquisition Notes	ESTIMATED FEE SIMPLE PARCELS:	ESTIMATED EASEMENT PARCELS:	Linear Feet of FEE SIMPLE Sidewalk	Linear Feet of EASEMENT Sidewalk	Average Width of Acquisition (BOTH)	Acres of FEE SIMPLE Acquisition	Acres of EASEMENT Acquisition	Land Value per Acre	(Fee Simple) Acquisition Cost	Easement Cost	Total Cost with Acquisition Services @ $10,000/Parcel & 30% Contingency
1	Joe B. Hall Avenue	Contains entrances, drainage, and slope construction. ROW likely not needed, but permanent and temporary easements will be needed.	–	16	–	5,060	10	–	1.16	$ 60,000.00	$ -	$ 13,939.70	$226,121.6
2	Bullitt Lick Middle School Road	Entire Bullitt Lick Middle School Road is within the "Bullitt County School District Finance..." property. Assuming NO acquisition costs.	–	–	–	–	–	–	–	$ -	$ -	$ -	$0.0
3	South Plum Street from KY-44 to West Joe B. Hall Road	Contains entrances and minimal drainage. Minimal slope construction. Utility poles set far in the front yards on the east side. ROW likely not needed, but permanent and temporary easements will be needed.	–	19	–	3,008	10	–	0.69	$ 75,000.00	$ -	$ 10,357.06	$260,464.2
4	West 3rd Street from Lee Street to KY 61	Contains entrances, drainage, and slope construction. Lots of utilitlies. ROW likely not needed, but permanent and temporary easements will be needed. Assuming that most of the ROW/easements on the south side of West 3rd will be already paid for with the park construction (?)	–	13	–	2,961	10	–	0.68	$ 65,000.00	$ -	$ 8,837.34	$180,488.5
5	KY-44 gap between Railroad and Adam Shepherd Parkway	Contains entrances, drainage, and slope construction. ROW/easements will already be purchased by KYTC anyways and additional costs will not be needed for sidewalk.	–	–	–	–	–	–	–	$ -	$ -	$ -	$0.0
6	KY-61 Salt River Bridge	Bridge widening retrofit estimate: $ 1,800,000 Sidewalk up until the bridge already exists.	–	–	–	–	–	–	–	$ -	$ -	$ -	$0.0
7	KY-61 Salt River Bridge to State Road 480c and Beech Grove Road	Contains entrances and slope construction. Minimal drainage needed. ROW likely not needed, but permanent and temporary easements will be needed.	–	7	–	1,103	10	–	0.25	$ 30,000.00	$ -	$ 1,518.88	$92,974.5
8	KY-480 (Cedar Grove Road) (two segments)	Contains entrances, drainage (especially), and slope construction. ROW likely not needed, but permanent and temporary easements will be needed. Adding a few ROW parcels just in case	8	46	1,000	14,181	10	0.23	3.26	$ 25,000.00	$ 5,739.21	$ 16,277.21	$730,621.3
9	Salt Well Road from West Blue Lick Road to KY-44	Contains entrances, drainage, and slope construction. ROW likely needed on the east side (sidewalk won't fit between utility poles and roadway). Permanent and temporary easements will be needed. "50' right of way" – Salt Well Road	17	10	2,510	2,510	10	0.58	0.58	$ 65,000.00	$ 37,455.27	$ 7,491.05	$409,430.2

APPENDIX C
ROADWAY BYPASS ROUTE FIGURES

TRAFFIC COUNTS (VEHICLES PER DAY)

ALL SCENARIOS PROJECTED FOR 2050 HORIZON YEAR

*HIGHEST TRAFFIC VOLUME VALUES RECORDED FOR SEGMENTS THAT HAVE MULTIPLE COUNTS

Cells are colored based on traffic volumes for entire route. RED=greatest / GREEN=lowest

MAJOR EXISTING ROUTES	Segment Number	SEGMENT		Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	NO BUILD	I-65 Closure Route 1	I-65 Closure Route 2	I-65 Closure Route 3	NO BUILD
I-65 (NB)	1	KY-1526 (Brooks Hill Road / John Harper Hwy) exit	KY-44 (E. Fourth Street / HWY-44 East) exit	66033	65494	65557	65794	65521	65420	65759	33747	32165	33238	49050
	2	KY-44 (E. Fourth Street / HWY-44 East) exit	KY-480 (Cedar Grove Road) exit	62904	65431	64513	65943	67075	64379	66292	31536	31524	31146	34040
	3	KY-480 (Cedar Grove Road) exit	CR-3219 (Ohm Drive) exit	52190	52736	52404	53162	54002	51721	53444	40810	40965	38952	39868
	4	CR-3219 (Ohm Drive) exit	KY-245 (Clermont Road) exit	51424	51122	52850	52029	51069	52670	51539	45360	45419	47156	
I-65 (SB)	5	KY-1526 (Brooks Hill Road / John Harper Hwy) exit	KY-44 (E. Fourth Street / HWY-44 East) exit	67174	66772	67170	67073	66795	66762	67027	37587	37298	38943	53017
	6	KY-44 (E. Fourth Street / HWY-44 East) exit	KY-480 (Cedar Grove Road) exit	65172	65485	65131	68048	65623	66956	68202	33393	33354	33013	35931
	7	KY-480 (Cedar Grove Road) exit	CR-3219 (Ohm Drive) exit	54431	55058	55211	56060	56372	54877	56004	42649	42695	40821	41564
	8	CR-3219 (Ohm Drive) exit	KY-245 (Clermont Road) exit	53074	52660	54416	53105	52522	54467	53197	47180	47135	49321	
KY-44	9	Mount Elmira Road	Raymond Road (west approach)		9391	10067	9688	9465	11744	9700		13132	14857	
	10	Raymond Road (west approach)	Pitts Point Road		8890	9552	9184	8963	7038	9194	12504	12537	14206	
	11	Pitts Point Road	Hensley Road	12239	11934	12595	12226	12007	9702	12237	15387	15422	16553	
	12	Hensley Road	Raymond Road (east approach)	14298	14138	14581	14287	14163	11604	14302	16370	16357	17460	
	13	Raymond Road (east approach)	Salt Well Road	17648	17736	17079	17993	17572	15388	17965	16739	16706	17600	17785
	14	Saltwell Road	Frank E. Simon Park	20061	20100	19309	20506	19904	17384	20485	18666	18629	19595	19789
	15	Frank E. Simon Park	KY-61 (Buckman Street)	19006	19170	18076	19436	18973	16015	19414	32803	32472	32870	33355
	16	KY-61 (Buckman Street)	Carpenter Street	15822	15169	16602	15299	15353	14100	15315	14055	13136	15971	13900
	17	Carpenter Street	Hester Street	15778	15125	16558	15255	15309	14056	15271	14011	13092	15927	13856
	18	Hester Street	Adam Shep. Pkwy / Vine Street / EB > I-65 SB on-ramp	20056	18816	20069	18971	19270	17358	18994	16356	15137	14540	15269
	19	Adam Shep. Pkwy / Vine Street / EB > I-65 SB on-ramp	I-65 SB > EB & WB off-ramp / WB > I-65 SB on-ramp	22251	21112	18094	21079	21315	19579	20640	38197	35032	36536	40494
	20	I-65 SB > EB & WB off-ramp / WB > I-65 SB on-ramp	EB > I-65 NB on-ramp	16240	16573	15924	17169	16699	16374	17072	18556	17830	17604	19589
	21	EB > I-65 NB on-ramp	I-65 NB > WB & EB off-ramp / WB > I-65 NB on-ramp	19872	20150	19608	20649	20255	19984	20568	21224	20034	18776	21811
	22	I-65 NB > WB & EB off-ramp / WB > I-65 NB on-ramp	Centerview Drive	40371	43930	44023	43602	43829	43938	43772	42367	42762	43337	42927
	23	Centerview Drive	McKendree University parking lot entrance	25020	29747	29844	29313	29621	29732	29535	28364	28293	29026	28531
	24	McKendree University parking lot entrance	North Oak Street	21359	25021	25095	24689	24927	25011	24861	24344	23956	24520	24155
	25	North Oak Street	Grandview Drive	12300	15963	16036	15631	15868	15952	15802	15285	14898	15461	15096
	26	Grandview Drive	Hoot Owl Camp Road	18592	23619	23695	23165	23499	23579	23398	23386	22258	22999	22549
	27	Hoot Owl Camp Road	River Edge Drive	20298	25530	25605	25062	25408	25488	25303	25820	24200	24962	24521
	28	River Edge Drive	Big Cliffy	16520	20095	21113	20648	19921	21011	20897	19798	17826	19542	18010
	29	Big Cliffy	Lazy River North Parkway / Proctor Lane	14563	17042	17767	17438	16918	17693	17617	16452	15128	16296	15156
	30	Lazy River North Parkway / Proctor Lane	Bells Mill Road	14804	19164	20688	20397	18968	20619	20598	16659	16021	17973	14933
	31	Bells Mill Road	Lloyd Lane / Bogard Lane	25685	23270	23573	23203	23165	23524	23405	23673	22174	23232	22841
KY-61	32	West Hebron Lane	Bells Mill Road	26870	31381	27660	27420	31360	27106	27329	28788	38284	30913	30331
	33	Bells Mill Road	Conestoga Parkway	31017	30622	35112	32883	30593	32980	32976	53182	48261	61507	60759
	34	Conestoga Parkway	Adam Shepherd Parkway	25258	24913	26189	25619	24848	25205	25656	32667	30907	35473	35729
	35	Adam Shepherd Parkway	West Blue Lick Road	31254	30293	32949	29760	30645	29051	27191	34252	34642	32923	34304
	36	West Blue Lick Road	Cherry Street	26771	26347	27608	26335	26536	27291	26377	35805	35487	35067	36344
	37	Cherry Street	KY-44 (4th Street)	22921	22511	23728	22561	22690	23447	22601	31567	30641	31160	34559
	38	KY-44 (4th Street)	3rd Street	18453	18386	18209	18763	18379	18596	18765	22303	22143	22486	26526
	39	3rd Street	2nd Street	18319	18259	18109	18924	18100	18705	18934	30057	29678	30166	35029
	40	2nd Street	Old Preston Highway South	19959	19525	18054	22009	19119	21199	21981	44045	43861	41880	53895
	41	Old Preston Highway South	Cedar Grove Road	18411	16903	18596	18605	16989	18299	18600	29817	29799	30304	35229
	42	Cedar Grove Road	Ohm Drive	8795	9233	11757	9329	9556	8348	9315	20322	20000	27096	23132
	43	Ohm Drive	Chapeze Lane	9447	9587	8143	10139	9515	8454	10185	11909	12006	17697	
	44	Chapeze Lane	Beech Grove Road	7844	7648	6761	7877	7430	6337	8138	7867	7905	7351	
	45	Beech Grove Road	Clermont Road	10060	9812		10117		6939	10439	13782		14076	
KY-1020	46	Brooks Hill Road	East Blue Lick Road	9258	9110	8245		9113	8896	9206		11864	10790	
	47	East Blue Lick Road	West Blue Lick Road	8145	7790	8349	8098	7808	7797	8106	10145	10039	10894	10832
	48	West Blue Lick Road	Buckman Street	4873	4874	7633	4986	4885	6128	4970	6229	6349	8737	8660
KY-480	49	Preston Highway	Cedar Grove Road (State Road 480C)	3441	3441	6308	3441	3441	3441	3441	13102	12075	10422	14897
	50	Cedar Grove Road (State Road 480C)	Dawson Drive	5135	6455	9657	5550	6012	4785	5641	19985	19088	30003	29902
	51	Dawson Drive	EB > I-65 SB on-ramp / I-65 SB > WB off-ramp	7965	10027	11981	7914	9594	6796	8015	26396	24943	39420	28121
	52	EB > I-65 SB on-ramp / I-65 SB > WB off-ramp	I-65 SB > EB off-ramp / WB > I-65 SB on-ramp	7461	9523	11477	7410	9090	6292	7511	25892	24439	38916	27617
	53	I-65 SB > EB off-ramp / WB > I-65 SB on-ramp	EB > I-65 NB on-ramp / I-65 NB off-ramp > WB	18845	18514	21886	20668	17250	20453	20704	20528	20504	29064	25067
	54	EB > I-65 NB on-ramp / I-65 NB off-ramp > WB	I-65 NB > EB off-ramp	20317	17070	25340	24874	13610	24866	24889	9201	9706	16053	18271
	55	I-65 NB > EB off-ramp	Buffalo Run Road / WB > I-65 NB on-ramp	28452	25915	32375	32011	23213	32004	32022	19769	20164	25121	26853
	56	Buffalo Run Road / WB > I-65 NB on-ramp	Omega Parkway	27143	24723	30886	30539	22146	30533	30550	18860	19237	23966	25619
	57	Omega Parkway	Valley View Road	16969	7437	15021	12741	3880	14765	15000	18390	18738	13340	16492
	58	Valley View Road	Ridge Road	15731	4273	12077	14897	5750	11872	12116	23096	23139	12426	16501
	59	Ridge Road	Ironwood Trail	5810	10057	11738	12311	10144	11763	10852	13903	13898	14833	14454
	60	Ironwood Trail	Deatsville Road	7993	12084	8664	9237	12272	8688	8775	15661	16360	11758	11379
	61	Deatsville Road	Clarks Lane	6187	9237	7794	8361	9415	7820	7926		14447	14549	
CR-3219 (Ohm Drive)	62	Preston Highway	I-65 SB > EB & WB off-ramp / EB & WB > I-65 SB on-ramp	12899	12616	9838	13044	12224	12976	13099	6433	5632	16343	
	63	I-65 SB > EB & WB off-ramp / EB & WB > I-65 SB on-ramp	I-65 NB > EB & WB off-ramp / EB & WB > I-65 NB on-ramp	11203	9606	7212	9684	11030	8954	9606	8384	8179	12070	11356
	64	I-65 NB > EB & WB off-ramp / EB & WB > I-65 NB on-ramp	Omega Parkway	13095	9496	8491	9350	14313	8546	9135	13655	14326	10785	10353
Raymond Road / Chillicoop Road	65	KY-44 (Shepherdsville Road)	Raymond Road	1257	1283	1226	1266	1266	1019	1266	955	995	897	
	66	Raymond Road	W. Blue Lick Road	2060	2137	2282	2255	2170	1958	2249	4264	4350	4467	4594
Raymond Road (N/S)	67	Raymond Road / Chillicoop Road	KY-44 (4th Street)	1656	1318	1529	1463	1365	1060	1459	1193	1239	1463	
W. Blue Lick Road	68	KY-1020 (Coral Ridge Road)	Chillicoop Road	4247	4116	6347	4222	4172	5056	4230	6298	5841	9663	9747
	69	Chillicoop Road	Woodland Drive	4157	3944	4303	3969	3982	5165	3983	6849	5986	7405	7293
	70	Woodland Drive	Bullitt Lick Middle School Road	6600	6359	7249	6294	6497	4717	6321	9800	9990	9752	9692
	71	Bullitt Lick Middle School Road	KY-61 (Buckman Street)	7019	6825	7726	6688	6962	5124	6704	10381	10567	10383	10326
Bells Mill Road	72	N. Preston Highway	Bells Mill Road – 90-deg bend	13453	11682	11927	11921	11663	11962	11935	17651	11516	12417	11552
	73	Bells Mill Road – 90-deg bend	KY-44	11611	8262	8475	8471	8246	8500	8496	10760	8183	8824	12459
KY-1494 / Old Ford Rd	74	Long Lick Farm Road	Reichmuth Lane	720	720	720	720	720	720	720	4604	4231	7824	
	75	Reichmuth Lane	Beechcliff Circle	6898	6898	6899	6898	6898	6898	6898	7264	6891	10502	
	76	Beechcliff Circle	Old Ford Road / KY-1494 intersection	9293	9295	9335	9334	9342	9309	9334	8227	7853	9985	11064
	77	Old Ford Road / KY-1494 intersection	KY-61 (S. Preston Highway)	11773	11381	11266	11381	11350	11232	11385	8712	8936	13012	12178
Omega Parkway	78	Ohm Drive	KY-480	12883	9419	8092	6021	7165	8164	8943	13434	14083	11123	10296
KY-245 (Clermont Road)	79	Preston Highway	I-65 SB on-ramp / I-65 SB off-ramp		8204		7368			7526	6929		7220	
	80	I-65 SB on-ramp / I-65 SB off-ramp	I-65 NB on-ramp / I-65 NB off-ramp		14001		14415			14823	10212		12824	
	81	I-65 NB on-ramp / I-65 NB off-ramp	Planmar Drive		20358		22401			22268	12781		17521	
	82	Planmar Drive	Chapeze Lane		16629		18504			18582			14522	
	83	Chapeze Lane	East end		17466		19448			19425			17299	

	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	NO BUILD	I-65 Closure Route 1	I-65 Closure Route 2	I-65 Closure Route 3	NO BUILD
MAX	67174	66772	67170	68048	67075	66956	68202	53182	48261	61507	60759
MIN	720	720	720	720	720	720	720	955	995	897	4594

PERCENT DIFFERENCE FROM NO-BUILD SCENARIO (2050) – shown as decimal

*HIGHEST TRAFFIC VOLUME VALUES RECORDED FOR SEGMENTS THAT HAVE MULTIPLE COUNTS

Cells are colored based on traffic volumes for entire route. RED=greatest / GREEN=lowest

MAJOR EXISTING ROUTES	Segment Number	SEGMENT		Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	I-65 Closure Route 1	I-65 Closure Route 2	I-65 Closure Route 3
I-65 (NB)	1	KY-1526 (Brooks Hill Road / John Harper Hwy) exit	KY-44 (E. Fourth Street / HWY-44 East) exit	1.00416673	0.99597013	0.99692818	1.00053225	0.99638072	0.99484481	0.68801223	0.65575943	0.67763507
	2	KY-44 (E. Fourth Street / HWY-44 East) exit	KY-480 (Cedar Grove Road) exit	0.94889278	0.98701201	0.97316418	0.99473541	1.01181138	0.97114282	0.92643948	0.92608696	0.91498237
	3	KY-480 (Cedar Grove Road) exit	CR-3219 (Ohm Drive) exit	0.97653619	0.98675249	0.98054038	0.99472345	1.01044084	0.96776065	1.02362797	1.02751580	0.97702418
	4	CR-3219 (Ohm Drive) exit	KY-245 (Clermont Road) exit	0.99776868	0.99190904	1.02543705	1.00950736	0.99088069	1.02194455			
I-65 (SB)	5	KY-1526 (Brooks Hill Road / John Harper Hwy) exit	KY-44 (E. Fourth Street / HWY-44 East) exit	1.00219315	0.99619556	1.00213347	1.00068629	0.99653871	0.99604637	0.70896128	0.70351019	0.73453798
	6	KY-44 (E. Fourth Street / HWY-44 East) exit	KY-480 (Cedar Grove Road) exit	0.95557315	0.96016246	0.95497199	0.99774200	0.96218586	0.98173074	0.92936462	0.92827920	0.91878879
	7	KY-480 (Cedar Grove Road) exit	CR-3219 (Ohm Drive) exit	0.97191272	0.98310835	0.98584030	1.00099993	1.00657096	0.97987644	1.02610432	1.02721105	0.98212395
	8	CR-3219 (Ohm Drive) exit	KY-245 (Clermont Road) exit	0.99768784	0.98990545	1.02291483	0.99827058	0.98731131	1.02387353			
KY-44	9	Mount Elmira Road	Raymond Road (west approach)		0.96814433	1.03783505	0.99876289	0.97577320	1.21072165			
	10	Raymond Road (west approach)	Pitts Point Road		0.96693496	1.03893844	0.99891233	0.97487492	0.76549924			
	11	Pitts Point Road	Hensley Road	1.00016344	0.97523903	1.02925554	0.99910109	0.98120454	0.79284138			
	12	Hensley Road	Raymond Road (east approach)	0.99972032	0.98853307	1.01950776	0.99895120	0.99028108	0.81135506			
	13	Raymond Road (east approach)	Salt Well Road	0.98235458	0.98725299	0.95068188	1.00155859	0.97812413	0.85655441	0.94118639	0.93933090	0.98959798
	14	Saltwell Road	Frank E. Simon Park	0.97930193	0.98120576	0.94259214	1.00102514	0.97163778	0.84862094	0.94325130	0.94138158	0.99019657
	15	Frank E. Simon Park	KY-61 (Buckman Street)	0.97898424	0.98743175	0.93108066	1.00113320	0.97728443	0.82492016	0.98345076	0.97352721	0.98545945
	16	KY-61 (Buckman Street)	Carpenter Street	1.03310480	0.99046686	1.08403526	0.99895527	1.00248123	0.92066601	1.01115108	0.94503597	1.14899281
	17	Carpenter Street	Hester Street	1.03320018	0.99043939	1.08427739	0.99895226	1.00248838	0.92043743	1.01118649	0.94486143	1.14946594
	18	Hester Street	Adam Shep. Pkwy / Vine Street / EB > I-65 SB on-ramp	1.05591239	0.99062862	1.05659682	0.99878909	1.01453090	0.91386754	1.07118999	0.99135503	0.95225621
	19	Adam Shep. Pkwy / Vine Street / EB > I-65 SB on-ramp	I-65 SB > EB & WB off-ramp / WB > I-65 SB on-ramp	1.07805233	1.02286822	0.87664729	1.02126938	1.03270349	0.94859496	0.94327555	0.86511582	0.90225712
	20	I-65 SB > EB & WB off-ramp / WB > I-65 SB on-ramp	EB > I-65 NB on-ramp	0.95126523	0.97077085	0.93275539	1.00568182	0.97815136	0.95911434	0.94726632	0.91020471	0.89866762
	21	EB > I-65 NB on-ramp	I-65 NB > WB & EB off-ramp / WB > I-65 NB on-ramp	0.96616103	0.97967717	0.95332555	1.00393816	0.98478219	0.97160638	0.97308697	0.91852735	0.86085003
	22	I-65 NB > WB & EB off-ramp / WB > I-65 NB on-ramp	Centerview Drive	0.92230193	1.00360961	1.00573426	0.99611624	1.00130220	1.00379238	0.98695460	0.99615627	1.00955110
	23	Centerview Drive	McKendree University parking lot entrance	0.84713052	1.00717792	1.01046216	0.99248349	1.00291180	1.00667005	0.99414672	0.99165820	1.01734955
	24	McKendree University parking lot entrance	North Oak Street	0.85913680	1.00643578	1.00941233	0.99308153	1.00265476	1.00603355	1.00782447	0.99176154	1.01511074
	25	North Oak Street	Grandview Drive	0.77838248	1.01018858	1.01480825	0.98917858	1.00417669	1.00949247	1.01251987	0.98688394	1.02417859
	26	Grandview Drive	Hoot Owl Camp Road	0.79459783	1.00944525	1.01269339	0.99004188	1.00431661	1.00773570	1.03711916	0.98709477	1.01995654
	27	Hoot Owl Camp Road	River Edge Drive	0.80219737	1.00897127	1.01193534	0.99047544	1.00414971	1.00731139	1.05297500	0.98690918	1.01798458
	28	River Edge Drive	Big Cliffy	0.79054410	0.96162129	1.01033641	0.98808441	0.95329473	1.00545533	1.09927818	0.98978345	1.08506385
	29	Big Cliffy	Lazy River North Parkway / Proctor Lane	0.82664472	0.96736107	1.00851450	0.98983936	0.96032242	1.00431401	1.08551069	0.99815255	1.07521774
	30	Lazy River North Parkway / Proctor Lane	Bells Mill Road	0.71871055	0.93038159	1.00436936	0.99024177	0.92086610	1.00101952	1.11558294	1.07285877	1.20357597
	31	Bells Mill Road	Lloyd Lane / Bogard Lane	1.09741508	0.99423200	1.00717795	0.99136937	0.98974578	1.00508438	1.03642573	0.97079813	1.01711834
KY-61	32	West Hebron Lane	Bells Mill Road	0.98320465	1.14826741	1.01211168	1.00332980	1.14749899	0.99184017	0.94912795	1.26220698	1.01918829
	33	Bells Mill Road	Conestoga Parkway	0.94059316	0.92861475	1.06477438	0.99717977	0.92773532	1.00012130	0.87529420	0.79430208	1.01231093
	34	Conestoga Parkway	Adam Shepherd Parkway	0.98448706	0.97103991	1.02077487	0.99855784	0.96850639	0.98242127	0.91429931	0.86503960	0.99283495
	35	Adam Shepherd Parkway	West Blue Lick Road	1.14942444	1.11408187	1.21176124	1.09447979	1.12702733	1.06840499	0.99848414	1.00985308	0.95974230
	36	West Blue Lick Road	Cherry Street	1.01493726	0.99886265	1.04666945	0.99840770	1.00602798	1.03465140	0.98516949	0.97641977	0.96486353
	37	Cherry Street	KY-44 (4th Street)	1.01415867	0.99601788	1.04986505	0.99823017	1.00393788	1.03743197	0.91342342	0.88662866	0.90164646
	38	KY-44 (4th Street)	3rd Street	0.98337330	0.97980282	0.97037037	0.99989342	0.97942979	0.99099387	0.84079771	0.83476589	0.84769660
	39	3rd Street	2nd Street	0.96751875	0.96434985	0.95642759	0.99947185	0.95595226	0.98790536	0.85806046	0.84724086	0.86117217
	40	2nd Street	Old Preston Highway South	0.90801146	0.88826714	0.82134571	1.00127383	0.86979664	0.96442382	0.81723722	0.81382317	0.77706652
	41	Old Preston Highway South	Cedar Grove Road	0.98983871	0.90876344	0.99978495	1.00026882	0.91338710	0.98381720	0.84637656	0.84586562	0.86020040
	42	Cedar Grove Road	Ohm Drive	0.94417606	0.99119699	1.26215781	1.00150295	1.02587225	0.89618894	0.87852326	0.86460315	1.17136434
	43	Ohm Drive	Chapeze Lane	0.92754050	0.94128621	0.79950908	0.99548355	0.93421699	0.83004418			
	44	Chapeze Lane	Beech Grove Road	0.96387319	0.93978865	0.83079381	0.96792824	0.91300074	0.77869255			
	45	Beech Grove Road	Clermont Road	0.96369384	0.93993678		0.96915413		0.66471884			
KY-1020	46	Brooks Hill Road	East Blue Lick Road	1.00564849	0.98957202	0.89561156		0.98989789	0.96632631			
	47	East Blue Lick Road	West Blue Lick Road	1.00481125	0.96101653	1.02997779	0.99901308	0.96323711	0.96188009	0.93657681	0.92679099	1.00572378
	48	West Blue Lick Road	Buckman Street	0.98048290	0.98068410	1.53581489	1.00321932	0.98289738	1.23299799	0.71928406	0.73314088	1.00889145
KY-480	49	Preston Highway	Cedar Grove Road (State Road 480C)	1.00000000	1.00000000	1.83318803	1.00000000	1.00000000	1.00000000	0.87950594	0.81056589	0.69960395
	50	Cedar Grove Road (State Road 480C)	Dawson Drive	0.91029959	1.14430066	1.71193051	0.98386811	1.06576848	0.84825386	0.66834994	0.63835195	1.00337770
	51	Dawson Drive	EB > I-65 SB on-ramp / I-65 SB > WB off-ramp	0.99376170	1.25102932	1.49482221	0.98739863	1.19700561	0.84791017	0.93865794	0.88698837	1.40179937
	52	EB > I-65 SB on-ramp / I-65 SB > WB off-ramp	I-65 SB > EB off-ramp / WB > I-65 SB on-ramp	0.99334310	1.26787379	1.52802556	0.98655306	1.21022500	0.83770470	0.93753847	0.88492595	1.40913206
	53	I-65 SB > EB off-ramp / WB > I-65 SB on-ramp	EB > I-65 NB on-ramp / I-65 NB off-ramp > WB	0.91021059	0.89422334	1.05709042	0.99826121	0.83317233	0.98787674	0.81892528	0.81796785	1.15945267
	54	EB > I-65 NB on-ramp / I-65 NB off-ramp > WB	I-65 NB > EB off-ramp	0.81630439	0.68584515	1.01812045	0.99939732	0.54682792	0.99907590	0.50358492	0.53122434	0.87860544
	55	I-65 NB > EB off-ramp	Buffalo Run Road / WB > I-65 NB on-ramp	0.88851415	0.80928736	1.01102367	0.99965649	0.72490788	0.99943789	0.73619335	0.75090306	0.93550069
	56	Buffalo Run Road / WB > I-65 NB on-ramp	Omega Parkway	0.88847791	0.80926350	1.01099836	0.99963993	0.72490998	0.99944354	0.73617237	0.75088801	0.93547758
	57	Omega Parkway	Valley View Road	1.13126667	0.49580000	1.00140000	0.84940000	0.25866667	0.98433333	1.11508610	1.13618724	0.80887703
	58	Valley View Road	Ridge Road	1.29836580	0.35267415	0.99678112	1.22953120	0.47457907	0.97986134	1.39967275	1.40227865	0.75304527
	59	Ridge Road	Ironwood Trail	0.53538518	0.92674161	1.08164394	1.13444526	0.93475857	1.08394766	0.96187906	0.96153314	1.02622112
	60	Ironwood Trail	Deatsville Road	0.91088319	1.37709402	0.98735043	1.05264957	1.39851852	0.99008547	1.37630723	1.43773618	1.03330697
	61	Deatsville Road	Clarks Lane	0.78059551	1.16540500	0.98334595	1.05488266	1.18786273	0.98662629			
CR-3219 (Ohm Drive)	62	Preston Highway	I-65 SB > EB & WB off-ramp / EB & WB > I-65 SB on-ramp	0.98473166	0.96312696	0.75104970	0.99580121	0.93320101	0.99060997			
	63	I-65 SB > EB & WB off-ramp / EB & WB > I-65 SB on-ramp	I-65 NB > EB & WB off-ramp / EB & WB > I-65 NB on-ramp	1.16625026	1.00000000	0.75078076	1.00811993	1.14824068	0.93212575	0.73828813	0.72023600	1.06287425
	64	I-65 NB > EB & WB off-ramp / EB & WB > I-65 NB on-ramp	Omega Parkway	1.43349754	1.03951834	0.92950192	1.02353585	1.56683087	0.93552271	1.31894137	1.38375350	1.04172704
Raymond Road / Chillicoop Road	65	KY-44 (Shepherdsville Road)	Raymond Road	0.99289100	1.01342812	0.96840442	1.00000000	1.00000000	0.80489731			
	66	Raymond Road	W. Blue Lick Road	0.91596265	0.95020009	1.01467319	1.00266785	0.96487328	0.87060916	0.92816717	0.94688724	0.97235525
Raymond Road (N/S)	67	Raymond Road / Chillicoop Road	KY-44 (4th Street)	1.13502399	0.90335846	1.04797807	1.00274160	0.93557231	0.72652502			
W. Blue Lick Road	68	KY-1020 (Coral Ridge Road)	Chillicoop Road	1.00401891	0.97304965	1.50047281	0.99810875	0.98628842	1.19527187	0.84614753	0.59926131	0.99138196
	69	Chillicoop Road	Woodland Drive	1.04368566	0.99020839	1.08034145	0.99648506	0.99974893	1.29676124	0.93911970	0.82078706	1.01535719
	70	Woodland Drive	Bullitt Lick Middle School Road	1.04413859	1.00601171	1.14681221	0.99572852	1.02784370	0.74624268	1.01114321	1.03074701	1.00619067
	71	Bullitt Lick Middle School Road	KY-61 (Buckman Street)	1.04698687	1.01804893	1.15244630	0.99761337	1.03848449	0.76431981	1.00532636	1.02333914	1.00552005
Bells Mill Road	72	N. Preston Highway	Bells Mill Road – 90-deg bend	1.12718894	0.97880184	0.99932970	0.99882698	0.97720989	1.00226225	1.52796053	0.99688366	1.07487881
	73	Bells Mill Road – 90-deg bend	KY-44	1.36664313	0.97245763	0.99752825	0.99705744	0.97057439	1.00047081	0.86363272	0.65679429	0.70824304
KY-1494 / Old Ford Rd	74	Long Lick Farm Road	Reichmuth Lane	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000			
	75	Reichmuth Lane	Beechcliff Circle	1.00000000	1.00000000	1.00014497	1.00000000	1.00000000	1.00000000			
	76	Beechcliff Circle	Old Ford Road / KY-1494 intersection	0.99560746	0.99582173	1.00010714	1.00000000	1.00085708	0.99732162	0.74358279	0.70977946	0.90247650
	77	Old Ford Road / KY-1494 intersection	KY-61 (S. Preston Highway)	1.03407993	0.99964866	0.98954765	0.99964866	0.99692578	0.98656126	0.71538841	0.73378223	1.06848415
Omega Parkway	78	Ohm Drive	KY-480	1.44056804	1.05322599	0.90484178	0.67326401	0.80118528	0.91289277	1.30477855	1.36781274	1.08032246
KY-245 (Clermont Road)	79	Preston Highway	I-65 SB on-ramp / I-65 SB off-ramp		1.09008770		0.97900611					
	80	I-65 SB on-ramp / I-65 SB off-ramp	I-65 NB on-ramp / I-65 NB off-ramp		0.94454564		0.97247521					
	81	I-65 NB on-ramp / I-65 NB off-ramp	Planmar Drive		0.91422669		1.00597270					
	82	Planmar Drive	Chapeze Lane		0.89489829		0.99580239					
	83	Chapeze Lane	East end		0.89915058		1.00118404					

	Route 1	Route 2	Route 3	Route 4	Route 5	Route 6	I-65 Closure Route 1	I-65 Closure Route 2	I-65 Closure Route 3
MIN	0.53538518	0.35267415	0.75078076	0.67326401	0.25866667	0.66471884	0.50358492	0.53122434	0.67763507
MAX	1.44056804	1.37709402	1.83318803	1.22953120	1.56683087	1.29676124	1.52796053	1.43773618	1.40913206

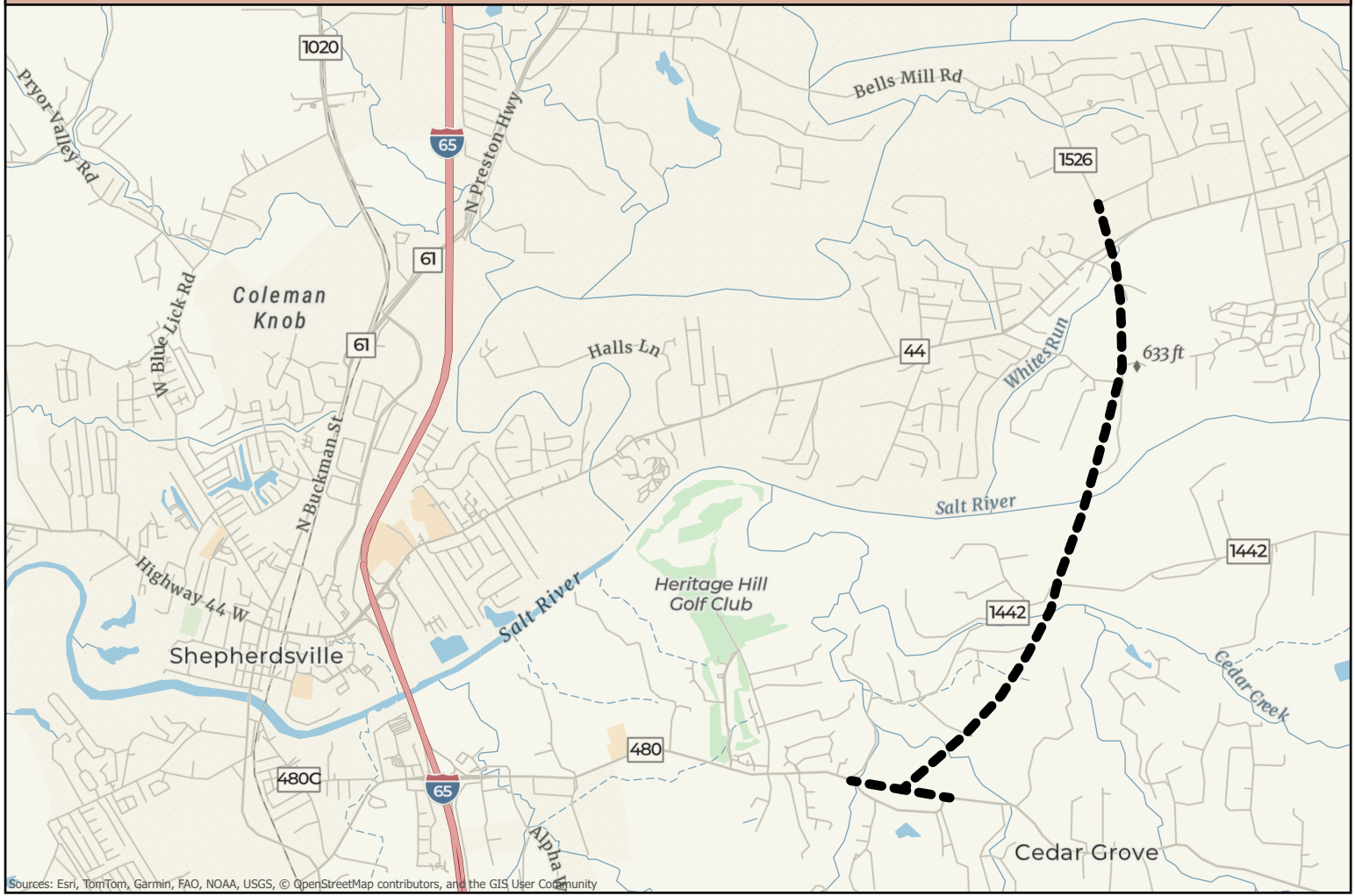
BYPASS ROUTE TRAFFIC COUNTS (VEHICLES PER DAY)

Bypass Route	Seg. #	SEGMENT		Counts	PHF Counts (K = 0.10)
Bypass 1	1	Cedar Grove realignment - WEST	Bypass Route 1 - South end	13130	1313
	2	Bypass Route 1 - South end	Cedar Grove realignment - EAST	9252	925
	3	Bypass Route 1 - South end	Bypass Route 1 - Middle	13333	1333
	4	Bypass Route 1 - Middle	Bypass Route 1 - North end	12640	1264
Bypass 2	5	Cedar Grove realignment - WEST	Bypass Route 2 - South end	2143	214
	6	Bypass Route 2 - South end	Cedar Grove realignment - EAST	13893	1389
	7	Bypass Route 2 - South end	Bypass Route 2 @ North Preston Highway	11750	1175
Bypass 3	20	Bypass 7 @ Cedar Grove Road	Bypass 7 @ Vine Street	12868	1287
Bypass 4	8	Bypass 4 @ Clermont Road	Bypass 4 @ Chapeze Lane	725	
	9	Bypass 4 @ Chapeze Lane	Bypass 4 @ Ohm Drive & Omega Parkway	630	
	10	Bypass 5 @ Ohm Drive & Omega Parkway	Bypass 5 @ Cedar Grove Road	2837	
Bypass 5	11	Bypass 4 @ Clermont Road	Bypass 4 @ Chapeze Lane	660	
	12	Bypass 4 @ Chapeze Lane	Bypass 4 @ Ohm Drive & Omega Parkway	905	
	13	Bypass 5 @ Ohm Drive & Omega Parkway	Bypass 5 @ Cedar Grove Road	3860	
	14	Cedar Grove realignment - WEST	Bypass Route 2 - South end	2184	
	15	Bypass Route 2 - South end	Cedar Grove realignment - EAST	13928	
	16	Bypass Route 2 - South end	Bypass Route 2 @ North Preston Highway	11744	
Bypass 6	17	Bypass 3 @ Preston Highway	Bypass 3 @ Bypass 6 & KY-44	4723	
	18	Bypass 6 @ Bypass 3 & KY-44	Bypass 6 @ West Blue Lick Road	333	
	19	Bypass 6 @ West Blue Lick Road	Bypass 6 @ Coral Ridge Road	2723	

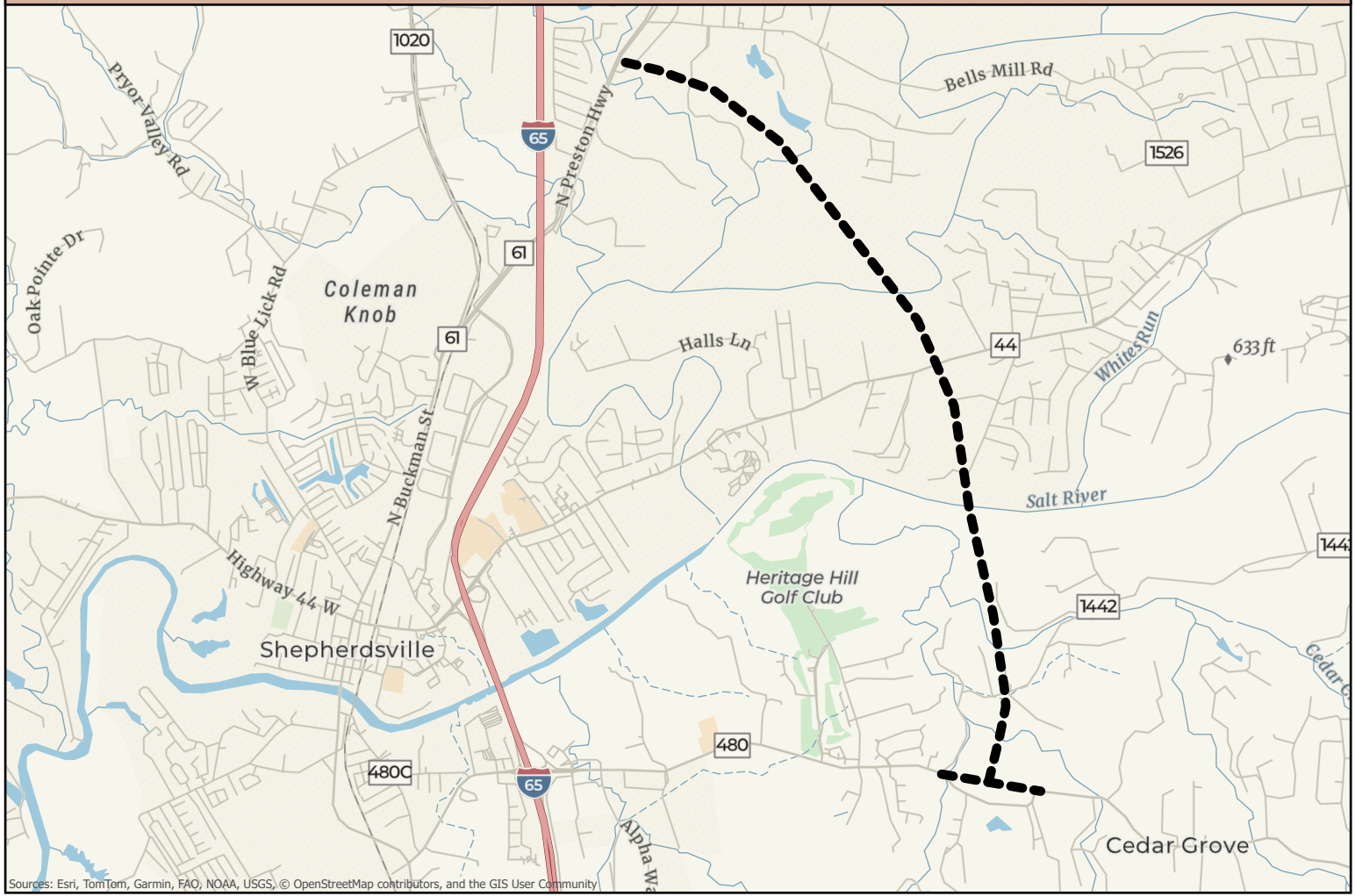
I-65 LANE CLOSURE - 3 LANES REDUCED TO 1 (NORTHBOUND AND SOUTHBOUND)

Bypass 1	1	Cedar Grove realignment - WEST	Bypass Route 1 - South end	17131	
	2	Bypass Route 1 - South end	Cedar Grove realignment - EAST	10186	
	3	Bypass Route 1 - South end	Bypass Route 1 - Middle	26827	
	4	Bypass Route 1 - Middle	Bypass Route 1 - North end	25216	
Bypass 2	5	Cedar Grove realignment - WEST	Bypass Route 2 - South end	16986	
	6	Bypass Route 2 - South end	Cedar Grove realignment - EAST	11050	
	7	Bypass Route 2 - South end	Bypass Route 2 @ North Preston Highway	26163	
Bypass 3	20	Bypass 7 @ Cedar Grove Road	Bypass 7 @ Vine Street	28737	

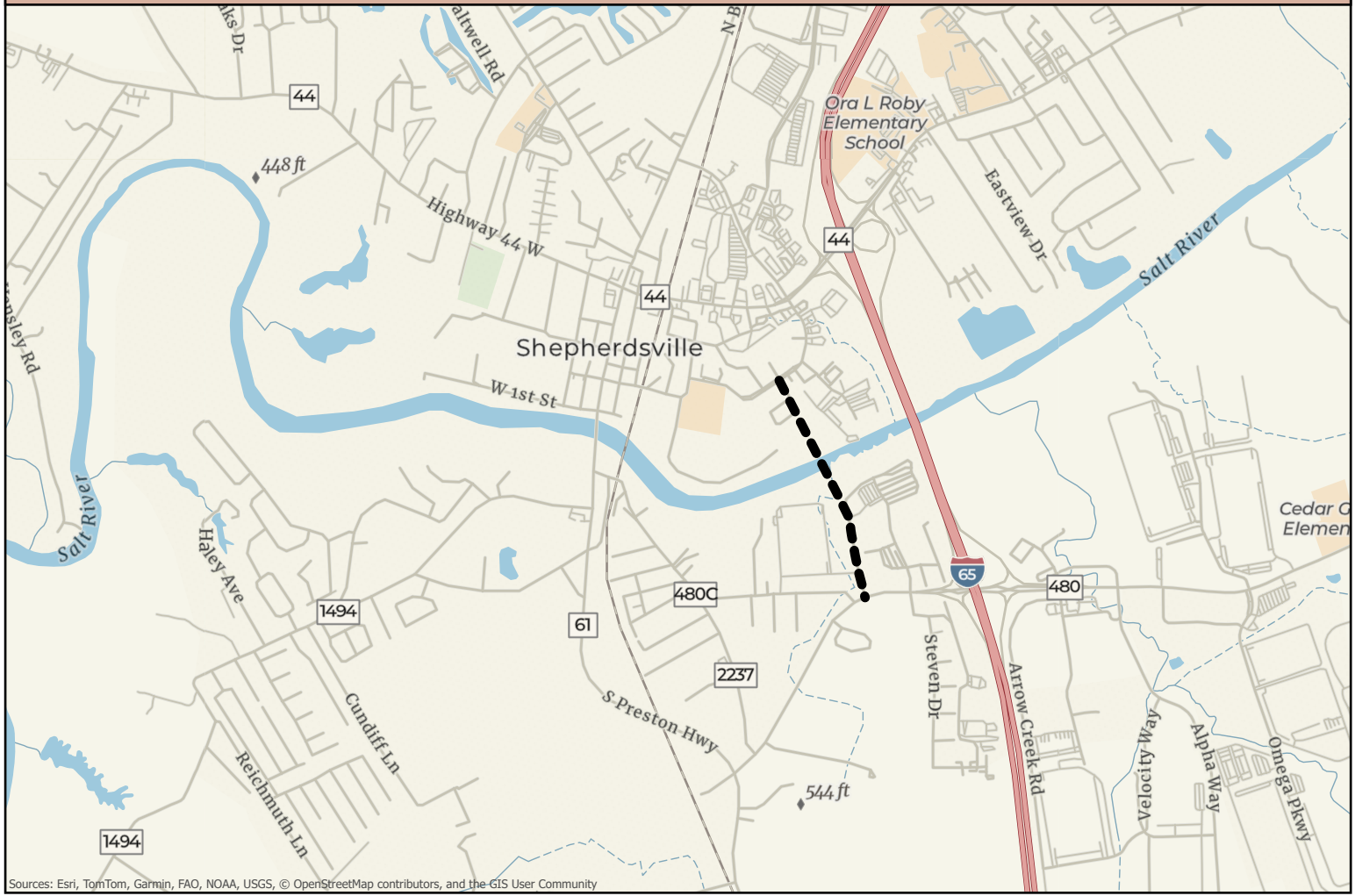
Bypass Route 1



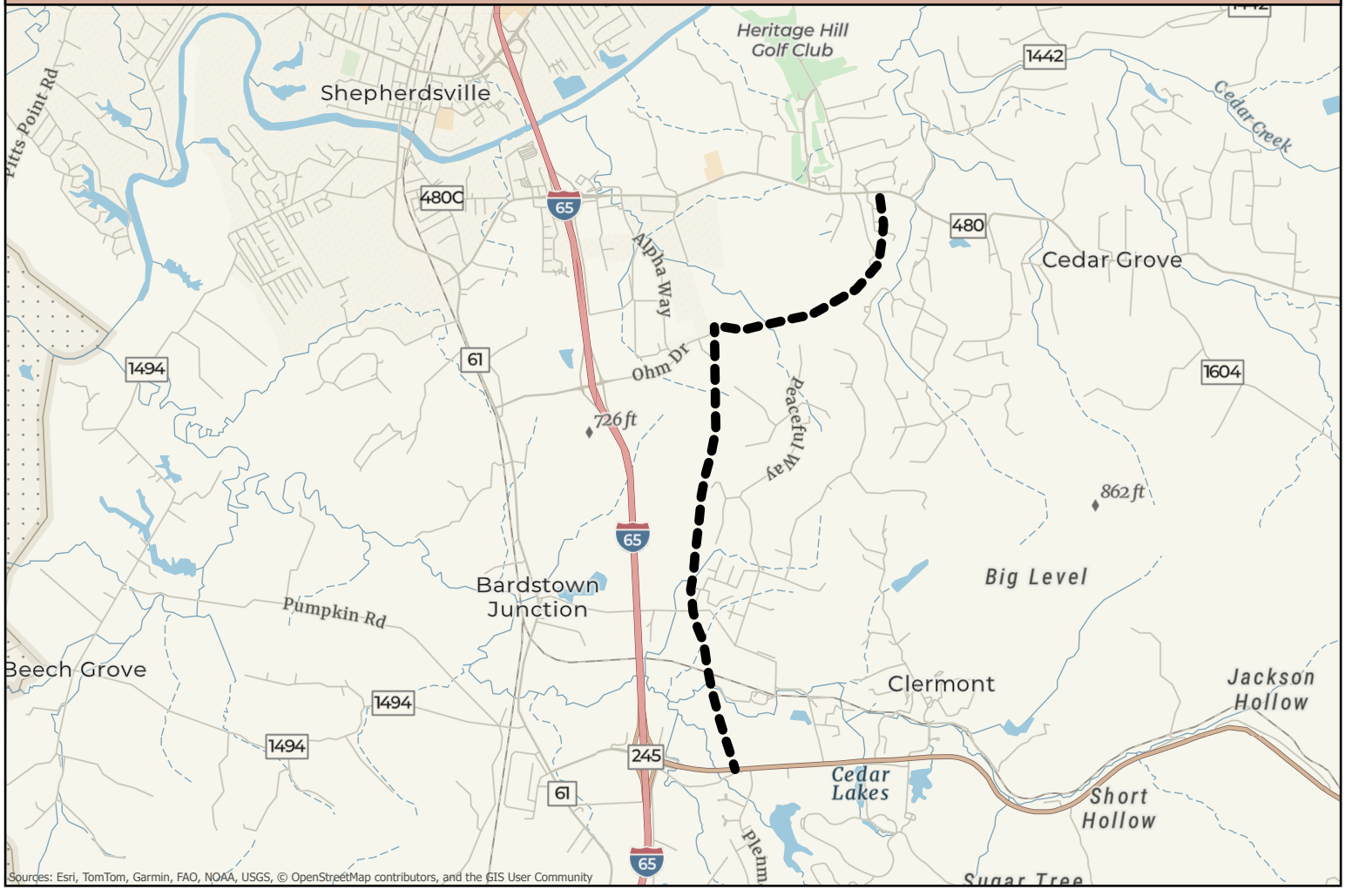
Bypass Route 2



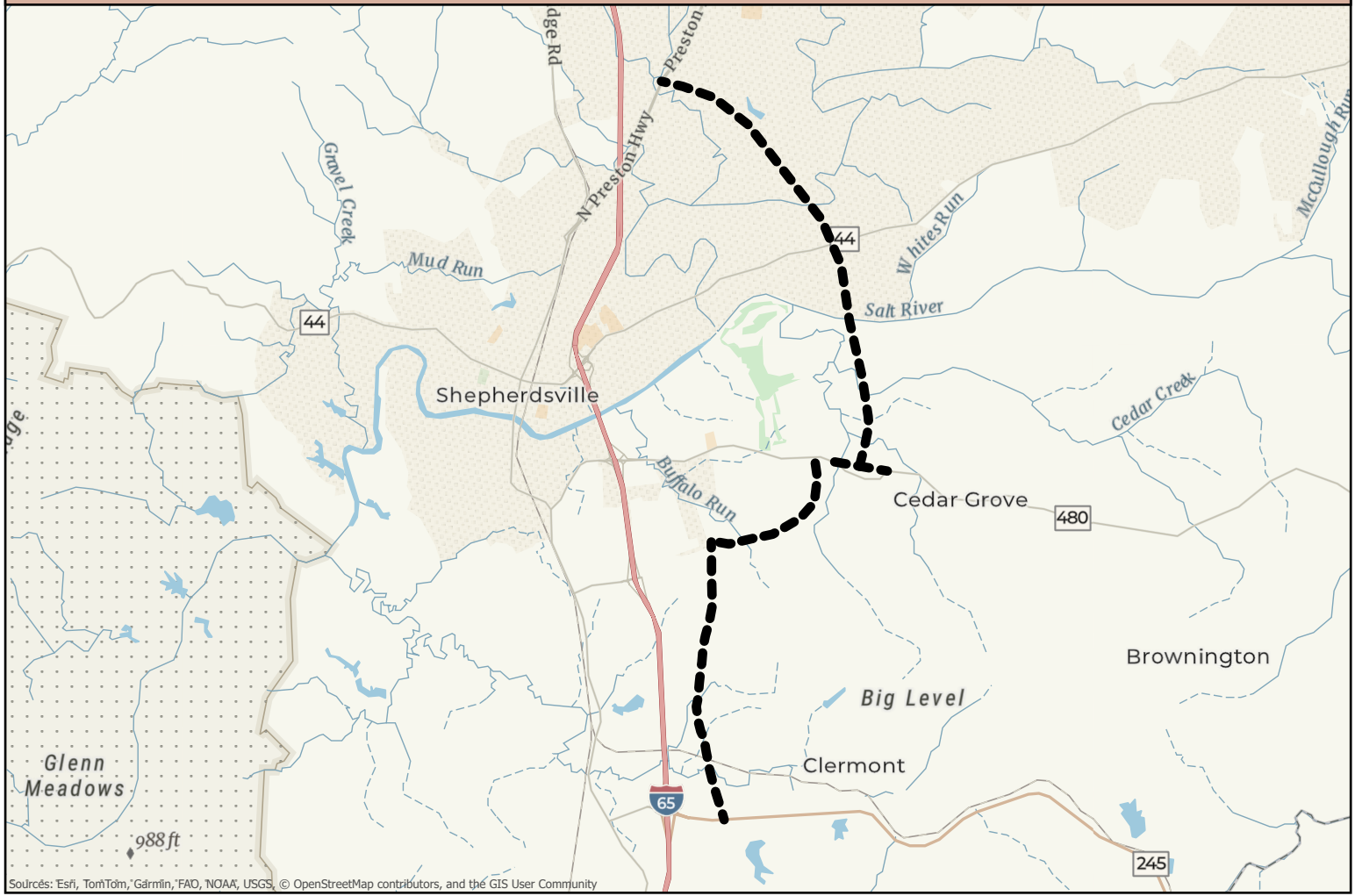
Bypass Route 3



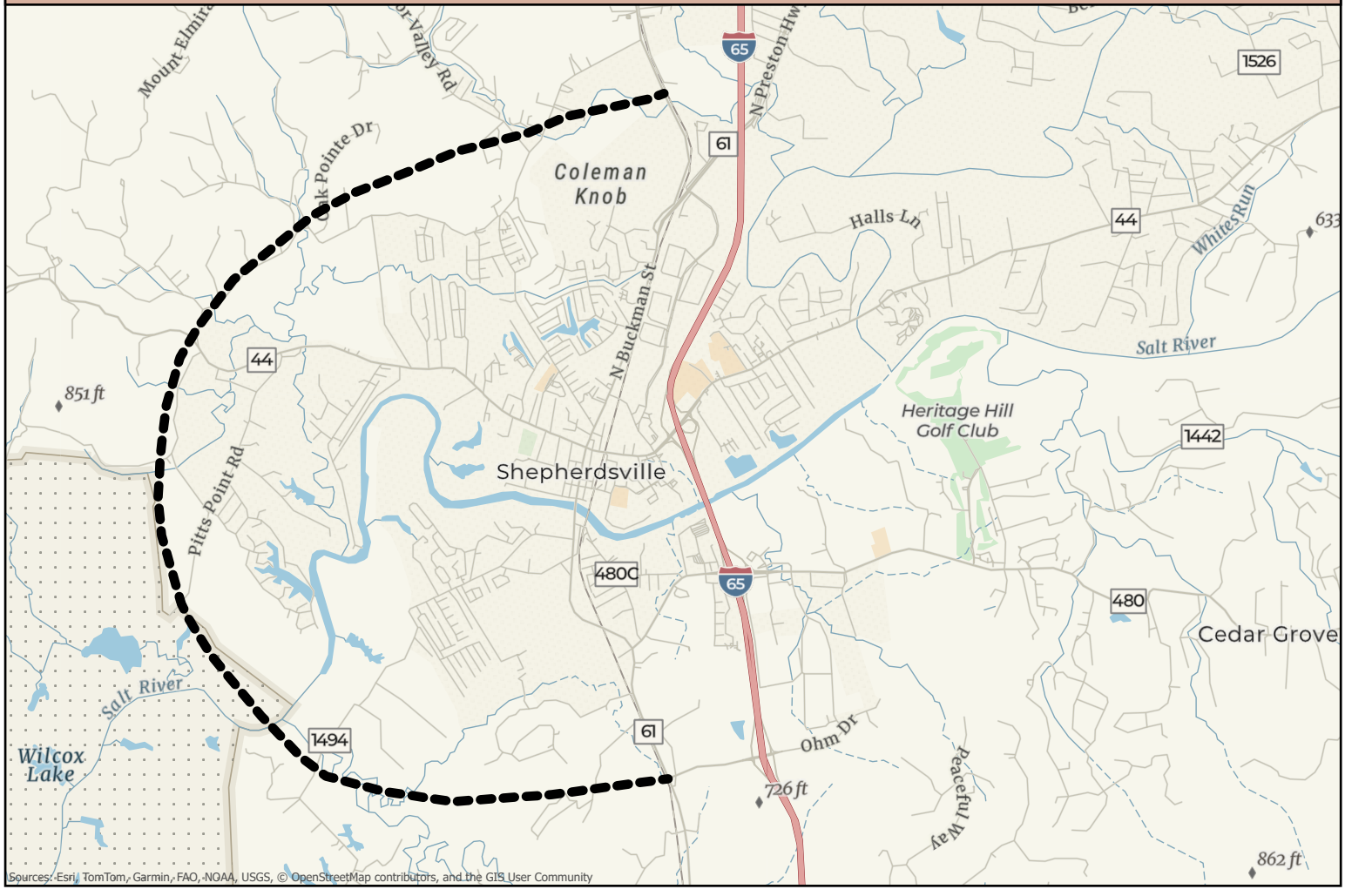
Bypass Route 4



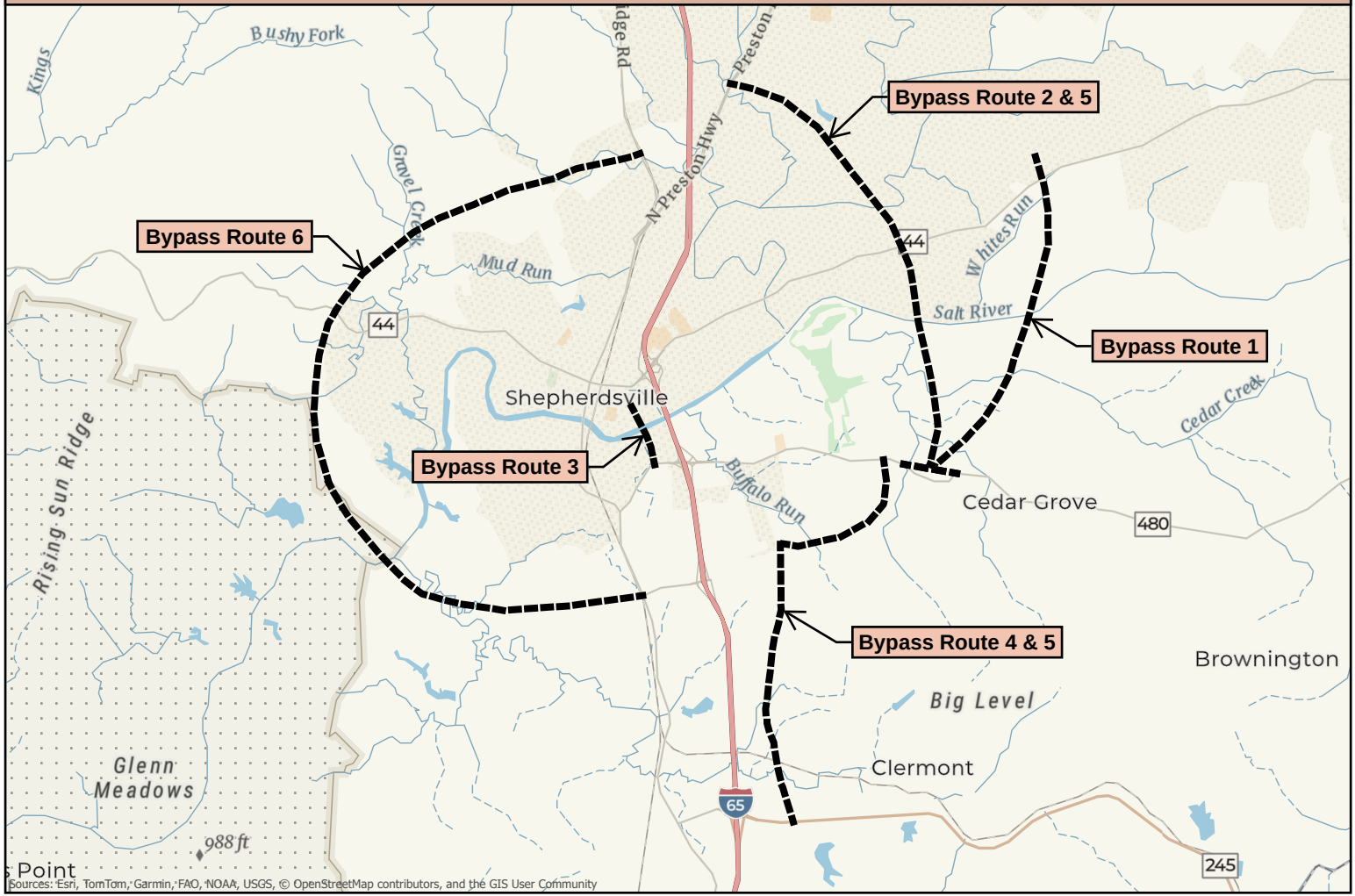
Bypass Route 5

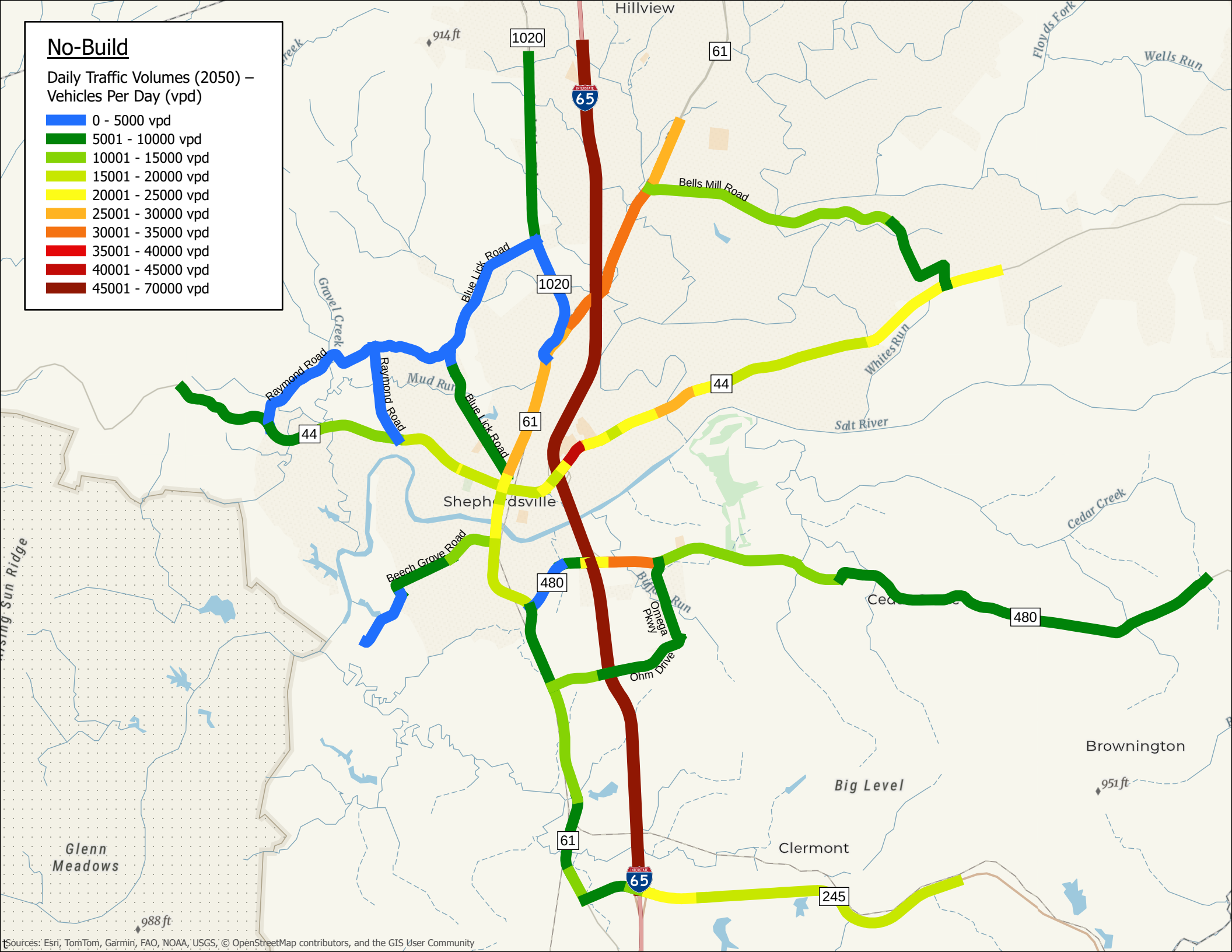


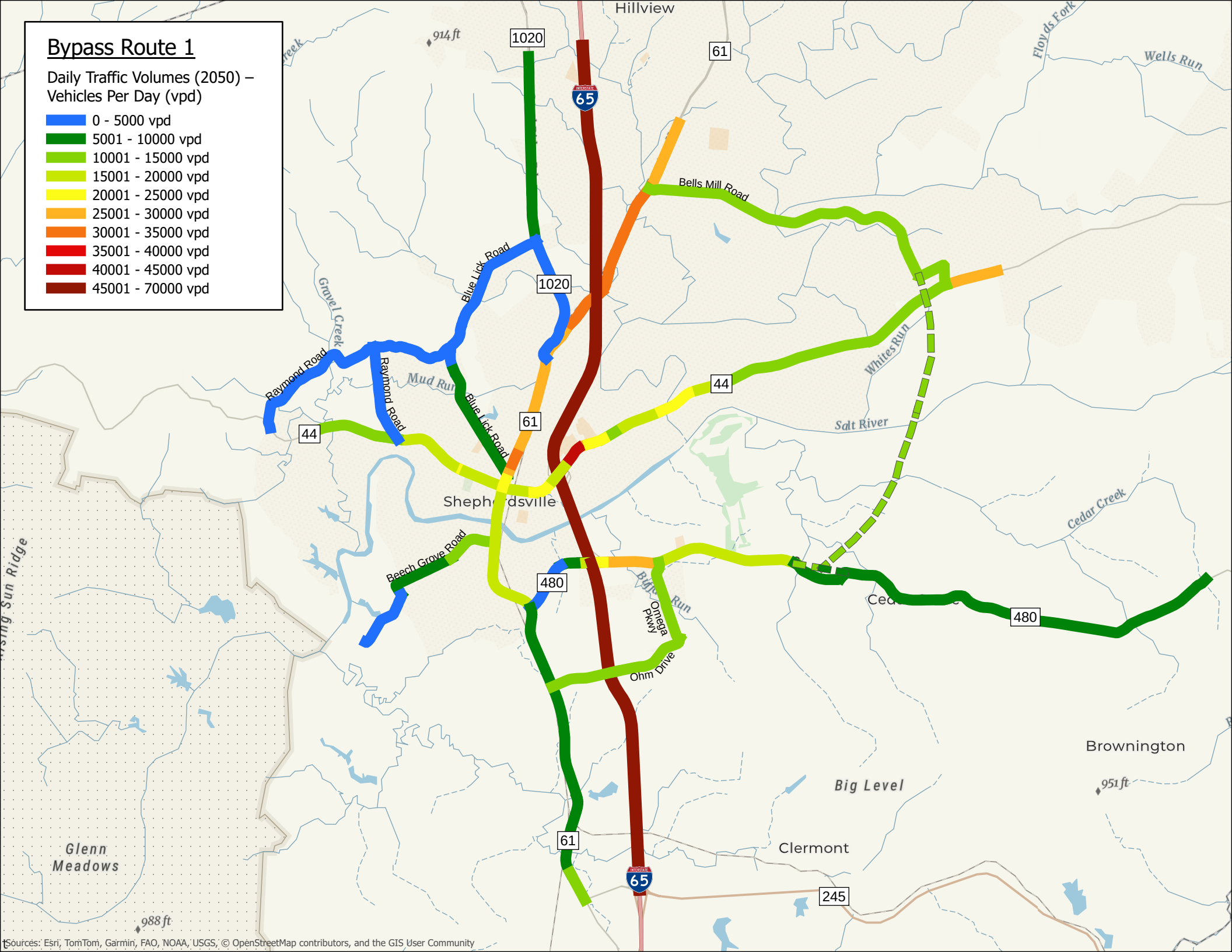
Bypass Route 6

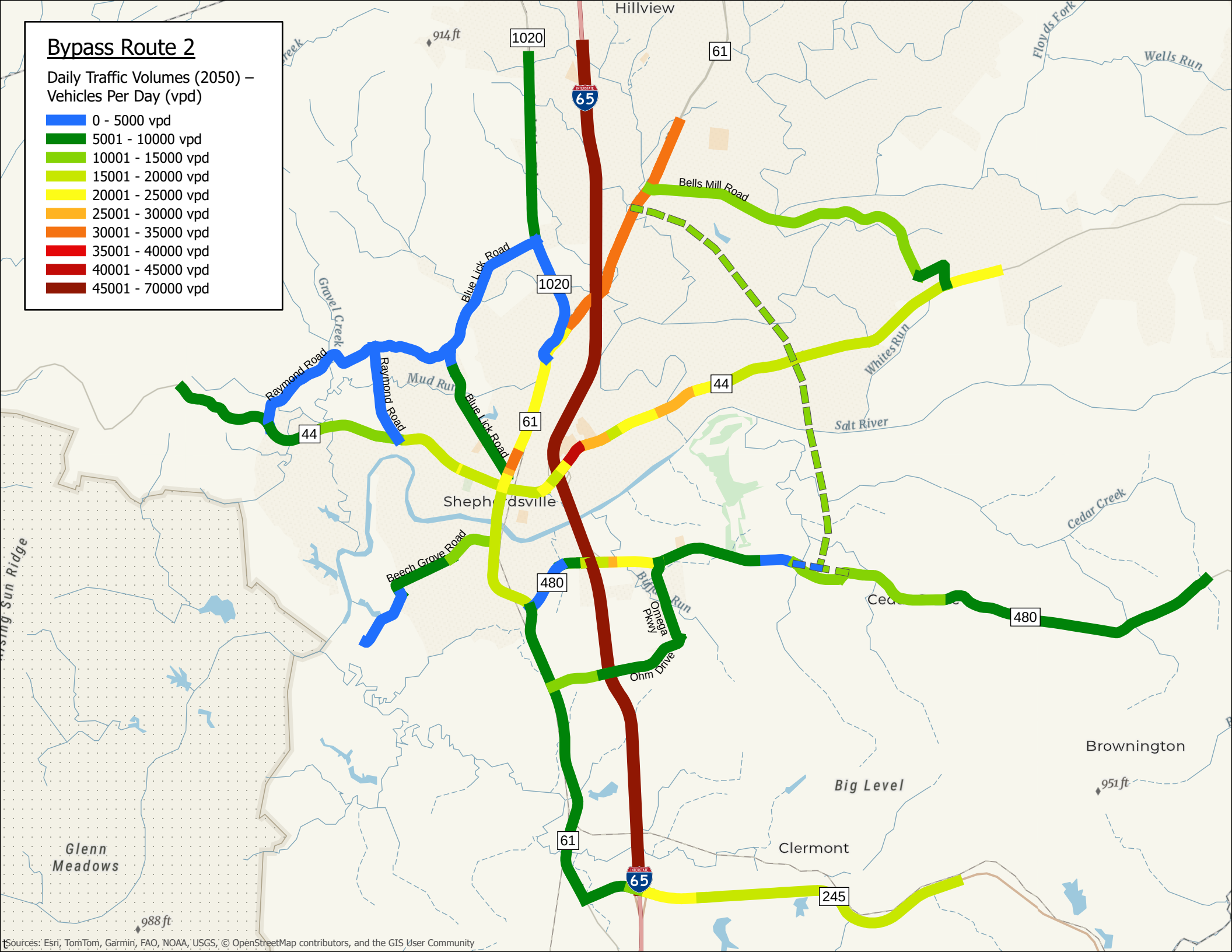


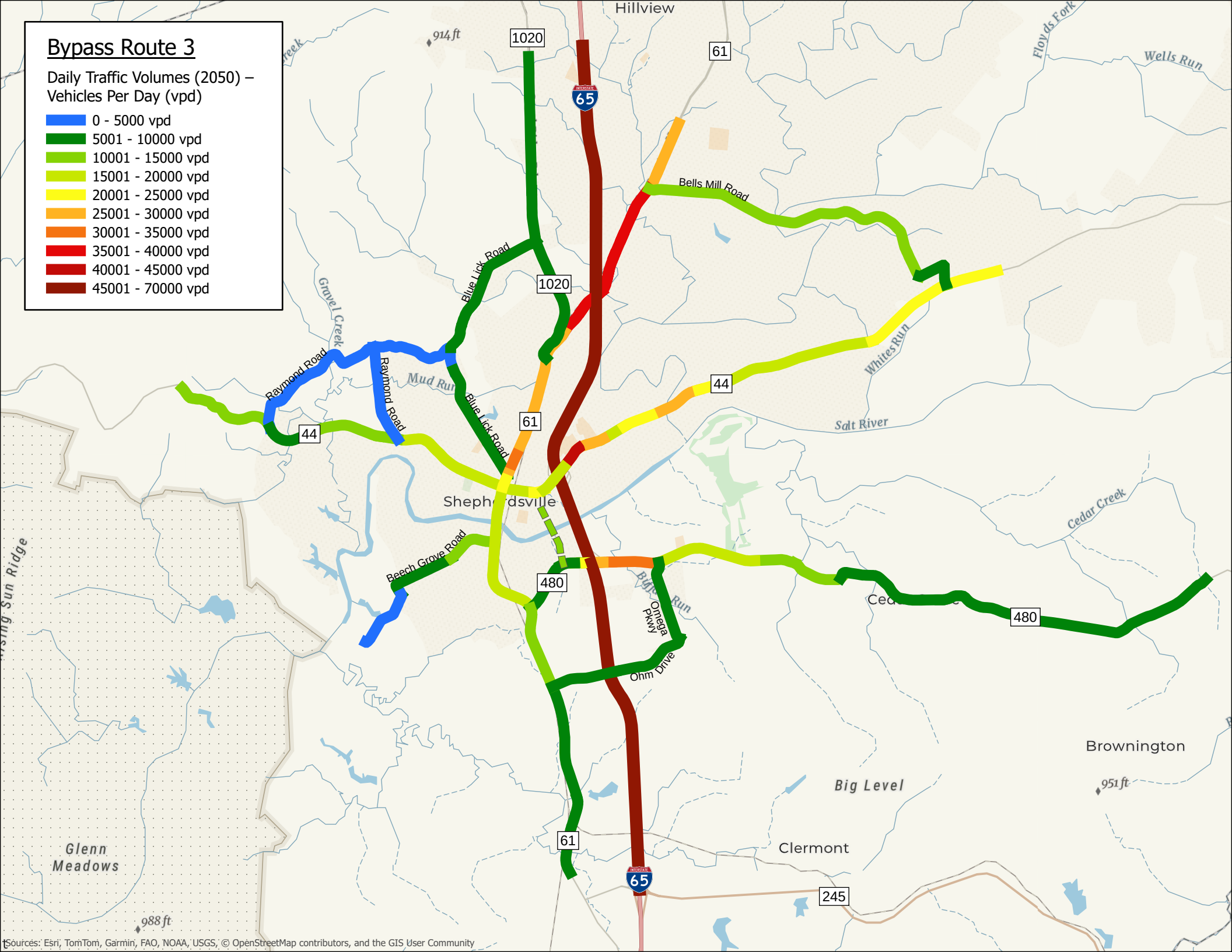
Bypass Routes – ALL SEGMENTS

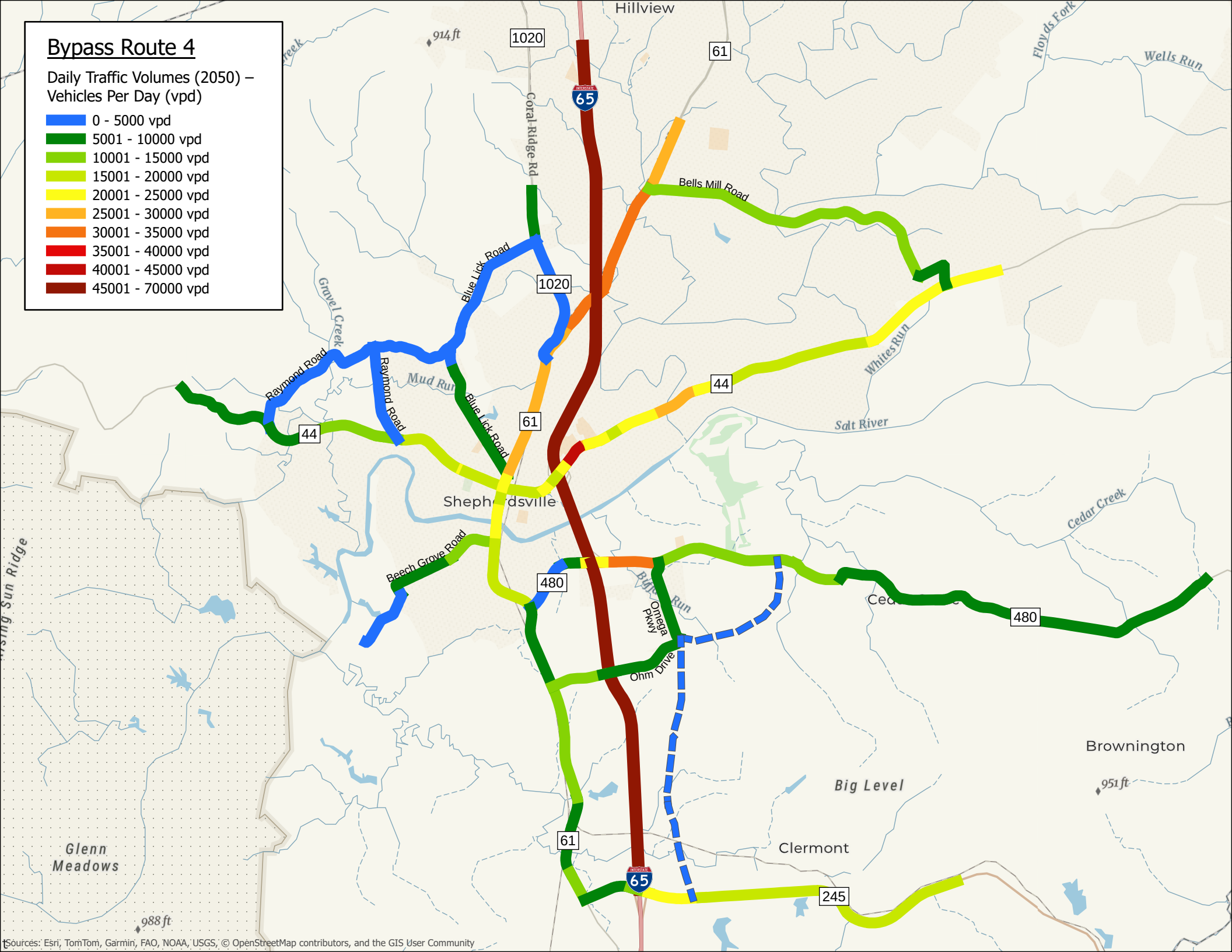


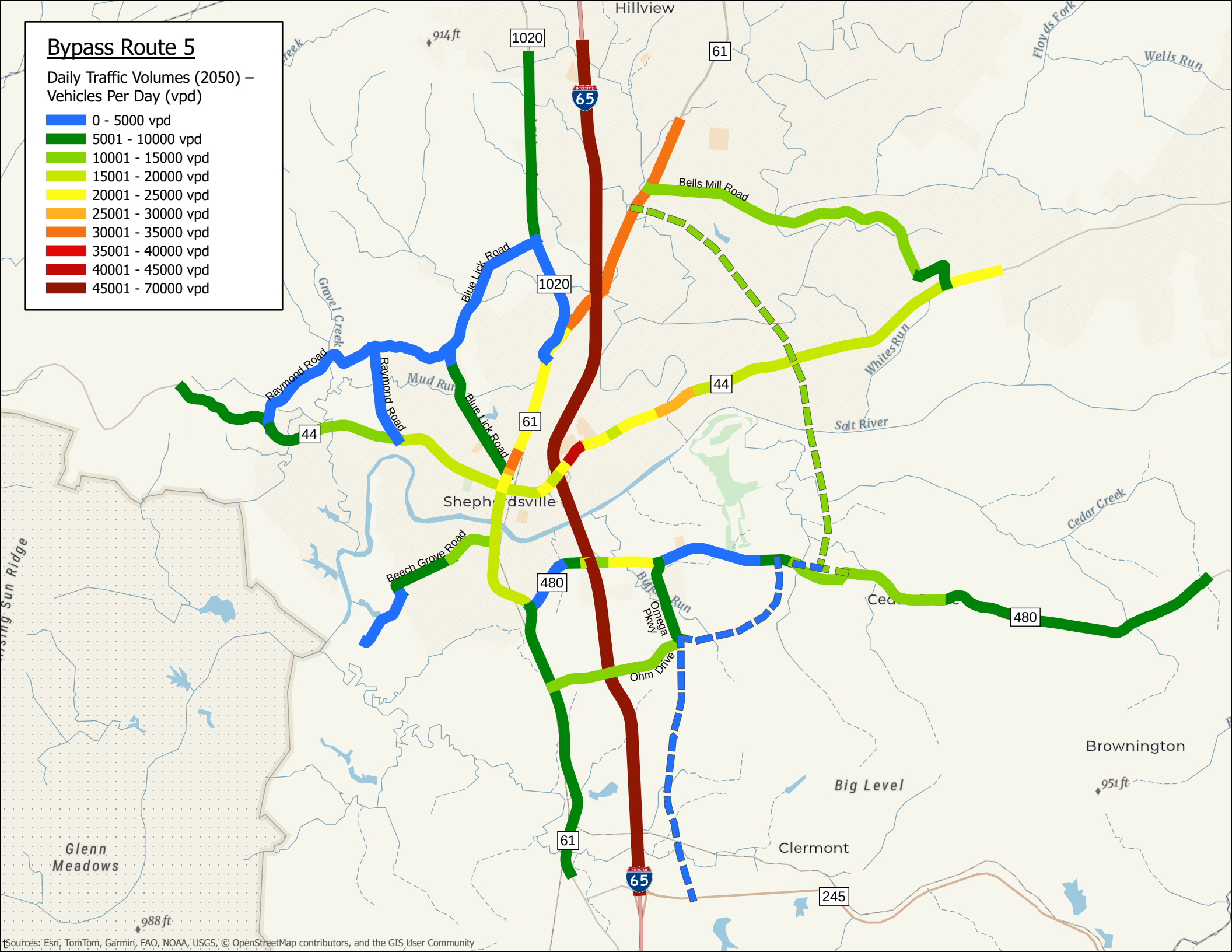

No-Build
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Bluff Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Rising Sun Ridge
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

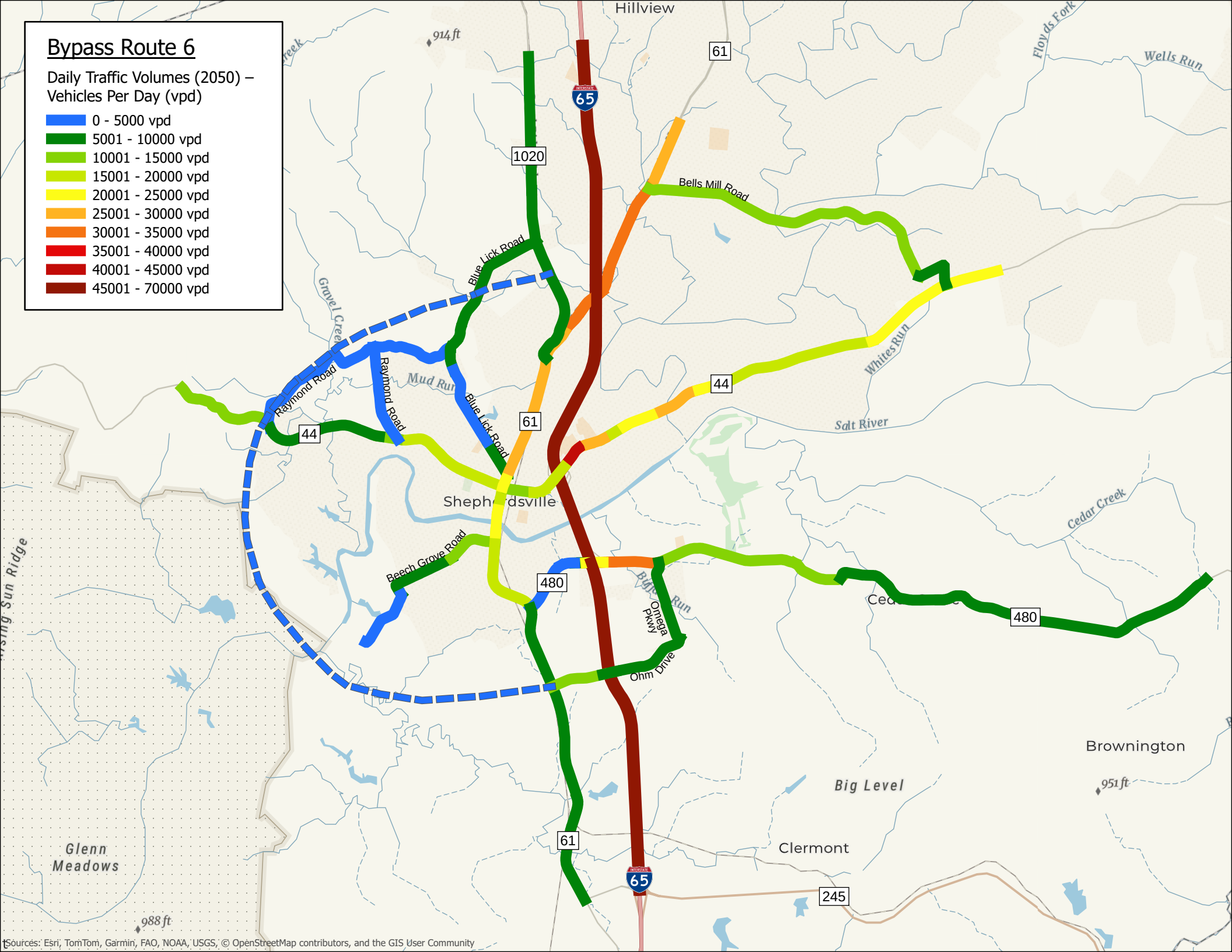

Bypass Route 1
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Buffalo Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

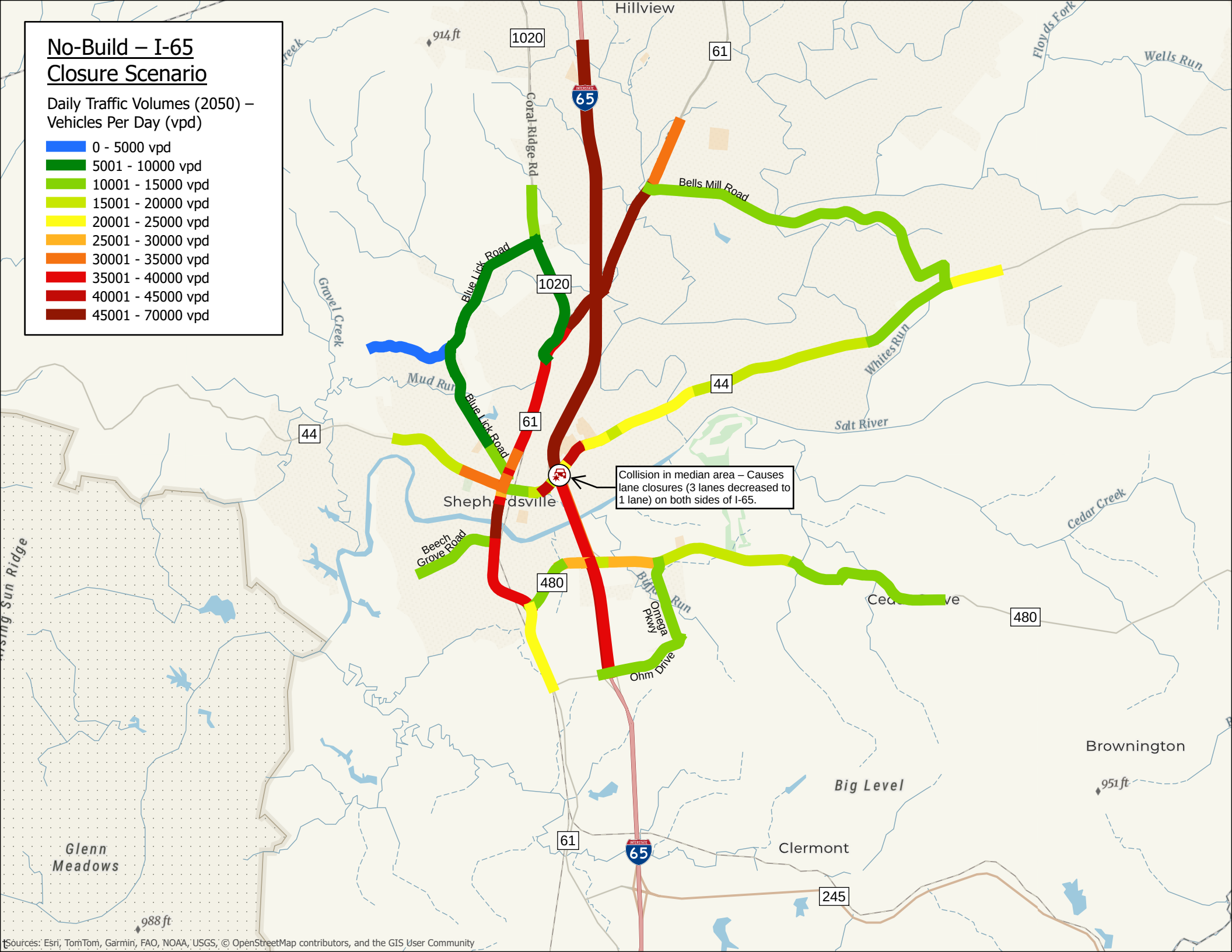

Bypass Route 2
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Bluff Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

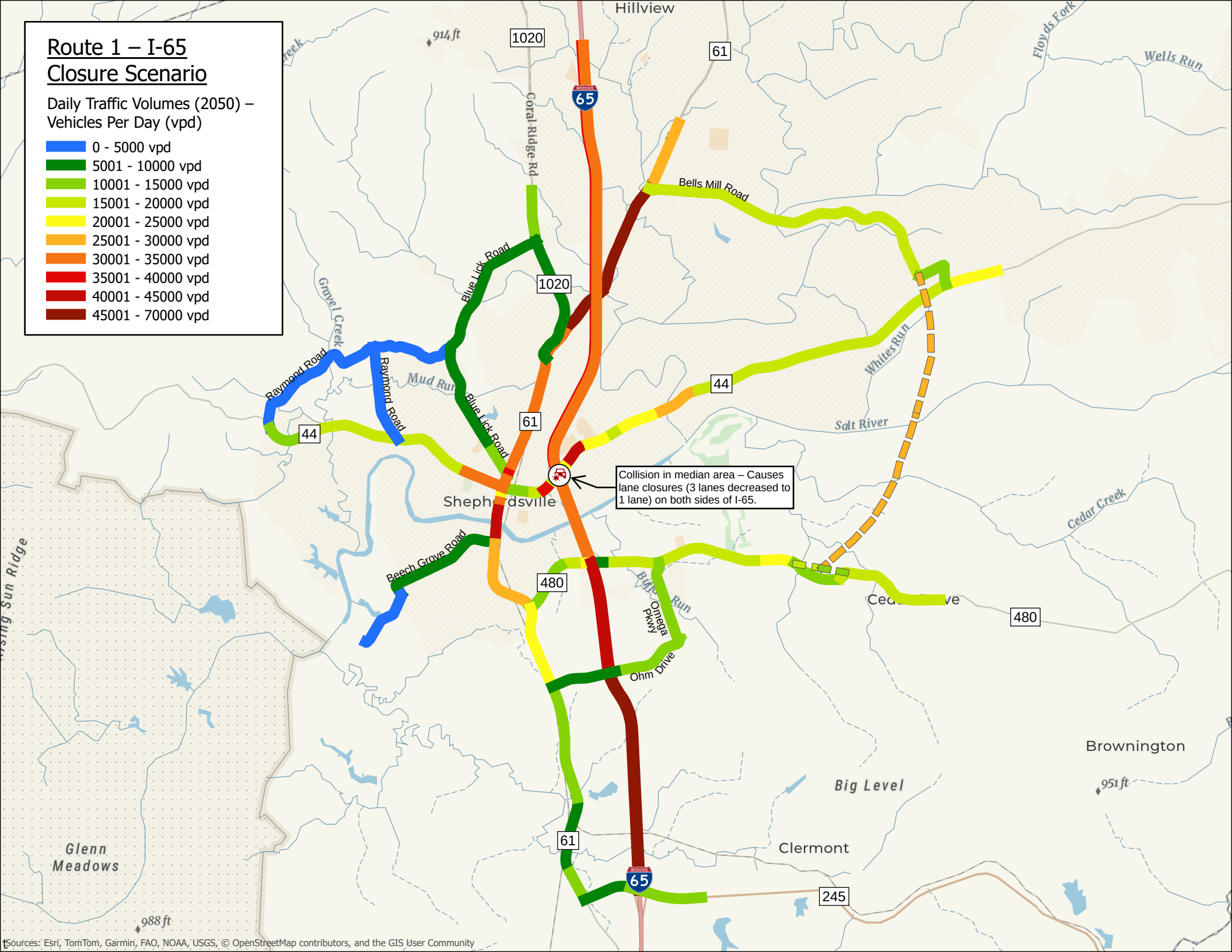

Bypass Route 3
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Bluff Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

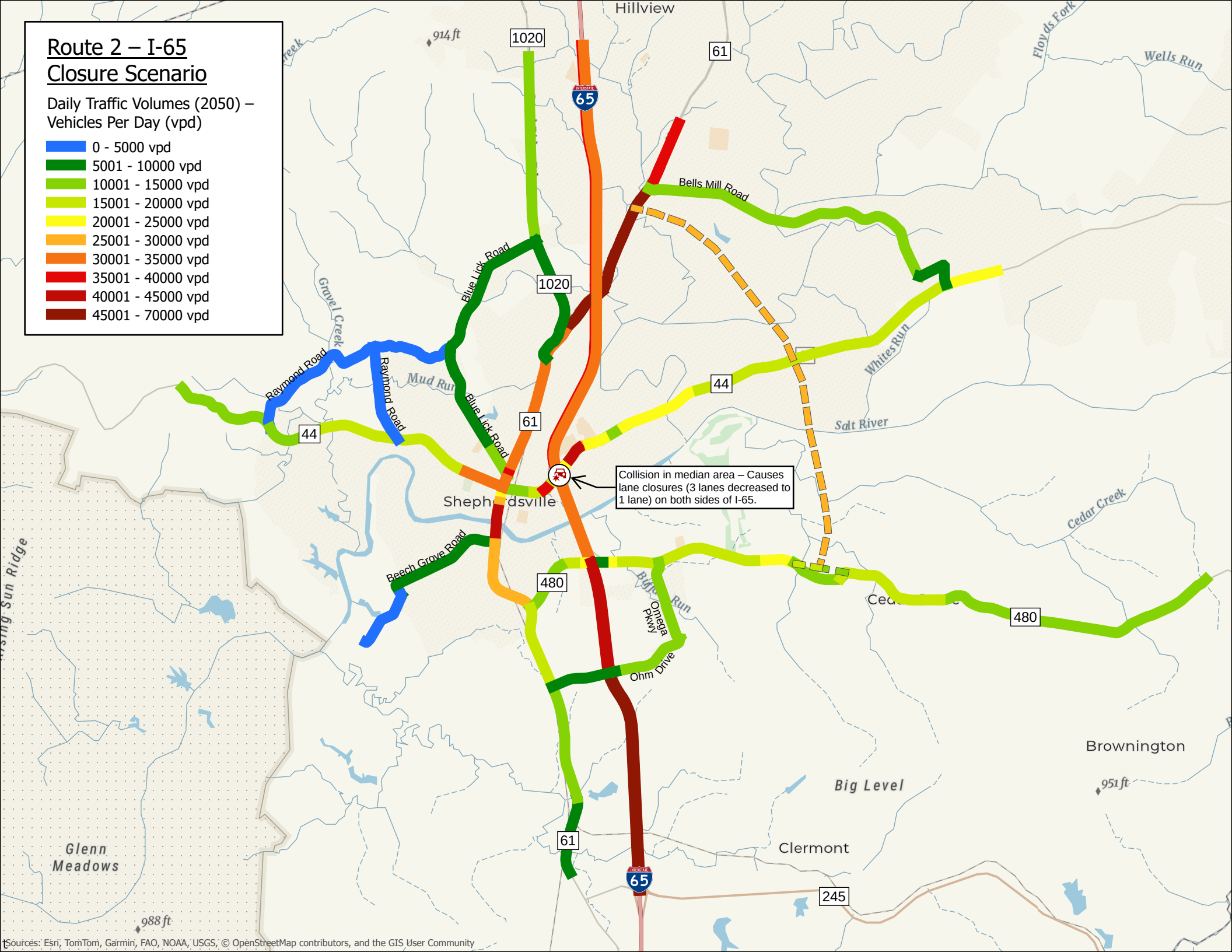

Bypass Route 4
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Coral Ridge Rd
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
1020
Gravel Creek
Raymond Road
Raymond Road
Mud Run
Blue Lick Road
44
61
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Buffalo Run
Omega Pkwy
Ohm Drive
480
Brownington
951 ft
Big Level
Clermont
61
65
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

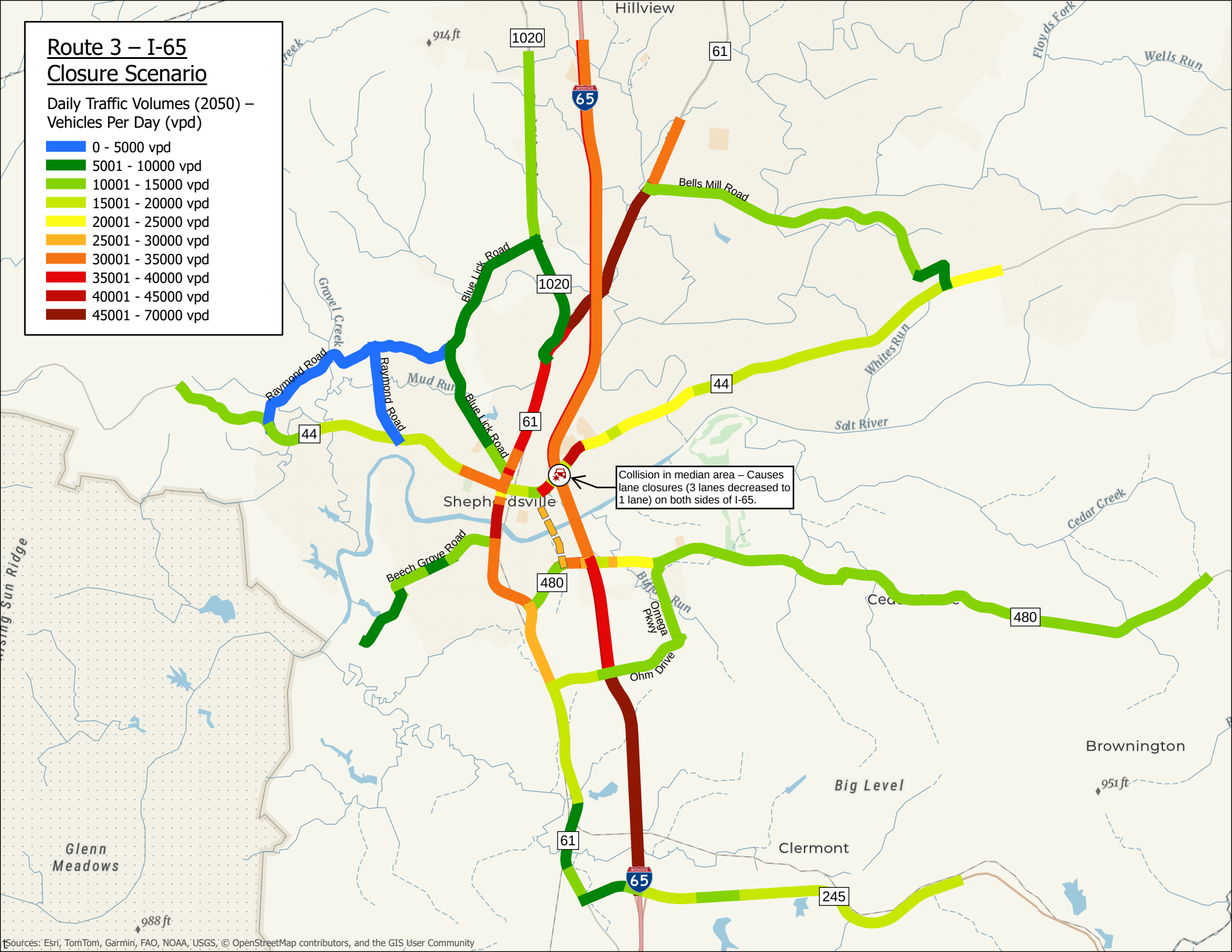

Bypass Route 5
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

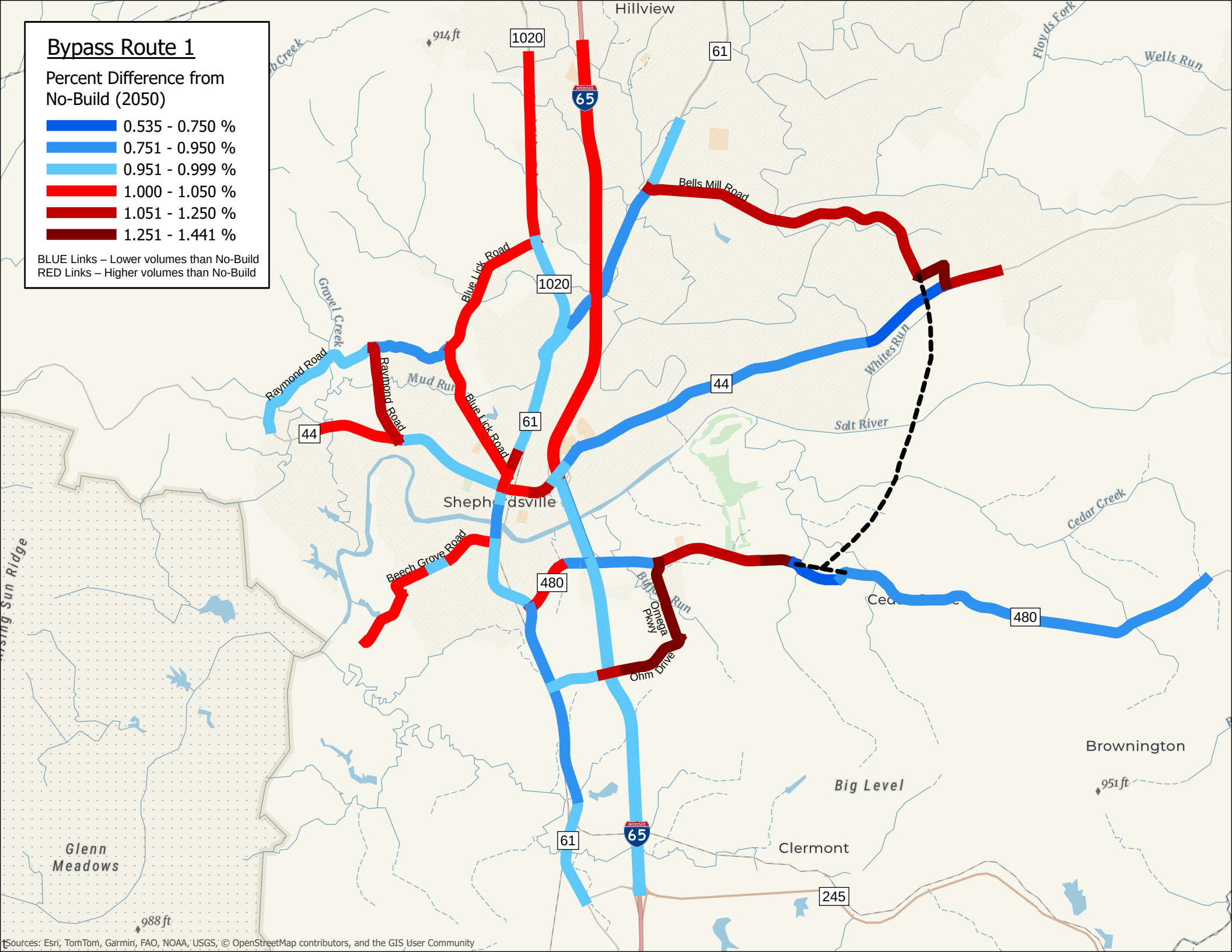

Bypass Route 6
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
61
65
1020
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Bluff Run
Omega Pkwy
Ohm Drive
Brownington
Big Level
951 ft
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

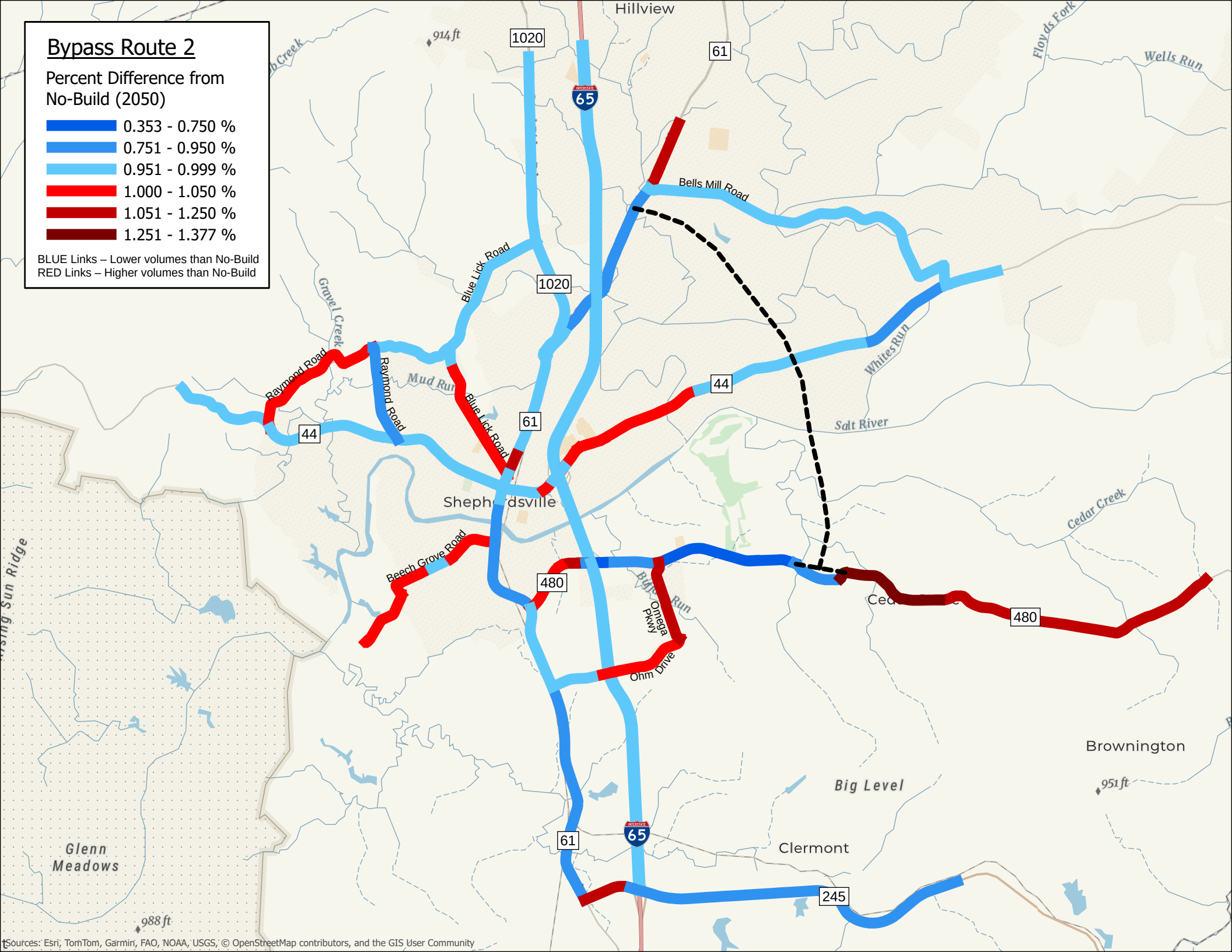

No-Build – I-65 Closure Scenario
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Hillview
Coral Ridge Rd
Bells Mill Road
Blue Lick Road
Gravel Creek
Mud Run
Whites Run
Salt River
Floyds Fork
Wells Run
Cedar Creek
Beech Grove Road
Omega Pkwy
Ohm Drive
Big Level
Brownington
Clermont
Glenn Meadows
914 ft
951 ft
988 ft
1020
61
44
480
245
65
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

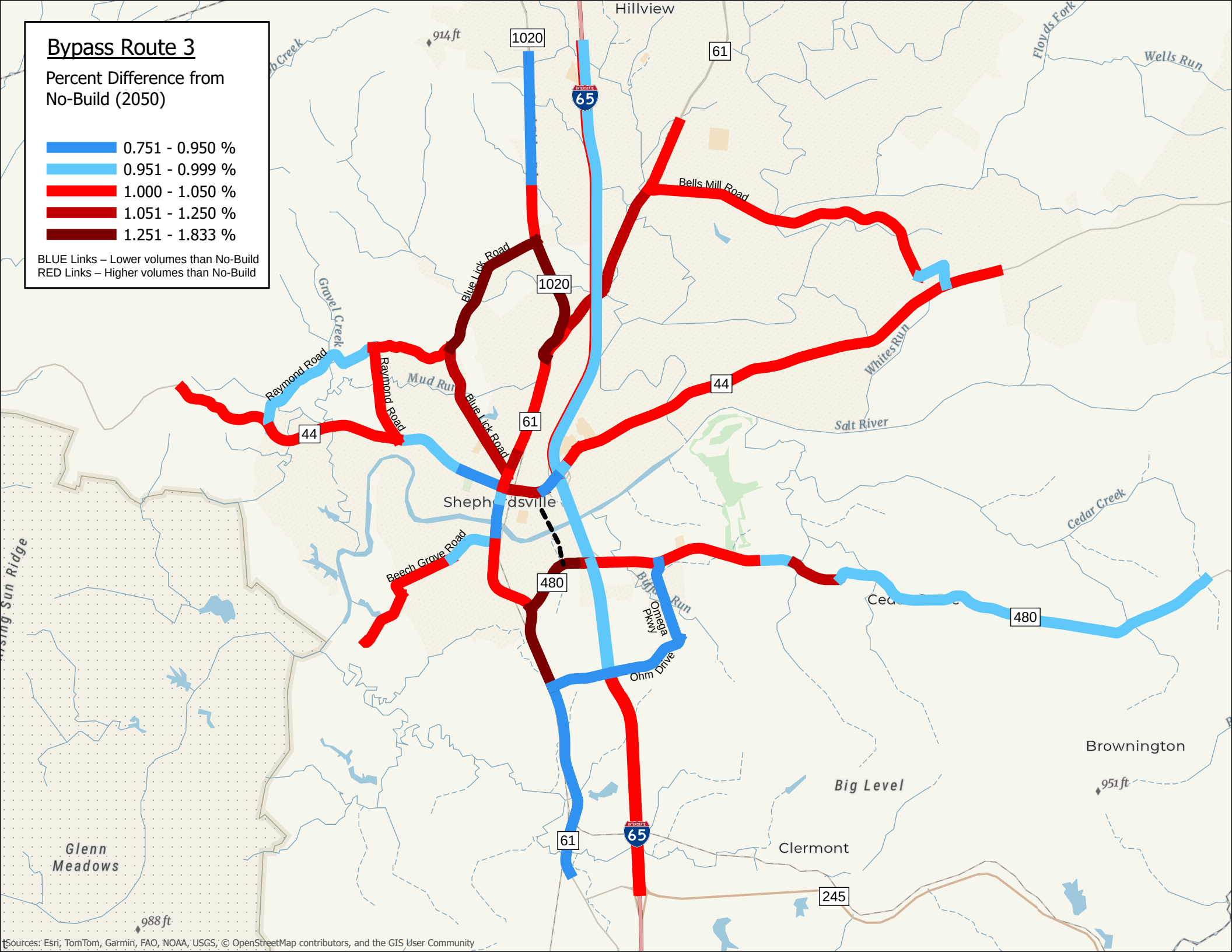

Route 1 – I-65
Closure Scenario
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Hillview
Coral Ridge Rd
Bells Mill Road
Blue Lick Road
Raymond Road
Gravel Creek
Mud Run
Whites Run
Salt River
Cedar Creek
Beech Grove Road
Omega Pkwy
Ohm Drive
Brownington
Big Level
Clermont
Glenn Meadows
Floyds Fork
Wells Run
914 ft
951 ft
988 ft
1020
61
65
44
480
245
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

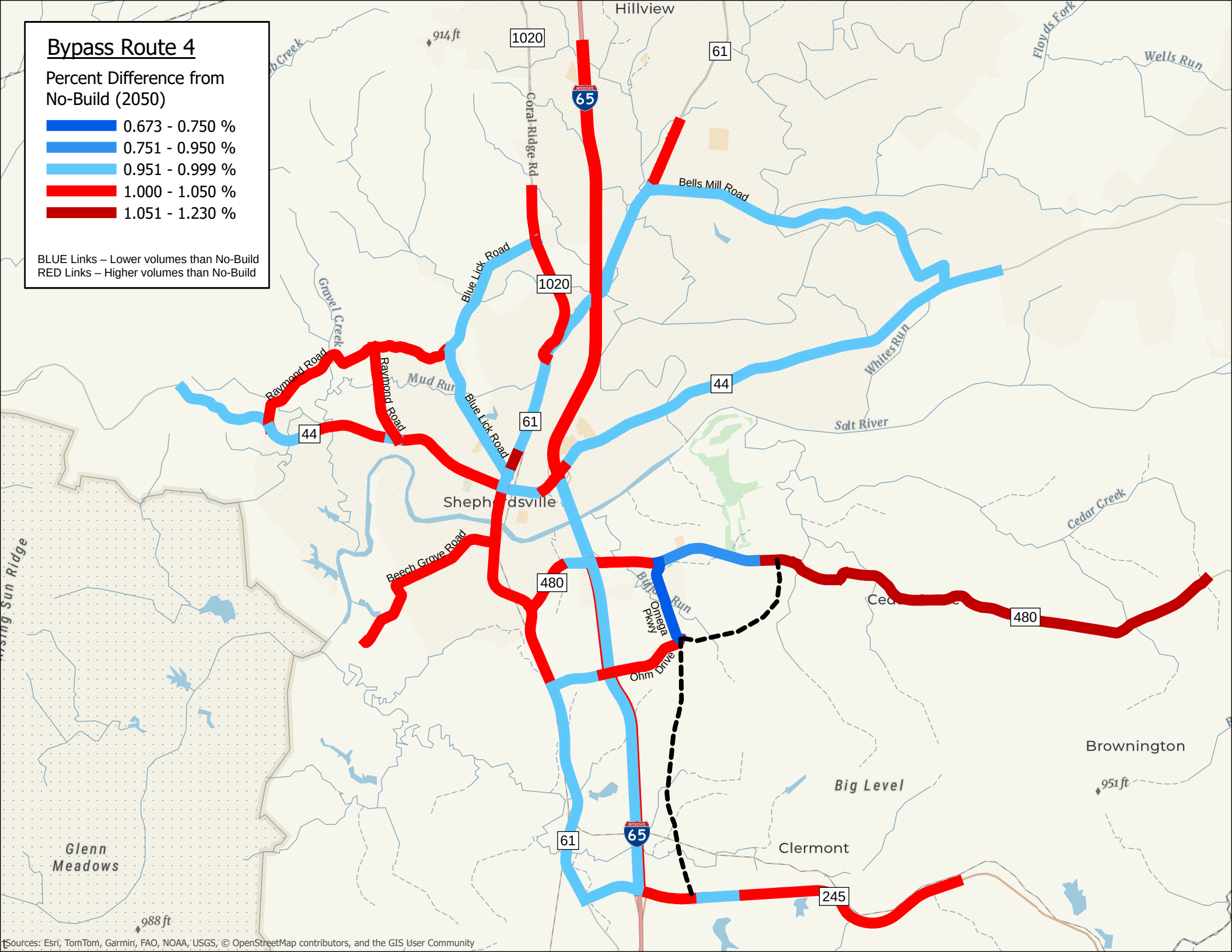

Route 2 – I-65
Closure Scenario
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Shepherdsville
Cedar Creek
Beech Grove Road
480
Buffalo Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Rising Sun Ridge
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

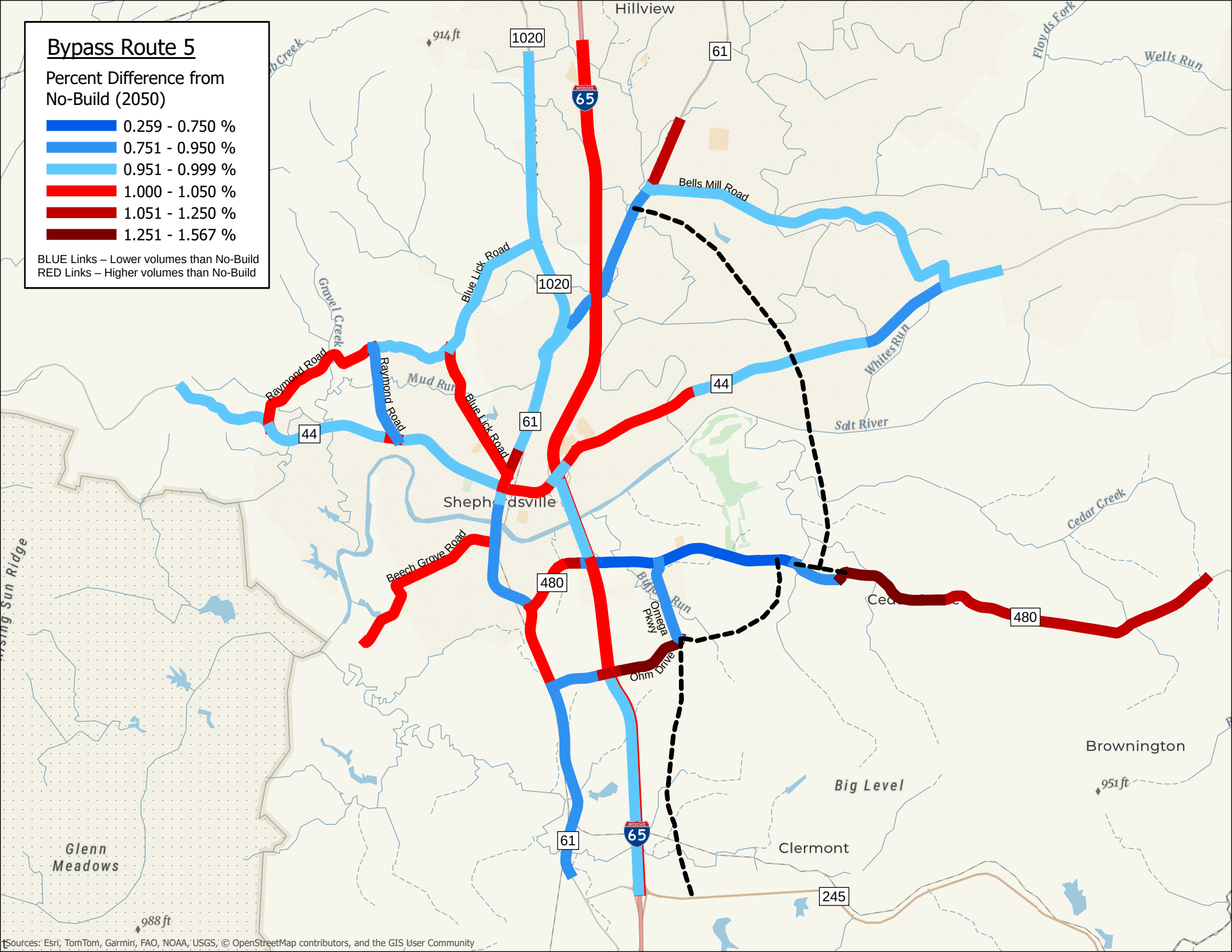

Route 3 – I-65
Closure Scenario
Daily Traffic Volumes (2050) – Vehicles Per Day (vpd)
0 - 5000 vpd
5001 - 10000 vpd
10001 - 15000 vpd
15001 - 20000 vpd
20001 - 25000 vpd
25001 - 30000 vpd
30001 - 35000 vpd
35001 - 40000 vpd
40001 - 45000 vpd
45001 - 70000 vpd
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Shepherdsville
Cedar Creek
Beech Grove Road
480
Buffalo Run
Omega Pkwy
Ohm Drive
Rising Sun Ridge
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

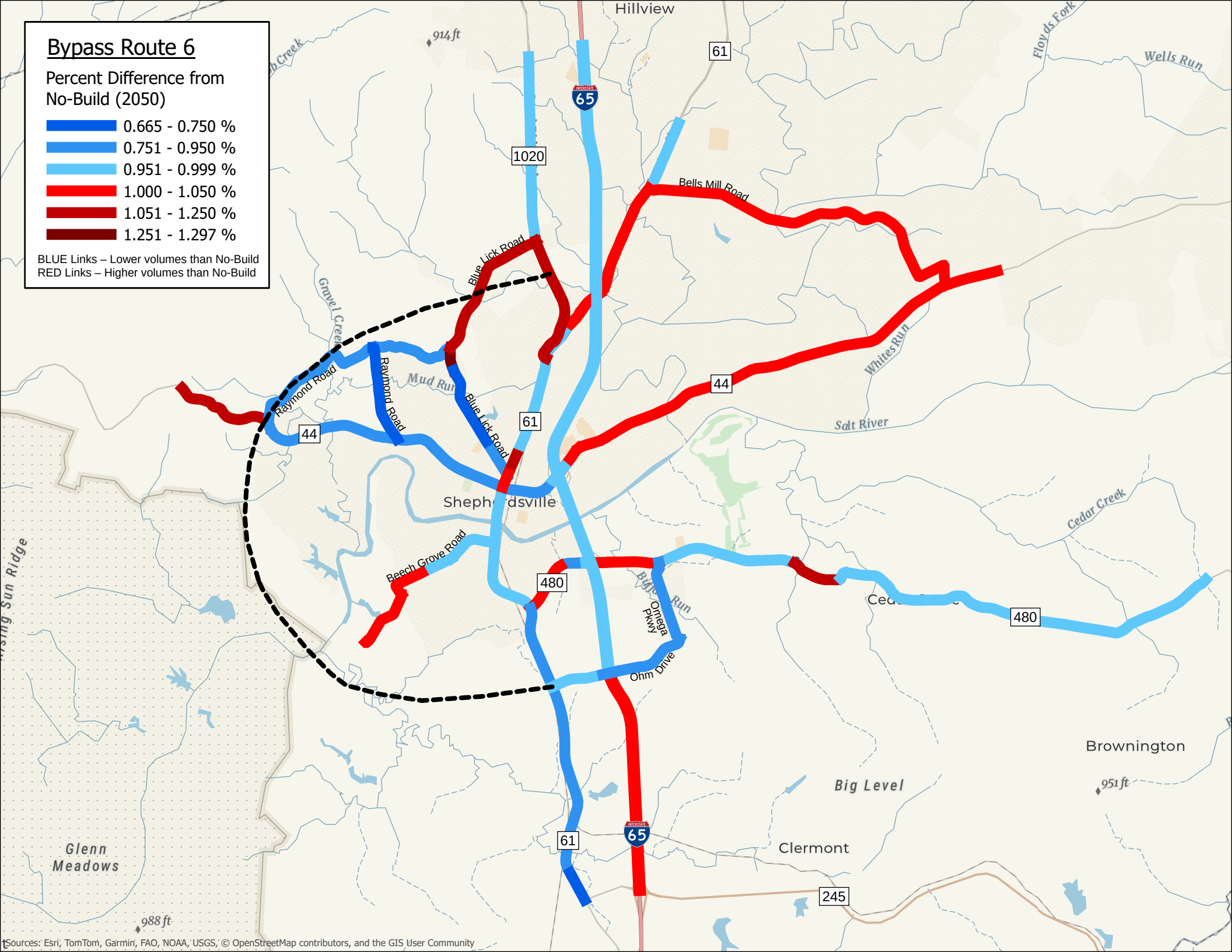

Bypass Route 1
Percent Difference from No-Build (2050)
0.535 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.441 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Bluff Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

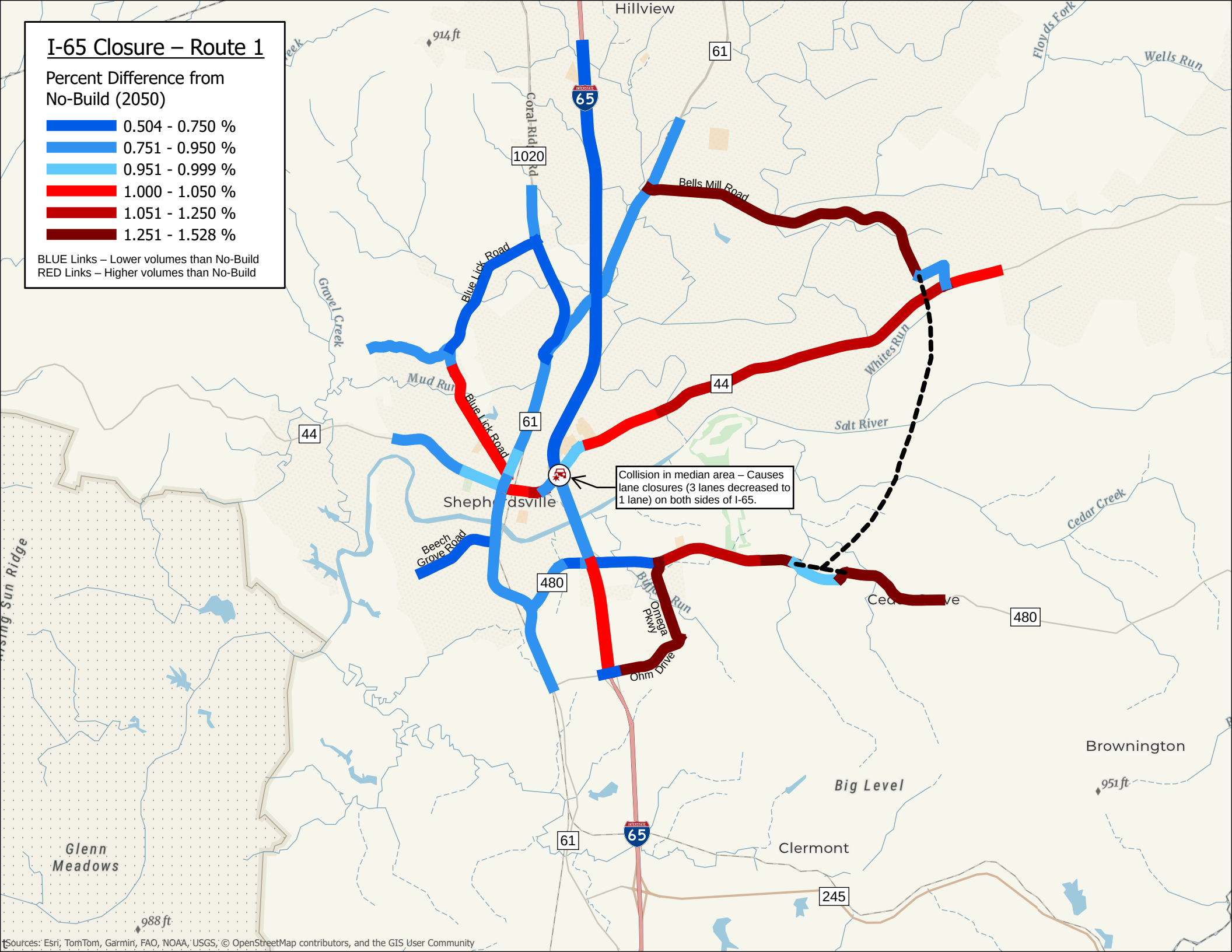

Bypass Route 2
Percent Difference from No-Build (2050)
0.353 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.377 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Bluff Run
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

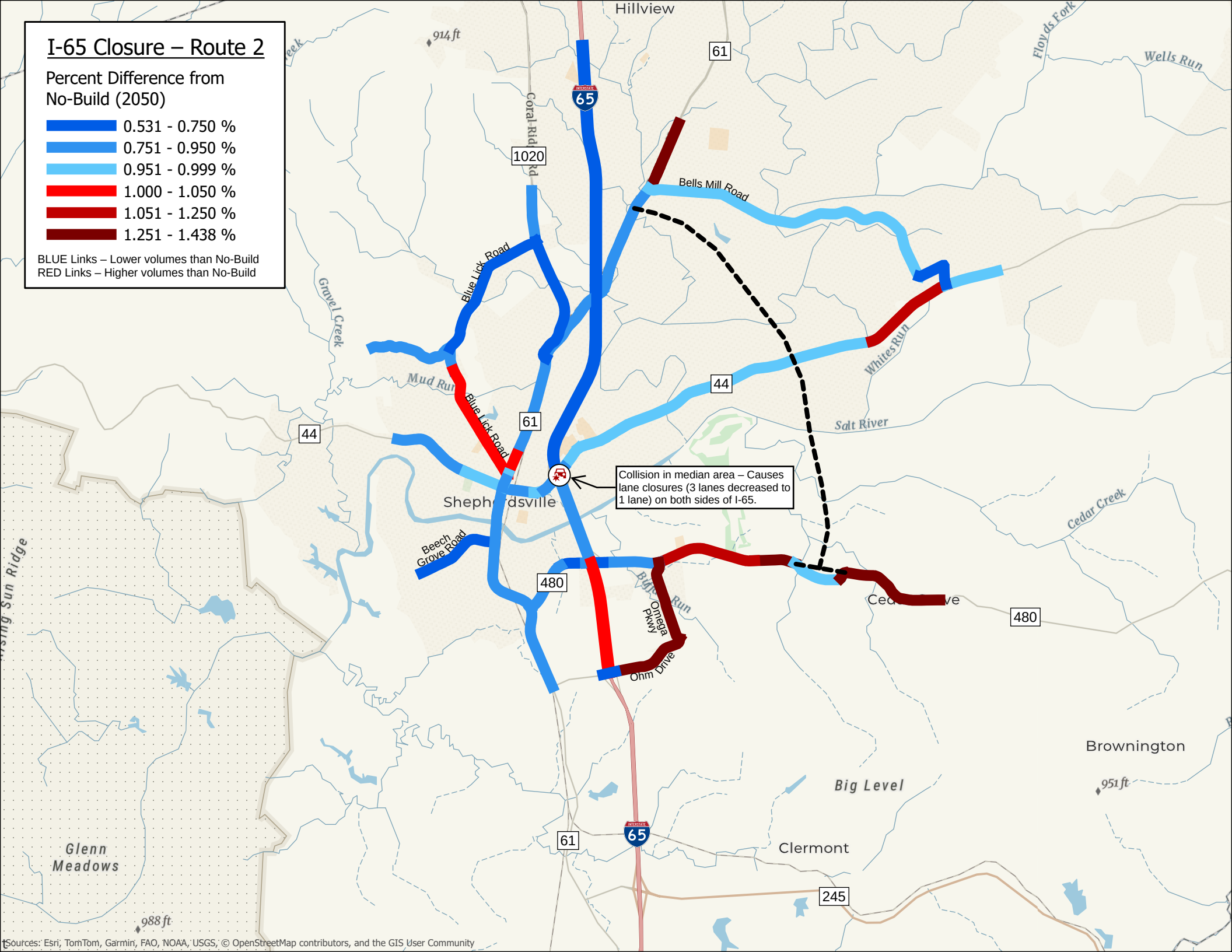

Bypass Route 3
Percent Difference from No-Build (2050)
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.833 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
1020
61
65
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Omega Pkwy
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

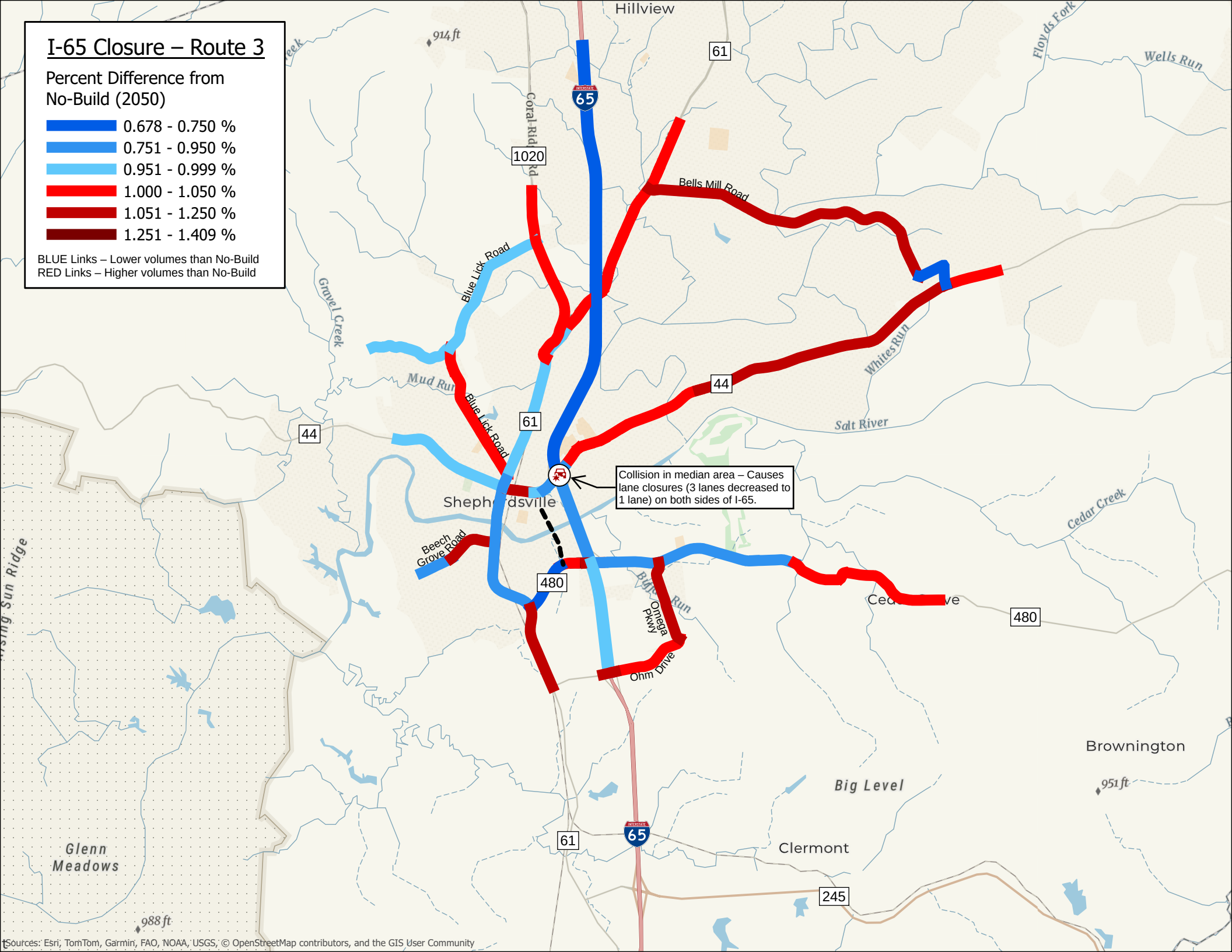

Bypass Route 4
Percent Difference from No-Build (2050)
0.673 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.230 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
1020
61
65
Coral Ridge Rd
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Ohm Drive
Brownington
Big Level
951 ft
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


Bypass Route 5
Percent Difference from No-Build (2050)
0.259 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.567 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
1020
61
65
Bells Mill Road
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Salt River
Whites Run
Floyds Fork
Wells Run
Cedar Creek
Beech Grove Road
480
Omega Pkwy
Ohm Drive
Brownington
Big Level
Clermont
245
Glenn Meadows
914 ft
951 ft
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


Bypass Route 6
Percent Difference from No-Build (2050)
0.665 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.297 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
61
65
1020
Bells Mill Road
Floyds Fork
Wells Run
Blue Lick Road
Gravel Creek
Raymond Road
Mud Run
44
Whites Run
Salt River
Shepherdsville
Cedar Creek
Beech Grove Road
480
Ohm Drive
Brownington
951 ft
Big Level
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


I-65 Closure – Route 1
Percent Difference from No-Build (2050)
0.504 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.528 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
61
65
1020
Coral Ridge Rd
Floyds Fork
Wells Run
Bells Mill Road
Blue Lick Road
Gravel Creek
Mud Run
Blue Lick Road
44
61
Whites Run
Salt River
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Shepherdsville
Beech Grove Road
480
Cedar Creek
Omega Pkwy
Ohm Drive
480
Brownington
951 ft
Big Level
61
65
Clermont
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

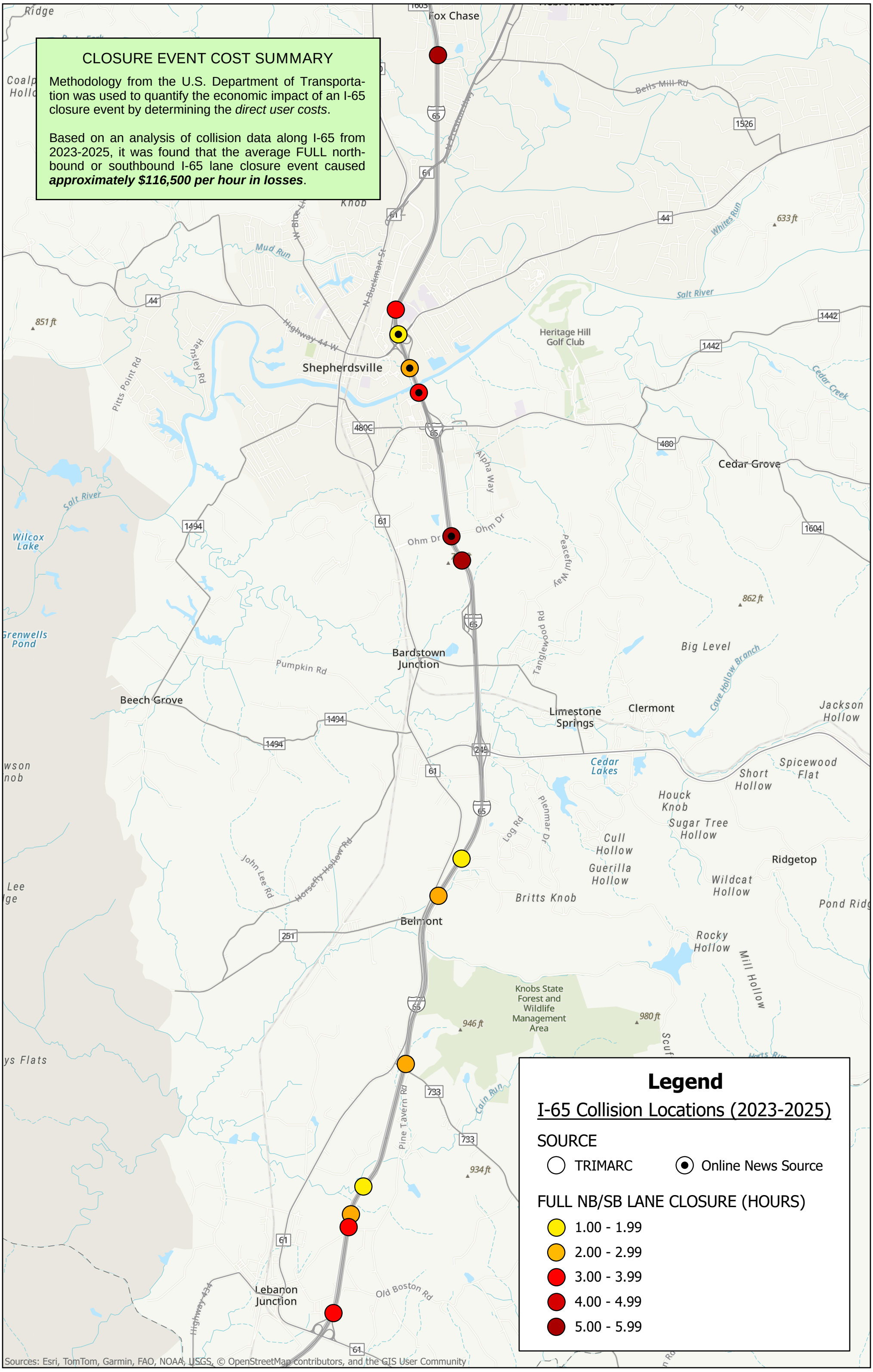

I-65 Closure – Route 2
Percent Difference from No-Build (2050)
0.531 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.438 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Hillview
914 ft
61
65
1020
Coral Ridge Rd
Bells Mill Road
Floyds Fork
Wells Run
Blue Lick Road
Gravel Creek
Mud Run
Blue Lick Road
44
61
Whites Run
Salt River
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Shepherdsville
Beech Grove Road
480
Cedar Creek
Omega Pkwy
Ohm Drive
480
Brownington
951 ft
Big Level
Clermont
61
65
245
Glenn Meadows
988 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


I-65 Closure – Route 3
Percent Difference from No-Build (2050)
0.678 - 0.750 %
0.751 - 0.950 %
0.951 - 0.999 %
1.000 - 1.050 %
1.051 - 1.250 %
1.251 - 1.409 %
BLUE Links – Lower volumes than No-Build
RED Links – Higher volumes than No-Build
Collision in median area – Causes lane closures (3 lanes decreased to 1 lane) on both sides of I-65.
Hillview
Shepherdsville
Clermont
Brownington
Big Level
Glenn Meadows
Gravel Creek
Mud Run
Salt River
Cedar Creek
Wells Run
Whites Run
Floyds Fork
Coral Ridge Rd
Blue Lick Road
Bells Mill Road
Beech Grove Road
Omega Pkwy
Ohm Drive
914 ft
951 ft
988 ft
65
61
44
480
1020
245
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

CLOSURE EVENT COST SUMMARY

Methodology from the U.S. Department of Transportation was used to quantify the economic impact of an I-65 closure event by determining the *direct user costs*.

Based on an analysis of collision data along I-65 from 2023-2025, it was found that the average FULL northbound or southbound I-65 lane closure event caused ***approximately $116,500 per hour in losses***.



Legend

I-65 Collision Locations (2023-2025)

SOURCE

- ○ TRIMARC
- ◉ Online News Source

FULL NB/SB LANE CLOSURE (HOURS)

- 1.00 - 1.99
- 2.00 - 2.99
- 3.00 - 3.99
- 4.00 - 4.99
- 5.00 - 5.99

APPENDIX D
TRAFFIC MODELING RESULTS

1	KY-61	9.451	10	Bells Mill Road	7.502	8			
2	Bells Mill Road	7.502	8	Lodie Drive	NO %	2			
3	KY-61	9.451	10	Conestoga Parkway	NO %	2			
4	KY-61	6.626	7	Adam Shepherd Parkway	NO %	2			
5	KY-61	6.626	7	KY-44 (EB)	6.830	7	KY-44 (WB)	7.047	8
6	KY-61	6.626	7	3rd Street	NO %	2			
7	KY-61	6.626	7	2nd Street	NO %	2			
8	KY-61	6.626	7	KY-480C	NO %	2			
9	KY-61 (SB)	6.626	7	KY-61 (NB)	7.796	8	KY-480	13.356	14
10	KY-61	7.796	8	Ohm Drive	11.669	12			
11	KY-44	6.830	7	Salt Well Road	NO %	2			
12	KY-44	6.830	7	Lee Street	NO %	2			
13	KY-44	7.047	8	Adam Shepherd Parkway	NO %	2	Paroquet Springs	NO %	2
14	KY-44	7.047	8	I-65 South ramps	NO %	2			
15	KY-44	7.047	8	I-65 North ramps	NO %	2			
16	KY-44	7.047	8	Bells Mill Road	NO %	2			
17	Bells Mill Road	NO %	2	Cammi Drive	NO %	2			
18	KY-480C (SB)	NO %	2	KY-480C (WB)	NO %	2	Old Preston Highway	NO %	2
19	KY-480	13.356	14	Old Preston Highway	NO %	2			
20	KY-480C (SB)	NO %	2	KY-480 (WB)	13.356	14	KY-480 (EB)	13.356	14
21	KY-480	7.419	8	Amazon.com Blvd	NO %	2	Omega Parkway	NO %	2
22	KY-480 (EB)	7.419	8	Ridge Road	NO %	2			
23	Clermont Road	12.579	13	Chapeze Lane	NO %	2			
24	W. Blue Lick Road	NO %	2	Salt Well Road	NO %	2			
25	Adam Shepherd Parkway	NO %	2	Conestoga Parkway	NO %	2			

TRUCK PERCENTAGE IS % PEAK TRUCK SINGLE + COMBO, AS RECORDED ON THE KYTC TRAFFIC COUNT WEBSITE:
https://maps.kytc.ky.gov/trafficcounts/

APPROACHES WITH NO TRUCK % HAVE AN ASSUMED 2% TRUCK PERCENTAGE

Weekday, Peak AM, Preston Highway & Bells Mill Road

	East - Bells Mill Road (Westbound)		South - North Preston Highway (Northbound)		North - North Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
7:00am	1	0	175	0	0	103	279	0.2828
7:15am	0	1	118	0	0	86	205	0.2075
7:30am	0	0	124	1	0	114	239	0.2421
7:45am	0	0	143	0	1	120	264	0.2675
Hourly Total	1	1	560	1	1	423	987	1
Hourly Total %			1			1		
PHF			0.8			0.88	0.88	

Weekday, Peak PM, Preston Highway & Bells Mill Road

	East - Bells Mill Road (Westbound)		South - North Preston Highway (Northbound)		North - North Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
4:30pm	1	0	186	0	0	187	374	0.2443
4:45pm	0	1	181	0	0	173	355	0.2318
5:00pm	0	0	215	1	0	194	410	0.2678
5:15pm	0	0	195	0	1	196	392	0.2561
Hourly Total	1	1	777	1	1	750	1531	1
Hourly Total %			1			1		
PHF			0.9			0.96	0.93	

PINK IS ASSUMED

Weekday, Peak AM, Bells Mill Road & N. Preston Highway

	West - Bells Mill Road (Eastbound)			East - Bells Mill Road (Westbound)			South - Old Preston Highway (Northbound)			North - Old Preston Highway (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
7:00am	1	0	0	0	1	148	0	0	0	6	1	0	157	0.2933
7:15am	0	1	0	0	0	118	1	0	0	13	0	0	133	0.2495
7:30am	0	0	1	0	0	100	0	1	0	25	0	0	127	0.2381
7:45am	0	0	0	1	0	92	0	0	1	23	0	1	118	0.219
Hourly Total	1	1	1	1	1	458	1	1	1	67	1	1	535	1
Hourly Total %						1				1				
PHF						0.77				0.67			0.85	

Weekday, Peak PM, Bells Mill Road & N. Preston Highway

	West - Bells Mill Road (Eastbound)			East - Bells Mill Road (Westbound)			South - Old Preston Highway (Northbound)			North - Old Preston Highway (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:30pm	1	0	0	0	1	39	0	0	0	61	1	0	103	0.271
4:45pm	0	1	0	0	0	41	1	0	0	43	0	0	86	0.2276
5:00pm	0	0	1	0	0	44	0	1	0	49	0	0	95	0.252
5:15pm	0	0	0	1	0	42	0	0	1	50	0	1	95	0.2493
Hourly Total	1	1	1	1	1	166	1	1	1	203	1	1	379	1
Hourly Total %						1				1				
PHF						0.94				0.83			0.92	

PINK IS ASSUMED

Weekday, Peak AM, N. Preston Highway & Conestoga Parkway

	East - Conestoga Parkway (Westbound)		South - North Preston Highway (Northbound)		North - North Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
6:45am	3	19	113	4	59	57	255	0.2781
7:00am	3	22	121	4	36	76	262	0.2857
7:15am	2	20	79	3	25	61	190	0.2072
7:30am	2	19	87	4	28	70	210	0.229
Hourly Total	10	80	400	15	148	264	917	1
Hourly Total %	0.1111	0.8889	0.9639	0.0361	0.3592	0.6408		
PHF	0.83	0.91	0.83	0.94	0.63	0.87	0.88	

Weekday, Peak PM, N. Preston Highway & Conestoga Parkway

	East - Conestoga Parkway (Westbound)		South - North Preston Highway (Northbound)		North - North Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
4:45pm	7	56	111	11	48	107	340	0.2358
5:00pm	9	77	120	10	48	121	385	0.267
5:15pm	7	60	109	10	48	124	358	0.2483
5:30pm	8	59	117	10	47	118	359	0.249
Hourly Total	31	252	457	41	191	470	1442	1
Hourly Total %	0.1095	0.8905	0.9177	0.0823	0.289	0.711		
PHF	0.86	0.82	0.95	0.93	0.99	0.95	0.94	

Weekday, Peak AM, N. Buckman Street & Adam Shepherd Parkway

	West - Entrance (Eastbound)			East - Adam Shepherd Parkway (Westbound)			South - North Buckman Street (Northbound)			North - North Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
7:00am	1	0	0	16	1	27	0	77	31	100	48	0	301	0.2748
7:15am	0	1	0	14	0	28	1	61	17	57	57	0	236	0.2151
7:30am	0	0	1	29	0	24	0	69	20	50	69	0	262	0.2399
7:45am	0	0	0	28	0	31	0	68	24	56	87	1	295	0.2702
Hourly Total	1	1	1	87	1	110	1	275	92	263	261	1	1094	1
Hourly Total %				0.4416		0.5584		0.7493	0.2507	0.5019	0.4981			
PHF				0.75		0.89		0.89	0.74	0.66	0.75		0.91	

Weekday, Peak PM, N. Buckman Street & Adam Shepherd Parkway

	West - Entrance (Eastbound)			East - Adam Shepherd Parkway (Westbound)			South - North Buckman Street (Northbound)			North - North Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:45pm	1	0	0	50	1	58	0	109	33	51	106	0	409	0.2447
5:00pm	0	1	0	65	0	65	1	104	31	50	119	0	436	0.261
5:15pm	0	0	1	49	0	57	0	95	31	58	122	0	413	0.2477
5:30pm	0	0	0	45	0	65	0	92	33	57	118	1	411	0.2465
Hourly Total	1	1	1	209	1	245	1	400	128	216	465	1	1669	1
Hourly Total %				0.4604		0.5396		0.7576	0.2424	0.3172	0.6828			
PHF				0.8		0.94		0.92	0.97	0.93	0.95		0.96	

Weekday, Peak AM, N. Buckman Street & Highway-44

	West - West 4th Street (Eastbound)			East - East 4th Street (Westbound)			South - South Buckman Street (Northbound)			North - South Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:30am	18	181	19	6	28	8	6	40	32	54	41	8	441	0.2907
6:45am	24	138	17	6	26	10	8	40	35	36	39	11	390	0.2571
7:00am	20	142	12	6	28	11	6	41	37	28	31	15	377	0.2485
7:15am	17	76	11	6	37	12	11	45	26	21	34	13	309	0.2037
Hourly Total	79	537	59	24	119	41	31	166	130	139	145	47	1517	1
Hourly Total %	0.117	0.7956	0.0874	0.1304	0.6467	0.2228	0.0948	0.5076	0.3976	0.4199	0.4381	0.142		
PHF	0.82	0.74	0.78	1	0.8	0.85	0.7	0.92	0.88	0.64	0.88	0.78	**0.86**	

Weekday, Peak PM, N. Buckman Street & Highway-44

	West - West 4th Street (Eastbound)			East - East 4th Street (Westbound)			South - South Buckman Street (Northbound)			North - South Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:45pm	25	56	18	23	58	17	25	86	21	25	82	30	466	0.2479
5:00pm	28	61	20	23	54	17	27	71	23	24	95	38	481	0.2559
5:15pm	25	61	19	25	61	16	22	61	21	26	94	38	469	0.2495
5:30pm	24	60	23	27	55	18	21	64	21	25	90	36	464	0.2468
Hourly Total	102	238	80	98	228	68	95	282	86	100	361	142	1880	1
Hourly Total %	0.2429	0.5667	0.1905	0.2487	0.5787	0.1726	0.2052	0.6091	0.1857	0.1658	0.5987	0.2355		
PHF	0.91	0.98	0.87	0.91	0.93	0.94	0.88	0.82	0.93	0.96	0.95	0.93	**0.98**	

Weekday, Peak AM, N. Buckman Street & 3rd Street

	West - West 3rd Street (Eastbound)			East - 3rd Street (Westbound)			South - South Buckman Street (Northbound)			North - South Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
7:00am	1	0	1	0	0	1	0	80	0	1	47	0	131	0.2084
7:15am	0	1	0	0	0	0	0	83	1	2	49	0	136	0.2181
7:30am	0	0	2	1	0	0	1	109	6	3	56	0	178	0.2859
7:45am	0	0	1	0	1	0	1	83	8	16	69	1	180	0.2876
Hourly Total	1	1	4	1	1	1	2	355	15	22	221	1	625	1
Hourly Total %			1				0.0054	0.9543	0.0403	0.0905	0.9095			
PHF			0.5				0.5	0.81	0.47	0.34	0.8		0.87	

Weekday, Peak PM, N. Buckman Street & 3rd Street

	West - West 3rd Street (Eastbound)			East - 3rd Street (Westbound)			South - South Buckman Street (Northbound)			North - South Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:45pm	1	1	4	0	0	1	2	125	0	1	122	1	258	0.253
5:00pm	1	0	6	0	1	1	2	113	0	1	137	1	263	0.2579
5:15pm	1	0	6	1	0	0	2	98	1	1	138	1	249	0.2441
5:30pm	1	0	5	0	0	0	1	101	0	0	140	1	249	0.2451
Hourly Total	4	1	21	1	1	2	7	437	1	3	537	4	1019	1
Hourly Total %	0.16		0.84	0.3333		0.6667	0.0158	0.9842		0.0055	0.9871	0.0074		
PHF	1		0.88	0.25		0.5	0.88	0.87		0.75	0.96	1	0.97	

PINK IS ASSUMED

Weekday, Peak AM, N. Buckman Street & 2nd Street

	West - 2nd Street (Eastbound)			East - 2nd Street (Westbound)			South - South Buckman Street (Northbound)			North - South Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:30am	1	0	0	4	0	0	0	74	98	3	58	0	238	0.2627
6:45am	0	1	1	5	1	0	1	78	94	4	59	0	244	0.2694
7:00am	0	1	0	6	0	0	0	77	100	3	44	1	232	0.2561
7:15am	0	0	0	6	0	1	0	81	56	2	45	0	191	0.2118
Hourly Total	1	2	1	21	1	1	1	310	348	12	206	1	905	1
Hourly Total %		0.6667	0.3333	0.913	0.0435	0.0435		0.4711	0.5289	0.055	0.945			
PHF		0.5	0.25	0.88	0.25	0.25		0.96	0.87	0.75	0.87		0.93	

Weekday, Peak PM, N. Buckman Street & 2nd Street

	West - 2nd Street (Eastbound)			East - 2nd Street (Westbound)			South - South Buckman Street (Northbound)			North - South Buckman Street (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:45pm	1	2	4	36	0	4	1	118	37	6	117	1	327	0.25
5:00pm	1	3	6	42	0	4	1	104	33	5	133	0	332	0.2546
5:15pm	0	2	7	42	0	3	1	91	31	5	135	0	317	0.2431
5:30pm	1	2	5	45	1	4	1	96	32	7	135	0	329	0.2523
Hourly Total	3	9	22	165	1	15	4	409	133	23	520	1	1305	1
Hourly Total %	0.0882	0.2647	0.6471	0.9116	0.0055	0.0829	0.0073	0.7491	0.2436	0.0424	0.9576			
PHF	0.75	0.75	0.79	0.92	0.25	0.94	1	0.87	0.9	0.82	0.96		0.98	

PINK IS ASSUMED

Weekday, Peak AM, S. Preston Highway & Old Preston Highway South

	East - Old Preston Highway South (Westbound)		South - Preston Highway (Northbound)		North - Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
6:30am	1	6	149	1	10	51	218	0.263
6:45am	0	10	146	1	9	54	220	0.2667
7:00am	0	7	152	1	7	42	209	0.2533
7:15am	0	9	120	1	10	39	179	0.217
Hourly Total	1	32	567	4	36	186	826	1
Hourly Total %		1	0.993	0.007	0.1622	0.8378		
PHF		0.8	0.93	1	0.9	0.86	0.94	

Weekday, Peak PM, S. Preston Highway & Old Preston Highway South

	East - Old Preston Highway South (Westbound)		South - Preston Highway (Northbound)		North - Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
4:45pm	2	37	116	1	23	133	312	0.2537
5:00pm	2	29	103	1	27	146	308	0.2504
5:15pm	1	20	97	2	28	153	301	0.2447
5:30pm	1	22	103	2	26	155	309	0.2512
Hourly Total	6	108	419	6	104	587	1230	1
Hourly Total %	0.0526	0.9474	0.9859	0.0141	0.1505	0.8495		
PHF	0.75	0.73	0.9	0.75	0.93	0.95	0.99	

PINK IS ASSUMED

Weekday, Peak AM, S. Preston Highway & Charles Hamilton Way

	East - Cedar Grove Road (Westbound)		South - Preston Highway (Northbound)		North - Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
7:00am	4	6	33	5	19	37	104	0.2464
7:15am	2	8	29	7	19	29	94	0.2227
7:30am	4	12	33	7	15	35	106	0.2512
7:45am	3	9	50	6	17	33	118	0.2796
Hourly Total	13	35	145	25	70	134	422	1
Hourly Total %	0.2708	0.7292	0.8529	0.1471	0.3431	0.6569		
PHF	0.81	0.73	0.72	0.89	0.92	0.91	0.89	

Weekday, Peak PM, S. Preston Highway & Charles Hamilton Way

	East - Cedar Grove Road (Westbound)		South - Preston Highway (Northbound)		North - Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
4:30pm	7	32	62	5	25	65	196	0.2631
4:45pm	7	32	60	6	21	65	191	0.2564
5:00pm	6	29	45	6	25	70	181	0.243
5:15pm	5	22	47	5	27	71	177	0.2376
Hourly Total	25	115	214	22	98	271	745	1
Hourly Total %	0.1786	0.8214	0.9068	0.0932	0.2656	0.7344		
PHF	0.89	0.9	0.86	0.92	0.91	0.95	0.95	

Weekday, Peak AM, S. Preston Highway & Ohm Drive

	East - Ohm Drive (Westbound)		South - Preston Highway (Northbound)		North - Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
6:30am	41	5	27	27	16	23	139	0.2579
6:45am	61	7	30	34	25	22	179	0.3321
7:00am	16	6	28	31	18	22	121	0.2245
7:15am	11	9	24	25	13	18	100	0.1855
Hourly Total	129	27	109	117	72	85	539	1
Hourly Total %	0.8269	0.1731	0.4823	0.5177	0.4586	0.5414		
PHF	0.53	0.75	0.91	0.86	0.72	0.92	0.75	

Weekday, Peak PM, S. Preston Highway & Ohm Drive

	East - Ohm Drive (Westbound)		South - Preston Highway (Northbound)		North - Preston Highway (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
4:30pm	18	27	40	23	17	52	177	0.2622
4:45pm	19	26	36	20	20	50	171	0.2533
5:00pm	18	16	32	23	22	54	165	0.2444
5:15pm	16	16	34	20	21	55	162	0.24
Hourly Total	71	85	142	86	80	211	675	1
Hourly Total %	0.4551	0.5449	0.6228	0.3772	0.2749	0.7251		
PHF	0.93	0.79	0.89	0.93	0.91	0.96	0.95	

Weekday, Peak AM, Highway-44 & Salt Well Road

	West - KY 44 (Eastbound)		East - KY 44 (Westbound)		North - Saltwell Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
6:30am	6	162	25	9	11	2	215	0.299
6:45am	8	139	27	8	6	1	189	0.2629
7:00am	3	122	31	8	9	2	175	0.2434
7:15am	8	82	32	8	7	3	140	0.1947
Hourly Total	25	505	115	33	33	8	719	1
Hourly Total %	0.0472	0.9528	0.777	0.223	0.8049	0.1951		
PHF	0.78	0.78	0.9	0.92	0.75	0.67	**0.84**	

Weekday, Peak PM, Highway-44 & Salt Well Road

	West - KY 44 (Eastbound)		East - KY 44 (Westbound)		North - Saltwell Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
4:45pm	6	79	88	11	6	7	197	0.2394
5:00pm	6	85	93	9	8	10	211	0.2564
5:15pm	6	84	92	8	10	8	208	0.2527
5:30pm	7	85	90	8	9	8	207	0.2515
Hourly Total	25	333	363	36	33	33	823	1
Hourly Total %	0.0698	0.9302	0.9098	0.0902	0.5	0.5		
PHF	0.89	0.98	0.98	0.82	0.82	0.82	**0.98**	

Weekday, Peak AM, Highway-44 & Lee Street

	West - KY 44 (Eastbound)		East - West 4th Street (Westbound)		South - Lee Street (Northbound)			
	Thru	Right	Left	Thru	Left	Right	Total	Total %
7:15am	0	1	4	345	0	1	351	0.4957
7:30am	86	0	1	49	0	0	136	0.1932
7:45am	29	0	1	0	0	0	30	0.0426
8:00am	115	0	0	49	25	0	189	0.2685
Hourly Total	230	1	6	443	25	1	706	1
Hourly Total %	1		0.0134	0.9866	1			
PHF	0.5		0.38	0.32	0.25		0.50	

Weekday, Peak PM, Highway-44 & Lee Street

	West - KY 44 (Eastbound)		East - West 4th Street (Westbound)		South - Lee Street (Northbound)			
	Thru	Right	Left	Thru	Left	Right	Total	Total %
4:00pm	29	1	4	49	1	0	84	0.183
4:15pm	0	0	3	49	0	0	52	0.1161
4:30pm	58	0	3	148	0	0	209	0.4665
4:45pm	0	0	5	99	0	1	105	0.2344
Hourly Total	87	1	15	345	1	1	450	1
Hourly Total %	1		0.0417	0.9583		1		
PHF	0.38		0.75	0.58		0.25	0.54	

PINK IS ASSUMED

Weekday, Peak AM, Highway-44 & Adam Shepherd Parkway

	West - East 4th Street (Eastbound)			East - East 4th Street (Westbound)			South - Vine Street (Northbound)			North - Adam Shepherd Parkway (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:30am	6	276	1	9	47	77	1	3	128	69	1	2	620	0.2607
6:45am	11	204	2	13	56	108	3	6	92	122	2	4	623	0.262
7:00am	8	220	2	11	49	89	5	6	106	153	3	5	657	0.2763
7:15am	7	122	1	12	66	88	3	4	58	109	3	5	478	0.201
Hourly Total	32	822	6	45	218	362	12	19	384	453	9	16	2378	1
Hourly Total %	0.0372	0.9558	0.007	0.072	0.3488	0.5792	0.0289	0.0458	0.9253	0.9477	0.0188	0.0335		
PHF	0.73	0.74	0.75	0.87	0.83	0.84	0.6	0.79	0.75	0.74	0.75	0.8	0.90	

Weekday, Peak PM, Highway-44 & Adam Shepherd Parkway

	West - East 4th Street (Eastbound)			East - East 4th Street (Westbound)			South - Vine Street (Northbound)			North - Adam Shepherd Parkway (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:30pm	18	91	2	27	103	184	2	11	31	131	7	8	615	0.2534
4:45pm	18	78	3	29	97	183	3	18	28	124	7	8	596	0.2456
5:00pm	17	94	3	28	95	175	2	14	32	142	7	8	617	0.2542
5:15pm	18	83	4	33	98	166	2	12	28	138	7	10	599	0.2468
Hourly Total	71	346	12	117	393	708	9	55	119	535	28	34	2427	1
Hourly Total %	0.1655	0.8065	0.028	0.0961	0.3227	0.5813	0.0492	0.3005	0.6503	0.8961	0.0469	0.057		
PHF	0.99	0.92	0.75	0.89	0.95	0.96	0.75	0.76	0.93	0.94	1	0.85	0.98	

Weekday, Peak AM, Highway-44 & I-65 South ramps

	West - East 4th Street (Eastbound)			East - East 4th Street (Westbound)			South - motorway_link (Northbound)			North - motorway_link (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:30am	0	406	3	77	90	0	0	0	0	35	1	53	665	0.2663
6:45am	0	337	3	60	115	0	0	0	0	50	1	72	638	0.2555
7:00am	0	416	4	41	96	0	0	0	0	47	1	62	667	0.2671
7:15am	0	235	2	63	114	0	0	0	0	48	1	64	527	0.2111
Hourly Total	0	1394	12	241	415	0	0	0	0	180	4	251	2497	1
Hourly Total %	0	0.9915	0.0085	0.3674	0.6326	0	0	0	0	0.4138	0.0092	0.577		
PHF	0	0.84	0.75	0.78	0.9	0	0	0	0	0.9	1	0.87	0.94	

Weekday, Peak PM, Highway-44 & I-65 South ramps

	West - East 4th Street (Eastbound)			East - East 4th Street (Westbound)			South - motorway_link (Northbound)			North - motorway_link (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:15pm	0	161	2	80	185	0	0	0	0	88	3	117	636	0.2502
4:30pm	0	161	1	78	205	0	0	0	0	84	2	118	649	0.2553
4:45pm	0	148	2	67	207	0	0	0	0	85	2	111	622	0.2447
5:00pm	0	171	2	69	198	0	0	0	0	83	2	110	635	0.2498
Hourly Total	0	641	7	294	795	0	0	0	0	340	9	456	2542	1
Hourly Total %	0	0.9892	0.0108	0.27	0.73	0	0	0	0	0.4224	0.0112	0.5665		
PHF	0	0.94	0.88	0.92	0.96	0	0	0	0	0.97	0.75	0.97	0.98	

Weekday, Peak AM, Highway-44 & I-65 North ramps

	West - Highway 44 East (Eastbound)			East - Highway 44 West (Westbound)			South - motorway_link (Northbound)			North - motorway_link (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:30am	0	282	0	0	144	0	53	0	123	0	0	0	602	0.2633
6:45am	0	248	0	0	124	0	82	0	200	0	0	0	654	0.2861
7:00am	0	287	0	0	75	0	82	0	184	0	0	0	628	0.2747
7:15am	0	136	0	0	120	0	78	0	68	0	0	0	402	0.1759
Hourly Total	0	953	0	0	463	0	295	0	575	0	0	0	2286	1
Hourly Total %	0	1	0	0	1	0	0.3391	0	0.6609	0	0	0		
PHF	0	0.83	0	0	0.8	0	0.9	0	0.72	0	0	0	0.87	

Weekday, Peak PM, Highway-44 & I-65 North ramps

	West - Highway 44 East (Eastbound)			East - Highway 44 West (Westbound)			South - motorway_link (Northbound)			North - motorway_link (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
5:00pm	0	187	0	0	201	0	90	0	76	0	0	0	554	0.2499
5:15pm	0	182	0	0	202	0	92	0	77	0	0	0	553	0.2494
5:30pm	0	185	0	0	220	0	89	0	73	0	0	0	567	0.2558
5:45pm	0	177	0	0	210	0	92	0	64	0	0	0	543	0.2449
Hourly Total	0	731	0	0	833	0	363	0	290	0	0	0	2217	1
Hourly Total %	0	1	0	0	1	0	0.5559	0	0.4441	0	0	0		
PHF	0	0.98	0	0	0.95	0	0.99	0	0.94	0	0	0	0.98	

Weekday, Peak AM, Highway-44 & Bells Mill Road

	West - Old Mill Road (Eastbound)		East - Old Mill Road (Westbound)		North - Bells Mill Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
6:45am	7	70	99	100	22	8	306	0.249
7:00am	8	50	97	97	15	5	272	0.2213
7:15am	8	59	136	103	20	4	330	0.2685
7:30am	5	80	123	81	27	5	321	0.2612
Hourly Total	28	259	455	381	84	22	1229	1
Hourly Total %	0.0976	0.9024	0.5443	0.4557	0.7925	0.2075		
PHF	0.88	0.81	0.84	0.92	0.78	0.69	0.93	

Weekday, Peak PM, Highway-44 & Bells Mill Road

	West - Old Mill Road (Eastbound)		East - Old Mill Road (Westbound)		North - Bells Mill Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
5:00pm	9	129	110	42	71	11	372	0.2478
5:15pm	9	117	123	46	72	12	379	0.2525
5:30pm	9	109	127	53	78	14	390	0.2598
5:45pm	10	106	109	49	73	13	360	0.2398
Hourly Total	37	461	469	190	294	50	1501	1
Hourly Total %	0.0743	0.9257	0.7117	0.2883	0.8547	0.1453		
PHF	0.93	0.89	0.92	0.9	0.94	0.89	0.96	

Weekday, Peak AM, Bells Mill Road & Cammi Drive

	West - Bells Mill Road (Eastbound)		East - Bells Mill Road (Westbound)		North - Cammi Drive (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
6:45am	0	25	111	1	4	3	144	0.2549
7:00am	0	18	112	1	2	5	138	0.2442
7:15am	0	24	119	1	2	5	151	0.2673
7:30am	1	32	91	1	2	5	132	0.2336
Hourly Total	1	99	433	4	10	18	565	1
Hourly Total %	0.01	0.99	0.9908	0.0092	0.3571	0.6429		
PHF	0.25	0.77	0.91	1	0.62	0.9	0.94	

Weekday, Peak PM, Bells Mill Road & Cammi Drive

	West - Bells Mill Road (Eastbound)		East - Bells Mill Road (Westbound)		North - Cammi Drive (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
5:00pm	8	86	49	6	3	2	154	0.2348
5:15pm	8	86	53	6	4	3	160	0.2439
5:30pm	9	92	61	5	5	4	176	0.2683
5:45pm	8	86	60	6	4	2	166	0.253
Hourly Total	33	350	223	23	16	11	656	1
Hourly Total %	0.0862	0.9138	0.9065	0.0935	0.5926	0.4074		
PHF	0.92	0.95	0.91	0.96	0.8	0.69	0.93	

Weekday, Peak AM, Old Preston Highway S. & Cedar Grove Road

	East - Cedar Grove Road (Westbound)		South - Old Preston Highway South (Northbound)		North - Old Preston Highway South (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
7:15am	0	8	0	1	12	1	22	0.22
7:30am	0	13	2	1	11	0	27	0.27
7:45am	0	12	2	1	15	1	31	0.31
8:00am	1	9	2	0	8	0	20	0.2
Hourly Total	1	42	6	3	46	2	100	1
Hourly Total %	0.0233	0.9767	0.6667	0.3333	0.9583	0.0417		
PHF	0.25	0.81	0.75	0.75	0.77	0.5	0.81	

Weekday, Peak PM, Old Preston Highway S. & Cedar Grove Road

	East - Cedar Grove Road (Westbound)		South - Old Preston Highway South (Northbound)		North - Old Preston Highway South (Southbound)			
	Left	Right	Thru	Right	Left	Thru	Total	Total %
4:30pm	1	33	1	1	20	3	59	0.2417
4:45pm	1	38	1	0	23	1	64	0.2667
5:00pm	1	31	1	0	28	1	62	0.2583
5:15pm	1	23	1	0	29	2	56	0.2333
Hourly Total	4	125	4	1	100	7	241	1
Hourly Total %	0.031	0.969	1	0	0.9346	0.0654		
PHF	1	0.82	1	0	0.86	0.58	0.94	

PINK IS ASSUMED

Weekday, Peak AM, Old Preston Highway S. & Charles Hamilton Way

	West - Cedar Grove Road (Eastbound)		East - Cedar Grove Road (Westbound)		North - Old Preston Highway South (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
6:15am	1	34	12	0	1	0	48	0.2626
6:30am	0	28	15	1	0	0	44	0.2458
6:45am	1	30	18	1	0	0	50	0.2793
7:00am	1	25	11	1	0	1	39	0.2123
Hourly Total	3	117	56	3	1	1	181	1
Hourly Total %	0.025	0.975	0.9492	0.0508				
PHF	0.75	0.86	0.78	0.75			0.91	

Weekday, Peak PM, Old Preston Highway S. & Charles Hamilton Way

	West - Cedar Grove Road (Eastbound)		East - Cedar Grove Road (Westbound)		North - Old Preston Highway South (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
4:30pm	1	33	40	1	1	3	79	0.2669
4:45pm	1	29	42	1	0	2	75	0.2534
5:00pm	1	33	38	1	0	2	75	0.2534
5:15pm	1	36	29	0	0	1	67	0.2264
Hourly Total	4	131	149	3	1	8	296	1
Hourly Total %	0.0296	0.9704	0.9803	0.0197	0.1111	0.8889		
PHF	1	0.91	0.89	0.75	0.25	0.67	0.94	

PINK IS ASSUMED

Weekday, Peak AM, Cedar Grove Road & Charles Hamilton Way

	West - Cedar Grove Road (Eastbound)		East - Cedar Grove Road (Westbound)		North - Cedar Grove Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
6:15am	1	32	12	15	13	0	73	0.2765
6:30am	2	27	14	7	15	2	67	0.2538
6:45am	1	28	18	9	13	0	69	0.2614
7:00am	0	24	13	7	11	0	55	0.2083
Hourly Total	4	111	57	38	52	2	264	1
Hourly Total %	0.0348	0.9652	0.6	0.4	0.963	0.037		
PHF	0.5	0.87	0.79	0.63	0.87	0.25	0.90	

Weekday, Peak PM, Cedar Grove Road & Charles Hamilton Way

	West - Cedar Grove Road (Eastbound)		East - Cedar Grove Road (Westbound)		North - Cedar Grove Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
4:30pm	1	31	37	30	22	1	122	0.2515
4:45pm	1	28	41	37	23	1	131	0.2701
5:00pm	1	33	35	27	26	1	123	0.2536
5:15pm	1	35	26	20	27	0	109	0.2247
Hourly Total	4	127	139	114	98	3	485	1
Hourly Total %	0.0305	0.9695	0.5494	0.4506	0.9703	0.0297		
PHF	1	0.91	0.85	0.77	0.91	0.75	0.93	

Weekday, Peak AM, Cedar Grove Road & Amazon.com Boulevard & Omega Parkway

	West - Cedar Grove Road (Eastbound)			East - Cedar Grove Road (Westbound)			South - Omega Parkway (Northbound)			North - Zapposdotcom Boulevard (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
5:45am	160	33	120	2	48	1	12	7	1	1	1	3	389	0.3199
6:00am	99	27	42	1	69	1	12	4	1	0	1	5	262	0.216
6:15am	57	36	40	1	109	0	8	4	0	0	1	3	259	0.2135
6:30am	42	55	54	2	138	0	7	2	1	0	1	2	304	0.2506
Hourly Total	358	151	256	6	364	2	39	17	3	1	4	13	1214	1
Hourly Total %	0.468	0.1974	0.3346	0.0161	0.9785	0.0054	0.661	0.2881	0.0508		0.2353	0.7647		
PHF	0.56	0.69	0.53	0.75	0.66	0.5	0.81	0.61	0.75		1	0.65	0.78	

Weekday, Peak PM, Cedar Grove Road & Amazon.com Boulevard & Omega Parkway

	West - Cedar Grove Road (Eastbound)			East - Cedar Grove Road (Westbound)			South - Omega Parkway (Northbound)			North - Zapposdotcom Boulevard (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:30pm	44	105	23	5	72	0	62	3	3	1	6	95	419	0.2512
4:45pm	76	100	27	6	66	2	29	7	4	1	7	83	408	0.2446
5:00pm	107	109	33	6	80	1	22	11	3	2	5	40	419	0.2512
5:15pm	133	92	42	4	76	1	19	11	4	1	4	35	422	0.253
Hourly Total	360	406	125	21	294	4	132	32	14	5	22	253	1668	1
Hourly Total %	0.404	0.4557	0.1403	0.0658	0.9216	0.0125	0.7416	0.1798	0.0787	0.0179	0.0786	0.9036		
PHF	0.68	0.93	0.74	0.88	0.92	0.5	0.53	0.73	0.88	0.62	0.79	0.67	0.99	

PINK IS ASSUMED

Weekday, Peak AM, Cedar Grove Road & Ridge Road

	West - Cedar Grove Road (Eastbound)		East - Cedar Grove Road (Westbound)		North - Ridge Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
6:30am	1	10	107	0	0	0	118	0.2326
6:45am	0	11	126	1	0	0	138	0.2724
7:00am	0	11	122	0	1	0	134	0.2644
7:15am	0	14	102	0	0	1	117	0.2306
Hourly Total	1	46	457	1	1	1	507	1
Hourly Total %		1	1					
PHF		0.82	0.91				0.92	

Weekday, Peak PM, Cedar Grove Road & Ridge Road

	West - Cedar Grove Road (Eastbound)		East - Cedar Grove Road (Westbound)		North - Ridge Road (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
4:30pm	1	84	42	0	0	0	127	0.251
4:45pm	0	75	44	1	0	0	120	0.2371
5:00pm	0	83	50	0	1	0	134	0.2649
5:15pm	0	73	51	0	0	1	125	0.247
Hourly Total	1	315	187	1	1	1	506	1
Hourly Total %		1	1					
PHF		0.94	0.92				0.94	

PINK IS ASSUMED

Weekday, Peak AM, Clermont Road & Chapeze Lane

	West - Clermont Road (Eastbound)		East - Clermont Road (Westbound)		North - Chapeze Lane (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
7:00am	1	87	224	1	1	4	318	0.2398
7:15am	1	100	245	1	1	2	350	0.264
7:30am	2	118	215	2	2	11	350	0.264
7:45am	4	113	184	2	1	4	308	0.2323
Hourly Total	8	418	868	6	5	21	1326	1
Hourly Total %	0.0188	0.9812	0.9931	0.0069	0.1923	0.8077		
PHF	0.5	0.89	0.89	0.75	0.62	0.48	**0.95**	

Weekday, Peak PM, Clermont Road & Chapeze Lane

	West - Clermont Road (Eastbound)		East - Clermont Road (Westbound)		North - Chapeze Lane (Southbound)			
	Left	Thru	Thru	Right	Left	Right	Total	Total %
4:15pm	4	188	131	3	3	3	332	0.2506
4:30pm	6	197	125	2	3	2	335	0.2528
4:45pm	5	194	122	3	2	4	330	0.2491
5:00pm	4	181	136	3	2	2	328	0.2475
Hourly Total	19	760	514	11	10	11	1325	1
Hourly Total %	0.0244	0.9756	0.979	0.021	0.4762	0.5238		
PHF	0.79	0.96	0.94	0.92	0.83	0.69	**0.99**	

Weekday, Peak AM, W. Blue Lick Road & Salt Well Road

	West - Cs-1068 (Eastbound)			East - Reserves Boulevard (Westbound)			South - West Blue Lick Road (Northbound)			North - West Blue Lick Road (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:45am	7	3	6	0	1	0	3	5	1	3	53	2	84	0.2823
7:00am	6	1	4	0	0	0	2	8	0	7	39	2	69	0.2347
7:15am	2	1	7	5	1	4	4	9	0	1	24	2	60	0.2041
7:30am	5	1	20	3	1	0	3	8	0	1	37	3	82	0.2789
Hourly Total	20	6	37	8	3	4	12	30	1	12	153	9	295	1
Hourly Total %	0.3175	0.0952	0.5873	0.5333	0.2	0.2667	0.2857	0.7143		0.069	0.8793	0.0517		
PHF	0.71	0.5	0.46	0.4	0.75	0.25	0.75	0.83		0.43	0.72	0.75	0.88	

Weekday, Peak PM, W. Blue Lick Road & Salt Well Road

	West - Cs-1068 (Eastbound)			East - Reserves Boulevard (Westbound)			South - West Blue Lick Road (Northbound)			North - West Blue Lick Road (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:45pm	7	3	5	2	2	2	11	32	2	2	31	8	107	0.2477
5:00pm	8	4	6	1	4	2	11	32	2	2	29	10	111	0.2569
5:15pm	8	3	7	2	2	1	9	31	2	3	31	8	107	0.2477
5:30pm	8	3	6	2	3	2	9	31	2	2	29	10	107	0.2477
Hourly Total	31	13	24	7	11	7	40	126	8	9	120	36	432	1
Hourly Total %	0.4559	0.1912	0.3529	0.28	0.44	0.28	0.2299	0.7241	0.046	0.0545	0.7273	0.2182		
PHF	0.97	0.81	0.86	0.88	0.69	0.88	0.91	0.98	1	0.75	0.97	0.9	0.97	

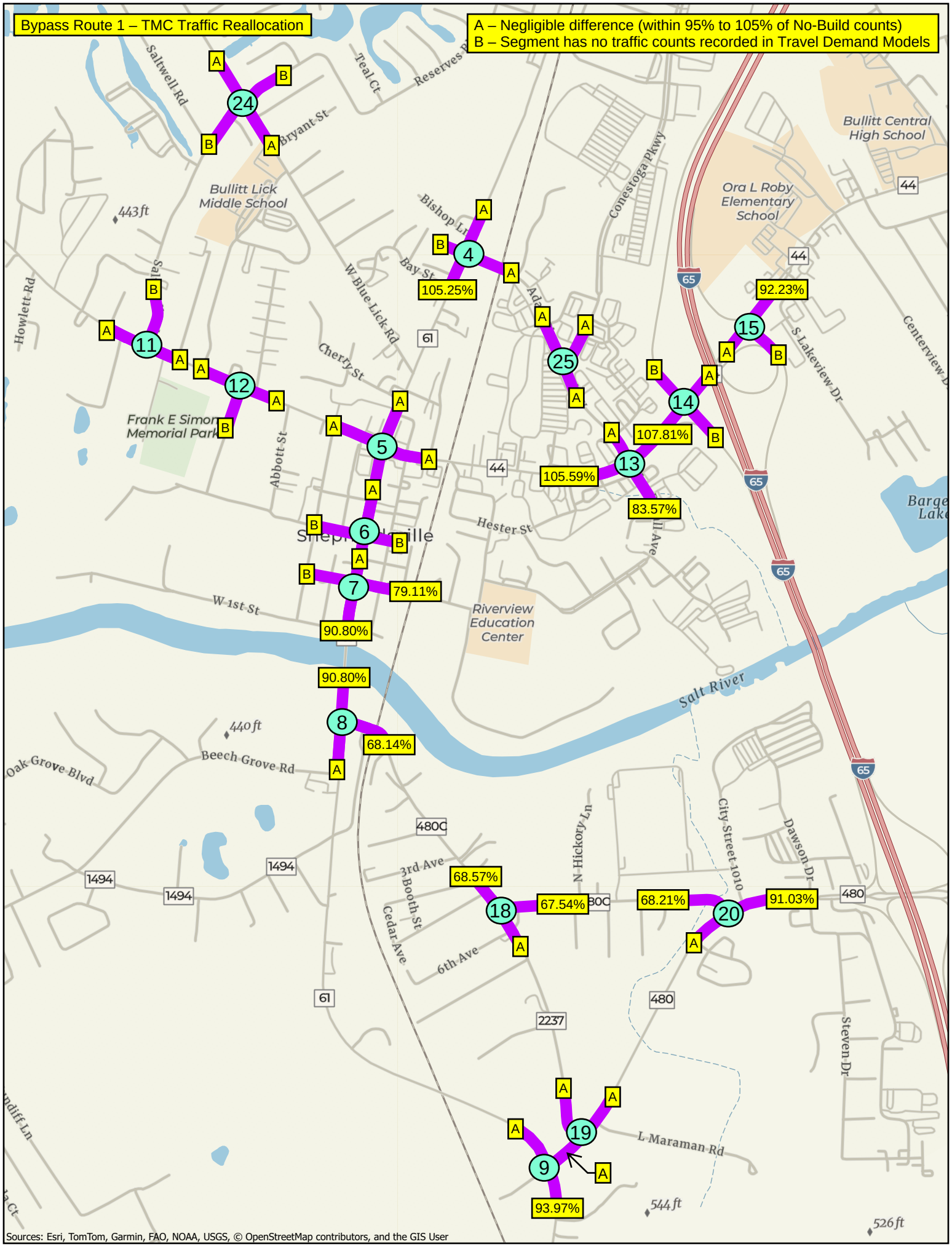
Weekday, Peak AM, Adam Shepherd Parkway & Conestoga Parkway

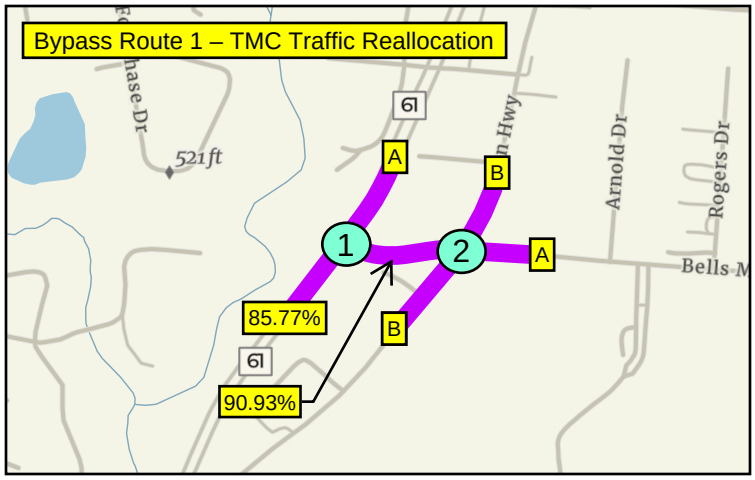
	West - Mall Entrance (Eastbound)			East - Conestoga Parkway (Westbound)			South - Adam Shepherd Parkway (Northbound)			North - Adam Shepherd Parkway (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
6:45am	2	2	2	49	2	8	2	49	66	11	114	2	309	0.2725
7:00am	2	2	2	57	2	12	2	47	50	10	141	2	329	0.2908
7:15am	2	2	2	44	2	7	2	48	45	7	77	2	240	0.2092
7:30am	2	2	2	40	2	6	2	74	57	10	61	2	260	0.2275
Hourly Total	8	8	8	190	8	33	8	218	218	38	393	8	1138	1
Hourly Total %				0.852		0.148		0.5	0.5	0.0882	0.9118			
PHF				0.83		0.69		0.74	0.83	0.86	0.7		0.86	

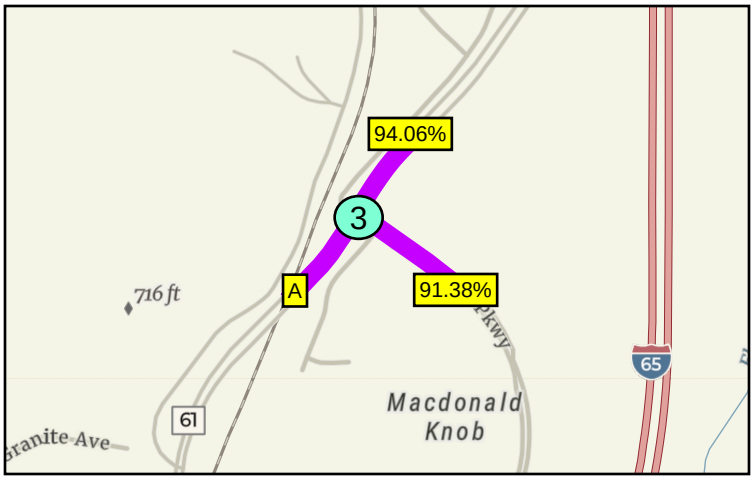
Weekday, Peak PM, Adam Shepherd Parkway & Conestoga Parkway

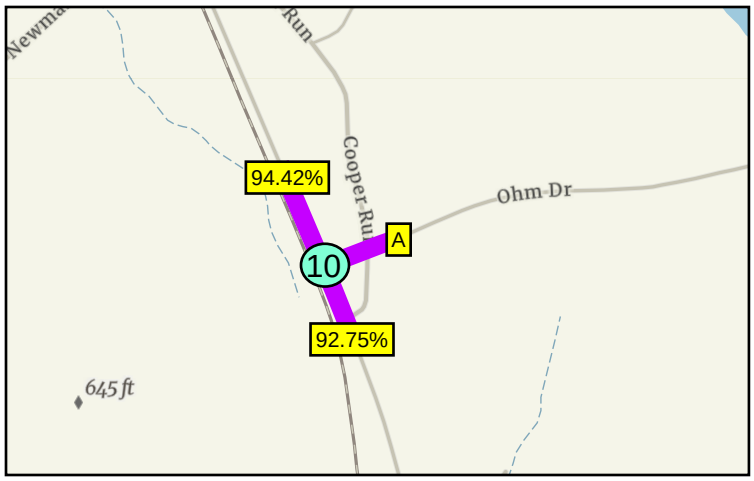
	West - Mall Entrance (Eastbound)			East - Conestoga Parkway (Westbound)			South - Adam Shepherd Parkway (Northbound)			North - Adam Shepherd Parkway (Southbound)				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total	Total %
4:30pm	5	5	5	84	5	31	5	74	111	24	57	5	411	0.2476
4:45pm	5	5	5	76	5	31	5	76	114	31	52	5	410	0.2469
5:00pm	5	5	5	96	5	42	5	76	105	27	57	5	433	0.2619
5:15pm	5	5	5	82	5	31	5	67	103	25	67	5	405	0.2437
Hourly Total	20	20	20	338	20	135	20	293	433	107	233	20	1659	1
Hourly Total %				0.7146		0.2854		0.4036	0.5964	0.3147	0.6853			
PHF				0.88		0.8		0.96	0.95	0.86	0.87		0.96	

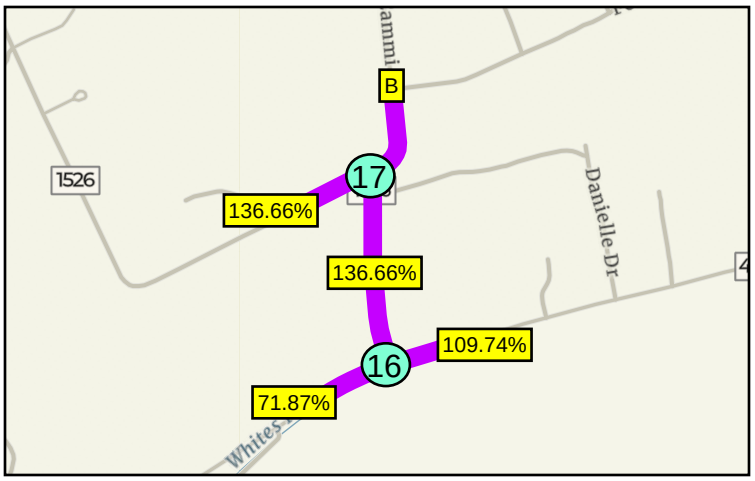
PINK IS ASSUMED

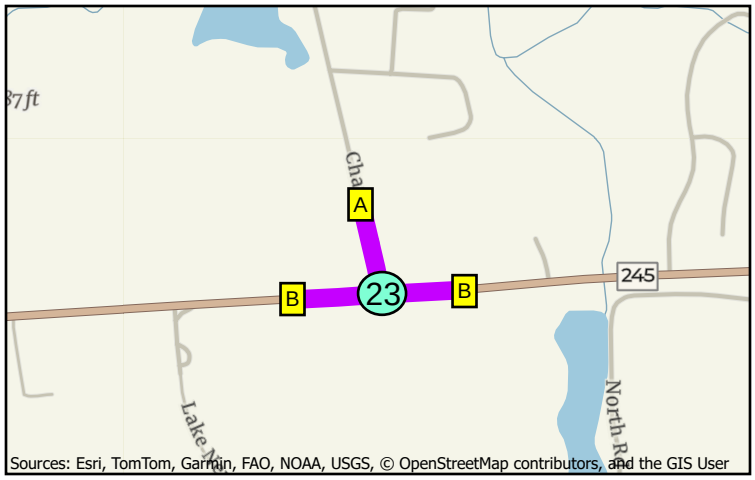

Bypass Route 1 – TMC Traffic Reallocation
A – Negligible difference (within 95% to 105% of No-Build counts)
B – Segment has no traffic counts recorded in Travel Demand Models
24
4
105.25%
11
12
5
6
7
79.11%
90.80%
90.80%
8
68.14%
25
13
105.59%
14
107.81%
83.57%
15
92.23%
18
68.57%
67.54%
20
68.21%
91.03%
19
9
93.97%
Bullitt Lick Middle School
Bullitt Central High School
Ora L Roby Elementary School
Frank E Simon Memorial Park
Riverview Education Center
Salt River
Saltwell Rd
Teal Ct
Bryant St
Bishop Ln
Bay St
W Blue Lick Rd
Howlett Rd
Cherry St
Abbott St
Hester St
W 1st St
Conestoga Pkwy
S Lakeview Dr
Centerview Dr
Beech Grove Rd
Oak Grove Blvd
3rd Ave
Booth St
Cedar Ave
6th Ave
N Hickory Ln
City Street-1010
Dawson Dr
Steven Dr
L Maraman Rd
443 ft
440 ft
544 ft
526 ft
44
61
65
480C
480
1494
2237
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User



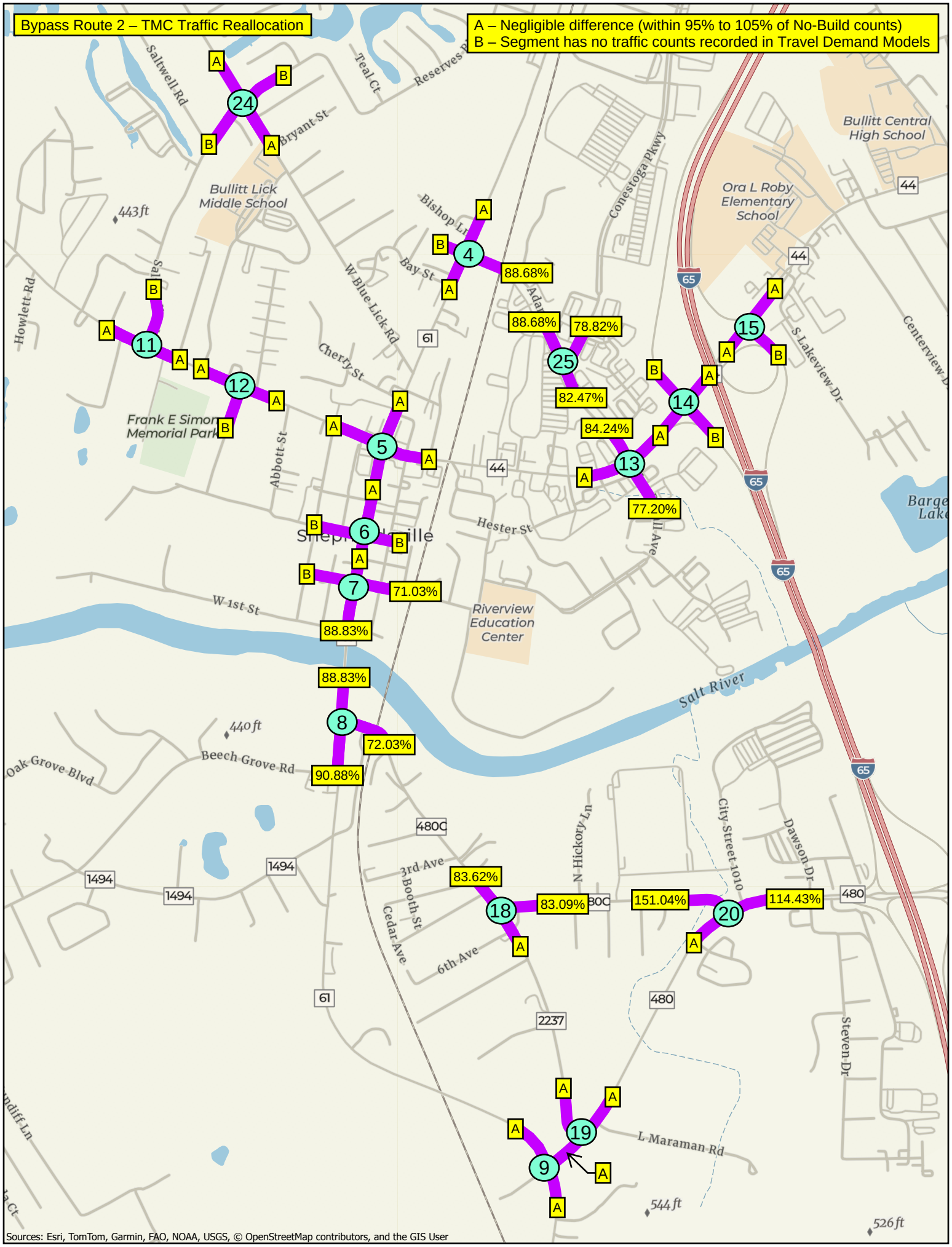


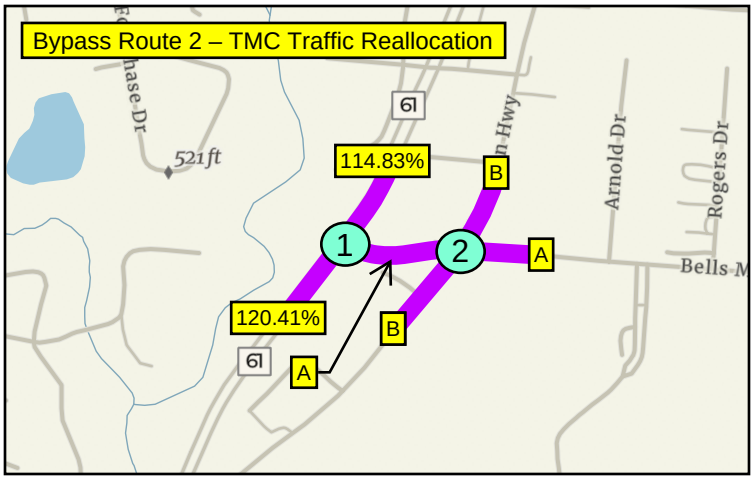


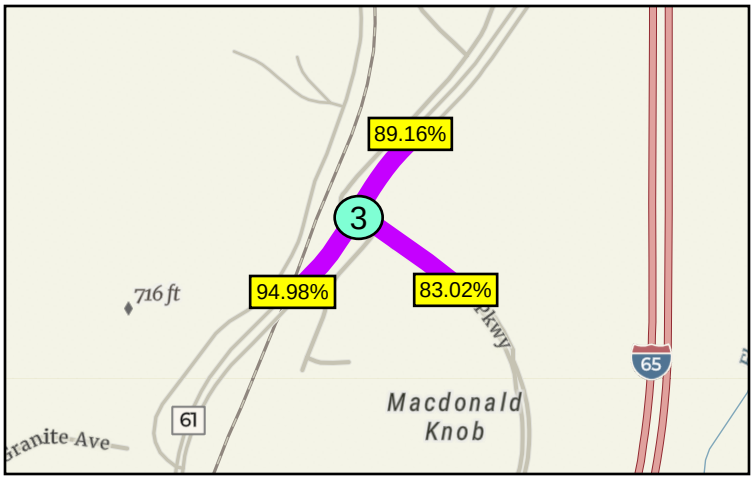


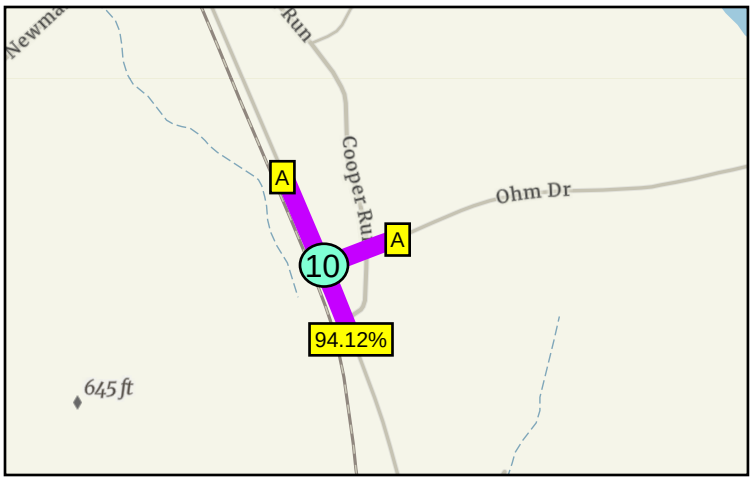


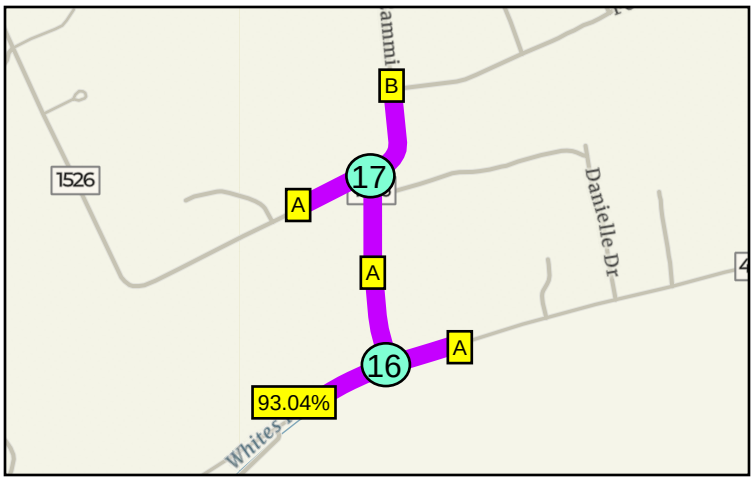
A – Negligible difference (within 95% to 105% of No-Build counts)
B – Segment has no traffic counts recorded in Travel Demand Models

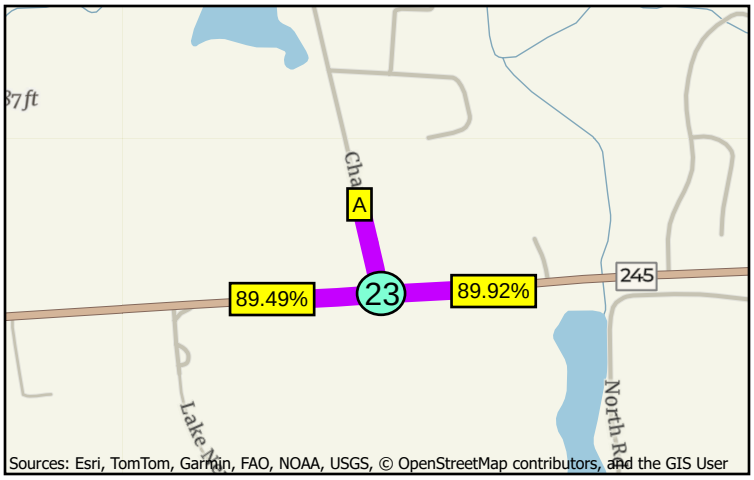

Bypass Route 2 – TMC Traffic Reallocation
A – Negligible difference (within 95% to 105% of No-Build counts)
B – Segment has no traffic counts recorded in Travel Demand Models
24
4
88.68%
11
12
5
6
7
71.03%
88.83%
88.83%
8
72.03%
90.88%
88.68%
78.82%
25
82.47%
84.24%
13
14
77.20%
15
83.62%
18
83.09%
151.04%
20
114.43%
19
9
Bullitt Central High School
Ora L Roby Elementary School
Bullitt Lick Middle School
Frank E Simon Memorial Park
Riverview Education Center
Salt River
Hester St
W 1st St
Cherry St
W Blue Lick Rd
Bay St
Bishop Ln
Conestoga Pkwy
S Lakeview Dr
Abbott St
Howlett Rd
Saltwell Rd
Teal Ct
Bryant St
Beech Grove Rd
Oak Grove Blvd
3rd Ave
Booth St
Cedar Ave
6th Ave
N Hickory Ln
City Street-1010
Dawson Dr
Steven Dr
L Maraman Rd
Barge Lake
443 ft
440 ft
544 ft
526 ft
61
44
65
480
1494
2237
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User



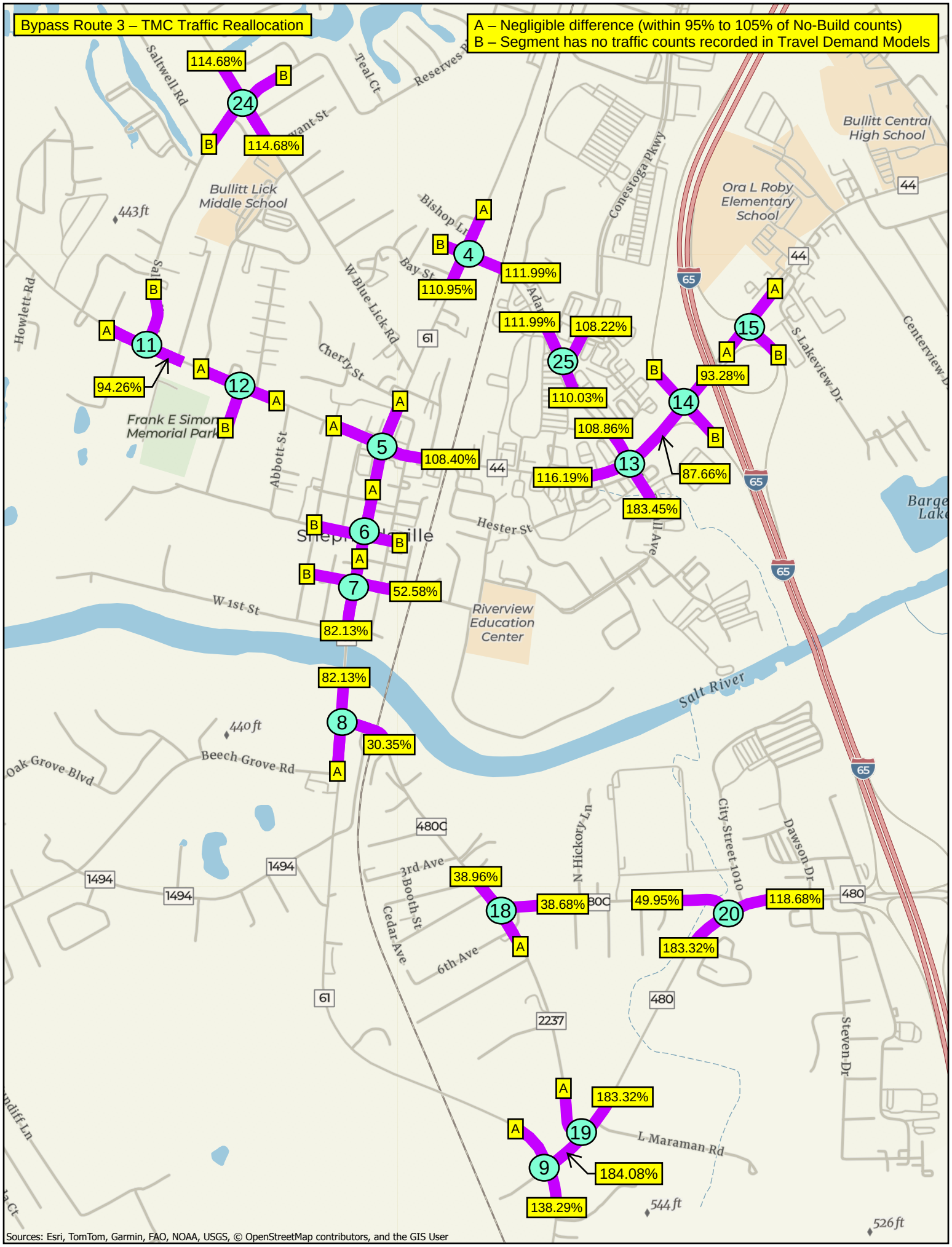


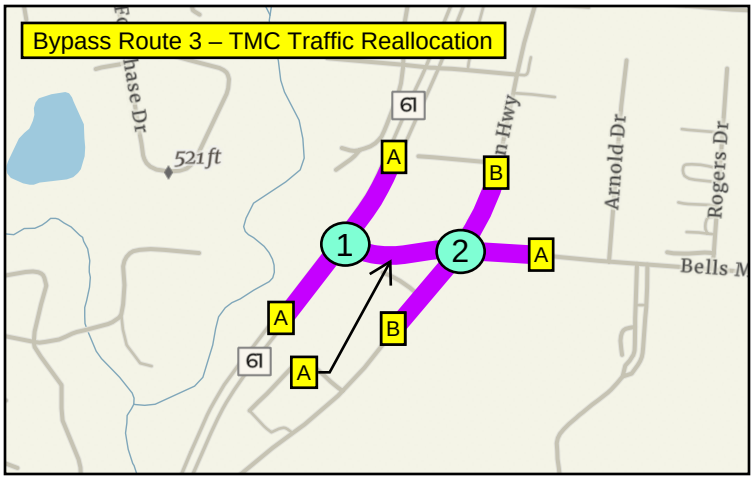


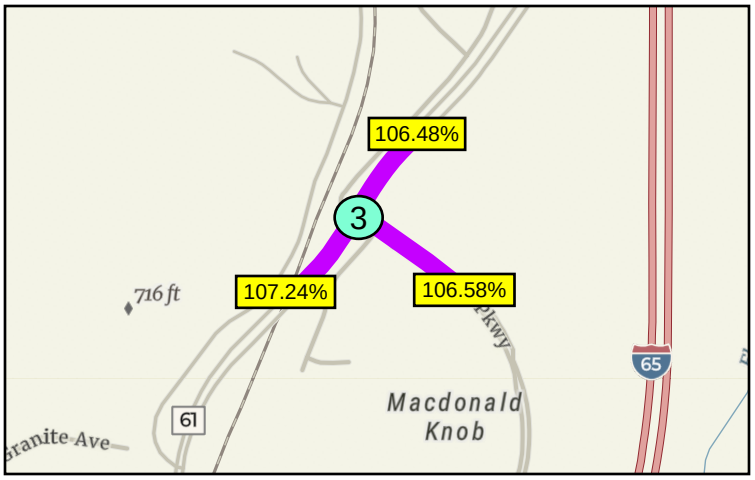


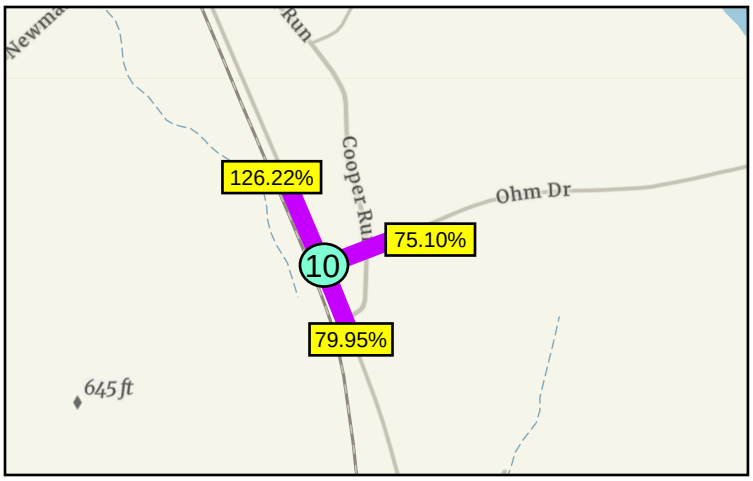


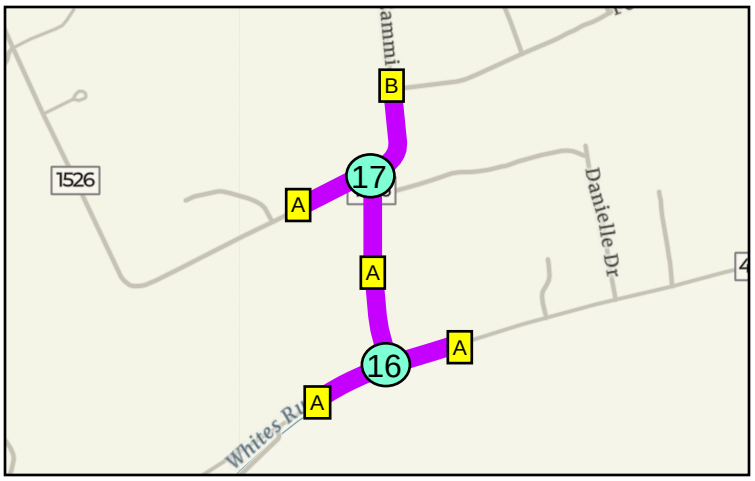
A – Negligible difference (within 95% to 105% of No-Build counts)
B – Segment has no traffic counts recorded in Travel Demand Models

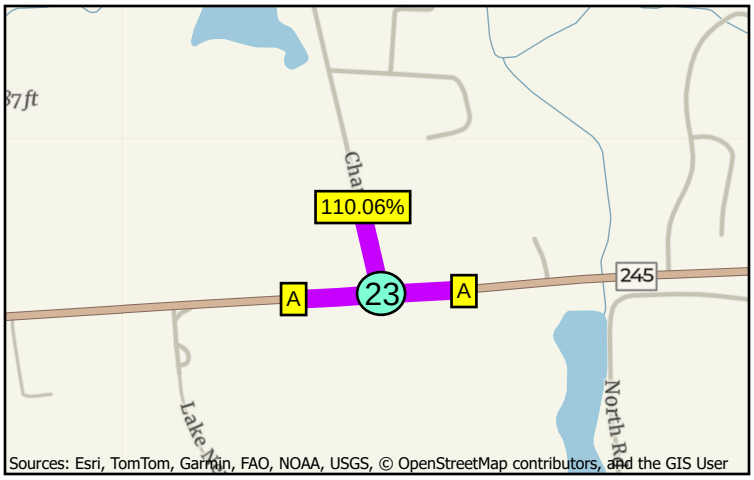

Bypass Route 3 – TMC Traffic Reallocation
A – Negligible difference (within 95% to 105% of No-Build counts)
B – Segment has no traffic counts recorded in Travel Demand Models
114.68%
114.68%
94.26%
111.99%
110.95%
111.99%
108.22%
110.03%
93.28%
108.86%
87.66%
116.19%
183.45%
108.40%
52.58%
82.13%
82.13%
30.35%
38.96%
38.68%
49.95%
118.68%
183.32%
183.32%
184.08%
138.29%
Bullitt Lick Middle School
Bullitt Central High School
Ora L Roby Elementary School
Frank E Simon Memorial Park
Riverview Education Center
Salt River
Saltwell Rd
Teal Ct
Reserves
Bishop Ln
Bay St
W Blue Lick Rd
Cherry St
Abbott St
Howlett Rd
Conestoga Pkwy
S Lakeview Dr
Centerview
Hester St
W 1st St
Beech Grove Rd
Oak Grove Blvd
3rd Ave
Booth St
Cedar Ave
6th Ave
N Hickory Ln
City Street 1010
Dawson Dr
Steven Dr
L Maraman Rd
443 ft
440 ft
544 ft
526 ft
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User





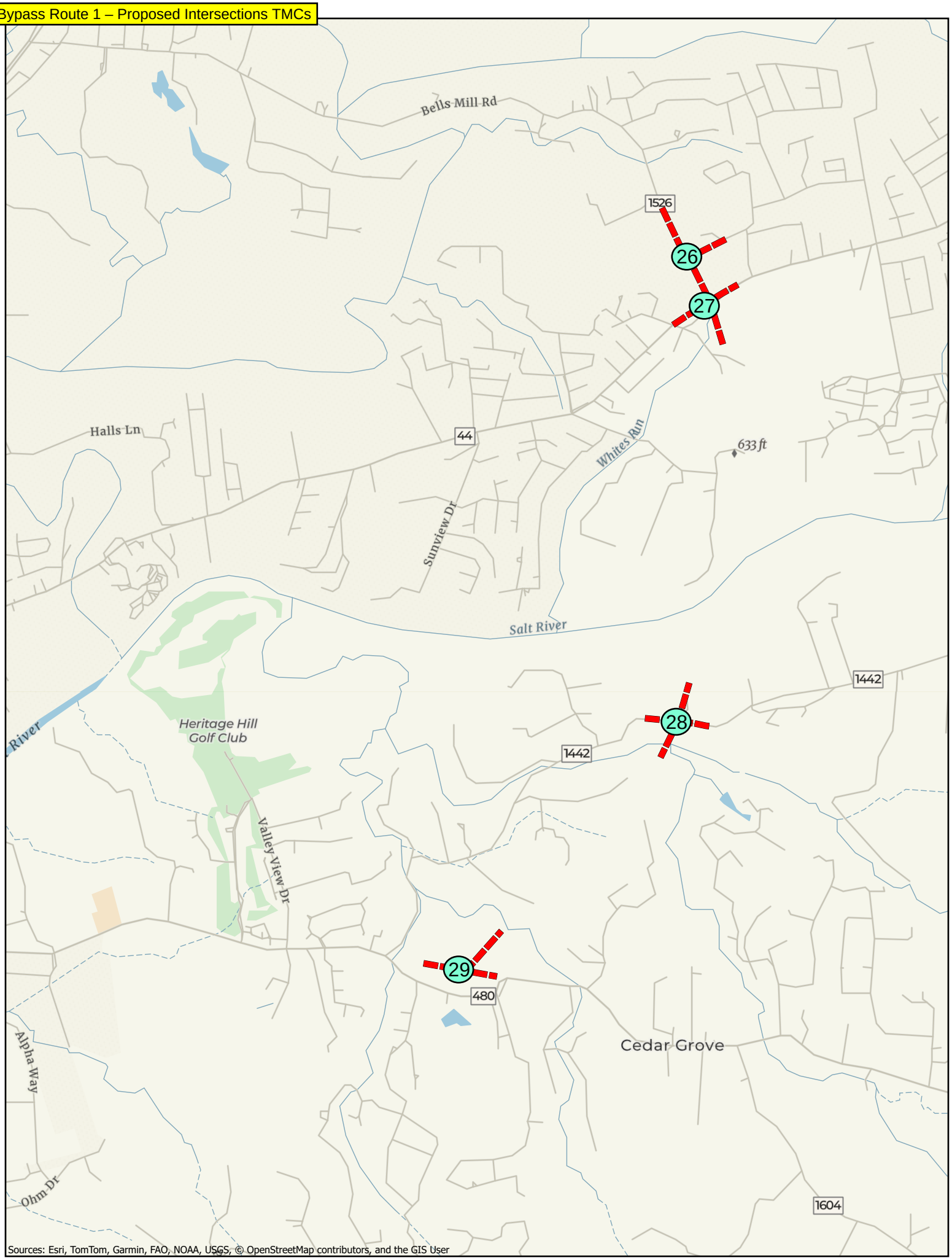




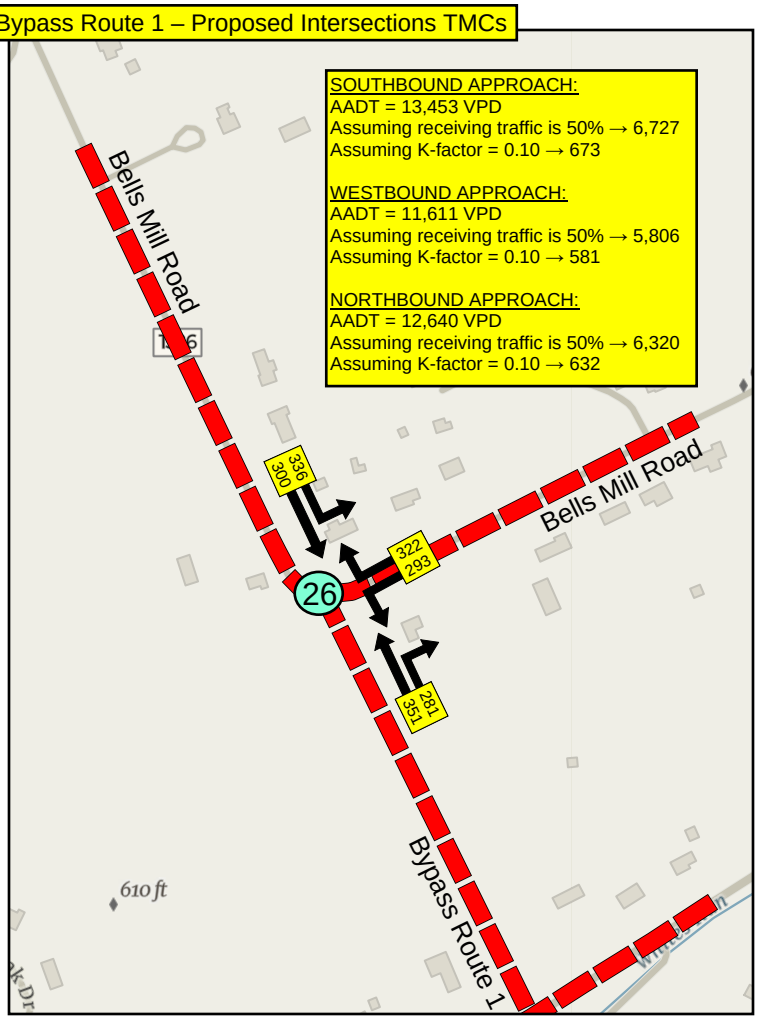


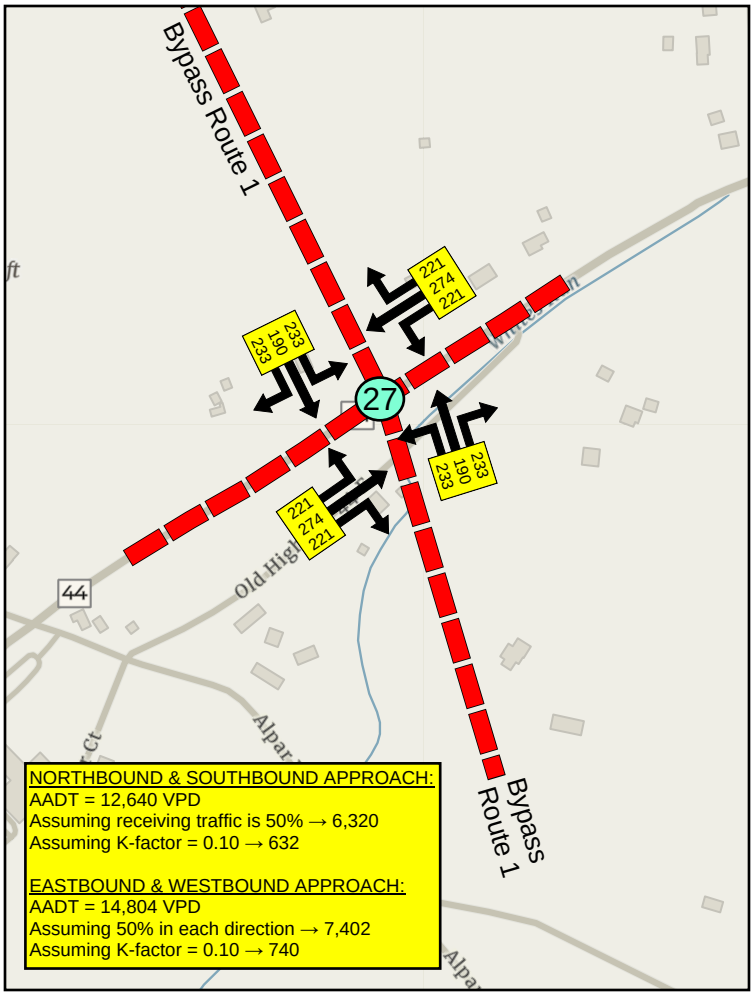
A – Negligible difference (within 95% to 105% of No-Build counts)
B – Segment has no traffic counts recorded in Travel Demand Models

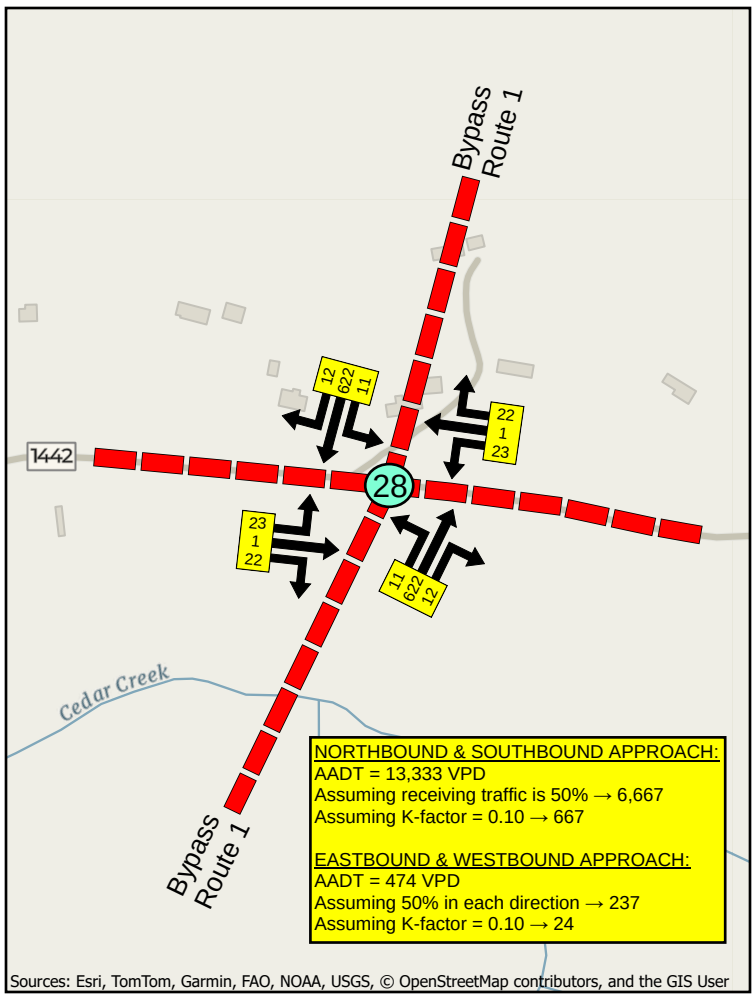
Bypass Route 1 – Proposed Intersections TMCs

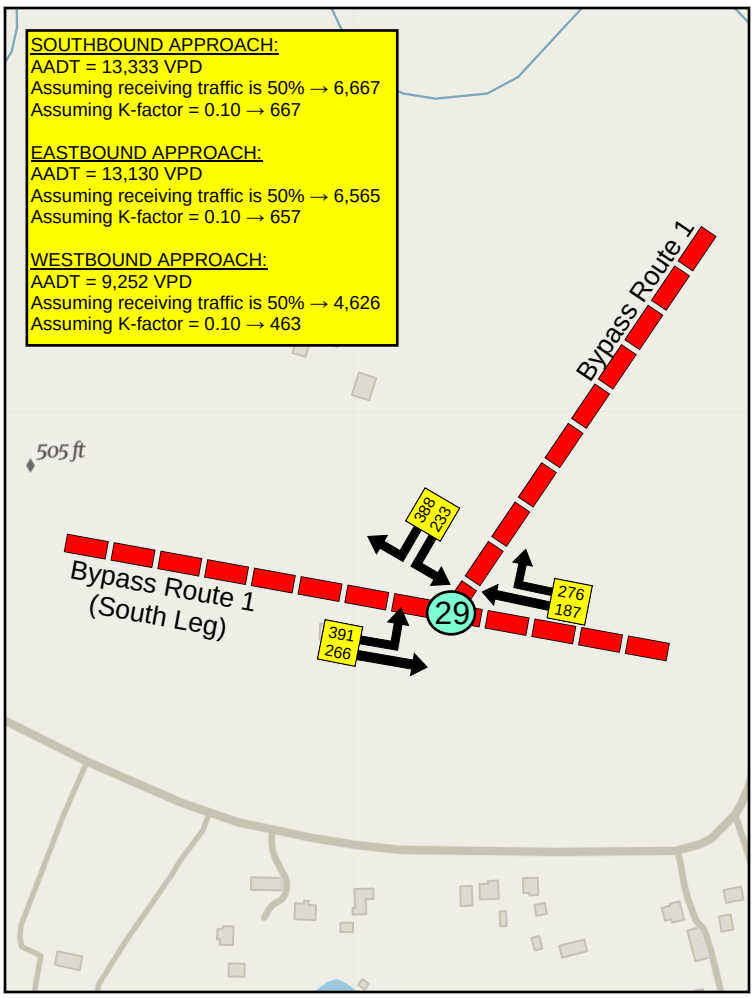


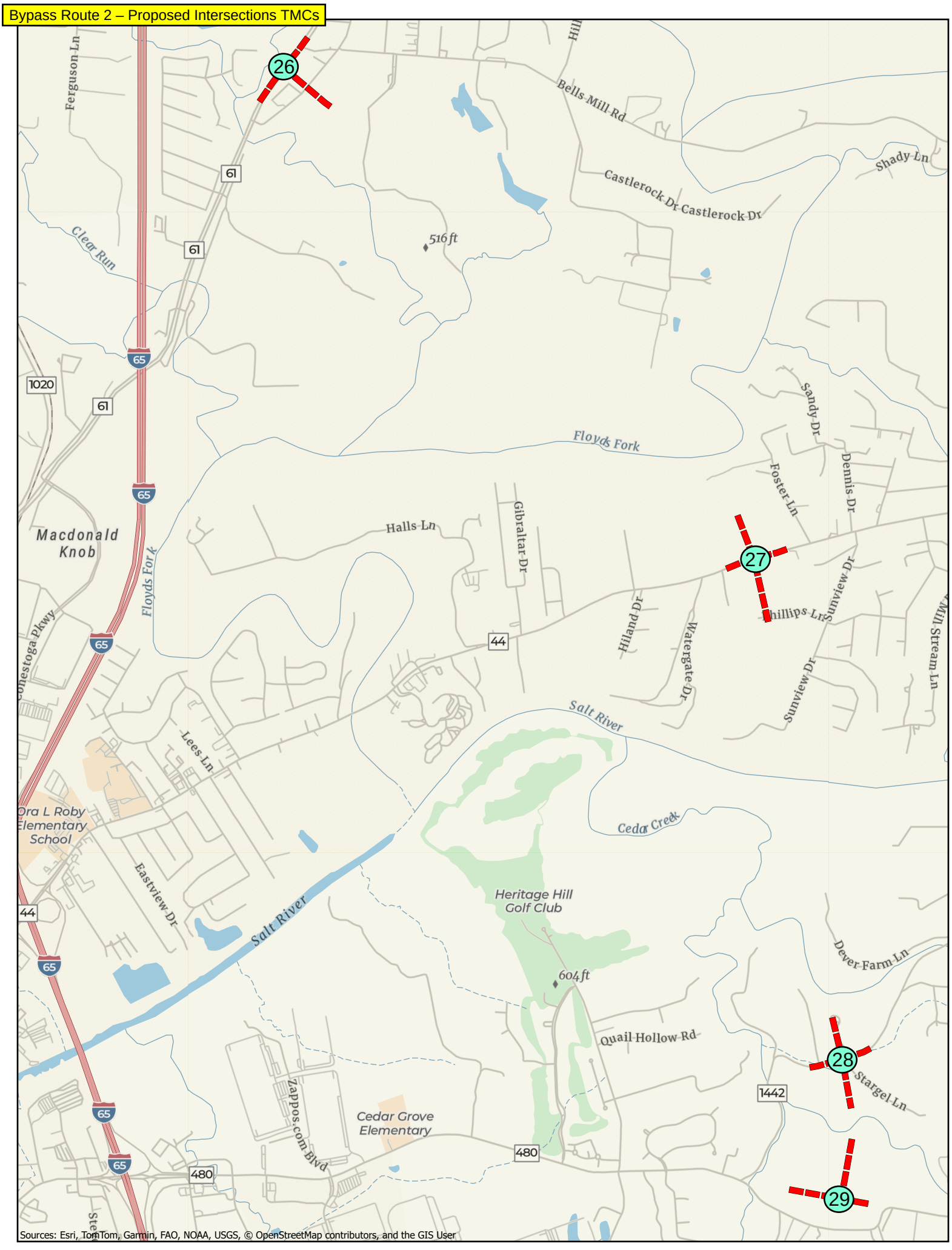
Bypass Route 1 – Proposed Intersections TMCs



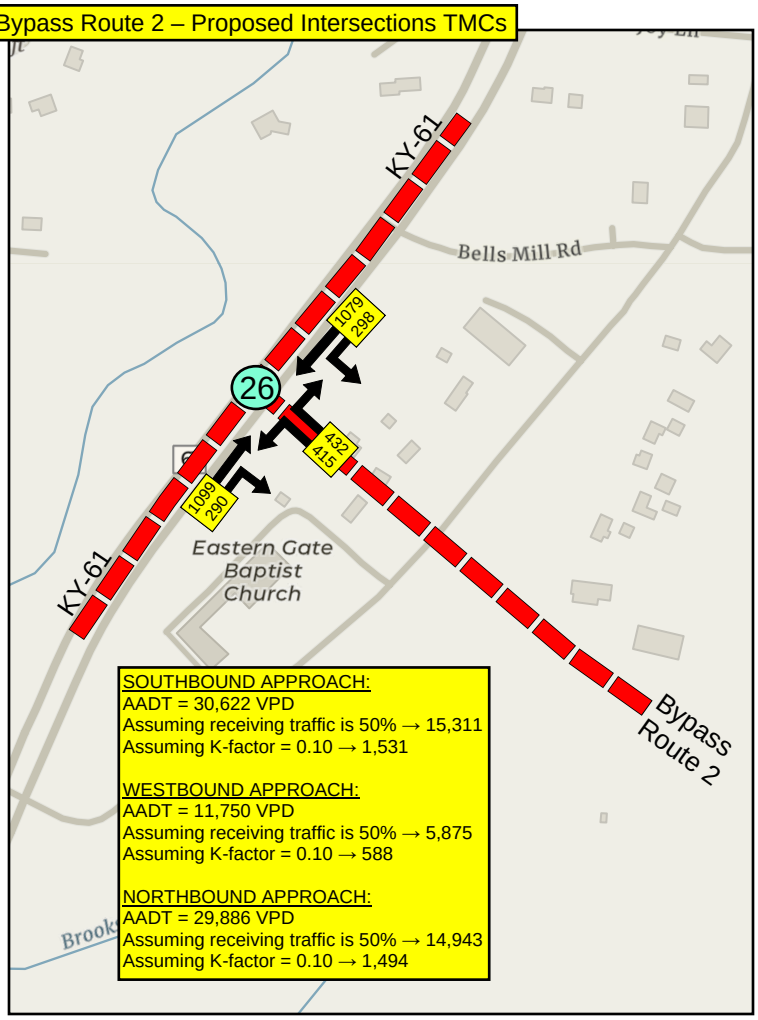


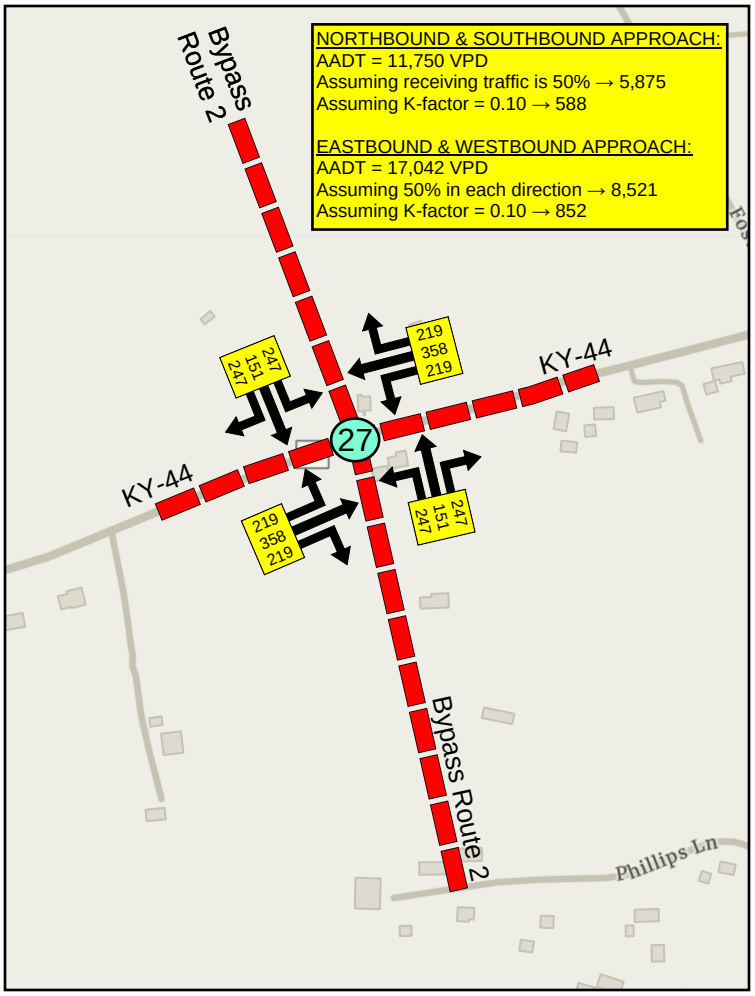


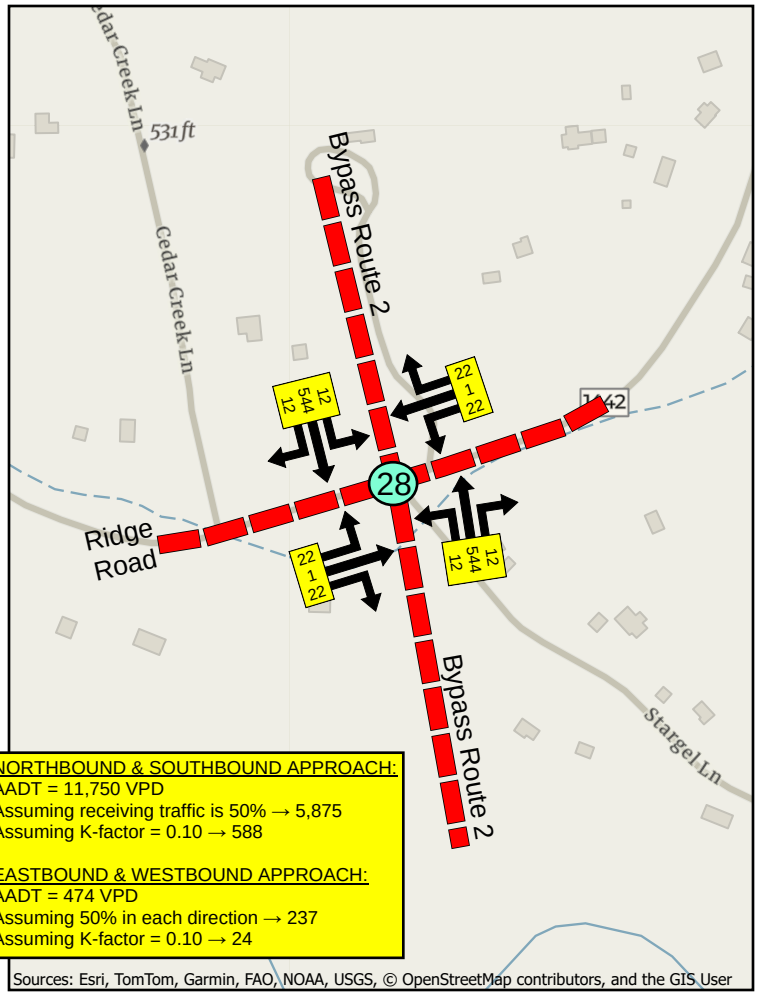


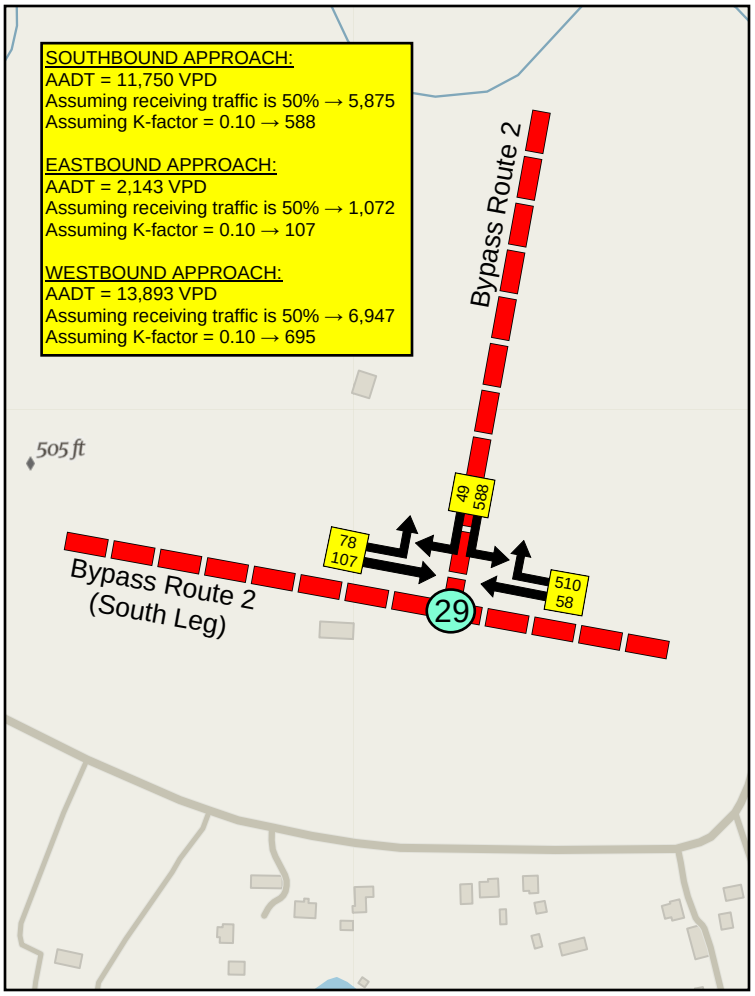

Bypass Route 2 – Proposed Intersections TMCs
26
27
28
29
Ferguson Ln
Bells Mill Rd
Castlerock Dr
Castlerock Dr
Shady Ln
Clear Run
516 ft
61
61
61
65
1020
Floyds Fork
Sandy Dr
Foster Ln
Dennis Dr
Macdonald Knob
Floyds Fork
Halls Ln
Gibraltar Dr
Hiland Dr
Watergate Dr
Sunview Dr
Sunview Dr
Phillips Ln
Mill Stream Ln
Conestoga Pkwy
65
44
Salt River
Lees Ln
Ora L Roby Elementary School
Cedar Creek
Eastview Dr
44
Salt River
Heritage Hill Golf Club
604 ft
Dever Farm Ln
65
Quail Hollow Rd
Stargel Ln
1442
Zappos.com Blvd
Cedar Grove Elementary
480
65
65
480
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Bypass Route 2 – Proposed Intersections TMCs



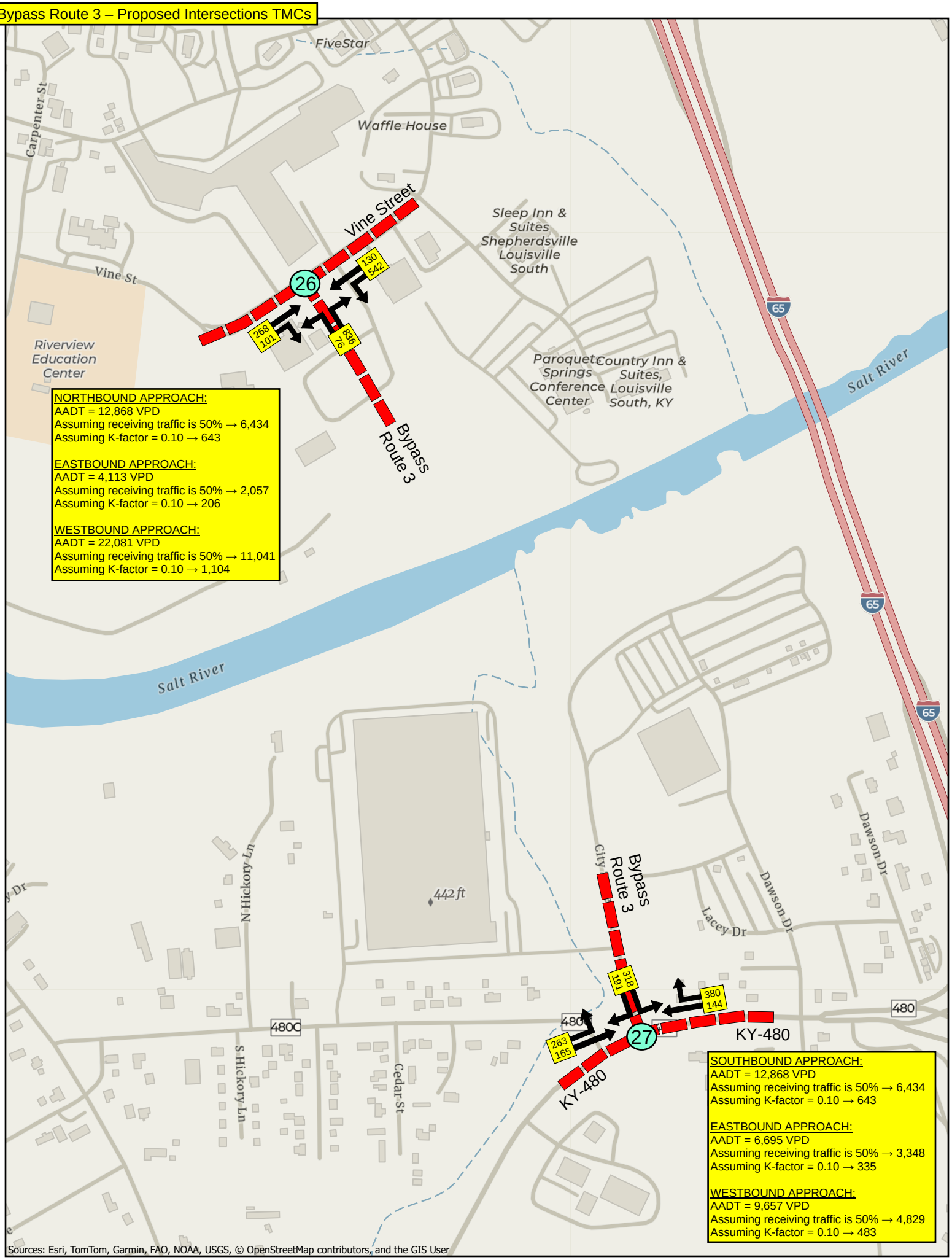






Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User

Bypass Route 3 – Proposed Intersections TMCs



Central Bullitt County Traffic Analysis - Existing Intersections

INT. 1: KY-61 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	18.1
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	18.1	C	C	0.00	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	10.5	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	560	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	1	9.1	A	A	0.00	0.0	0	
	SBT	423	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 1: KY-61 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	27.9
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	27.9	D	D	0.01	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	11.4	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	777	0.0	A		0.00	0.0	0	D
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	1	9.8	A	A	0.00	0.0	0	
	SBT	750	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 2: Bells Mill Road & Lodie Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.6	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	11.1
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	458	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	10.0	B	B	0.01	0.0	0	
	NBT	1	10.0	B		0.01	0.0	0	B
	NBR	1	10.0	B		0.01	0.0	0	
Southbound	SBL	67	11.1	B	B	0.12	0.4	10	
	SBT	1	11.1	B		0.12	0.4	10	
	SBR	1	11.1	B		0.121	0.4	10	

INT. 2: Bells Mill Road & Lodie Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.7	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	10.5
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	166	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	9.0	A	A	0.00	0.0	0	
	NBT	1	9.0	A		0.00	0.0	0	B
	NBR	1	9.0	A		0.00	0.0	0	
Southbound	SBL	203	10.5	B	B	0.25	1.0	25	
	SBT	1	10.5	B		0.25	1.0	25	
	SBR	1	10.5	B		0.253	1	25	

INT. 3: KY-61 & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	22.6
	EBR	–	-	-		-	-	-	
Westbound	WBL	10	22.6	C	C	0.05	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	80	10.3	B		0.12	0.4	10	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	400	0.0	A		0.00	0.0	0	C
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	148	9.2	A	A	0.16	0.6	15	
	SBT	264	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 3: KY-61 & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	36.0
	EBR	–	-	-		-	-	-	
Westbound	WBL	31	36.0	E	E	0.22	0.8	20	
	WBT	–	-	-		-	-	-	
	WBR	252	12.7	B		0.37	1.7	43	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	457	0.0	A		0.00	0.0	0	E
	NBR	41	0.0	A		0.00	0.0	0	
Southbound	SBL	191	9.6	A	A	0.21	0.8	20	
	SBT	470	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 4: KY-61 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	26.6	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	13.0
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	87	29.9	C	C	0.24	3.3	83	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	110	31.0	C		0.33	4.3	108	Intersection LOS
Northbound	NBL	1	7.2	A	A	0.00	0.0	0	
	NBT	275	7.2	A		0.19	2.5	63	B
	NBR	92	7.3	A		0.19	2.5	63	
Southbound	SBL	263	13.7	B	B	0.46	5.9	148	
	SBT	261	6.8	A		0.13	1.7	43	
	SBR	1	6.8	A		0.13	1.8	45	

INT. 4: KY-61 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	23.2	C	C	0.01	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	17.6
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	209	34.9	C	C	0.53	4.7	118	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	245	32.0	C		0.56	5.1	128	Intersection LOS
Northbound	NBL	1	10.8	B	B	0.00	0.0	0	
	NBT	400	10.3	B		0.28	2.5	63	B
	NBR	128	10.4	B		0.29	2.5	63	
Southbound	SBL	216	19.0	B	B	0.46	3.2	80	
	SBT	465	9.9	A		0.24	2.1	53	
	SBR	1	9.9	A		0.24	2.2	55	

INT. 5: KY-61 & KY-44 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	79	55.2	E	D	0.49	5.1	128	Intersection Delay (s)
	EBT	537	0.0	A		0.00	0.0	0	46.2
	EBR	59	44.4	D		0.90	26.7	668	
Westbound	WBL	24	63.7	E	C	0.36	1.8	45	
	WBT	119	0.0	A		0.00	0.0	0	
	WBR	41	25.5	C		0.29	6.4	160	Intersection LOS
Northbound	NBL	31	61.8	E	D	0.39	2.2	55	
	NBT	166	48.9	D		0.59	9.2	230	D
	NBR	130	48.4	D		0.55	7.6	190	
Southbound	SBL	139	74.7	E	D	0.80	9.8	245	
	SBT	145	37.1	D		0.38	7.2	180	
	SBR	47	33.3	C		0.15	2.2	55	

INT. 5: KY-61 & KY-44 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	102	62.5	E	D	0.61	3.4	85	Intersection Delay (s)
	EBT	238	0.0	A		0.00	0.0	0	43.5
	EBR	80	46.2	D		0.72	8.9	223	
Westbound	WBL	98	61.5	E	D	0.59	3.3	83	
	WBT	228	0.0	A		0.00	0.0	0	
	WBR	68	43.9	D		0.67	8.1	203	Intersection LOS
Northbound	NBL	95	60.1	E	D	0.57	3.1	78	
	NBT	282	35.9	D		0.53	6.8	170	D
	NBR	86	29.5	C		0.19	1.8	45	
Southbound	SBL	100	54.2	D	D	0.50	3.1	78	
	SBT	361	37.7	D		0.64	9.1	228	
	SBR	142	29.8	C		0.3	3.1	78	

INT. 6: KY-61 & 3rd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	11.7	B	B	0.01	0.0	0	Intersection Delay (s)
	EBT	1	11.7	B		0.01	0.0	0	14.1
	EBR	4	11.7	B		0.01	0.0	0	
Westbound	WBL	1	14.1	B	B	0.01	0.0	0	
	WBT	1	14.1	B		0.01	0.0	0	
	WBR	1	14.1	B		0.01	0.0	0	Intersection LOS
Northbound	NBL	2	7.8	A	A	0.00	0.0	0	
	NBT	355	0.0	A		0.00	0.0	0	B
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	22	8.3	A	A	0.02	0.1	3	
	SBT	221	0.0	A		0.00	0.0	0	
	SBR	1	0	A		0	0	0	

INT. 6: KY-61 & 3rd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	14.3	B	B	0.07	0.2	5	Intersection Delay (s)
	EBT	1	14.3	B		0.07	0.2	5	16.5
	EBR	21	14.3	B		0.07	0.2	5	
Westbound	WBL	1	16.5	C	C	0.01	0.0	0	
	WBT	1	16.5	C		0.01	0.0	0	
	WBR	2	16.5	C		0.01	0.0	0	Intersection LOS
Northbound	NBL	7	8.7	A	A	0.01	0.0	0	
	NBT	437	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	3	8.3	A	A	0.00	0.0	0	
	SBT	537	0.0	A		0.00	0.0	0	
	SBR	4	0	A		0	0	0	

INT. 7: KY-61 & 2nd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	25.0	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	2	0.0	A		0.00	0.0	0	9.9
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	21	25.6	C	C	0.05	0.7	18	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	1	25.0	C		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	8.9	A	B	0.00	0.0	0	
	NBT	310	9.1	A		0.30	5.3	133	A
	NBR	348	10.3	B		0.40	6.5	163	
Southbound	SBL	12	10.6	B	B	0.03	0.2	5	
	SBT	206	0.0	A		0.00	0.0	0	
	SBR	1	8.2	A		0.2	3.3	83	

INT. 7: KY-61 & 2nd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	3	25.8	C	C	0.07	0.6	15	Intersection Delay (s)
	EBT	9	0.0	A		0.00	0.0	0	13.5
	EBR	22	0.0	A		0.00	0.0	0	
Westbound	WBL	165	30.7	C	C	0.39	3.3	83	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	15	25.3	C		0.04	0.3	8	Intersection LOS
Northbound	NBL	4	13.8	B	A	0.01	0.0	0	
	NBT	409	9.9	A		0.38	3.9	98	B
	NBR	133	7.8	A		0.15	1.1	28	
Southbound	SBL	23	12.1	B	B	0.05	0.3	8	
	SBT	520	0.0	A		0.00	0.0	0	
	SBR	1	11.2	B		0.48	5.5	138	

INT. 8: KY-61 & KY-480C (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	12.9
	EBR	–	-	-		-	-	-	
Westbound	WBL	1	12.9	B	B	0.07	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	32	12.9	B		0.07	0.2	5	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	567	0.0	A		0.00	0.0	0	B
	NBR	4	0.0	A		0.00	0.0	0	
Southbound	SBL	36	9.0	A	A	0.04	0.1	3	
	SBT	186	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 8: KY-61 & KY-480C (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	13.3
	EBR	–	-	-		-	-	-	
Westbound	WBL	6	13.3	B	B	0.21	0.8	20	
	WBT	–	-	-		-	-	-	
	WBR	108	13.3	B		0.21	0.8	20	
Northbound	NBL	–	-	-	A	-	-	-	B
	NBT	419	0.0	A		0.00	0.0	0	
	NBR	6	0.0	A		0.00	0.0	0	B
Southbound	SBL	104	8.6	A	A	0.10	0.3	8	
	SBT	587	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	13	12.6	B		0.03	0.0	0	12.6
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	35	9.5	A		0.05	0.1	3	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	145	0.0	A	A	0.00	0.0	0	
	NBR	25	0.0	A		0.00	0.0	0	B
	SBL	70	7.8	A		0.06	0.2	5	
Southbound	SBT	134	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	25	16.4	C		0.08	0.2	5	16.4
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	115	10.5	B		0.16	0.6	15	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	214	0.0	A	A	0.00	0.0	0	
	NBR	22	0.0	A		0.00	0.0	0	C
	SBL	98	8.0	A		0.08	0.3	8	
Southbound	SBT	271	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	129	15.8	C		0.34	1.5	38	15.8
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	27	9.3	A		0.04	0.1	3	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	109	0.0	A	A	0.00	0.0	0	
	NBR	117	0.0	A		0.00	0.0	0	C
	SBL	72	8.2	A		0.08	0.3	8	
Southbound	SBT	85	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	71	14.5	B		0.17	0.6	15	B
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	85	9.6	A		0.10	0.3	8	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	142	0.0	A	A	0.00	0.0	0	
	NBR	86	0.0	A		0.00	0.0	0	
	SBL	80	8.0	A		0.07	0.2	5	14.5
Southbound	SBT	211	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 11: KY-44 & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	7.7	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	505	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	15.8
	WBL	–	-	-		-	-	-	
Westbound	WBT	115	0.0	A	A	0.00	0.0	0	
	WBR	33	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
	SBL	33	15.8	C		0.13	0.4	10	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	8	15.8	C		0.128	0.4	10	

INT. 11: KY-44 & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	8.3	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	333	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	14.1
	WBL	–	-	-		-	-	-	
Westbound	WBT	363	0.0	A	A	0.00	0.0	0	
	WBR	36	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	33	14.1	B		0.15	0.5	13	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	33	14.1	B		0.146	0.5	13	

INT. 12: KY-44 & Lee Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	230	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	37.3
	WBL	6	8.4	A		0.01	0.0	0	
Westbound	WBT	443	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	
	NBL	25	37.3	E		0.32	1.3	33	Intersection LOS
Northbound	NBT	–	-	-	E	-	-	-	
	NBR	1	37.3	E		0.32	1.3	33	E
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 12: KY-44 & Lee Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	87	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	12.8
	WBL	15	7.7	A		0.02	0.1	3	
Westbound	WBT	345	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	
	NBL	1	12.8	B		0.01	0.0	0	Intersection LOS
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	1	12.8	B		0.01	0.0	0	B
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 13: KY-44 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	32	64.4	E		0.36	2.4	60	Intersection Delay (s)
Eastbound	EBT	822	52.7	D	D	0.90	20.6	515	
	EBR	6	29.6	C		0.02	0.3	8	45.3
	WBL	45	46.4	D		0.20	2.6	65	
Westbound	WBT	218	24.2	C	C	0.18	4.1	103	
	WBR	362	16.5	B		0.46	15.0	375	
	NBL	12	42.3	D		0.04	0.6	15	Intersection LOS
Northbound	NBT	19	42.6	D	D	0.07	1.0	25	
	NBR	384	54.8	D		0.85	19.9	498	D
	SBL	453	55.7	E		0.78	12.6	315	
Southbound	SBT	9	0.0	A	E	0.00	0.0	0	
	SBR	16	40.9	D		0.06	0.8	20	

INT. 13: KY-44 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	71	61.3	E		0.46	2.5	63	Intersection Delay (s)
Eastbound	EBT	346	53.7	D	D	0.66	5.4	135	
	EBR	12	43.2	D		0.05	0.3	8	D
	WBL	117	57.0	E		0.53	3.8	95	
Westbound	WBT	393	47.3	D	D	0.59	5.7	143	
	WBR	708	27.9	C		0.86	24.4	610	
	NBL	9	43.8	D		0.03	0.2	5	Intersection LOS
Northbound	NBT	55	46.3	D	D	0.20	1.6	40	
	NBR	119	34.8	C		0.27	2.9	73	38.6
	SBL	535	30.5	C		0.44	6.4	160	
Southbound	SBT	28	0.0	A	C	0.00	0.0	0	
	SBR	34	25.5	C		0.06	0.7	18	

INT. 14: KY-44 & I-65 South ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	1394	33.1	C	C	0.89	25.2	630	
	EBR	12	0.0	A		0.00	0.0	0	29.8
	WBL	241	38.1	D		0.71	7.7	193	
Westbound	WBT	415	5.9	A	D	0.19	2.9	73	
	WBR	0	0.0	A		0.00	0.0	0	
	NBL	0	-	-		-	-	-	Intersection LOS
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	180	47.3	D		0.57	47.3	1183	
Southbound	SBT	4	0.0	A	D	0.00	0.0	0	
	SBR	251	0	A		0	0	0	

INT. 14: KY-44 & I-65 South ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	641	18.4	B	B	0.39	5.2	130	
	EBR	7	0.0	A		0.00	0.0	0	27.8
	WBL	294	12.3	B		0.50	3.1	78	
Westbound	WBT	795	6.9	A	A	0.34	3.4	85	
	WBR	0	0.0	A		0.00	0.0	0	
	NBL	0	-	-		-	-	-	Intersection LOS
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	340	105.7	F		1.05	14.9	373	
Southbound	SBT	9	0.0	A	F	0.00	0.0	0	
	SBR	456	0	A		0	0	0	

INT. 15: KY-44 & I-65 North ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	953	36.2	D	D	0.89	18.7	468	
	EBR	0	0.0	A		0.00		0	30.0
	WBL	0	0.0	A		0.00	0.0	0	
Westbound	WBT	463	27.5	C	C	0.43	9.1	228	
	WBR	–	-	-		-	-	-	
	NBL	295	16.3	B		0.36	8.7	218	Intersection LOS
Northbound	NBT	–	-	-	C	-	-	-	
	NBR	575	28.6	C		0.79	20.8	520	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 15: KY-44 & I-65 North ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	731	30.8	C	C	0.61	8.2	205	
	EBR	0	0.0	A		0	0.0	0	27.4
	WBL	0	0.0	A		0	0.0	0	
Westbound	WBT	833	32.9	C	C	0.69	9.8	245	
	WBR	–	-	-		-	-	-	
	NBL	363	16.8	B		0.39	5.6	140	Intersection LOS
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	290	16.3	B		0.35	4.4	110	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 16: KY-44 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	28	16.7	B		0.10	0.6	15	Intersection Delay (s)
Eastbound	EBT	259	10.5	B	B	0.32	3.1	78	
	EBR	–	-	-		-	-	-	13.4
	WBL	–	-	-		-	-	-	
Westbound	WBT	455	13.7	B	B	0.57	6.7	168	
	WBR	381	14.1	B		0.56	5.8	145	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	84	15.4	B		0.16	1.5	38	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	22	14.4	B		0.05	0.4	10	

INT. 16: KY-44 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	37	16.8	B		0.12	0.4	10	Intersection Delay (s)
Eastbound	EBT	461	13.6	B	B	0.56	3.6	90	
	EBR	–	-	-		-	-	-	14.7
	WBL	–	-	-		-	-	-	
Westbound	WBT	469	13.7	B	B	0.57	3.7	93	
	WBR	190	10.1	B		0.27	1.2	30	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	294	20.6	C		0.54	3.5	88	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	50	14.9	B		0.1	0.5	13	

INT. 17: Bells Mill Road & Cammi Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	1	8.3	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	99	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	11.9
	WBL	–	-	-		-	-	-	
Westbound	WBT	433	0.0	A	A	0.00	0.0	0	
	WBR	4	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	10	11.9	B		0.05	0.2	5	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	18	11.9	B		0.054	0.2	5	

INT. 17: Bells Mill Road & Cammi Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	33	7.8	A		0.03	0.1	3	Intersection Delay (s)
Eastbound	EBT	350	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	12.8
	WBL	–	-	-		-	-	-	
Westbound	WBT	223	0.0	A	A	0.00	0.0	0	
	WBR	23	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	16	12.8	B		0.06	0.2	5	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	11	0	A		0	0	0	

INT. 18: KY-480C & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
	WBL	1	0.0	A		0.0	0.0	0	
Westbound	WBT	–	-	-	A	-	-	-	
	WBR	42	0.0	A		0.0	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	6	8.4	A	A	0.0	0.0	0	
	NBR	3	8.4	A		0.0	0.0	0	A
	SBL	46	0.0	A		0.0	0.0	0	
Southbound	SBT	2	0.0	A	A	0.0	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 18: KY-480C & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
	WBL	4	0.0	A		0.00	0.0	0	
Westbound	WBT	–	-	-	A	-	-	-	
	WBR	125	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	4	8.4	A	A	0.01	0.0	0	
	NBR	1	8.4	A		0.01	0.0	0	A
	SBL	100	0.0	A		0.00	0.0	0	
Southbound	SBT	7	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 19: KY-480 & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	3	7.5	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	117	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.1
	WBL	–	-	-		-	-	-	
Westbound	WBT	56	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
	SBL	1	9.1	A		0.00	0.0	0	
Southbound	SBT	–	-	-	A	-	-	-	
	SBR	1	9.1	A		0.002	0	0	

INT. 19: KY-480 & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	4	7.7	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	131	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.2
	WBL	–	-	-		-	-	-	
Westbound	WBT	149	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
	SBL	1	9.2	A		0.01	0.0	0	
Southbound	SBT	–	-	-	A	-	-	-	
	SBR	1	9.2	A		0.011	0	0	

INT. 20: KY-480C & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	4	7.6	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	111	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	10.0
	WBL	–	-	-		-	-	-	
Westbound	WBT	57	0.0	A	A	0.00	0.0	0	
	WBR	38	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	52	10.0	B		0.08	0.3	8	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	2	10	B		0.077	0.3	8	

INT. 20: KY-480C & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	4	7.9	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	137	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	11.7
	WBL	–	-	-		-	-	-	
Westbound	WBT	139	0.0	A	A	0.00	0.0	0	
	WBR	114	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	98	11.7	B		0.17	0.6	15	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	3	11.7	B		0.169	0.6	15	

INT. 21: KY-480 & Omega Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	358	20.7	C		0.68	9.8	245	Intersection Delay (s)
Eastbound	EBT	151	14.3	B	B	0.13	1.8	45	
	EBR	256	19.4	B		0.48	7.9	198	27.4
	WBL	6	25.2	C		0.02	0.2	5	
Westbound	WBT	364	43.7	D	D	0.68	9.0	225	
	WBR	2	43.3	D		0.68	9.3	233	
	NBL	39	38.1	D		0.23	2.0	50	Intersection LOS
Northbound	NBT	17	0.0	A	D	0.00	0.0	0	
	NBR	3	36.2	D		0.12	1.0	25	C
	SBL	1	36.9	D		0.03	0.2	5	
Southbound	SBT	4	0.0	A	D	0.00	0.0	0	
	SBR	13	15.8	B		0.03	0.4	10	

INT. 21: KY-480 & Omega Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	360	15.5	B		0.50	4.0	100	Intersection Delay (s)
Eastbound	EBT	406	15.6	B	B	0.27	2.3	58	
	EBR	125	15.1	B		0.18	1.4	35	23.6
	WBL	21	25.6	C		0.06	0.3	8	
Westbound	WBT	294	35.5	D	C	0.43	2.9	73	
	WBR	4	35.4	D		0.43	3.1	78	
	NBL	132	49.6	D		0.61	3.4	85	Intersection LOS
Northbound	NBT	32	0	A	D	0.00	0.0	0	
	NBR	14	37.8	D		0.21	1.0	25	C
	SBL	5	38.6	D		0.15	0.6	15	
Southbound	SBT	22	0	A	C	0.00	0.0	0	
	SBR	253	20.4	C		0.39	3.6	90	

INT. 22: KY-480 & Ridge Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	1	8.5	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	46	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	11.8
	WBL	-	-	-		-	-	-	
Westbound	WBT	457	0.0	A	A	0.00	0.0	0	
	WBR	1	0.0	A		0.00	0.0	0	
	NBL	-	-	-		-	-	-	Intersection LOS
Northbound	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	B
	SBL	1	11.8	B		0.00	0.0	0	
Southbound	SBT	-	-	-	B	-	-	-	
	SBR	1	11.8	B		0.004	0	0	

INT. 22: KY-480 & Ridge Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	1	7.7	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	315	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	10.7
	WBL	-	-	-		-	-	-	
Westbound	WBT	187	0.0	A	A	0.00	0.0	0	
	WBR	1	0.0	A		0.00	0.0	0	
	NBL	-	-	-		-	-	-	Intersection LOS
Northbound	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	B
	SBL	1	10.7	B		0.00	0.0	0	
Southbound	SBT	-	-	-	B	-	-	-	
	SBR	1	10.7	B		0.003	0	0	

INT. 23: Clermont Road & Chapeze Lane (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	8	10.2	B		0.01	0.0	0	Intersection Delay (s)
Eastbound	EBT	418	0.0	A	B	0.00	0.0	0	
	EBR	–	-	-		-	-	-	19.7
	WBL	–	-	-		-	-	-	
Westbound	WBT	868	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
	SBL	5	19.7	C		0.10	0.3	8	
Southbound	SBT	-	-	-	C	-	-	-	
	SBR	21	19.7	C		0.1	0.3	8	

INT. 23: Clermont Road & Chapeze Lane (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	19	8.7	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	760	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	20.0
	WBL	-	-	-		-	-	-	
Westbound	WBT	514	0.0	A	A	0.00	0.0	0	
	WBR	11	0.0	A		0.00	0.0	0	
	NBL	-	-	-		-	-	-	Intersection LOS
Northbound	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	C
	SBL	10	20.0	C		0.08	0.3	8	
Southbound	SBT	-	-	-	C	-	-	-	
	SBR	11	20	C		0.081	0.3	8	

INT. 24: West Blue Lick Road & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	20	7.3	A		0.01	0.0	0	Intersection Delay (s)
Eastbound	EBT	6	0.0	A	A	0.00	0.0	0	
	EBR	37	0.0	A		0.00	0.0	0	11.2
	WBL	8	7.3	A		0.01	0.0	0	
Westbound	WBT	3	0.0	A	A	0.00	0.0	0	
	WBR	4	0.0	A		0.00	0.0	0	
	NBL	12	10.4	B		0.07	0.2	5	Intersection LOS
Northbound	NBT	30	10.4	B	B	0.07	0.2	5	
	NBR	1	10.4	B		0.07	0.2	5	B
	SBL	12	11.2	B		0.26	1.0	25	
Southbound	SBT	153	11.2	B	B	0.26	1.0	25	
	SBR	9	11.2	B		0.256	1	25	

INT. 24: West Blue Lick Road & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	31	7.3	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	13	0.0	A	A	0.00	0.0	0	
	EBR	24	0.0	A		0.00	0.0	0	11.6
	WBL	7	7.3	A		0.01	0.0	0	
Westbound	WBT	11	0.0	A	A	0.00	0.0	0	
	WBR	7	0.0	A		0.00	0.0	0	
	NBL	40	11.6	B		0.25	1.0	25	Intersection LOS
Northbound	NBT	126	11.6	B	B	0.25	1.0	25	
	NBR	8	11.6	B		0.25	1.0	25	B
	SBL	9	10.8	B		0.22	0.8	20	
Southbound	SBT	120	10.8	B	B	0.22	0.8	20	
	SBR	36	10.8	B		0.217	0.8	20	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (AM Peak)									
Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	24.5	C		0.04	0.5	13	Intersection Delay (s)
	EBT	8	0	A	C	0.00	0	0	
	EBR	8	24.3	C		0.03	0.3	8	26.1
Westbound	WBL	190	29.6	C		0.50	6.8	170	
	WBT	8	22.7	C	C	0.02	0.2	5	
	WBR	33	0.0	A		0.00	0.0	0	
Northbound	NBL	8	26.3	C		0.03	0.3	8	Intersection LOS
	NBT	218	25.3	C	C	0.45	7.3	183	
	NBR	218	0.0	A		0.00	0.0	0	C
Southbound	SBL	38	28.3	C		0.14	1.4	35	
	SBT	393	25.0	C	C	0.43	6.5	163	
	SBR	8	24.9	C		0.43	6.8	170	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (PM Peak)									
Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	20	25.1	C		0.10	0.7	18	Intersection Delay (s)
	EBT	20	0.0	A	C	0.00	0.0	0	
	EBR	20	24.7	C		0.06	0.3	8	31.0
Westbound	WBL	338	41.4	D		0.79	7.4	185	
	WBT	20	22.9	C	D	0.04	0.3	8	
	WBR	135	0.0	A		0.00	0.0	0	
Northbound	NBL	20	23.6	C		0.06	0.3	8	Intersection LOS
	NBT	293	27.2	C	C	0.54	5.1	128	
	NBR	433	0.0	A		0.00	0.0	0	C
Southbound	SBL	107	36.0	D		0.42	2.3	58	
	SBT	233	22.2	C	C	0.24	1.9	48	
	SBR	20	22.2	C		0.25	2	50	

Central Bullitt County Traffic Analysis - Bypass Route 1

INT. 1: KY-61 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	16.5
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	16.5	C	C	0.00	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	10.1	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	481	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	1	8.7	A	A	0.00	0.0	0	
	SBT	423	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 1: KY-61 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	24.2
	EBR	–	–	–		–	–	–	
Westbound	WBL	2	24.2	C	C	0.01	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	2	10.8	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	667	0.0	A		0.00	0.0	0	C
	NBR	2	0.0	A		0.00	0.0	0	
Southbound	SBL	1	9.4	A	A	0.00	0.0	0	
	SBT	750	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 2: Bells Mill Road & Lodie Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.6	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	11.1
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	458	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	10.0	B	B	0.01	0.0	0	
	NBT	1	10.0	B		0.01	0.0	0	B
	NBR	1	10.0	B		0.01	0.0	0	
Southbound	SBL	67	11.1	B	B	0.12	0.4	10	
	SBT	1	11.1	B		0.12	0.4	10	
	SBR	1	11.1	B		0.121	0.4	10	

INT. 2: Bells Mill Road & Lodie Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.7	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	10.5
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	166	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	9.0	A	A	0.00	0.0	0	
	NBT	1	9.0	A		0.00	0.0	0	B
	NBR	1	9.0	A		0.00	0.0	0	
Southbound	SBL	203	10.5	B	B	0.25	1.0	25	
	SBT	1	10.5	B		0.25	1.0	25	
	SBR	1	10.5	B		0.253	1	25	

INT. 3: KY-61 & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	21.7
	EBR	-	-	-		-	-	-	
Westbound	WBL	10	21.7	C	C	0.05	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	74	10.3	B		0.11	0.4	10	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	400	0.0	A		0.00	0.0	0	C
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	148	9.1	A	A	0.15	0.5	13	
	SBT	249	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 3: KY-61 & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	32.8
	EBR	–	-	-		-	-	-	
Westbound	WBL	29	32.8	D	D	0.19	0.7	18	
	WBT	–	-	-		-	-	-	
	WBR	231	12.4	B		0.34	1.5	38	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	457	0.0	A		0.00	0.0	0	D
	NBR	41	0.0	A		0.00	0.0	0	
Southbound	SBL	180	9.6	A	A	0.20	0.7	18	
	SBT	442	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 4: KY-61 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	26.6	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	13.0
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	87	29.9	C	C	0.24	3.3	83	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	110	31.0	C		0.33	4.3	108	Intersection LOS
Northbound	NBL	2	7.2	A	A	0.00	0.0	0	
	NBT	290	7.3	A		0.20	2.7	68	B
	NBR	97	7.4	A		0.20	2.7	68	
Southbound	SBL	263	14.2	B	B	0.47	6.0	150	
	SBT	261	6.8	A		0.13	1.7	43	
	SBR	1	6.8	A		0.13	1.8	45	

INT. 4: KY-61 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	23.2	C	C	0.01	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	17.6
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	209	34.9	C	C	0.53	4.7	118	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	245	32.0	C		0.56	5.1	128	Intersection LOS
Northbound	NBL	2	10.8	B	B	0.00	0.0	0	
	NBT	421	10.5	B		0.30	2.7	68	B
	NBR	135	10.5	B		0.30	2.6	65	
Southbound	SBL	216	19.8	B	B	0.48	3.3	83	
	SBT	465	9.9	A		0.24	2.1	53	
	SBR	1	9.9	A		0.24	2.2	55	

INT. 5: KY-61 & KY-44 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	79	55.2	E	D	0.49	5.1	128	Intersection Delay (s)
	EBT	537	0.0	A		0.00	0.0	0	46.2
	EBR	59	44.4	D		0.90	26.7	668	
Westbound	WBL	24	63.7	E	C	0.36	1.8	45	
	WBT	119	0.0	A		0.00	0.0	0	
	WBR	41	25.5	C		0.29	6.4	160	Intersection LOS
Northbound	NBL	31	61.8	E	D	0.39	2.2	55	
	NBT	166	48.9	D		0.59	9.2	230	D
	NBR	130	48.4	D		0.55	7.6	190	
Southbound	SBL	139	74.7	E	D	0.80	9.8	245	
	SBT	145	37.1	D		0.38	7.2	180	
	SBR	47	33.3	C		0.15	2.2	55	

INT. 5: KY-61 & KY-44 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	102	62.5	E	D	0.61	3.4	85	Intersection Delay (s)
	EBT	238	0.0	A		0.00	0.0	0	43.5
	EBR	80	46.2	D		0.72	8.9	223	
Westbound	WBL	98	61.5	E	D	0.59	3.3	83	
	WBT	228	0.0	A		0.00	0.0	0	
	WBR	68	43.9	D		0.67	8.1	203	Intersection LOS
Northbound	NBL	95	60.1	E	D	0.57	3.1	78	
	NBT	282	35.9	D		0.53	6.8	170	D
	NBR	86	29.5	C		0.19	1.8	45	
Southbound	SBL	100	54.2	D	D	0.50	3.1	78	
	SBT	361	37.7	D		0.64	9.1	228	
	SBR	142	29.8	C		0.3	3.1	78	

INT. 6: KY-61 & 3rd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	11.7	B	B	0.01	0.0	0	Intersection Delay (s)
	EBT	1	11.7	B		0.01	0.0	0	14.1
	EBR	4	11.7	B		0.01	0.0	0	
Westbound	WBL	1	14.1	B	B	0.01	0.0	0	
	WBT	1	14.1	B		0.01	0.0	0	
	WBR	1	14.1	B		0.01	0.0	0	Intersection LOS
Northbound	NBL	2	7.8	A	A	0.00	0.0	0	
	NBT	355	0.0	A		0.00	0.0	0	B
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	22	8.3	A	A	0.02	0.1	3	
	SBT	221	0.0	A		0.00	0.0	0	
	SBR	1	0	A		0	0	0	

INT. 6: KY-61 & 3rd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	14.3	B	B	0.07	0.2	5	Intersection Delay (s)
	EBT	1	14.3	B		0.07	0.2	5	16.5
	EBR	21	14.3	B		0.07	0.2	5	
Westbound	WBL	1	16.5	C	C	0.01	0.0	0	
	WBT	1	16.5	C		0.01	0.0	0	
	WBR	2	16.5	C		0.01	0.0	0	Intersection LOS
Northbound	NBL	7	8.7	A	A	0.01	0.0	0	
	NBT	437	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	3	8.3	A	A	0.00	0.0	0	
	SBT	537	0.0	A		0.00	0.0	0	
	SBR	4	0	A		0	0	0	

INT. 7: KY-61 & 2nd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	25.0	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	2	0.0	A		0.00	0.0	0	9.5
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	17	25.4	C	C	0.04	0.6	15	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	1	25.0	C		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	8.9	A	B	0.00	0.0	0	
	NBT	282	8.8	A		0.28	4.7	118	A
	NBR	316	9.9	B		0.37	5.7	143	
Southbound	SBL	12	10.1	B	B	0.03	0.2	5	
	SBT	206	0.0	A		0.00	0.0	0	
	SBR	1	8.2	A		0.2	3.3	83	

INT. 7: KY-61 & 2nd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	3	25.8	C	C	0.07	0.6	15	Intersection Delay (s)
	EBT	9	0.0	A		0.00	0.0	0	12.8
	EBR	22	0.0	A		0.00	0.0	0	
Westbound	WBL	131	29.2	C	C	0.31	2.5	63	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	12	25.3	C		0.03	0.2	5	Intersection LOS
Northbound	NBL	4	13.8	B	A	0.01	0.0	0	
	NBT	372	9.5	A		0.35	3.4	85	B
	NBR	121	7.7	A		0.13	1.0	25	
Southbound	SBL	23	11.4	B	B	0.04	0.2	5	
	SBT	520	0.0	A		0.00	0.0	0	
	SBR	1	11.2	B		0.48	5.5	138	

INT. 8: KY-61 & KY-480C (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	12.8
	EBR	–	-	-		-	-	-	
Westbound	WBL	1	12.8	B	B	0.05	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	22	12.8	B		0.05	0.2	5	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	567	0.0	A		0.00	0.0	0	B
	NBR	4	0.0	A		0.00	0.0	0	
Southbound	SBL	33	8.9	A	A	0.04	0.1	3	
	SBT	169	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 8: KY-61 & KY-480C (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	12.4
	EBR	–	-	-		-	-	-	
Westbound	WBL	4	12.4	B	B	0.14	0.5	13	
	WBT	–	-	-		-	-	-	
	WBR	74	12.4	B		0.14	0.5	13	
Northbound	NBL	–	-	-	A	-	-	-	B
	NBT	419	0.0	A		0.00	0.0	0	
	NBR	6	0.0	A		0.00	0.0	0	
Southbound	SBL	95	8.6	A	A	0.09	0.3	8	B
	SBT	533	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	12.5
	WBL	13	12.5	B		0.03	0.1	3	
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	35	9.5	A		0.05	0.1	3	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	137	0.0	A	A	0.00	0.0	0	
	NBR	24	0.0	A		0.00	0.0	0	B
	SBL	70	7.8	A		0.06	0.2	5	
Southbound	SBT	134	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	16.1
	WBL	25	16.1	C		0.08	0.2	5	
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	115	10.4	B		0.15	0.5	13	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	201	0.0	A	A	0.00	0.0	0	
	NBR	21	0.0	A		0.00	0.0	0	C
	SBL	98	8.0	A		0.08	0.3	8	
Southbound	SBT	271	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	15.1
	WBL	129	15.1	C		0.33	1.4	35	
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	27	9.2	A		0.04	0.1	3	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	101	0.0	A	A	0.00	0.0	0	
	NBR	109	0.0	A		0.00	0.0	0	C
	SBL	68	8.1	A		0.07	0.2	5	
Southbound	SBT	81	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	14.0
	WBL	71	14.0	B		0.16	0.6	15	
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	85	9.5	A		0.10	0.3	8	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	132	0.0	A	A	0.00	0.0	0	
	NBR	80	0.0	A		0.00	0.0	0	B
	SBL	76	7.9	A		0.06	0.2	5	
Southbound	SBT	200	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 11: KY-44 & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	7.7	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	505	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	15.8
	WBL	–	-	-		-	-	-	
Westbound	WBT	115	0.0	A	A	0.00	0.0	0	
	WBR	33	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
	SBL	33	15.8	C		0.13	0.4	10	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	8	15.8	C		0.128	0.4	10	

INT. 11: KY-44 & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	8.3	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	333	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	14.1
	WBL	–	-	-		-	-	-	
Westbound	WBT	363	0.0	A	A	0.00	0.0	0	
	WBR	36	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	33	14.1	B		0.15	0.5	13	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	33	14.1	B		0.146	0.5	13	

INT. 12: KY-44 & Lee Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	230	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	37.3
	WBL	6	8.4	A		0.01	0.0	0	
Westbound	WBT	443	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	25	37.3	E		0.32	1.3	33	
Northbound	NBT	–	-	-	E	-	-	-	
	NBR	1	37.3	E		0.32	1.3	33	E
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 12: KY-44 & Lee Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	87	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	12.8
	WBL	15	7.7	A		0.02	0.1	3	
Westbound	WBT	345	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	1	12.8	B		0.01	0.0	0	
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	1	12.8	B		0.01	0.0	0	B
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 13: KY-44 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	34	65.3	E		0.38	2.5	63	Intersection Delay (s)
Eastbound	EBT	868	45.6	D	D	0.85	20.3	508	
	EBR	7	26.9	C		0.02	0.3	8	42.1
	WBL	49	53.3	D		0.29	3.0	75	
Westbound	WBT	235	25.1	C	C	0.20	4.6	115	
	WBR	391	16.6	B		0.49	16.6	415	Intersection LOS
	NBL	10	43.0	D		0.04	0.5	13	
Northbound	NBT	16	43.3	D	E	0.06	0.9	23	
	NBR	321	60.0	E		0.84	17.7	443	D
	SBL	453	50.9	D		0.72	12.1	303	
Southbound	SBT	9	0.0	A	D	0.00	0.0	0	
	SBR	16	39.2	D		0.06	0.8	20	

INT. 13: KY-44 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	75	56.9	E		0.42	2.5	63	Intersection Delay (s)
Eastbound	EBT	366	52.8	D	D	0.66	5.6	140	
	EBR	13	42.4	D		0.05	0.4	10	47.2
	WBL	127	62.3	E		0.61	4.4	110	
Westbound	WBT	424	52.3	D	D	0.70	6.5	163	
	WBR	764	51.6	D		1.00	30.6	765	Intersection LOS
	NBL	8	41.2	D		0.03	0.2	5	
Northbound	NBT	46	42.8	D	D	0.14	1.3	33	
	NBR	100	32.5	C		0.21	2.3	58	D
	SBL	535	33.1	C		0.48	6.7	168	
Southbound	SBT	28	0.0	A	C	0.00	0.0	0	
	SBR	34	27.5	C		0.07	0.7	18	

INT. 14: KY-44 & I-65 South ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	1503	41.8	D	D	0.96	25.2	630	
	EBR	13	0.0	A		0.00	0.0	0	36.3
	WBL	241	45.8	D		0.76	7.7	193	
Westbound	WBT	415	5.9	A	D	0.19	2.9	73	
	WBR	0	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	0	-	-		-	-	-	
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	D
	SBL	180	47.3	D		0.57	47.3	1183	
Southbound	SBT	4	0.0	A	D	0.00	0.0	0	
	SBR	251	0	A		0	0	0	

INT. 14: KY-44 & I-65 South ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	691	18.8	B	B	0.42	5.7	143	
	EBR	8	0.0	A		0.00	0.0	0	27.8
	WBL	294	13.0	B		0.52	3.1	78	
Westbound	WBT	795	6.9	A	A	0.34	3.4	85	
	WBR	0	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	0	-	-		-	-	-	
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	340	105.7	F		1.05	14.9	373	
Southbound	SBT	9	0.0	A	F	0.00	0.0	0	
	SBR	456	0	A		0	0	0	

INT. 15: KY-44 & I-65 North ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	953	36.2	D	D	0.89	18.7	468	
	EBR	0	0.0	A		0.00		0	29.9
	WBL	0	0.0	A		0.00	0.0	0	
Westbound	WBT	428	27.0	C	C	0.40	8.5	213	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	295	16.3	B		0.36	8.7	218	
Northbound	NBT	–	-	-	C	-	-	-	
	NBR	575	28.6	C		0.79	20.8	520	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 15: KY-44 & I-65 North ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	731	30.8	C	C	0.61	8.2	205	
	EBR	0	0.0	A		0	0.0	0	26.7
	WBL	0	0.0	A		0	0.0	0	
Westbound	WBT	769	31.5	C	C	0.64	8.8	220	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	363	16.8	B		0.39	5.6	140	
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	290	16.3	B		0.35	4.4	110	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 16: KY-44 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	21	17.8	B		0.09	0.4	10	Intersection Delay (s)
Eastbound	EBT	187	9.7	A	B	0.23	2.1	53	
	EBR	–	-	-		-	-	-	14.4
	WBL	–	-	-		-	-	-	
Westbound	WBT	500	14.9	B	B	0.62	7.8	195	
	WBR	419	15.3	B		0.62	6.7	168	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	115	16.0	B		0.22	2.1	53	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	30	14.5	B		0.06	0.5	13	

INT. 16: KY-44 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	27	17.7	B		0.09	0.3	8	Intersection Delay (s)
Eastbound	EBT	332	11.3	B	B	0.40	2.3	58	
	EBR	–	-	-		-	-	-	14.6
	WBL	–	-	-		-	-	-	
Westbound	WBT	515	14.8	B	B	0.62	4.3	108	
	WBR	209	10.4	B		0.30	1.4	35	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	294	20.6	C		0.54	3.5	88	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	50	14.9	B		0.1	0.5	13	

INT. 17: Bells Mill Road & Cammi Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	2	8.8	A		0.00	0.0	0	Intersection Delay (s)
	EBT	136	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	14.0
Westbound	WBL	–	-	-		-	-	-	
	WBT	592	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	10	14.0	B		0.07	0.2	5	
	SBT	–	-	-	B	-	-	-	
	SBR	18	14	B		0.069	0.2	5	

INT. 17: Bells Mill Road & Cammi Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	45	8.1	A		0.04	0.1	3	Intersection Delay (s)
	EBT	479	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	15.9
Westbound	WBL	–	-	-		-	-	-	
	WBT	305	0.0	A	A	0.00	0.0	0	
	WBR	32	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
Southbound	SBL	16	15.9	C		0.08	0.3	8	
	SBT	–	-	-	C	-	-	-	
	SBR	11	0	A		0	0	0	

INT. 18: KY-480C & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-		-	-	-	Intersection Delay (s)
	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
Westbound	WBL	1	0.0	A		0.0	0.0	0	
	WBT	–	-	-	A	-	-	-	
	WBR	29	0.0	A		0.0	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	6	8.4	A	A	0.0	0.0	0	
	NBR	3	8.4	A		0.0	0.0	0	A
Southbound	SBL	32	0.0	A		0.0	0.0	0	
	SBT	2	0.0	A	A	0.0	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 18: KY-480C & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-		-	-	-	Intersection Delay (s)
	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
Westbound	WBL	3	0.0	A		0.00	0.0	0	
	WBT	–	-	-	A	-	-	-	
	WBR	85	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	4	8.4	A	A	0.01	0.0	0	
	NBR	1	8.4	A		0.01	0.0	0	A
Southbound	SBL	69	0.0	A		0.00	0.0	0	
	SBT	5	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 19: KY-480 & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	3	7.5	A		0.00	0.0	0	Intersection Delay (s)
	EBT	117	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.1
Westbound	WBL	–	-	-		-	-	-	
	WBT	56	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
Southbound	SBL	1	9.1	A		0.00	0.0	0	
	SBT	–	-	-	A	-	-	-	
	SBR	1	9.1	A		0.002	0	0	

INT. 19: KY-480 & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	7.7	A		0.00	0.0	0	Intersection Delay (s)
	EBT	131	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.2
Westbound	WBL	–	-	-		-	-	-	
	WBT	149	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
Southbound	SBL	1	9.2	A		0.01	0.0	0	
	SBT	–	-	-	A	-	-	-	
	SBR	8	9.2	A		0.011	0	0	

INT. 20: KY-480C & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	7.5	A		0.00	0.0	0	Intersection Delay (s)
	EBT	111	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.9
Westbound	WBL	–	-	-		-	-	-	
	WBT	52	0.0	A	A	0.00	0.0	0	
	WBR	35	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
Southbound	SBL	36	9.9	A		0.05	0.2	5	
	SBT	–	-	-	A	-	-	-	
	SBR	1	9.9	A		0.053	0.2	5	

INT. 20: KY-480C & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	7.9	A		0.00	0.0	0	Intersection Delay (s)
	EBT	127	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	11.1
Westbound	WBL	–	-	-		-	-	-	
	WBT	127	0.0	A	A	0.00	0.0	0	
	WBR	104	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	67	11.1	B		0.11	0.4	10	
	SBT	–	-	-	B	-	-	-	
	SBR	2	11.1	B		0.112	0.4	10	

INT. 21: KY-480 & Omega Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	302	18.5	B		0.59	8.0	200	Intersection Delay (s)
	EBT	128	14.2	B	B	0.11	1.5	38	
	EBR	216	18.1	B		0.40	6.4	160	30.3
Westbound	WBL	7	25.2	C		0.03	0.3	8	
	WBT	412	49.3	D	D	0.77	10.5	263	
	WBR	3	48.6	D		0.77	10.8	270	
Northbound	NBL	57	40.3	D		0.34	3.0	75	Intersection LOS
	NBT	25	0.0	A	D	0.00	0.0	0	
	NBR	5	37.1	D		0.17	1.5	38	C
Southbound	SBL	1	36.9	D		0.03	0.2	5	
	SBT	4	0.0	A	C	0.00	0.0	0	
	SBR	13	15.8	B		0.03	0.4	10	

INT. 21: KY-480 & Omega Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	304	14.6	B		0.43	3.2	80	Intersection Delay (s)
	EBT	343	15.2	B	B	0.22	1.9	48	
	EBR	106	14.8	B		0.16	1.2	30	28.9
Westbound	WBL	24	25.7	C		0.07	0.4	10	
	WBT	333	37	D	D	0.49	3.4	85	
	WBR	5	36.8	D		0.49	3.6	90	
Northbound	NBL	191	76.2	E		0.89	6.3	158	Intersection LOS
	NBT	46	0	A	E	0.00	0.0	0	
	NBR	21	39.7	D		0.31	1.5	38	C
Southbound	SBL	5	38.6	D		0.15	0.6	15	
	SBT	22	0	A	C	0.00	0.0	0	
	SBR	253	20.4	C		0.39	3.6	90	

INT. 22: KY-480 & Ridge Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	2	9.0	A		0.00	0.0	0	Intersection Delay (s)
	EBT	60	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	13.6
Westbound	WBL	-	-	-		-	-	-	
	WBT	610	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	B
Southbound	SBL	1	13.6	B		0.01	0.0	0	
	SBT	-	-	-	B	-	-	-	
	SBR	1	13.6	B		0.005	0	0	

INT. 22: KY-480 & Ridge Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	2	7.9	A		0.00	0.0	0	Intersection Delay (s)
	EBT	409	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	11.8
Westbound	WBL	-	-	-		-	-	-	
	WBT	250	0.0	A	A	0.00	0.0	0	
	WBR	2	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	B
Southbound	SBL	1	11.8	B		0.00	0.0	0	
	SBT	-	-	-	B	-	-	-	
	SBR	1	11.8	B		0.004	0	0	

INT. 23: Clermont Road & Chapeze Lane (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	10.2	B		0.01	0.0	0	Intersection Delay (s)
	EBT	418	0.0	A	B	0.00	0.0	0	
	EBR	–	-	-		-	-	-	19.7
Westbound	WBL	–	-	-		-	-	-	
	WBT	868	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
Southbound	SBL	5	19.7	C		0.01	0.3	8	
	SBT	-	-	-	C	-	-	-	
	SBR	21	19.7	C		0.1	0.3	8	

INT. 23: Clermont Road & Chapeze Lane (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	19	8.7	A		0.02	0.1	3	Intersection Delay (s)
	EBT	760	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	20.0
Westbound	WBL	-	-	-		-	-	-	
	WBT	514	0.0	A	A	0.00	0.0	0	
	WBR	11	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	C
Southbound	SBL	10	20.0	C		0.08	0.3	8	
	SBT	-	-	-	C	-	-	-	
	SBR	11	20	C		0.081	0.3	8	

INT. 24: West Blue Lick Road & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	20	7.3	A		0.01	0.0	0	Intersection Delay (s)
	EBT	6	0.0	A	A	0.00	0.0	0	
	EBR	37	0.0	A		0.00	0.0	0	11.2
Westbound	WBL	8	7.3	A		0.01	0.0	0	
	WBT	3	0.0	A	A	0.00	0.0	0	
	WBR	4	0.0	A		0.00	0.0	0	
Northbound	NBL	12	10.4	B		0.07	0.2	5	Intersection LOS
	NBT	30	10.4	B	B	0.07	0.2	5	
	NBR	1	10.4	B		0.07	0.2	5	B
Southbound	SBL	12	11.2	B		0.26	1.0	25	
	SBT	153	11.2	B	B	0.26	1.0	25	
	SBR	9	11.2	B		0.256	1	25	

INT. 24: West Blue Lick Road & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	31	7.3	A		0.02	0.1	3	Intersection Delay (s)
	EBT	13	0.0	A	A	0.00	0.0	0	
	EBR	24	0.0	A		0.00	0.0	0	11.6
Westbound	WBL	7	7.3	A		0.01	0.0	0	
	WBT	11	0.0	A	A	0.00	0.0	0	
	WBR	7	0.0	A		0.00	0.0	0	
Northbound	NBL	40	11.6	B		0.25	1.0	25	Intersection LOS
	NBT	126	11.6	B	B	0.25	1.0	25	
	NBR	8	11.6	B		0.25	1.0	25	B
Southbound	SBL	9	10.8	B		0.22	0.8	20	
	SBT	120	10.8	B	B	0.22	0.8	20	
	SBR	36	10.8	B		0.217	0.8	20	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	24.5	C		0.04	0.5	13	Intersection Delay (s)
	EBT	8	0	A	C	0.00	0	0	
	EBR	8	24.3	C		0.03	0.3	8	26.1
Westbound	WBL	190	29.6	C		0.50	6.8	170	
	WBT	8	22.7	C	C	0.02	0.2	5	
	WBR	33	0.0	A		0.00	0.0	0	
Northbound	NBL	8	26.3	C		0.03	0.3	8	Intersection LOS
	NBT	218	25.3	C	C	0.45	7.3	183	
	NBR	218	0.0	A		0.00	0.0	0	C
Southbound	SBL	38	28.3	C		0.14	1.4	35	
	SBT	393	25.0	C	C	0.43	6.5	163	
	SBR	8	24.9	C		0.43	6.8	170	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	20	25.1	C		0.10	0.7	18	Intersection Delay (s)
	EBT	20	0.0	A	C	0.00	0.0	0	
	EBR	20	24.7	C		0.06	0.3	8	31.0
Westbound	WBL	338	41.4	D		0.79	7.4	185	
	WBT	20	22.9	C	D	0.04	0.3	8	
	WBR	135	0.0	A		0.00	0.0	0	
Northbound	NBL	20	23.6	C		0.06	0.3	8	Intersection LOS
	NBT	293	27.2	C	C	0.54	5.1	128	
	NBR	433	0.0	A		0.00	0.0	0	C
Southbound	SBL	107	36.0	D		0.42	2.3	58	
	SBT	233	22.2	C	C	0.24	1.9	48	
	SBR	20	22.2	C		0.25	2	50	

INT. 26: Bypass Route 1 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–		–	–	–	Intersection Delay (s)
	EBT	–	–	–	-	–	–	–	
	EBR	–	–	–		–	–	–	29.0
Westbound	WBL	293	48.8	D		0.72	14.4	360	
	WBT	–	–	–	E	–	–	–	
	WBR	322	65.2	E		0.88	17.9	448	
Northbound	NBL	–	–	–		–	–	–	Intersection LOS
	NBT	351	10.0	B	A	0.34	7.2	180	
	NBR	281	9.9	A		0.32	5.8	145	C
Southbound	SBL	300	32.8	C		0.74	12.8	320	
	SBT	339	9.9	A	C	0.33	6.9	173	
	SBR	–	–	–		–	–	–	

INT. 26: Bypass Route 1 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–		–	–	–	Intersection Delay (s)
	EBT	–	–	–	-	–	–	–	
	EBR	–	–	–		–	–	–	29.0
Westbound	WBL	293	48.8	D		0.72	9.4	235	
	WBT	–	–	–	E	–	–	–	
	WBR	322	65.2	E		0.88	12.2	305	
Northbound	NBL	–	–	–		–	–	–	Intersection LOS
	NBT	351	10.0	B	A	0.34	4.0	100	
	NBR	281	9.9	A		0.32	3.2	80	C
Southbound	SBL	300	32.8	C		0.74	8.1	203	
	SBT	339	9.9	A	C	0.33	3.8	95	
	SBR	–	–	–		–	–	–	

INT. 27: Bypass Route 1 & KY-44 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	221	52.5	D		0.75	10.8	270	Intersection Delay (s)
	EBT	274	49.4	D	D	0.76	12.5	313	
	EBR	221	49.0	D		0.73	10.5	263	52.9
Westbound	WBL	221	52.5	D		0.75	10.8	270	
	WBT	274	49.4	D	D	0.76	12.5	313	
	WBR	221	49.0	D		0.73	10.5	263	
Northbound	NBL	233	51.3	D		0.75	11.2	280	Intersection LOS
	NBT	190	44.7	D	E	0.61	8.9	223	
	NBR	233	69.5	E		0.89	12.9	323	D
Southbound	SBL	233	51.3	D		0.75	11.2	280	
	SBT	190	44.7	D	E	0.61	8.9	223	
	SBR	233	69.5	E		0.89	12.9	323	

INT. 27: Bypass Route 1 & KY-44 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	221	52.5	D		0.75	6.6	165	Intersection Delay (s)
	EBT	274	49.4	D	D	0.76	7.9	198	
	EBR	221	49.0	D		0.73	6.4	160	52.9
Westbound	WBL	221	52.5	D		0.75	6.6	165	
	WBT	274	49.4	D	D	0.76	7.9	198	
	WBR	221	49.0	D		0.73	6.4	160	
Northbound	NBL	233	51.3	D		0.75	6.9	173	Intersection LOS
	NBT	190	44.7	D	E	0.61	5.2	130	
	NBR	233	69.5	E		0.89	8.2	205	D
Southbound	SBL	233	51.3	D		0.75	6.9	173	
	SBT	190	44.7	D	E	0.61	5.2	130	
	SBR	233	69.5	E		0.89	8.2	205	

INT. 28: Bypass Route 1 & Ridge Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	23	–	–		–	–	–	Intersection Delay (s)
	EBT	1	34.4	C	C	0.15	2.0	50	
	EBR	22	–	–		–	–	–	10.3
Westbound	WBL	23	–	–		–	–	–	
	WBT	1	34.4	C	C	0.15	2.0	50	
	WBR	22	–	–		–	–	–	
Northbound	NBL	11	–	–		–	–	–	Intersection LOS
	NBT	622	8.6	A	A	0.56	10.9	273	
	NBR	12	–	–		–	–	–	B
Southbound	SBL	11	–	–		–	–	–	
	SBT	622	8.6	A	A	0.56	10.9	273	
	SBR	12	–	–		–	–	–	

INT. 28: Bypass Route 1 & Ridge Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	23	–	–		–	–	–	Intersection Delay (s)
	EBT	1	34.4	C	C	0.15	1.1	28	
	EBR	22	–	–		–	–	–	10.3
Westbound	WBL	23	–	–		–	–	–	
	WBT	1	34.4	C	C	0.15	1.1	28	
	WBR	22	–	–		–	–	–	
Northbound	NBL	11	–	–		–	–	–	Intersection LOS
	NBT	622	8.6	A	A	0.56	6.7	168	
	NBR	12	–	–		–	–	–	B
Southbound	SBL	11	–	–		–	–	–	
	SBT	622	8.6	A	A	0.56	6.7	168	
	SBR	12	–	–		–	–	–	

INT. 29: Bypass Route 1 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	391	33.9	C		0.71	14.1	353	Intersection Delay (s)
	EBT	230	7.0	A	C	0.22	3.1	78	
	EBR	–	–	–		–	–	–	30.4
Westbound	WBL	–	–	–		–	–	–	
	WBT	269	40.9	D	D	0.66	11.3	283	
	WBR	276	51.2	D		0.80	12.9	323	
Northbound	NBL	–	–	–		–	–	–	Intersection LOS
	NBT	–	–	–	-	–	–	–	
	NBR	–	–	–		–	–	–	C
Southbound	SBL	233	40.8	D		0.63	10.5	263	
	SBT	–	–	–	C	–	–	–	
	SBR	388	12.4	B		0.47	23.8	595	

INT. 29: Bypass Route 1 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	391	33.9	C		0.71	9.1	228	Intersection Delay (s)
	EBT	230	7.0	A	C	0.22	1.7	43	
	EBR	–	–	–		–	–	–	30.4
Westbound	WBL	–	–	–		–	–	–	
	WBT	269	40.9	D	D	0.66	6.9	173	
	WBR	276	51.2	D		0.80	8.2	205	
Northbound	NBL	–	–	–		–	–	–	Intersection LOS
	NBT	–	–	–	-	–	–	–	
	NBR	–	–	–		–	–	–	C
Southbound	SBL	233	40.8	D		0.63	6.3	158	
	SBT	–	–	–	C	–	–	–	
	SBR	388	12.4	B		0.47	17.1	428	

Central Bullitt County Traffic Analysis - Bypass Route 2

INT. 1: KY-61 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	22.0
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	22.0	C	C	0.01	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	11.0	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	675	0.0	A		0.00	0.0	0	C
	NBR	2	0.0	A		0.00	0.0	0	
Southbound	SBL	2	9.6	A	A	0.00	0.0	0	
	SBT	486	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 1: KY-61 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	38.0
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	38.0	E	E	0.01	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	12.3	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	936	0.0	A		0.00	0.0	0	E
	NBR	2	0.0	A		0.00	0.0	0	
Southbound	SBL	2	10.7	B	B	0.00	0.0	0	
	SBT	863	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 2: Bells Mill Road & Lodie Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.6	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	11.1
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	458	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	10.0	B	B	0.01	0.0	0	
	NBT	1	10.0	B		0.01	0.0	0	B
	NBR	1	10.0	B		0.01	0.0	0	
Southbound	SBL	67	11.1	B	B	0.12	0.4	10	
	SBT	1	11.1	B		0.12	0.4	10	
	SBR	1	11.1	B		0.121	0.4	10	

INT. 2: Bells Mill Road & Lodie Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.7	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	10.5
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	166	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	9.0	A	A	0.00	0.0	0	
	NBT	1	9.0	A		0.00	0.0	0	B
	NBR	1	9.0	A		0.00	0.0	0	
Southbound	SBL	203	10.5	B	B	0.25	1.0	25	
	SBT	1	10.5	B		0.25	1.0	25	
	SBR	1	10.5	B		0.253	1	25	

INT. 3: KY-61 & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	20.2
	EBR	–	-	-		-	-	-	
Westbound	WBL	9	20.2	C	C	0.04	0.1	3	
	WBT	–	-	-		-	-	-	
	WBR	67	10.1	B		0.10	0.3	8	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	380	0.0	A		0.00	0.0	0	C
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	132	9.0	A	A	0.14	0.5	13	
	SBT	236	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 3: KY-61 & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	29.1
	EBR	–	-	-		-	-	-	
Westbound	WBL	26	29.1	D	D	0.16	0.5	13	
	WBT	–	-	-		-	-	-	
	WBR	210	11.8	B		0.30	1.3	33	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	434	0.0	A		0.00	0.0	0	D
	NBR	39	0.0	A		0.00	0.0	0	
Southbound	SBL	171	9.4	A	A	0.18	0.7	18	
	SBT	419	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 4: KY-61 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	26.5	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	12.5
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	77	29.3	C	C	0.21	2.8	70	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	98	30.4	C		0.29	3.8	95	Intersection LOS
Northbound	NBL	1	7.2	A	A	0.00	0.0	0	
	NBT	275	7.2	A		0.19	2.5	63	B
	NBR	92	7.3	A		0.19	2.5	63	
Southbound	SBL	263	13.7	B	B	0.46	5.9	148	
	SBT	261	6.8	A		0.13	1.7	43	
	SBR	1	6.8	A		0.13	1.8	45	

INT. 4: KY-61 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	23.1	C	C	0.01	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	16.6
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	186	32.2	C	C	0.46	4.0	100	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	218	30.4	C		0.50	4.4	110	Intersection LOS
Northbound	NBL	1	10.8	B	B	0.00	0.0	0	
	NBT	400	10.3	B		0.28	2.5	63	B
	NBR	128	10.4	B		0.29	2.5	63	
Southbound	SBL	216	19.0	B	B	0.46	3.2	80	
	SBT	465	9.9	A		0.24	2.1	53	
	SBR	1	9.9	A		0.24	2.2	55	

INT. 5: KY-61 & KY-44 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	79	55.2	E	D	0.49	5.1	128	Intersection Delay (s)
	EBT	537	0.0	A		0.00	0.0	0	46.2
	EBR	59	44.4	D		0.90	26.7	668	
Westbound	WBL	24	63.7	E	C	0.36	1.8	45	
	WBT	119	0.0	A		0.00	0.0	0	
	WBR	41	25.5	C		0.29	6.4	160	Intersection LOS
Northbound	NBL	31	61.8	E	D	0.39	2.2	55	
	NBT	166	48.9	D		0.59	9.2	230	D
	NBR	130	48.4	D		0.55	7.6	190	
Southbound	SBL	139	74.7	E	D	0.80	9.8	245	
	SBT	145	37.1	D		0.38	7.2	180	
	SBR	47	33.3	C		0.15	2.2	55	

INT. 5: KY-61 & KY-44 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	102	62.5	E	D	0.61	3.4	85	Intersection Delay (s)
	EBT	238	0.0	A		0.00	0.0	0	43.5
	EBR	80	46.2	D		0.72	8.9	223	
Westbound	WBL	98	61.5	E	D	0.59	3.3	83	
	WBT	228	0.0	A		0.00	0.0	0	
	WBR	68	43.9	D		0.67	8.1	203	Intersection LOS
Northbound	NBL	95	60.1	E	D	0.57	3.1	78	
	NBT	282	35.9	D		0.53	6.8	170	D
	NBR	86	29.5	C		0.19	1.8	45	
Southbound	SBL	100	54.2	D	D	0.50	3.1	78	
	SBT	361	37.7	D		0.64	9.1	228	
	SBR	142	29.8	C		0.3	3.1	78	

INT. 6: KY-61 & 3rd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	11.7	B	B	0.01	0.0	0	Intersection Delay (s)
	EBT	1	11.7	B		0.01	0.0	0	14.1
	EBR	4	11.7	B		0.01	0.0	0	
Westbound	WBL	1	14.1	B	B	0.01	0.0	0	
	WBT	1	14.1	B		0.01	0.0	0	
	WBR	1	14.1	B		0.01	0.0	0	Intersection LOS
Northbound	NBL	2	7.8	A	A	0.00	0.0	0	
	NBT	355	0.0	A		0.00	0.0	0	B
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	22	8.3	A	A	0.02	0.1	3	
	SBT	221	0.0	A		0.00	0.0	0	
	SBR	1	0	A		0	0	0	

INT. 6: KY-61 & 3rd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	14.3	B	B	0.07	0.2	5	Intersection Delay (s)
	EBT	1	14.3	B		0.07	0.2	5	16.5
	EBR	21	14.3	B		0.07	0.2	5	
Westbound	WBL	1	16.5	C	C	0.01	0.0	0	
	WBT	1	16.5	C		0.01	0.0	0	
	WBR	2	16.5	C		0.01	0.0	0	Intersection LOS
Northbound	NBL	7	8.7	A	A	0.01	0.0	0	
	NBT	437	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	3	8.3	A	A	0.00	0.0	0	
	SBT	537	0.0	A		0.00	0.0	0	
	SBR	4	0	A		0	0	0	

INT. 7: KY-61 & 2nd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	25.0	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	2	0.0	A		0.00	0.0	0	9.4
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	15	25.4	C	C	0.04	0.5	13	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	1	25.0	C		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	8.9	A	A	0.00	0.0	0	
	NBT	276	8.8	A		0.27	4.6	115	A
	NBR	310	9.8	A		0.36	5.6	140	
Southbound	SBL	12	10.0	B	A	0.03	0.2	5	
	SBT	206	0.0	A		0.00	0.0	0	
	SBR	1	8.2	A		0.2	3.3	83	

INT. 7: KY-61 & 2nd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	3	25.8	C	C	0.07	0.6	15	Intersection Delay (s)
	EBT	9	0.0	A		0.00	0.0	0	12.6
	EBR	22	0.0	A		0.00	0.0	0	
Westbound	WBL	118	28.6	C	C	0.28	2.2	55	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	11	25.2	C		0.03	0.2	5	Intersection LOS
Northbound	NBL	4	13.8	B	A	0.01	0.0	0	
	NBT	364	9.4	A		0.34	3.3	83	B
	NBR	119	7.7	A		0.13	0.9	23	
Southbound	SBL	23	11.3	B	B	0.04	0.2	5	
	SBT	520	0.0	A		0.00	0.0	0	
	SBR	1	11.2	B		0.48	5.5	138	

INT. 8: KY-61 & KY-480C (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	12.3
	EBR	–	-	-		-	-	-	
Westbound	WBL	1	12.3	B	B	0.05	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	23	12.3	B		0.05	0.2	5	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	516	0.0	A		0.00	0.0	0	B
	NBR	4	0.0	A		0.00	0.0	0	
Southbound	SBL	32	8.8	A	A	0.03	0.1	3	
	SBT	166	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 8: KY-61 & KY-480C (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	12.2
	EBR	–	-	-		-	-	-	
Westbound	WBL	5	12.2	B	B	0.14	0.5	13	
	WBT	–	-	-		-	-	-	
	WBR	78	12.2	B		0.14	0.5	13	
Northbound	NBL	–	-	-	A	-	-	-	B
	NBT	381	0.0	A		0.00	0.0	0	
	NBR	6	0.0	A		0.00	0.0	0	
Southbound	SBL	93	8.4	A	A	0.08	0.3	8	B
	SBT	522	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	12.6
	WBL	13	12.6	B		0.03	0.1	3	
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	35	9.5	A		0.05	0.1	3	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	145	0.0	A	A	0.00	0.0	0	B
	NBR	25	0.0	A		0.00	0.0	0	
	SBL	70	7.8	A		0.06	0.2	5	
Southbound	SBT	134	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	16.4
	WBL	25	16.4	C		0.08	0.2	5	
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	115	10.5	B		0.16	0.6	15	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	214	0.0	A	A	0.00	0.0	0	C
	NBR	22	0.0	A		0.00	0.0	0	
	SBL	98	8.0	A		0.08	0.3	8	
Southbound	SBT	271	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	15.6
	WBL	129	15.6	C		0.34	1.5	38	
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	27	9.2	A		0.04	0.1	3	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	103	0.0	A	A	0.00	0.0	0	C
	NBR	111	0.0	A		0.00	0.0	0	
	SBL	72	8.1	A		0.08	0.3	8	
Southbound	SBT	85	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	14.3
	WBL	71	14.3	B		0.16	0.6	15	
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	85	9.5	A		0.10	0.3	8	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	134	0.0	A	A	0.00	0.0	0	B
	NBR	81	0.0	A		0.00	0.0	0	
	SBL	80	7.9	A		0.06	0.2	5	
Southbound	SBT	211	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 11: KY-44 & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	7.7	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	505	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	15.8
	WBL	–	-	-		-	-	-	
Westbound	WBT	115	0.0	A	A	0.00	0.0	0	
	WBR	33	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
	SBL	33	15.8	C		0.13	0.4	10	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	8	15.8	C		0.128	0.4	10	

INT. 11: KY-44 & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	8.3	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	333	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	14.1
	WBL	–	-	-		-	-	-	
Westbound	WBT	363	0.0	A	A	0.00	0.0	0	
	WBR	36	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	33	14.1	B		0.15	0.5	13	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	33	14.1	B		0.146	0.5	13	

INT. 12: KY-44 & Lee Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	230	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	37.3
	WBL	6	8.4	A		0.01	0.0	0	
Westbound	WBT	443	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	25	37.3	E		0.32	1.3	33	
Northbound	NBT	–	-	-	E	-	-	-	
	NBR	1	37.3	E		0.32	1.3	33	E
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 12: KY-44 & Lee Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	87	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	12.8
	WBL	15	7.7	A		0.02	0.1	3	
Westbound	WBT	345	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	1	12.8	B		0.01	0.0	0	
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	1	12.8	B		0.01	0.0	0	B
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 13: KY-44 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	32	64.4	E		0.36	2.4	60	Intersection Delay (s)
Eastbound	EBT	822	44.6	D	D	0.83	19.2	480	
	EBR	6	27.5	C		0.01	0.3	8	39.7
	WBL	45	48.7	D		0.22	2.6	65	
Westbound	WBT	218	23.6	C	C	0.18	4.1	103	
	WBR	362	16.5	B		0.46	14.8	370	Intersection LOS
	NBL	10	42.2	D		0.04	0.5	13	
Northbound	NBT	15	42.4	D	D	0.05	0.8	20	
	NBR	297	45.2	D		0.69	14.5	363	D
	SBL	382	52.6	D		0.69	10.7	268	
Southbound	SBT	8	0.0	A	D	0.00	0.0	0	
	SBR	14	41.7	D		0.06	0.8	20	

INT. 13: KY-44 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	71	61.3	E		0.46	2.5	63	Intersection Delay (s)
Eastbound	EBT	346	53.7	D	D	0.66	5.4	135	
	EBR	12	43.2	D		0.05	0.3	8	40.7
	WBL	117	57.0	E		0.53	3.8	95	
Westbound	WBT	393	47.3	D	D	0.59	5.7	143	
	WBR	708	33.4	C		0.90	25.1	628	Intersection LOS
	NBL	7	41.1	D		0.02	0.2	5	
Northbound	NBT	43	42.7	D	D	0.13	1.2	30	
	NBR	92	31.4	C		0.19	2.1	53	D
	SBL	451	31.8	C		0.40	5.4	135	
Southbound	SBT	24	0.0	A	C	0.00	0.0	0	
	SBR	29	27.4	C		0.06	0.6	15	

INT. 14: KY-44 & I-65 South ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	1394	33.1	C	C	0.89	25.2	630	
	EBR	12	0.0	A		0.00	0.0	0	29.8
	WBL	241	38.1	D		0.71	7.7	193	
Westbound	WBT	415	5.9	A	B	0.19	2.9	73	
	WBR	0	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	0	-	-		-	-	-	
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	180	5.9	D		0.57	9.2	230	
Southbound	SBT	4	0.0	A	D	0.00	0.0	0	
	SBR	251	0	A		0	0	0	

INT. 14: KY-44 & I-65 South ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	641	18.4	B	B	0.39	5.2	130	
	EBR	7	0.0	A		0.00	0.0	0	27.8
	WBL	294	12.3	B		0.50	3.1	78	
Westbound	WBT	795	6.9	A	A	0.34	3.4	85	
	WBR	0	0.0	A		0.00	0.0	0	Intersection LOS
	NBL	0	-	-		-	-	-	
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	340	105.7	F		1.05	14.9	373	
Southbound	SBT	9	0.0	A	F	0.00	0.0	0	
	SBR	456	0	A		0	0	0	

INT. 15: KY-44 & I-65 North ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	953	36.2	D	D	0.89	18.7	468	
	EBR	0	0.0	A		0.00		0	30.0
	WBL	0	0.0	A		0.00	0.0	0	
Westbound	WBT	463	27.5	C	C	0.43	9.1	228	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	295	16.3	B		0.36	8.7	218	
Northbound	NBT	–	-	-	C	-	-	-	
	NBR	575	28.6	C		0.79	20.8	520	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 15: KY-44 & I-65 North ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	731	30.8	C	C	0.61	8.2	205	
	EBR	0	0.0	A		0	0.0	0	27.4
	WBL	0	0.0	A		0	0.0	0	
Westbound	WBT	833	32.9	C	C	0.69	9.8	245	
	WBR	–	-	-		-	-	-	Intersection LOS
	NBL	363	16.8	B		0.39	5.6	140	
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	290	16.3	B		0.35	4.4	110	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 16: KY-44 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	36	16.6	B		0.10	0.5	13	Intersection Delay (s)
Eastbound	EBT	241	10.3	B	B	0.30	2.9	73	
	EBR	–	-	-		-	-	-	13.4
	WBL	–	-	-		-	-	-	
Westbound	WBT	455	13.7	B	B	0.57	6.7	168	
	WBR	381	14.1	B		0.56	5.8	145	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	84	15.4	B		0.16	1.5	38	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	22	14.4	B		0.05	0.4	10	

INT. 16: KY-44 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	37	16.8	B		0.12	0.4	10	Intersection Delay (s)
Eastbound	EBT	461	13.6	B	B	0.56	3.6	90	
	EBR	–	-	-		-	-	-	14.7
	WBL	–	-	-		-	-	-	
Westbound	WBT	469	13.7	B	B	0.57	3.7	93	
	WBR	190	10.1	B		0.27	1.2	30	Intersection LOS
	NBL	–	-	-		-	-	-	
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	294	20.6	C		0.54	3.5	88	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	50	14.9	B		0.1	0.5	13	

INT. 17: Bells Mill Road & Cammi Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.3	A		0.00	0.0	0	Intersection Delay (s)
	EBT	99	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	11.9
Westbound	WBL	–	-	-		-	-	-	
	WBT	433	0.0	A	A	0.00	0.0	0	
	WBR	4	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	10	11.9	B		0.05	0.2	5	
	SBT	–	-	-	B	-	-	-	
	SBR	18	11.9	B		0.054	0.2	5	

INT. 17: Bells Mill Road & Cammi Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	33	7.8	A		0.03	0.1	3	Intersection Delay (s)
	EBT	350	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	12.8
Westbound	WBL	–	-	-		-	-	-	
	WBT	223	0.0	A	A	0.00	0.0	0	
	WBR	32	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	16	12.8	B		0.06	0.2	5	
	SBT	–	-	-	C	-	-	-	
	SBR	11	0	A		0	0	0	

INT. 18: KY-480C & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-		-	-	-	Intersection Delay (s)
	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
Westbound	WBL	1	0.0	A		0.0	0.0	0	
	WBT	–	-	-	A	-	-	-	
	WBR	35	0.0	A		0.0	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	6	8.4	A	A	0.0	0.0	0	
	NBR	3	8.4	A		0.0	0.0	0	A
Southbound	SBL	39	0.0	A		0.0	0.0	0	
	SBT	2	0.0	A	A	0.0	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 18: KY-480C & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-		-	-	-	Intersection Delay (s)
	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
Westbound	WBL	4	0.0	A		0.00	0.0	0	
	WBT	–	-	-	A	-	-	-	
	WBR	104	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	4	8.4	A	A	0.01	0.0	0	
	NBR	1	8.4	A		0.01	0.0	0	A
Southbound	SBL	84	0.0	A		0.00	0.0	0	
	SBT	6	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 19: KY-480 & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	3	7.5	A		0.00	0.0	0	Intersection Delay (s)
	EBT	117	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.1
Westbound	WBL	–	-	-		-	-	-	
	WBT	56	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
Southbound	SBL	1	9.1	A		0.00	0.0	0	
	SBT	–	-	-	A	-	-	-	
	SBR	1	9.1	A		0.002	0	0	

INT. 19: KY-480 & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	7.7	A		0.00	0.0	0	Intersection Delay (s)
	EBT	131	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.2
Westbound	WBL	–	-	-		-	-	-	
	WBT	149	0.0	A	A	0.00	0.0	0	
	WBR	3	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
Southbound	SBL	1	9.2	A		0.01	0.0	0	
	SBT	–	-	-	A	-	-	-	
	SBR	8	9.2	A		0.011	0	0	

INT. 20: KY-480C & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	7.6	A		0.00	0.0	0	Intersection Delay (s)
	EBT	111	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	10.4
Westbound	WBL	–	-	-		-	-	-	
	WBT	66	0.0	A	A	0.00	0.0	0	
	WBR	44	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	79	10.4	B		0.12	0.4	10	
	SBT	–	-	-	B	-	-	-	
	SBR	3	10.4	B		0.12	0.4	10	

INT. 20: KY-480C & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	8.1	A		0.00	0.0	0	Intersection Delay (s)
	EBT	127	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	12.9
Westbound	WBL	–	-	-		-	-	-	
	WBT	159	0.0	A	A	0.00	0.0	0	
	WBR	131	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	148	12.9	B		0.27	1.1	28	
	SBT	–	-	-	B	-	-	-	
	SBR	5	12.9	B		0.266	1.1	28	

INT. 21: KY-480 & Omega Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	262	14.5	B		0.44	6.4	160	Intersection Delay (s)
	EBT	111	14.0	B	B	0.09	1.3	33	
	EBR	188	17.3	B		0.35	5.4	135	21.2
Westbound	WBL	3	25.1	C		0.01	0.1	3	
	WBT	182	33.6	C	C	0.34	4.0	100	
	WBR	1	33.4	C		0.34	4.2	105	
Northbound	NBL	41	38.4	D		0.24	2.1	53	Intersection LOS
	NBT	18	0.0	A	D	0.00	0.0	0	
	NBR	4	36.4	D		0.13	1.1	28	C
Southbound	SBL	1	36.9	D		0.03	0.2	5	
	SBT	4	0.0	A	C	0.00	0.0	0	
	SBR	13	15.8	B		0.03	0.4	10	

INT. 21: KY-480 & Omega Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	264	12.9	B		0.33	2.7	68	Intersection Delay (s)
	EBT	297	14.9	B	B	0.19	1.6	40	
	EBR	92	14.6	B		0.14	1.0	25	22.9
Westbound	WBL	11	25.3	C		0.03	0.2	5	
	WBT	147	31.6	C	C	0.22	1.4	95	
	WBR	2	31.5	C		0.22	1.4	35	
Northbound	NBL	139	51.4	D		0.64	3.7	93	Intersection LOS
	NBT	34	0	A	D	0.00	0.0	0	
	NBR	15	38.1	D		0.23	1.1	28	C
Southbound	SBL	5	38.6	D		0.15	0.6	15	
	SBT	22	0	A	C	0.00	0.0	0	
	SBR	253	20.4	C		0.39	3.6	90	

INT. 22: KY-480 & Ridge Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.6	A		0.00	0.0	0	Intersection Delay (s)
	EBT	17	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	9.2
Westbound	WBL	-	-	-		-	-	-	
	WBT	127	0.0	A	A	0.00	0.0	0	
	WBR	1	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	A
Southbound	SBL	1	9.2	A		0.00	0.0	0	
	SBT	-	-	-	A	-	-	-	
	SBR	1	9.2	A		0.003	0	0	

INT. 22: KY-480 & Ridge Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.4	A		0.00	0.0	0	Intersection Delay (s)
	EBT	112	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	9.0
Westbound	WBL	-	-	-		-	-	-	
	WBT	52	0.0	A	A	0.00	0.0	0	
	WBR	1	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	A
Southbound	SBL	1	9.0	A		0.00	0.0	0	
	SBT	-	-	-	A	-	-	-	
	SBR	1	9	A		0.002	0	0	

INT. 23: Clermont Road & Chapeze Lane (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	9.8	A		0.01	0.0	0	Intersection Delay (s)
	EBT	374	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	17.5
Westbound	WBL	–	-	-		-	-	-	
	WBT	781	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
Southbound	SBL	5	17.5	C		0.09	0.3	8	
	SBT	-	-	-	C	-	-	-	
	SBR	21	17.5	C		0.087	0.3	8	

INT. 23: Clermont Road & Chapeze Lane (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	17	8.5	A		0.02	0.1	3	Intersection Delay (s)
	EBT	681	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	17.6
Westbound	WBL	-	-	-		-	-	-	
	WBT	460	0.0	A	A	0.00	0.0	0	
	WBR	10	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	C
Southbound	SBL	10	17.6	C		0.07	0.2	5	
	SBT	-	-	-	C	-	-	-	
	SBR	11	17.6	C		0.069	0.2	5	

INT. 24: West Blue Lick Road & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	20	7.3	A		0.01	0.0	0	Intersection Delay (s)
	EBT	6	0.0	A	A	0.00	0.0	0	
	EBR	37	0.0	A		0.00	0.0	0	11.2
Westbound	WBL	8	7.3	A		0.01	0.0	0	
	WBT	3	0.0	A	A	0.00	0.0	0	
	WBR	4	0.0	A		0.00	0.0	0	
Northbound	NBL	12	10.4	B		0.07	0.2	5	Intersection LOS
	NBT	30	10.4	B	B	0.07	0.2	5	
	NBR	1	10.4	B		0.07	0.2	5	B
Southbound	SBL	12	11.2	B		0.26	1.0	25	
	SBT	153	11.2	B	B	0.26	1.0	25	
	SBR	9	11.2	B		0.256	1	25	

INT. 24: West Blue Lick Road & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	31	7.3	A		0.02	0.1	3	Intersection Delay (s)
	EBT	13	0.0	A	A	0.00	0.0	0	
	EBR	24	0.0	A		0.00	0.0	0	11.6
Westbound	WBL	7	7.3	A		0.01	0.0	0	
	WBT	11	0.0	A	A	0.00	0.0	0	
	WBR	7	0.0	A		0.00	0.0	0	
Northbound	NBL	40	11.6	B		0.25	1.0	25	Intersection LOS
	NBT	126	11.6	B	B	0.25	1.0	25	
	NBR	8	11.6	B		0.25	1.0	25	B
Southbound	SBL	9	10.8	B		0.22	0.8	20	
	SBT	120	10.8	B	B	0.22	0.8	20	
	SBR	36	10.8	B		0.217	0.8	20	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	24.5	C	C	0.04	0.5	13	Intersection Delay (s)
	EBT	8	0	A		0.00	0	0	
	EBR	8	24.3	C		0.03	0.3	8	24.9
Westbound	WBL	150	27.5	C	C	0.39	5.1	128	
	WBT	7	22.7	C		0.02	0.2	5	
	WBR	26	0.0	A		0.00	0.0	0	
Northbound	NBL	7	25.3	C	C	0.03	0.2	5	Intersection LOS
	NBT	180	24.0	C		0.37	5.8	145	
	NBR	180	0.0	A		0.00	0.0	0	C
Southbound	SBL	34	26.4	C	C	0.12	1.2	30	
	SBT	349	24.2	C		0.38	5.7	143	
	SBR	7	24.1	C		0.38	5.9	148	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	20	25.1	C	C	0.10	0.7	18	Intersection Delay (s)
	EBT	20	0.0	A		0.00	0.0	0	
	EBR	20	24.7	C		0.06	0.3	8	27.2
Westbound	WBL	267	33.1	C	C	0.62	5.1	128	
	WBT	16	22.9	C		0.04	0.2	5	
	WBR	107	0.0	A		0.00	0.0	0	
Northbound	NBL	17	23.1	C	C	0.05	0.3	8	Intersection LOS
	NBT	242	25.2	C		0.45	4.0	100	
	NBR	357	0.0	A		0.00	0.0	0	C
Southbound	SBL	95	31.5	C	C	0.32	1.9	48	
	SBT	207	21.9	C		0.22	1.7	43	
	SBR	18	21.9	C		0.22	1.7	43	

INT. 26: Bypass Route 1 & KY-61 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	-	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	
	EBR	–	–	–		–	–	–	37.5
Westbound	WBL	415	77.2	E	D	1.00	22.0	550	
	WBT	–	–	–		–	–	–	
	WBR	432	24.8	C		0.67	13.1	328	
Northbound	NBL	–	–	–	D	–	–	–	Intersection LOS
	NBT	1099	44.6	D		0.94	21.6	540	
	NBR	290	28.0	C		0.56	10.0	250	D
Southbound	SBL	298	78.6	E	C	0.96	16.7	418	
	SBT	1079	11.4	B		0.56	10.1	253	
	SBR	–	–	–		–	–	–	

INT. 26: Bypass Route 1 & KY-61 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	-	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	
	EBR	–	–	–		–	–	–	37.5
Westbound	WBL	415	77.2	E	D	1.00	5.5	138	
	WBT	–	–	–		–	–	–	
	WBR	432	24.8	C		0.67	8.3	208	
Northbound	NBL	–	–	–	D	–	–	–	Intersection LOS
	NBT	1099	44.6	D		0.94	15.2	380	
	NBR	290	28.0	C		0.56	6.0	150	D
Southbound	SBL	298	78.6	E	C	0.96	11.2	280	
	SBT	1079	11.4	B		0.56	6.0	150	
	SBR	–	–	–		–	–	–	

INT. 27: Bypass Route 1 & KY-44 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	219	28.9	C	C	0.66	7.3	183	Intersection Delay (s)
	EBT	358	33.1	C		0.65	12.9	323	
	EBR	219	28.7	C		0.47	8.1	203	34.5
Westbound	WBL	219	28.9	C	C	0.66	7.3	183	
	WBT	358	33.1	C		0.65	12.9	323	
	WBR	219	28.7	C		0.47	8.1	203	
Northbound	NBL	247	31.7	C	D	0.64	9.1	228	Intersection LOS
	NBT	151	34.6	C		0.39	6.3	158	
	NBR	247	49.2	D		0.76	11.5	288	C
Southbound	SBL	247	31.7	C	D	0.64	9.1	228	
	SBT	151	34.6	C		0.39	6.3	158	
	SBR	247	49.2	D		0.76	11.5	288	

INT. 27: Bypass Route 1 & KY-44 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	219	28.9	C	C	0.66	14.1	353	Intersection Delay (s)
	EBT	358	33.1	C		0.65	8.2	205	
	EBR	219	28.7	C		0.47	4.6	115	34.5
Westbound	WBL	219	28.9	C	C	0.66	4.1	103	
	WBT	358	33.1	C		0.65	8.2	205	
	WBR	219	28.7	C		0.47	4.6	115	
Northbound	NBL	247	31.7	C	D	0.64	5.3	133	Intersection LOS
	NBT	151	34.6	C		0.39	3.5	88	
	NBR	247	49.2	D		0.76	7.1	178	C
Southbound	SBL	247	31.7	C	D	0.64	5.3	133	
	SBT	151	34.6	C		0.39	3.5	88	
	SBR	247	49.2	D		0.76	7.1	178	

INT. 28: Bypass Route 1 & Ridge Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	22	33.7	C	C	0.07	0.9	23	Intersection Delay (s)
	EBT	1	32.6	C		0.08	1.0	25	
	EBR	22	–	–		–	–	–	10.0
Westbound	WBL	22	33.7	C	C	0.07	0.9	23	
	WBT	1	32.6	C		0.08	1.0	25	
	WBR	22	–	–		–	–	–	
Northbound	NBL	12	10.6	B	A	0.03	0.2	5	Intersection LOS
	NBT	544	8.1	A		0.50	7.9	198	
	NBR	12	–	–		–	–	–	A
Southbound	SBL	12	10.6	B	A	0.03	0.2	5	
	SBT	544	8.1	A		0.50	7.9	198	
	SBR	12	–	–		–	–	–	

INT. 28: Bypass Route 1 & Ridge Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	22	33.7	C	C	0.07	0.5	13	Intersection Delay (s)
	EBT	1	32.6	C		0.08	0.5	13	
	EBR	22	–	–		–	–	–	10.0
Westbound	WBL	22	33.7	C	C	0.07	0.5	13	
	WBT	1	32.6	C		0.08	0.5	13	
	WBR	22	–	–		–	–	–	
Northbound	NBL	12	10.6	B	A	0.03	0.1	3	Intersection LOS
	NBT	544	8.1	A		0.50	4.5	113	
	NBR	12	–	–		–	–	–	A
Southbound	SBL	12	10.6	B	A	0.03	0.1	3	
	SBT	544	8.1	A		0.50	4.5	113	
	SBR	12	–	–		–	–	–	

INT. 29: Bypass Route 1 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	78	48.7	D	C	0.45	4.1	103	Intersection Delay (s)
	EBT	107	24.1	C		0.20	3.5	88	
	EBR	–	–	–		–	–	–	16.9
Westbound	WBL	–	–	–	A	–	–	–	
	WBT	58	36.3	D		0.20	2.5	63	
	WBR	510	6.7	A		0.50	20.1	503	
Northbound	NBL	–	–	–	-	–	–	–	Intersection LOS
	NBT	–	–	–		–	–	–	
	NBR	–	–	–		–	–	–	B
Southbound	SBL	588	19.0	B	B	0.68	14.5	363	
	SBT	–	–	–		–	–	–	
	SBR	49	9.7	A		0.06	3.9	98	

INT. 29: Bypass Route 1 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	78	48.7	D	C	0.45	2.3	58	Intersection Delay (s)
	EBT	107	24.1	C		0.20	2.0	50	
	EBR	–	–	–		–	–	–	16.9
Westbound	WBL	–	–	–	A	–	–	–	
	WBT	58	36.3	D		0.20	1.4	35	
	WBR	510	6.7	A		0.50	14.0	350	
Northbound	NBL	–	–	–	-	–	–	–	Intersection LOS
	NBT	–	–	–		–	–	–	
	NBR	–	–	–		–	–	–	B
Southbound	SBL	588	19.0	B	B	0.68	9.5	238	
	SBT	–	–	–		–	–	–	
	SBR	49	9.7	A		0.06	2.2	55	

Central Bullitt County Traffic Analysis - Bypass Route 3

INT. 1: KY-61 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	18.1
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	18.1	C	C	0.00	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	10.5	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	560	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	1	9.1	A	A	0.00	0.0	0	
	SBT	423	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 1: KY-61 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–	–	–	–	–	Intersection Delay (s)
	EBT	–	–	–		–	–	–	27.9
	EBR	–	–	–		–	–	–	
Westbound	WBL	1	27.9	D	D	0.01	0.0	0	
	WBT	–	–	–		–	–	–	
	WBR	1	11.4	B		0.00	0.0	0	Intersection LOS
Northbound	NBL	–	–	–	A	–	–	–	
	NBT	777	0.0	A		0.00	0.0	0	D
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	1	9.8	A	A	0.00	0.0	0	
	SBT	750	0.0	A		0.00	0.0	0	
	SBR	–	–	–		–	–	–	

INT. 2: Bells Mill Road & Lodie Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.6	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	11.1
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	458	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	10.0	B	B	0.01	0.0	0	
	NBT	1	10.0	B		0.01	0.0	0	B
	NBR	1	10.0	B		0.01	0.0	0	
Southbound	SBL	67	11.1	B	B	0.12	0.4	10	
	SBT	1	11.1	B		0.12	0.4	10	
	SBR	1	11.1	B		0.121	0.4	10	

INT. 2: Bells Mill Road & Lodie Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.7	A	A	0.00	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	10.5
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	1	7.3	A	A	0.00	0.0	0	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	166	0.0	A		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	9.0	A	A	0.00	0.0	0	
	NBT	1	9.0	A		0.00	0.0	0	B
	NBR	1	9.0	A		0.00	0.0	0	
Southbound	SBL	203	10.5	B	B	0.25	1.0	25	
	SBT	1	10.5	B		0.25	1.0	25	
	SBR	1	10.5	B		0.253	1	25	

INT. 3: KY-61 & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	25.0
	EBR	-	-	-		-	-	-	
Westbound	WBL	11	25.0	D	D	0.07	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	86	10.5	B		0.13	0.4	10	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	429	0.0	A		0.00	0.0	0	D
	NBR	16	0.0	A		0.00	0.0	0	
Southbound	SBL	158	9.4	A	A	0.18	0.7	18	
	SBT	282	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 3: KY-61 & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	43.4
	EBR	–	-	-		-	-	-	
Westbound	WBL	33	43.4	E	E	0.27	1.0	25	
	WBT	–	-	-		-	-	-	
	WBR	269	13.4	B		0.40	1.9	48	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	490	0.0	A		0.00	0.0	0	E
	NBR	44	0.0	A		0.00	0.0	0	
Southbound	SBL	204	9.9	A	A	0.23	0.9	23	
	SBT	501	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 4: KY-61 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	26.6	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	13.6
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	98	30.8	C	C	0.27	3.8	95	
	WBT	2	0.0	A		0.00	0.0	0	
	WBR	124	31.8	C		0.37	4.9	123	Intersection LOS
Northbound	NBL	2	7.2	A	A	0.00	0.0	0	
	NBT	306	7.4	A		0.21	2.8	70	B
	NBR	102	7.5	A		0.21	2.8	70	
Southbound	SBL	263	14.6	B	B	0.48	6.2	155	
	SBT	261	6.8	A		0.13	1.7	43	
	SBR	1	6.8	A		0.13	1.8	45	

INT. 4: KY-61 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	23.4	C	C	0.01	0.0	0	Intersection Delay (s)
	EBT	1	0.0	A		0.00	0.0	0	19.1
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	234	39.1	D	D	0.63	5.7	143	
	WBT	2	0.0	A		0.00	0.0	0	
	WBR	275	34.2	C		0.63	6.0	150	Intersection LOS
Northbound	NBL	2	10.8	B	B	0.00	0.0	0	
	NBT	444	10.6	B		0.31	2.9	73	B
	NBR	142	10.7	B		0.32	2.8	70	
Southbound	SBL	216	20.7	C	B	0.49	3.4	85	
	SBT	465	9.9	A		0.24	2.1	53	
	SBR	1	9.9	A		0.24	2.2	55	

INT. 5: KY-61 & KY-44 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	79	55.2	E	D	0.49	5.1	128	Intersection Delay (s)
	EBT	537	0.0	A		0.00	0.0	0	46.1
	EBR	59	44.4	D		0.90	26.7	668	
Westbound	WBL	26	65.1	E	C	0.39	2.0	50	
	WBT	129	0.0	A		0.00	0.0	0	
	WBR	45	25.9	C		0.32	7.0	175	Intersection LOS
Northbound	NBL	31	61.8	E	D	0.39	2.2	55	
	NBT	166	48.9	D		0.59	9.2	230	D
	NBR	130	48.4	D		0.55	7.6	190	
Southbound	SBL	139	74.7	E	D	0.80	9.8	245	
	SBT	145	37.1	D		0.38	7.2	180	
	SBR	47	33.3	C		0.15	2.2	55	

INT. 5: KY-61 & KY-44 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	102	62.5	E	D	0.61	3.4	85	Intersection Delay (s)
	EBT	238	0.0	A		0.00	0.0	0	44.1
	EBR	80	46.2	D		0.72	8.9	223	
Westbound	WBL	107	64.8	E	D	0.64	3.7	93	
	WBT	248	0.0	A		0.00	0.0	0	
	WBR	68	45.9	D		0.71	8.8	220	Intersection LOS
Northbound	NBL	95	60.1	E	D	0.57	3.1	78	
	NBT	282	35.9	D		0.53	6.8	170	D
	NBR	86	29.5	C		0.19	1.8	45	
Southbound	SBL	100	54.2	D	D	0.50	3.1	78	
	SBT	361	37.7	D		0.64	9.1	228	
	SBR	142	29.8	C		0.3	3.1	78	

INT. 6: KY-61 & 3rd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	11.7	B	B	0.01	0.0	0	Intersection Delay (s)
	EBT	1	11.7	B		0.01	0.0	0	14.1
	EBR	4	11.7	B		0.01	0.0	0	
Westbound	WBL	1	14.1	B	B	0.01	0.0	0	
	WBT	1	14.1	B		0.01	0.0	0	
	WBR	1	14.1	B		0.01	0.0	0	Intersection LOS
Northbound	NBL	2	7.8	A	A	0.00	0.0	0	
	NBT	355	0.0	A		0.00	0.0	0	B
	NBR	15	0.0	A		0.00	0.0	0	
Southbound	SBL	22	8.3	A	A	0.02	0.1	3	
	SBT	221	0.0	A		0.00	0.0	0	
	SBR	1	0	A		0	0	0	

INT. 6: KY-61 & 3rd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	4	14.3	B	B	0.07	0.2	5	Intersection Delay (s)
	EBT	1	14.3	B		0.07	0.2	5	16.5
	EBR	21	14.3	B		0.07	0.2	5	
Westbound	WBL	1	16.5	C	C	0.01	0.0	0	
	WBT	1	16.5	C		0.01	0.0	0	
	WBR	2	16.5	C		0.01	0.0	0	Intersection LOS
Northbound	NBL	7	8.7	A	A	0.01	0.0	0	
	NBT	437	0.0	A		0.00	0.0	0	C
	NBR	1	0.0	A		0.00	0.0	0	
Southbound	SBL	3	8.3	A	A	0.00	0.0	0	
	SBT	537	0.0	A		0.00	0.0	0	
	SBR	4	0	A		0	0	0	

INT. 7: KY-61 & 2nd Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	25.0	C	C	0.01	0.1	3	Intersection Delay (s)
	EBT	2	0.0	A		0.00	0.0	0	9.2
	EBR	1	0.0	A		0.00	0.0	0	
Westbound	WBL	11	25.3	C	C	0.03	0.4	10	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	1	25.0	C		0.00	0.0	0	Intersection LOS
Northbound	NBL	1	8.9	A	A	0.00	0.0	0	
	NBT	255	8.6	A		0.25	4.1	103	A
	NBR	286	9.5	A		0.33	5.0	125	
Southbound	SBL	12	9.7	A	A	0.03	0.2	5	
	SBT	206	0.0	A		0.00	0.0	0	
	SBR	1	8.2	A		0.2	3.3	83	

INT. 7: KY-61 & 2nd Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	3	25.8	C	C	0.07	0.6	15	Intersection Delay (s)
	EBT	9	0.0	A		0.00	0.0	0	12.0
	EBR	22	0.0	A		0.00	0.0	0	
Westbound	WBL	87	27.5	C	C	0.20	1.6	40	
	WBT	1	0.0	A		0.00	0.0	0	
	WBR	8	25.2	C		0.02	0.1	3	Intersection LOS
Northbound	NBL	4	13.8	B	A	0.01	0.0	0	
	NBT	336	9.2	A		0.31	3.0	75	B
	NBR	110	7.6	A		0.12	0.9	23	
Southbound	SBL	23	10.8	B	B	0.04	0.2	5	
	SBT	520	0.0	A		0.00	0.0	0	
	SBR	1	11.2	B		0.48	5.5	138	

INT. 8: KY-61 & KY-480C (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	12.8
	EBR	–	-	-		-	-	-	
Westbound	WBL	1	12.8	B	B	0.03	0.1	3	
	WBT	–	-	-		-	-	-	
	WBR	10	12.8	B		0.03	0.1	3	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	567	0.0	A		0.00	0.0	0	B
	NBR	4	0.0	A		0.00	0.0	0	
Southbound	SBL	30	8.9	A	A	0.03	0.1	3	
	SBT	153	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 8: KY-61 & KY-480C (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-	-	-	-	-	Intersection Delay (s)
	EBT	–	-	-		-	-	-	11.8
	EBR	–	-	-		-	-	-	
Westbound	WBL	2	11.8	B	B	0.06	0.2	5	
	WBT	–	-	-		-	-	-	
	WBR	33	11.8	B		0.06	0.2	5	Intersection LOS
Northbound	NBL	–	-	-	A	-	-	-	
	NBT	419	0.0	A		0.00	0.0	0	B
	NBR	6	0.0	A		0.00	0.0	0	
Southbound	SBL	86	8.5	A	A	0.08	0.3	8	
	SBT	483	0.0	A		0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	24	13.6	B		0.06	0.2	5	13.6
Westbound	WBT	–	-	-	B	-	-	-	
	WBR	65	10.2	B		0.10	0.3	8	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	201	0.0	A	A	0.00	0.0	0	
	NBR	35	0.0	A		0.06	0.0	0	B
	SBL	70	8.0	A		0.06	0.2	5	
Southbound	SBT	134	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 9: KY-61 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	46	19.3	C		0.16	0.6	15	19.3
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	212	12.7	B		0.33	1.4	35	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	296	0.0	A	A	0.00	0.0	0	
	NBR	31	0.0	A		0.00	0.0	0	C
	SBL	98	8.3	A		0.87	0.3	8	
Southbound	SBT	271	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	97	15.8	C		0.28	1.1	28	15.8
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	21	9.1	A		0.03	0.1	3	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	88	0.0	A	A	0.00	0.0	0	
	NBR	94	0.0	A		0.00	0.0	0	C
	SBL	91	8.1	A		0.09	0.3	8	
Southbound	SBT	108	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 10: KY-61 & Ohm Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	
	WBL	54	15.3	C		0.14	0.5	13	15.3
Westbound	WBT	–	-	-	C	-	-	-	
	WBR	64	9.3	A		0.07	0.2	5	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	114	0.0	A	A	0.00	0.0	0	
	NBR	69	0.0	A		0.00	0.0	0	C
	SBL	101	7.9	A		0.08	0.3	8	
Southbound	SBT	267	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 11: KY-44 & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	7.7	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	505	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	15.7
	WBL	–	-	-		-	-	-	
Westbound	WBT	109	0.0	A	A	0.00	0.0	0	
	WBR	32	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
	SBL	33	15.7	C		0.13	0.4	10	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	8	15.7	C		0.127	0.4	10	

INT. 11: KY-44 & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	25	8.2	A		0.02	0.1	3	Intersection Delay (s)
Eastbound	EBT	333	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	13.8
	WBL	–	-	-		-	-	-	
Westbound	WBT	343	0.0	A	A	0.00	0.0	0	
	WBR	34	0.0	A		0.00	0.0	0	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	33	13.8	B		0.14	0.5	13	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	33	13.8	B		0.142	0.5	13	

INT. 12: KY-44 & Lee Street (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	230	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	37.3
	WBL	6	8.4	A		0.01	0.0	0	
Westbound	WBT	443	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	
	NBL	25	37.3	E		0.32	1.3	33	Intersection LOS
Northbound	NBT	–	-	-	E	-	-	-	
	NBR	1	37.3	E		0.32	1.3	33	E
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 12: KY-44 & Lee Street (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	87	0.0	A	A	0.00	0.0	0	
	EBR	1	0.0	A		0.00	0.0	0	12.8
	WBL	15	7.7	A		0.02	0.1	3	
Westbound	WBT	345	0.0	A	A	0.00	0.0	0	
	WBR	–	-	-		-	-	-	
	NBL	1	12.8	B		0.01	0.0	0	Intersection LOS
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	1	12.8	B		0.01	0.0	0	B
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 13: KY-44 & Adam Shepherd Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	38	67.3	E		0.42	2.8	70	Intersection Delay (s)
Eastbound	EBT	955	54.6	D	D	0.94	24.1	603	
	EBR	7	26.9	C		0.02	0.3	8	52.5
	WBL	40	48.2	D		0.19	2.3	58	
Westbound	WBT	191	22.6	C	C	0.15	3.5	88	
	WBR	318	15.0	B		0.40	12.6	315	
	NBL	22	43.7	D		0.09	1.2	30	Intersection LOS
Northbound	NBT	35	44.3	D	E	0.13	1.9	48	
	NBR	705	65.5	E		0.96	19.9	498	D
	SBL	494	66.1	E		0.89	14.7	368	
Southbound	SBT	10	0.0	A	E	0.00	0.0	0	
	SBR	18	41.9	D		0.07	1	25	

INT. 13: KY-44 & Adam Shepherd Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	83	58.4	E		0.46	2.8	70	Intersection Delay (s)
Eastbound	EBT	402	51.0	D	D	0.66	6.1	153	
	EBR	14	40.7	D		0.05	0.4	10	39.5
	WBL	103	57.0	E		0.50	3.4	85	
Westbound	WBT	345	45.7	D	D	0.52	4.9	123	
	WBR	621	28.9	C		0.81	21.1	528	
	NBL	17	41.8	D		0.05	0.4	10	Intersection LOS
Northbound	NBT	101	45.7	D	D	0.31	2.9	73	
	NBR	219	32.7	C		0.27	2.5	63	D
	SBL	583	35.8	D		0.55	7.6	190	
Southbound	SBT	31	0.0	A	D	0.00	0.0	0	
	SBR	38	29	C		0.08	0.8	20	

INT. 14: KY-44 & I-65 South ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	1222	26.9	C	C	0.78	20.1	503	
	EBR	11	0.0	A		0.00	0.0	0	24.5
	WBL	225	25.3	C		0.60	6.7	168	
Westbound	WBT	388	5.8	A	B	0.17	2.7	68	
	WBR	0	0.0	A		0.00	0.0	0	
	NBL	0	-	-		-	-	-	Intersection LOS
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	180	47.3	D		0.57	9.2	230	
Southbound	SBT	4	0.0	A	D	0.00	0.0	0	
	SBR	251	0	A		0	0	0	

INT. 14: KY-44 & I-65 South ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	0	0.0	A		0.00	0.0	0	Intersection Delay (s)
Eastbound	EBT	562	17.7	B	B	0.34	4.4	110	
	EBR	7	0.0	A		0.00	0.0	0	28.4
	WBL	275	10.9	B		0.44	2.8	70	
Westbound	WBT	742	6.7	A	A	0.32	3.1	78	
	WBR	0	0.0	A		0.00	0.0	0	
	NBL	0	-	-		-	-	-	Intersection LOS
Northbound	NBT	0	-	-	-	-	-	-	
	NBR	0	-	-		-	-	-	C
	SBL	340	105.7	F		1.05	14.9	373	
Southbound	SBT	9	0.0	A	F	0.00	0.0	0	
	SBR	456	0	A		0	0	0	

INT. 15: KY-44 & I-65 North ramps (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	953	36.2	D	D	0.89	18.7	468	
	EBR	0	0.0	A		0.00		0	30.0
	WBL	0	0.0	A		0.00	0.0	0	
Westbound	WBT	463	27.5	C	C	0.43	9.1	228	
	WBR	–	-	-		-	-	-	
	NBL	295	16.3	B		0.36	8.7	218	Intersection LOS
Northbound	NBT	–	-	-	C	-	-	-	
	NBR	575	28.6	C		0.79	20.8	520	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 15: KY-44 & I-65 North ramps (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	–	-	-		-	-	-	Intersection Delay (s)
Eastbound	EBT	731	30.8	C	C	0.61	8.2	205	
	EBR	0	0.0	A		0	0.0	0	27.4
	WBL	0	0.0	A		0	0.0	0	
Westbound	WBT	833	32.9	C	C	0.69	9.8	245	
	WBR	–	-	-		-	-	-	
	NBL	363	16.8	B		0.39	5.6	140	Intersection LOS
Northbound	NBT	–	-	-	B	-	-	-	
	NBR	290	16.3	B		0.35	4.4	110	C
	SBL	–	-	-		-	-	-	
Southbound	SBT	–	-	-	-	-	-	-	
	SBR	–	-	-		-	-	-	

INT. 16: KY-44 & Bells Mill Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	28	16.7	B		0.10	0.6	15	Intersection Delay (s)
Eastbound	EBT	259	10.5	B	B	0.32	3.1	78	
	EBR	–	-	-		-	-	-	13.4
	WBL	–	-	-		-	-	-	
Westbound	WBT	455	13.7	B	B	0.57	6.7	168	
	WBR	381	14.1	B		0.56	5.8	145	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	84	15.4	B		0.16	1.5	38	
Southbound	SBT	–	-	-	B	-	-	-	
	SBR	22	14.4	B		0.05	0.4	10	

INT. 16: KY-44 & Bells Mill Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
	EBL	37	16.8	B		0.12	0.4	10	Intersection Delay (s)
Eastbound	EBT	461	13.6	B	B	0.56	3.6	90	
	EBR	–	-	-		-	-	-	14.7
	WBL	–	-	-		-	-	-	
Westbound	WBT	469	13.7	B	B	0.57	3.7	93	
	WBR	190	10.1	B		0.27	1.2	30	
	NBL	–	-	-		-	-	-	Intersection LOS
Northbound	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
	SBL	294	20.6	C		0.54	3.5	88	
Southbound	SBT	–	-	-	C	-	-	-	
	SBR	50	14.9	B		0.1	0.5	13	

INT. 17: Bells Mill Road & Cammi Drive (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.3	A		0.00	0.0	0	Intersection Delay (s)
	EBT	99	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	11.9
Westbound	WBL	–	-	-		-	-	-	
	WBT	433	0.0	A	A	0.00	0.0	0	
	WBR	4	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	10	11.9	B		0.05	0.2	5	
	SBT	–	-	-	B	-	-	-	
	SBR	18	11.9	B		0.054	0.2	5	

INT. 17: Bells Mill Road & Cammi Drive (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	33	7.8	A		0.03	0.1	3	Intersection Delay (s)
	EBT	350	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	12.8
Westbound	WBL	–	-	-		-	-	-	
	WBT	223	0.0	A	A	0.00	0.0	0	
	WBR	32	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	16	12.8	B		0.06	0.2	5	
	SBT	–	-	-	C	-	-	-	
	SBR	11	0	A		0	0	0	

INT. 18: KY-480C & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-		-	-	-	Intersection Delay (s)
	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.4
Westbound	WBL	1	0.0	A		0.0	0.0	0	
	WBT	–	-	-	A	-	-	-	
	WBR	17	0.0	A		0.0	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	6	8.4	A	A	0.0	0.0	0	
	NBR	3	8.4	A		0.0	0.0	0	A
Southbound	SBL	18	0.0	A		0.0	0.0	0	
	SBT	1	0.0	A	A	0.0	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 18: KY-480C & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	-	-		-	-	-	Intersection Delay (s)
	EBT	–	-	-	-	-	-	-	
	EBR	–	-	-		-	-	-	8.3
Westbound	WBL	2	0.0	A		0.00	0.0	0	
	WBT	–	-	-	A	-	-	-	
	WBR	49	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	4	8.3	A	A	0.01	0.0	0	
	NBR	1	8.3	A		0.01	0.0	0	A
Southbound	SBL	39	0.0	A		0.00	0.0	0	
	SBT	3	0.0	A	A	0.00	0.0	0	
	SBR	–	-	-		-	-	-	

INT. 19: KY-480 & Old Preston Highway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	6	7.6	A		0.01	0.0	0	Intersection Delay (s)
	EBT	216	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	9.8
Westbound	WBL	–	-	-		-	-	-	
	WBT	102	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	A
Southbound	SBL	1	9.8	A		0.00	0.0	0	
	SBT	–	-	-	A	-	-	-	
	SBR	1	9.8	A		0.003	0	0	

INT. 19: KY-480 & Old Preston Highway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	8.0	A		0.01	0.0	0	Intersection Delay (s)
	EBT	242	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	10.2
Westbound	WBL	–	-	-		-	-	-	
	WBT	274	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	1	10.2	B		0.01	0.0	0	
	SBT	–	-	-	B	-	-	-	
	SBR	8	10.2	B		0.014	0	0	

INT. 20: KY-480C & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	7.6	A		0.01	0.0	0	Intersection Delay (s)
	EBT	204	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	10.8
Westbound	WBL	–	-	-		-	-	-	
	WBT	68	0.0	A	A	0.00	0.0	0	
	WBR	46	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	26	10.8	B		0.05	0.1	3	
	SBT	–	-	-	B	-	-	-	
	SBR	1	10.8	B		0.046	0.1	3	

INT. 20: KY-480C & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	8.1	A		0.01	0.0	0	Intersection Delay (s)
	EBT	233	0.0	A	A	0.00	0.0	0	
	EBR	–	-	-		-	-	-	12.7
Westbound	WBL	–	-	-		-	-	-	
	WBT	165	0.0	A	A	0.00	0.0	0	
	WBR	136	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	B
Southbound	SBL	49	12.7	B		0.11	0.4	10	
	SBT	–	-	-	B	-	-	-	
	SBR	2	12.7	B		0.105	0.4	10	

INT. 21: KY-480 & Omega Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	358	20.7	C		0.68	9.8	245	Intersection Delay (s)
	EBT	151	14.3	B	B	0.13	1.8	45	
	EBR	256	19.4	B		0.48	7.9	198	27.3
Westbound	WBL	6	25.2	C		0.02	0.2	5	
	WBT	364	43.7	D	D	0.68	9.0	225	
	WBR	2	43.3	D		0.68	9.3	233	
Northbound	NBL	36	37.8	D		0.21	1.8	45	Intersection LOS
	NBT	16	0.0	A	D	0.00	0.0	0	
	NBR	3	36.2	D		0.11	1.0	25	C
Southbound	SBL	1	36.9	D		0.03	0.2	5	
	SBT	4	0.0	A	C	0.00	0.0	0	
	SBR	13	15.8	B		0.03	0.4	10	

INT. 21: KY-480 & Omega Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	360	15.5	B		0.50	4.0	100	Intersection Delay (s)
	EBT	406	15.6	B	B	0.27	2.3	58	
	EBR	125	15.1	B		0.18	1.4	35	23.2
Westbound	WBL	21	25.6	C		0.06	0.3	8	
	WBT	294	35.5	D	C	0.43	2.9	73	
	WBR	4	35.4	D		0.43	3.1	78	
Northbound	NBL	120	47.1	D		0.56	3.0	75	Intersection LOS
	NBT	29	0	A	D	0.00	0.0	0	
	NBR	13	37.5	D		0.19	0.9	23	C
Southbound	SBL	5	38.6	D		0.15	0.6	15	
	SBT	22	0	A	C	0.00	0.0	0	
	SBR	253	20.4	C		0.39	3.6	90	

INT. 22: KY-480 & Ridge Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	8.5	A		0.00	0.0	0	Intersection Delay (s)
	EBT	46	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	11.8
Westbound	WBL	-	-	-		-	-	-	
	WBT	457	0.0	A	A	0.00	0.0	0	
	WBR	1	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	B
Southbound	SBL	1	11.8	B		0.00	0.0	0	
	SBT	-	-	-	B	-	-	-	
	SBR	1	11.8	B		0.004	0	0	

INT. 22: KY-480 & Ridge Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	1	7.7	A		0.00	0.0	0	Intersection Delay (s)
	EBT	315	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	10.7
Westbound	WBL	-	-	-		-	-	-	
	WBT	187	0.0	A	A	0.00	0.0	0	
	WBR	1	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	B
Southbound	SBL	1	10.7	B		0.00	0.0	0	
	SBT	-	-	-	B	-	-	-	
	SBR	1	10.7	B		0.003	0	0	

INT. 23: Clermont Road & Chapeze Lane (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	10.2	B		0.01	0.0	0	Intersection Delay (s)
	EBT	418	0.0	A	B	0.00	0.0	0	
	EBR	–	-	-		-	-	-	20.0
Westbound	WBL	–	-	-		-	-	-	
	WBT	868	0.0	A	A	0.00	0.0	0	
	WBR	6	0.0	A		0.00	0.0	0	
Northbound	NBL	–	-	-		-	-	-	Intersection LOS
	NBT	–	-	-	-	-	-	-	
	NBR	–	-	-		-	-	-	C
Southbound	SBL	6	20.0	C		0.12	0.4	10	
	SBT	–	-	-	C	-	-	-	
	SBR	24	20	C		0.117	0.4	10	

INT. 23: Clermont Road & Chapeze Lane (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	19	8.7	A		0.02	0.1	3	Intersection Delay (s)
	EBT	760	0.0	A	A	0.00	0.0	0	
	EBR	-	-	-		-	-	-	19.9
Westbound	WBL	-	-	-		-	-	-	
	WBT	514	0.0	A	A	0.00	0.0	0	
	WBR	11	0.0	A		0.00	0.0	0	
Northbound	NBL	-	-	-		-	-	-	Intersection LOS
	NBT	-	-	-	-	-	-	-	
	NBR	-	-	-		-	-	-	C
Southbound	SBL	11	19.9	C		0.09	0.3	8	
	SBT	-	-	-	C	-	-	-	
	SBR	13	19.9	C		0.091	0.3	8	

INT. 24: West Blue Lick Road & Salt Well Road (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	23	7.3	A		0.02	0.0	0	Intersection Delay (s)
	EBT	7	0.0	A	A	0.00	0.0	0	
	EBR	43	0.0	A		0.00	0.0	0	11.5
Westbound	WBL	10	7.3	A		0.01	0.0	0	
	WBT	4	0.0	A	A	0.00	0.0	0	
	WBR	5	0.0	A		0.00	0.0	0	
Northbound	NBL	12	10.6	B		0.07	0.2	5	Intersection LOS
	NBT	30	10.6	B	B	0.07	0.2	5	
	NBR	1	10.6	B		0.07	0.2	5	B
Southbound	SBL	12	11.5	B		0.26	1.1	28	
	SBT	153	11.5	B	B	0.26	1.1	28	
	SBR	9	11.5	B		0.263	1.1	28	

INT. 24: West Blue Lick Road & Salt Well Road (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	36	7.3	A		0.02	0.1	3	Intersection Delay (s)
	EBT	15	0.0	A	A	0.00	0.0	0	
	EBR	28	0.0	A		0.00	0.0	0	11.9
Westbound	WBL	8	7.3	A		0.01	0.0	0	
	WBT	13	0.0	A	A	0.00	0.0	0	
	WBR	8	0.0	A		0.00	0.0	0	
Northbound	NBL	40	11.9	B		0.26	1.0	25	Intersection LOS
	NBT	126	11.9	B	B	0.26	1.0	25	
	NBR	8	11.9	B		0.26	1.0	25	B
Southbound	SBL	9	11.1	B		0.22	0.8	20	
	SBT	120	11.1	B	B	0.22	0.8	20	
	SBR	36	11.1	B		0.222	0.8	20	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	8	24.5	C		0.04	0.5	13	Intersection Delay (s)
	EBT	8	0	A	C	0.00	0	0	
	EBR	8	24.3	C		0.03	0.3	8	27.1
Westbound	WBL	206	30.6	C		0.54	7.6	190	
	WBT	9	22.7	C	C	0.02	0.3	8	
	WBR	36	0.0	A		0.00	0.0	0	
Northbound	NBL	9	27.4	C		0.04	0.3	8	Intersection LOS
	NBT	240	26.2	C	C	0.50	8.1	203	
	NBR	240	0.0	A		0.00	0.0	0	C
Southbound	SBL	43	29.7	C		0.18	1.6	40	
	SBT	441	26.0	C	C	0.48	7.5	188	
	SBR	9	25.8	C		0.48	7.8	195	

INT. 25: Adam Shepherd Parkway & Conestoga Parkway (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	20	25.1	C		0.10	0.7	18	Intersection Delay (s)
	EBT	20	0.0	A	C	0.00	0.0	0	
	EBR	20	24.7	C		0.06	0.3	8	33.7
Westbound	WBL	366	47.2	D		0.86	8.7	218	
	WBT	22	23.0	C	D	0.05	0.3	8	
	WBR	146	0.0	A		0.00	0.0	0	
Northbound	NBL	22	24.2	C		0.07	0.4	10	Intersection LOS
	NBT	323	28.6	C	C	0.60	5.8	145	
	NBR	477	0.0	A		0.00	0.0	0	C
Southbound	SBL	120	40.6	D		0.51	2.8	70	
	SBT	261	22.6	C	C	0.27	2.2	55	
	SBR	23	22.6	C		0.28	2.2	55	

INT. 26: Bypass Route 3 & Joe B. Hall Avenue (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–		–	–	–	Intersection Delay (s)
	EBT	268	46.8	D	D	0.63	9.1	228	
	EBR	101	48.1	D		0.65	9.1	228	18.9
Westbound	WBL	542	17.3	B		0.68	12.7	318	
	WBT	130	7.5	A	B	0.12	2.1	53	
	WBR	–	–	–		–	–	–	
Northbound	NBL	76	28.2	C		0.17	2.9	73	Intersection LOS
	NBT	–	–	–	A	–	–	–	
	NBR	836	8.3	A		0.48	7.5	188	B
Southbound	SBL	–	–	–		–	–	–	
	SBT	–	–	–	-	–	–	–	
	SBR	–	–	–		–	–	–	

INT. 26: Bypass Route 3 & Joe B. Hall Avenue (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	–	–	–		–	–	–	Intersection Delay (s)
	EBT	268	41.6	D	D	0.55	5.0	125	
	EBR	101	42.4	D		0.57	5.0	125	17.0
Westbound	WBL	542	12.1	B		0.60	6.0	150	
	WBT	130	4.9	A	B	0.11	0.9	23	
	WBR	–	–	–		–	–	–	
Northbound	NBL	76	34.6	C		0.23	1.8	45	Intersection LOS
	NBT	–	–	–	B	–	–	–	
	NBR	836	9.5	A		0.49	4.7	118	B
Southbound	SBL	–	–	–		–	–	–	
	SBT	–	–	–	-	–	–	–	
	SBR	–	–	–		–	–	–	

INT. 27: Bypass Route 3 & KY-480 (AM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	263	24.0	C		0.68	5.7	143	Intersection Delay (s)
	EBT	165	9.9	A	B	0.26	1.8	45	
	EBR	–	–	–		–	–	–	15.4
Westbound	WBL	–	–	–		–	–	–	
	WBT	144	9.7	A	B	0.23	1.7	43	
	WBR	380	18.1	B		0.70	6.9	173	
Northbound	NBL	–	–	–		–	–	–	Intersection LOS
	NBT	–	–	–	-	–	–	–	
	NBR	–	–	–		–	–	–	B
Southbound	SBL	318	13.2	B		0.52	4.7	118	
	SBT	–	–	–	B	–	–	–	
	SBR	191	11.1	B		0.35	2.5	63	

INT. 27: Bypass Route 3 & KY-480 (PM Peak)

Approach	Movement	Volume	Delay (s)	LOS		V/C Ratio	95%ile Back of Q (veh/ln)	95th Queue (ft)	
Eastbound	EBL	263	24.0	C		0.68	8.2	205	Intersection Delay (s)
	EBT	165	9.9	A	B	0.26	1.0	25	
	EBR	–	–	–		–	–	–	15.4
Westbound	WBL	–	–	–		–	–	–	
	WBT	144	9.7	A	B	0.23	1.0	25	
	WBR	380	18.1	B		0.70	3.8	95	
Northbound	NBL	–	–	–		–	–	–	Intersection LOS
	NBT	–	–	–	-	–	–	–	
	NBR	–	–	–		–	–	–	B
Southbound	SBL	318	13.2	B		0.52	2.6	65	
	SBT	–	–	–	B	–	–	–	
	SBR	191	11.1	B		0.35	1.4	35	

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	560	1	1	423
Future Vol, veh/h	1	1	560	1	1	423
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	636	1	1	481

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	880	319	0	0	638	0
Stage 1	637	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	275	660	-	-	890	-
Stage 1	473	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	275	660	-	-	890	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.3	0	0.02
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	275	660	890	-
HCM Lane V/C Ratio	-	-	0.004	0.002	0.001	-
HCM Ctrl Dly (s/v)	-	-	18.1	10.5	9.1	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Future Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	539	1	1	1	79	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	2	0	0	8	547	2	278	279	272
Stage 1	-	-	-	-	-	-	4	4	-	274	274	-
Stage 2	-	-	-	-	-	-	4	543	-	4	5	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	998	-	-	1581	-	-	1011	444	1083	674	629	767
Stage 1	-	-	-	-	-	-	1018	892	-	732	683	-
Stage 2	-	-	-	-	-	-	1018	519	-	1018	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1581	-	-	1005	443	1083	670	627	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	1005	443	-	670	627	-
Stage 1	-	-	-	-	-	-	1017	891	-	731	682	-
Stage 2	-	-	-	-	-	-	1014	518	-	1015	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.87	0.02	10.04	11.11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	718	545	-	-	3	-	-	670
HCM Lane V/C Ratio	0.005	0.001	-	-	0.001	-	-	0.121
HCM Ctrl Dly (s/v)	10	8.6	0	-	7.3	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

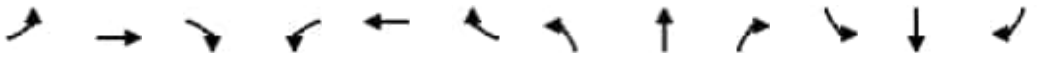
Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	80	400	15	148	264
Future Vol, veh/h	10	80	400	15	148	264
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	11	91	455	17	168	300

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	949	236	0	0	472	0
Stage 1	463	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	258	766	-	-	1032	-
Stage 1	600	-	-	-	-	-
Stage 2	584	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	766	-	-	1032	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	489	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.69	0	3.29
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	216	766	1032	-
HCM Lane V/C Ratio	-	-	0.053	0.119	0.163	-
HCM Ctrl Dly (s/v)	-	-	22.6	10.3	9.2	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	0.6	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	87	1	110	1	275	92	263	261	1
Future Volume (veh/h)	1	1	1	87	1	110	1	275	92	263	261	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	96	1	121	1	302	101	289	287	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	140	138	113	403	3	367	709	1599	525	629	2209	8
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	372	593	482	1415	13	1574	1048	2525	828	943	3488	12
Grp Volume(v), veh/h	3	0	0	96	0	122	1	202	201	289	140	148
Grp Sat Flow(s),veh/h/ln	1447	0	0	1415	0	1587	1048	1706	1647	943	1706	1794
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	4.4	4.6	16.6	3.0	3.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	5.5	0.0	5.7	3.0	4.4	4.6	21.2	3.0	3.0
Prop In Lane	0.33		0.33	1.00		0.99	1.00		0.50	1.00		0.01
Lane Grp Cap(c), veh/h	391	0	0	403	0	370	709	1081	1043	629	1081	1136
V/C Ratio(X)	0.01	0.00	0.00	0.24	0.00	0.33	0.00	0.19	0.19	0.46	0.13	0.13
Avail Cap(c_a), veh/h	391	0	0	403	0	370	709	1081	1043	629	1081	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	28.5	0.0	28.7	7.2	6.9	6.9	11.3	6.6	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	2.4	0.0	0.4	0.4	2.4	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	3.3	0.0	4.3	0.0	2.5	2.5	5.9	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.6	0.0	0.0	29.9	0.0	31.0	7.2	7.2	7.3	13.7	6.8	6.8
LnGrp LOS	C			C		C	A	A	A	B	A	A
Approach Vol, veh/h		3			218			404			577	
Approach Delay, s/veh		26.6			30.5			7.3			10.3	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		27.0		63.0		27.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		57.0		21.0		57.0		21.0				
Max Q Clear Time (g_c+I1), s		6.6		7.7		23.2		7.7				
Green Ext Time (p_c), s		2.3		0.0		3.3		0.7				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.0									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	537	59	24	119	41	31	166	130	139	145	47
Future Volume (veh/h)	79	537	59	24	119	41	31	166	130	139	145	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	92	624	69	28	138	48	36	193	151	162	169	55
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	187	693	77	77	471	164	93	327	277	202	441	374
Arrive On Green	0.11	0.44	0.44	0.05	0.37	0.37	0.05	0.18	0.18	0.12	0.25	0.25
Sat Flow, veh/h	1711	1589	176	1697	1263	439	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	92	0	693	28	0	186	36	193	151	162	169	55
Grp Sat Flow(s),veh/h/ln	1711	0	1765	1697	0	1702	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	5.6	0.0	40.1	1.8	0.0	8.5	2.2	10.8	9.9	10.1	8.6	3.1
Cycle Q Clear(g_c), s	5.6	0.0	40.1	1.8	0.0	8.5	2.2	10.8	9.9	10.1	8.6	3.1
Prop In Lane	1.00		0.10	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
V/C Ratio(X)	0.49	0.00	0.90	0.36	0.00	0.29	0.39	0.59	0.55	0.80	0.38	0.15
Avail Cap(c_a), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	28.8	51.0	0.0	24.3	50.2	41.3	40.9	47.2	34.6	32.5
Incr Delay (d2), s/veh	9.0	0.0	15.6	12.7	0.0	1.2	11.6	7.6	7.5	27.5	2.5	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	0.0	26.7	1.8	0.0	6.4	2.2	9.2	7.6	9.8	7.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	0.0	44.4	63.7	0.0	25.5	61.8	48.9	48.4	74.7	37.1	33.3
LnGrp LOS	E		D	E		C	E	D	D	E	D	C
Approach Vol, veh/h		785			214			380			386	
Approach Delay, s/veh		45.6			30.5			49.9			52.3	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	26.0	11.0	54.0	12.0	33.0	18.0	47.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	20.0	5.0	48.0	6.0	27.0	12.0	41.0
Max Q Clear Time (g_c+I1), s	12.1	12.8	3.8	42.1	4.2	10.6	7.6	10.5
Green Ext Time (p_c), s	0.0	0.9	0.0	2.3	0.0	0.9	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	46.2
HCM 7th LOS	D

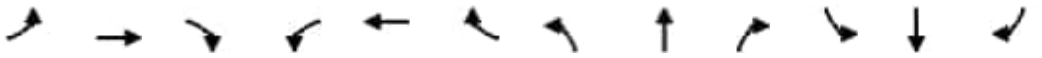
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Future Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	1	1	5	1	1	1	2	408	17	25	254	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	718	735	255	726	727	417	255	0	0	425	0	0
Stage 1	305	305	-	421	421	-	-	-	-	-	-	-
Stage 2	413	430	-	305	306	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	344	347	784	340	351	636	1281	-	-	1108	-	-
Stage 1	704	662	-	610	589	-	-	-	-	-	-	-
Stage 2	616	584	-	704	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	334	338	784	328	342	636	1281	-	-	1108	-	-
Mov Cap-2 Maneuver	334	338	-	328	342	-	-	-	-	-	-	-
Stage 1	688	647	-	609	588	-	-	-	-	-	-	-
Stage 2	613	582	-	683	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.72	14.13	0.04	0.75
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	543	398	1108	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.009	0.023	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	11.7	14.1	8.3	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	1	21	1	1	1	310	348	12	206	1
Future Volume (veh/h)	1	2	1	21	1	1	1	310	348	12	206	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	2	1	23	1	1	1	333	374	13	222	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	129	245	108	427	17	405	698	1098	930	452	1092	5
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	311	959	423	1364	66	1585	1112	1796	1522	712	1787	8
Grp Volume(v), veh/h	4	0	0	24	0	1	1	333	374	13	0	223
Grp Sat Flow(s),veh/h/ln	1694	0	0	1431	0	1585	1112	1796	1522	712	0	1795
Q Serve(g_s), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	8.0	11.4	0.8	0.0	5.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	1.1	0.0	0.0	5.0	8.0	11.4	8.8	0.0	5.0
Prop In Lane	0.25		0.25	0.96		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	483	0	0	444	0	405	698	1098	930	452	0	1097
V/C Ratio(X)	0.01	0.00	0.00	0.05	0.00	0.00	0.00	0.30	0.40	0.03	0.00	0.20
Avail Cap(c_a), veh/h	483	0	0	444	0	405	698	1098	930	452	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	0.0	0.0	25.3	0.0	25.0	8.9	8.4	9.0	10.4	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.7	1.3	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.7	0.0	0.0	0.0	5.3	6.5	0.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.0	0.0	0.0	25.6	0.0	25.0	8.9	9.1	10.3	10.6	0.0	8.2
LnGrp LOS	C			C		C	A	A	B	B		A
Approach Vol, veh/h		4			25			708			236	
Approach Delay, s/veh		25.0			25.5			9.7			8.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		13.4		2.2		10.8		3.1				
Green Ext Time (p_c), s		3.6		0.0		1.5		0.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			9.9									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	32	567	4	36	186
Future Vol, veh/h	1	32	567	4	36	186
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	1	34	603	4	38	198

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	880	605	0	0	607	0
Stage 1	605	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	318	497	-	-	947	-
Stage 1	545	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	303	497	-	-	947	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.95	0	1.45
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	488	292	-
HCM Lane V/C Ratio	-	-	0.072	0.04	-
HCM Ctrl Dly (s/v)	-	-	12.9	9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	35	145	25	70	134
Future Vol, veh/h	13	35	145	25	70	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	15	39	163	28	79	151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	485	177	0	0	191	0
Stage 1	177	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	520	836	-	-	1353	-
Stage 1	826	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	490	836	-	-	1353	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	677	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.35	0	2.68
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	490	836	1353	-
HCM Lane V/C Ratio	-	-	0.03	0.047	0.058	-
HCM Ctrl Dly (s/v)	-	-	12.6	9.5	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.2	-

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	27	109	117	72	85
Future Vol, veh/h	129	27	109	117	72	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	172	36	145	156	96	113

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	451	145	0	0	301	0
Stage 1	145	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	548	876	-	-	1226	-
Stage 1	858	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	505	876	-	-	1226	-
Mov Cap-2 Maneuver	505	-	-	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.64	0	3.75
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	505	876	1226	-
HCM Lane V/C Ratio	-	-	0.34	0.041	0.078	-
HCM Ctrl Dly (s/v)	-	-	15.8	9.3	8.2	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1.5	0.1	0.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	505	115	33	33	8
Future Vol, veh/h	25	505	115	33	33	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	30	601	137	39	39	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	176	0	-	0	817	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	661	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1370	-	-	-	346	889
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1370	-	-	-	335	889
Mov Cap-2 Maneuver	-	-	-	-	335	-
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.36	0	15.83
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	85	-	-	-	381
HCM Lane V/C Ratio	0.022	-	-	-	0.128
HCM Ctrl Dly (s/v)	7.7	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.4

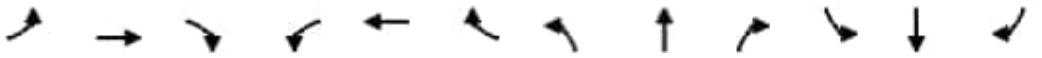
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	1	6	443	25	1
Future Vol, veh/h	230	1	6	443	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	50	50	50	50
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	460	2	12	886	50	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	462	0	1371	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1073	-	161	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1073	-	158	600
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.11	37.34
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	162	-	-	24	-
HCM Lane V/C Ratio	0.321	-	-	0.011	-
HCM Ctrl Dly (s/v)	37.3	-	-	8.4	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0	-

13: Paroquet Springs/Adam Shepherd & KY-44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	822	6	45	218	362	12	19	384	453	9	16
Future Volume (veh/h)	32	822	6	45	218	362	12	19	384	453	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	913	7	50	242	402	13	21	427	510	0	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	99	1015	453	254	1326	868	297	312	502	653	0	291
Arrive On Green	0.06	0.30	0.30	0.15	0.39	0.39	0.17	0.17	0.17	0.18	0.00	0.18
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	36	913	7	50	242	402	13	21	427	510	0	18
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.4	31.0	0.4	3.1	5.6	18.5	0.7	1.1	20.0	16.4	0.0	1.1
Cycle Q Clear(g_c), s	2.4	31.0	0.4	3.1	5.6	18.5	0.7	1.1	20.0	16.4	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	1015	453	254	1326	868	297	312	502	653	0	291
V/C Ratio(X)	0.36	0.90	0.02	0.20	0.18	0.46	0.04	0.07	0.85	0.78	0.00	0.06
Avail Cap(c_a), veh/h	99	1015	453	254	1326	868	297	312	502	653	0	291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	40.3	29.5	44.7	23.9	14.8	42.0	42.1	38.3	46.7	0.0	40.5
Incr Delay (d2), s/veh	10.0	12.4	0.1	1.7	0.3	1.8	0.3	0.4	16.4	9.0	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	20.6	0.3	2.6	4.1	15.0	0.6	1.0	19.9	12.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.4	52.7	29.6	46.4	24.2	16.5	42.3	42.6	54.8	55.7	0.0	40.9
LnGrp LOS	E	D	C	D	C	B	D	D	D	E		D
Approach Vol, veh/h		956			694			461			528	
Approach Delay, s/veh		52.9			21.4			53.9			55.2	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	26.0	24.0	42.0		28.0	13.0	53.0					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	20.0	18.0	36.0		22.0	7.0	47.0					
Max Q Clear Time (g_c+I1), s	22.0	5.1	33.0		18.4	4.4	20.5					
Green Ext Time (p_c), s	0.0	0.1	1.7		0.7	0.0	3.1					

Intersection Summary	
HCM 7th Control Delay, s/veh	45.3
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

14: I-65 SB on-ramp/I-65 SB off-ramp & KY-44

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1394	12	241	415	0	0	0	0	180	4	251
Future Volume (veh/h)	0	1394	12	241	415	0	0	0	0	180	4	251
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1483	0	256	441	0				191	4	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		359	2369	0				333	7	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1746	37	1585
Grp Volume(v), veh/h	0	1483	0	256	441	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	43.7	0.0	9.1	4.9	0.0				10.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	43.7	0.0	9.1	4.9	0.0				10.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1662		359	2369	0				340	0	
V/C Ratio(X)	0.00	0.89		0.71	0.19	0.00				0.57	0.00	
Avail Cap(c_a), veh/h	0	1662		359	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	25.4	0.0	26.7	5.7	0.0				40.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.8	0.0	11.4	0.2	0.0				6.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	25.2	0.0	7.7	2.9	0.0				9.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	33.1	0.0	38.1	5.9	0.0				47.3	0.0	0.0
LnGrp LOS		C		D	A					D		
Approach Vol, veh/h		1483			697						195	
Approach Delay, s/veh		33.1			17.7						47.3	
Approach LOS		C			B						D	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		11.1	45.7		12.9		6.9					
Green Ext Time (p_c), s		0.4	5.9		0.6		3.2					

Intersection Summary	
HCM 7th Control Delay, s/veh	29.8
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

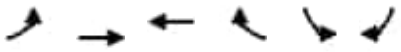
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	953	0	0	463	295	575
Future Volume (veh/h)	953	0	0	463	295	575
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	1095	0	0	532	339	661
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.48	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	1095	0	0	532	339	661
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	32.3	0.0	0.0	13.1	12.2	37.2
Cycle Q Clear(g_c), s	32.3	0.0	0.0	13.1	12.2	37.2
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.89	0.00	0.00	0.43	0.36	0.79
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.4	15.2	21.1
Incr Delay (d2), s/veh	9.8	0.0	0.0	1.1	1.1	7.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	0.0	0.0	9.1	8.7	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.2	0.0	0.0	27.5	16.3	28.6
LnGrp LOS	D			C	B	C
Approach Vol, veh/h	1095			532	1000	
Approach Delay, s/veh	36.2			27.5	24.4	
Approach LOS	D			C	C	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		46.0		64.0	46.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		40.0		58.0	40.0
Max Q Clear Time (g_c+I1), s		15.1		39.2	34.3
Green Ext Time (p_c), s		3.6		3.7	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	30.0
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	259	455	381	84	22
Future Volume (veh/h)	28	259	455	381	84	22
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	30	278	489	410	90	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	290	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	590	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	30	278	489	410	90	24
Grp Sat Flow(s),veh/h/ln	590	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.3	5.7	11.7	11.6	2.2	0.6
Cycle Q Clear(g_c), s	14.0	5.7	11.7	11.6	2.2	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	290	861	861	730	564	502
V/C Ratio(X)	0.10	0.32	0.57	0.56	0.16	0.05
Avail Cap(c_a), veh/h	290	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	9.5	11.0	11.0	14.8	14.2
Incr Delay (d2), s/veh	0.7	1.0	2.7	3.1	0.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	3.1	6.7	5.8	1.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.7	10.5	13.7	14.1	15.4	14.4
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h		308	899		114	
Approach Delay, s/veh		11.1	13.9		15.2	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		16.0		4.2	13.7
Green Ext Time (p_c), s		1.3		0.2	3.7

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	99	433	4	10	18
Future Vol, veh/h	1	99	433	4	10	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	105	461	4	11	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	465	0	-	0	570	463
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	107	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1096	-	-	-	483	599
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	917	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1096	-	-	-	482	599
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.08	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	18	-	-	-	551
HCM Lane V/C Ratio	0.001	-	-	-	0.054
HCM Ctrl Dly (s/v)	8.3	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	42	6	3	46	2
Future Vol, veh/h	1	42	6	3	46	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	52	7	4	57	2

Major/Minor	Minor2		Major2	
Conflicting Flow All	116	2	0	0
Stage 1	116	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	774	1082	-	-
Stage 1	800	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1082	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.36	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1082	-	-
HCM Lane V/C Ratio	0.01	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	117	56	3	1	1
Future Vol, veh/h	3	117	56	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	3	129	62	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	198	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1464	-	-	-	790	1001
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	891	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1464	-	-	-	789	1001
Mov Cap-2 Maneuver	-	-	-	-	789	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	9.09
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1464	-	-	-	882
HCM Lane V/C Ratio	0.002	-	-	-	0.002
HCM Ctrl Dly (s/v)	7.5	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

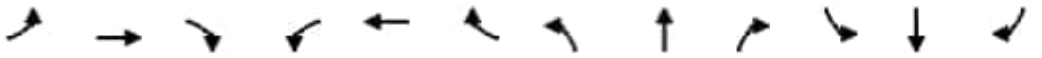
Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	111	57	38	52	2
Future Vol, veh/h	4	111	57	38	52	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	123	63	42	58	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	106	0	-	0	217	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1414	-	-	-	772	975
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1414	-	-	-	769	975
Mov Cap-2 Maneuver	-	-	-	-	769	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	894	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.26	0	10.03
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1414	-	-	-	775
HCM Lane V/C Ratio	0.003	-	-	-	0.077
HCM Ctrl Dly (s/v)	7.6	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	151	256	6	364	2	39	17	3	1	4	13
Future Volume (veh/h)	358	151	256	6	364	2	39	17	3	1	4	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	459	194	328	8	467	3	50	22	4	1	5	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	673	1542	688	342	690	4	218	188	34	31	155	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3448	22	1781	1540	280	309	1546	1585
Grp Volume(v), veh/h	459	194	328	8	229	241	50	0	26	6	0	17
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1777	1781	0	1820	1855	0	1585
Q Serve(g_s), s	15.6	3.0	13.6	0.3	11.3	11.3	2.3	0.0	1.1	0.3	0.0	0.6
Cycle Q Clear(g_c), s	15.6	3.0	13.6	0.3	11.3	11.3	2.3	0.0	1.1	0.3	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.15	0.17		1.00
Lane Grp Cap(c), veh/h	673	1542	688	342	338	355	218	0	222	185	0	652
V/C Ratio(X)	0.68	0.13	0.48	0.02	0.68	0.68	0.23	0.00	0.12	0.03	0.00	0.03
Avail Cap(c_a), veh/h	673	1542	688	342	338	355	218	0	222	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.2	14.1	17.0	25.1	33.3	33.3	35.7	0.0	35.2	36.6	0.0	15.8
Incr Delay (d2), s/veh	5.5	0.2	2.4	0.1	10.4	10.0	2.4	0.0	1.1	0.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.8	1.8	7.9	0.2	9.0	9.3	2.0	0.0	1.0	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.7	14.3	19.4	25.2	43.7	43.3	38.1	0.0	36.2	36.9	0.0	15.8
LnGrp LOS	C	B	B	C	D	D	D		D	D		B
Approach Vol, veh/h		981			478			76			23	
Approach Delay, s/veh		19.0			43.2			37.5			21.3	
Approach LOS		B			D			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.0	11.0	47.0	15.0	34.0	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	5.0	41.0	9.0	28.0	18.0
Max Q Clear Time (g_c+I1), s	4.3	2.3	15.6	2.6	17.6	13.3
Green Ext Time (p_c), s	0.1	0.0	2.1	0.0	1.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	46	457	1	1	1
Future Vol, veh/h	1	46	457	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	1	50	497	1	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	498	0	-	0	549	497
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	52	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1036	-	-	-	496	573
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	970	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1036	-	-	-	496	573
Mov Cap-2 Maneuver	-	-	-	-	496	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	970	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.18	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	38	-	-	-	532
HCM Lane V/C Ratio	0.001	-	-	-	0.004
HCM Ctrl Dly (s/v)	8.5	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
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	8	418	868	6	5	21
Future Vol, veh/h	8	418	868	6	5	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	8	440	914	6	5	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	920	0	-	0	1374	917
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	457	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	698	-	-	-	160	330
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	638	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	698	-	-	-	158	330
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	638	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	19.67
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	34	-	-	-	273
HCM Lane V/C Ratio	0.012	-	-	-	0.1
HCM Ctrl Dly (s/v)	10.2	0	-	-	19.7
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	8.8

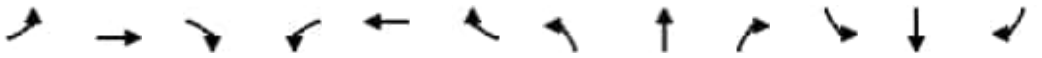
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	6	37	8	3	4	12	30	1	12	153	9
Future Vol, veh/h	20	6	37	8	3	4	12	30	1	12	153	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	7	42	9	3	5	14	34	1	14	174	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	8	0	0	49	0	0	182	99	28	93	118	6
Stage 1	-	-	-	-	-	-	73	73	-	24	24	-
Stage 2	-	-	-	-	-	-	109	26	-	69	94	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1612	-	-	1558	-	-	780	791	1047	890	772	1077
Stage 1	-	-	-	-	-	-	936	834	-	994	875	-
Stage 2	-	-	-	-	-	-	897	873	-	941	817	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1612	-	-	1558	-	-	585	775	1047	834	756	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	585	775	-	834	756	-
Stage 1	-	-	-	-	-	-	923	822	-	988	870	-
Stage 2	-	-	-	-	-	-	707	868	-	888	805	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.31	3.91	10.41	11.25
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	488	-	-	862	-	-	773
HCM Lane V/C Ratio	0.068	0.014	-	-	0.006	-	-	0.256
HCM Ctrl Dly (s/v)	10.4	7.3	0	-	7.3	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	1

25: Adam Shepherd & Mall Entrance/Conestoga



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	8	8	190	8	33	8	218	218	38	393	8
Future Volume (veh/h)	8	8	8	190	8	33	8	218	218	38	393	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	9	9	221	9	0	9	253	0	44	457	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		273	561		305	1069	21
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	927	1870	1585	1127	3564	70
Grp Volume(v), veh/h	18	0	9	221	9	0	9	253	0	44	228	238
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	927	1870	1585	1127	1777	1858
Q Serve(g_s), s	0.6	0.0	0.4	8.5	0.3	0.0	0.6	8.8	0.0	2.6	8.2	8.2
Cycle Q Clear(g_c), s	0.6	0.0	0.4	8.5	0.3	0.0	8.9	8.8	0.0	11.4	8.2	8.2
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	411	0	357	445	468		273	561		305	533	557
V/C Ratio(X)	0.04	0.00	0.03	0.50	0.02		0.03	0.45		0.14	0.43	0.43
Avail Cap(c_a), veh/h	411	0	357	445	468		273	561		305	533	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	24.2	25.7	22.6	0.0	26.0	22.7	0.0	27.3	22.5	22.5
Incr Delay (d2), s/veh	0.2	0.0	0.1	3.9	0.1	0.0	0.2	2.6	0.0	1.0	2.5	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.3	6.8	0.2	0.0	0.3	7.3	0.0	1.4	6.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.5	0.0	24.3	29.6	22.7	0.0	26.3	25.3	0.0	28.3	25.0	24.9
LnGrp LOS	C		C	C	C		C	C		C	C	C
Approach Vol, veh/h		27			230			262			510	
Approach Delay, s/veh		24.4			29.3			25.3			25.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.0		30.0		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		18.0		24.0		20.0				
Max Q Clear Time (g_c+I1), s		10.9		2.6		13.4		10.5				
Green Ext Time (p_c), s		1.1		0.0		2.1		0.4				

Intersection Summary												
HCM 7th Control Delay, s/veh			26.1									
HCM 7th LOS			C									

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	777	1	1	750
Future Vol, veh/h	1	1	777	1	1	750
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	835	1	1	806

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1241	418	0	0	837	0
Stage 1	836	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	159	567	-	-	744	-
Stage 1	371	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	159	567	-	-	744	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	19.61	0	0.01
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	159	567	744	-
HCM Lane V/C Ratio	-	-	0.007	0.002	0.001	-
HCM Ctrl Dly (s/v)	-	-	27.9	11.4	9.8	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Future Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	180	1	1	1	221	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	2	0	0	8	189	2	98	99	92
Stage 1	-	-	-	-	-	-	4	4	-	94	94	-
Stage 2	-	-	-	-	-	-	4	185	-	4	4	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1582	-	-	1012	706	1083	884	791	965
Stage 1	-	-	-	-	-	-	1019	893	-	912	817	-
Stage 2	-	-	-	-	-	-	1019	747	-	1019	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1582	-	-	1008	704	1083	879	789	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	1008	704	-	879	789	-
Stage 1	-	-	-	-	-	-	1018	892	-	911	815	-
Stage 2	-	-	-	-	-	-	1015	746	-	1016	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.55	0.04	9.02	10.48
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	899	545	-	-	9	-	-	879
HCM Lane V/C Ratio	0.004	0.001	-	-	0.001	-	-	0.253
HCM Ctrl Dly (s/v)	9	7.7	0	-	7.3	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	1

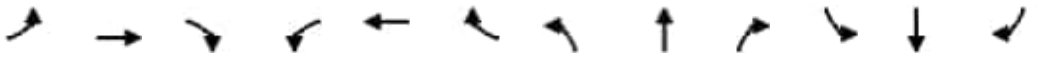
Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	252	457	41	191	470
Future Vol, veh/h	31	252	457	41	191	470
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	33	268	486	44	203	500

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1164	265	0	0	530	0
Stage 1	508	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	187	733	-	-	980	-
Stage 1	569	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	149	733	-	-	980	-
Mov Cap-2 Maneuver	149	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	379	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	15.26	0	2.78
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	149	733	980	-
HCM Lane V/C Ratio	-	-	0.222	0.366	0.207	-
HCM Ctrl Dly (s/v)	-	-	36	12.7	9.6	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	0.8	1.7	0.8	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	209	1	245	1	400	128	216	465	1
Future Volume (veh/h)	1	1	1	209	1	245	1	400	128	216	465	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	218	1	255	1	417	133	225	484	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	127	126	100	409	2	456	526	1475	465	487	2019	4
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	256	436	346	1415	6	1580	875	2552	806	824	3494	7
Grp Volume(v), veh/h	3	0	0	218	0	256	1	277	273	225	236	249
Grp Sat Flow(s),veh/h/ln	1038	0	0	1415	0	1586	875	1706	1651	824	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	5.3	0.0	12.3	0.1	7.4	7.5	17.1	6.1	6.1
Cycle Q Clear(g_c), s	12.3	0.0	0.0	17.7	0.0	12.3	6.2	7.4	7.5	24.6	6.1	6.1
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	353	0	0	409	0	458	526	986	954	487	986	1037
V/C Ratio(X)	0.01	0.00	0.00	0.53	0.00	0.56	0.00	0.28	0.29	0.46	0.24	0.24
Avail Cap(c_a), veh/h	353	0	0	409	0	458	526	986	954	487	986	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	0.0	0.0	30.0	0.0	27.1	10.8	9.6	9.6	15.8	9.3	9.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.9	0.0	4.9	0.0	0.7	0.8	3.1	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.7	0.0	5.1	0.0	2.5	2.5	3.2	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.2	0.0	0.0	34.9	0.0	32.0	10.8	10.3	10.4	19.0	9.9	9.9
LnGrp LOS	C			C		C	B	B	B	B	A	A
Approach Vol, veh/h		3			474			551			710	
Approach Delay, s/veh		23.2			33.4			10.3			12.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.0		32.0		58.0		32.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		52.0		26.0		52.0		26.0				
Max Q Clear Time (g_c+I1), s		9.5		14.3		26.6		19.7				
Green Ext Time (p_c), s		3.3		0.0		4.2		1.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			17.6									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	238	80	98	228	68	95	282	86	100	361	142
Future Volume (veh/h)	102	238	80	98	228	68	95	282	86	100	361	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	104	243	82	100	233	69	97	288	88	102	368	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	171	339	114	170	348	103	171	539	457	202	572	484
Arrive On Green	0.10	0.26	0.26	0.10	0.26	0.26	0.10	0.30	0.30	0.12	0.32	0.32
Sat Flow, veh/h	1711	1285	434	1697	1320	391	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	104	0	325	100	0	302	97	288	88	102	368	145
Grp Sat Flow(s),veh/h/ln	1711	0	1718	1697	0	1711	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	6.4	0.0	18.9	6.2	0.0	17.4	6.0	14.7	4.7	6.2	19.3	7.9
Cycle Q Clear(g_c), s	6.4	0.0	18.9	6.2	0.0	17.4	6.0	14.7	4.7	6.2	19.3	7.9
Prop In Lane	1.00		0.25	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	0	453	170	0	451	171	539	457	202	572	484
V/C Ratio(X)	0.61	0.00	0.72	0.59	0.00	0.67	0.57	0.53	0.19	0.50	0.64	0.30
Avail Cap(c_a), veh/h	171	0	453	170	0	451	171	539	457	202	572	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	36.8	47.3	0.0	36.2	47.2	32.1	28.6	45.5	32.2	28.3
Incr Delay (d2), s/veh	15.0	0.0	9.4	14.1	0.0	7.7	12.9	3.8	0.9	8.7	5.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	8.9	3.3	0.0	8.1	3.1	6.8	1.8	3.1	9.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.5	0.0	46.2	61.5	0.0	43.9	60.1	35.9	29.5	54.2	37.7	29.8
LnGrp LOS	E		D	E		D	E	D	C	D	D	C
Approach Vol, veh/h		429			402			473			615	
Approach Delay, s/veh		50.1			48.3			39.7			38.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	39.0	17.0	35.0	17.0	41.0	17.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	33.0	11.0	29.0	11.0	35.0	11.0	29.0
Max Q Clear Time (g_c+I1), s	8.2	16.7	8.2	20.9	8.0	21.3	8.4	19.4
Green Ext Time (p_c), s	0.1	1.7	0.1	1.2	0.1	2.2	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	43.5
HCM 7th LOS	D

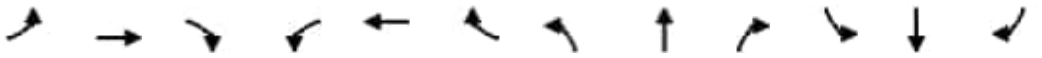
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Future Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	4	1	22	1	1	2	7	451	1	3	554	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1027	1028	556	1026	1029	451	558	0	0	452	0	0
Stage 1	562	562	-	465	465	-	-	-	-	-	-	-
Stage 2	465	466	-	560	564	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	213	234	531	213	234	608	988	-	-	1083	-	-
Stage 1	512	510	-	577	563	-	-	-	-	-	-	-
Stage 2	577	562	-	513	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	232	531	201	231	608	988	-	-	1083	-	-
Mov Cap-2 Maneuver	209	232	-	201	231	-	-	-	-	-	-	-
Stage 1	510	508	-	573	559	-	-	-	-	-	-	-
Stage 2	570	558	-	489	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.33	16.47	0.14	0.05
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	412	318	1083	-	-
HCM Lane V/C Ratio	0.007	-	-	0.065	0.013	0.003	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	14.3	16.5	8.3	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	9	22	165	1	15	4	409	133	23	520	1
Future Volume (veh/h)	3	9	22	165	1	15	4	409	133	23	520	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	3	9	22	168	1	15	4	417	136	23	531	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	59	134	274	437	2	405	455	1098	930	485	1095	2
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	59	526	1072	1396	8	1585	837	1796	1522	821	1792	3
Grp Volume(v), veh/h	34	0	0	169	0	15	4	417	136	23	0	532
Grp Sat Flow(s),veh/h/ln	1657	0	0	1405	0	1585	837	1796	1522	821	0	1796
Q Serve(g_s), s	0.0	0.0	0.0	7.5	0.0	0.6	0.2	10.6	3.4	1.3	0.0	14.7
Cycle Q Clear(g_c), s	1.4	0.0	0.0	8.9	0.0	0.6	15.0	10.6	3.4	11.9	0.0	14.7
Prop In Lane	0.09		0.65	0.99		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	467	0	0	439	0	405	455	1098	930	485	0	1097
V/C Ratio(X)	0.07	0.00	0.00	0.39	0.00	0.04	0.01	0.38	0.15	0.05	0.00	0.48
Avail Cap(c_a), veh/h	467	0	0	439	0	405	455	1098	930	485	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	0.0	28.1	0.0	25.2	13.8	8.9	7.5	11.9	0.0	9.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	2.5	0.0	0.2	0.0	1.0	0.3	0.2	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	3.3	0.0	0.3	0.0	3.9	1.1	0.3	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.8	0.0	0.0	30.7	0.0	25.3	13.8	9.9	7.8	12.1	0.0	11.2
LnGrp LOS	C			C		C	B	A	A	B		B
Approach Vol, veh/h		34			184			557			555	
Approach Delay, s/veh		25.8			30.2			9.4			11.2	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		17.0		3.4		16.7		10.9				
Green Ext Time (p_c), s		3.2		0.1		3.9		0.7				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.5									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	108	419	6	104	587
Future Vol, veh/h	6	108	419	6	104	587
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	6	109	423	6	105	593

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1229	426	0	0	429	0
Stage 1	426	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	196	628	-	-	1104	-
Stage 1	659	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	168	628	-	-	1104	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	378	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.28	0	1.29
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	549	271	-
HCM Lane V/C Ratio	-	-	0.21	0.095	-
HCM Ctrl Dly (s/v)	-	-	13.3	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.3	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	115	214	22	98	271
Future Vol, veh/h	25	115	214	22	98	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	26	121	225	23	103	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	728	237	0	0	248	0
Stage 1	237	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	373	773	-	-	1289	-
Stage 1	775	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	343	773	-	-	1289	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.56	0	2.13
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	343	773	1289	-
HCM Lane V/C Ratio	-	-	0.077	0.157	0.08	-
HCM Ctrl Dly (s/v)	-	-	16.4	10.5	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.6	0.3	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	85	142	86	80	211
Future Vol, veh/h	71	85	142	86	80	211
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	75	89	149	91	84	222

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	540	149	0	0	240	0
Stage 1	149	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	486	871	-	-	1292	-
Stage 1	854	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	454	871	-	-	1292	-
Mov Cap-2 Maneuver	454	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	619	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.82	0	2.19
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	454	871	1292	-
HCM Lane V/C Ratio	-	-	0.165	0.103	0.065	-
HCM Ctrl Dly (s/v)	-	-	14.5	9.6	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.3	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	333	363	36	33	33
Future Vol, veh/h	25	333	363	36	33	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	26	340	370	37	34	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	407	0	-	0	780	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1125	-	-	-	364	659
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	354	659
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.58	0	14.15
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	126	-	-	-	461
HCM Lane V/C Ratio	0.023	-	-	-	0.146
HCM Ctrl Dly (s/v)	8.3	0	-	-	14.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

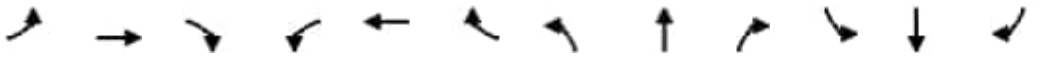
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	1	15	345	1	1
Future Vol, veh/h	87	1	15	345	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	161	2	28	639	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	856	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	694	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1386	-	328	883
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1386	-	318	883
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.32	12.77
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	467	-	-	75	-
HCM Lane V/C Ratio	0.008	-	-	0.02	-
HCM Ctrl Dly (s/v)	12.8	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	346	12	117	393	708	9	55	119	535	28	34
Future Volume (veh/h)	71	346	12	117	393	708	9	55	119	535	28	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	353	12	119	401	722	9	56	121	567	0	35
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	156	536	239	226	677	843	267	281	449	1277	0	568
Arrive On Green	0.09	0.16	0.16	0.13	0.20	0.20	0.15	0.15	0.15	0.36	0.00	0.36
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	72	353	12	119	401	722	9	56	121	567	0	35
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	4.8	11.8	0.8	7.8	12.9	24.0	0.5	3.1	7.1	14.6	0.0	1.7
Cycle Q Clear(g_c), s	4.8	11.8	0.8	7.8	12.9	24.0	0.5	3.1	7.1	14.6	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	536	239	226	677	843	267	281	449	1277	0	568
V/C Ratio(X)	0.46	0.66	0.05	0.53	0.59	0.86	0.03	0.20	0.27	0.44	0.00	0.06
Avail Cap(c_a), veh/h	156	536	239	226	677	843	267	281	449	1277	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	47.5	42.8	48.5	43.6	17.0	43.6	44.7	33.4	29.4	0.0	25.3
Incr Delay (d2), s/veh	9.6	6.2	0.4	8.5	3.8	10.9	0.2	1.6	1.5	1.1	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.4	0.3	3.8	5.7	24.4	0.2	1.6	2.9	6.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.3	53.7	43.2	57.0	47.3	27.9	43.8	46.3	34.8	30.5	0.0	25.5
LnGrp LOS	E	D	D	E	D	C	D	D	C	C		C
Approach Vol, veh/h		437			1242			186			602	
Approach Delay, s/veh		54.6			37.0			38.7			30.2	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	24.0	22.0	25.0	49.0	17.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	18.0	16.0	19.0	43.0	11.0	24.0
Max Q Clear Time (g_c+I1), s	9.1	9.8	13.8	16.6	6.8	26.0
Green Ext Time (p_c), s	0.4	0.1	1.0	2.2	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	38.6
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

14: I-65 SB on-ramp/I-65 SB off-ramp & KY-44

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	641	7	294	795	0	0	0	0	340	9	456
Future Volume (veh/h)	0	641	7	294	795	0	0	0	0	340	9	456
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	654	0	300	811	0				347	9	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		601	2369	0				332	9	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1738	45	1585
Grp Volume(v), veh/h	0	654	0	300	811	0				356	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	13.4	0.0	7.9	10.4	0.0				21.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.4	0.0	7.9	10.4	0.0				21.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	1662		601	2369	0				340	0	
V/C Ratio(X)	0.00	0.39		0.50	0.34	0.00				1.05	0.00	
Avail Cap(c_a), veh/h	0	1662		601	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.7	0.0	9.4	6.5	0.0				44.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	2.9	0.4	0.0				61.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	0.0	3.1	3.4	0.0				14.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	18.4	0.0	12.3	6.9	0.0				105.7	0.0	0.0
LnGrp LOS		B		B	A					F		
Approach Vol, veh/h		654			1111						356	
Approach Delay, s/veh		18.4			8.4						105.7	
Approach LOS		B			A						F	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		9.9	15.4		23.0		12.4					
Green Ext Time (p_c), s		0.5	5.0		0.0		6.8					

Intersection Summary	
HCM 7th Control Delay, s/veh	27.8
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

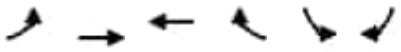
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	731	0	0	833	363	290
Future Volume (veh/h)	731	0	0	833	363	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	746	0	0	850	370	296
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.36	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	746	0	0	850	370	296
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	19.8	0.0	0.0	23.5	13.6	11.9
Cycle Q Clear(g_c), s	19.8	0.0	0.0	23.5	13.6	11.9
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.61	0.00	0.00	0.69	0.39	0.35
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	0.0	29.7	15.5	15.1
Incr Delay (d2), s/veh	2.2	0.0	0.0	3.2	1.2	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0	9.8	5.6	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.8	0.0	0.0	32.9	16.8	16.3
LnGrp LOS	C			C	B	B
Approach Vol, veh/h	746			850	666	
Approach Delay, s/veh	30.8			32.9	16.5	
Approach LOS	C			C	B	

Timer - Assigned Phs		4	6	8
Phs Duration (G+Y+Rc), s		46.0	64.0	46.0
Change Period (Y+Rc), s		6.0	6.0	6.0
Max Green Setting (Gmax), s		40.0	58.0	40.0
Max Q Clear Time (g_c+I1), s		25.5	15.6	21.8
Green Ext Time (p_c), s		5.0	2.3	4.8

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	461	469	190	294	50
Future Volume (veh/h)	37	461	469	190	294	50
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	39	480	489	198	306	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	327	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	719	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	39	480	489	198	306	52
Grp Sat Flow(s),veh/h/ln	719	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.4	11.4	11.7	4.7	8.5	1.4
Cycle Q Clear(g_c), s	14.2	11.4	11.7	4.7	8.5	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	327	861	861	730	564	502
V/C Ratio(X)	0.12	0.56	0.57	0.27	0.54	0.10
Avail Cap(c_a), veh/h	327	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	11.0	11.0	9.2	16.9	14.5
Incr Delay (d2), s/veh	0.7	2.6	2.7	0.9	3.7	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.6	3.7	1.2	3.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.8	13.6	13.7	10.1	20.6	14.9
LnGrp LOS	B	B	B	B	C	B
Approach Vol, veh/h		519	687		358	
Approach Delay, s/veh		13.8	12.7		19.8	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		16.2		10.5	13.7
Green Ext Time (p_c), s		2.3		0.7	2.9

Intersection Summary		
HCM 7th Control Delay, s/veh	14.7	
HCM 7th LOS	B	

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	350	223	23	16	11
Future Vol, veh/h	33	350	223	23	16	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	376	240	25	17	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	265	0	-	0	699	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	447	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1300	-	-	-	406	787
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1300	-	-	-	392	787
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	644	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.68	0	12.77
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	155	-	-	-	492
HCM Lane V/C Ratio	0.027	-	-	-	0.059
HCM Ctrl Dly (s/v)	7.8	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	125	4	1	100	7
Future Vol, veh/h	4	125	4	1	100	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	133	4	1	106	7

Major/Minor	Minor2		Major2	
Conflicting Flow All	220	7	0	0
Stage 1	220	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	678	1075	-	-
Stage 1	721	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1075	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.37	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1075	-	-
HCM Lane V/C Ratio	0.005	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	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	4	131	149	3	1	8
Future Vol, veh/h	4	131	149	3	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	139	159	3	1	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	308	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1347	-	-	-	684	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	682	885
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.23	0	9.25
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1347	-	-	-	857
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Ctrl Dly (s/v)	7.7	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

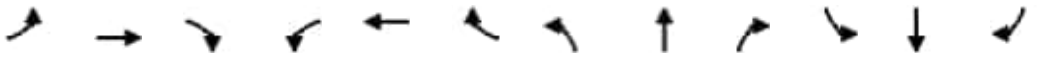
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	127	139	114	98	3
Future Vol, veh/h	4	127	139	114	98	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	137	149	123	105	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	272	0	-	0	356	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1225	-	-	-	642	829
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1225	-	-	-	640	829
Mov Cap-2 Maneuver	-	-	-	-	640	-
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	882	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.24	0	11.72
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1225	-	-	-	644
HCM Lane V/C Ratio	0.004	-	-	-	0.169
HCM Ctrl Dly (s/v)	7.9	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	406	125	21	294	4	132	32	14	5	22	253
Future Volume (veh/h)	360	406	125	21	294	4	132	32	14	5	22	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	364	410	126	21	297	4	133	32	14	5	22	256
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	735	1542	688	340	684	9	218	151	66	34	151	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3420	46	1781	1234	540	343	1510	1585
Grp Volume(v), veh/h	364	410	126	21	147	154	133	0	46	27	0	256
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1773	1781	0	1773	1853	0	1585
Q Serve(g_s), s	11.5	6.8	4.5	0.8	6.8	6.9	6.4	0.0	2.1	1.2	0.0	9.0
Cycle Q Clear(g_c), s	11.5	6.8	4.5	0.8	6.8	6.9	6.4	0.0	2.1	1.2	0.0	9.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.30	0.19		1.00
Lane Grp Cap(c), veh/h	735	1542	688	340	338	355	218	0	217	185	0	652
V/C Ratio(X)	0.50	0.27	0.18	0.06	0.43	0.43	0.61	0.00	0.21	0.15	0.00	0.39
Avail Cap(c_a), veh/h	735	1542	688	340	338	355	218	0	217	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	15.2	14.6	25.3	31.5	31.5	37.5	0.0	35.6	37.0	0.0	18.6
Incr Delay (d2), s/veh	2.4	0.4	0.6	0.3	4.0	3.8	12.1	0.0	2.2	1.6	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.3	1.4	0.3	2.9	3.1	3.4	0.0	1.0	0.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.5	15.6	15.1	25.6	35.5	35.4	49.6	0.0	37.8	38.6	0.0	20.4
LnGrp LOS	B	B	B	C	D	D	D		D	D		C
Approach Vol, veh/h		900			322			179			283	
Approach Delay, s/veh		15.5			34.8			46.6			22.1	
Approach LOS		B			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.0	11.0	47.0	15.0	34.0	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	5.0	41.0	9.0	28.0	18.0
Max Q Clear Time (g_c+I1), s	8.4	2.8	8.8	11.0	13.5	8.9
Green Ext Time (p_c), s	0.1	0.0	2.8	0.0	0.9	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	23.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	315	187	1	1	1
Future Vol, veh/h	1	315	187	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	1	335	199	1	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	200	0	-	0	537	199
Stage 1	-	-	-	-	199	-
Stage 2	-	-	-	-	337	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1337	-	-	-	505	842
Stage 1	-	-	-	-	834	-
Stage 2	-	-	-	-	723	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1337	-	-	-	504	842
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	723	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.02	0	10.73
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	6	-	-	-	631
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Ctrl Dly (s/v)	7.7	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
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	19	760	514	11	10	11
Future Vol, veh/h	19	760	514	11	10	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	19	768	519	11	10	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	530	0	-	0	1331	525
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	806	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	983	-	-	-	170	553
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	983	-	-	-	165	553
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	439	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	20.05
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	44	-	-	-	260
HCM Lane V/C Ratio	0.02	-	-	-	0.081
HCM Ctrl Dly (s/v)	8.7	0	-	-	20
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	13	24	7	11	7	40	126	8	9	120	36
Future Vol, veh/h	31	13	24	7	11	7	40	126	8	9	120	36
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	13	25	7	11	7	41	130	8	9	124	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	19	0	0	38	0	0	177	123	26	172	131	15
Stage 1	-	-	-	-	-	-	90	90	-	29	29	-
Stage 2	-	-	-	-	-	-	88	33	-	142	102	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1598	-	-	1572	-	-	785	768	1050	792	759	1065
Stage 1	-	-	-	-	-	-	918	821	-	987	871	-
Stage 2	-	-	-	-	-	-	920	868	-	861	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1598	-	-	1572	-	-	618	748	1050	636	740	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	618	748	-	636	740	-
Stage 1	-	-	-	-	-	-	899	804	-	983	867	-
Stage 2	-	-	-	-	-	-	758	864	-	701	794	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.33	2.04	11.62	10.85
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	723	726	-	-	468	-	-	785
HCM Lane V/C Ratio	0.248	0.02	-	-	0.005	-	-	0.217
HCM Ctrl Dly (s/v)	11.6	7.3	0	-	7.3	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	0.8

25: Adam Shepherd & Mall Entrance/Conestoga

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	20	338	20	135	20	293	433	107	233	20
Future Volume (veh/h)	20	20	20	338	20	135	20	293	433	107	233	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	21	21	352	21	0	21	305	0	111	243	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		362	561		266	994	85
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	1115	1870	1585	1074	3312	284
Grp Volume(v), veh/h	42	0	21	352	21	0	21	305	0	111	129	135
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	1115	1870	1585	1074	1777	1819
Q Serve(g_s), s	1.5	0.0	0.8	14.8	0.7	0.0	1.2	10.9	0.0	7.7	4.4	4.5
Cycle Q Clear(g_c), s	1.5	0.0	0.8	14.8	0.7	0.0	5.6	10.9	0.0	18.6	4.4	4.5
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	411	0	357	445	468		362	561		266	533	546
V/C Ratio(X)	0.10	0.00	0.06	0.79	0.04		0.06	0.54		0.42	0.24	0.25
Avail Cap(c_a), veh/h	411	0	357	445	468		362	561		266	533	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	24.3	28.0	22.8	0.0	23.3	23.4	0.0	31.2	21.1	21.2
Incr Delay (d2), s/veh	0.5	0.0	0.3	13.4	0.2	0.0	0.3	3.8	0.0	4.8	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	7.4	0.3	0.0	0.3	5.1	0.0	2.3	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.1	0.0	24.7	41.4	22.9	0.0	23.6	27.2	0.0	36.0	22.2	22.2
LnGrp LOS	C		C	D	C		C	C		D	C	C
Approach Vol, veh/h		63			373			326			375	
Approach Delay, s/veh		24.9			40.4			26.9			26.3	
Approach LOS		C			D			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.0		30.0		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		18.0		24.0		20.0				
Max Q Clear Time (g_c+I1), s		12.9		3.5		20.6		16.8				
Green Ext Time (p_c), s		1.3		0.2		0.6		0.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	31.0
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	481	1	1	423
Future Vol, veh/h	1	1	481	1	1	423
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	547	1	1	481

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	790	274	0	0	548	0
Stage 1	547	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	315	706	-	-	964	-
Stage 1	527	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	315	706	-	-	964	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.29	0	0.02
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	315	706	964	-
HCM Lane V/C Ratio	-	-	0.004	0.002	0.001	-
HCM Ctrl Dly (s/v)	-	-	16.5	10.1	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Future Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	539	1	1	1	79	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	2	0	0	8	547	2	278	279	272
Stage 1	-	-	-	-	-	-	4	4	-	274	274	-
Stage 2	-	-	-	-	-	-	4	543	-	4	5	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	998	-	-	1581	-	-	1011	444	1083	674	629	767
Stage 1	-	-	-	-	-	-	1018	892	-	732	683	-
Stage 2	-	-	-	-	-	-	1018	519	-	1018	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1581	-	-	1005	443	1083	670	627	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	1005	443	-	670	627	-
Stage 1	-	-	-	-	-	-	1017	891	-	731	682	-
Stage 2	-	-	-	-	-	-	1014	518	-	1015	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.87	0.02	10.04	11.11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	718	545	-	-	3	-	-	670
HCM Lane V/C Ratio	0.005	0.001	-	-	0.001	-	-	0.121
HCM Ctrl Dly (s/v)	10	8.6	0	-	7.3	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

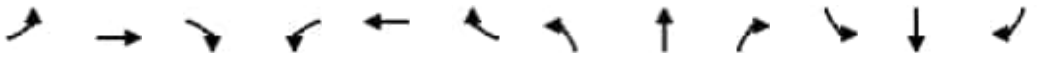
Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	74	400	15	140	249
Future Vol, veh/h	10	74	400	15	140	249
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	11	84	455	17	159	283

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	923	236	0	0	472	0
Stage 1	463	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	269	766	-	-	1032	-
Stage 1	600	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	227	766	-	-	1032	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	510	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.63	0	3.28
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	227	766	1032	-
HCM Lane V/C Ratio	-	-	0.05	0.11	0.154	-
HCM Ctrl Dly (s/v)	-	-	21.7	10.3	9.1	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	87	1	110	2	290	97	263	261	1
Future Volume (veh/h)	1	1	1	87	1	110	2	290	97	263	261	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	96	1	121	2	319	107	289	287	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	140	138	113	403	3	367	709	1597	526	615	2209	8
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	372	593	482	1415	13	1574	1048	2522	831	923	3488	12
Grp Volume(v), veh/h	3	0	0	96	0	122	2	214	212	289	140	148
Grp Sat Flow(s),veh/h/ln	1447	0	0	1415	0	1587	1048	1706	1647	923	1706	1794
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	5.7	0.1	4.7	4.9	17.3	3.0	3.0
Cycle Q Clear(g_c), s	5.7	0.0	0.0	5.5	0.0	5.7	3.0	4.7	4.9	22.1	3.0	3.0
Prop In Lane	0.33		0.33	1.00		0.99	1.00		0.50	1.00		0.01
Lane Grp Cap(c), veh/h	391	0	0	403	0	370	709	1081	1043	615	1081	1136
V/C Ratio(X)	0.01	0.00	0.00	0.24	0.00	0.33	0.00	0.20	0.20	0.47	0.13	0.13
Avail Cap(c_a), veh/h	391	0	0	403	0	370	709	1081	1043	615	1081	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	28.5	0.0	28.7	7.2	6.9	6.9	11.6	6.6	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	2.4	0.0	0.4	0.4	2.6	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	3.3	0.0	4.3	0.0	2.7	2.7	6.0	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.6	0.0	0.0	29.9	0.0	31.0	7.2	7.3	7.4	14.2	6.8	6.8
LnGrp LOS	C			C		C	A	A	A	B	A	A
Approach Vol, veh/h		3			218			428			577	
Approach Delay, s/veh		26.6			30.5			7.4			10.5	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		27.0		63.0		27.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		57.0		21.0		57.0		21.0				
Max Q Clear Time (g_c+I1), s		6.9		7.7		24.1		7.7				
Green Ext Time (p_c), s		2.5		0.0		3.3		0.7				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.0									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	537	59	24	119	41	31	166	130	139	145	47
Future Volume (veh/h)	79	537	59	24	119	41	31	166	130	139	145	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	92	624	69	28	138	48	36	193	151	162	169	55
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	187	693	77	77	471	164	93	327	277	202	441	374
Arrive On Green	0.11	0.44	0.44	0.05	0.37	0.37	0.05	0.18	0.18	0.12	0.25	0.25
Sat Flow, veh/h	1711	1589	176	1697	1263	439	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	92	0	693	28	0	186	36	193	151	162	169	55
Grp Sat Flow(s),veh/h/ln	1711	0	1765	1697	0	1702	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	5.6	0.0	40.1	1.8	0.0	8.5	2.2	10.8	9.9	10.1	8.6	3.1
Cycle Q Clear(g_c), s	5.6	0.0	40.1	1.8	0.0	8.5	2.2	10.8	9.9	10.1	8.6	3.1
Prop In Lane	1.00		0.10	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
V/C Ratio(X)	0.49	0.00	0.90	0.36	0.00	0.29	0.39	0.59	0.55	0.80	0.38	0.15
Avail Cap(c_a), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	28.8	51.0	0.0	24.3	50.2	41.3	40.9	47.2	34.6	32.5
Incr Delay (d2), s/veh	9.0	0.0	15.6	12.7	0.0	1.2	11.6	7.6	7.5	27.5	2.5	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	0.0	26.7	1.8	0.0	6.4	2.2	9.2	7.6	9.8	7.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	0.0	44.4	63.7	0.0	25.5	61.8	48.9	48.4	74.7	37.1	33.3
LnGrp LOS	E		D	E		C	E	D	D	E	D	C
Approach Vol, veh/h		785			214			380			386	
Approach Delay, s/veh		45.6			30.5			49.9			52.3	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	26.0	11.0	54.0	12.0	33.0	18.0	47.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	20.0	5.0	48.0	6.0	27.0	12.0	41.0
Max Q Clear Time (g_c+I1), s	12.1	12.8	3.8	42.1	4.2	10.6	7.6	10.5
Green Ext Time (p_c), s	0.0	0.9	0.0	2.3	0.0	0.9	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	46.2
HCM 7th LOS	D

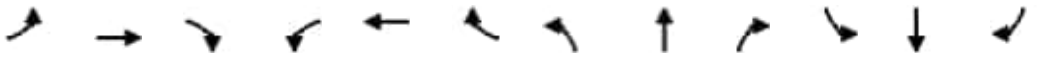
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Future Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	1	1	5	1	1	1	2	408	17	25	254	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	718	735	255	726	727	417	255	0	0	425	0	0
Stage 1	305	305	-	421	421	-	-	-	-	-	-	-
Stage 2	413	430	-	305	306	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	344	347	784	340	351	636	1281	-	-	1108	-	-
Stage 1	704	662	-	610	589	-	-	-	-	-	-	-
Stage 2	616	584	-	704	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	334	338	784	328	342	636	1281	-	-	1108	-	-
Mov Cap-2 Maneuver	334	338	-	328	342	-	-	-	-	-	-	-
Stage 1	688	647	-	609	588	-	-	-	-	-	-	-
Stage 2	613	582	-	683	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.72	14.13	0.04	0.75
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	543	398	1108	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.009	0.023	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	11.7	14.1	8.3	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	1	17	1	1	1	282	316	12	206	1
Future Volume (veh/h)	1	2	1	17	1	1	1	282	316	12	206	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	2	1	18	1	1	1	303	340	13	222	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	129	245	108	423	21	405	698	1098	930	482	1092	5
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	311	959	423	1351	84	1585	1112	1796	1522	756	1787	8
Grp Volume(v), veh/h	4	0	0	19	0	1	1	303	340	13	0	223
Grp Sat Flow(s),veh/h/ln	1694	0	0	1435	0	1585	1112	1796	1522	756	0	1795
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	7.1	10.1	0.7	0.0	5.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.9	0.0	0.0	5.0	7.1	10.1	7.8	0.0	5.0
Prop In Lane	0.25		0.25	0.95		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	483	0	0	445	0	405	698	1098	930	482	0	1097
V/C Ratio(X)	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.28	0.37	0.03	0.00	0.20
Avail Cap(c_a), veh/h	483	0	0	445	0	405	698	1098	930	482	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	0.0	0.0	25.2	0.0	25.0	8.9	8.2	8.8	10.0	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.6	1.1	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.6	0.0	0.0	0.0	4.7	5.7	0.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.0	0.0	0.0	25.4	0.0	25.0	8.9	8.8	9.9	10.1	0.0	8.2
LnGrp LOS	C			C		C	A	A	A	B		A
Approach Vol, veh/h		4			20			644			236	
Approach Delay, s/veh		25.0			25.4			9.4			8.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		12.1		2.2		9.8		2.9				
Green Ext Time (p_c), s		3.2		0.0		1.4		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			9.5									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	22	567	4	33	169
Future Vol, veh/h	1	22	567	4	33	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	1	23	603	4	35	180

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	855	605	0	0	607	0
Stage 1	605	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	328	497	-	-	947	-
Stage 1	545	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	315	497	-	-	947	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.81	0	1.46
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	485	294	-
HCM Lane V/C Ratio	-	-	0.05	0.037	-
HCM Ctrl Dly (s/v)	-	-	12.8	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	35	137	24	70	134
Future Vol, veh/h	13	35	137	24	70	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	15	39	154	27	79	151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	475	167	0	0	181	0
Stage 1	167	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	527	846	-	-	1365	-
Stage 1	834	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	497	846	-	-	1365	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	678	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.28	0	2.68
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	497	846	1365	-
HCM Lane V/C Ratio	-	-	0.029	0.046	0.058	-
HCM Ctrl Dly (s/v)	-	-	12.5	9.5	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.2	-

Intersection	
Int Delay, s/veh	5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	27	101	109	68	81
Future Vol, veh/h	129	27	101	109	68	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	172	36	135	145	91	108

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	424	135	0	0	280	0
Stage 1	135	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	568	888	-	-	1249	-
Stage 1	868	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	527	888	-	-	1249	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	868	-	-	-	-	-
Stage 2	684	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.09	0	3.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	527	888	1249	-
HCM Lane V/C Ratio	-	-	0.326	0.041	0.073	-
HCM Ctrl Dly (s/v)	-	-	15.1	9.2	8.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1.4	0.1	0.2	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	505	115	33	33	8
Future Vol, veh/h	25	505	115	33	33	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	30	601	137	39	39	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	176	0	-	0	817	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	661	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1370	-	-	-	346	889
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1370	-	-	-	335	889
Mov Cap-2 Maneuver	-	-	-	-	335	-
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.36	0	15.83
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	85	-	-	-	381
HCM Lane V/C Ratio	0.022	-	-	-	0.128
HCM Ctrl Dly (s/v)	7.7	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

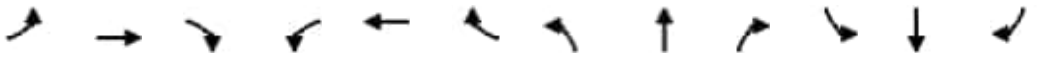
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	1	6	443	25	1
Future Vol, veh/h	230	1	6	443	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	50	50	50	50
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	460	2	12	886	50	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	462	0	1371	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1073	-	161	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1073	-	158	600
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.11	37.34
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	162	-	-	24	-
HCM Lane V/C Ratio	0.321	-	-	0.011	-
HCM Ctrl Dly (s/v)	37.3	-	-	8.4	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	868	7	49	235	391	10	16	321	453	9	16
Future Volume (veh/h)	34	868	7	49	235	391	10	16	321	453	9	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	964	8	54	261	434	11	18	357	510	0	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	99	1128	503	184	1297	881	282	296	423	713	0	317
Arrive On Green	0.06	0.33	0.33	0.11	0.38	0.38	0.16	0.16	0.16	0.20	0.00	0.20
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	38	964	8	54	261	434	11	18	357	510	0	18
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.6	31.9	0.4	3.5	6.2	20.2	0.6	1.0	19.0	16.0	0.0	1.1
Cycle Q Clear(g_c), s	2.6	31.9	0.4	3.5	6.2	20.2	0.6	1.0	19.0	16.0	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	1128	503	184	1297	881	282	296	423	713	0	317
V/C Ratio(X)	0.38	0.85	0.02	0.29	0.20	0.49	0.04	0.06	0.84	0.72	0.00	0.06
Avail Cap(c_a), veh/h	99	1128	503	184	1297	881	282	296	423	713	0	317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	37.3	26.8	49.3	24.7	14.6	42.8	42.9	41.6	44.8	0.0	38.8
Incr Delay (d2), s/veh	10.9	8.3	0.1	4.0	0.3	2.0	0.3	0.4	18.3	6.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	20.3	0.3	3.0	4.6	16.6	0.5	0.9	17.7	12.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.3	45.6	26.9	53.3	25.1	16.6	43.0	43.3	60.0	50.9	0.0	39.2
LnGrp LOS	E	D	C	D	C	B	D	D	E	D		D
Approach Vol, veh/h		1010			749			386			528	
Approach Delay, s/veh		46.2			22.2			58.7			50.5	
Approach LOS		D			C			E			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	19.0	46.0		30.0	13.0	52.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		19.0	13.0	40.0		24.0	7.0	46.0				
Max Q Clear Time (g_c+I1), s		21.0	5.5	33.9		18.0	4.6	22.2				
Green Ext Time (p_c), s		0.0	0.0	3.2		1.1	0.0	3.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			42.1									
HCM 7th LOS			D									

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1503	13	241	415	0	0	0	0	180	4	251
Future Volume (veh/h)	0	1503	13	241	415	0	0	0	0	180	4	251
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1599	0	256	441	0				191	4	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		338	2369	0				333	7	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1746	37	1585
Grp Volume(v), veh/h	0	1599	0	256	441	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	50.1	0.0	10.7	4.9	0.0				10.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	50.1	0.0	10.7	4.9	0.0				10.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1662		338	2369	0				340	0	
V/C Ratio(X)	0.00	0.96		0.76	0.19	0.00				0.57	0.00	
Avail Cap(c_a), veh/h	0	1662		338	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	27.0	0.0	31.2	5.7	0.0				40.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	14.8	0.0	14.6	0.2	0.0				6.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	30.0	0.0	8.1	2.9	0.0				9.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	41.8	0.0	45.8	5.9	0.0				47.3	0.0	0.0
LnGrp LOS		D		D	A					D		
Approach Vol, veh/h		1599			697						195	
Approach Delay, s/veh		41.8			20.5						47.3	
Approach LOS		D			C						D	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		12.7	52.1		12.9		6.9					
Green Ext Time (p_c), s		0.3	1.6		0.6		3.2					

Intersection Summary	
HCM 7th Control Delay, s/veh	36.3
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

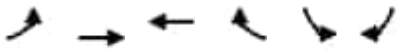
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	953	0	0	428	295	575
Future Volume (veh/h)	953	0	0	428	295	575
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	1095	0	0	492	339	661
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.48	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	1095	0	0	492	339	661
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	32.3	0.0	0.0	11.9	12.2	37.2
Cycle Q Clear(g_c), s	32.3	0.0	0.0	11.9	12.2	37.2
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.89	0.00	0.00	0.40	0.36	0.79
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.1	15.2	21.1
Incr Delay (d2), s/veh	9.8	0.0	0.0	1.0	1.1	7.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	0.0	0.0	8.5	8.7	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.2	0.0	0.0	27.0	16.3	28.6
LnGrp LOS	D			C	B	C
Approach Vol, veh/h	1095			492	1000	
Approach Delay, s/veh	36.2			27.0	24.4	
Approach LOS	D			C	C	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		46.0		64.0	46.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		40.0		58.0	40.0
Max Q Clear Time (g_c+I1), s		13.9		39.2	34.3
Green Ext Time (p_c), s		3.3		3.7	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	29.9
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	187	500	419	115	30
Future Volume (veh/h)	21	187	500	419	115	30
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	23	201	538	451	124	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	261	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	542	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	23	201	538	451	124	32
Grp Sat Flow(s),veh/h/ln	542	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.0	3.9	13.4	13.2	3.1	0.8
Cycle Q Clear(g_c), s	15.4	3.9	13.4	13.2	3.1	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	261	861	861	730	564	502
V/C Ratio(X)	0.09	0.23	0.62	0.62	0.22	0.06
Avail Cap(c_a), veh/h	261	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	9.0	11.5	11.4	15.1	14.3
Incr Delay (d2), s/veh	0.7	0.6	3.4	3.9	0.9	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	2.1	7.8	6.7	2.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.8	9.7	14.9	15.3	16.0	14.5
LnGrp LOS	B	A	B	B	B	B
Approach Vol, veh/h		224	989		156	
Approach Delay, s/veh		10.5	15.1		15.7	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		17.4		5.1	15.4
Green Ext Time (p_c), s		0.8		0.3	3.9

Intersection Summary		
HCM 7th Control Delay, s/veh	14.4	
HCM 7th LOS	B	

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	136	592	6	10	18
Future Vol, veh/h	2	136	592	6	10	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	145	630	6	11	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	636	0	-	0	782	633
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	947	-	-	-	363	480
Stage 1	-	-	-	-	529	-
Stage 2	-	-	-	-	879	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	947	-	-	-	362	480
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	879	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.13	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	26	-	-	-	430
HCM Lane V/C Ratio	0.002	-	-	-	0.069
HCM Ctrl Dly (s/v)	8.8	0	-	-	14
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	29	6	3	32	2
Future Vol, veh/h	1	29	6	3	32	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	36	7	4	40	2

Major/Minor	Minor2		Major2	
Conflicting Flow All	81	2	0	0
Stage 1	81	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	809	1082	-	-
Stage 1	827	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1082	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.36	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1082	-	-
HCM Lane V/C Ratio	0.01	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	117	56	3	1	1
Future Vol, veh/h	3	117	56	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	3	129	62	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	198	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1464	-	-	-	790	1001
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	891	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1464	-	-	-	789	1001
Mov Cap-2 Maneuver	-	-	-	-	789	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	9.09
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1464	-	-	-	882
HCM Lane V/C Ratio	0.002	-	-	-	0.002
HCM Ctrl Dly (s/v)	7.5	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

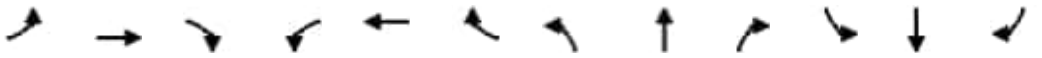
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	111	52	35	36	1
Future Vol, veh/h	4	111	52	35	36	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	123	58	39	40	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	97	0	-	0	209	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1425	-	-	-	779	984
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1425	-	-	-	776	984
Mov Cap-2 Maneuver	-	-	-	-	776	-
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	894	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.26	0	9.87
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1425	-	-	-	781
HCM Lane V/C Ratio	0.003	-	-	-	0.053
HCM Ctrl Dly (s/v)	7.5	-	-	-	9.9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	128	216	7	412	3	57	25	5	1	4	13
Future Volume (veh/h)	302	128	216	7	412	3	57	25	5	1	4	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	387	164	277	9	528	4	73	32	6	1	5	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	654	1542	688	355	689	5	218	187	35	31	155	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3443	26	1781	1532	287	309	1546	1585
Grp Volume(v), veh/h	387	164	277	9	259	273	73	0	38	6	0	17
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1777	1781	0	1819	1855	0	1585
Q Serve(g_s), s	12.4	2.5	11.0	0.4	13.0	13.0	3.4	0.0	1.7	0.3	0.0	0.6
Cycle Q Clear(g_c), s	12.4	2.5	11.0	0.4	13.0	13.0	3.4	0.0	1.7	0.3	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.16	0.17		1.00
Lane Grp Cap(c), veh/h	654	1542	688	355	338	355	218	0	222	185	0	652
V/C Ratio(X)	0.59	0.11	0.40	0.03	0.77	0.77	0.34	0.00	0.17	0.03	0.00	0.03
Avail Cap(c_a), veh/h	654	1542	688	355	338	355	218	0	222	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	14.0	16.3	25.1	34.0	34.0	36.2	0.0	35.4	36.6	0.0	15.8
Incr Delay (d2), s/veh	3.9	0.1	1.8	0.1	15.2	14.6	4.1	0.0	1.7	0.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	1.5	6.4	0.3	10.5	10.8	3.0	0.0	1.5	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.5	14.2	18.1	25.2	49.3	48.6	40.3	0.0	37.1	36.9	0.0	15.8
LnGrp LOS	B	B	B	C	D	D	D		D	D		B
Approach Vol, veh/h		828			541			111			23	
Approach Delay, s/veh		17.5			48.6			39.2			21.3	
Approach LOS		B			D			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.0	11.0	47.0	15.0	34.0	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	5.0	41.0	9.0	28.0	18.0
Max Q Clear Time (g_c+I1), s	5.4	2.4	13.0	2.6	14.4	15.0
Green Ext Time (p_c), s	0.1	0.0	1.8	0.0	0.9	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	30.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	60	610	3	1	1
Future Vol, veh/h	2	60	610	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	2	65	663	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	666	0	-	0	734	665
Stage 1	-	-	-	-	665	-
Stage 2	-	-	-	-	70	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	895	-	-	-	387	460
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	953	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	895	-	-	-	386	460
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.29	0	13.62
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	58	-	-	-	420
HCM Lane V/C Ratio	0.002	-	-	-	0.005
HCM Ctrl Dly (s/v)	9	0	-	-	13.6
HCM Lane LOS	A	A	-	-	B
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	8	418	868	6	5	21
Future Vol, veh/h	8	418	868	6	5	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	8	440	914	6	5	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	920	0	-	0	1374	917
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	457	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	698	-	-	-	160	330
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	638	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	698	-	-	-	158	330
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	638	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	19.67
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	34	-	-	-	273
HCM Lane V/C Ratio	0.012	-	-	-	0.1
HCM Ctrl Dly (s/v)	10.2	0	-	-	19.7
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

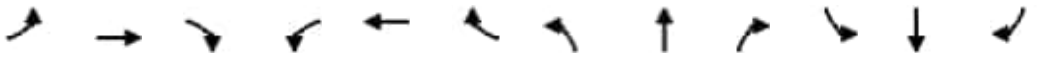
Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	6	37	8	3	4	12	30	1	12	153	9
Future Vol, veh/h	20	6	37	8	3	4	12	30	1	12	153	9
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	7	42	9	3	5	14	34	1	14	174	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	8	0	0	49	0	0	182	99	28	93	118	6
Stage 1	-	-	-	-	-	-	73	73	-	24	24	-
Stage 2	-	-	-	-	-	-	109	26	-	69	94	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1612	-	-	1558	-	-	780	791	1047	890	772	1077
Stage 1	-	-	-	-	-	-	936	834	-	994	875	-
Stage 2	-	-	-	-	-	-	897	873	-	941	817	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1612	-	-	1558	-	-	585	775	1047	834	756	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	585	775	-	834	756	-
Stage 1	-	-	-	-	-	-	923	822	-	988	870	-
Stage 2	-	-	-	-	-	-	707	868	-	888	805	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.31	3.91	10.41	11.25
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	488	-	-	862	-	-	773
HCM Lane V/C Ratio	0.068	0.014	-	-	0.006	-	-	0.256
HCM Ctrl Dly (s/v)	10.4	7.3	0	-	7.3	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	8	8	190	8	33	8	218	218	38	393	8
Future Volume (veh/h)	8	8	8	190	8	33	8	218	218	38	393	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	9	9	221	9	0	9	253	0	44	457	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		273	561		305	1069	21
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	927	1870	1585	1127	3564	70
Grp Volume(v), veh/h	18	0	9	221	9	0	9	253	0	44	228	238
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	927	1870	1585	1127	1777	1858
Q Serve(g_s), s	0.6	0.0	0.4	8.5	0.3	0.0	0.6	8.8	0.0	2.6	8.2	8.2
Cycle Q Clear(g_c), s	0.6	0.0	0.4	8.5	0.3	0.0	8.9	8.8	0.0	11.4	8.2	8.2
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	411	0	357	445	468		273	561		305	533	557
V/C Ratio(X)	0.04	0.00	0.03	0.50	0.02		0.03	0.45		0.14	0.43	0.43
Avail Cap(c_a), veh/h	411	0	357	445	468		273	561		305	533	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	24.2	25.7	22.6	0.0	26.0	22.7	0.0	27.3	22.5	22.5
Incr Delay (d2), s/veh	0.2	0.0	0.1	3.9	0.1	0.0	0.2	2.6	0.0	1.0	2.5	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.3	6.8	0.2	0.0	0.3	7.3	0.0	1.4	6.5	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.5	0.0	24.3	29.6	22.7	0.0	26.3	25.3	0.0	28.3	25.0	24.9
LnGrp LOS	C		C	C	C		C	C		C	C	C
Approach Vol, veh/h		27			230			262			510	
Approach Delay, s/veh		24.4			29.3			25.3			25.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.0		30.0		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		18.0		24.0		20.0				
Max Q Clear Time (g_c+I1), s		10.9		2.6		13.4		10.5				
Green Ext Time (p_c), s		1.1		0.0		2.1		0.4				

Intersection Summary												
HCM 7th Control Delay, s/veh			26.1									
HCM 7th LOS			C									

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	293	322	351	281	300	339
Future Volume (veh/h)	293	322	351	281	300	339
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	326	358	390	312	333	377
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	456	405	1156	979	451	1156
Arrive On Green	0.27	0.27	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1682	1497	1767	1497	703	1767
Grp Volume(v), veh/h	326	358	390	312	333	377
Grp Sat Flow(s),veh/h/ln	1682	1497	1767	1497	703	1767
Q Serve(g_s), s	21.0	27.5	11.8	10.9	47.9	11.3
Cycle Q Clear(g_c), s	21.0	27.5	11.8	10.9	59.6	11.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	456	405	1156	979	451	1156
V/C Ratio(X)	0.72	0.88	0.34	0.32	0.74	0.33
Avail Cap(c_a), veh/h	456	405	1156	979	451	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	41.9	9.2	9.1	22.4	9.1
Incr Delay (d2), s/veh	9.3	23.2	0.8	0.9	10.3	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.4	17.9	7.2	5.8	12.8	6.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	48.8	65.2	10.0	9.9	32.8	9.9
LnGrp LOS	D	E	B	A	C	A
Approach Vol, veh/h	684		702			710
Approach Delay, s/veh	57.4		10.0			20.6
Approach LOS	E		A			C

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	83.0			83.0	37.0
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	78.5			78.5	32.5
Max Q Clear Time (g_c+I1), s	13.8			61.6	29.5
Green Ext Time (p_c), s	3.3			4.4	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	29.0
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	274	221	221	274	221	233	190	233	233	190	233
Future Volume (veh/h)	221	274	221	221	274	221	233	190	233	233	190	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	246	304	246	246	304	246	259	211	259	259	211	259
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	328	397	337	328	397	337	345	344	292	345	344	292
Arrive On Green	0.19	0.22	0.22	0.19	0.22	0.22	0.20	0.19	0.19	0.20	0.19	0.19
Sat Flow, veh/h	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Grp Volume(v), veh/h	246	304	246	246	304	246	259	211	259	259	211	259
Grp Sat Flow(s),veh/h/ln	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Q Serve(g_s), s	13.8	16.1	15.2	13.8	16.1	15.2	14.5	10.9	16.8	14.5	10.9	16.8
Cycle Q Clear(g_c), s	13.8	16.1	15.2	13.8	16.1	15.2	14.5	10.9	16.8	14.5	10.9	16.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	397	337	328	397	337	345	344	292	345	344	292
V/C Ratio(X)	0.75	0.76	0.73	0.75	0.76	0.73	0.75	0.61	0.89	0.75	0.61	0.89
Avail Cap(c_a), veh/h	328	397	337	328	397	337	345	344	292	345	344	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	36.3	35.9	37.9	36.3	35.9	37.4	36.8	39.2	37.4	36.8	39.2
Incr Delay (d2), s/veh	14.6	13.1	13.1	14.6	13.1	13.1	14.0	7.9	30.3	14.0	7.9	30.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.8	12.5	10.5	10.8	12.5	10.5	11.2	8.9	12.9	11.2	8.9	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.5	49.4	49.0	52.5	49.4	49.0	51.3	44.7	69.5	51.3	44.7	69.5
LnGrp LOS	D	D	D	D	D	D	D	D	E	D	D	E
Approach Vol, veh/h		796			796			729			729	
Approach Delay, s/veh		50.2			50.2			55.9			55.9	
Approach LOS		D			D			E			E	

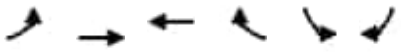
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	24.0	24.0	27.0	25.0	24.0	24.0	27.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	19.5	19.5	22.5	20.5	19.5	19.5	22.5
Max Q Clear Time (g_c+I1), s	16.5	18.8	15.8	18.1	16.5	18.8	15.8	18.1
Green Ext Time (p_c), s	0.3	0.2	0.2	1.0	0.3	0.2	0.2	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	52.9
HCM 7th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1	22	23	1	22	11	622	12	11	622	12
Future Volume (veh/h)	23	1	22	23	1	22	11	622	12	11	622	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	26	1	24	26	1	24	12	691	13	12	691	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	181	21	131	181	21	131	44	1217	23	44	1217	23
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	648	110	674	648	110	674	11	1702	32	11	1702	32
Grp Volume(v), veh/h	51	0	0	51	0	0	716	0	0	716	0	0
Grp Sat Flow(s),veh/h/ln	1432	0	0	1432	0	0	1744	0	0	1744	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	2.6	0.0	0.0	19.5	0.0	0.0	19.5	0.0	0.0
Prop In Lane	0.51		0.47	0.51		0.47	0.02		0.02	0.02		0.02
Lane Grp Cap(c), veh/h	334	0	0	334	0	0	1284	0	0	1284	0	0
V/C Ratio(X)	0.15	0.00	0.00	0.15	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00
Avail Cap(c_a), veh/h	334	0	0	334	0	0	1284	0	0	1284	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.4	0.0	0.0	33.4	0.0	0.0	6.8	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	1.0	0.0	0.0	1.8	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	0.0	2.0	0.0	0.0	10.9	0.0	0.0	10.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.4	0.0	0.0	34.4	0.0	0.0	8.6	0.0	0.0	8.6	0.0	0.0
LnGrp LOS	C			C			A			A		
Approach Vol, veh/h		51			51			716			716	
Approach Delay, s/veh		34.4			34.4			8.6			8.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	76.0	24.0	76.0	24.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	71.5	19.5	71.5	19.5
Max Q Clear Time (g_c+I1), s	21.5	4.6	21.5	4.6
Green Ext Time (p_c), s	6.4	0.1	6.4	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	10.3
HCM 7th LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	391	230	269	276	233	388
Future Volume (veh/h)	391	230	269	276	233	388
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	434	256	299	307	259	431
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	614	1175	450	382	412	913
Arrive On Green	0.37	0.67	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1682	1767	1767	1497	1682	1497
Grp Volume(v), veh/h	434	256	299	307	259	431
Grp Sat Flow(s),veh/h/ln	1682	1767	1767	1497	1682	1497
Q Serve(g_s), s	22.1	5.7	15.2	19.2	13.7	15.8
Cycle Q Clear(g_c), s	22.1	5.7	15.2	19.2	13.7	15.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	614	1175	450	382	412	913
V/C Ratio(X)	0.71	0.22	0.66	0.80	0.63	0.47
Avail Cap(c_a), veh/h	614	1175	450	382	412	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	6.6	33.4	34.9	33.7	10.7
Incr Delay (d2), s/veh	6.7	0.4	7.5	16.3	7.1	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.1	3.1	11.3	12.9	10.5	23.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	33.9	7.0	40.9	51.2	40.8	12.4
LnGrp LOS	C	A	D	D	D	B
Approach Vol, veh/h		690	606		690	
Approach Delay, s/veh		23.9	46.1		23.1	
Approach LOS		C	D		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	71.0	29.0	41.0	30.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	66.5	24.5	36.5	25.5
Max Q Clear Time (g_c+I1), s	7.7	17.8	24.1	21.2
Green Ext Time (p_c), s	1.3	1.5	1.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	30.4
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	667	2	1	750
Future Vol, veh/h	2	2	667	2	1	750
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	2	2	717	2	1	806

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1124	360	0	0	719	0
Stage 1	718	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	190	620	-	-	827	-
Stage 1	428	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	190	620	-	-	827	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	428	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	17.5	0	0.01
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	190	620	827	-
HCM Lane V/C Ratio	-	-	0.011	0.003	0.001	-
HCM Ctrl Dly (s/v)	-	-	24.2	10.8	9.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Future Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	180	1	1	1	221	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	2	0	0	8	189	2	98	99	92
Stage 1	-	-	-	-	-	-	4	4	-	94	94	-
Stage 2	-	-	-	-	-	-	4	185	-	4	4	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1582	-	-	1012	706	1083	884	791	965
Stage 1	-	-	-	-	-	-	1019	893	-	912	817	-
Stage 2	-	-	-	-	-	-	1019	747	-	1019	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1582	-	-	1008	704	1083	879	789	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	1008	704	-	879	789	-
Stage 1	-	-	-	-	-	-	1018	892	-	911	815	-
Stage 2	-	-	-	-	-	-	1015	746	-	1016	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.55	0.04	9.02	10.48
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	899	545	-	-	9	-	-	879
HCM Lane V/C Ratio	0.004	0.001	-	-	0.001	-	-	0.253
HCM Ctrl Dly (s/v)	9	7.7	0	-	7.3	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	1

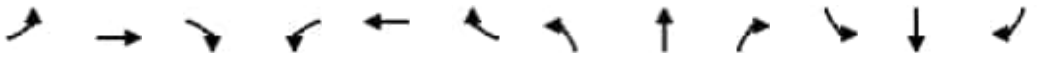
Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	231	457	41	180	442
Future Vol, veh/h	29	231	457	41	180	442
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	31	246	486	44	191	470

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1126	265	0	0	530	0
Stage 1	508	-	-	-	-	-
Stage 2	618	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	199	733	-	-	980	-
Stage 1	569	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	160	733	-	-	980	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	402	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.65	0	2.77
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	160	733	980	-
HCM Lane V/C Ratio	-	-	0.193	0.335	0.195	-
HCM Ctrl Dly (s/v)	-	-	32.8	12.4	9.6	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.7	1.5	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	209	1	245	2	421	135	216	465	1
Future Volume (veh/h)	1	1	1	209	1	245	2	421	135	216	465	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	218	1	255	2	439	141	225	484	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	127	126	100	409	2	456	526	1471	468	472	2019	4
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	256	436	346	1415	6	1580	875	2546	811	801	3494	7
Grp Volume(v), veh/h	3	0	0	218	0	256	2	293	287	225	236	249
Grp Sat Flow(s),veh/h/ln	1038	0	0	1415	0	1586	875	1706	1650	801	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	5.3	0.0	12.3	0.1	7.9	8.0	18.0	6.1	6.1
Cycle Q Clear(g_c), s	12.3	0.0	0.0	17.7	0.0	12.3	6.2	7.9	8.0	26.0	6.1	6.1
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	353	0	0	409	0	458	526	986	954	472	986	1037
V/C Ratio(X)	0.01	0.00	0.00	0.53	0.00	0.56	0.00	0.30	0.30	0.48	0.24	0.24
Avail Cap(c_a), veh/h	353	0	0	409	0	458	526	986	954	472	986	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	0.0	0.0	30.0	0.0	27.1	10.8	9.7	9.7	16.3	9.3	9.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.9	0.0	4.9	0.0	0.8	0.8	3.4	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.7	0.0	5.1	0.0	2.7	2.6	3.3	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.2	0.0	0.0	34.9	0.0	32.0	10.8	10.5	10.5	19.8	9.9	9.9
LnGrp LOS	C			C		C	B	B	B	B	A	A
Approach Vol, veh/h		3			474			582			710	
Approach Delay, s/veh		23.2			33.4			10.5			13.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.0		32.0		58.0		32.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		52.0		26.0		52.0		26.0				
Max Q Clear Time (g_c+I1), s		10.0		14.3		28.0		19.7				
Green Ext Time (p_c), s		3.5		0.0		4.3		1.2				

Intersection Summary												
HCM 7th Control Delay, s/veh			17.6									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	238	80	98	228	68	95	282	86	100	361	142
Future Volume (veh/h)	102	238	80	98	228	68	95	282	86	100	361	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	104	243	82	100	233	69	97	288	88	102	368	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	171	339	114	170	348	103	171	539	457	202	572	484
Arrive On Green	0.10	0.26	0.26	0.10	0.26	0.26	0.10	0.30	0.30	0.12	0.32	0.32
Sat Flow, veh/h	1711	1285	434	1697	1320	391	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	104	0	325	100	0	302	97	288	88	102	368	145
Grp Sat Flow(s),veh/h/ln	1711	0	1718	1697	0	1711	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	6.4	0.0	18.9	6.2	0.0	17.4	6.0	14.7	4.7	6.2	19.3	7.9
Cycle Q Clear(g_c), s	6.4	0.0	18.9	6.2	0.0	17.4	6.0	14.7	4.7	6.2	19.3	7.9
Prop In Lane	1.00		0.25	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	0	453	170	0	451	171	539	457	202	572	484
V/C Ratio(X)	0.61	0.00	0.72	0.59	0.00	0.67	0.57	0.53	0.19	0.50	0.64	0.30
Avail Cap(c_a), veh/h	171	0	453	170	0	451	171	539	457	202	572	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	36.8	47.3	0.0	36.2	47.2	32.1	28.6	45.5	32.2	28.3
Incr Delay (d2), s/veh	15.0	0.0	9.4	14.1	0.0	7.7	12.9	3.8	0.9	8.7	5.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	8.9	3.3	0.0	8.1	3.1	6.8	1.8	3.1	9.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.5	0.0	46.2	61.5	0.0	43.9	60.1	35.9	29.5	54.2	37.7	29.8
LnGrp LOS	E		D	E		D	E	D	C	D	D	C
Approach Vol, veh/h		429			402			473			615	
Approach Delay, s/veh		50.1			48.3			39.7			38.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	39.0	17.0	35.0	17.0	41.0	17.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	33.0	11.0	29.0	11.0	35.0	11.0	29.0
Max Q Clear Time (g_c+I1), s	8.2	16.7	8.2	20.9	8.0	21.3	8.4	19.4
Green Ext Time (p_c), s	0.1	1.7	0.1	1.2	0.1	2.2	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	43.5
HCM 7th LOS	D

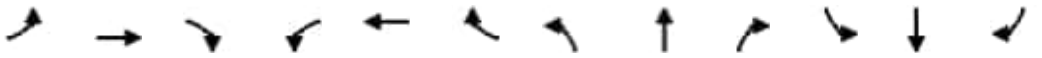
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Future Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	4	1	22	1	1	2	7	451	1	3	554	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1027	1028	556	1026	1029	451	558	0	0	452	0	0
Stage 1	562	562	-	465	465	-	-	-	-	-	-	-
Stage 2	465	466	-	560	564	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	213	234	531	213	234	608	988	-	-	1083	-	-
Stage 1	512	510	-	577	563	-	-	-	-	-	-	-
Stage 2	577	562	-	513	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	232	531	201	231	608	988	-	-	1083	-	-
Mov Cap-2 Maneuver	209	232	-	201	231	-	-	-	-	-	-	-
Stage 1	510	508	-	573	559	-	-	-	-	-	-	-
Stage 2	570	558	-	489	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.33	16.47	0.14	0.05
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	412	318	1083	-	-
HCM Lane V/C Ratio	0.007	-	-	0.065	0.013	0.003	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	14.3	16.5	8.3	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	9	22	131	1	12	4	372	121	23	520	1
Future Volume (veh/h)	3	9	22	131	1	12	4	372	121	23	520	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	3	9	22	134	1	12	4	380	123	23	531	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	59	134	274	436	3	405	455	1098	930	516	1095	2
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	59	526	1072	1394	12	1585	837	1796	1522	860	1792	3
Grp Volume(v), veh/h	34	0	0	135	0	12	4	380	123	23	0	532
Grp Sat Flow(s),veh/h/ln	1657	0	0	1405	0	1585	837	1796	1522	860	0	1796
Q Serve(g_s), s	0.0	0.0	0.0	5.4	0.0	0.5	0.2	9.4	3.1	1.2	0.0	14.7
Cycle Q Clear(g_c), s	1.4	0.0	0.0	6.8	0.0	0.5	15.0	9.4	3.1	10.6	0.0	14.7
Prop In Lane	0.09		0.65	0.99		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	467	0	0	439	0	405	455	1098	930	516	0	1097
V/C Ratio(X)	0.07	0.00	0.00	0.31	0.00	0.03	0.01	0.35	0.13	0.04	0.00	0.48
Avail Cap(c_a), veh/h	467	0	0	439	0	405	455	1098	930	516	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	0.0	27.3	0.0	25.1	13.8	8.6	7.4	11.2	0.0	9.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.8	0.0	0.1	0.0	0.9	0.3	0.2	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	2.5	0.0	0.2	0.0	3.4	1.0	0.2	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.8	0.0	0.0	29.2	0.0	25.3	13.8	9.5	7.7	11.4	0.0	11.2
LnGrp LOS	C			C		C	B	A	A	B		B
Approach Vol, veh/h		34			147			507			555	
Approach Delay, s/veh		25.8			28.8			9.1			11.2	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		17.0		3.4		16.7		8.8				
Green Ext Time (p_c), s		2.9		0.1		3.9		0.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			12.8									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	74	419	6	95	533
Future Vol, veh/h	4	74	419	6	95	533
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	4	75	423	6	96	538

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1157	426	0	0	429	0
Stage 1	426	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	217	628	-	-	1104	-
Stage 1	659	-	-	-	-	-
Stage 2	477	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	190	628	-	-	1104	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	418	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.45	0	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	562	272	-
HCM Lane V/C Ratio	-	-	0.14	0.087	-
HCM Ctrl Dly (s/v)	-	-	12.4	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	115	201	21	98	271
Future Vol, veh/h	25	115	201	21	98	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	26	121	212	22	103	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	714	223	0	0	234	0
Stage 1	223	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	380	788	-	-	1305	-
Stage 1	787	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	350	788	-	-	1305	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	544	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.42	0	2.12
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	350	788	1305	-
HCM Lane V/C Ratio	-	-	0.075	0.154	0.079	-
HCM Ctrl Dly (s/v)	-	-	16.1	10.4	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.5	0.3	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	85	132	80	76	200
Future Vol, veh/h	71	85	132	80	76	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	75	89	139	84	80	211

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	509	139	0	0	223	0
Stage 1	139	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	506	883	-	-	1311	-
Stage 1	864	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	475	883	-	-	1311	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	864	-	-	-	-	-
Stage 2	635	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.56	0	2.18
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	475	883	1311	-
HCM Lane V/C Ratio	-	-	0.157	0.101	0.061	-
HCM Ctrl Dly (s/v)	-	-	14	9.5	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.3	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	333	363	36	33	33
Future Vol, veh/h	25	333	363	36	33	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	26	340	370	37	34	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	407	0	-	0	780	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1125	-	-	-	364	659
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	354	659
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.58	0	14.15
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	126	-	-	-	461
HCM Lane V/C Ratio	0.023	-	-	-	0.146
HCM Ctrl Dly (s/v)	8.3	0	-	-	14.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

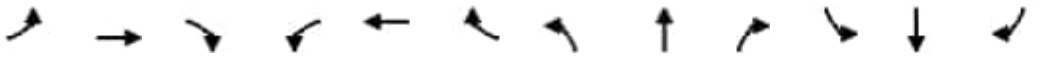
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	1	15	345	1	1
Future Vol, veh/h	87	1	15	345	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	161	2	28	639	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	856	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	694	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1386	-	328	883
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1386	-	318	883
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.32	12.77
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	467	-	-	75	-
HCM Lane V/C Ratio	0.008	-	-	0.02	-
HCM Ctrl Dly (s/v)	12.8	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	366	13	127	424	764	8	46	100	535	28	34
Future Volume (veh/h)	75	366	13	127	424	764	8	46	100	535	28	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	373	13	130	433	780	8	47	102	567	0	35
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	184	564	252	212	621	780	312	327	476	1188	0	528
Arrive On Green	0.11	0.17	0.17	0.13	0.18	0.18	0.17	0.17	0.17	0.33	0.00	0.33
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	77	373	13	130	433	780	8	47	102	567	0	35
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	5.1	12.4	0.9	8.7	14.4	22.0	0.4	2.6	5.8	15.1	0.0	1.8
Cycle Q Clear(g_c), s	5.1	12.4	0.9	8.7	14.4	22.0	0.4	2.6	5.8	15.1	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	564	252	212	621	780	312	327	476	1188	0	528
V/C Ratio(X)	0.42	0.66	0.05	0.61	0.70	1.00	0.03	0.14	0.21	0.48	0.00	0.07
Avail Cap(c_a), veh/h	184	564	252	212	621	780	312	327	476	1188	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.0	46.8	42.0	49.7	45.9	19.3	41.0	41.9	31.4	31.7	0.0	27.3
Incr Delay (d2), s/veh	6.9	6.0	0.4	12.5	6.4	32.2	0.2	0.9	1.0	1.4	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.6	0.4	4.4	6.5	30.6	0.2	1.3	2.3	6.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.9	52.8	42.4	62.3	52.3	51.6	41.2	42.8	32.5	33.1	0.0	27.5
LnGrp LOS	E	D	D	E	D	D	D	D	C	C		C
Approach Vol, veh/h		463			1343			157			602	
Approach Delay, s/veh		53.2			52.8			36.0			32.8	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	27.0	21.0	26.0		46.0	19.0	28.0					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	21.0	15.0	20.0		40.0	13.0	22.0					
Max Q Clear Time (g_c+I1), s	7.8	10.7	14.4		17.1	7.1	24.0					
Green Ext Time (p_c), s	0.4	0.1	1.1		2.2	0.1	0.0					

Intersection Summary	
HCM 7th Control Delay, s/veh	47.2
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	691	8	294	795	0	0	0	0	340	9	456
Future Volume (veh/h)	0	691	8	294	795	0	0	0	0	340	9	456
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	705	0	300	811	0				347	9	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		580	2369	0				332	9	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1738	45	1585
Grp Volume(v), veh/h	0	705	0	300	811	0				356	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	14.7	0.0	7.9	10.4	0.0				21.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.7	0.0	7.9	10.4	0.0				21.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	1662		580	2369	0				340	0	
V/C Ratio(X)	0.00	0.42		0.52	0.34	0.00				1.05	0.00	
Avail Cap(c_a), veh/h	0	1662		580	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	18.0	0.0	9.8	6.5	0.0				44.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	3.3	0.4	0.0				61.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.7	0.0	3.1	3.4	0.0				14.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	18.8	0.0	13.0	6.9	0.0				105.7	0.0	0.0
LnGrp LOS		B		B	A					F		
Approach Vol, veh/h		705			1111						356	
Approach Delay, s/veh		18.8			8.6						105.7	
Approach LOS		B			A						F	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		9.9	16.7		23.0		12.4					
Green Ext Time (p_c), s		0.5	5.4		0.0		6.8					

Intersection Summary	
HCM 7th Control Delay, s/veh	27.8
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

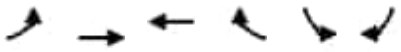
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	731	0	0	769	363	290
Future Volume (veh/h)	731	0	0	769	363	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	746	0	0	785	370	296
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.36	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	746	0	0	785	370	296
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	19.8	0.0	0.0	21.1	13.6	11.9
Cycle Q Clear(g_c), s	19.8	0.0	0.0	21.1	13.6	11.9
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.61	0.00	0.00	0.64	0.39	0.35
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	0.0	29.0	15.5	15.1
Incr Delay (d2), s/veh	2.2	0.0	0.0	2.5	1.2	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0	8.8	5.6	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.8	0.0	0.0	31.5	16.8	16.3
LnGrp LOS	C			C	B	B
Approach Vol, veh/h	746			785	666	
Approach Delay, s/veh	30.8			31.5	16.5	
Approach LOS	C			C	B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		46.0		64.0	46.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		40.0		58.0	40.0
Max Q Clear Time (g_c+I1), s		23.1		15.6	21.8
Green Ext Time (p_c), s		4.9		2.3	4.8

Intersection Summary	
HCM 7th Control Delay, s/veh	26.7
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	332	515	209	294	50
Future Volume (veh/h)	27	332	515	209	294	50
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	28	346	536	218	306	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	296	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	676	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	28	346	536	218	306	52
Grp Sat Flow(s),veh/h/ln	676	1781	1781	1510	1781	1585
Q Serve(g_s), s	1.9	7.5	13.3	5.2	8.5	1.4
Cycle Q Clear(g_c), s	15.3	7.5	13.3	5.2	8.5	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	296	861	861	730	564	502
V/C Ratio(X)	0.09	0.40	0.62	0.30	0.54	0.10
Avail Cap(c_a), veh/h	296	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	9.9	11.5	9.4	16.9	14.5
Incr Delay (d2), s/veh	0.6	1.4	3.4	1.0	3.7	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.3	4.3	1.4	3.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.7	11.3	14.8	10.4	20.6	14.9
LnGrp LOS	B	B	B	B	C	B
Approach Vol, veh/h		374	754		358	
Approach Delay, s/veh		11.8	13.6		19.8	
Approach LOS		B	B		B	

Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	35.0	25.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0
Max Green Setting (Gmax), s	29.0	19.0	29.0
Max Q Clear Time (g_c+I1), s	17.3	10.5	15.3
Green Ext Time (p_c), s	1.5	0.7	3.1

Intersection Summary	
HCM 7th Control Delay, s/veh	14.6
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	479	305	32	16	11
Future Vol, veh/h	45	479	305	32	16	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	515	328	34	17	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	362	0	-	0	957	345
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	612	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1196	-	-	-	286	698
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	541	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1196	-	-	-	270	698
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	541	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.7	0	15.89
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	155	-	-	-	360
HCM Lane V/C Ratio	0.04	-	-	-	0.081
HCM Ctrl Dly (s/v)	8.1	0	-	-	15.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	85	4	1	69	5
Future Vol, veh/h	3	85	4	1	69	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	90	4	1	73	5

Major/Minor	Minor2		Major2	
Conflicting Flow All	152	5	0	0
Stage 1	152	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	740	1078	-	-
Stage 1	772	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1078	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.36	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1078	-	-
HCM Lane V/C Ratio	0.005	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	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	4	131	149	3	1	8
Future Vol, veh/h	4	131	149	3	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	139	159	3	1	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	308	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1347	-	-	-	684	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	682	885
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.23	0	9.25
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1347	-	-	-	857
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Ctrl Dly (s/v)	7.7	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

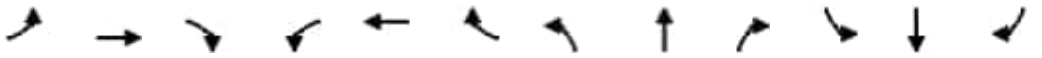
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	127	127	104	67	2
Future Vol, veh/h	4	127	127	104	67	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	137	137	112	72	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	248	0	-	0	338	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1250	-	-	-	658	849
Stage 1	-	-	-	-	840	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1250	-	-	-	656	849
Mov Cap-2 Maneuver	-	-	-	-	656	-
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	882	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.24	0	11.14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1250	-	-	-	660
HCM Lane V/C Ratio	0.003	-	-	-	0.112
HCM Ctrl Dly (s/v)	7.9	-	-	-	11.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	343	106	24	333	5	191	46	21	5	22	253
Future Volume (veh/h)	304	343	106	24	333	5	191	46	21	5	22	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	307	346	107	24	336	5	193	46	21	5	22	256
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	719	1542	688	353	683	10	218	149	68	34	151	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3414	51	1781	1216	555	343	1510	1585
Grp Volume(v), veh/h	307	346	107	24	166	175	193	0	67	27	0	256
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1772	1781	0	1770	1853	0	1585
Q Serve(g_s), s	9.3	5.6	3.7	1.0	7.9	7.9	9.6	0.0	3.1	1.2	0.0	9.0
Cycle Q Clear(g_c), s	9.3	5.6	3.7	1.0	7.9	7.9	9.6	0.0	3.1	1.2	0.0	9.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.31	0.19		1.00
Lane Grp Cap(c), veh/h	719	1542	688	353	338	354	218	0	216	185	0	652
V/C Ratio(X)	0.43	0.22	0.16	0.07	0.49	0.49	0.89	0.00	0.31	0.15	0.00	0.39
Avail Cap(c_a), veh/h	719	1542	688	353	338	354	218	0	216	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	14.9	14.4	25.3	31.9	31.9	38.9	0.0	36.0	37.0	0.0	18.6
Incr Delay (d2), s/veh	1.9	0.3	0.5	0.4	5.0	4.8	37.3	0.0	3.7	1.6	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.9	1.2	0.4	3.4	3.6	6.3	0.0	1.5	0.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.6	15.2	14.8	25.7	37.0	36.8	76.2	0.0	39.7	38.6	0.0	20.4
LnGrp LOS	B	B	B	C	D	D	E		D	D		C
Approach Vol, veh/h		760			365			260			283	
Approach Delay, s/veh		14.9			36.1			66.8			22.1	
Approach LOS		B			D			E			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.0	11.0	47.0		15.0	34.0	24.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		11.0	5.0	41.0		9.0	28.0	18.0				
Max Q Clear Time (g_c+I1), s		11.6	3.0	7.6		11.0	11.3	9.9				
Green Ext Time (p_c), s		0.0	0.0	2.3		0.0	0.8	1.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	28.9
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	409	250	2	1	1
Future Vol, veh/h	2	409	250	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	2	435	266	2	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	268	0	-	0	706	267
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	439	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1262	-	-	-	402	772
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1262	-	-	-	401	772
Mov Cap-2 Maneuver	-	-	-	-	401	-
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.04	0	11.85
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	9	-	-	-	528
HCM Lane V/C Ratio	0.002	-	-	-	0.004
HCM Ctrl Dly (s/v)	7.9	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
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	19	760	514	11	10	11
Future Vol, veh/h	19	760	514	11	10	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	19	768	519	11	10	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	530	0	-	0	1331	525
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	806	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	983	-	-	-	170	553
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	983	-	-	-	165	553
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	439	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	20.05
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	44	-	-	-	260
HCM Lane V/C Ratio	0.02	-	-	-	0.081
HCM Ctrl Dly (s/v)	8.7	0	-	-	20
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	9.5

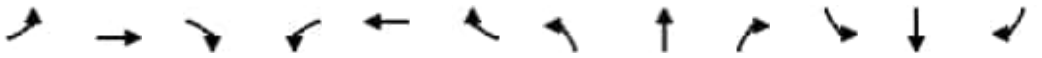
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	13	24	7	11	7	40	126	8	9	120	36
Future Vol, veh/h	31	13	24	7	11	7	40	126	8	9	120	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	13	25	7	11	7	41	130	8	9	124	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	19	0	0	38	0	0	177	123	26	172	131	15
Stage 1	-	-	-	-	-	-	90	90	-	29	29	-
Stage 2	-	-	-	-	-	-	88	33	-	142	102	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1598	-	-	1572	-	-	785	768	1050	792	759	1065
Stage 1	-	-	-	-	-	-	918	821	-	987	871	-
Stage 2	-	-	-	-	-	-	920	868	-	861	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1598	-	-	1572	-	-	618	748	1050	636	740	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	618	748	-	636	740	-
Stage 1	-	-	-	-	-	-	899	804	-	983	867	-
Stage 2	-	-	-	-	-	-	758	864	-	701	794	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.33	2.04	11.62	10.85
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	723	726	-	-	468	-	-	785
HCM Lane V/C Ratio	0.248	0.02	-	-	0.005	-	-	0.217
HCM Ctrl Dly (s/v)	11.6	7.3	0	-	7.3	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	0.8

25: Adam Shepherd & Mall Entrance/Conestoga



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	20	338	20	135	20	293	433	107	233	20
Future Volume (veh/h)	20	20	20	338	20	135	20	293	433	107	233	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	21	21	352	21	0	21	305	0	111	243	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		362	561		266	994	85
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	1115	1870	1585	1074	3312	284
Grp Volume(v), veh/h	42	0	21	352	21	0	21	305	0	111	129	135
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	1115	1870	1585	1074	1777	1819
Q Serve(g_s), s	1.5	0.0	0.8	14.8	0.7	0.0	1.2	10.9	0.0	7.7	4.4	4.5
Cycle Q Clear(g_c), s	1.5	0.0	0.8	14.8	0.7	0.0	5.6	10.9	0.0	18.6	4.4	4.5
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	411	0	357	445	468		362	561		266	533	546
V/C Ratio(X)	0.10	0.00	0.06	0.79	0.04		0.06	0.54		0.42	0.24	0.25
Avail Cap(c_a), veh/h	411	0	357	445	468		362	561		266	533	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	24.3	28.0	22.8	0.0	23.3	23.4	0.0	31.2	21.1	21.2
Incr Delay (d2), s/veh	0.5	0.0	0.3	13.4	0.2	0.0	0.3	3.8	0.0	4.8	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	7.4	0.3	0.0	0.3	5.1	0.0	2.3	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.1	0.0	24.7	41.4	22.9	0.0	23.6	27.2	0.0	36.0	22.2	22.2
LnGrp LOS	C		C	D	C		C	C		D	C	C
Approach Vol, veh/h		63			373			326			375	
Approach Delay, s/veh		24.9			40.4			26.9			26.3	
Approach LOS		C			D			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.0		30.0		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		18.0		24.0		20.0				
Max Q Clear Time (g_c+I1), s		12.9		3.5		20.6		16.8				
Green Ext Time (p_c), s		1.3		0.2		0.6		0.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	31.0
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	293	322	351	281	300	339
Future Volume (veh/h)	293	322	351	281	300	339
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	326	358	390	312	333	377
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	456	405	1156	979	451	1156
Arrive On Green	0.27	0.27	0.65	0.65	0.65	0.65
Sat Flow, veh/h	1682	1497	1767	1497	703	1767
Grp Volume(v), veh/h	326	358	390	312	333	377
Grp Sat Flow(s),veh/h/ln	1682	1497	1767	1497	703	1767
Q Serve(g_s), s	21.0	27.5	11.8	10.9	47.9	11.3
Cycle Q Clear(g_c), s	21.0	27.5	11.8	10.9	59.6	11.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	456	405	1156	979	451	1156
V/C Ratio(X)	0.72	0.88	0.34	0.32	0.74	0.33
Avail Cap(c_a), veh/h	456	405	1156	979	451	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	41.9	9.2	9.1	22.4	9.1
Incr Delay (d2), s/veh	9.3	23.2	0.8	0.9	10.3	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	12.2	4.0	3.2	8.1	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	48.8	65.2	10.0	9.9	32.8	9.9
LnGrp LOS	D	E	B	A	C	A
Approach Vol, veh/h	684		702			710
Approach Delay, s/veh	57.4		10.0			20.6
Approach LOS	E		A			C

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	83.0			83.0	37.0
Change Period (Y+Rc), s	4.5			4.5	4.5
Max Green Setting (Gmax), s	78.5			78.5	32.5
Max Q Clear Time (g_c+I1), s	13.8			61.6	29.5
Green Ext Time (p_c), s	3.3			4.4	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	29.0
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	274	221	221	274	221	233	190	233	233	190	233
Future Volume (veh/h)	221	274	221	221	274	221	233	190	233	233	190	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	246	304	246	246	304	246	259	211	259	259	211	259
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	328	397	337	328	397	337	345	344	292	345	344	292
Arrive On Green	0.19	0.22	0.22	0.19	0.22	0.22	0.20	0.19	0.19	0.20	0.19	0.19
Sat Flow, veh/h	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Grp Volume(v), veh/h	246	304	246	246	304	246	259	211	259	259	211	259
Grp Sat Flow(s),veh/h/ln	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Q Serve(g_s), s	13.8	16.1	15.2	13.8	16.1	15.2	14.5	10.9	16.8	14.5	10.9	16.8
Cycle Q Clear(g_c), s	13.8	16.1	15.2	13.8	16.1	15.2	14.5	10.9	16.8	14.5	10.9	16.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	397	337	328	397	337	345	344	292	345	344	292
V/C Ratio(X)	0.75	0.76	0.73	0.75	0.76	0.73	0.75	0.61	0.89	0.75	0.61	0.89
Avail Cap(c_a), veh/h	328	397	337	328	397	337	345	344	292	345	344	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	36.3	35.9	37.9	36.3	35.9	37.4	36.8	39.2	37.4	36.8	39.2
Incr Delay (d2), s/veh	14.6	13.1	13.1	14.6	13.1	13.1	14.0	7.9	30.3	14.0	7.9	30.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	7.9	6.4	6.6	7.9	6.4	6.9	5.2	8.2	6.9	5.2	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.5	49.4	49.0	52.5	49.4	49.0	51.3	44.7	69.5	51.3	44.7	69.5
LnGrp LOS	D	D	D	D	D	D	D	D	E	D	D	E
Approach Vol, veh/h		796			796			729			729	
Approach Delay, s/veh		50.2			50.2			55.9			55.9	
Approach LOS		D			D			E			E	

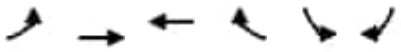
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	24.0	24.0	27.0	25.0	24.0	24.0	27.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	19.5	19.5	22.5	20.5	19.5	19.5	22.5
Max Q Clear Time (g_c+I1), s	16.5	18.8	15.8	18.1	16.5	18.8	15.8	18.1
Green Ext Time (p_c), s	0.3	0.2	0.2	1.0	0.3	0.2	0.2	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	52.9
HCM 7th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	1	22	23	1	22	11	622	12	11	622	12
Future Volume (veh/h)	23	1	22	23	1	22	11	622	12	11	622	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	26	1	24	26	1	24	12	691	13	12	691	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	181	21	131	181	21	131	44	1217	23	44	1217	23
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.71	0.71	0.71	0.71	0.71
Sat Flow, veh/h	648	110	674	648	110	674	11	1702	32	11	1702	32
Grp Volume(v), veh/h	51	0	0	51	0	0	716	0	0	716	0	0
Grp Sat Flow(s),veh/h/ln	1432	0	0	1432	0	0	1744	0	0	1744	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.0	2.6	0.0	0.0	19.5	0.0	0.0	19.5	0.0	0.0
Prop In Lane	0.51		0.47	0.51		0.47	0.02		0.02	0.02		0.02
Lane Grp Cap(c), veh/h	334	0	0	334	0	0	1284	0	0	1284	0	0
V/C Ratio(X)	0.15	0.00	0.00	0.15	0.00	0.00	0.56	0.00	0.00	0.56	0.00	0.00
Avail Cap(c_a), veh/h	334	0	0	334	0	0	1284	0	0	1284	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.4	0.0	0.0	33.4	0.0	0.0	6.8	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	1.0	0.0	0.0	1.8	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.1	0.0	0.0	6.7	0.0	0.0	6.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.4	0.0	0.0	34.4	0.0	0.0	8.6	0.0	0.0	8.6	0.0	0.0
LnGrp LOS	C			C			A			A		
Approach Vol, veh/h		51			51			716			716	
Approach Delay, s/veh		34.4			34.4			8.6			8.6	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	76.0	24.0	76.0	24.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	71.5	19.5	71.5	19.5
Max Q Clear Time (g_c+I1), s	21.5	4.6	21.5	4.6
Green Ext Time (p_c), s	6.4	0.1	6.4	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	10.3
HCM 7th LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	391	230	269	276	233	388
Future Volume (veh/h)	391	230	269	276	233	388
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	434	256	299	307	259	431
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	614	1175	450	382	412	913
Arrive On Green	0.37	0.67	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1682	1767	1767	1497	1682	1497
Grp Volume(v), veh/h	434	256	299	307	259	431
Grp Sat Flow(s),veh/h/ln	1682	1767	1767	1497	1682	1497
Q Serve(g_s), s	22.1	5.7	15.2	19.2	13.7	15.8
Cycle Q Clear(g_c), s	22.1	5.7	15.2	19.2	13.7	15.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	614	1175	450	382	412	913
V/C Ratio(X)	0.71	0.22	0.66	0.80	0.63	0.47
Avail Cap(c_a), veh/h	614	1175	450	382	412	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	6.6	33.4	34.9	33.7	10.7
Incr Delay (d2), s/veh	6.7	0.4	7.5	16.3	7.1	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	1.7	6.9	8.2	6.3	17.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	33.9	7.0	40.9	51.2	40.8	12.4
LnGrp LOS	C	A	D	D	D	B
Approach Vol, veh/h		690	606		690	
Approach Delay, s/veh		23.9	46.1		23.1	
Approach LOS		C	D		C	

Timer - Assigned Phs		4		6	7	8
Phs Duration (G+Y+Rc), s		71.0		29.0	41.0	30.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		66.5		24.5	36.5	25.5
Max Q Clear Time (g_c+I1), s		7.7		17.8	24.1	21.2
Green Ext Time (p_c), s		1.3		1.5	1.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	30.4
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	675	2	2	486
Future Vol, veh/h	1	1	675	2	2	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	767	2	2	552

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1049	385	0	0	769	0
Stage 1	768	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	213	597	-	-	790	-
Stage 1	403	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	597	-	-	790	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	403	-	-	-	-	-
Stage 2	722	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.54	0	0.04
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	213	597	790	-
HCM Lane V/C Ratio	-	-	0.005	0.002	0.003	-
HCM Ctrl Dly (s/v)	-	-	22	11	9.6	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Future Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	539	1	1	1	79	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	2	0	0	8	547	2	278	279	272
Stage 1	-	-	-	-	-	-	4	4	-	274	274	-
Stage 2	-	-	-	-	-	-	4	543	-	4	5	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	998	-	-	1581	-	-	1011	444	1083	674	629	767
Stage 1	-	-	-	-	-	-	1018	892	-	732	683	-
Stage 2	-	-	-	-	-	-	1018	519	-	1018	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1581	-	-	1005	443	1083	670	627	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	1005	443	-	670	627	-
Stage 1	-	-	-	-	-	-	1017	891	-	731	682	-
Stage 2	-	-	-	-	-	-	1014	518	-	1015	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.87	0.02	10.04	11.11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	718	545	-	-	3	-	-	670
HCM Lane V/C Ratio	0.005	0.001	-	-	0.001	-	-	0.121
HCM Ctrl Dly (s/v)	10	8.6	0	-	7.3	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

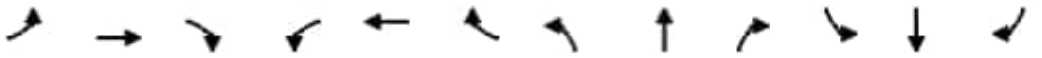
Intersection	
Int Delay, s/veh	2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	67	380	15	132	236
Future Vol, veh/h	9	67	380	15	132	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	10	76	432	17	150	268

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	874	224	0	0	449	0
Stage 1	440	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	289	779	-	-	1053	-
Stage 1	616	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	248	779	-	-	1053	-
Mov Cap-2 Maneuver	248	-	-	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.31	0	3.22
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	248	779	1053	-
HCM Lane V/C Ratio	-	-	0.041	0.098	0.142	-
HCM Ctrl Dly (s/v)	-	-	20.2	10.1	9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.3	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	77	1	98	1	275	92	263	261	1
Future Volume (veh/h)	1	1	1	77	1	98	1	275	92	263	261	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	85	1	108	1	302	101	289	287	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	144	142	117	411	3	367	709	1599	525	629	2209	8
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	390	611	500	1415	15	1573	1048	2525	828	943	3488	12
Grp Volume(v), veh/h	3	0	0	85	0	109	1	202	201	289	140	148
Grp Sat Flow(s),veh/h/ln	1501	0	0	1415	0	1587	1048	1706	1647	943	1706	1794
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	5.1	0.0	4.4	4.6	16.6	3.0	3.0
Cycle Q Clear(g_c), s	5.1	0.0	0.0	4.4	0.0	5.1	3.0	4.4	4.6	21.2	3.0	3.0
Prop In Lane	0.33		0.33	1.00		0.99	1.00		0.50	1.00		0.01
Lane Grp Cap(c), veh/h	403	0	0	411	0	370	709	1081	1043	629	1081	1136
V/C Ratio(X)	0.01	0.00	0.00	0.21	0.00	0.29	0.00	0.19	0.19	0.46	0.13	0.13
Avail Cap(c_a), veh/h	403	0	0	411	0	370	709	1081	1043	629	1081	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	28.1	0.0	28.4	7.2	6.9	6.9	11.3	6.6	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.1	0.0	2.0	0.0	0.4	0.4	2.4	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	2.8	0.0	3.8	0.0	2.5	2.5	5.9	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.5	0.0	0.0	29.3	0.0	30.4	7.2	7.2	7.3	13.7	6.8	6.8
LnGrp LOS	C			C		C	A	A	A	B	A	A
Approach Vol, veh/h		3			194			404			577	
Approach Delay, s/veh		26.5			29.9			7.3			10.3	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		27.0		63.0		27.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		57.0		21.0		57.0		21.0				
Max Q Clear Time (g_c+I1), s		6.6		7.1		23.2		7.1				
Green Ext Time (p_c), s		2.3		0.0		3.3		0.7				

Intersection Summary												
HCM 7th Control Delay, s/veh			12.5									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	537	59	24	119	41	31	166	130	139	145	47
Future Volume (veh/h)	79	537	59	24	119	41	31	166	130	139	145	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	92	624	69	28	138	48	36	193	151	162	169	55
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	187	693	77	77	471	164	93	327	277	202	441	374
Arrive On Green	0.11	0.44	0.44	0.05	0.37	0.37	0.05	0.18	0.18	0.12	0.25	0.25
Sat Flow, veh/h	1711	1589	176	1697	1263	439	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	92	0	693	28	0	186	36	193	151	162	169	55
Grp Sat Flow(s),veh/h/ln	1711	0	1765	1697	0	1702	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	5.6	0.0	40.1	1.8	0.0	8.5	2.2	10.8	9.9	10.1	8.6	3.1
Cycle Q Clear(g_c), s	5.6	0.0	40.1	1.8	0.0	8.5	2.2	10.8	9.9	10.1	8.6	3.1
Prop In Lane	1.00		0.10	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
V/C Ratio(X)	0.49	0.00	0.90	0.36	0.00	0.29	0.39	0.59	0.55	0.80	0.38	0.15
Avail Cap(c_a), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	28.8	51.0	0.0	24.3	50.2	41.3	40.9	47.2	34.6	32.5
Incr Delay (d2), s/veh	9.0	0.0	15.6	12.7	0.0	1.2	11.6	7.6	7.5	27.5	2.5	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	0.0	26.7	1.8	0.0	6.4	2.2	9.2	7.6	9.8	7.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	0.0	44.4	63.7	0.0	25.5	61.8	48.9	48.4	74.7	37.1	33.3
LnGrp LOS	E		D	E		C	E	D	D	E	D	C
Approach Vol, veh/h		785			214			380			386	
Approach Delay, s/veh		45.6			30.5			49.9			52.3	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	26.0	11.0	54.0	12.0	33.0	18.0	47.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	20.0	5.0	48.0	6.0	27.0	12.0	41.0
Max Q Clear Time (g_c+I1), s	12.1	12.8	3.8	42.1	4.2	10.6	7.6	10.5
Green Ext Time (p_c), s	0.0	0.9	0.0	2.3	0.0	0.9	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	46.2
HCM 7th LOS	D

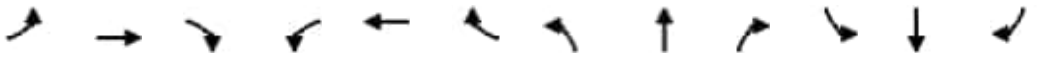
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Future Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	1	1	5	1	1	1	2	408	17	25	254	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	718	735	255	726	727	417	255	0	0	425	0	0
Stage 1	305	305	-	421	421	-	-	-	-	-	-	-
Stage 2	413	430	-	305	306	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	344	347	784	340	351	636	1281	-	-	1108	-	-
Stage 1	704	662	-	610	589	-	-	-	-	-	-	-
Stage 2	616	584	-	704	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	334	338	784	328	342	636	1281	-	-	1108	-	-
Mov Cap-2 Maneuver	334	338	-	328	342	-	-	-	-	-	-	-
Stage 1	688	647	-	609	588	-	-	-	-	-	-	-
Stage 2	613	582	-	683	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.72	14.13	0.04	0.75
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	543	398	1108	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.009	0.023	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	11.7	14.1	8.3	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	1	15	1	1	1	276	310	12	206	1
Future Volume (veh/h)	1	2	1	15	1	1	1	276	310	12	206	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	2	1	16	1	1	1	297	333	13	222	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	129	245	108	421	24	405	698	1098	930	488	1092	5
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	311	959	423	1343	94	1585	1112	1796	1522	765	1787	8
Grp Volume(v), veh/h	4	0	0	17	0	1	1	297	333	13	0	223
Grp Sat Flow(s),veh/h/ln	1694	0	0	1437	0	1585	1112	1796	1522	765	0	1795
Q Serve(g_s), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	6.9	9.8	0.7	0.0	5.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.8	0.0	0.0	5.0	6.9	9.8	7.7	0.0	5.0
Prop In Lane	0.25		0.25	0.94		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	483	0	0	445	0	405	698	1098	930	488	0	1097
V/C Ratio(X)	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.27	0.36	0.03	0.00	0.20
Avail Cap(c_a), veh/h	483	0	0	445	0	405	698	1098	930	488	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	0.0	0.0	25.2	0.0	25.0	8.9	8.2	8.7	9.9	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.6	1.1	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.5	0.0	0.0	0.0	4.6	5.6	0.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.0	0.0	0.0	25.4	0.0	25.0	8.9	8.8	9.8	10.0	0.0	8.2
LnGrp LOS	C			C		C	A	A	A	B		A
Approach Vol, veh/h		4			18			631			236	
Approach Delay, s/veh		25.0			25.3			9.3			8.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		11.8		2.2		9.7		2.8				
Green Ext Time (p_c), s		3.1		0.0		1.4		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			9.4									
HCM 7th LOS			A									

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	23	516	4	32	166
Future Vol, veh/h	1	23	516	4	32	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	1	24	549	4	34	177

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	796	551	0	0	553	0
Stage 1	551	-	-	-	-	-
Stage 2	245	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	356	534	-	-	992	-
Stage 1	577	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	343	534	-	-	992	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.25	0	1.42
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	522	291	-
HCM Lane V/C Ratio	-	-	0.049	0.034	-
HCM Ctrl Dly (s/v)	-	-	12.3	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	2.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	35	145	25	70	134
Future Vol, veh/h	13	35	145	25	70	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	15	39	163	28	79	151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	485	177	0	0	191	0
Stage 1	177	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	520	836	-	-	1353	-
Stage 1	826	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	490	836	-	-	1353	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	677	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	10.35	0	2.68
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	490	836	1353	-
HCM Lane V/C Ratio	-	-	0.03	0.047	0.058	-
HCM Ctrl Dly (s/v)	-	-	12.6	9.5	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0.2	-

Intersection	
Int Delay, s/veh	5.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	129	27	103	111	72	85
Future Vol, veh/h	129	27	103	111	72	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	172	36	137	148	96	113

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	443	137	0	0	285	0
Stage 1	137	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	554	885	-	-	1243	-
Stage 1	865	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	511	885	-	-	1243	-
Mov Cap-2 Maneuver	511	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	669	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.47	0	3.73
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	511	885	1243	-
HCM Lane V/C Ratio	-	-	0.336	0.041	0.077	-
HCM Ctrl Dly (s/v)	-	-	15.6	9.2	8.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1.5	0.1	0.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	505	115	33	33	8
Future Vol, veh/h	25	505	115	33	33	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	30	601	137	39	39	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	176	0	-	0	817	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	661	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1370	-	-	-	346	889
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1370	-	-	-	335	889
Mov Cap-2 Maneuver	-	-	-	-	335	-
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.36	0	15.83
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	85	-	-	-	381
HCM Lane V/C Ratio	0.022	-	-	-	0.128
HCM Ctrl Dly (s/v)	7.7	0	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.4

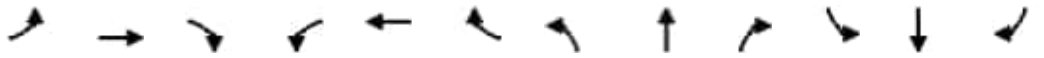
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	1	6	443	25	1
Future Vol, veh/h	230	1	6	443	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	50	50	50	50
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	460	2	12	886	50	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	462	0	1371	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1073	-	161	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1073	-	158	600
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.11	37.34
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	162	-	-	24	-
HCM Lane V/C Ratio	0.321	-	-	0.011	-
HCM Ctrl Dly (s/v)	37.3	-	-	8.4	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0	-

13: Paroquet Springs/Adam Shepherd & KY-44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	822	6	45	218	362	10	15	297	382	8	14
Future Volume (veh/h)	32	822	6	45	218	362	10	15	297	382	8	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	913	7	50	242	402	11	17	330	430	0	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	99	1100	491	226	1354	868	297	312	476	623	0	277
Arrive On Green	0.06	0.32	0.32	0.13	0.40	0.40	0.17	0.17	0.17	0.17	0.00	0.17
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	36	913	7	50	242	402	11	17	330	430	0	16
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	2.4	29.9	0.4	3.2	5.5	18.5	0.6	0.9	20.0	13.6	0.0	1.0
Cycle Q Clear(g_c), s	2.4	29.9	0.4	3.2	5.5	18.5	0.6	0.9	20.0	13.6	0.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	1100	491	226	1354	868	297	312	476	623	0	277
V/C Ratio(X)	0.36	0.83	0.01	0.22	0.18	0.46	0.04	0.05	0.69	0.69	0.00	0.06
Avail Cap(c_a), veh/h	99	1100	491	226	1354	868	297	312	476	623	0	277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	37.4	27.5	46.4	23.3	14.8	41.9	42.0	37.1	46.4	0.0	41.3
Incr Delay (d2), s/veh	10.0	7.3	0.1	2.2	0.3	1.8	0.2	0.3	8.1	6.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	19.2	0.3	2.6	4.1	14.8	0.5	0.8	14.5	10.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	64.4	44.7	27.5	48.7	23.6	16.5	42.2	42.4	45.2	52.6	0.0	41.7
LnGrp LOS	E	D	C	D	C	B	D	D	D	D		D
Approach Vol, veh/h		956			694			358			446	
Approach Delay, s/veh		45.3			21.3			45.0			52.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.0	22.0	45.0	27.0	13.0	54.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	20.0	16.0	39.0	21.0	7.0	48.0
Max Q Clear Time (g_c+I1), s	22.0	5.2	31.9	15.6	4.4	20.5
Green Ext Time (p_c), s	0.0	0.1	3.4	0.8	0.0	3.1

Intersection Summary	
HCM 7th Control Delay, s/veh	39.7
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1394	12	241	415	0	0	0	0	180	4	251
Future Volume (veh/h)	0	1394	12	241	415	0	0	0	0	180	4	251
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1483	0	256	441	0				191	4	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		359	2369	0				333	7	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1746	37	1585
Grp Volume(v), veh/h	0	1483	0	256	441	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	43.7	0.0	9.1	4.9	0.0				10.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	43.7	0.0	9.1	4.9	0.0				10.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1662		359	2369	0				340	0	
V/C Ratio(X)	0.00	0.89		0.71	0.19	0.00				0.57	0.00	
Avail Cap(c_a), veh/h	0	1662		359	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	25.4	0.0	26.7	5.7	0.0				40.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.8	0.0	11.4	0.2	0.0				6.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	25.2	0.0	7.7	2.9	0.0				9.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	33.1	0.0	38.1	5.9	0.0				47.3	0.0	0.0
LnGrp LOS		C		D	A					D		
Approach Vol, veh/h		1483			697						195	
Approach Delay, s/veh		33.1			17.7						47.3	
Approach LOS		C			B						D	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		11.1	45.7		12.9		6.9					
Green Ext Time (p_c), s		0.4	5.9		0.6		3.2					

Intersection Summary	
HCM 7th Control Delay, s/veh	29.8
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

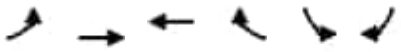
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	953	0	0	463	295	575
Future Volume (veh/h)	953	0	0	463	295	575
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	1095	0	0	532	339	661
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.48	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	1095	0	0	532	339	661
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	32.3	0.0	0.0	13.1	12.2	37.2
Cycle Q Clear(g_c), s	32.3	0.0	0.0	13.1	12.2	37.2
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.89	0.00	0.00	0.43	0.36	0.79
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.4	15.2	21.1
Incr Delay (d2), s/veh	9.8	0.0	0.0	1.1	1.1	7.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	0.0	0.0	9.1	8.7	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.2	0.0	0.0	27.5	16.3	28.6
LnGrp LOS	D			C	B	C
Approach Vol, veh/h	1095			532	1000	
Approach Delay, s/veh	36.2			27.5	24.4	
Approach LOS	D			C	C	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		46.0		64.0	46.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		40.0		58.0	40.0
Max Q Clear Time (g_c+I1), s		15.1		39.2	34.3
Green Ext Time (p_c), s		3.6		3.7	3.4

Intersection Summary		
HCM 7th Control Delay, s/veh	30.0	
HCM 7th LOS	C	

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	26	241	455	381	84	22
Future Volume (veh/h)	26	241	455	381	84	22
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	28	259	489	410	90	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	290	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	590	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	28	259	489	410	90	24
Grp Sat Flow(s),veh/h/ln	590	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.1	5.3	11.7	11.6	2.2	0.6
Cycle Q Clear(g_c), s	13.9	5.3	11.7	11.6	2.2	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	290	861	861	730	564	502
V/C Ratio(X)	0.10	0.30	0.57	0.56	0.16	0.05
Avail Cap(c_a), veh/h	290	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	9.4	11.0	11.0	14.8	14.2
Incr Delay (d2), s/veh	0.7	0.9	2.7	3.1	0.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	2.9	6.7	5.8	1.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.6	10.3	13.7	14.1	15.4	14.4
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h		287	899		114	
Approach Delay, s/veh		10.9	13.9		15.2	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		15.9		4.2	13.7
Green Ext Time (p_c), s		1.2		0.2	3.7

Intersection Summary		
HCM 7th Control Delay, s/veh	13.4	
HCM 7th LOS	B	

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	99	433	4	10	18
Future Vol, veh/h	1	99	433	4	10	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	105	461	4	11	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	465	0	-	0	570	463
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	107	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1096	-	-	-	483	599
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	917	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1096	-	-	-	482	599
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.08	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	18	-	-	-	551
HCM Lane V/C Ratio	0.001	-	-	-	0.054
HCM Ctrl Dly (s/v)	8.3	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	35	6	3	39	2
Future Vol, veh/h	1	35	6	3	39	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	43	7	4	48	2

Major/Minor	Minor2		Major2	
Conflicting Flow All	99	2	0	0
Stage 1	99	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	791	1082	-	-
Stage 1	813	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1082	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.36	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1082	-	-
HCM Lane V/C Ratio	0.01	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	117	56	3	1	1
Future Vol, veh/h	3	117	56	3	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	3	129	62	3	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	198	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	135	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1464	-	-	-	790	1001
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	891	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1464	-	-	-	789	1001
Mov Cap-2 Maneuver	-	-	-	-	789	-
Stage 1	-	-	-	-	957	-
Stage 2	-	-	-	-	891	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	9.09
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1464	-	-	-	882
HCM Lane V/C Ratio	0.002	-	-	-	0.002
HCM Ctrl Dly (s/v)	7.5	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

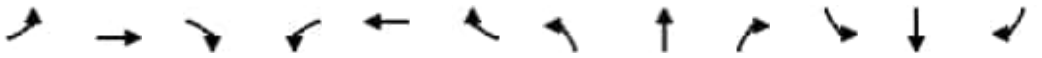
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	111	66	44	79	3
Future Vol, veh/h	4	111	66	44	79	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	123	73	49	88	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	122	0	-	0	230	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	132	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1394	-	-	-	758	958
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1394	-	-	-	756	958
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	894	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.26	0	10.37
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1394	-	-	-	762
HCM Lane V/C Ratio	0.003	-	-	-	0.12
HCM Ctrl Dly (s/v)	7.6	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	111	188	3	182	1	41	18	4	1	4	13
Future Volume (veh/h)	262	111	188	3	182	1	41	18	4	1	4	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	336	142	241	4	233	1	53	23	5	1	5	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	763	1542	688	365	691	3	218	182	40	31	155	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3456	15	1781	1489	324	309	1546	1585
Grp Volume(v), veh/h	336	142	241	4	114	120	53	0	28	6	0	17
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1779	1781	0	1812	1855	0	1585
Q Serve(g_s), s	10.4	2.1	9.3	0.2	5.2	5.2	2.4	0.0	1.2	0.3	0.0	0.6
Cycle Q Clear(g_c), s	10.4	2.1	9.3	0.2	5.2	5.2	2.4	0.0	1.2	0.3	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.18	0.17		1.00
Lane Grp Cap(c), veh/h	763	1542	688	365	338	356	218	0	221	185	0	652
V/C Ratio(X)	0.44	0.09	0.35	0.01	0.34	0.34	0.24	0.00	0.13	0.03	0.00	0.03
Avail Cap(c_a), veh/h	763	1542	688	365	338	356	218	0	221	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	13.9	15.9	25.0	30.9	30.9	35.7	0.0	35.2	36.6	0.0	15.8
Incr Delay (d2), s/veh	1.8	0.1	1.4	0.1	2.7	2.6	2.6	0.0	1.2	0.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	1.3	5.4	0.1	4.0	4.2	2.1	0.0	1.1	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.5	14.0	17.3	25.1	33.6	33.4	38.4	0.0	36.4	36.9	0.0	15.8
LnGrp LOS	B	B	B	C	C	C	D		D	D		B
Approach Vol, veh/h		719			238			81			23	
Approach Delay, s/veh		15.3			33.4			37.7			21.3	
Approach LOS		B			C			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.0	11.0	47.0		15.0	34.0	24.0				
Change Period (Y+Rc), s		6.0	6.0	6.0		6.0	6.0	6.0				
Max Green Setting (Gmax), s		11.0	5.0	41.0		9.0	28.0	18.0				
Max Q Clear Time (g_c+I1), s		4.4	2.2	11.3		2.6	12.4	7.2				
Green Ext Time (p_c), s		0.1	0.0	1.5		0.0	0.8	0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	21.2
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	17	127	1	1	1
Future Vol, veh/h	1	17	127	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	1	18	138	1	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	139	0	-	0	159	139
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1408	-	-	-	832	910
Stage 1	-	-	-	-	888	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1408	-	-	-	831	910
Mov Cap-2 Maneuver	-	-	-	-	831	-
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.42	0	9.15
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	100	-	-	-	869
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Ctrl Dly (s/v)	7.6	0	-	-	9.2
HCM Lane LOS	A	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	8	374	781	6	5	21
Future Vol, veh/h	8	374	781	6	5	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	8	394	822	6	5	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	828	0	-	0	1236	825
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	411	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	757	-	-	-	195	372
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	670	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	757	-	-	-	192	372
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	38	-	-	-	315
HCM Lane V/C Ratio	0.011	-	-	-	0.087
HCM Ctrl Dly (s/v)	9.8	0	-	-	17.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	8.8

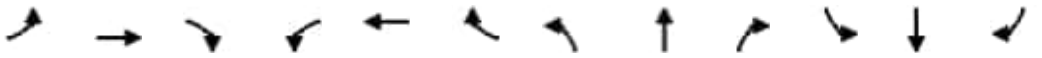
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	6	37	8	3	4	12	30	1	12	153	9
Future Vol, veh/h	20	6	37	8	3	4	12	30	1	12	153	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	7	42	9	3	5	14	34	1	14	174	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	8	0	0	49	0	0	182	99	28	93	118	6
Stage 1	-	-	-	-	-	-	73	73	-	24	24	-
Stage 2	-	-	-	-	-	-	109	26	-	69	94	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1612	-	-	1558	-	-	780	791	1047	890	772	1077
Stage 1	-	-	-	-	-	-	936	834	-	994	875	-
Stage 2	-	-	-	-	-	-	897	873	-	941	817	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1612	-	-	1558	-	-	585	775	1047	834	756	1077
Mov Cap-2 Maneuver	-	-	-	-	-	-	585	775	-	834	756	-
Stage 1	-	-	-	-	-	-	923	822	-	988	870	-
Stage 2	-	-	-	-	-	-	707	868	-	888	805	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.31	3.91	10.41	11.25
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	488	-	-	862	-	-	773
HCM Lane V/C Ratio	0.068	0.014	-	-	0.006	-	-	0.256
HCM Ctrl Dly (s/v)	10.4	7.3	0	-	7.3	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	1

25: Adam Shepherd & Mall Entrance/Conestoga



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	8	8	150	7	26	7	180	180	34	349	7
Future Volume (veh/h)	8	8	8	150	7	26	7	180	180	34	349	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	9	9	174	8	0	8	209	0	40	406	8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		294	561		339	1069	21
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	972	1870	1585	1173	3564	70
Grp Volume(v), veh/h	18	0	9	174	8	0	8	209	0	40	202	212
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	972	1870	1585	1173	1777	1858
Q Serve(g_s), s	0.6	0.0	0.4	6.5	0.3	0.0	0.5	7.0	0.0	2.2	7.2	7.2
Cycle Q Clear(g_c), s	0.6	0.0	0.4	6.5	0.3	0.0	7.7	7.0	0.0	9.3	7.2	7.2
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	411	0	357	445	468		294	561		339	533	557
V/C Ratio(X)	0.04	0.00	0.03	0.39	0.02		0.03	0.37		0.12	0.38	0.38
Avail Cap(c_a), veh/h	411	0	357	445	468		294	561		339	533	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	24.2	24.9	22.6	0.0	25.2	22.1	0.0	25.7	22.1	22.1
Incr Delay (d2), s/veh	0.2	0.0	0.1	2.6	0.1	0.0	0.2	1.9	0.0	0.7	2.0	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.3	5.1	0.2	0.0	0.2	5.8	0.0	1.2	5.7	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.5	0.0	24.3	27.5	22.7	0.0	25.3	24.0	0.0	26.4	24.2	24.1
LnGrp LOS	C		C	C	C		C	C		C	C	C
Approach Vol, veh/h		27			182			217			454	
Approach Delay, s/veh		24.4			27.3			24.0			24.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	30.0	24.0	30.0	26.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	24.0	18.0	24.0	20.0
Max Q Clear Time (g_c+I1), s	9.7	2.6	11.3	8.5
Green Ext Time (p_c), s	0.9	0.0	2.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	24.9
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	415	432	1099	290	298	1079
Future Volume (veh/h)	415	432	1099	290	298	1079
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	461	480	1221	322	331	1199
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	463	719	1292	576	345	2131
Arrive On Green	0.28	0.28	0.38	0.38	0.20	0.63
Sat Flow, veh/h	1682	1497	3445	1497	1682	3445
Grp Volume(v), veh/h	461	480	1221	322	331	1199
Grp Sat Flow(s),veh/h/ln	1682	1497	1678	1497	1682	1678
Q Serve(g_s), s	27.4	24.5	35.2	16.9	19.5	20.3
Cycle Q Clear(g_c), s	27.4	24.5	35.2	16.9	19.5	20.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	463	719	1292	576	345	2131
V/C Ratio(X)	1.00	0.67	0.94	0.56	0.96	0.56
Avail Cap(c_a), veh/h	463	719	1292	576	345	2131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	19.9	29.7	24.1	39.3	10.4
Incr Delay (d2), s/veh	41.0	4.9	14.9	3.9	39.3	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.0	13.1	21.6	10.0	16.7	10.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	77.2	24.8	44.6	28.0	78.6	11.4
LnGrp LOS	E	C	D	C	E	B
Approach Vol, veh/h	941		1543			1530
Approach Delay, s/veh	50.4		41.2			26.0
Approach LOS	D		D			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	35.0	43.0			68.0	32.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	30.5	38.5			63.5	27.5
Max Q Clear Time (g_c+I1), s	31.5	37.2			22.3	29.4
Green Ext Time (p_c), s	0.0	1.0			9.6	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	37.5
HCM 7th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	358	219	219	358	219	247	151	247	247	151	247
Future Volume (veh/h)	219	358	219	219	358	219	247	151	247	247	151	247
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	243	398	243	243	398	243	274	168	274	274	168	274
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	370	609	517	370	609	517	427	426	361	427	426	361
Arrive On Green	0.11	0.34	0.34	0.11	0.34	0.34	0.13	0.24	0.24	0.13	0.24	0.24
Sat Flow, veh/h	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Grp Volume(v), veh/h	243	398	243	243	398	243	274	168	274	274	168	274
Grp Sat Flow(s),veh/h/ln	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Q Serve(g_s), s	9.2	19.0	12.7	9.2	19.0	12.7	12.3	8.0	17.0	12.3	8.0	17.0
Cycle Q Clear(g_c), s	9.2	19.0	12.7	9.2	19.0	12.7	12.3	8.0	17.0	12.3	8.0	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	609	517	370	609	517	427	426	361	427	426	361
V/C Ratio(X)	0.66	0.65	0.47	0.66	0.65	0.47	0.64	0.39	0.76	0.64	0.39	0.76
Avail Cap(c_a), veh/h	370	609	517	370	609	517	427	426	361	427	426	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	27.7	25.6	20.1	27.7	25.6	24.5	31.8	35.3	24.5	31.8	35.3
Incr Delay (d2), s/veh	8.8	5.4	3.1	8.8	5.4	3.1	7.2	2.7	13.9	7.2	2.7	13.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.3	12.9	8.1	7.3	12.9	8.1	9.1	6.3	11.5	9.1	6.3	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.9	33.1	28.7	28.9	33.1	28.7	31.7	34.6	49.2	31.7	34.6	49.2
LnGrp LOS	C	C	C	C	C	C	C	C	D	C	C	D
Approach Vol, veh/h		884			884			716			716	
Approach Delay, s/veh		30.7			30.7			39.1			39.1	
Approach LOS		C			C			D			D	

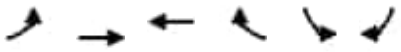
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	28.6	15.4	39.0	17.0	28.6	15.4	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.5	24.1	10.9	34.5	12.5	24.1	10.9	34.5
Max Q Clear Time (g_c+I1), s	14.3	19.0	11.2	21.0	14.3	19.0	11.2	21.0
Green Ext Time (p_c), s	0.0	0.8	0.0	2.4	0.0	0.8	0.0	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	34.5
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1	22	22	1	22	12	544	12	12	544	12
Future Volume (veh/h)	22	1	22	22	1	22	12	544	12	12	544	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	1	24	24	1	24	13	604	13	13	604	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	323	12	296	323	12	296	487	1215	26	487	1215	26
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1309	60	1446	1309	60	1446	761	1723	37	761	1723	37
Grp Volume(v), veh/h	24	0	25	24	0	25	13	0	617	13	0	617
Grp Sat Flow(s),veh/h/ln	1309	0	1506	1309	0	1506	761	0	1760	761	0	1760
Q Serve(g_s), s	1.5	0.0	1.3	1.5	0.0	1.3	0.8	0.0	15.9	0.8	0.0	15.9
Cycle Q Clear(g_c), s	2.9	0.0	1.3	2.9	0.0	1.3	16.7	0.0	15.9	16.7	0.0	15.9
Prop In Lane	1.00		0.96	1.00		0.96	1.00		0.02	1.00		0.02
Lane Grp Cap(c), veh/h	323	0	309	323	0	309	487	0	1241	487	0	1241
V/C Ratio(X)	0.07	0.00	0.08	0.07	0.00	0.08	0.03	0.00	0.50	0.03	0.00	0.50
Avail Cap(c_a), veh/h	323	0	309	323	0	309	487	0	1241	487	0	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	32.1	33.3	0.0	32.1	10.5	0.0	6.7	10.5	0.0	6.7
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.4	0.0	0.5	0.1	0.0	1.4	0.1	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	1.0	0.9	0.0	1.0	0.2	0.0	7.9	0.2	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.7	0.0	32.6	33.7	0.0	32.6	10.6	0.0	8.1	10.6	0.0	8.1
LnGrp LOS	C		C	C		C	B		A	B		A
Approach Vol, veh/h		49			49			630			630	
Approach Delay, s/veh		33.2			33.2			8.2			8.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	75.0	25.0	75.0	25.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	70.5	20.5	70.5	20.5
Max Q Clear Time (g_c+I1), s	18.7	4.9	18.7	4.9
Green Ext Time (p_c), s	4.0	0.1	4.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	10.0
HCM 7th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	107	58	510	588	49
Future Volume (veh/h)	78	107	58	510	588	49
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	87	119	64	567	653	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	193	601	318	1123	959	853
Arrive On Green	0.12	0.34	0.18	0.18	0.57	0.57
Sat Flow, veh/h	1682	1767	1767	1497	1682	1497
Grp Volume(v), veh/h	87	119	64	567	653	54
Grp Sat Flow(s),veh/h/ln	1682	1767	1767	1497	1682	1497
Q Serve(g_s), s	4.8	4.8	3.1	15.2	27.3	1.6
Cycle Q Clear(g_c), s	4.8	4.8	3.1	15.2	27.3	1.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	193	601	318	1123	959	853
V/C Ratio(X)	0.45	0.20	0.20	0.50	0.68	0.06
Avail Cap(c_a), veh/h	193	601	318	1123	959	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	23.4	34.9	5.0	15.1	9.6
Incr Delay (d2), s/veh	7.4	0.7	1.4	1.6	3.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	3.5	2.5	20.1	14.5	3.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	48.7	24.1	36.3	6.7	19.0	9.7
LnGrp LOS	D	C	D	A	B	A
Approach Vol, veh/h		206	631		707	
Approach Delay, s/veh		34.5	9.7		18.3	
Approach LOS		C	A		B	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	38.5	61.5	16.0	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	34.0	57.0	11.5	18.0
Max Q Clear Time (g_c+I1), s	6.8	29.3	6.8	17.2
Green Ext Time (p_c), s	0.5	2.3	0.1	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	16.9
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	936	2	2	863
Future Vol, veh/h	1	1	936	2	2	863
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	1006	2	2	928

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1476	504	0	0	1009	0
Stage 1	1008	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	111	497	-	-	637	-
Stage 1	300	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	110	497	-	-	637	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	300	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	25.12	0	0.02
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	110	497	637	-
HCM Lane V/C Ratio	-	-	0.01	0.002	0.003	-
HCM Ctrl Dly (s/v)	-	-	38	12.3	10.7	-
HCM Lane LOS	-	-	E	B	B	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Future Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	180	1	1	1	221	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	2	0	0	8	189	2	98	99	92
Stage 1	-	-	-	-	-	-	4	4	-	94	94	-
Stage 2	-	-	-	-	-	-	4	185	-	4	4	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1582	-	-	1012	706	1083	884	791	965
Stage 1	-	-	-	-	-	-	1019	893	-	912	817	-
Stage 2	-	-	-	-	-	-	1019	747	-	1019	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1582	-	-	1008	704	1083	879	789	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	1008	704	-	879	789	-
Stage 1	-	-	-	-	-	-	1018	892	-	911	815	-
Stage 2	-	-	-	-	-	-	1015	746	-	1016	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.55	0.04	9.02	10.48
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	899	545	-	-	9	-	-	879
HCM Lane V/C Ratio	0.004	0.001	-	-	0.001	-	-	0.253
HCM Ctrl Dly (s/v)	9	7.7	0	-	7.3	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	1

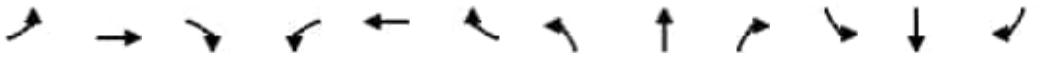
Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	210	434	39	171	419
Future Vol, veh/h	26	210	434	39	171	419
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	28	223	462	41	182	446

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1069	252	0	0	503	0
Stage 1	482	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	216	748	-	-	1003	-
Stage 1	587	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	748	-	-	1003	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	425	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.75	0	2.72
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	177	748	1003	-
HCM Lane V/C Ratio	-	-	0.156	0.299	0.181	-
HCM Ctrl Dly (s/v)	-	-	29.1	11.8	9.4	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	1.3	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	186	1	218	1	400	128	216	465	1
Future Volume (veh/h)	1	1	1	186	1	218	1	400	128	216	465	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	194	1	227	1	417	133	225	484	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	137	135	109	426	2	456	526	1475	465	487	2019	4
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	289	469	379	1415	7	1579	875	2552	806	824	3494	7
Grp Volume(v), veh/h	3	0	0	194	0	228	1	277	273	225	236	249
Grp Sat Flow(s),veh/h/ln	1136	0	0	1415	0	1586	875	1706	1651	824	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	10.7	0.1	7.4	7.5	17.1	6.1	6.1
Cycle Q Clear(g_c), s	10.8	0.0	0.0	14.8	0.0	10.7	6.2	7.4	7.5	24.6	6.1	6.1
Prop In Lane	0.33		0.33	1.00		1.00	1.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	381	0	0	426	0	458	526	986	954	487	986	1037
V/C Ratio(X)	0.01	0.00	0.00	0.46	0.00	0.50	0.00	0.28	0.29	0.46	0.24	0.24
Avail Cap(c_a), veh/h	381	0	0	426	0	458	526	986	954	487	986	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	0.0	28.7	0.0	26.6	10.8	9.6	9.6	15.8	9.3	9.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.5	0.0	3.8	0.0	0.7	0.8	3.1	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.0	0.0	4.4	0.0	2.5	2.5	3.2	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.1	0.0	0.0	32.2	0.0	30.4	10.8	10.3	10.4	19.0	9.9	9.9
LnGrp LOS	C			C		C	B	B	B	B	A	A
Approach Vol, veh/h		3			422			551			710	
Approach Delay, s/veh		23.1			31.2			10.3			12.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.0		32.0		58.0		32.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		52.0		26.0		52.0		26.0				
Max Q Clear Time (g_c+I1), s		9.5		12.8		26.6		16.8				
Green Ext Time (p_c), s		3.3		0.0		4.2		1.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			16.6									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	238	80	98	228	68	95	282	86	100	361	142
Future Volume (veh/h)	102	238	80	98	228	68	95	282	86	100	361	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	104	243	82	100	233	69	97	288	88	102	368	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	171	339	114	170	348	103	171	539	457	202	572	484
Arrive On Green	0.10	0.26	0.26	0.10	0.26	0.26	0.10	0.30	0.30	0.12	0.32	0.32
Sat Flow, veh/h	1711	1285	434	1697	1320	391	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	104	0	325	100	0	302	97	288	88	102	368	145
Grp Sat Flow(s),veh/h/ln	1711	0	1718	1697	0	1711	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	6.4	0.0	18.9	6.2	0.0	17.4	6.0	14.7	4.7	6.2	19.3	7.9
Cycle Q Clear(g_c), s	6.4	0.0	18.9	6.2	0.0	17.4	6.0	14.7	4.7	6.2	19.3	7.9
Prop In Lane	1.00		0.25	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	0	453	170	0	451	171	539	457	202	572	484
V/C Ratio(X)	0.61	0.00	0.72	0.59	0.00	0.67	0.57	0.53	0.19	0.50	0.64	0.30
Avail Cap(c_a), veh/h	171	0	453	170	0	451	171	539	457	202	572	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	36.8	47.3	0.0	36.2	47.2	32.1	28.6	45.5	32.2	28.3
Incr Delay (d2), s/veh	15.0	0.0	9.4	14.1	0.0	7.7	12.9	3.8	0.9	8.7	5.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	8.9	3.3	0.0	8.1	3.1	6.8	1.8	3.1	9.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.5	0.0	46.2	61.5	0.0	43.9	60.1	35.9	29.5	54.2	37.7	29.8
LnGrp LOS	E		D	E		D	E	D	C	D	D	C
Approach Vol, veh/h		429			402			473			615	
Approach Delay, s/veh		50.1			48.3			39.7			38.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	39.0	17.0	35.0	17.0	41.0	17.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	33.0	11.0	29.0	11.0	35.0	11.0	29.0
Max Q Clear Time (g_c+I1), s	8.2	16.7	8.2	20.9	8.0	21.3	8.4	19.4
Green Ext Time (p_c), s	0.1	1.7	0.1	1.2	0.1	2.2	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	43.5
HCM 7th LOS	D

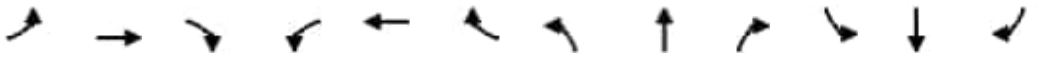
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Future Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	4	1	22	1	1	2	7	451	1	3	554	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1027	1028	556	1026	1029	451	558	0	0	452	0	0
Stage 1	562	562	-	465	465	-	-	-	-	-	-	-
Stage 2	465	466	-	560	564	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	213	234	531	213	234	608	988	-	-	1083	-	-
Stage 1	512	510	-	577	563	-	-	-	-	-	-	-
Stage 2	577	562	-	513	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	232	531	201	231	608	988	-	-	1083	-	-
Mov Cap-2 Maneuver	209	232	-	201	231	-	-	-	-	-	-	-
Stage 1	510	508	-	573	559	-	-	-	-	-	-	-
Stage 2	570	558	-	489	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.33	16.47	0.14	0.05
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	412	318	1083	-	-
HCM Lane V/C Ratio	0.007	-	-	0.065	0.013	0.003	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	14.3	16.5	8.3	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	9	22	118	1	11	4	364	119	23	520	1
Future Volume (veh/h)	3	9	22	118	1	11	4	364	119	23	520	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	3	9	22	120	1	11	4	371	121	23	531	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	59	134	274	436	3	405	455	1098	930	523	1095	2
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	59	526	1072	1393	13	1585	837	1796	1522	869	1792	3
Grp Volume(v), veh/h	34	0	0	121	0	11	4	371	121	23	0	532
Grp Sat Flow(s),veh/h/ln	1658	0	0	1406	0	1585	837	1796	1522	869	0	1796
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	0.5	0.2	9.1	3.0	1.2	0.0	14.7
Cycle Q Clear(g_c), s	1.4	0.0	0.0	6.0	0.0	0.5	15.0	9.1	3.0	10.3	0.0	14.7
Prop In Lane	0.09		0.65	0.99		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	467	0	0	439	0	405	455	1098	930	523	0	1097
V/C Ratio(X)	0.07	0.00	0.00	0.28	0.00	0.03	0.01	0.34	0.13	0.04	0.00	0.48
Avail Cap(c_a), veh/h	467	0	0	439	0	405	455	1098	930	523	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	0.0	27.1	0.0	25.1	13.8	8.6	7.4	11.1	0.0	9.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.6	0.0	0.1	0.0	0.8	0.3	0.2	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	2.2	0.0	0.2	0.0	3.3	0.9	0.2	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.8	0.0	0.0	28.6	0.0	25.2	13.8	9.4	7.7	11.3	0.0	11.2
LnGrp LOS	C			C		C	B	A	A	B		B
Approach Vol, veh/h		34			132			496			555	
Approach Delay, s/veh		25.8			28.3			9.0			11.2	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		17.0		3.4		16.7		8.0				
Green Ext Time (p_c), s		2.8		0.1		3.9		0.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			12.6									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	78	381	6	93	522
Future Vol, veh/h	5	78	381	6	93	522
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	5	79	385	6	94	527

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1103	388	0	0	391	0
Stage 1	388	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	234	660	-	-	1141	-
Stage 1	686	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	207	660	-	-	1141	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.21	0	1.28
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	583	272	-
HCM Lane V/C Ratio	-	-	0.144	0.082	-
HCM Ctrl Dly (s/v)	-	-	12.2	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	115	214	22	98	271
Future Vol, veh/h	25	115	214	22	98	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	26	121	225	23	103	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	728	237	0	0	248	0
Stage 1	237	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	373	773	-	-	1289	-
Stage 1	775	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	343	773	-	-	1289	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.56	0	2.13
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	343	773	1289	-
HCM Lane V/C Ratio	-	-	0.077	0.157	0.08	-
HCM Ctrl Dly (s/v)	-	-	16.4	10.5	8	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.6	0.3	-

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	85	134	81	80	211
Future Vol, veh/h	71	85	134	81	80	211
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	75	89	141	85	84	222

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	532	141	0	0	226	0
Stage 1	141	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	491	881	-	-	1307	-
Stage 1	862	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	460	881	-	-	1307	-
Mov Cap-2 Maneuver	460	-	-	-	-	-
Stage 1	862	-	-	-	-	-
Stage 2	620	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.73	0	2.18
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	460	881	1307	-
HCM Lane V/C Ratio	-	-	0.163	0.102	0.064	-
HCM Ctrl Dly (s/v)	-	-	14.3	9.5	7.9	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.3	0.2	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	333	363	36	33	33
Future Vol, veh/h	25	333	363	36	33	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	26	340	370	37	34	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	407	0	-	0	780	389
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1125	-	-	-	364	659
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	354	659
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.58	0	14.15
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	126	-	-	-	461
HCM Lane V/C Ratio	0.023	-	-	-	0.146
HCM Ctrl Dly (s/v)	8.3	0	-	-	14.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

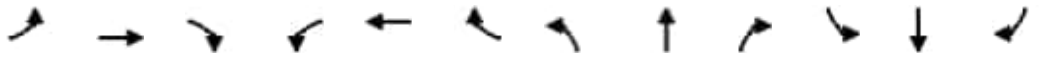
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	1	15	345	1	1
Future Vol, veh/h	87	1	15	345	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	161	2	28	639	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	856	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	694	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1386	-	328	883
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1386	-	318	883
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.32	12.77
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	467	-	-	75	-
HCM Lane V/C Ratio	0.008	-	-	0.02	-
HCM Ctrl Dly (s/v)	12.8	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

13: Paroquet Springs/Adam Shepherd & KY-44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	346	12	117	393	708	7	43	92	451	24	29
Future Volume (veh/h)	71	346	12	117	393	708	7	43	92	451	24	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	353	12	119	401	722	7	44	94	477	0	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	156	536	239	226	677	805	312	327	489	1188	0	528
Arrive On Green	0.09	0.16	0.16	0.13	0.20	0.20	0.17	0.17	0.17	0.33	0.00	0.33
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	1585	3563	0	1585
Grp Volume(v), veh/h	72	353	12	119	401	722	7	44	94	477	0	30
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1585	1781	0	1585
Q Serve(g_s), s	4.8	11.8	0.8	7.8	12.9	24.0	0.4	2.4	5.2	12.4	0.0	1.5
Cycle Q Clear(g_c), s	4.8	11.8	0.8	7.8	12.9	24.0	0.4	2.4	5.2	12.4	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	536	239	226	677	805	312	327	489	1188	0	528
V/C Ratio(X)	0.46	0.66	0.05	0.53	0.59	0.90	0.02	0.13	0.19	0.40	0.00	0.06
Avail Cap(c_a), veh/h	156	536	239	226	677	805	312	327	489	1188	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	47.5	42.8	48.5	43.6	18.7	41.0	41.8	30.5	30.8	0.0	27.2
Incr Delay (d2), s/veh	9.6	6.2	0.4	8.5	3.8	14.7	0.1	0.9	0.9	1.0	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.4	0.3	3.8	5.7	25.1	0.2	1.2	2.1	5.4	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.3	53.7	43.2	57.0	47.3	33.4	41.1	42.7	31.4	31.8	0.0	27.4
LnGrp LOS	E	D	D	E	D	C	D	D	C	C		C
Approach Vol, veh/h		437			1242			145			507	
Approach Delay, s/veh		54.6			40.2			35.3			31.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	27.0	22.0	25.0	46.0	17.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	21.0	16.0	19.0	40.0	11.0	24.0
Max Q Clear Time (g_c+I1), s	7.2	9.8	13.8	14.4	6.8	26.0
Green Ext Time (p_c), s	0.4	0.1	1.0	1.8	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	40.7
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	641	7	294	795	0	0	0	0	340	9	456
Future Volume (veh/h)	0	641	7	294	795	0	0	0	0	340	9	456
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	654	0	300	811	0				347	9	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		601	2369	0				332	9	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1738	45	1585
Grp Volume(v), veh/h	0	654	0	300	811	0				356	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	13.4	0.0	7.9	10.4	0.0				21.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.4	0.0	7.9	10.4	0.0				21.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	1662		601	2369	0				340	0	
V/C Ratio(X)	0.00	0.39		0.50	0.34	0.00				1.05	0.00	
Avail Cap(c_a), veh/h	0	1662		601	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.7	0.0	9.4	6.5	0.0				44.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	2.9	0.4	0.0				61.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	0.0	3.1	3.4	0.0				14.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	18.4	0.0	12.3	6.9	0.0				105.7	0.0	0.0
LnGrp LOS		B		B	A					F		
Approach Vol, veh/h		654			1111						356	
Approach Delay, s/veh		18.4			8.4						105.7	
Approach LOS		B			A						F	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		9.9	15.4		23.0		12.4					
Green Ext Time (p_c), s		0.5	5.0		0.0		6.8					

Intersection Summary	
HCM 7th Control Delay, s/veh	27.8
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

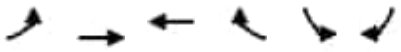
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	731	0	0	833	363	290
Future Volume (veh/h)	731	0	0	833	363	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	746	0	0	850	370	296
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.36	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	746	0	0	850	370	296
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	19.8	0.0	0.0	23.5	13.6	11.9
Cycle Q Clear(g_c), s	19.8	0.0	0.0	23.5	13.6	11.9
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.61	0.00	0.00	0.69	0.39	0.35
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	0.0	29.7	15.5	15.1
Incr Delay (d2), s/veh	2.2	0.0	0.0	3.2	1.2	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0	9.8	5.6	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.8	0.0	0.0	32.9	16.8	16.3
LnGrp LOS	C			C	B	B
Approach Vol, veh/h	746			850	666	
Approach Delay, s/veh	30.8			32.9	16.5	
Approach LOS	C			C	B	

Timer - Assigned Phs		4	6	8
Phs Duration (G+Y+Rc), s		46.0	64.0	46.0
Change Period (Y+Rc), s		6.0	6.0	6.0
Max Green Setting (Gmax), s		40.0	58.0	40.0
Max Q Clear Time (g_c+I1), s		25.5	15.6	21.8
Green Ext Time (p_c), s		5.0	2.3	4.8

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	461	469	190	294	50
Future Volume (veh/h)	37	461	469	190	294	50
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	39	480	489	198	306	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	327	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	719	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	39	480	489	198	306	52
Grp Sat Flow(s),veh/h/ln	719	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.4	11.4	11.7	4.7	8.5	1.4
Cycle Q Clear(g_c), s	14.2	11.4	11.7	4.7	8.5	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	327	861	861	730	564	502
V/C Ratio(X)	0.12	0.56	0.57	0.27	0.54	0.10
Avail Cap(c_a), veh/h	327	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	11.0	11.0	9.2	16.9	14.5
Incr Delay (d2), s/veh	0.7	2.6	2.7	0.9	3.7	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.6	3.7	1.2	3.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.8	13.6	13.7	10.1	20.6	14.9
LnGrp LOS	B	B	B	B	C	B
Approach Vol, veh/h		519	687		358	
Approach Delay, s/veh		13.8	12.7		19.8	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		16.2		10.5	13.7
Green Ext Time (p_c), s		2.3		0.7	2.9

Intersection Summary		
HCM 7th Control Delay, s/veh	14.7	
HCM 7th LOS	B	

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	350	223	23	16	11
Future Vol, veh/h	33	350	223	23	16	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	376	240	25	17	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	265	0	-	0	699	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	447	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1300	-	-	-	406	787
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1300	-	-	-	392	787
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	644	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.68	0	12.77
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	155	-	-	-	492
HCM Lane V/C Ratio	0.027	-	-	-	0.059
HCM Ctrl Dly (s/v)	7.8	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	104	4	1	84	6
Future Vol, veh/h	4	104	4	1	84	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	111	4	1	89	6

Major/Minor	Minor2		Major2	
Conflicting Flow All	185	6	0	0
Stage 1	185	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	709	1076	-	-
Stage 1	747	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1076	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.36	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1076	-	-
HCM Lane V/C Ratio	0.005	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	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	4	131	149	3	1	8
Future Vol, veh/h	4	131	149	3	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	139	159	3	1	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	162	0	-	0	308	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1347	-	-	-	684	885
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1347	-	-	-	682	885
Mov Cap-2 Maneuver	-	-	-	-	682	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	880	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.23	0	9.25
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1347	-	-	-	857
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Ctrl Dly (s/v)	7.7	-	-	-	9.2
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

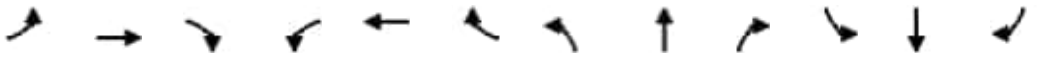
Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	127	159	131	148	5
Future Vol, veh/h	4	127	159	131	148	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	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	4	137	171	141	159	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	312	0	-	0	387	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1184	-	-	-	617	797
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1184	-	-	-	614	797
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	882	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.25	0	12.91
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1184	-	-	-	619
HCM Lane V/C Ratio	0.004	-	-	-	0.266
HCM Ctrl Dly (s/v)	8.1	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	297	92	11	147	2	139	34	15	5	22	253
Future Volume (veh/h)	264	297	92	11	147	2	139	34	15	5	22	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	267	300	93	11	148	2	140	34	15	5	22	256
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	801	1542	688	363	684	9	218	150	66	34	151	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3419	46	1781	1230	543	343	1510	1585
Grp Volume(v), veh/h	267	300	93	11	73	77	140	0	49	27	0	256
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1773	1781	0	1773	1853	0	1585
Q Serve(g_s), s	7.8	4.8	3.2	0.4	3.3	3.3	6.7	0.0	2.2	1.2	0.0	9.0
Cycle Q Clear(g_c), s	7.8	4.8	3.2	0.4	3.3	3.3	6.7	0.0	2.2	1.2	0.0	9.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.31	0.19		1.00
Lane Grp Cap(c), veh/h	801	1542	688	363	338	355	218	0	217	185	0	652
V/C Ratio(X)	0.33	0.19	0.14	0.03	0.22	0.22	0.64	0.00	0.23	0.15	0.00	0.39
Avail Cap(c_a), veh/h	801	1542	688	363	338	355	218	0	217	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.8	14.6	14.2	25.1	30.1	30.1	37.6	0.0	35.7	37.0	0.0	18.6
Incr Delay (d2), s/veh	1.1	0.3	0.4	0.2	1.5	1.4	13.7	0.0	2.4	1.6	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.6	1.0	0.2	1.4	1.4	3.7	0.0	1.1	0.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.9	14.9	14.6	25.3	31.6	31.5	51.4	0.0	38.1	38.6	0.0	20.4
LnGrp LOS	B	B	B	C	C	C	D		D	D		C
Approach Vol, veh/h		660			161			189			283	
Approach Delay, s/veh		14.1			31.1			47.9			22.1	
Approach LOS		B			C			D			C	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	17.0	11.0	47.0		15.0	34.0	24.0					
Change Period (Y+Rc), s	6.0	6.0	6.0		6.0	6.0	6.0					
Max Green Setting (Gmax), s	11.0	5.0	41.0		9.0	28.0	18.0					
Max Q Clear Time (g_c+I1), s	8.7	2.4	6.8		11.0	9.8	5.3					
Green Ext Time (p_c), s	0.1	0.0	2.0		0.0	0.7	0.5					

Intersection Summary	
HCM 7th Control Delay, s/veh	22.9
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	112	52	1	1	1
Future Vol, veh/h	1	112	52	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	1	119	55	1	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	56	0	-	0	177	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1511	-	-	-	813	1011
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	904	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1511	-	-	-	812	1011
Mov Cap-2 Maneuver	-	-	-	-	812	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	904	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.07	0	9.01
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	16	-	-	-	901
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Ctrl Dly (s/v)	7.4	0	-	-	9
HCM Lane LOS	A	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	17	681	460	10	10	11
Future Vol, veh/h	17	681	460	10	10	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	17	688	465	10	10	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	475	0	-	0	1192	470
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	722	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1032	-	-	-	207	594
Stage 1	-	-	-	-	629	-
Stage 2	-	-	-	-	481	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1032	-	-	-	201	594
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	481	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	17.56
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	44	-	-	-	308
HCM Lane V/C Ratio	0.017	-	-	-	0.069
HCM Ctrl Dly (s/v)	8.5	0	-	-	17.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

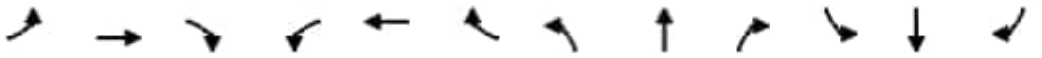
Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	13	24	7	11	7	40	126	8	9	120	36
Future Vol, veh/h	31	13	24	7	11	7	40	126	8	9	120	36
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	13	25	7	11	7	41	130	8	9	124	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	19	0	0	38	0	0	177	123	26	172	131	15
Stage 1	-	-	-	-	-	-	90	90	-	29	29	-
Stage 2	-	-	-	-	-	-	88	33	-	142	102	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1598	-	-	1572	-	-	785	768	1050	792	759	1065
Stage 1	-	-	-	-	-	-	918	821	-	987	871	-
Stage 2	-	-	-	-	-	-	920	868	-	861	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1598	-	-	1572	-	-	618	748	1050	636	740	1065
Mov Cap-2 Maneuver	-	-	-	-	-	-	618	748	-	636	740	-
Stage 1	-	-	-	-	-	-	899	804	-	983	867	-
Stage 2	-	-	-	-	-	-	758	864	-	701	794	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.33	2.04	11.62	10.85
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	723	726	-	-	468	-	-	785
HCM Lane V/C Ratio	0.248	0.02	-	-	0.005	-	-	0.217
HCM Ctrl Dly (s/v)	11.6	7.3	0	-	7.3	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	20	267	16	107	17	242	357	95	207	18
Future Volume (veh/h)	20	20	20	267	16	107	17	242	357	95	207	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	21	21	278	17	0	18	252	0	99	216	19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		377	561		305	992	87
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	1145	1870	1585	1128	3307	288
Grp Volume(v), veh/h	42	0	21	278	17	0	18	252	0	99	115	120
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	1145	1870	1585	1128	1777	1818
Q Serve(g_s), s	1.5	0.0	0.8	11.1	0.6	0.0	1.0	8.7	0.0	6.2	3.9	3.9
Cycle Q Clear(g_c), s	1.5	0.0	0.8	11.1	0.6	0.0	4.9	8.7	0.0	14.9	3.9	3.9
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	411	0	357	445	468		377	561		305	533	546
V/C Ratio(X)	0.10	0.00	0.06	0.62	0.04		0.05	0.45		0.32	0.22	0.22
Avail Cap(c_a), veh/h	411	0	357	445	468		377	561		305	533	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	24.3	26.7	22.7	0.0	22.8	22.7	0.0	28.7	21.0	21.0
Incr Delay (d2), s/veh	0.5	0.0	0.3	6.5	0.1	0.0	0.2	2.6	0.0	2.8	0.9	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	5.1	0.2	0.0	0.3	4.0	0.0	1.9	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.1	0.0	24.7	33.1	22.9	0.0	23.1	25.2	0.0	31.5	21.9	21.9
LnGrp LOS	C		C	C	C		C	C		C	C	C
Approach Vol, veh/h		63			295			270			334	
Approach Delay, s/veh		24.9			32.5			25.1			24.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.0		30.0		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		18.0		24.0		20.0				
Max Q Clear Time (g_c+I1), s		10.7		3.5		16.9		13.1				
Green Ext Time (p_c), s		1.1		0.2		0.9		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	27.2
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	415	432	1099	290	298	1079
Future Volume (veh/h)	415	432	1099	290	298	1079
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	461	480	1221	322	331	1199
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	463	719	1292	576	345	2131
Arrive On Green	0.28	0.28	0.38	0.38	0.20	0.63
Sat Flow, veh/h	1682	1497	3445	1497	1682	3445
Grp Volume(v), veh/h	461	480	1221	322	331	1199
Grp Sat Flow(s),veh/h/ln	1682	1497	1678	1497	1682	1678
Q Serve(g_s), s	27.4	24.5	35.2	16.9	19.5	20.3
Cycle Q Clear(g_c), s	27.4	24.5	35.2	16.9	19.5	20.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	463	719	1292	576	345	2131
V/C Ratio(X)	1.00	0.67	0.94	0.56	0.96	0.56
Avail Cap(c_a), veh/h	463	719	1292	576	345	2131
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	19.9	29.7	24.1	39.3	10.4
Incr Delay (d2), s/veh	41.0	4.9	14.9	3.9	39.3	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	8.3	15.2	6.0	11.2	6.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	77.2	24.8	44.6	28.0	78.6	11.4
LnGrp LOS	E	C	D	C	E	B
Approach Vol, veh/h	941		1543			1530
Approach Delay, s/veh	50.4		41.2			26.0
Approach LOS	D		D			C

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	35.0	43.0			68.0	32.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	30.5	38.5			63.5	27.5
Max Q Clear Time (g_c+I1), s	31.5	37.2			22.3	29.4
Green Ext Time (p_c), s	0.0	1.0			9.6	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	37.5
HCM 7th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	358	219	219	358	219	247	151	247	247	151	247
Future Volume (veh/h)	219	358	219	219	358	219	247	151	247	247	151	247
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	243	398	243	243	398	243	274	168	274	274	168	274
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	370	609	517	370	609	517	427	426	361	427	426	361
Arrive On Green	0.11	0.34	0.34	0.11	0.34	0.34	0.13	0.24	0.24	0.13	0.24	0.24
Sat Flow, veh/h	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Grp Volume(v), veh/h	243	398	243	243	398	243	274	168	274	274	168	274
Grp Sat Flow(s),veh/h/ln	1682	1767	1497	1682	1767	1497	1682	1767	1497	1682	1767	1497
Q Serve(g_s), s	9.2	19.0	12.7	9.2	19.0	12.7	12.3	8.0	17.0	12.3	8.0	17.0
Cycle Q Clear(g_c), s	9.2	19.0	12.7	9.2	19.0	12.7	12.3	8.0	17.0	12.3	8.0	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	609	517	370	609	517	427	426	361	427	426	361
V/C Ratio(X)	0.66	0.65	0.47	0.66	0.65	0.47	0.64	0.39	0.76	0.64	0.39	0.76
Avail Cap(c_a), veh/h	370	609	517	370	609	517	427	426	361	427	426	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	27.7	25.6	20.1	27.7	25.6	24.5	31.8	35.3	24.5	31.8	35.3
Incr Delay (d2), s/veh	8.8	5.4	3.1	8.8	5.4	3.1	7.2	2.7	13.9	7.2	2.7	13.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	8.2	4.6	4.1	8.2	4.6	5.3	3.5	7.1	5.3	3.5	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.9	33.1	28.7	28.9	33.1	28.7	31.7	34.6	49.2	31.7	34.6	49.2
LnGrp LOS	C	C	C	C	C	C	C	C	D	C	C	D
Approach Vol, veh/h		884			884			716			716	
Approach Delay, s/veh		30.7			30.7			39.1			39.1	
Approach LOS		C			C			D			D	

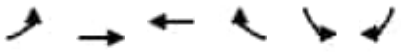
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	28.6	15.4	39.0	17.0	28.6	15.4	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.5	24.1	10.9	34.5	12.5	24.1	10.9	34.5
Max Q Clear Time (g_c+I1), s	14.3	19.0	11.2	21.0	14.3	19.0	11.2	21.0
Green Ext Time (p_c), s	0.0	0.8	0.0	2.4	0.0	0.8	0.0	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	34.5
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1	22	22	1	22	12	544	12	12	544	12
Future Volume (veh/h)	22	1	22	22	1	22	12	544	12	12	544	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	24	1	24	24	1	24	13	604	13	13	604	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9	9	9	9	9	9	9
Cap, veh/h	323	12	296	323	12	296	487	1215	26	487	1215	26
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.70	0.70	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1309	60	1446	1309	60	1446	761	1723	37	761	1723	37
Grp Volume(v), veh/h	24	0	25	24	0	25	13	0	617	13	0	617
Grp Sat Flow(s),veh/h/ln	1309	0	1506	1309	0	1506	761	0	1760	761	0	1760
Q Serve(g_s), s	1.5	0.0	1.3	1.5	0.0	1.3	0.8	0.0	15.9	0.8	0.0	15.9
Cycle Q Clear(g_c), s	2.9	0.0	1.3	2.9	0.0	1.3	16.7	0.0	15.9	16.7	0.0	15.9
Prop In Lane	1.00		0.96	1.00		0.96	1.00		0.02	1.00		0.02
Lane Grp Cap(c), veh/h	323	0	309	323	0	309	487	0	1241	487	0	1241
V/C Ratio(X)	0.07	0.00	0.08	0.07	0.00	0.08	0.03	0.00	0.50	0.03	0.00	0.50
Avail Cap(c_a), veh/h	323	0	309	323	0	309	487	0	1241	487	0	1241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	32.1	33.3	0.0	32.1	10.5	0.0	6.7	10.5	0.0	6.7
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.4	0.0	0.5	0.1	0.0	1.4	0.1	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.5	0.5	0.0	0.5	0.1	0.0	4.5	0.1	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.7	0.0	32.6	33.7	0.0	32.6	10.6	0.0	8.1	10.6	0.0	8.1
LnGrp LOS	C		C	C		C	B		A	B		A
Approach Vol, veh/h		49			49			630			630	
Approach Delay, s/veh		33.2			33.2			8.2			8.2	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	75.0	25.0	75.0	25.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	70.5	20.5	70.5	20.5
Max Q Clear Time (g_c+I1), s	18.7	4.9	18.7	4.9
Green Ext Time (p_c), s	4.0	0.1	4.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	10.0
HCM 7th LOS	A



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	107	58	510	588	49
Future Volume (veh/h)	78	107	58	510	588	49
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	87	119	64	567	653	54
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	193	601	318	1123	959	853
Arrive On Green	0.12	0.34	0.18	0.18	0.57	0.57
Sat Flow, veh/h	1682	1767	1767	1497	1682	1497
Grp Volume(v), veh/h	87	119	64	567	653	54
Grp Sat Flow(s),veh/h/ln	1682	1767	1767	1497	1682	1497
Q Serve(g_s), s	4.8	4.8	3.1	15.2	27.3	1.6
Cycle Q Clear(g_c), s	4.8	4.8	3.1	15.2	27.3	1.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	193	601	318	1123	959	853
V/C Ratio(X)	0.45	0.20	0.20	0.50	0.68	0.06
Avail Cap(c_a), veh/h	193	601	318	1123	959	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	23.4	34.9	5.0	15.1	9.6
Incr Delay (d2), s/veh	7.4	0.7	1.4	1.6	3.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.0	1.4	14.0	9.5	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	48.7	24.1	36.3	6.7	19.0	9.7
LnGrp LOS	D	C	D	A	B	A
Approach Vol, veh/h		206	631		707	
Approach Delay, s/veh		34.5	9.7		18.3	
Approach LOS		C	A		B	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	38.5	61.5	16.0	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	34.0	57.0	11.5	18.0
Max Q Clear Time (g_c+I1), s	6.8	29.3	6.8	17.2
Green Ext Time (p_c), s	0.5	2.3	0.1	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	16.9
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	560	1	1	423
Future Vol, veh/h	1	1	560	1	1	423
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	636	1	1	481

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	880	319	0	0	638	0
Stage 1	637	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	275	660	-	-	890	-
Stage 1	473	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	275	660	-	-	890	-
Mov Cap-2 Maneuver	275	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.3	0	0.02
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	275	660	890	-
HCM Lane V/C Ratio	-	-	0.004	0.002	0.001	-
HCM Ctrl Dly (s/v)	-	-	18.1	10.5	9.1	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Future Vol, veh/h	1	1	1	1	1	458	1	1	1	67	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	539	1	1	1	79	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	541	0	0	2	0	0	8	547	2	278	279	272
Stage 1	-	-	-	-	-	-	4	4	-	274	274	-
Stage 2	-	-	-	-	-	-	4	543	-	4	5	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	998	-	-	1581	-	-	1011	444	1083	674	629	767
Stage 1	-	-	-	-	-	-	1018	892	-	732	683	-
Stage 2	-	-	-	-	-	-	1018	519	-	1018	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	997	-	-	1581	-	-	1005	443	1083	670	627	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	1005	443	-	670	627	-
Stage 1	-	-	-	-	-	-	1017	891	-	731	682	-
Stage 2	-	-	-	-	-	-	1014	518	-	1015	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.87	0.02	10.04	11.11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	718	545	-	-	3	-	-	670
HCM Lane V/C Ratio	0.005	0.001	-	-	0.001	-	-	0.121
HCM Ctrl Dly (s/v)	10	8.6	0	-	7.3	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	86	429	16	158	282
Future Vol, veh/h	11	86	429	16	158	282
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	13	98	488	18	180	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1016	253	0	0	506	0
Stage 1	497	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	234	747	-	-	1001	-
Stage 1	577	-	-	-	-	-
Stage 2	562	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	192	747	-	-	1001	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.19	0	3.37
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	192	747	1001	-
HCM Lane V/C Ratio	-	-	0.065	0.131	0.179	-
HCM Ctrl Dly (s/v)	-	-	25	10.5	9.4	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.4	0.7	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	98	2	124	2	306	102	263	261	1
Future Volume (veh/h)	1	1	1	98	2	124	2	306	102	263	261	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	108	2	136	2	336	112	289	287	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	135	133	107	394	5	365	709	1600	524	601	2209	8
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.63	0.63	0.63	0.63	0.63	0.63
Sat Flow, veh/h	350	571	460	1415	23	1566	1048	2526	828	905	3488	12
Grp Volume(v), veh/h	3	0	0	108	0	138	2	225	223	289	140	148
Grp Sat Flow(s),veh/h/ln	1381	0	0	1415	0	1589	1048	1706	1647	905	1706	1794
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	6.6	0.1	5.0	5.2	17.9	3.0	3.0
Cycle Q Clear(g_c), s	6.6	0.0	0.0	6.8	0.0	6.6	3.0	5.0	5.2	23.1	3.0	3.0
Prop In Lane	0.33		0.33	1.00		0.99	1.00		0.50	1.00		0.01
Lane Grp Cap(c), veh/h	376	0	0	394	0	371	709	1081	1043	601	1081	1136
V/C Ratio(X)	0.01	0.00	0.00	0.27	0.00	0.37	0.00	0.21	0.21	0.48	0.13	0.13
Avail Cap(c_a), veh/h	376	0	0	394	0	371	709	1081	1043	601	1081	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	29.1	0.0	29.0	7.2	7.0	7.0	11.9	6.6	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.7	0.0	2.9	0.0	0.4	0.5	2.7	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	3.8	0.0	4.9	0.0	2.8	2.8	6.2	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.6	0.0	0.0	30.8	0.0	31.8	7.2	7.4	7.5	14.6	6.8	6.8
LnGrp LOS	C			C		C	A	A	A	B	A	A
Approach Vol, veh/h		3			246			450			577	
Approach Delay, s/veh		26.6			31.4			7.4			10.7	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		27.0		63.0		27.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		57.0		21.0		57.0		21.0				
Max Q Clear Time (g_c+I1), s		7.2		8.6		25.1		8.8				
Green Ext Time (p_c), s		2.6		0.0		3.4		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.6									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	537	59	26	129	45	31	166	130	139	145	47
Future Volume (veh/h)	79	537	59	26	129	45	31	166	130	139	145	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	92	624	69	30	150	52	36	193	151	162	169	55
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	187	693	77	77	471	163	93	327	277	202	441	374
Arrive On Green	0.11	0.44	0.44	0.05	0.37	0.37	0.05	0.18	0.18	0.12	0.25	0.25
Sat Flow, veh/h	1711	1589	176	1697	1264	438	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	92	0	693	30	0	202	36	193	151	162	169	55
Grp Sat Flow(s),veh/h/ln	1711	0	1765	1697	0	1703	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	5.6	0.0	40.1	1.9	0.0	9.3	2.2	10.8	9.9	10.1	8.6	3.1
Cycle Q Clear(g_c), s	5.6	0.0	40.1	1.9	0.0	9.3	2.2	10.8	9.9	10.1	8.6	3.1
Prop In Lane	1.00		0.10	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
V/C Ratio(X)	0.49	0.00	0.90	0.39	0.00	0.32	0.39	0.59	0.55	0.80	0.38	0.15
Avail Cap(c_a), veh/h	187	0	770	77	0	635	93	327	277	202	441	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	28.8	51.0	0.0	24.6	50.2	41.3	40.9	47.2	34.6	32.5
Incr Delay (d2), s/veh	9.0	0.0	15.6	14.1	0.0	1.3	11.6	7.6	7.5	27.5	2.5	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.1	0.0	26.7	2.0	0.0	7.0	2.2	9.2	7.6	9.8	7.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	0.0	44.4	65.1	0.0	25.9	61.8	48.9	48.4	74.7	37.1	33.3
LnGrp LOS	E		D	E		C	E	D	D	E	D	C
Approach Vol, veh/h		785			232			380			386	
Approach Delay, s/veh		45.6			31.0			49.9			52.3	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	26.0	11.0	54.0	12.0	33.0	18.0	47.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	20.0	5.0	48.0	6.0	27.0	12.0	41.0
Max Q Clear Time (g_c+I1), s	12.1	12.8	3.9	42.1	4.2	10.6	7.6	11.3
Green Ext Time (p_c), s	0.0	0.9	0.0	2.3	0.0	0.9	0.1	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	46.1
HCM 7th LOS	D

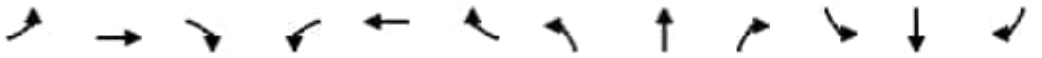
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Future Vol, veh/h	1	1	4	1	1	1	2	355	15	22	221	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	1	1	5	1	1	1	2	408	17	25	254	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	718	735	255	726	727	417	255	0	0	425	0	0
Stage 1	305	305	-	421	421	-	-	-	-	-	-	-
Stage 2	413	430	-	305	306	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	344	347	784	340	351	636	1281	-	-	1108	-	-
Stage 1	704	662	-	610	589	-	-	-	-	-	-	-
Stage 2	616	584	-	704	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	334	338	784	328	342	636	1281	-	-	1108	-	-
Mov Cap-2 Maneuver	334	338	-	328	342	-	-	-	-	-	-	-
Stage 1	688	647	-	609	588	-	-	-	-	-	-	-
Stage 2	613	582	-	683	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.72	14.13	0.04	0.75
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1281	-	-	543	398	1108	-	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.009	0.023	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	11.7	14.1	8.3	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	2	1	11	1	1	1	255	286	12	206	1
Future Volume (veh/h)	1	2	1	11	1	1	1	255	286	12	206	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	2	1	12	1	1	1	274	308	13	222	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	129	245	108	414	32	405	698	1098	930	513	1092	5
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	311	959	423	1320	124	1585	1112	1796	1522	800	1787	8
Grp Volume(v), veh/h	4	0	0	13	0	1	1	274	308	13	0	223
Grp Sat Flow(s),veh/h/ln	1694	0	0	1444	0	1585	1112	1796	1522	800	0	1795
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	6.3	8.9	0.7	0.0	5.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.6	0.0	0.0	5.0	6.3	8.9	7.0	0.0	5.0
Prop In Lane	0.25		0.25	0.92		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	483	0	0	446	0	405	698	1098	930	513	0	1097
V/C Ratio(X)	0.01	0.00	0.00	0.03	0.00	0.00	0.00	0.25	0.33	0.03	0.00	0.20
Avail Cap(c_a), veh/h	483	0	0	446	0	405	698	1098	930	513	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	0.0	0.0	25.1	0.0	25.0	8.9	8.0	8.5	9.6	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.5	1.0	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.4	0.0	0.0	0.0	4.1	5.0	0.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.0	0.0	0.0	25.3	0.0	25.0	8.9	8.6	9.5	9.7	0.0	8.2
LnGrp LOS	C			C		C	A	A	A	A		A
Approach Vol, veh/h		4			14			583			236	
Approach Delay, s/veh		25.0			25.2			9.1			8.3	
Approach LOS		C			C			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	61.0	29.0	61.0	29.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	55.0	23.0	55.0	23.0
Max Q Clear Time (g_c+I1), s	10.9	2.2	9.0	2.6
Green Ext Time (p_c), s	2.8	0.0	1.4	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	9.2
HCM 7th LOS	A

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	10	567	4	30	153
Future Vol, veh/h	1	10	567	4	30	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	1	11	603	4	32	163

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	832	605	0	0	607	0
Stage 1	605	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	339	497	-	-	947	-
Stage 1	545	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	497	-	-	947	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	781	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.77	0	1.46
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	475	295	-
HCM Lane V/C Ratio	-	-	0.025	0.034	-
HCM Ctrl Dly (s/v)	-	-	12.8	8.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Intersection	
Int Delay, s/veh	2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	65	201	35	70	134
Future Vol, veh/h	24	65	201	35	70	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	27	73	226	39	79	151

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	553	246	0	0	265	0
Stage 1	246	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	474	765	-	-	1270	-
Stage 1	768	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	445	765	-	-	1270	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	674	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.13	0	2.75
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	445	765	1270	-
HCM Lane V/C Ratio	-	-	0.061	0.096	0.062	-
HCM Ctrl Dly (s/v)	-	-	13.6	10.2	8	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.3	0.2	-

Intersection	
Int Delay, s/veh	4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	97	21	88	94	91	108
Future Vol, veh/h	97	21	88	94	91	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	129	28	117	125	121	144

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	504	117	0	0	243	0
Stage 1	117	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	510	908	-	-	1289	-
Stage 1	883	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	462	908	-	-	1289	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	603	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.6	0	3.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	462	908	1289	-
HCM Lane V/C Ratio	-	-	0.28	0.031	0.094	-
HCM Ctrl Dly (s/v)	-	-	15.8	9.1	8.1	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1.1	0.1	0.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	505	109	32	33	8
Future Vol, veh/h	25	505	109	32	33	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	30	601	130	38	39	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	168	0	-	0	810	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	661	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1380	-	-	-	350	898
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1380	-	-	-	338	898
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.36	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	85	-	-	-	385
HCM Lane V/C Ratio	0.022	-	-	-	0.127
HCM Ctrl Dly (s/v)	7.7	0	-	-	15.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	1.4

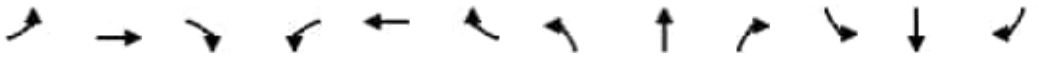
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	1	6	443	25	1
Future Vol, veh/h	230	1	6	443	25	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	50	50	50	50
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	460	2	12	886	50	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	462	0	1371	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1073	-	161	600
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1073	-	158	600
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.11	37.34
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	162	-	-	24	-
HCM Lane V/C Ratio	0.321	-	-	0.011	-
HCM Ctrl Dly (s/v)	37.3	-	-	8.4	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0	-

13: Paroquet Springs/Adam Shepherd & KY-44



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	955	7	40	191	318	22	35	705	494	10	18
Future Volume (veh/h)	38	955	7	40	191	318	22	35	705	494	10	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	1061	8	44	212	353	24	39	783	557	0	20
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	99	1128	503	226	1382	881	282	296	814	623	0	277
Arrive On Green	0.06	0.33	0.33	0.13	0.41	0.41	0.16	0.16	0.16	0.17	0.00	0.17
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	2790	3563	0	1585
Grp Volume(v), veh/h	42	1061	8	44	212	353	24	39	783	557	0	20
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1395	1781	0	1585
Q Serve(g_s), s	2.9	36.5	0.4	2.8	4.7	15.3	1.4	2.2	19.0	18.3	0.0	1.3
Cycle Q Clear(g_c), s	2.9	36.5	0.4	2.8	4.7	15.3	1.4	2.2	19.0	18.3	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	1128	503	226	1382	881	282	296	814	623	0	277
V/C Ratio(X)	0.42	0.94	0.02	0.19	0.15	0.40	0.09	0.13	0.96	0.89	0.00	0.07
Avail Cap(c_a), veh/h	99	1128	503	226	1382	881	282	296	814	623	0	277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.6	38.8	26.8	46.3	22.4	13.6	43.1	43.4	41.9	48.4	0.0	41.4
Incr Delay (d2), s/veh	12.8	15.8	0.1	1.9	0.2	1.4	0.6	0.9	23.6	17.7	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	24.1	0.3	2.3	3.5	12.6	1.2	1.9	19.9	14.7	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	67.3	54.7	26.9	48.2	22.6	15.0	43.7	44.3	65.5	66.1	0.0	41.9
LnGrp LOS	E	D	C	D	C	B	D	D	E	E		D
Approach Vol, veh/h		1111			609			846			577	
Approach Delay, s/veh		55.0			20.0			63.9			65.2	
Approach LOS		D			C			E			E	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.0	22.0	46.0	27.0	13.0	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	19.0	16.0	40.0	21.0	7.0	49.0
Max Q Clear Time (g_c+I1), s	21.0	4.8	38.5	20.3	4.9	17.3
Green Ext Time (p_c), s	0.0	0.0	1.0	0.2	0.0	2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	52.5
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1222	11	225	388	0	0	0	0	180	4	251
Future Volume (veh/h)	0	1222	11	225	388	0	0	0	0	180	4	251
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1300	0	239	413	0				191	4	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		398	2369	0				333	7	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1746	37	1585
Grp Volume(v), veh/h	0	1300	0	239	413	0				195	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	34.9	0.0	6.1	4.6	0.0				10.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	34.9	0.0	6.1	4.6	0.0				10.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.98		1.00
Lane Grp Cap(c), veh/h	0	1662		398	2369	0				340	0	
V/C Ratio(X)	0.00	0.78		0.60	0.17	0.00				0.57	0.00	
Avail Cap(c_a), veh/h	0	1662		398	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	23.1	0.0	18.7	5.6	0.0				40.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.8	0.0	6.6	0.2	0.0				6.8	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	20.1	0.0	6.7	2.7	0.0				9.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	26.9	0.0	25.3	5.8	0.0				47.3	0.0	0.0
LnGrp LOS		C		C	A					D		
Approach Vol, veh/h		1300			652						195	
Approach Delay, s/veh		26.9			12.9						47.3	
Approach LOS		C			B						D	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		8.1	36.9		12.9		6.6					
Green Ext Time (p_c), s		0.4	8.8		0.6		3.0					

Intersection Summary	
HCM 7th Control Delay, s/veh	24.5
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

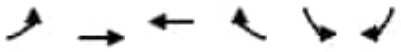
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	953	0	0	463	295	575
Future Volume (veh/h)	953	0	0	463	295	575
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	1095	0	0	532	339	661
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.48	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	1095	0	0	532	339	661
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	32.3	0.0	0.0	13.1	12.2	37.2
Cycle Q Clear(g_c), s	32.3	0.0	0.0	13.1	12.2	37.2
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.89	0.00	0.00	0.43	0.36	0.79
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.4	15.2	21.1
Incr Delay (d2), s/veh	9.8	0.0	0.0	1.1	1.1	7.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.7	0.0	0.0	9.1	8.7	20.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	36.2	0.0	0.0	27.5	16.3	28.6
LnGrp LOS	D			C	B	C
Approach Vol, veh/h	1095			532	1000	
Approach Delay, s/veh	36.2			27.5	24.4	
Approach LOS	D			C	C	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		46.0		64.0	46.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		40.0		58.0	40.0
Max Q Clear Time (g_c+I1), s		15.1		39.2	34.3
Green Ext Time (p_c), s		3.6		3.7	3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	30.0
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	259	455	381	84	22
Future Volume (veh/h)	28	259	455	381	84	22
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	30	278	489	410	90	24
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	290	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	590	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	30	278	489	410	90	24
Grp Sat Flow(s),veh/h/ln	590	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.3	5.7	11.7	11.6	2.2	0.6
Cycle Q Clear(g_c), s	14.0	5.7	11.7	11.6	2.2	0.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	290	861	861	730	564	502
V/C Ratio(X)	0.10	0.32	0.57	0.56	0.16	0.05
Avail Cap(c_a), veh/h	290	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	9.5	11.0	11.0	14.8	14.2
Incr Delay (d2), s/veh	0.7	1.0	2.7	3.1	0.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	3.1	6.7	5.8	1.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.7	10.5	13.7	14.1	15.4	14.4
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h		308	899		114	
Approach Delay, s/veh		11.1	13.9		15.2	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		16.0		4.2	13.7
Green Ext Time (p_c), s		1.3		0.2	3.7

Intersection Summary	
HCM 7th Control Delay, s/veh	13.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	99	433	4	10	18
Future Vol, veh/h	1	99	433	4	10	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	105	461	4	11	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	465	0	-	0	570	463
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	107	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1096	-	-	-	483	599
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	917	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1096	-	-	-	482	599
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.08	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	18	-	-	-	551
HCM Lane V/C Ratio	0.001	-	-	-	0.054
HCM Ctrl Dly (s/v)	8.3	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	17	6	3	18	1
Future Vol, veh/h	1	17	6	3	18	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	21	7	4	22	1

Major/Minor	Minor2		Major2	
Conflicting Flow All	46	1	0	0
Stage 1	46	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	846	1083	-	-
Stage 1	857	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1083	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.36	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1083	-	-
HCM Lane V/C Ratio	0.01	-	-
HCM Ctrl Dly (s/v)	8.4	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	216	102	6	1	1
Future Vol, veh/h	6	216	102	6	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	7	237	112	7	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	119	0	-	0	366	115
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	251	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1398	-	-	-	634	937
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	791	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1398	-	-	-	631	937
Mov Cap-2 Maneuver	-	-	-	-	631	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	9.79
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1398	-	-	-	754
HCM Lane V/C Ratio	0.005	-	-	-	0.003
HCM Ctrl Dly (s/v)	7.6	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

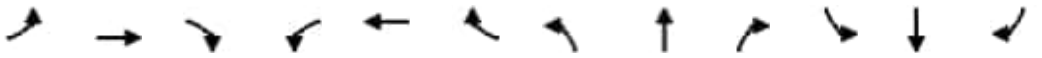
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	204	68	46	26	1
Future Vol, veh/h	8	204	68	46	26	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	9	227	76	51	29	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	127	0	-	0	346	101
Stage 1	-	-	-	-	101	-
Stage 2	-	-	-	-	244	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1389	-	-	-	651	954
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	796	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1389	-	-	-	647	954
Mov Cap-2 Maneuver	-	-	-	-	647	-
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	796	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.29	0	10.76
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1389	-	-	-	655
HCM Lane V/C Ratio	0.006	-	-	-	0.046
HCM Ctrl Dly (s/v)	7.6	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	151	256	6	364	2	36	16	3	1	4	13
Future Volume (veh/h)	358	151	256	6	364	2	36	16	3	1	4	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	459	194	328	8	467	3	46	21	4	1	5	17
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	673	1542	688	342	690	4	218	187	36	31	155	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3448	22	1781	1527	291	309	1546	1585
Grp Volume(v), veh/h	459	194	328	8	229	241	46	0	25	6	0	17
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1777	1781	0	1818	1855	0	1585
Q Serve(g_s), s	15.6	3.0	13.6	0.3	11.3	11.3	2.1	0.0	1.1	0.3	0.0	0.6
Cycle Q Clear(g_c), s	15.6	3.0	13.6	0.3	11.3	11.3	2.1	0.0	1.1	0.3	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.16	0.17		1.00
Lane Grp Cap(c), veh/h	673	1542	688	342	338	355	218	0	222	185	0	652
V/C Ratio(X)	0.68	0.13	0.48	0.02	0.68	0.68	0.21	0.00	0.11	0.03	0.00	0.03
Avail Cap(c_a), veh/h	673	1542	688	342	338	355	218	0	222	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.2	14.1	17.0	25.1	33.3	33.3	35.6	0.0	35.2	36.6	0.0	15.8
Incr Delay (d2), s/veh	5.5	0.2	2.4	0.1	10.4	10.0	2.2	0.0	1.0	0.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.8	1.8	7.9	0.2	9.0	9.3	1.8	0.0	1.0	0.2	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.7	14.3	19.4	25.2	43.7	43.3	37.8	0.0	36.2	36.9	0.0	15.8
LnGrp LOS	C	B	B	C	D	D	D		D	D		B
Approach Vol, veh/h		981			478			71			23	
Approach Delay, s/veh		19.0			43.2			37.2			21.3	
Approach LOS		B			D			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.0	11.0	47.0	15.0	34.0	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	5.0	41.0	9.0	28.0	18.0
Max Q Clear Time (g_c+I1), s	4.1	2.3	15.6	2.6	17.6	13.3
Green Ext Time (p_c), s	0.1	0.0	2.1	0.0	1.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	46	457	1	1	1
Future Vol, veh/h	1	46	457	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	1	50	497	1	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	498	0	-	0	549	497
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	52	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1036	-	-	-	496	573
Stage 1	-	-	-	-	611	-
Stage 2	-	-	-	-	970	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1036	-	-	-	496	573
Mov Cap-2 Maneuver	-	-	-	-	496	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	970	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.18	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	38	-	-	-	532
HCM Lane V/C Ratio	0.001	-	-	-	0.004
HCM Ctrl Dly (s/v)	8.5	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	418	868	6	6	24
Future Vol, veh/h	8	418	868	6	6	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	8	440	914	6	6	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	920	0	-	0	1374	917
Stage 1	-	-	-	-	917	-
Stage 2	-	-	-	-	457	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	698	-	-	-	160	330
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	638	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	698	-	-	-	158	330
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	638	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	20.04
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	34	-	-	-	271
HCM Lane V/C Ratio	0.012	-	-	-	0.117
HCM Ctrl Dly (s/v)	10.2	0	-	-	20
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

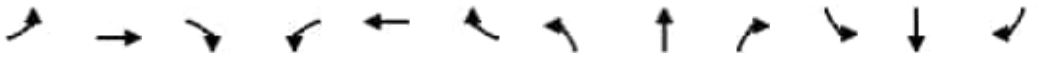
Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	7	43	10	4	5	12	30	1	12	153	9
Future Vol, veh/h	23	7	43	10	4	5	12	30	1	12	153	9
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	8	49	11	5	6	14	34	1	14	174	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	10	0	0	57	0	0	199	118	32	107	139	7
Stage 1	-	-	-	-	-	-	85	85	-	30	30	-
Stage 2	-	-	-	-	-	-	114	33	-	77	109	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1609	-	-	1548	-	-	760	773	1041	872	752	1075
Stage 1	-	-	-	-	-	-	923	825	-	987	870	-
Stage 2	-	-	-	-	-	-	891	868	-	932	805	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1609	-	-	1548	-	-	564	754	1041	812	734	1075
Mov Cap-2 Maneuver	-	-	-	-	-	-	564	754	-	812	734	-
Stage 1	-	-	-	-	-	-	908	811	-	979	864	-
Stage 2	-	-	-	-	-	-	699	861	-	876	791	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.29	3.86	10.59	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	693	484	-	-	853	-	-	751
HCM Lane V/C Ratio	0.07	0.016	-	-	0.007	-	-	0.263
HCM Ctrl Dly (s/v)	10.6	7.3	0	-	7.3	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	8	8	206	9	36	9	240	240	43	441	9
Future Volume (veh/h)	8	8	8	206	9	36	9	240	240	43	441	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	9	9	9	240	10	0	10	279	0	50	513	10
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		250	561		285	1070	21
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	879	1870	1585	1100	3565	69
Grp Volume(v), veh/h	18	0	9	240	10	0	10	279	0	50	255	268
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	879	1870	1585	1100	1777	1858
Q Serve(g_s), s	0.6	0.0	0.4	9.3	0.3	0.0	0.8	9.8	0.0	3.1	9.4	9.4
Cycle Q Clear(g_c), s	0.6	0.0	0.4	9.3	0.3	0.0	10.2	9.8	0.0	13.0	9.4	9.4
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	411	0	357	445	468		250	561		285	533	557
V/C Ratio(X)	0.04	0.00	0.03	0.54	0.02		0.04	0.50		0.18	0.48	0.48
Avail Cap(c_a), veh/h	411	0	357	445	468		250	561		285	533	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	0.0	24.2	26.0	22.6	0.0	27.1	23.0	0.0	28.4	22.9	22.9
Incr Delay (d2), s/veh	0.2	0.0	0.1	4.6	0.1	0.0	0.3	3.1	0.0	1.3	3.1	2.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.3	7.6	0.3	0.0	0.3	8.1	0.0	1.6	7.5	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.5	0.0	24.3	30.6	22.7	0.0	27.4	26.2	0.0	29.7	26.0	25.8
LnGrp LOS	C		C	C	C		C	C		C	C	C
Approach Vol, veh/h		27			250			289			573	
Approach Delay, s/veh		24.4			30.3			26.2			26.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		24.0		30.0		26.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		24.0		18.0		24.0		20.0				
Max Q Clear Time (g_c+I1), s		12.2		2.6		15.0		11.3				
Green Ext Time (p_c), s		1.2		0.0		2.2		0.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			27.1									
HCM 7th LOS			C									

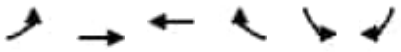
Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	268	101	542	130	76	836
Future Volume (veh/h)	268	101	542	130	76	836
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	291	110	589	141	83	909
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	460	170	868	1184	493	1908
Arrive On Green	0.18	0.18	0.41	0.63	0.28	0.28
Sat Flow, veh/h	2633	939	1781	1870	1781	2790
Grp Volume(v), veh/h	202	199	589	141	83	909
Grp Sat Flow(s),veh/h/ln	1777	1701	1781	1870	1781	1395
Q Serve(g_s), s	10.5	10.9	19.4	3.0	3.5	15.3
Cycle Q Clear(g_c), s	10.5	10.9	19.4	3.0	3.5	15.3
Prop In Lane		0.55	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	322	308	868	1184	493	1908
V/C Ratio(X)	0.63	0.65	0.68	0.12	0.17	0.48
Avail Cap(c_a), veh/h	322	308	868	1184	493	1908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	38.0	13.1	7.3	27.4	7.4
Incr Delay (d2), s/veh	8.9	10.1	4.3	0.2	0.7	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	9.1	12.7	2.1	2.9	7.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	46.8	48.1	17.3	7.5	28.2	8.3
LnGrp LOS	D	D	B	A	C	A
Approach Vol, veh/h	401			730	992	
Approach Delay, s/veh	47.4			15.4	9.9	
Approach LOS	D			B	A	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	32.2	45.2	22.6		67.8
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	27.7	40.7	18.1		63.3
Max Q Clear Time (g_c+I1), s	17.3	21.4	12.9		5.0
Green Ext Time (p_c), s	3.3	2.0	1.1		0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	18.9
HCM 7th LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	263	165	144	380	318	191
Future Volume (veh/h)	263	165	144	380	318	191
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	292	183	160	422	353	212
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	428	707	707	599	673	599
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	786	1767	1767	1497	1682	1497
Grp Volume(v), veh/h	292	183	160	422	353	212
Grp Sat Flow(s),veh/h/ln	786	1767	1767	1497	1682	1497
Q Serve(g_s), s	15.3	3.1	2.7	10.6	7.2	4.5
Cycle Q Clear(g_c), s	18.0	3.1	2.7	10.6	7.2	4.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	428	707	707	599	673	599
V/C Ratio(X)	0.68	0.26	0.23	0.70	0.52	0.35
Avail Cap(c_a), veh/h	428	707	707	599	673	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	9.0	8.9	11.3	10.3	9.4
Incr Delay (d2), s/veh	8.6	0.9	0.7	6.8	2.9	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	1.8	1.7	6.9	4.7	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.0	9.9	9.7	18.1	13.2	11.1
LnGrp LOS	C	A	A	B	B	B
Approach Vol, veh/h		475	582		565	
Approach Delay, s/veh		18.6	15.8		12.4	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		22.5		22.5	22.5
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		18.0		18.0	18.0
Max Q Clear Time (g_c+I1), s		20.0		9.2	12.6
Green Ext Time (p_c), s		0.0		1.4	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	15.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	1	777	1	1	750
Future Vol, veh/h	1	1	777	1	1	750
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	275	-	-	325	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	8	10	10	10	10
Mvmt Flow	1	1	835	1	1	806

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1241	418	0	0	837	0
Stage 1	836	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.96	7.06	-	-	4.3	-
Critical Hdwy Stg 1	5.96	-	-	-	-	-
Critical Hdwy Stg 2	5.96	-	-	-	-	-
Follow-up Hdwy	3.58	3.38	-	-	2.3	-
Pot Cap-1 Maneuver	159	567	-	-	744	-
Stage 1	371	-	-	-	-	-
Stage 2	625	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	159	567	-	-	744	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	371	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	19.61	0	0.01
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	159	567	744	-
HCM Lane V/C Ratio	-	-	0.007	0.002	0.001	-
HCM Ctrl Dly (s/v)	-	-	27.9	11.4	9.8	-
HCM Lane LOS	-	-	D	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Future Vol, veh/h	1	1	1	1	1	166	1	1	1	203	1	1
Conflicting Peds, #/hr	1	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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	8	8	8	8	8	8	2	2	2	2	2	2
Mvmt Flow	1	1	1	1	1	180	1	1	1	221	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	2	0	0	8	189	2	98	99	92
Stage 1	-	-	-	-	-	-	4	4	-	94	94	-
Stage 2	-	-	-	-	-	-	4	185	-	4	4	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1582	-	-	1012	706	1083	884	791	965
Stage 1	-	-	-	-	-	-	1019	893	-	912	817	-
Stage 2	-	-	-	-	-	-	1019	747	-	1019	892	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1356	-	-	1582	-	-	1008	704	1083	879	789	964
Mov Cap-2 Maneuver	-	-	-	-	-	-	1008	704	-	879	789	-
Stage 1	-	-	-	-	-	-	1018	892	-	911	815	-
Stage 2	-	-	-	-	-	-	1015	746	-	1016	891	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.55	0.04	9.02	10.48
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	899	545	-	-	9	-	-	879
HCM Lane V/C Ratio	0.004	0.001	-	-	0.001	-	-	0.253
HCM Ctrl Dly (s/v)	9	7.7	0	-	7.3	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	1

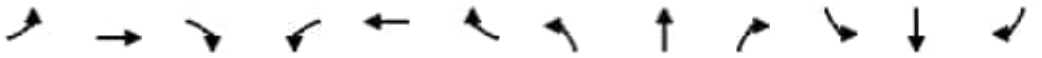
Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	269	490	44	204	501
Future Vol, veh/h	33	269	490	44	204	501
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	360	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	10	10	10	10
Mvmt Flow	35	286	521	47	217	533

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1245	284	0	0	568	0
Stage 1	545	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.3	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.3	-
Pot Cap-1 Maneuver	166	713	-	-	947	-
Stage 1	545	-	-	-	-	-
Stage 2	453	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	128	713	-	-	947	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	350	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.68	0	2.87
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	128	713	947	-
HCM Lane V/C Ratio	-	-	0.274	0.401	0.229	-
HCM Ctrl Dly (s/v)	-	-	43.4	13.4	9.9	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1	1.9	0.9	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1	1	234	2	275	2	444	142	216	465	1
Future Volume (veh/h)	1	1	1	234	2	275	2	444	142	216	465	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	1	1	1	244	2	286	2	462	148	225	484	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	116	115	89	389	3	455	526	1472	468	457	2019	4
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	218	398	308	1415	11	1576	875	2547	810	779	3494	7
Grp Volume(v), veh/h	3	0	0	244	0	288	2	308	302	225	236	249
Grp Sat Flow(s),veh/h/ln	924	0	0	1415	0	1587	875	1706	1650	779	1706	1795
Q Serve(g_s), s	0.0	0.0	0.0	6.8	0.0	14.2	0.1	8.4	8.5	18.9	6.1	6.1
Cycle Q Clear(g_c), s	14.2	0.0	0.0	21.0	0.0	14.2	6.2	8.4	8.5	27.4	6.1	6.1
Prop In Lane	0.33		0.33	1.00		0.99	1.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	320	0	0	389	0	458	526	986	954	457	986	1037
V/C Ratio(X)	0.01	0.00	0.00	0.63	0.00	0.63	0.00	0.31	0.32	0.49	0.24	0.24
Avail Cap(c_a), veh/h	320	0	0	389	0	458	526	986	954	457	986	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	0.0	31.6	0.0	27.8	10.8	9.8	9.8	16.9	9.3	9.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	7.5	0.0	6.4	0.0	0.8	0.9	3.8	0.6	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	5.7	0.0	6.0	0.0	2.9	2.8	3.4	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.4	0.0	0.0	39.1	0.0	34.2	10.8	10.6	10.7	20.7	9.9	9.9
LnGrp LOS	C			D		C	B	B	B	C	A	A
Approach Vol, veh/h		3			532			612			710	
Approach Delay, s/veh		23.4			36.4			10.7			13.3	
Approach LOS		C			D			B			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.0		32.0		58.0		32.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		52.0		26.0		52.0		26.0				
Max Q Clear Time (g_c+I1), s		10.5		16.2		29.4		23.0				
Green Ext Time (p_c), s		3.8		0.0		4.3		0.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			19.1									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	238	80	107	248	68	95	282	86	100	361	142
Future Volume (veh/h)	102	238	80	107	248	68	95	282	86	100	361	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1781	1781	1781	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	104	243	82	109	253	69	97	288	88	102	368	145
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	8	8	8	7	7	7	7	7	7
Cap, veh/h	171	339	114	170	355	97	171	539	457	202	572	484
Arrive On Green	0.10	0.26	0.26	0.10	0.26	0.26	0.10	0.30	0.30	0.12	0.32	0.32
Sat Flow, veh/h	1711	1285	434	1697	1348	368	1711	1796	1522	1711	1796	1522
Grp Volume(v), veh/h	104	0	325	109	0	322	97	288	88	102	368	145
Grp Sat Flow(s),veh/h/ln	1711	0	1718	1697	0	1715	1711	1796	1522	1711	1796	1522
Q Serve(g_s), s	6.4	0.0	18.9	6.8	0.0	18.7	6.0	14.7	4.7	6.2	19.3	7.9
Cycle Q Clear(g_c), s	6.4	0.0	18.9	6.8	0.0	18.7	6.0	14.7	4.7	6.2	19.3	7.9
Prop In Lane	1.00		0.25	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	0	453	170	0	452	171	539	457	202	572	484
V/C Ratio(X)	0.61	0.00	0.72	0.64	0.00	0.71	0.57	0.53	0.19	0.50	0.64	0.30
Avail Cap(c_a), veh/h	171	0	453	170	0	452	171	539	457	202	572	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	36.8	47.6	0.0	36.7	47.2	32.1	28.6	45.5	32.2	28.3
Incr Delay (d2), s/veh	15.0	0.0	9.4	17.2	0.0	9.2	12.9	3.8	0.9	8.7	5.5	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	8.9	3.7	0.0	8.8	3.1	6.8	1.8	3.1	9.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.5	0.0	46.2	64.8	0.0	45.9	60.1	35.9	29.5	54.2	37.7	29.8
LnGrp LOS	E		D	E		D	E	D	C	D	D	C
Approach Vol, veh/h		429			431			473			615	
Approach Delay, s/veh		50.1			50.7			39.7			38.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	39.0	17.0	35.0	17.0	41.0	17.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	33.0	11.0	29.0	11.0	35.0	11.0	29.0
Max Q Clear Time (g_c+I1), s	8.8	16.7	8.8	20.9	8.0	21.3	8.4	20.7
Green Ext Time (p_c), s	0.1	1.7	0.0	1.2	0.1	2.2	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	44.1
HCM 7th LOS	D

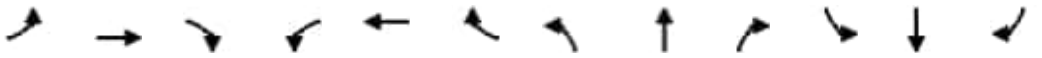
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Future Vol, veh/h	4	1	21	1	1	2	7	437	1	3	537	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	7	7
Mvmt Flow	4	1	22	1	1	2	7	451	1	3	554	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1027	1028	556	1026	1029	451	558	0	0	452	0	0
Stage 1	562	562	-	465	465	-	-	-	-	-	-	-
Stage 2	465	466	-	560	564	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.17	-	-	4.17	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.263	-	-	2.263	-	-
Pot Cap-1 Maneuver	213	234	531	213	234	608	988	-	-	1083	-	-
Stage 1	512	510	-	577	563	-	-	-	-	-	-	-
Stage 2	577	562	-	513	509	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	209	232	531	201	231	608	988	-	-	1083	-	-
Mov Cap-2 Maneuver	209	232	-	201	231	-	-	-	-	-	-	-
Stage 1	510	508	-	573	559	-	-	-	-	-	-	-
Stage 2	570	558	-	489	507	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.33	16.47	0.14	0.05
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	988	-	-	412	318	1083	-	-
HCM Lane V/C Ratio	0.007	-	-	0.065	0.013	0.003	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	14.3	16.5	8.3	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	9	22	87	1	8	4	336	110	23	520	1
Future Volume (veh/h)	3	9	22	87	1	8	4	336	110	23	520	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	3	9	22	89	1	8	4	343	112	23	531	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	7	7
Cap, veh/h	59	134	274	435	4	405	455	1098	930	547	1095	2
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	59	526	1073	1389	17	1585	837	1796	1522	899	1792	3
Grp Volume(v), veh/h	34	0	0	90	0	8	4	343	112	23	0	532
Grp Sat Flow(s),veh/h/ln	1658	0	0	1407	0	1585	837	1796	1522	899	0	1796
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.3	0.2	8.3	2.8	1.1	0.0	14.7
Cycle Q Clear(g_c), s	1.4	0.0	0.0	4.2	0.0	0.3	15.0	8.3	2.8	9.4	0.0	14.7
Prop In Lane	0.09		0.65	0.99		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	467	0	0	439	0	405	455	1098	930	547	0	1097
V/C Ratio(X)	0.07	0.00	0.00	0.20	0.00	0.02	0.01	0.31	0.12	0.04	0.00	0.48
Avail Cap(c_a), veh/h	467	0	0	439	0	405	455	1098	930	547	0	1097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	0.0	26.4	0.0	25.1	13.8	8.4	7.3	10.7	0.0	9.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.1	0.0	0.1	0.0	0.7	0.3	0.1	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	1.6	0.0	0.1	0.0	3.0	0.9	0.2	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.8	0.0	0.0	27.5	0.0	25.2	13.8	9.2	7.6	10.8	0.0	11.2
LnGrp LOS	C			C		C	B	A	A	B		B
Approach Vol, veh/h		34			98			459			555	
Approach Delay, s/veh		25.8			27.3			8.8			11.2	
Approach LOS		C			C			A			B	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.0		29.0		61.0		29.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		23.0		55.0		23.0				
Max Q Clear Time (g_c+I1), s		17.0		3.4		16.7		6.2				
Green Ext Time (p_c), s		2.6		0.1		3.9		0.4				

Intersection Summary												
HCM 7th Control Delay, s/veh			12.0									
HCM 7th LOS			B									

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	33	419	6	86	483
Future Vol, veh/h	2	33	419	6	86	483
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	7	7	7	7
Mvmt Flow	2	33	423	6	87	488

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1088	426	0	0	429	0
Stage 1	426	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.17	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.263	-
Pot Cap-1 Maneuver	239	628	-	-	1104	-
Stage 1	659	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	628	-	-	1104	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	659	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	11.79	0	1.29
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	565	272	-
HCM Lane V/C Ratio	-	-	0.063	0.079	-
HCM Ctrl Dly (s/v)	-	-	11.8	8.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.3	-

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	212	296	31	98	271
Future Vol, veh/h	46	212	296	31	98	271
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	185	0	-	-	285	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	14	14	8	8	7	7
Mvmt Flow	48	223	312	33	103	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	819	328	0	0	344	0
Stage 1	328	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.54	6.34	-	-	4.17	-
Critical Hdwy Stg 1	5.54	-	-	-	-	-
Critical Hdwy Stg 2	5.54	-	-	-	-	-
Follow-up Hdwy	3.626	3.426	-	-	2.263	-
Pot Cap-1 Maneuver	329	687	-	-	1187	-
Stage 1	704	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	300	687	-	-	1187	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.91	0	2.21
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	300	687	1187	-
HCM Lane V/C Ratio	-	-	0.161	0.325	0.087	-
HCM Ctrl Dly (s/v)	-	-	19.3	12.7	8.3	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	1.4	0.3	-

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	54	64	114	69	101	267
Future Vol, veh/h	54	64	114	69	101	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	165	0	-	500	700	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	12	12	8	8	8	8
Mvmt Flow	57	67	120	73	106	281

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	614	120	0	0	193	0
Stage 1	120	-	-	-	-	-
Stage 2	494	-	-	-	-	-
Critical Hdwy	6.52	6.32	-	-	4.18	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.408	-	-	2.272	-
Pot Cap-1 Maneuver	440	905	-	-	1346	-
Stage 1	881	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	405	905	-	-	1346	-
Mov Cap-2 Maneuver	405	-	-	-	-	-
Stage 1	881	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.06	0	2.17
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	405	905	1346	-
HCM Lane V/C Ratio	-	-	0.14	0.074	0.079	-
HCM Ctrl Dly (s/v)	-	-	15.3	9.3	7.9	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	0.3	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	333	343	34	33	33
Future Vol, veh/h	25	333	343	34	33	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	26	340	350	35	34	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	385	0	-	0	758	367
Stage 1	-	-	-	-	367	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	4.17	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.263	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1147	-	-	-	375	678
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1147	-	-	-	365	678
Mov Cap-2 Maneuver	-	-	-	-	365	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.57	0	13.85
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	126	-	-	-	474
HCM Lane V/C Ratio	0.022	-	-	-	0.142
HCM Ctrl Dly (s/v)	8.2	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	1	15	345	1	1
Future Vol, veh/h	87	1	15	345	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	54	54	54	54	54
Heavy Vehicles, %	7	7	7	7	2	2
Mvmt Flow	161	2	28	639	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	856	162
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	694	-
Critical Hdwy	-	-	4.17	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.263	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1386	-	328	883
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1386	-	318	883
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.32	12.77
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	467	-	-	75	-
HCM Lane V/C Ratio	0.008	-	-	0.02	-
HCM Ctrl Dly (s/v)	12.8	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	402	14	103	345	621	17	101	219	583	31	38
Future Volume (veh/h)	83	402	14	103	345	621	17	101	219	583	31	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	410	14	105	352	634	17	103	223	618	0	39
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	184	621	277	212	677	780	312	327	837	1128	0	502
Arrive On Green	0.11	0.18	0.18	0.13	0.20	0.20	0.17	0.17	0.17	0.32	0.00	0.32
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	1781	1870	2790	3563	0	1585
Grp Volume(v), veh/h	85	410	14	105	352	634	17	103	223	618	0	39
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1781	1870	1395	1781	0	1585
Q Serve(g_s), s	5.6	13.5	0.9	6.9	11.1	24.0	1.0	5.8	7.3	17.2	0.0	2.1
Cycle Q Clear(g_c), s	5.6	13.5	0.9	6.9	11.1	24.0	1.0	5.8	7.3	17.2	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	621	277	212	677	780	312	327	837	1128	0	502
V/C Ratio(X)	0.46	0.66	0.05	0.50	0.52	0.81	0.05	0.31	0.27	0.55	0.00	0.08
Avail Cap(c_a), veh/h	184	621	277	212	677	780	312	327	837	1128	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.2	45.5	40.4	49.0	42.9	19.8	41.2	43.2	32.0	33.9	0.0	28.7
Incr Delay (d2), s/veh	8.2	5.5	0.3	8.0	2.8	9.0	0.3	2.5	0.8	1.9	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	6.1	0.4	3.4	4.9	21.1	0.4	2.9	2.5	7.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.4	51.0	40.7	57.0	45.7	28.9	41.6	45.7	32.7	35.8	0.0	29.0
LnGrp LOS	E	D	D	E	D	C	D	D	C	D		C
Approach Vol, veh/h		509			1091			343			657	
Approach Delay, s/veh		51.9			37.0			37.1			35.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	27.0	21.0	28.0	44.0	19.0	30.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	21.0	15.0	22.0	38.0	13.0	24.0
Max Q Clear Time (g_c+I1), s	9.3	8.9	15.5	19.2	7.6	26.0
Green Ext Time (p_c), s	1.1	0.1	1.4	2.3	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	39.5
HCM 7th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	562	7	275	742	0	0	0	0	340	9	456
Future Volume (veh/h)	0	562	7	275	742	0	0	0	0	340	9	456
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1781	1781	1781	1781	0				1870	1870	1870
Adj Flow Rate, veh/h	0	573	0	281	757	0				347	9	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	8	8	8	8	0				2	2	2
Cap, veh/h	0	1662		637	2369	0				332	9	
Arrive On Green	0.00	0.49	0.00	0.15	0.70	0.00				0.19	0.19	0.00
Sat Flow, veh/h	0	3474	1510	1697	3474	0				1738	45	1585
Grp Volume(v), veh/h	0	573	0	281	757	0				356	0	0
Grp Sat Flow(s),veh/h/ln	0	1692	1510	1697	1692	0				1783	0	1585
Q Serve(g_s), s	0.0	11.4	0.0	7.3	9.5	0.0				21.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.4	0.0	7.3	9.5	0.0				21.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	1662		637	2369	0				340	0	
V/C Ratio(X)	0.00	0.34		0.44	0.32	0.00				1.05	0.00	
Avail Cap(c_a), veh/h	0	1662		637	2369	0				340	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.2	0.0	8.7	6.4	0.0				44.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	2.2	0.4	0.0				61.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.4	0.0	2.8	3.1	0.0				14.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	17.7	0.0	10.9	6.7	0.0				105.7	0.0	0.0
LnGrp LOS		B		B	A					F		
Approach Vol, veh/h		573			1038						356	
Approach Delay, s/veh		17.7			7.9						105.7	
Approach LOS		B			A						F	

Timer - Assigned Phs		3	4		6		8					
Phs Duration (G+Y+Rc), s		23.0	60.0		27.0		83.0					
Change Period (Y+Rc), s		6.0	6.0		6.0		6.0					
Max Green Setting (Gmax), s		17.0	54.0		21.0		77.0					
Max Q Clear Time (g_c+I1), s		9.3	13.4		23.0		11.5					
Green Ext Time (p_c), s		0.5	4.3		0.0		6.2					

Intersection Summary	
HCM 7th Control Delay, s/veh	28.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

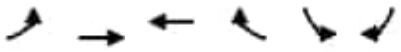
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	731	0	0	833	363	290
Future Volume (veh/h)	731	0	0	833	363	290
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1781	0	0	1781	1870	1870
Adj Flow Rate, veh/h	746	0	0	850	370	296
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	0	0	8	2	2
Cap, veh/h	1231	0	0	1231	939	836
Arrive On Green	0.36	0.00	0.00	0.36	0.53	0.53
Sat Flow, veh/h	3563	0	0	3563	1781	1585
Grp Volume(v), veh/h	746	0	0	850	370	296
Grp Sat Flow(s),veh/h/ln	1692	0	0	1692	1781	1585
Q Serve(g_s), s	19.8	0.0	0.0	23.5	13.6	11.9
Cycle Q Clear(g_c), s	19.8	0.0	0.0	23.5	13.6	11.9
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	1231	0	0	1231	939	836
V/C Ratio(X)	0.61	0.00	0.00	0.69	0.39	0.35
Avail Cap(c_a), veh/h	1231	0	0	1231	939	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	0.0	0.0	29.7	15.5	15.1
Incr Delay (d2), s/veh	2.2	0.0	0.0	3.2	1.2	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0	9.8	5.6	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.8	0.0	0.0	32.9	16.8	16.3
LnGrp LOS	C			C	B	B
Approach Vol, veh/h	746			850	666	
Approach Delay, s/veh	30.8			32.9	16.5	
Approach LOS	C			C	B	

Timer - Assigned Phs		4	6	8
Phs Duration (G+Y+Rc), s		46.0	64.0	46.0
Change Period (Y+Rc), s		6.0	6.0	6.0
Max Green Setting (Gmax), s		40.0	58.0	40.0
Max Q Clear Time (g_c+I1), s		25.5	15.6	21.8
Green Ext Time (p_c), s		5.0	2.3	4.8

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C

Notes

Unsignalized Delay for [WBT] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	461	469	190	294	50
Future Volume (veh/h)	37	461	469	190	294	50
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1870	1870
Adj Flow Rate, veh/h	39	480	489	198	306	52
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	2	2
Cap, veh/h	327	861	861	730	564	502
Arrive On Green	0.48	0.48	0.48	0.48	0.32	0.32
Sat Flow, veh/h	719	1781	1781	1510	1781	1585
Grp Volume(v), veh/h	39	480	489	198	306	52
Grp Sat Flow(s),veh/h/ln	719	1781	1781	1510	1781	1585
Q Serve(g_s), s	2.4	11.4	11.7	4.7	8.5	1.4
Cycle Q Clear(g_c), s	14.2	11.4	11.7	4.7	8.5	1.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	327	861	861	730	564	502
V/C Ratio(X)	0.12	0.56	0.57	0.27	0.54	0.10
Avail Cap(c_a), veh/h	327	861	861	730	564	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	11.0	11.0	9.2	16.9	14.5
Incr Delay (d2), s/veh	0.7	2.6	2.7	0.9	3.7	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.6	3.7	1.2	3.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.8	13.6	13.7	10.1	20.6	14.9
LnGrp LOS	B	B	B	B	C	B
Approach Vol, veh/h		519	687		358	
Approach Delay, s/veh		13.8	12.7		19.8	
Approach LOS		B	B		B	

Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		35.0		25.0	35.0
Change Period (Y+Rc), s		6.0		6.0	6.0
Max Green Setting (Gmax), s		29.0		19.0	29.0
Max Q Clear Time (g_c+I1), s		16.2		10.5	13.7
Green Ext Time (p_c), s		2.3		0.7	2.9

Intersection Summary	
HCM 7th Control Delay, s/veh	14.7
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	33	350	223	23	16	11
Future Vol, veh/h	33	350	223	23	16	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	376	240	25	17	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	265	0	-	0	699	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	447	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1300	-	-	-	406	787
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	644	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1300	-	-	-	392	787
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	644	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.68	0	12.77
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	155	-	-	-	492
HCM Lane V/C Ratio	0.027	-	-	-	0.059
HCM Ctrl Dly (s/v)	7.8	0	-	-	12.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	49	4	1	39	3
Future Vol, veh/h	2	49	4	1	39	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	52	4	1	41	3

Major/Minor	Minor2		Major2	
Conflicting Flow All	86	3	0	0
Stage 1	86	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.52	6.22	4.12	-
Critical Hdwy Stg 1	5.52	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	4.018	3.318	2.218	-
Pot Cap-1 Maneuver	804	1081	-	-
Stage 1	823	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	0	1081	-	-
Mov Cap-2 Maneuver	0	-	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-

Approach	NB	SB
HCM Ctrl Dly, s/v	8.35	
HCM LOS	A	

Minor Lane/Major Mvmt	NBLn1	SBL	SBT
Capacity (veh/h)	1081	-	-
HCM Lane V/C Ratio	0.005	-	-
HCM Ctrl Dly (s/v)	8.3	-	-
HCM Lane LOS	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	8	242	274	6	1	8
Future Vol, veh/h	8	242	274	6	1	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	75	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	9	257	291	6	1	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	298	0	-	0	569	295
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	274	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1198	-	-	-	483	745
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	772	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1198	-	-	-	480	745
Mov Cap-2 Maneuver	-	-	-	-	480	-
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.26	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1198	-	-	-	702
HCM Lane V/C Ratio	0.007	-	-	-	0.014
HCM Ctrl Dly (s/v)	8	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

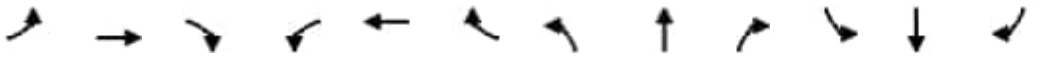
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	233	165	136	49	2
Future Vol, veh/h	8	233	165	136	49	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	14	14	14	14	2	2
Mvmt Flow	9	251	177	146	53	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	324	0	-	0	518	251
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	268	-
Critical Hdwy	4.24	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.326	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1172	-	-	-	518	788
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	777	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1172	-	-	-	514	788
Mov Cap-2 Maneuver	-	-	-	-	514	-
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	777	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.27	0	12.72
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1172	-	-	-	521
HCM Lane V/C Ratio	0.007	-	-	-	0.105
HCM Ctrl Dly (s/v)	8.1	-	-	-	12.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

21: Omega Pkwy/Amazon.com Blvd & KY-480



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	406	125	21	294	4	120	29	13	5	22	253
Future Volume (veh/h)	360	406	125	21	294	4	120	29	13	5	22	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	364	410	126	21	297	4	121	29	13	5	22	256
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	2	2	2	2	2	2
Cap, veh/h	735	1542	688	340	684	9	218	150	67	34	151	652
Arrive On Green	0.31	0.46	0.46	0.06	0.20	0.20	0.12	0.12	0.12	0.10	0.10	0.10
Sat Flow, veh/h	1697	3385	1510	1697	3420	46	1781	1223	548	343	1510	1585
Grp Volume(v), veh/h	364	410	126	21	147	154	121	0	42	27	0	256
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1773	1781	0	1772	1853	0	1585
Q Serve(g_s), s	11.5	6.8	4.5	0.8	6.8	6.9	5.8	0.0	1.9	1.2	0.0	9.0
Cycle Q Clear(g_c), s	11.5	6.8	4.5	0.8	6.8	6.9	5.8	0.0	1.9	1.2	0.0	9.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.31	0.19		1.00
Lane Grp Cap(c), veh/h	735	1542	688	340	338	355	218	0	217	185	0	652
V/C Ratio(X)	0.50	0.27	0.18	0.06	0.43	0.43	0.56	0.00	0.19	0.15	0.00	0.39
Avail Cap(c_a), veh/h	735	1542	688	340	338	355	218	0	217	185	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	15.2	14.6	25.3	31.5	31.5	37.2	0.0	35.5	37.0	0.0	18.6
Incr Delay (d2), s/veh	2.4	0.4	0.6	0.3	4.0	3.8	9.9	0.0	2.0	1.6	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.3	1.4	0.3	2.9	3.1	3.0	0.0	0.9	0.6	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	15.5	15.6	15.1	25.6	35.5	35.4	47.1	0.0	37.5	38.6	0.0	20.4
LnGrp LOS	B	B	B	C	D	D	D		D	D		C
Approach Vol, veh/h		900			322			163			283	
Approach Delay, s/veh		15.5			34.8			44.6			22.1	
Approach LOS		B			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.0	11.0	47.0	15.0	34.0	24.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	11.0	5.0	41.0	9.0	28.0	18.0
Max Q Clear Time (g_c+I1), s	7.8	2.8	8.8	11.0	13.5	8.9
Green Ext Time (p_c), s	0.1	0.0	2.8	0.0	0.9	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	23.2
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	315	187	1	1	1
Future Vol, veh/h	1	315	187	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	2	2
Mvmt Flow	1	335	199	1	1	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	200	0	-	0	537	199
Stage 1	-	-	-	-	199	-
Stage 2	-	-	-	-	337	-
Critical Hdwy	4.18	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.272	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1337	-	-	-	505	842
Stage 1	-	-	-	-	834	-
Stage 2	-	-	-	-	723	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1337	-	-	-	504	842
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	723	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.02	0	10.73
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	6	-	-	-	631
HCM Lane V/C Ratio	0.001	-	-	-	0.003
HCM Ctrl Dly (s/v)	7.7	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	760	514	11	11	13
Future Vol, veh/h	19	760	514	11	11	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	13	13	13	13	2	2
Mvmt Flow	19	768	519	11	11	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	530	0	-	0	1331	525
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	806	-
Critical Hdwy	4.23	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.317	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	983	-	-	-	170	553
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	983	-	-	-	165	553
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	439	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.21	0	19.91
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	44	-	-	-	266
HCM Lane V/C Ratio	0.02	-	-	-	0.091
HCM Ctrl Dly (s/v)	8.7	0	-	-	19.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	9.4

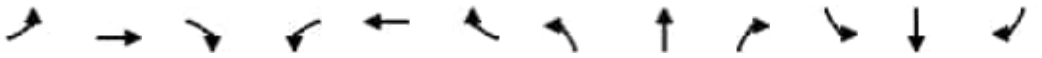
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	15	28	8	13	8	40	126	8	9	120	36
Future Vol, veh/h	36	15	28	8	13	8	40	126	8	9	120	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	15	29	8	13	8	41	130	8	9	124	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	22	0	0	44	0	0	196	142	30	189	153	18
Stage 1	-	-	-	-	-	-	104	104	-	34	34	-
Stage 2	-	-	-	-	-	-	92	38	-	155	119	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1594	-	-	1564	-	-	763	749	1045	772	739	1061
Stage 1	-	-	-	-	-	-	902	809	-	982	867	-
Stage 2	-	-	-	-	-	-	915	863	-	848	798	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1594	-	-	1564	-	-	595	727	1045	614	718	1061
Mov Cap-2 Maneuver	-	-	-	-	-	-	595	727	-	614	718	-
Stage 1	-	-	-	-	-	-	880	790	-	977	862	-
Stage 2	-	-	-	-	-	-	753	859	-	686	778	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	3.33	2.02	11.89	11.05
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	701	726	-	-	461	-	-	765
HCM Lane V/C Ratio	0.256	0.023	-	-	0.005	-	-	0.222
HCM Ctrl Dly (s/v)	11.9	7.3	0	-	7.3	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	0.8

25: Adam Shepherd & Mall Entrance/Conestoga



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	20	366	22	146	22	323	477	120	261	23
Future Volume (veh/h)	20	20	20	366	22	146	22	323	477	120	261	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	21	21	381	23	0	23	336	0	125	272	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	205	357	445	468		346	561		243	992	87
Arrive On Green	0.22	0.22	0.22	0.25	0.25	0.00	0.30	0.30	0.00	0.30	0.30	0.30
Sat Flow, veh/h	912	912	1585	1781	1870	1585	1083	1870	1585	1044	3306	290
Grp Volume(v), veh/h	42	0	21	381	23	0	23	336	0	125	145	151
Grp Sat Flow(s),veh/h/ln	1825	0	1585	1781	1870	1585	1083	1870	1585	1044	1777	1818
Q Serve(g_s), s	1.5	0.0	0.8	16.3	0.7	0.0	1.3	12.3	0.0	9.3	5.0	5.1
Cycle Q Clear(g_c), s	1.5	0.0	0.8	16.3	0.7	0.0	6.4	12.3	0.0	21.5	5.0	5.1
Prop In Lane	0.50		1.00	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	411	0	357	445	468		346	561		243	533	545
V/C Ratio(X)	0.10	0.00	0.06	0.86	0.05		0.07	0.60		0.51	0.27	0.28
Avail Cap(c_a), veh/h	411	0	357	445	468		346	561		243	533	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	24.3	28.6	22.8	0.0	23.8	23.9	0.0	33.1	21.3	21.4
Incr Delay (d2), s/veh	0.5	0.0	0.3	18.6	0.2	0.0	0.4	4.7	0.0	7.6	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	8.7	0.3	0.0	0.4	5.8	0.0	2.8	2.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.1	0.0	24.7	47.2	23.0	0.0	24.2	28.6	0.0	40.6	22.6	22.6
LnGrp LOS	C		C	D	C		C	C		D	C	C
Approach Vol, veh/h		63			404			359			421	
Approach Delay, s/veh		24.9			45.9			28.3			28.0	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	30.0	24.0	30.0	26.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	24.0	18.0	24.0	20.0
Max Q Clear Time (g_c+I1), s	14.3	3.5	23.5	18.3
Green Ext Time (p_c), s	1.4	0.2	0.1	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	33.7
HCM 7th LOS	C

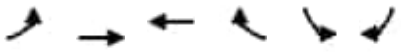
Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	268	101	542	130	76	836
Future Volume (veh/h)	268	101	542	130	76	836
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	291	110	589	141	83	909
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	521	192	980	1319	365	1841
Arrive On Green	0.20	0.20	0.46	0.70	0.20	0.20
Sat Flow, veh/h	2633	939	1781	1870	1781	2790
Grp Volume(v), veh/h	202	199	589	141	83	909
Grp Sat Flow(s),veh/h/ln	1777	1701	1781	1870	1781	1395
Q Serve(g_s), s	10.2	10.6	15.8	2.4	3.9	16.4
Cycle Q Clear(g_c), s	10.2	10.6	15.8	2.4	3.9	16.4
Prop In Lane		0.55	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	364	349	980	1319	365	1841
V/C Ratio(X)	0.55	0.57	0.60	0.11	0.23	0.49
Avail Cap(c_a), veh/h	364	349	980	1319	365	1841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	35.8	9.4	4.7	33.1	8.6
Incr Delay (d2), s/veh	6.0	6.7	2.7	0.2	1.4	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	5.0	6.0	0.9	1.8	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	41.6	42.4	12.1	4.9	34.6	9.5
LnGrp LOS	D	D	B	A	C	A
Approach Vol, veh/h	401			730	992	
Approach Delay, s/veh	42.0			10.7	11.6	
Approach LOS	D			B	B	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	25.0	50.0	25.0		75.0
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	20.5	45.5	20.5		70.5
Max Q Clear Time (g_c+I1), s	18.4	17.8	12.6		4.4
Green Ext Time (p_c), s	1.0	2.1	1.5		0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	17.0
HCM 7th LOS	B

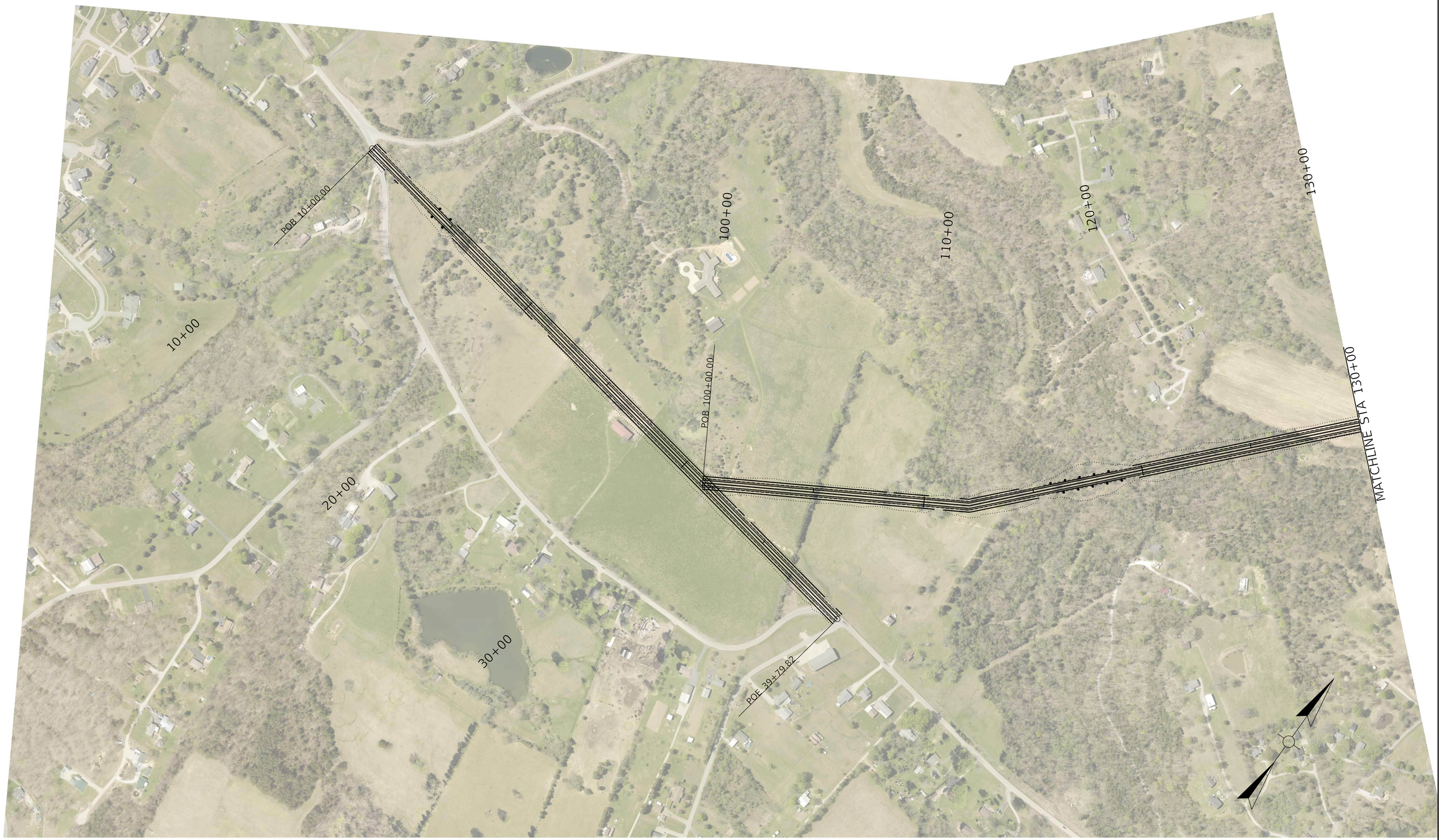


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	263	165	144	380	318	191
Future Volume (veh/h)	263	165	144	380	318	191
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1767	1767	1767
Adj Flow Rate, veh/h	292	183	160	422	353	212
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	9	9	9	9	9	9
Cap, veh/h	428	707	707	599	673	599
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	786	1767	1767	1497	1682	1497
Grp Volume(v), veh/h	292	183	160	422	353	212
Grp Sat Flow(s),veh/h/ln	786	1767	1767	1497	1682	1497
Q Serve(g_s), s	15.3	3.1	2.7	10.6	7.2	4.5
Cycle Q Clear(g_c), s	18.0	3.1	2.7	10.6	7.2	4.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	428	707	707	599	673	599
V/C Ratio(X)	0.68	0.26	0.23	0.70	0.52	0.35
Avail Cap(c_a), veh/h	428	707	707	599	673	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	9.0	8.9	11.3	10.3	9.4
Incr Delay (d2), s/veh	8.6	0.9	0.7	6.8	2.9	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	1.0	1.0	3.8	2.6	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	24.0	9.9	9.7	18.1	13.2	11.1
LnGrp LOS	C	A	A	B	B	B
Approach Vol, veh/h		475	582		565	
Approach Delay, s/veh		18.6	15.8		12.4	
Approach LOS		B	B		B	

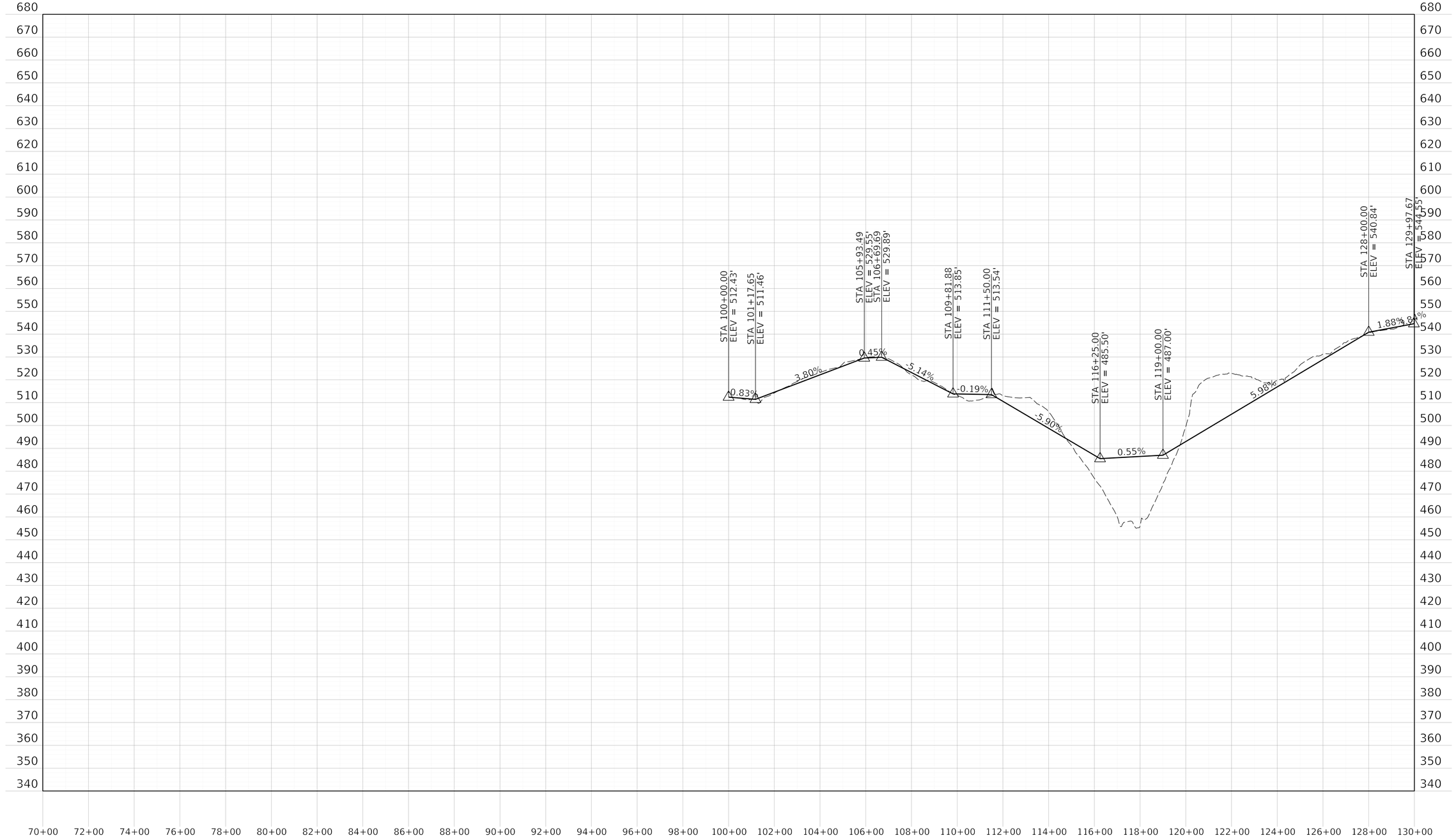
Timer - Assigned Phs		4		6	8
Phs Duration (G+Y+Rc), s		22.5		22.5	22.5
Change Period (Y+Rc), s		4.5		4.5	4.5
Max Green Setting (Gmax), s		18.0		18.0	18.0
Max Q Clear Time (g_c+I1), s		20.0		9.2	12.6
Green Ext Time (p_c), s		0.0		1.4	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	15.4
HCM 7th LOS	B

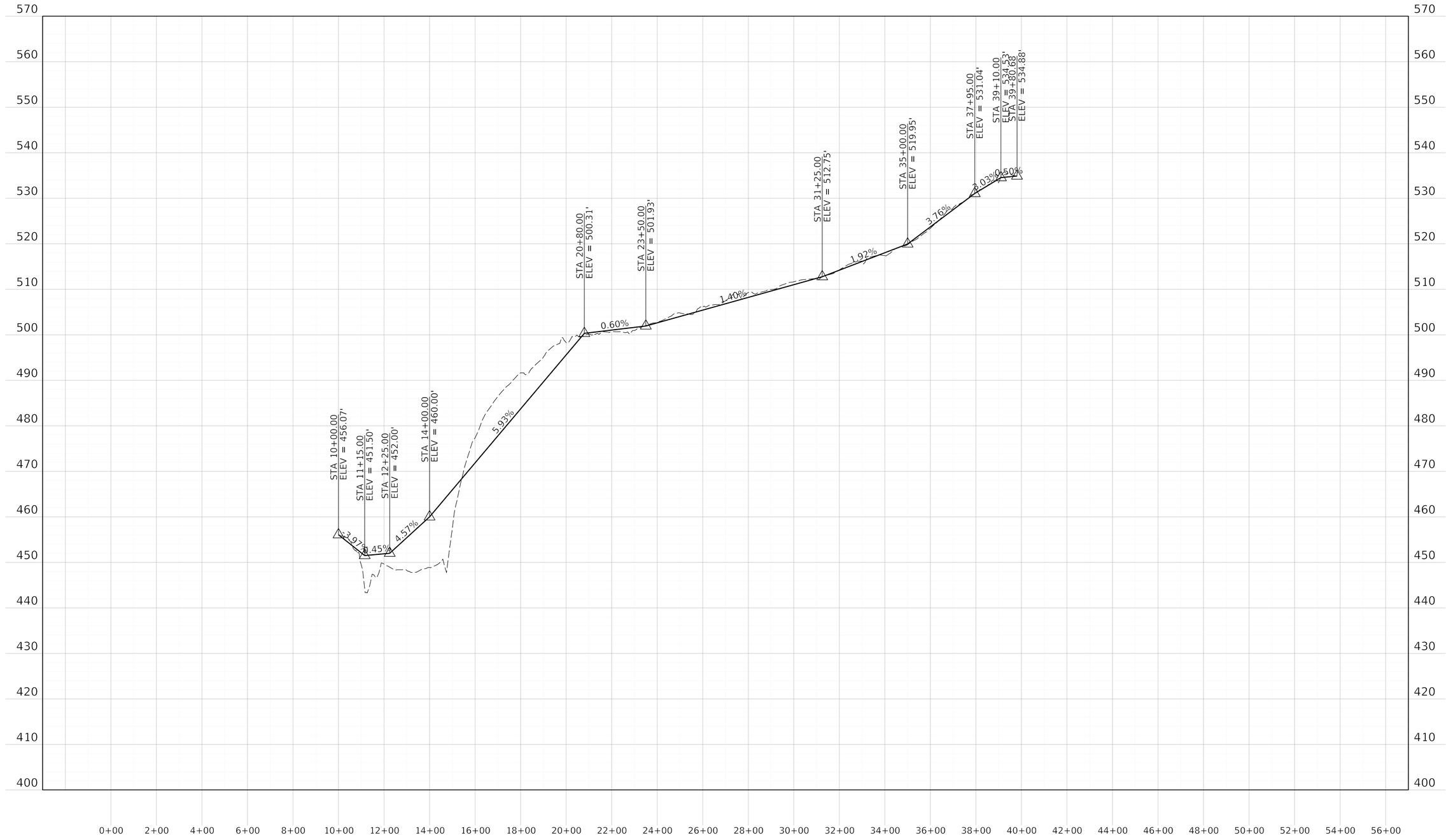
APPENDIX E
ROADWAY BYPASS DESIGN OUTPUT



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 & BYPASS ROUTE 1 (SOUTH LEG) - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0′ 200′ 400′ 800′	BEGINNING TO END BEGINNING TO STA. 130+00.00	SHEET NO. 1



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	BEGINNING TO STA. 130+00.00	SHEET NO. 2



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 (SOUTH LEG) - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=10'	HORIZONTAL SCALE SCALE: 1"=200'	BEGINNING TO END	SHEET NO. 3

CITY OF SHEPHERDSVILLE

BYPASS ROUTE 1 - PLAN SHEET

HORIZONTAL SCALE
SCALE: 1"=200'

0' 200' 400' 800'

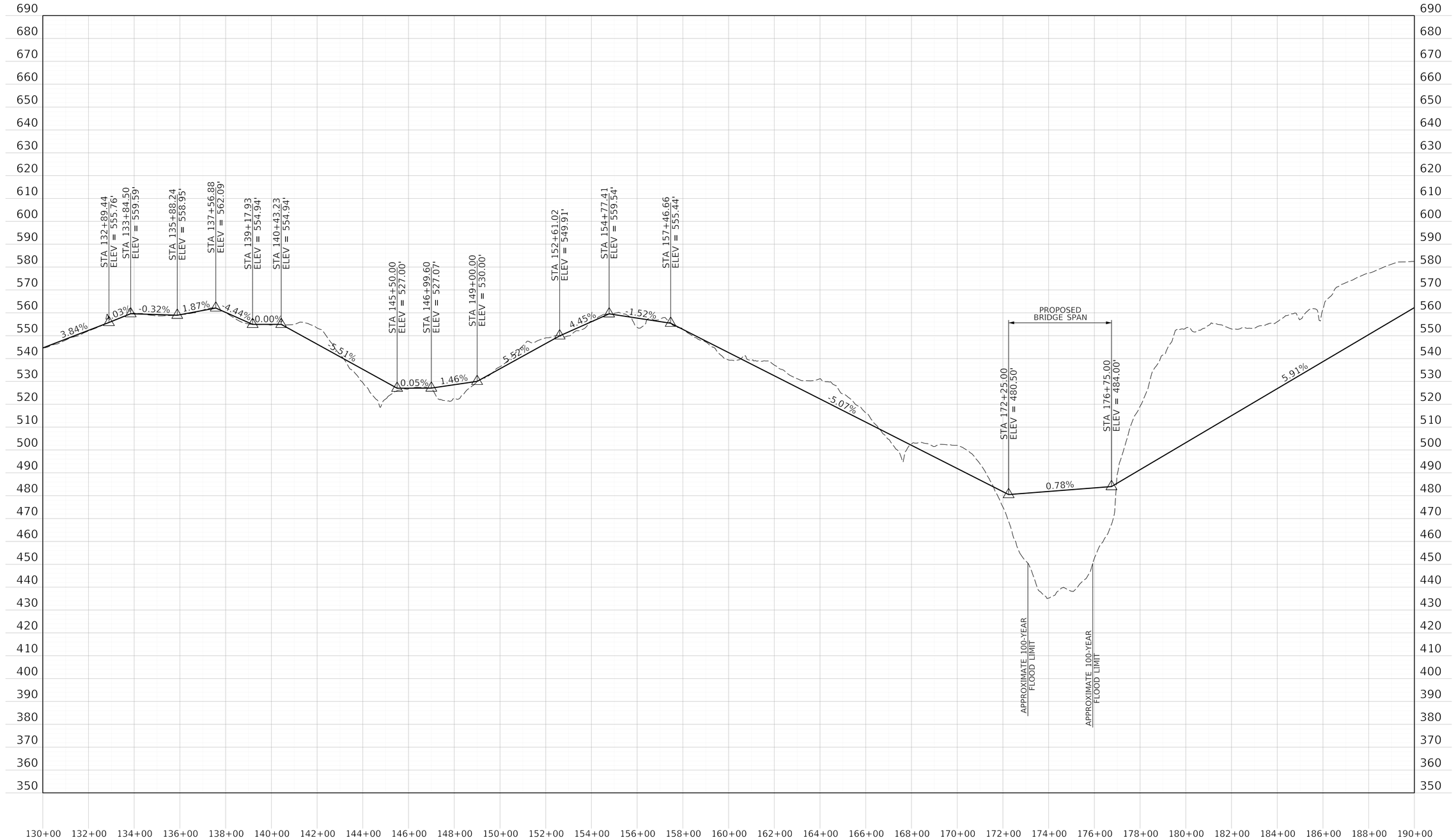
STA. 130+00.00 TO STA. 190+00.00

SHEET NO.
4

OpenRoads Designer v23.00.01.11

USER: lynnj

FILE NAME: \\STRAND.COM\PROJECTS\MAD\3600--3699\3690\010\DRAWINGS\CAD\SHEETS\PLAN AND PROFILE.DGN



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA. 130+00.00 TO STA. 190+00.00	SHEET NO. 5

CITY OF SHEPHERDSVILLE

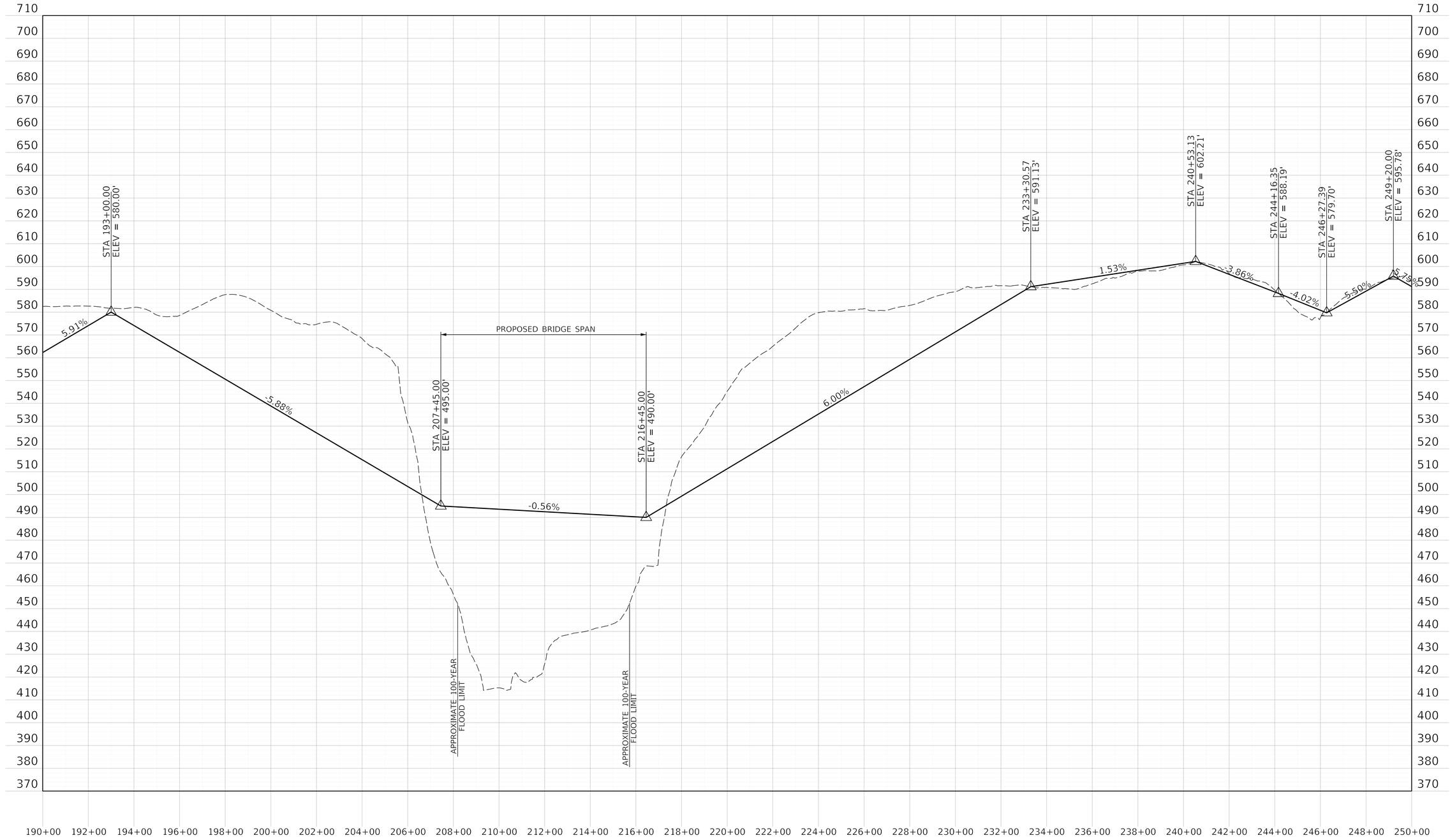
BYPASS ROUTE 1 - PLAN SHEET

HORIZONTAL SCALE
SCALE: 1"=200'

0′ 200′ 400′ 800′

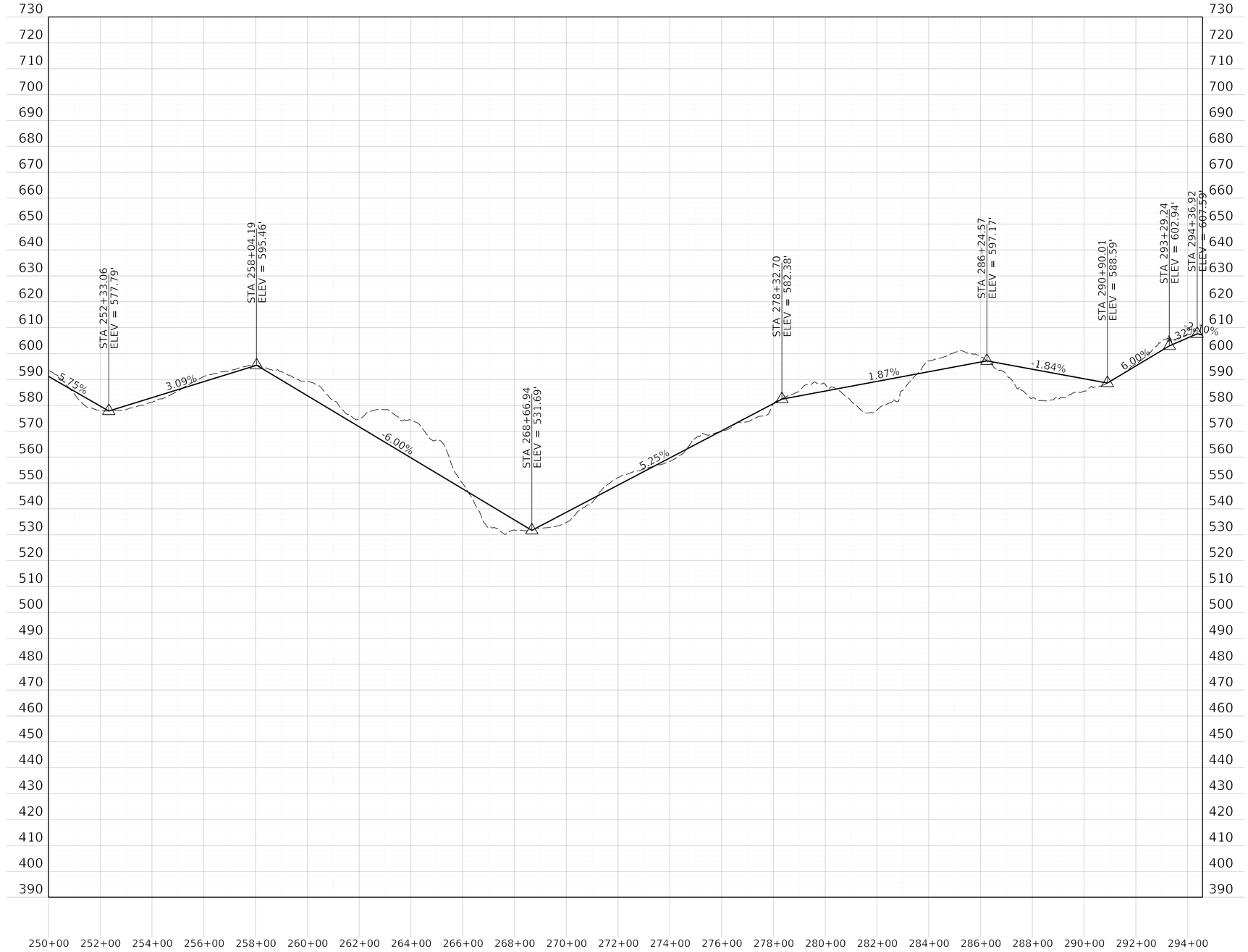
STA. 190+00.00 TO STA. 250+00.00

SHEET NO.
6



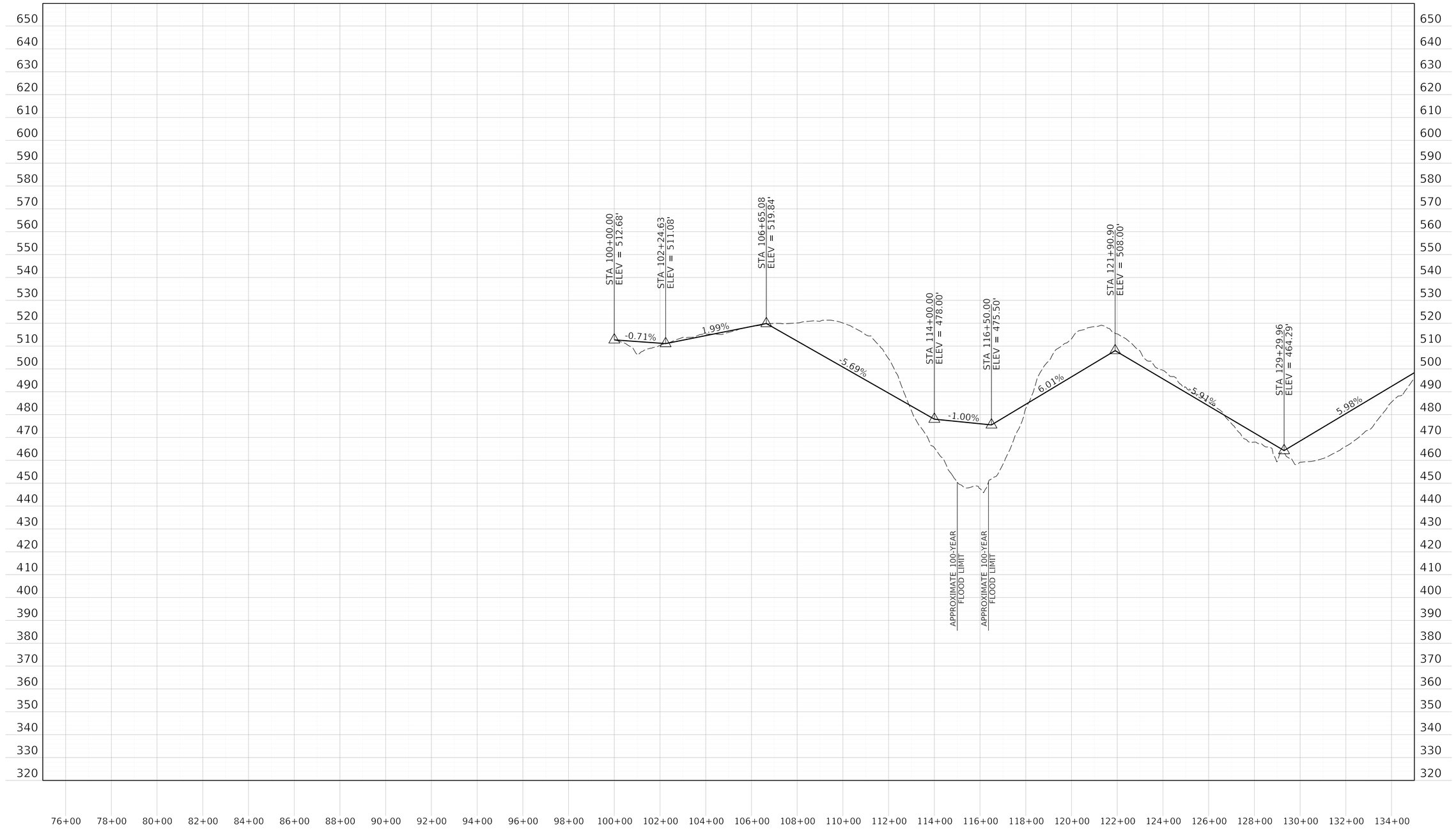
CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA. 190+00.00 TO STA. 250+00.00	SHEET NO. 7

CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0' 200' 400' 800'	STA. 250+00.00 TO END	SHEET NO. 8

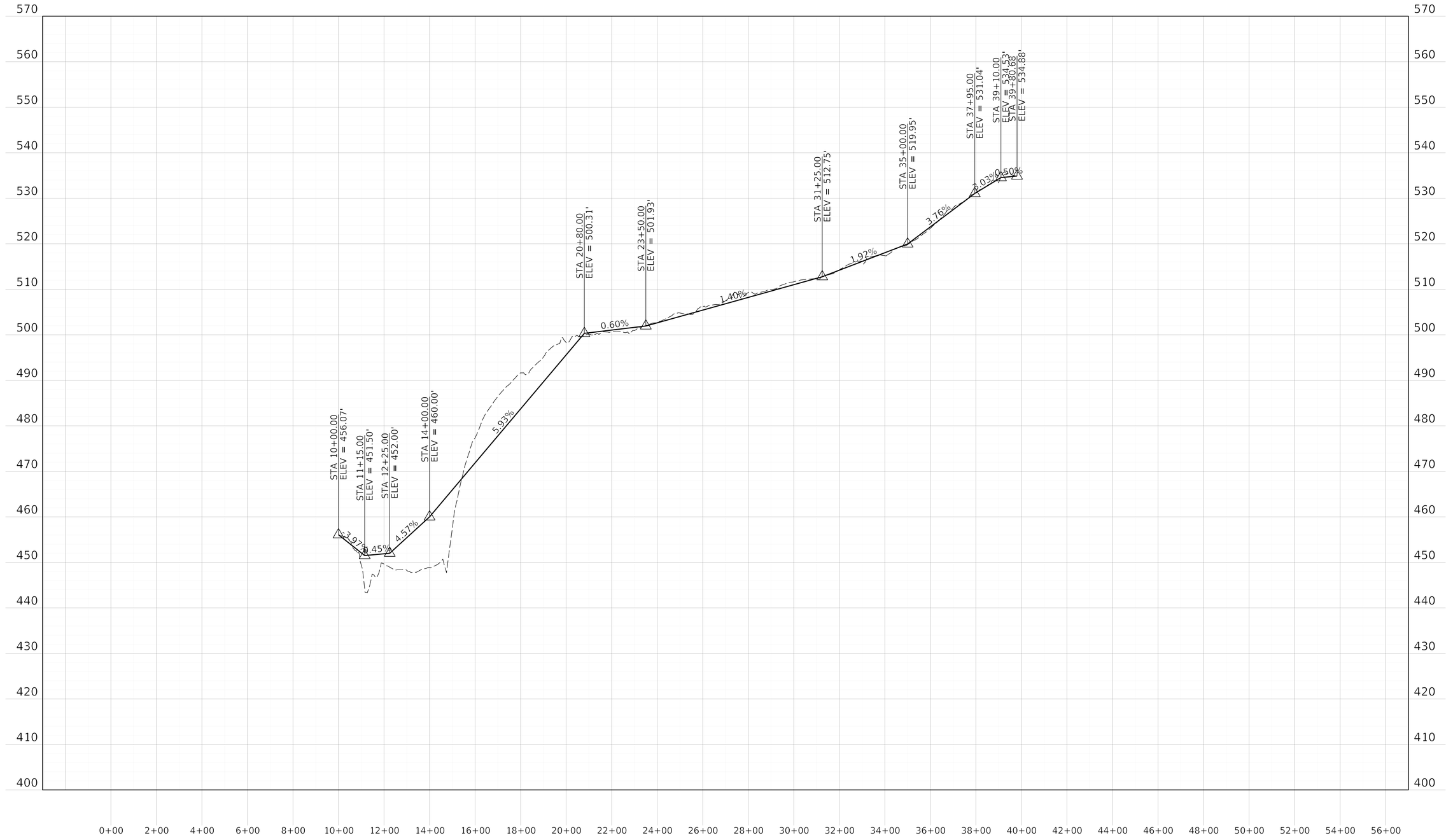


CITY OF SHEPHERDSVILLE	BYPASS ROUTE 1 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA 250+00.00 TO END	SHEET NO. 9

CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 & BYPASS ROUTE 2 (SOUTH LEG) - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0′ 200′ 400′ 800′	BEGINNING TO END BEGINNING TO STA. 135+00.00	SHEET NO. 10

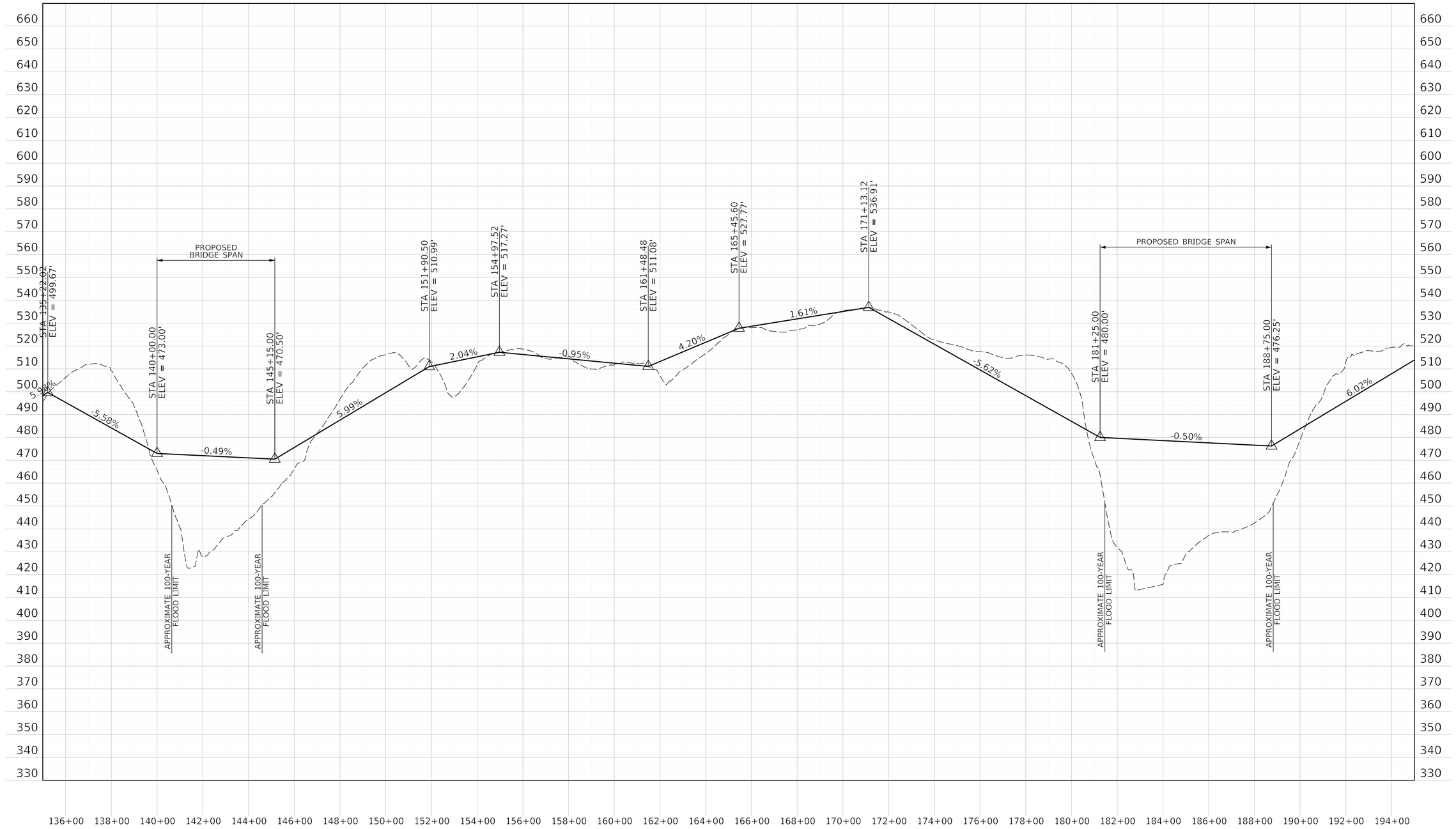


CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	BEGINNING TO STA. 135+00.00	SHEET NO. 11



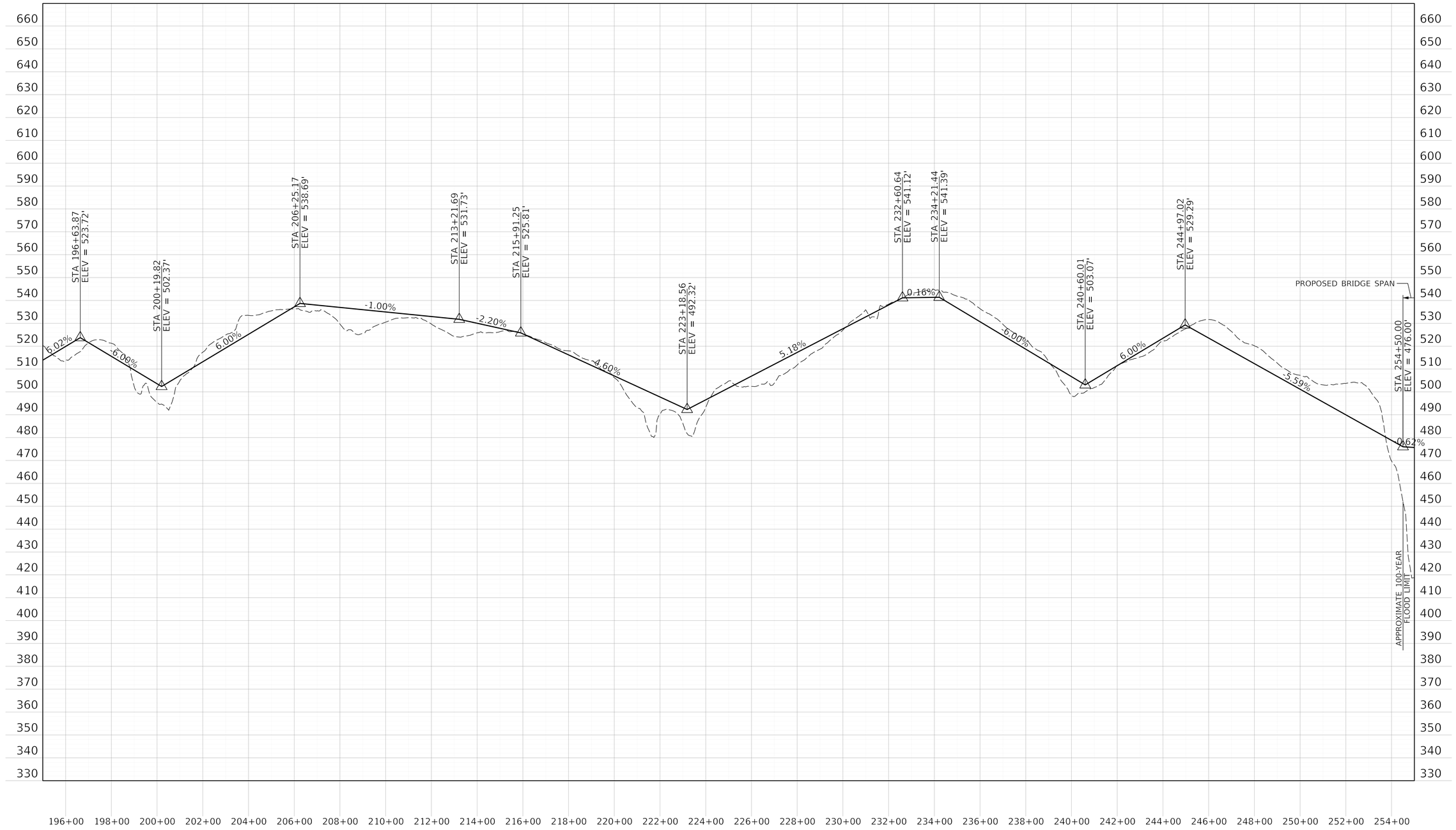
CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 (SOUTH LEG) - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=10'	HORIZONTAL SCALE SCALE: 1"=200'	BEGINNING TO END	SHEET NO. 12

CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0' 200' 400' 800'	STA. 135+00.00 TO STA. 195+00.00	SHEET NO. 13

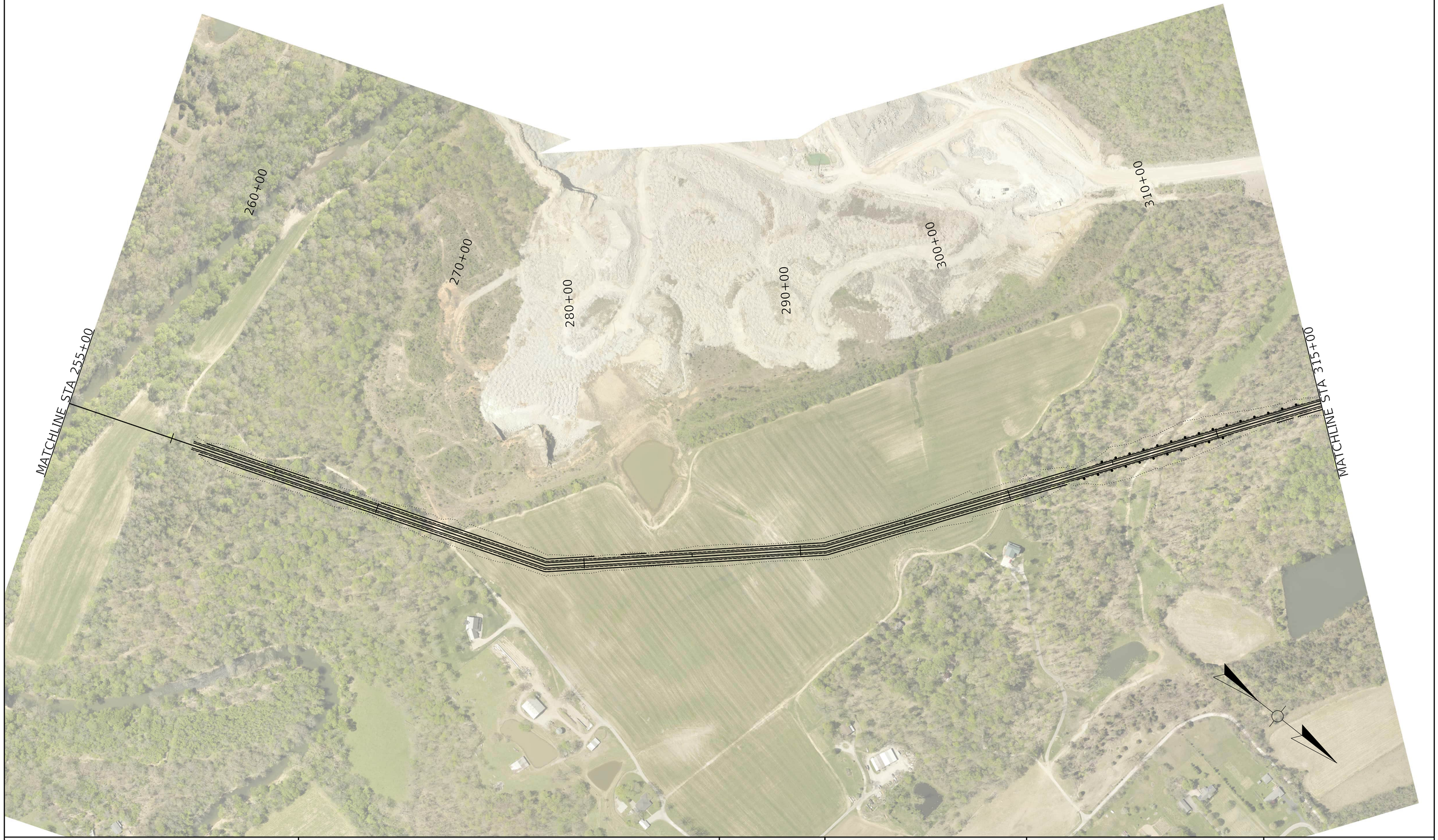


CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA. 135+00.00 TO STA. 195+00.00	SHEET NO. 14

CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0′ 200′ 400′ 800′	STA. 195+00.00 TO STA. 255+00.00	SHEET NO. 15



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA. 195+00.00 TO STA. 255+00.00	SHEET NO. 16



CITY OF SHEPHERDSVILLE

BYPASS ROUTE 2 - PLAN SHEET

HORIZONTAL SCALE
SCALE: 1"=200'

0' 200' 400' 800'

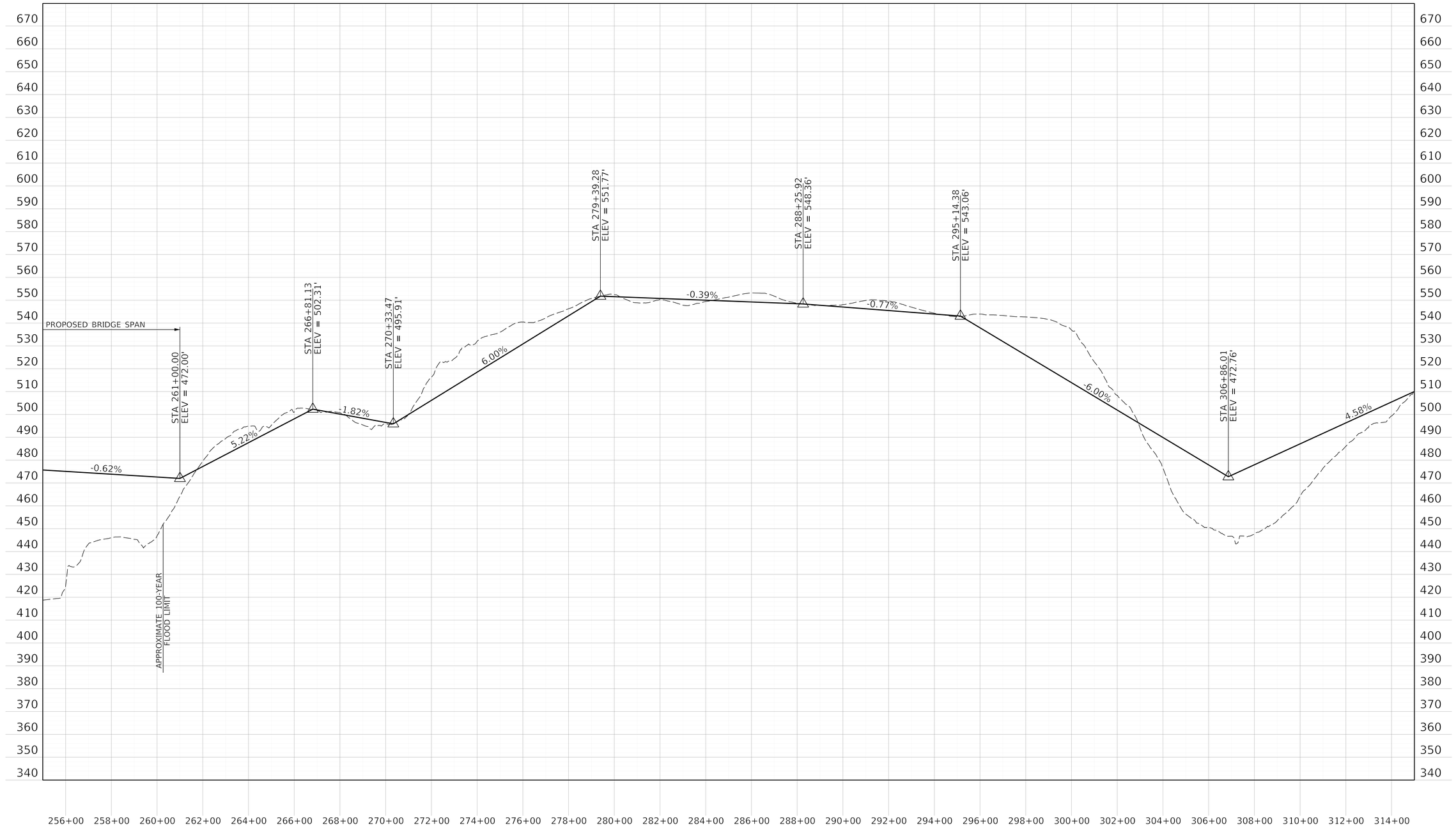
STA. 255+00.00 TO STA. 315+00.00

SHEET NO.
17

OpenRoads Designer v23.00.01.11

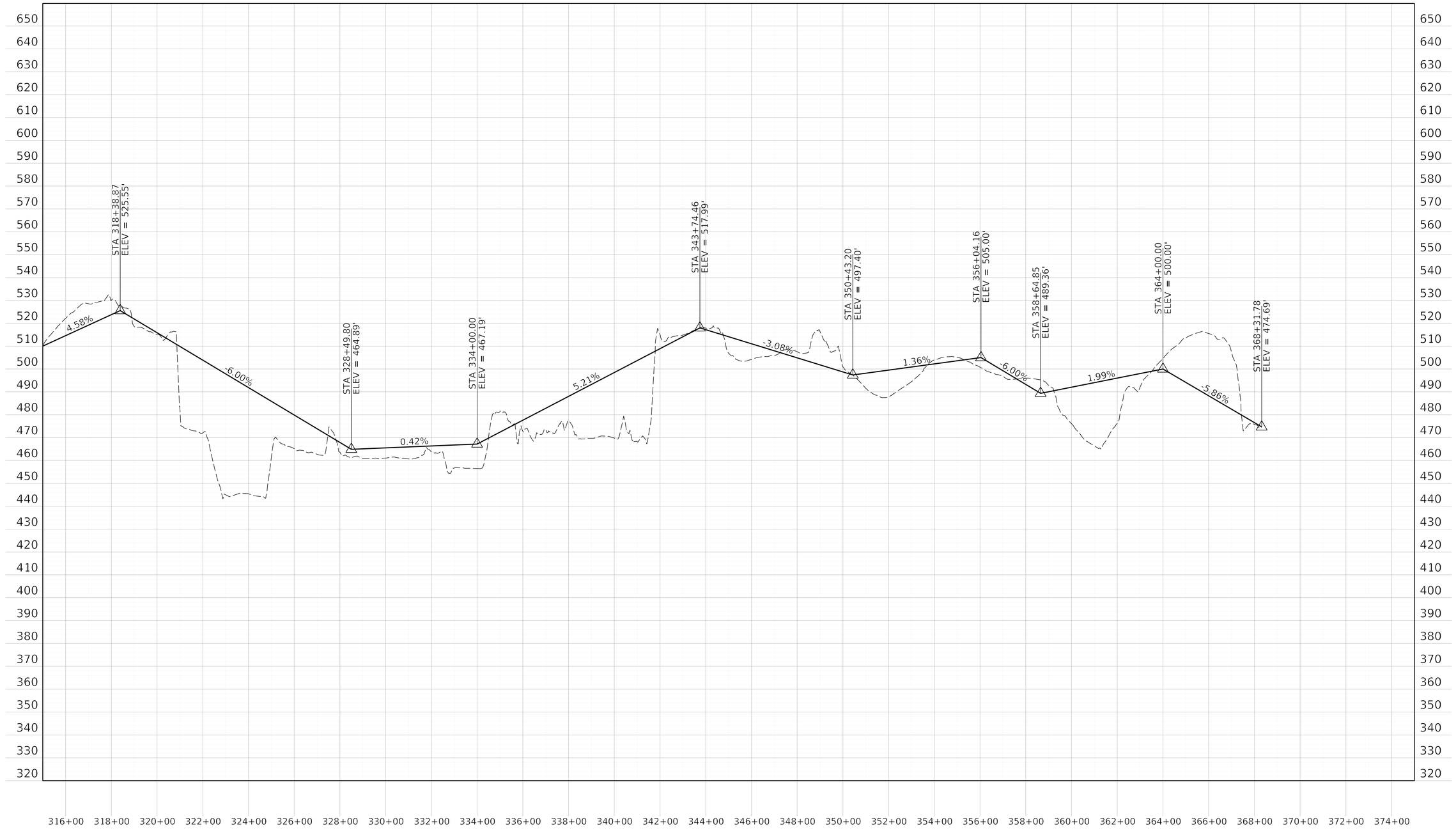
USER: lynnj

FILE NAME: \\STRAND.COM\PROJECTS\MAD\3600--3699\3690\010\DRAWINGS\CAD\SHEETS\PLAN AND PROFILE - BYPASS ROUTE 2.DGN



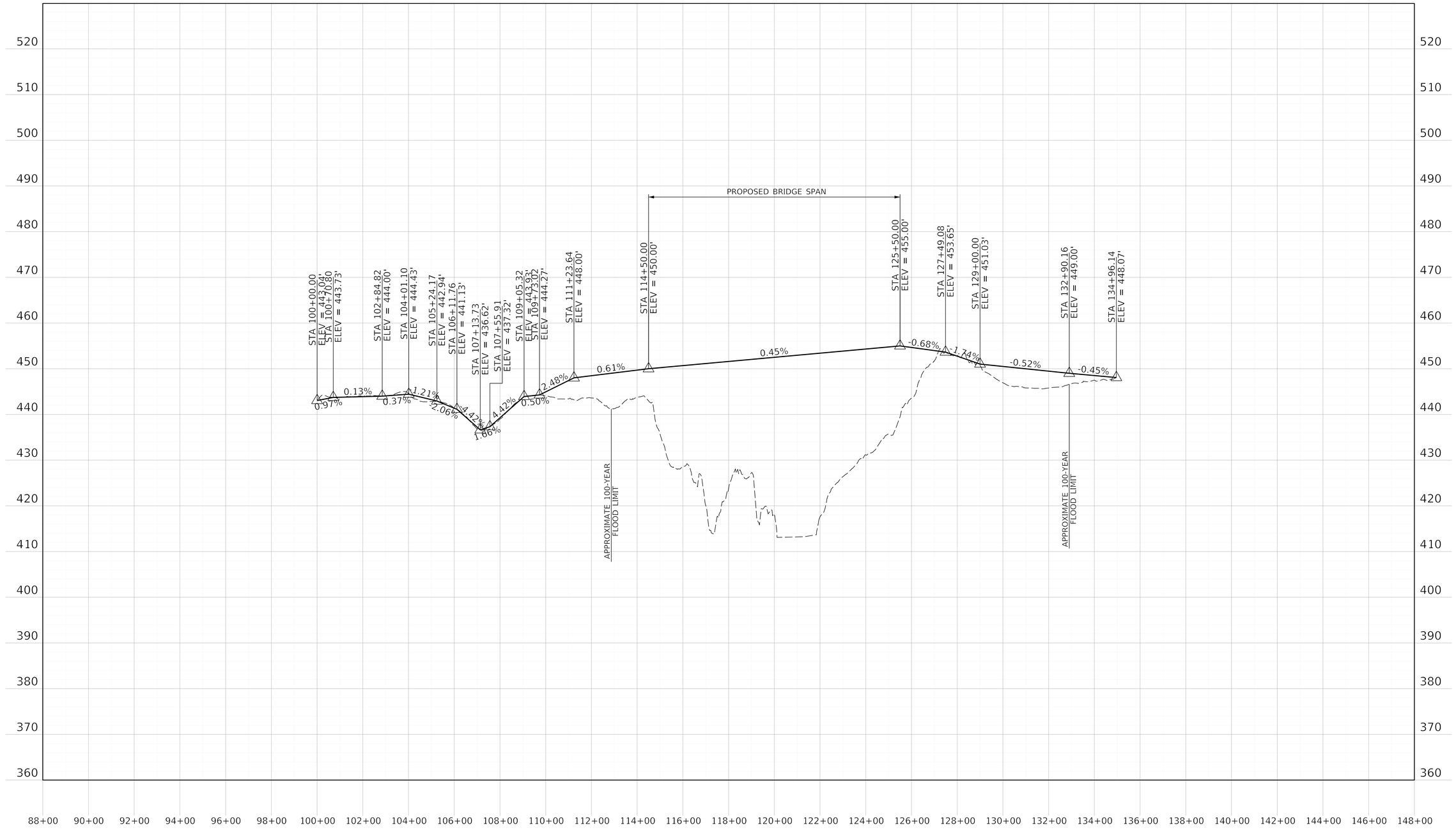
CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA. 255+00.00 TO STA 315+00.00	SHEET NO. 18

CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0' 200' 400' 800'	STA. 315+00.00 TO END	SHEET NO. 19



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 2 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=20'	HORIZONTAL SCALE SCALE: 1"=200'	STA. 315+00.00 TO END	SHEET NO. 20

CITY OF SHEPHERDSVILLE	BYPASS ROUTE 3 - PLAN SHEET	HORIZONTAL SCALE SCALE: 1"=200'	0' 200' 400' 800'	BEGINNING TO END	SHEET NO. 21



CITY OF SHEPHERDSVILLE	BYPASS ROUTE 3 - PROFILE SHEET	VERTICAL SCALE SCALE: 1"=10'	HORIZONTAL SCALE SCALE: 1"=200'	BEGINNING TO END	SHEET NO. 22

APPENDIX F
ROADWAY BYPASS OPCC

CORRIDOR INFORMATION (ORD)

	Corridor Length (feet)	
Bypass Route 1	19458	23000
Bypass Route 1 - South Leg	2980	
Bypass Route 2	26832	30000
Bypass Route 2 - South Leg	2980	
Bypass Route 3	3496	3500

BRIDGE INFORMATION

	Bridge Length (ft)	Box Culvert Length (ft)
Bypass Route 1		
Lickskillet Creek Tributary	—	125
Cedar Creek	450	—
Salt River	900	—
Bypass Route 2		
Lickskillet Creek Tributary	—	125
Cedar Creek	515	—
Salt River	750	—
Floyd's Fork	650	—
Bypass Route 3		
Salt River	1100	—

	Bypass Route 1 (incl. south leg)	Bypass Route 2 (incl. south leg)	Bypass Route 3	
Asphalt Surface	121161.96	160982.64	18879.14	CUBIC FEET
Asphalt Base	336561.00	447174.00	52442.06	CUBIC FEET
DGA CSB	533412.15	707949.55	83430.49	CUBIC FEET
Cut	18,195,052.67	10,551,233.10	120,786.10	CUBIC FEET
Fill	1,772,212.22	8,921,339.29	249,797.45	CUBIC FEET

	Bypass Route 1 (incl. south leg)	Bypass Route 2 (incl. south leg)	Bypass Route 3		
Asphalt Surface	8885.21	11805.39	1384.47	TONS	ASPHALT SURFACE TON = (Volume in IN * SQ. YD) * (110 / 2000)
Asphalt Base	24681.14	32792.76	3845.75	TONS	ASPHALT BASE TON = (Volume in IN * SQ. YD) * (110 / 2000)
DGA CSB	40894.93	54276.13	6396.34	TONS	CSB TON = (Volume in IN * SQ. YD) * (115 / 2000)
Cut	673890.84	390786.41	4473.56	CUBIC YARDS	
Fill	65637.49	330419.97	9251.76	CUBIC YARDS	

	Bypass Route 1 (incl. south leg)	Bypass Route 2 (incl. south leg)	Bypass Route 3		
Asphalt Surface	$ 1,021,799.19	$ 1,357,620.26	$ 159,214.09	$ 115.00	per ton (00301)
Asphalt Base	$ 2,591,519.68	$ 3,443,239.79	$ 403,803.85	$ 105.00	per ton (00212)
DGA CSB	$ 1,390,427.66	$ 1,845,388.49	$ 217,475.47	$ 34.00	per ton (00003)
Cut	$ 6,738,908.40	$ 3,907,864.11	$ 134,206.78	$10 / $30 (see >>>)	per cubic yard (02200) – $10/ for B.R. 1 and 2, $30/ for B.R. 3
Fill					
SUM	$ 11,742,654.93	$ 10,554,112.65	$ 914,700.18		

ASSUMPTIONS:
Bridge: $275/SF
Culvert: $4,500/LF of Barrel Length
30-foot width

Bypass Route #	Stream Crossing	Bridge Length	Bridge Area	Box Culvert Length	Assumed Cost	
1	Lickskillet Creek Tributary	–	–	125	$562,500	$11,700,000
	Cedar Creek	450	13500	–	$3,712,500	
	Salt River	900	27000	–	$7,425,000	
2	Lickskillet Creek Tributary	–	–	125	$562,500	$16,361,250
	Cedar Creek	515	15450	–	$4,248,750	
	Salt River	750	22500	–	$6,187,500	
	Floyd's Fork	650	19500	–	$5,362,500	
3	Salt River	1100	33000	–	$9,075,000	$9,075,000

	Bypass Route 1 (incl. south leg)	Bypass Route 2 (incl. south leg)	Bypass Route 3
Lime Stabilization Costs	$ 500,000.00	$ 500,000.00	$ 100,000.00
Additional Paving Costs	$ 250,000.00	$ 300,000.00	$ 50,000.00
Clearing and Grubbing	$ 300,000.00	$ 350,000.00	$ 75,000.00
Staking	$ 125,000.00	$ 150,000.00	$ 20,000.00
Additional Roadway Costs	$ 250,000.00	$ 300,000.00	$ 40,000.00
Channel Lining	$ 500,000.00	$ 500,000.00	$ 75,000.00
Additional Drainage	$ 1,000,000.00	$ 1,000,000.00	$ 100,000.00
MOT, Striping, and Signing	$ 1,000,000.00	$ 1,000,000.00	$ 100,000.00
SUM	$ 3,925,000.00	$ 4,100,000.00	$ 560,000.00
SUM (with Pavement Quantities and Bridge Costs)	$ 27,367,654.93	$ 31,015,362.65	$ 10,549,700.18
Mobilization (5%)	$ 1,368,382.75	$ 1,550,768.13	$ 527,485.01
Demobilization (1.5%)	$ 410,514.82	$ 465,230.44	$ 158,245.50
TOTAL COST:	$ 29,146,552.50	$ 33,031,361.22	$ 11,235,430.70
WITH 30% CONTINGENCY:	**$ 37,890,518.24**	**$ 42,940,769.59**	**$ 14,606,059.90**

Bypass Route #	AFFECTED PARCELS:	Acres of FEE SIMPLE Acquisition	Acres of EASEMENT Acquisition	Land Value per Acre	(Fee Simple) Acquisition Cost	Easement Cost	Total Cost with Acquisition Services @ $10,000/Parcel & 30% Contingency	SUM
1 - North of Salt River, north of Alpar Lane	15	3.39	3.79	$ 25,000	$ 84,698	$ 18,933	$ 329,720	
1 - North of Salt River, south of Alpar Lane	10	4.83	7.52	$ 8,000	$ 38,660	$ 12,024	$ 195,890	
1 - South of Salt River	24	13.77	19.71	$ 7,000	$ 96,375	$ 27,598	$ 473,165	$ 998,774.48
2 - North of Salt River, north of KY-44	10	13.43	27.97	$ 17,000	$ 228,336	$ 95,104	$ 550,472	
2 - North of Salt River, south of KY-44	23	4.52	8.43	$ 10,000	$ 45,182	$ 16,861	$ 379,656	
2 - South of Salt River	14	11.13	20.61	$ 8,000	$ 89,022	$ 32,972	$ 340,592	$ 1,270,720.23
3 - North of Salt River	3	1.28	1.85	$ 70,000	$ 89,754	$ 25,901	$ 189,352	
3 - South of Salt River	3	1.95	2.74	$ 15,500	$ 30,289	$ 8,487	$ 89,408	$ 278,760.47

Bypass Route	Number of Properties to be relocated	Assumed $450,000 for each property
1	15	$ 6,750,000.00
2	24	$ 10,800,000.00
3	0	$ -

	Bypass Route 1	Bypass Route 2	Bypass Route 3
Design Costs			
ROW Costs	$ 998,774.48	$ 1,270,720.23	$ 278,760.47
Utility Costs			
Construction Costs	$ 37,890,518.24	$ 42,940,769.59	$ 14,606,059.90
SUM	$ 38,889,292.72	$ 44,211,489.82	$ 14,884,820.37

	Bypass Route 1	Bypass Route 2	Bypass Route 3	
Design Costs				
ROW Costs	$ 7,748,774.48	$ 12,070,720.23	$ 278,760.47	with relocation cost
Utility Costs				
Construction Costs	$ 37,890,518.24	$ 42,940,769.59	$ 14,606,059.90	
SUM	$ 45,639,292.72	$ 55,011,489.82	$ 14,884,820.37	

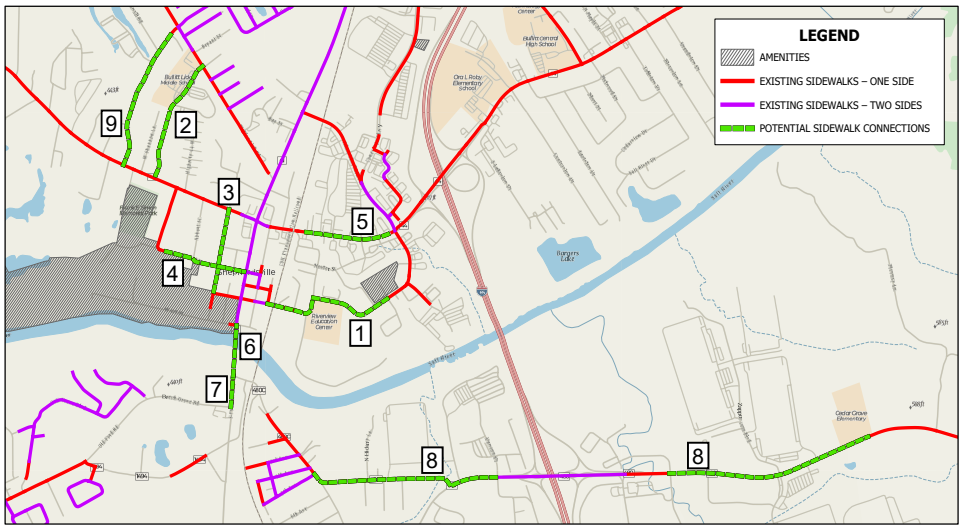
APPENDIX G
PUBLIC INFORMATION MEETING COMMENTS

PEDESTRIAN NETWORK

Overview: Gaps in the pedestrian network were identified by analyzing the connectivity between key origins and destinations – the areas of consideration included recreational areas, neighborhoods, schools, restaurants, and industrial parks. Based on this analysis, nine key projects were identified in coordination with the City to reflect community needs and planning objectives.

Potential Sidewalk Connections:

1. Joe B. Hall Avenue – Provides a connection from the Aquatic Center to the railroad bridge and downtown area.
2. Bullitt Lick Middle School Road – Provides a connection from the Mallard Lake subdivision to the downtown area and the new park entrance on KY-44.
3. South Plum Street from KY-44 to West Joe B. Hall Avenue – Provides a connection from KY-44 to the park and Joe B. Hall Avenue.
4. West 3rd Street from Lee Street to KY-61 – Provides a connection from the park to KY-61 and Joe B. Hall Avenue.
5. KY-44 between Railroad and Adam Shepherd Parkway – Fills in the sidewalk gap and provides a connection between the downtown area and east Shepherdsville.
6. KY-61 Salt River Bridge – Improves sidewalk infrastructure along the bridge.
7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road – Provides a connection from the neighborhoods south of the Salt River to the downtown area.
8. Cedar Grove Road (two segments) – Fills in the gaps along KY-480 to connect to KY-61 and the downtown area.
9. Salt Well Road from West Blue Lick Road to KY-44 – Provides additional connections to the park.



Study Team Contact:
Kyle Henderson, P.E.
kyle.henderson@strand.com
(608) 251-4843

City Engineer Contact:
Arthur Jones, P.E.
ajones@shepherdsvilleky.gov
(502) 543-2923

City of Shepherdsville – Public Involvement Meeting

Central Bullitt County Transportation Planning Study:
Bypass Routes and Pedestrian Networks

Tuesday, May 12, 2026 – 5:00 to 7:00 PM

STUDY PURPOSE

The City of Shepherdsville is actively engaged in revitalizing their downtown area with new and developing projects. These projects, which include an aquatic center, skatepark, and recreational park, are expected to attract additional businesses, residents, and visitors to the community. In an effort to address this anticipated population growth, the City has initiated development of a long-range transportation plan to improve the vehicular and pedestrian networks throughout Shepherdsville and Bullitt County.

KNOWN ISSUES

VEHICULAR	PEDESTRIAN
• Recurring congestion during peak hours • Downtown congestion during I-65 lane closures • Outdated infrastructure • Crash rates • Access management	• Lack of connection between key origins and destinations • Substandard sidewalk infrastructure • High vehicular speeds that create an uncomfortable and unsafe pedestrian experience • Lack of pedestrian signals and crosswalks

MEETING PURPOSE

1. Present the findings and preliminary recommendations for the Shepherdsville bypass route (Pages 2 and 3).
2. Highlight potential sidewalk connections to fill pedestrian network gaps (Page 4).
3. Provide a venue for public input to be incorporated in the final design.

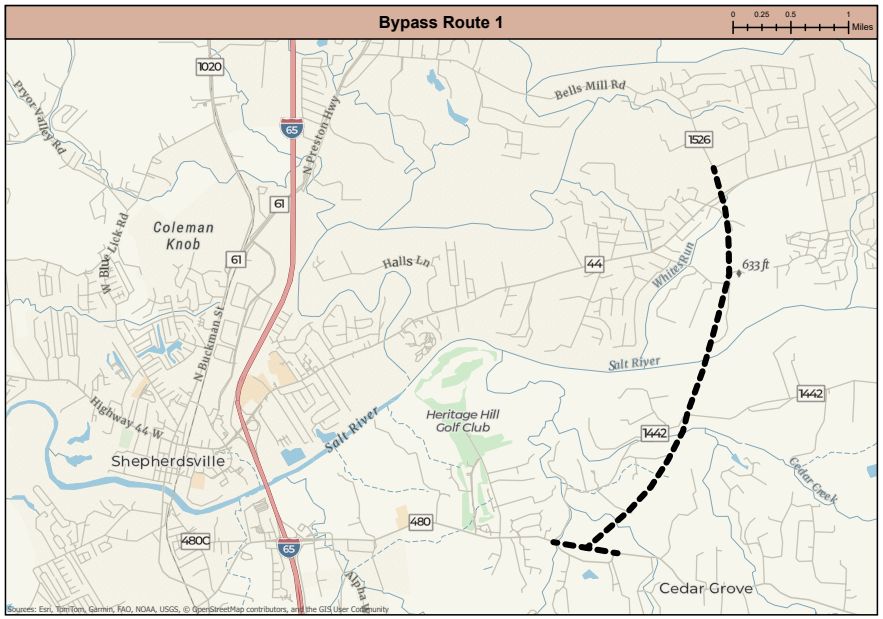
Please take a few minutes to complete the short survey by scanning the QR code – we'd love to hear your thoughts! You can also share feedback with us using the paper Comment Form. Be sure to stop by and talk with the team at the exhibits as well.

BYPASS ROUTES

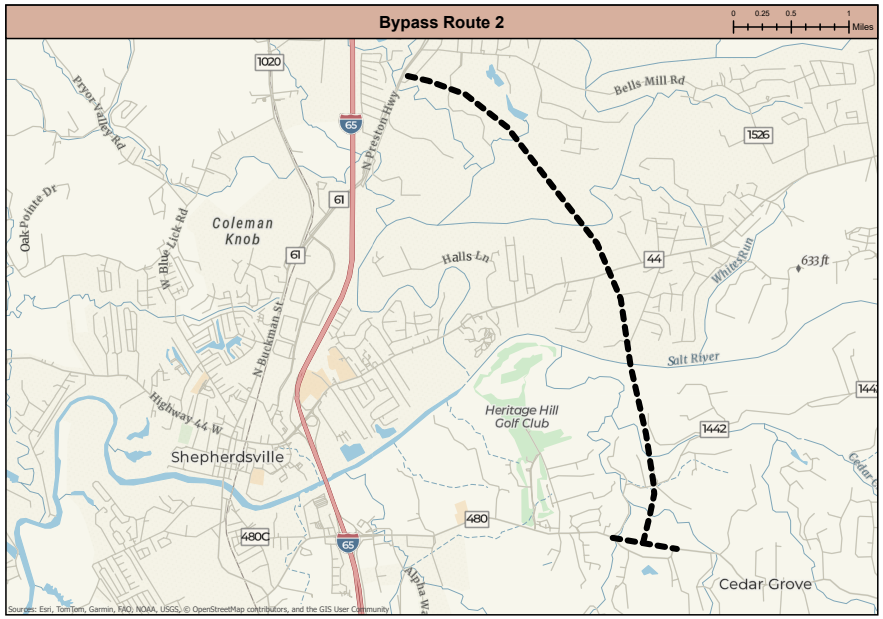
Overview:

The Salt River runs south of downtown Shepherdsville and features two existing north-south crossings: I-65 and KY-61. Recurring peak hour congestion and lane closures on I-65 often cause many interstate drivers to reroute using KY-61, resulting in gridlock conditions throughout the downtown area. This increase in traffic highlights the need for a third crossing over the Salt River that avoids the inner city and improves vehicular connectivity.

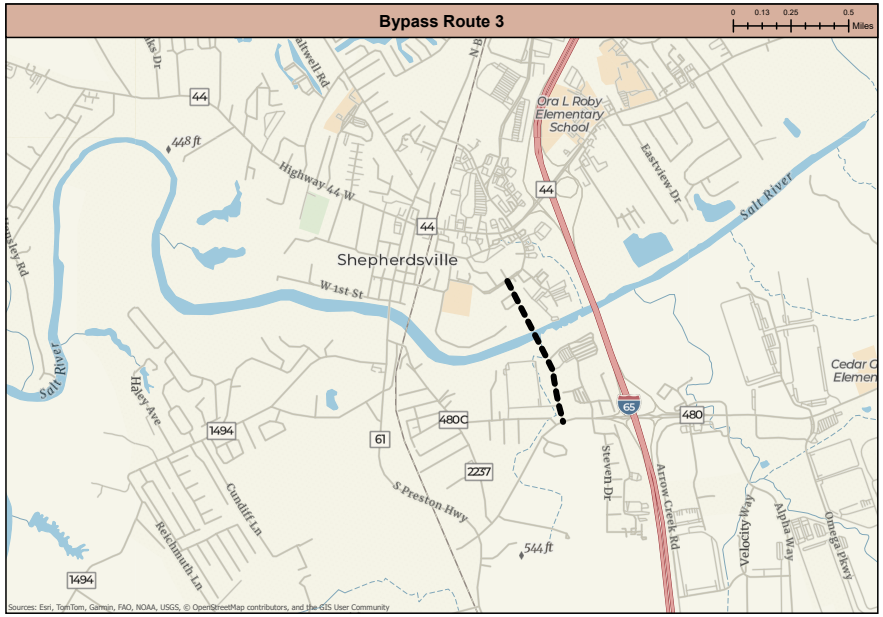
With several considerations in mind, including benefits to the existing roadway network, anticipated traffic volumes, and construction costs, three bypass route designs appear to merit further analysis.



Bypass Route 1 runs from KY-480 to KY-44 and Bells Mill Road. Travel demand modeling shows that the bypass primarily serves traffic to/from east Shepherdsville (including Mount Washington) to the logistics park area. This is shown with the increase in traffic volumes along KY-44 east of the bypass, and on Ohm Drive, Omega Parkway, and KY-480 west of the bypass.



Bypass Route 2 runs from KY-480 to KY-61 south of Bells Mill Road. With Route 2 in place, travel demand modeling shows an increase in traffic from KY-480 southeast of Shepherdsville, as traffic uses this bypass to access KY-61 North. Traffic on Ohm Drive and Omega Parkway show increases as well.



Bypass Route 3 offers a new bridge connection between KY-61 and I-65 and provides the largest volume reductions over the Salt River. Volume redistributes to the state highways that have existing residual capacity.

SIGN-IN SHEET

Row	Name	Address	City	City/Zip	Representing	Phone	Email
1	Sharon & David Knight	111 Maple Trail	Shepherdsville	40165	The community	502-543-7036	SamK1952@gmail.com
2	Steven Phelps	295 Lovers Leap Ln	Shepherdsville	40165	South East Bullitt Community	502-432-1865	roselps2@gmail.com
3	Gerald Mitchell	225 McCubbins Farm Ln	Shepherdsville	40165	Self	–	–
4	David Myers	1890 Beech Grove Rd	Shepherdsville	40165	Self	–	–
5	Dara Sanders	179 Tanyard Park Pl. #171	Louisville	40229	Self	502-428-9540	–
6	Cameron Burkeen				BCHD	270-978-3601	Cameron.burkeen@bullitthealth.org
7	Dustin Dishow	274 Whitledge Ln	Shepherdsville	40165	Self	502-475-8368	–
8	Sheila Bandy	1063 Wilderness Way	Shepherdsville	40165	Self	502-773-4055	Grannieplus3@gmail.com
9	Brance Gould	349 S. Buckman St	Shepherdsville	40165	Gould Properties	502-523-3254	–
10	Cheri & Harold Smith	226 River Edge Dr	Shepherdsville	40165	Self	502-387-4676	Ketchums68@yahoo.com
11	Penny Terry	4713 Ridge Rd	Shepherdsville	40165	Self	502-548-4768	Pennyterry05@gmail.com
12	Doug Weber	8700 Storrington Ct	Louisville	40222	Self	502-203-7743	dweberuk@outlook.com
13	Vivian Cambron	364/368 Ferguson Ln	Shepherdsville	40165	Self	502-650-6854	vcambron@outlook.com
		17105 Shakes Creek Dr	Fisherville	40023	Self	–	–
14	Jasmine Webb	230 W Blue Lick Rd Apt. 2	Shepherdsville	40165	Self	502-434-9863	Xena01818@gmail.com
15	Nancy Holston	7450 Cedar Grove Rd	Shepherdsville	40165		–	–
16	Monte Holston					–	–
17	Jason McCubbins	109 McCubbins Farm Rd	Shepherdsville	40165		–	–
18	Jo Coffman	411 Centerview Dr	Shepherdsville	40165		–	–
19	Ben Boling	Oak Grove Boulevard	Shepherdsville	40165		–	–
20	Pat Jones	215 Gibraltar Dr	Shepherdsville	40165		–	–
21	Chad (illegible)	6880 Cedar Grove Rd	Shepherdsville	40165		–	–
22	David Armstrong	6964 Cedar Grove Rd	Shepherdsville	40165		–	–
23	Misty Powell	127 Bischoff Way	Shepherdsville	40165		–	–
24	Brady Hill				KIPDA	–	brady.hill@kipda.org
25	Anita Stump				Chamber	–	anita@bullittchamber.org
26	Angela Johns	151 Sunny Ct	Shepherdsville	40165		–	angela.johns@yahoo.com
27	Caleb & Cortney Buse	801 Tanglewood Rd	Shepherdsville	40165		–	–
28	Jason Turpin	1851 Raymond Rd	Shepherdsville	40165		–	jason@kyturpin.com
29	Pam Johns	169 Aqua View Dr	Shepherdsville	40165		–	pamjohns364@gmail.com
30	Stephen Lawson	1062 Old Mill Stream Ln	Shepherdsville	40165		–	0000stephen0000@gmail.com
31	Cathy Martin	182 Juanita Ct	Shepherdsville	40165		–	clmartin215@gmail.com
32	Brenda S. Board	248 Partridge Run	Shepherdsville	40165		–	–
33	Gary W. Board	248 Partridge Run	Shepherdsville	40165		–	–
34	Steve Schmidt					–	–
35	Alice Scifres	6959 Cedar Grove Rd	Shepherdsville	40165		–	–
36	David Strange	878 Peaceful Way	Shepherdsville	40165	Myself	502-592-0778	davidstrange@windstream.net
37	Dave Juergens	PO Box 445	Shepherdsville	40150	Myself	502-553-4144	djandes@gmail.com
38	Eronmonsele Esekhaigbe	1710 Somerset Pl.	Louisville	40220	KIPDA	313-829-7071	eronmonsele.esekhaigbe@kipda.org
39	Tee Zehnder					–	–
40	Rita Jones	Cedar Grove Rd	Shepherdsville	40165	Self	502-395-0816	bitohoney1313@aol.com
41	Ami Shifflett	425 Stargel Ln	Shepherdsville	40165	Self/Spouse (Steven Shifflett)	502-468-6056	stevenshifflett80@gmail.com
						502-356-7013	amicarpenter@yahoo.com
42	Tank Blevins (illegible)	260 Circle Dr	Shepherdsville	40165	Self	502-445-1621	star4241@me.com
43	Jason Rice	300 Cooper Run Rd	Shepherdsville	40165	Self	502-664-7432	jcrice1975@hotmail.com
44	Lisa S. Carter	340 Cliffside Dr	Shepherdsville	40165	Self	502-777-5550	lisasmithcarter11@yahoo.com
45	Allison Nuckolls	4608 Cedar Grove Rd	Shepherdsville	40165	Self	502-558-4271	allison@glorykidd.com
46	Mike Hibbard Sr.	189 Seminole Ct	Shepherdsville	40165	Self	502-802-5703	mhibbandsr@gmail.com
47	Karen Hibbard	189 Seminole Ct	Shepherdsville	40165	Self	502-235-7744	kychinadoll@yahoo.com
48	Brian Bleemel	601 Clarks Ln	Shepherdsville	40165	4th District Magistrate	502-301-0138	bbleemel@bullittky.com
49	Laura Singleton	239 Tanglewood Rd	Shepherdsville	40165		502-548-8958	mjs0557@gmail.com
50	Brenda & Ralph Rittman	200 Michelle Dr	Shepherdsville	40165	Myself	–	–
51	Sherry Barbee	868 Alpar Ln	Shepherdsville	40165	Self	–	–
52	Pennie Barbee	868 Alpar Ln	Shepherdsville	40165	Self	–	–
53	Patty Goodman	330 Clarks Ln	Shepherdsville	40165	Myself	502-418-4766	1whitesquaw@windstream.net
54	Rep. Thomas Huff	187 Kristi Shells Ct	Shepherdsville	40165	Self	502-553-4827	–
55	Bonnie Weck	135A Michelle Dr	Shepherdsville	40165	Self	502-387-4403	bonnieweck@gmail.com
56	Buddy Tinnell	170C Michelle Dr	Shepherdsville	40165	Self	502-599-3247	buddytinnell@gmail.com
57	Beckie McIntosh	602 Alyssa Brooke Dr	Shepherdsville	40165	Self	502-492-7116	–
58	Jessica Robards	1965 Hwy 44E	Shepherdsville	40165	Self	502-543-2317	–
59	Chris Docter	5657 Cedar Grove Rd	Shepherdsville	40165	Self	502-380-7034	cwdocter@gmail.com
60	Tammy Bleemel	607 Clarks Ln	Shepherdsville	40165	Self	202-492-0256	–
61	Dave Shadowen	555 Hillcreek Rd	Shepherdsville	40165	Self	–	–
62	MJ Shadowen	555 Hillcreek Rd	Shepherdsville	40165	Self	–	mjshadowen@aol.com
63	Cindy Zehnder				Self	–	tee_cindy_z@windstream.net
64	James Chappell	216 Sharon Dr	Shepherdsville	40165	Self	502-921-9222	jameschap211@gmail.com
65	Jeremy Kubac	243 Lee St	Shepherdsville	40165	Self	502-235-3903	jeremy.kubac@greshamsmith.com
66	Kathy Harshfield	565 McCubbins Farm Ln	Shepherdsville	40165	Self	502-817-0189	kathy.harshfield@gmail.com

Orange cells indicate uncertainty resulting from illegibility

CITY OF SHEPHERDSVILLE
PUBLIC INVOLVEMENT MEETING (PIM)

Central Bullitt County Transportation Planning Study: Bypass Routes and Pedestrian Networks

DATE:	TIME:	LOCATION:	PURPOSE:
Tuesday, May 12, 2026	5:00 P.M. to 7:00 P.M.	Shepherdsville City Hall, 634 Conestoga Parkway, Shepherdsville, KY 40165	Discuss potential bypass routes and gaps in the pedestrian sidewalk network.

ATTENDANCE RECORD

NAME (Please Print)	STREET ADDRESS CITY/STATE/ZIP CODE	REPRESENTING	PHONE NUMBER	Email (Please fill out if you would like to receive notifications by email)
1. Sharon + David Knight	111 maple Trail 40165	the community	502 543 7036	samK1952@gmail.com
2. Steven Phelps	295 Lovers Leap Ln	South East Bullitt Comm	502-432-1865	roselps2@gmail.com
3. Gerald Mitchell	225 McCubbins Farm Lane	Self		
4. DAVID Myers	1890 Beech Grove Rd	Self		
5. Dara Sanders	179 Tanyard Park Pl. #171	Self	502 428-9540	
6. Cameron Burkeen		BCHD	270-978-3601	cameron.burkeen@bullitthealth.org
7. Dustin Dishon	274 whitledge Ln 40165	Self	502-475-8568	
8. Sheila Bandy	1063 Wilderness Way Shep	Self	502-773-4055	grannieplus3@gmail.com
9. BRANCE GOULD	349 S. BUCKMAN SHEP KY	GOULD PROPERTIES	(502) 523-3254	
10. CHERI SMITH + HAROLD	226 RIVER EDGE DR	self	502-387-4676	Ketchums68@yahoo.com
11. Penny Terry	4713 Ridge Rd Shep.	Self	502-548-4768	pennyterry05@gmail.com
12. Doug Webb	8700 Storrington Ct Lou.	self	502-203-7743	dweberuk@outlook.com
13. Vivian Cambron	364/368 Ferguson Lane 17105 Shakes Creek Drive	Self	502 650-6854	vcambron@outlook.com
14. Jasmine Webb	230 W Blue Lick Rd, Apt 2, Shepherdsville, Ky, 40165	Self	502-434-9863	Xena01818@gmail.com

NAME (Please Print)	STREET ADDRESS CITY/STATE/ZIP CODE	REPRESENTING	PHONE NUMBER	Email (Please fill out if you would like to receive notifications by email)
15. Nancy Holston	7450 Cedar Grove Rd			
16. MARK HOLSTON	" " "			
17. Jason McCubbins	109 McCubbins Farm Rd			
18. Jo Coffman	411 Centerview Dr. Oak Grove Blvd			
19. Ben Boling				
20. Pat Jones	215 Gibraltar Dr.			
21. Chuck [illegible]	6880 Cedar Grove Road			
22. David Armstrong	6964 cedar grove RD			
23. Misty Powell	127 Bischoff Way 40165			
24. Brady Hill		KIPDA		brady.hill@kipda.org
25. Anita Stump		Chamber		anita@bullitchamber.org
26. ANGELA JOHNS	151 SUNNY Ct. Shep KY. 40165			angela.johns@yahoo.com
27. Caleb + Courtney Buse	801 Tanglewood Rd. Shep. KY 40165			
28. Jason Turpin	1851 Raymond Rd			Jason@kyturpin.com
29. Pam Johns	169 Aqua View Dr. Sheph 40165			pamjohns364@gmail.com
30. Stephen Lawson	1062 Old Mill Stream Ln 40165			ΦΦΦΦStephenΦΦΦΦ@Gmail.
31. Cathy Martin	182 Juanita Ct. Shep 40165			clmartin215@gmail.com
32. Brenda S. Board	248 Partridge Run Shep. Ky 40165			
33. GARY W. BOARD	248 PARTRIDGE RUN SHEP. KY 40165			
34. Steve Schmidt				
35. Alice Scifres	6959 Cedar Grove Rd 40165			

NAME (Please Print)	STREET ADDRESS CITY/STATE/ZIP CODE	REPRESENTING	PHONE NUMBER	Email (Please fill out if you would like to receive notifications by email)
36. David Strange	878 Peaceful Way, Shep Ky 40165	myself	502-592-0778	DavidStrange@Windstream.net
37. DAVE JUERGENS	Po Box 445 LJ Ky 40150	my self	502 553 4144	djander@gmail.com
38. Fronmouseh Esekhaigbe	1710 Somerset Pl. Louisville Pl 40220	KIPDA	3138297071	fronmouseh.esekhaigbe@kipda.org
39. TEE Zehnder	city			
40. Rita Jones	Cedar Grove Rd. Shep	self	502-395-0816	Bitohaney1313@aol.com
41. Ami Shifflett	425 Stengel Rn Shep	self/spouse (Steven Shifflett)	502-468-6056 502-356-7013	stevenshifflett80@gmail.com amicarpenter@yahoo.com
42. Tank Blevins	260 circle Dr	Self	502-445-1621	STAR4241@ME.Com
43. Jason Rice	300 Cooper Run Rd	Self	502-6647432	jcrice1975@hotmail.com
44. Lisa S. Carter	340 Cliffside Dr	Self	502.777.5550	Lisasmithcarter11@yahoo.com
45. Allison Nuckolls	4608 Cedar Grove Rd.	Self	502-558-4271	allison@gloryKidd.com
46. Mike Hibbard Sr	189 Seminole Ct. Shep	Self	502-802-5703	mhibbardsr@gmail.com
47. Karen Hibbard	189 S Same ↑	Self	502-235-7744	Kychinadll@yahoo.com
48. Brian Bleemel	601 Clarks Ln Shep.	4th Dist. Magistrate	502-301-0138	bbleemel@bullittky.com
49. Laura (Marian) Singleton	239 Tanglewood Rd		502-548-8958	mjs ∅ 557@gmail.com
50. Brenda + Ralph Rittman	200 Michelle Dr Shep	myself		
51. [illegible] Barbee	868 Alpar Ln	self		
52. Pennie Barbee	868 Alpar Ln	self		
53. Patty Goodman	330 Clarks Ln 40165	Myself	502.418.4766	1whitesquaw@windstream.Net
54. Rep Thomas Huff	187 Kristi Shells Ct.	Self	502-553-4827	
55. Bonnie Weck	135A Michelle Dr	self	502387-4403	bonnieweck@gmail.com
56. Buddy Tinnell	170 C Michelle Dr	self	502-599-3247	buddytinnell@gmail.com

NAME (Please Print)	STREET ADDRESS CITY/STATE/ZIP CODE	REPRESENTING	PHONE NUMBER	Email (Please fill out if you would like to receive notifications by email)
57. Beckie McIntosh	602 Alyssa Brooke Dr. 40165	self	502-492-7116	—
58. Jessica Robards	1965 Hwy. 44 E	Self	502-543-2317	—
59. Chris Docter	5657 Cedar Grove Rd	Self	502-380-7034	cwdocter@gmail.com
60. Tammy Bleemel	607 Clarks Ln Shep Ky 40165	self	5024920256	
61. Dave Shadowen	555 Hilcreek, Shep	Self	—	—
62. MJ Shadowen	11	Self	—	mjshadowen@aol.com
63. Cindy Zehnder		Self		tee_cindy_z@windstream.net
64. Chappell, James	216 Sharon Drive	Self	502-921-9272	Jameschappell@gmail.com
65. Jeremy Kubacz	243 Lee Street 40165	self	502.235.3903	jeremy.kubacz@greshamsmith.com
66. Kathy Harshfield	565 McCubbins Farm Ln	Self	502-817-0189	Kathy.harshfield@gmail.com
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HARD-COPY COMMENT FORM RESPONSES

Name	Address	Daytime Phone Number	Email Address	Comments
Allison Nuckolls	4608 Cedar Grove Rd		allison@glorykidd.com	My vote is Bypass 1. Make a bridge over Salt River at the Amazon Rd. to the KOA
Jo Coffman	411 Centerview Dr	502-930-3501	jcoffman1@twc.com	You will need all the components to compare of the routes. Pick out the most efficient, costly way to go. Take the most important one first, then pick 2 more, have the state see them. When one project is half way done, secure funding for the next one. Keep it going until all of your projects are completed.
Brian Bleemel, 4th Dist. Magistrate	607 Clarks Ln	502-301-0138		Road From 2nd Industrial Park Entrance on 480 over to 44 then to 61/65, and new interchange
Jasmine Webb	230 W Blue Lick Rd, Apt 2	502-434-9863	Xena01818@gmail.com	I really like the idea of adding sidewalks around the aquatic center and on 44 between the CSX rail road to the overpass. However, to truly have an impact, along with adding sidewalks we need to make the lanes smaller on 44. This decreases speed and makes pedestrians feel safer. Adding sidewalks makes for thinner roads, which decreases speed. Bypass route 3 just makes for more traffic near the aquatic center, which leads back into 44. It could be nice with some tuning on the north point. Bypass route 4 could work. It keeps a lot of truck traffic out of the way, though we have a lot of traffic coming from Bardstown which is concerning.
Stephen Lawson	1062 Old Mill Stream Ln	502-767-9775	0000stephen0000@gmail.com	3 lanes on Hwy-44, time appointed at 2 PM east and 2 AM west. Center turn in during non-high volume times (Peak-hour capacity) Use existing Hwy-61 as 3 northbound lanes. Build 3 southbound lanes west of KY-61. Open Exit 119. (Splitting KY-61 to NB and SB route)
Chris Docter	5657 Cedar Grove Rd	502-380-7034	cwdocter@gmail.com	Need exit at MM 119 from both northbound and southbound I-65. This would relieve Shepherdsville of traffic. Any plan routing more traffic onto KY-480 should not be considered. KY-480 has two lanes and is extremely dangerous. Ask state to lower speed limit on KY-480. It is currently 55 MPH from I-65 to Bardstown Road.

Public Involvement Meeting Comment Form

City of Shepherdsville

Central Bullitt County Transportation Planning Study:
Bypass Routes and Pedestrian Networks

Tuesday, May 12, 2026

Please place this form in the comment box. Comments can also be e-mailed to kyle.henderson@strand.com.

Your comments will assist us in developing a project that will serve the needs of the traveling public as well as the needs of the local community. Your input is welcome and appreciated throughout the design process.

Name: Allison Nuckolls

Address: 4608 Cedar Grove Rd

Daytime Phone Number (optional): _____

Email Address (optional): allison@glorykidd.com

Please Print Comments (attach additional sheets if necessary):

My vote is Bypass 1

Make a bridge over Salt River at the Amazon Rd. to the KOA

Public Involvement Meeting Comment Form

City of Shepherdsville

Central Bullitt County Transportation Planning Study:
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Name: Jo Coffman

Address: 411 Conterview Dr

Daytime Phone Number (optional): 502-930-3501

Email Address (optional): jcoffman1@twc.com

Please Print Comments (attach additional sheets if necessary):

You will need all the componets to compare of the routes. Pick out the most efficient, Costly way to go. Take the most important one First, then pick 2 more have the state to see them. When one project is halfway done secure funding for the next one. Keep it going until all of your project are completed.

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Your comments will assist us in developing a project that will serve the needs of the traveling public as well as the needs of the local community. Your input is welcome and appreciated throughout the design process.

Name: Brian Bleemel 4th Dist. Magistrate

Address: 607 Clarks Ln Shep.

Daytime Phone Number (optional): 502-301-0138

Email Address (optional): _____

Please Print Comments (attach additional sheets if necessary):

Road from 2nd Industrial Park Entrance on 480 over to 44 then to 61/65 & new interchange

Public Involvement Meeting Comment Form

City of Shepherdsville

Central Bullitt County Transportation Planning Study:
Bypass Routes and Pedestrian Networks

Tuesday, May 12, 2026

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Your comments will assist us in developing a project that will serve the needs of the traveling public as well as the needs of the local community. Your input is welcome and appreciated throughout the design process.

Name: Jasmine Webb

Address: 230 W Blue Lick Rd, Apt 2, Shepherdsville, Ky, 40165

Daytime Phone Number (optional): 502-434-9863

Email Address (optional): Xena01818@gmail.com

Please Print Comments (attach additional sheets if necessary):

- I really like the idea of adding side walks around the aquatic center and on 44 between the CSX train railroad to the overpass. However, to truly have an impact, along with adding side walks, we need to make the lanes smaller on 44. This decreases speed and makes pedestrians feel safer. Adding side walks makes for thinner roads, which decreases speed.
- By pass route 3 just makes for more traffic near the aquatic center, which leads back into 44, it could be nice with some tuning on the north point.
- By pass route 4 could work. It keeps alot of truck traffic out of the way, though we have alot of traffic coming from Bardstown is concerning.

Public Involvement Meeting Comment Form

City of Shepherdsville

Central Bullitt County Transportation Planning Study:
Bypass Routes and Pedestrian Networks

Tuesday, May 12, 2026

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Your comments will assist us in developing a project that will serve the needs of the traveling public as well as the needs of the local community. Your input is welcome and appreciated throughout the design process.

Name: Stephen Lawson

Address: 1062 Old Mill Stream Ln. Shep. Ky 40165

Daytime Phone Number (optional): 502-767-9775

Email Address (optional): bdΦΦStephenΦΦΦΦ@gmail.com

Please Print Comments (attach additional sheets if necessary):

3 lanes on Hwy 44 time appointed PM 2 East & AM 2 West
center turn in non High Volume times. → PEAK HOUR Capacity

Use existing 61 Hwy as 3 North Bound lanes
Build 3 south bound lanes West of 61. open Exit 119

4) Splitting 61 to NB & SB ROUTE

Public Involvement Meeting Comment Form

City of Shepherdsville

Central Bullitt County Transportation Planning Study:
Bypass Routes and Pedestrian Networks

Tuesday, May 12, 2026

Please place this form in the comment box. Comments can also be e-mailed to kyle.henderson@strand.com.

Your comments will assist us in developing a project that will serve the needs of the traveling public as well as the needs of the local community. Your input is welcome and appreciated throughout the design process.

Name: Chris Docter

Address: 5657 Cedar Grove Rd

Daytime Phone Number (optional): (502) 380-7034

Email Address (optional): cwdocter@gmail.com

Please Print Comments (attach additional sheets if necessary):

Need exit @ mm 119 from both North & Southbound I-65. This would relieve Shepherdsville of traffic.

Any plan routing more traffic onto 480 should not be considered. 480 is a 2 lane & extremely dangerous.

* Ask state to lower speed limit on 480. It is currently 55 mph from I-65 to Bardstown Rd.

MICROSOFT FORM SURVEY RESPONSES

ID	Area of Residence	Age Range	Gender	Do you work in Bullitt County?	Which proposed sidewalk(s) would you be most likely to use?	Do you have any comments on the proposed sidewalk connections?	Are there any additional locations or routes in Shepherdsville where sidewalks would be beneficial?	Bypass Route 1 runs from KY-480 to KY-44 and Bells Mill Road. Travel demand modeling shows that the bypass primarily serves traffic to/from east Shepherdsville (including Mount Washington) to the ...	Bypass Route 2 runs from KY-480 to KY-61 south of Bells Mill Road. With Route 2 in place, travel demand modeling shows an increase in traffic from KY-480 southeast of Shepherdsville, as traffic us...	Bypass Route 3 offers a new bridge connection between KY-61 and I-65 and provides the largest volume reductions over the Salt River. Volume redistributes to the state highways that have existing r...	Bypass Route 4 runs from KY-480 to KY-245 east of I-65. The north segment of this bypass route lies east of the industrial park. Travel demand modeling shows that Bypass Route 4 causes an increase...	Bypass Route 5 combines Bypass Routes 2 and 4. Providing a full bypass route from KY-245 to KY-61 on the east side of I-65 does not show a major benefit to downtown traffic when compared to the re...	Bypass Route 6 runs from KY-1020 to KY-61 on the west side of Shepherdsville. This route has the lowest volume of daily traffic and does not significantly reduce traffic on the existing, congested...	First Preference	Second Preference	Third Preference	Do you have any comments about the bypass routes or other thoughts you'd like to share on additional routes?	Routes 1, 2, and 3 are under further consideration for the next phase of study. Do you have additional comments on these routes?	What are the biggest impacts to you as a driver due to a lane closure event on I-65?
2	Shepherdsville	41-45	Male	Yes	6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;1. Joe B. Hall Avenue;	The connection over the Salt River is very important.	Along Conestoga Parkway	8	10	10	2	2	0	Bypass Route 2	Bypass Route 3	Bypass Route 1	We need to evaluate how the I-65 shut downs are impacting these routes.	No.	Delay of travel time;
3	Shepherdsville	26-30	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;1. Joe B. Hall Avenue;8. Cedar Grove Road (two segments);6. KY-61 Salt River Bridge (improved);	If you add side walks to Ky-44 between railroad and adam shepherd, please reduce the speed on cars.	Maybe complete the side walk at the end of W blue Lick road to 61. It would be so much better	6	5	0	7	6	0	Bypass Route 1	Bypass Route 2	Bypass Route 4			General congestion;Safety risks;
4	Shepherdsville	46-50	Female	No	1. Joe B. Hall Avenue;5. KY-44 between Railroad and Adam Shepherd Parkway;		Connecting any missing sidewalks at least to the Central library.	1	4	8	4	4	1	Bypass Route 3	Bypass Route 2	Bypass Route 6	No comment	No comment	General congestion;Safety risks;
5	Shepherdsville	46-50	Male	No	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;4. West 3rd Street from Lee Street to KY-61;6. KY-61 Salt River Bridge (improved);	If I understand the map correctly, options 3 and 4 are in or around the park. We would likely only use sidewalks in Shepherdsville if they were at the park. And six if you widen the bridge to three lanes and to make all three northbound lanes with a foot path on one shoulder.		0	0	0	0	0	10	Bypass Route 6	Bypass Route 6	Bypass Route 6	If you made the current Highway 61 N. a dedicated northbound three lane and went parallel to it within an additional southbound three lane it could possibly broaden the city making a lesser desirable portion more desirable for a larger tax base	One and two will only add to the congestion on 44 by moving the bottleneck toward Mount Washington number three may assist whenever interstate 65 is shut down, but would not be a plausible solution to the current traffic issues. Six lanes through town with the current 61 north as a primary northbound lanes and adding three southbound lanes similar to US 60 in Shelbville.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
6	Shepherdsville	46-50	Female	No	2. Bullitt Lick Middle School Road;		Needs sidewalks down Hwy 44 east of I65	4	10	5	4	8	5	Bypass Route 2	Bypass Route 5	Bypass Route 6	Fix Hwy 44. Wider, reflective lights or paint on roads to make it visible at night. Needs sidewalks on 44 east of I65	2 is best option	Delay of travel time;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;
7	Shepherdsville	36-40	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;1. Joe B. Hall Avenue;8. Cedar Grove Road (two segments);3. South Plum Street from KY-44 to West Joe B. Hall Avenue;	Any ability for safe walking is a beneficial upgrade.		10	10	8	4	6	0	Bypass Route 1	Bypass Route 2	Bypass Route 5	Traffic lights at the intersection of these bypasses would be a beneficial consideration.		Delay of travel time;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
8	Shepherdsville	36-40	Female	Yes	2. Bullitt Lick Middle School Road;	I think side walks are a great idea	By pleasant grove	0	4	8	0	7	3	Bypass Route 4	Bypass Route 3	Bypass Route 6	Bells mill and 44 is already over crowded and backed up this would be horrendous to those living there.	Route would be better than one due to the traffic at that intersection. Route 3 would be great for downtown traffic	Delay of travel time;General congestion;Reroute distance;Safety risks;
9	Shepherdsville	61-65	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;	they are needed throughout city and subdivisions	all the subdivisions and all the way down 44 east and west	4	10	4	3	8	0	Bypass Route 2	Bypass Route 6	Bypass Route 3	be nice to have circular bypass all around both sides		Delay of travel time;General congestion;Safety risks;Higher volumes of vehicles on alternate routes to I-65;
10	Rural Bullitt County	31-35	Female	No				10	0	4	0	6	3	Bypass Route 1	Bypass Route 5	Bypass Route 6	Bypass route 6 is nice but would only be used when there is a wreck on 65. Money would be better spent increasing safety on 65 to reduce the accidents from happening in the first place. Route 3 will have very little impact. Lights and traffic control in Shepherdsville are terrible. Any accident and it is completely standstill because local police do not come through and keep people moving. Therefore that route would be pretty useless.	Route 1 makes the most sense as it connects through to Bells Mill. Can help allow for traffic to go around if there's an accident on 44. I do not understand the purpose of route 3 as there are already ways around on that side of the highway (Preston Highway). If this is going to be built it needs to be between Shep and Mt Washington.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
11	Mount Washington	51-55	Female	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;			10	10	10	7	8	3	Bypass Route 1	Bypass Route 3	Bypass Route 5	My only request is for bypass one to be in between Alpar Lane and Rivercrest subdivision where there is open land and not to interfere with existing subdivisions	My only request is for bypass one to be in between Alpar Lane and Rivercrest subdivision where there is open land and not to interfere with existing subdivisions	Delay of travel time;
12	Shepherdsville	31-35	Female	Yes	2. Bullitt Lick Middle School Road;5. KY-44 between Railroad and Adam Shepherd Parkway;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;		N/a	4	7	3	1	8	0	Bypass Route 1	Bypass Route 2	Bypass Route 5	Any route that connects to 44 needs designated turning lanes, traffic lights, or roundabouts. These initiatives to reduce congestion will only be helpful if traffic can flow smoothly and safely on and off 44.	Major downside of traffic noise given proximity to dense housing areas for some options. Sunview should remain a dead end road - it's currently a narrow road with low visibility. Allowing it to connect to a bypass would encourage it as a shortcut and starkly increase danger	Delay of travel time;General congestion;
13	Shepherdsville	46-50	Female	No	2. Bullitt Lick Middle School Road;	There should always be sidewalks around schools		5	6	2	1	5	7	Bypass Route 1	Bypass Route 2	Bypass Route 6		You need a by pass with 2 lanes both ways that will allow residents to get over the river and any extra traffic from the highway when I65 is backed up/blocked	Delay of travel time;Safety risks;I live across salt River. If the highway and city are backed up, I'm stuck ;
14	Shepherdsville	46-50	Male	No	5. KY-44 between Railroad and Adam Shepherd Parkway;	No	No	0	10	10	0	0	10	Bypass Route 3	Bypass Route 6	Bypass Route 5	Why not a connector by cedar rove or through valley view?	2 and 3 are very impactful to low income and elderly people. Focusing on widening 44, 61, and adding a 119 exit would be more beneficial	Delay of travel time;
15	Shepherdsville	46-50	Male	Yes	2. Bullitt Lick Middle School Road;			0	0	5	0	0	0	Bypass Route 3	Bypass Route 5	Bypass Route 2			Higher volumes of vehicles on alternate routes to I-65;Safety risks;General congestion;
16	Shepherdsville	31-35	Female	No	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;			0	0	8	0	1	0	Bypass Route 3	Bypass Route 3	Bypass Route 3			Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;
17	Rural Bullitt County	46-50	Male	No	7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;			1	1	10	1	1	7	Bypass Route 3	Bypass Route 5	Bypass Route 1			Delay of travel time;General congestion;
18	Shepherdsville	51-55	Male	Yes	8. Cedar Grove Road (two segments);			3	8	0	9	10	0	Bypass Route 5	Bypass Route 4	Bypass Route 2	With bypasses, we need another exit ramp off 61, north of Shepherdsville		
19	Shepherdsville	51-55	Female	Yes	2. Bullitt Lick Middle School Road;	N/A		1	1	9	2	2	10	Bypass Route 3	Bypass Route 6	Bypass Route 4	We need to improve 61 and 44 before worrying about anything else. We need a new exit ramp for 65 at 119 mm. Bypass to Bells Mill does nothing to help with birth south traffic issues.	3 doesn't alleviate problems. 1 and 2 takes advantage of the older, poorer people in the area.	Reroute distance;
20	Hillview	46-50	Male	No	8. Cedar Grove Road (two segments);			1	0		1	1	1						Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
21	Rural Bullitt County	46-50	Male	No				0	0	10	0	0	0	Bypass Route 3	Bypass Route 3	Bypass Route 3			Higher volumes of vehicles on alternate routes to I-65;
22	Rural Bullitt County	31-35	Female	No	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;			0	0	0	0	10	0	Bypass Route 3	Bypass Route 3	Bypass Route 3			Reroute distance;
23	Rural Bullitt County	26-30	Male	Yes	6. KY-61 Salt River Bridge (improved);	Less Sidewalks, concrete, buildings, and warehouse the better	No	0	0	10	0	0	10	Bypass Route 3	Bypass Route 6	Bypass Route 5	LEAVE RURAL 480 ALONE	Fix HWY 44 instead of impeading on the home and landowners of rural 480	General congestion;Reroute distance;
24	Rural Bullitt County	31-35	Female	No	6. KY-61 Salt River Bridge (improved);	Nope. Less concrete and buildings the better.		0	0	10	0	0	10	Bypass Route 6	Bypass Route 6	Bypass Route 6	NO BYPASS ON CEDAR GROVE. NO MORE CRAP ON OUR LANDS!!! FIX 44 INSTEAD, FIX THE REAL PORBLEM. WE ARE SICK AND TIRED OF YOUR WAREHOUSES AND MEGA BUIDLING IN RURAL BULLITT CO!!!! STOP THIS!!!!!	STOP STOP STOP. THIS ROAD WILL GO STRIGHT THROUGH OR CLOSE TO MY FAMILY FARM. ABSOLUTELY NOT!!!!!!!!!! I WILL ATTEND EVERY MEETING AND DO ALL I CAN WITH MY LARGE COMMUNITY, WHICH AGREES WITH ME. STOP BULIDNG ON TO SHEPHERDSVILLE. THIS IS NONSENCE, WE ARE NOT LOUISVILLE!!!!!! GET YOUR MACHINES OFF OUR UNTOUCHED LAND!!!!!!!!!!!!!!!!!!! STOPP!!!!!	
25	Rural Bullitt County	51-55	Female	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;			0	0	10	0	0	0	Bypass Route 3	Bypass Route 6	Bypass Route 4	STOP DESTROYING WHAT LITTLE FARMLAND WE HAVE LEFT!	3 WOULD BE LEAST COSTLY AND MOST IMPACTFUL if the goal is to alleviate traffic. If the goal is to open up the farmland the good ole boys bought for development, then you're just terrible humans.	Delay of travel time;Safety risks;
26	Clermont	31-35	Male	No	6. KY-61 Salt River Bridge (improved);			0	8	10	0	0	9	Bypass Route 3	Bypass Route 6	Bypass Route 1	Route 3 would reduce the stress on Preston backing up and would eliminate the need for route 4. The price point of 3 seems like it would be the best option and less loss of people proerty		Higher volumes of vehicles on alternate routes to I-65;Safety risks;
27	Shepherdsville	61-65	Female	No	6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;									Bypass Route 3	Bypass Route 1				General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;Delay of travel time;
28	Shepherdsville	56-60	Female	Yes	6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;	No		4	8	7	2	2	2	Bypass Route 2	Bypass Route 3	Bypass Route 1	We do need another bridge across the salt river	These are the best choices	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
29	Shepherdsville	36-40	Female	Yes	1. Joe B. Hall Avenue;			0	0	0	0	0	0	Bypass Route 1			Widen 44 east	Widen 44 east	Delay of travel time;Safety risks;
30	Rural Bullitt County	61-65	Female	No				10	10		5	5	1	Bypass Route 1	Bypass Route 2				Delay of travel time;
31	Lebanon Junction	31-35	Female	No	1. Joe B. Hall Avenue;5. KY-44 between Railroad and Adam Shepherd Parkway;8. Cedar Grove Road (two segments);	No		0	1	10	0	0	0	Bypass Route 3	Bypass Route 2	Bypass Route 1	We desperately need another way over salt river. This needs to be prioritized.	Cedar Grove does not need any new developments. It has been crapped on by bullitt county. We do not need any further developments in the entirety of bullitt county. Leave shepherdsville and Lebanon junction alone.	General congestion;Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
32	Shepherdsville	36-40	Male	Yes	6. KY-61 Salt River Bridge (improved);			10	10	10	10	10	10	Bypass Route 1	Bypass Route 2	Bypass Route 3			General congestion;Delay of travel time;
33	Shepherdsville	36-40	Female	No	8. Cedar Grove Road (two segments);	No		7	10	10	4	5	2	Bypass Route 3	Bypass Route 2	Bypass Route 4	I would like to see some help with traffic without destroying the natural environment	My concern is the turn time of the projects	Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Delay of travel time;
34	Shepherdsville	71-75	Female	No	8. Cedar Grove Road (two segments);	No		10	2	1	2	2	2	Bypass Route 1			No	No	Delay of travel time;General congestion;Safety risks;Higher volumes of vehicles on alternate routes to I-65;
35	Rural Bullitt County	46-50	Male	No	7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;			2	5	1	4	4	8	Bypass Route 6	Bypass Route 2	Bypass Route 1			General congestion;Safety risks;Delay of travel time;
36	Shepherdsville	46-50	Female	No	8. Cedar Grove Road (two segments);			0	0	5	0	0	5	Bypass Route 3	Bypass Route 3	Bypass Route 3	Lots of those options impact cedar grove. Run the bypasses through the industrial parks instead of residential. Tax the businesses for using our infrastructure and proximity to I65 to pay for it	How would you like it to run through your back yard? Please reconsider	Delay of travel time;
37	Rural Bullitt County		Male	No	8. Cedar Grove Road (two segments);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;6. KY-61 Salt River Bridge (improved);3. South Plum Street from KY-44 to West Joe B. Hall Avenue;1. Joe B. Hall Avenue;9. Salt Well Road from West Blue Lick Road to KY-44;			10	10	10	8	8	5	Bypass Route 1	Bypass Route 2	Bypass Route 3	Please do something for Cedar Grove	Please we need this so bad	General congestion;Safety risks;
38	Rural Bullitt County	51-55	Female	No	1. Joe B. Hall Avenue;			0	0	3	0	0	0	Bypass Route 3	Bypass Route 6	Bypass Route 2			Higher volumes of vehicles on alternate routes to I-65;
39	Rural Bullitt County	46-50	Male	Yes						10				Bypass Route 3	Bypass Route 3	Bypass Route 3			
40	Cedar Grove	51-55	Female	No		I probably won't use any of them.	Not to me.	8	8	0	4	4	0	Bypass Route 1	Bypass Route 2	Bypass Route 4	No	No	Delay of travel time;General congestion;Safety risks;
41	Mount Washington	41-45	Male	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;			10	10	5	7	7	3	Bypass Route 1	Bypass Route 2	Bypass Route 5			Delay of travel time;General congestion;Reroute distance;Safety risks;
42	Shepherdsville	41-45	Female	No	8. Cedar Grove Road (two segments);					10				Bypass Route 3	Bypass Route 3	Bypass Route 3			
43	Shepherdsville	21-25	Female	Yes	6. KY-61 Salt River Bridge (improved);				0	0	0	0	0				leave shit alone		Higher volumes of vehicles on alternate routes to I-65;
44	Shepherdsville	41-45	Male	No	8. Cedar Grove Road (two segments);			10	10	7	0	8	2	Bypass Route 2	Bypass Route 1	Bypass Route 5	Bypass 2 should offer a connection to i65 at Preston highway	A connection to i65 would greatly improve the benefits these would offer	Delay of travel time;General congestion;Safety risks;
45	Rural Bullitt County	46-50	Male	No				0	1	7	0	0	0	Bypass Route 3	Bypass Route 2	Bypass Route 4			Higher volumes of vehicles on alternate routes to I-65;General congestion;Delay of travel time;
46	Shepherdsville	66-70	Male	No															General congestion;
47	Rural Bullitt County	36-40	Female	Yes	1. Joe B. Hall Avenue;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;8. Cedar Grove Road (two segments);					10				Bypass Route 3	Bypass Route 3	Bypass Route 3	Routes 1, 2, 4 and 5 will negatively affect the Cedar Grove area, we do NOT want this!	Route 3 is definitely a great option!	Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;
48	Cedargrove area	46-50	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;8. Cedar Grove Road (two segments);	No		10	10	5	9	10	4	Bypass Route 2	Bypass Route 5	Bypass Route 1	We also need a 44 to 480 bridge	We need them immediately	Safety risks;General congestion;Higher volumes of vehicles on alternate routes to I-65;Delay of travel time;
49	Shepherdsville	46-50	Male	No	7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;			2	0	10	0	3	1	Bypass Route 3	Bypass Route 5	Bypass Route 3		One of the biggest issues with the interstate traffic that gets routed through Shepherdsville is there is only one route that crosses Salt River. There needs to be another way to cross the river.	Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;General congestion;Reroute distance;Safety risks;
50	Shepherdsville	66-70	Male	No				1	1	9	1	1	1	Bypass Route 3	Bypass Route 3	Bypass Route 3			Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;
51	Shepherdsville	46-50	Male	Yes		No		10	10	10	5	10	3	Bypass Route 5					Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
52	Rural Bullitt County	71-75	Female	No		No. I rarely walk any distance outside my subdivision.	N/A	7	10	3	6	10	0	Bypass Route 2	Bypass Route 5	Bypass Route 3	No	No	Higher volumes of vehicles on alternate routes to I-65;Reroute distance;Delay of travel time;
53	Shepherdsville	51-55	Male	Yes	8. Cedar Grove Road (two segments);	No	#5	8	10	1	4	5	0	Bypass Route 2	Bypass Route 1	Bypass Route 5	Any that adds a new bridge over salt river	Seems best for our future	Higher volumes of vehicles on alternate routes to I-65;Delay of travel time;Safety risks;
54	Mount Washington	36-40	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;4. West 3rd Street from Lee Street to KY-61;1. Joe B. Hall Avenue;6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;	Our communities need to be more walk and bike friendly. As many as possible need to be constructed.		10	10	5	3	8	4	Bypass Route 1	Bypass Route 2	Bypass Route 5	The traffic coming in and out of Mt. Washington is a huge concern. Any bypass considerations need to include east of I-65 at bells mill or even further east.	Route 1 is critical to relieve 44 traffic around the Mt. Washington area	Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;
55	Shepherdsville	46-50	Male	No	9. Salt Well Road from West Blue Lick Road to KY-44;			6	7	7	2	2	1	Bypass Route 2	Bypass Route 3	Bypass Route 1			Higher volumes of vehicles on alternate routes to I-65;
56	Rural Bullitt County	56-60	Male	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;	Sidewalks are fine, but I would like to see road improvement be a priority . They are falling apart and beat you and your car to death driving on them.		2	4	7	8	7	1	Bypass Route 4	Bypass Route 5	Bypass Route 3	I would like to see a full single bypass running from 61 in Lebanon Junction East of I-65 connecting to Cedar Grove Hwy 44 and reconnecting to Hwy 61 North.		Higher volumes of vehicles on alternate routes to I-65;
57	Mount Washington	41-45	Male	No	5. KY-44 between Railroad and Adam Shepherd Parkway;			1	0	0	0	0	0	Bypass Route 1	Bypass Route 1	Bypass Route 1	Widen 44		Delay of travel time;General congestion;
58	Rural Bullitt County	31-35	Female	No	4. West 3rd Street from Lee Street to KY-61;			0	0	10	0	0	0	Bypass Route 3	Bypass Route 2	Bypass Route 1		Route 3 seems to not disrupt as many neighborhoods/wildlife as other options	Higher volumes of vehicles on alternate routes to I-65;
59	Mount Washington	46-50	Female	No	1. Joe B. Hall Avenue;2. Bullitt Lick Middle School Road;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;4. West 3rd Street from Lee Street to KY-61;5. KY-44 between Railroad and Adam Shepherd Parkway;6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;8. Cedar Grove Road (two segments);9. Salt Well Road from West Blue Lick Road to KY-44;	Sidewalks everywhere are beneficial to everyone especially kids		10	10	5	10	10	10	Bypass Route 6	Bypass Route 6	Bypass Route 6	Shepherdsville and Mount Washington need to accommodate to the influx of residents moving there to get out of Louisville. The current infrastructure is not cutting it. It takes over an hour to get from Shep to MW via 44 east.		Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
60	Shepherdsville	41-45	Male	Yes							10	10	0	Bypass Route 4	Bypass Route 5		Connecting 61 to 245 will let more traff C bypass the city of Shepherdsville congested areas more than any other options. It has the added benefit of giving us another I-65 parallel to help bypass wrecks. Hands down best options	Route one just dumps more traffic into the already worst traffic congestion area. 2 and 3 are only good options if it's ultimately connected to 245	Delay of travel time;General congestion;
61	Shepherdsville	41-45	Female	Yes				4	5	1	0	5	8	Bypass Route 6	Bypass Route 5		Cedar Grove rd is already has to much traffic due to the over load of workers for all the warehouses!	3 is not gonna help unless you can widened 61. And you can't due to all the houses and businesses there. Traffic will still bog down in central shepherdsville	Safety risks;Higher volumes of vehicles on alternate routes to I-65;Reroute distance;General congestion;Delay of travel time;To many warehouses which causing my vehicles, which causes more accidents.;
62	Brooks		Male	Yes	8. Cedar Grove Road (two segments);9. Salt Well Road from West Blue Lick Road to KY-44;2. Bullitt Lick Middle School Road;			9	10	6	8	10	10						Safety risks;Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;
63	Shepherdsville	56-60	Male	Yes	1. Joe B. Hall Avenue;6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;4. West 3rd Street from Lee Street to KY-61;	Sidewalks are great and add safety. Add some flare to them to make them unique for our town.		1	2	4	1	1	0	Bypass Route 3			I don't like bypass 6	3	Delay of travel time;
64	Rural Bullitt County	46-50	Male	Yes	8. Cedar Grove Road (two segments);			10	8	1	4	3	1	Bypass Route 1	Bypass Route 2	Bypass Route 5	I live on 480, close to these proposed bypasses. Selfishly, I fear the increased traffic and development. Objectively however, if you want to alleviate issues on 44, why not take off from the same origin point on 480 as route 1 and go all the way Mount Washington?		Delay of travel time;
65	Rural Bullitt County	46-50	Female	No		Should not be the priority	Should not be the priority	0	0	6	0	6	8	Bypass Route 6	Bypass Route 5		Any bypass route that doesn't completely bypass all of bullitt county is a waste of time, money and resources. 65 N and S are heavily congested all the way from Brookes to LJ. Look at bypasses in other areas like Lincoln Parkway where you completely bypass all towns.	3 provides the best relief for 65 and Preston for another way over Salt River. 1 and 2 are a waste and do not provide relief to the current congested areas.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Reroute distance;Safety risks;It's not even closures anymore, it's every day, stop and go on I-65. Needs to be 4 lanes with better, longer on/off ramps.;
66	Shepherdsville	36-40	Female	No	8. Cedar Grove Road (two segments);	No	N/a	3	5	0	2	3	0	Bypass Route 2	Bypass Route 1		I don't feel these routes will be much solution as they will have people having to go out of their way and they will opt out to take these routes. Majority that live in the area already know alternative ways around it's more of getting 65 traffic through town when an accident occurs	I think 3 is pointless	Reroute distance;Higher volumes of vehicles on alternate routes to I-65;
67	Mount Washington	36-40	Female	Yes				0	10	0	0	5	0	Bypass Route 2	Bypass Route 5			Route 1 is not going to being able to sustain increased traffic long term. Bells Mills is a dangerous and windy road. I much prefer creating a new access to Preston from 44,that is more direct and able to handle ALL the traffic of the present and future.	Delay of travel time;General congestion;Safety risks;
68	Shepherdsville	26-30	Male	Yes	9. Salt Well Road from West Blue Lick Road to KY-44;1. Joe B. Hall Avenue;	N/A	N/A	9	10	0	5	9	0	Bypass Route 2	Bypass Route 1	Bypass Route 5	N/A	N/A	Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
69	Mount Washington	26-30	Female	Yes	1. Joe B. Hall Avenue;			8	4	2	5	6	1	Bypass Route 1	Bypass Route 5	Bypass Route 4		Route 1 would assist those who work in distilleries as well coming from Mount Washington/shepherdsville area	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
70	Shepherdsville	51-55	Female	No	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;1. Joe B. Hall Avenue;			8	7	3	2	2	3	Bypass Route 1	Bypass Route 2	Bypass Route 1			Delay of travel time;Reroute distance;
71	Shepherdsville	46-50	Male	No		do not use sidewalks		2	7	1	0	3	1	Bypass Route 1			The main issue is getting from Shepherdsville Mt Washington. Improvements need to be addressed going East and West. The current routes proposed address North and South		Delay of travel time;
72	Mount Washington	51-55	Male	Yes		Sidewalks are important though I'm doubtful I would use them myself.		10	10	3	4	4	0	Bypass Route 1	Bypass Route 2	Bypass Route 3	Bypass route 1 and bypass route 2 up here to offer best solution for me. I travel daily to Cedar Grove road from the very edge of Mount Washington and Shepherdsville (Cherry Hill Pkwy). I imagine these bypasses would be beneficial to many others as well. It would likely reduce the amount of traffic that needs to head directly into downtown Shepherdsville.	Routes one and two definitely benefit me the most. Route 3 I don't see using very much. But if it reduces traffic for downtown, I'm off for that too because I do go to downtown Shepherdsville to shop and eat.	Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;Safety risks;Reroute distance;
73	Shepherdsville	36-40	Prefer not to say	Yes	6. KY-61 Salt River Bridge (improved);	We need roads not sidewalks.		0	3	10	3	5	10	Bypass Route 6	Bypass Route 5	Bypass Route 4			Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
74	Shepherdsville	51-55	Female	No	2. Bullitt Lick Middle School Road;	No		5	2	9	2	3	2	Bypass Route 3	Bypass Route 1	Bypass Route 4	Adding traffic volume to bells mill road without improvement is meaningless		Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;General congestion;Reroute distance;Safety risks;I live on 44 by watergate and the volume of accidents are unacceptable.;
75	Rural Bullitt County	56-60	Female	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;									Bypass Route 6	Bypass Route 3	Bypass Route 1			Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;
76	Shepherdsville	41-45	Male	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;	No	No	2	1	8	1	2	1	Bypass Route 3	Bypass Route 6	Bypass Route 4			Higher volumes of vehicles on alternate routes to I-65;
77	Mount Washington	36-40	Female	No	6. KY-61 Salt River Bridge (improved);5. KY-44 between Railroad and Adam Shepherd Parkway;8. Cedar Grove Road (two segments);			9	10	1	8	9	2	Bypass Route 5	Bypass Route 4	Bypass Route 2			Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;
78	Shepherdsville	26-30	Female	No	6. KY-61 Salt River Bridge (improved);4. West 3rd Street from Lee Street to KY-61;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;			2	5	5	1	1	0	Bypass Route 2	Bypass Route 3	Bypass Route 1		I believe route 2 and 3 would help the most to distribute traffic in the event of accidents on 65 that gridlock the whole city.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;
79	Mount Washington	56-60	Male	No		No	No	3	10	10	2	10	0	Bypass Route 3	Bypass Route 5		The most impactful way to improve traffic flow would be creating exits to 61 from a 65		General congestion;
80	Mount Washington	36-40	Male	No				8	5	5	1	3	0	Bypass Route 1	Bypass Route 2	Bypass Route 5	Dose little to help issues from 44 between Mt Washington area of 44 and those trying to go to the north of Shepherdsville 65 area		Higher volumes of vehicles on alternate routes to I-65;
81	Shepherdsville	31-35	Female	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;	No. Other than I never see people walking on the sidewalks we have now so why do we need more?	No	0	0	0	0	0	0	Bypass Route 6	Bypass Route 6	Bypass Route 6	We don't need another road. The ones we have now are not maintained properly	I would sign every petition there is against these routes. Highly against	Delay of travel time;
82	Shepherdsville	31-35	Male	No				0	0	0	0	0	0				These routes will not alleviate traffic flow as much as they are intended in downtown Shepherdsville. Entrance and exit ramps from HWY61 to I65 need to be studied. That would alleviate congestion at the busiest times of the day. It's inconvenient for the residents of west Shepherdsville to get off at the Brooks exit and weave their way back through to the west side of town. The shortest route is to come to Shepherdsville and go west down 44 or Joe B Hall to 61. Both of those cause heavy congestion at peak traffic times. If the residents of west shepherdsville had ramps to access I65 from HWY 61 they could bypass most, if not all of Shepherdsville. This would also help during accidents. As it would lessen the traffic to the east side of town when there is an accident on I65 between the exits to HWY 44 and HWY 480. Interstate traffic could get off at 61 and travel south to the new exit on the back side of 480 before re-entering the interstate. Please do a study on where our residents travel to and from for work daily and replan. For reason of not having to see it and it being far out of the way I like 6 the best. But it has the largest environmental and residential impacts by far. It is large majority in flood plain and by building it out of that will severely impact everything around it.	I believe all of these routes are less than ideal. The majority of the traffic from Shepherdsville in the afternoon is from residents that work north of Shepherdsville. These bypasses do not provide a direct connection with I65 from the north. They all require backtracking or weaving through other already heavily trafficked areas of the county. Getting off use a bypass to avoid Shepherdsville to only sit in more traffic does not make sense and will not provide the impact that these bypasses should for the environmental and residential impacts they will cause.	Higher volumes of vehicles on alternate routes to I-65;
83	Shepherdsville	56-60	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;		Bullitt Central High to Buckman st. Joe B Hall parakett springs	0	0	2	0	0	1	Bypass Route 6	Bypass Route 3	Bypass Route 1	1 65 exits from Preston would have helped when widening from Hillview to Shepherdsville goes right over 65 at ridge road, the biggest mistake ever	Stop with Industrial park, leave cedar grove alone	Delay of travel time;
84	Brooks	31-35	Female	Yes				10	6	3	0	10	0	Bypass Route 1	Bypass Route 5	Bypass Route 2			Higher volumes of vehicles on alternate routes to I-65;Safety risks;
85	Brooks	41-45	Female	No	1. Joe B. Hall Avenue;			0	5	10	0	0	7	Bypass Route 3	Bypass Route 2	Bypass Route 6	None of these are good options. There needs to be an exit built off I65 to Preston	Route 3 will cause the least disruption to people who live here. We do not want more land development or warehouses. This is what has caused this problem to begin with.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;
86	Lebanon Junction	61-65	Female	No	9. Salt Well Road from West Blue Lick Road to KY-44;	No	Unsure	0	0	0	2	3	3	Bypass Route 2		Bypass Route 1			Higher volumes of vehicles on alternate routes to I-65;
87	Lebanon Junction	51-55	Female	No	1. Joe B. Hall Avenue;	No	No roads need to be widening to sustain all the traffic. Hwy 44	0	0	7	0	0	7		Bypass Route 6	Bypass Route 6	No	No	General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
88	Mount Washington	56-60	Male	No		We need to worry about the traffic instead of the worry about sidewalks, people don't walk as much anymore		0	9	1	0	10	8	Bypass Route 5	Bypass Route 5	Bypass Route 6	It gets congested by the bridge over I65 so you need to widen Preston highway further south.	2 is the better option of the 3	Delay of travel time;General congestion;Safety risks;
89	Mount Washington	46-50	Male	No	1. Joe B. Hall Avenue;			7	4	6	4	3	2	Bypass Route 1	Bypass Route 2	Bypass Route 3	A ramp to i65 on Preston hwy by Conestoga pkwy		Higher volumes of vehicles on alternate routes to I-65;
90	Shepherdsville	41-45	Female	Yes				4	2	6	7	5	2				Widen Preston hwy to 4 lanes. Widen the existing salt river bridge and build a bypass.		Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
91	Shepherdsville	51-55	Prefer not to say	No		We don't need sidewalks. We drive cars. These semi trucks are destroying and causing traffic problems!!	None	0	0	0	0	0	0				We need the state of Kentucky government to expand the State Roads when a builder decides to plan a development.		Higher volumes of vehicles on alternate routes to I-65;
92	Shepherdsville	61-65	Female	Yes	8. Cedar Grove Road (two segments);			8	5	5	1	1	0	Bypass Route 2	Bypass Route 1	Bypass Route 5			Higher volumes of vehicles on alternate routes to I-65;Delay of travel time;
93	Shepherdsville	46-50	Female	Yes	8. Cedar Grove Road (two segments);			0	0	10	0	0	0	Bypass Route 3	Bypass Route 6	Bypass Route 4	Unless you are adding another way across the river, it is just a band aid.	We need an additional way to cross Salt River.	Higher volumes of vehicles on alternate routes to I-65;
94	Shepherdsville	31-35	Female	No	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;			0	0	8	0	0	0	Bypass Route 3			Route 3 seems the most beneficial. The other routes proposed doesn't help anything for Shepherdsville traffic.	Again routes routes 1 & 2 will not affect actual Shepherdsville traffic. It makes no sense to put a bypass on these areas. A bypass closer to Shepherdsville would deter traffic better. Route 3 would help and give motorists another route when I65 is shutdown.	Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
95	Shepherdsville	66-70	Male	No				1	1	1	1	1	1				It doesn't look like these will fix the traffic problems we currently have		General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
96	Mount Washington	41-45	Female	No	1. Joe B. Hall Avenue;2. Bullitt Lick Middle School Road;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;4. West 3rd Street from Lee Street to KY-61;5. KY-44 between Railroad and Adam Shepherd Parkway;6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;8. Cedar Grove Road (two segments);9. Salt Well Road from West Blue Lick Road to KY-44;	I think they all look good and would benefit a lot of the community.		10	1	6	0	0	0	Bypass Route 1	Bypass Route 3	Bypass Route 2	Route 1 is most beneficial for the community hands down	I support route 1	Delay of travel time;General congestion;Reroute distance;Safety risks;
97	Mount Washington	46-50	Female	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;1. Joe B. Hall Avenue;2. Bullitt Lick Middle School Road;3. South Plum Street from KY-44 to West Joe B. Hall Avenue;4. West 3rd Street from Lee Street to KY-61;			10	7	6	4	6	0	Bypass Route 1	Bypass Route 2	Bypass Route 5			Safety risks;Higher volumes of vehicles on alternate routes to I-65;
98	Mount Washington	46-50	Male	Yes		No comment. I don't use any of them.		10	10	3	1	10	0	Bypass Route 2	Bypass Route 1	Bypass Route 5	Yes, put an exit ramp north of Shepherdsville off of 65. This would allow people and businesses to access their homes and jobs with out going through downtown Shepherdsville.		Delay of travel time;Safety risks;Higher volumes of vehicles on alternate routes to I-65;Business is slowed due to of parts deliveries being delayed due to traffic. ;
99	Rural Bullitt County	46-50	Female	Yes	7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;8. Cedar Grove Road (two segments);			0	0	5	0	0	0	Bypass Route 3	Bypass Route 3	Bypass Route 3	Stop ruining Bullitt county with warehouses and traffic won't be such an issue	Cedar Grove cannot handle more traffic. Put your dumb bypasses somewhere else	Safety risks;Higher volumes of vehicles on alternate routes to I-65;
100	Rural Bullitt County	46-50	Female	Yes	1. Joe B. Hall Avenue;	No	I don't use sidewalks in Shepherdsville, so I have no opinion.	0	0	7	0	0	0	Bypass Route 3	Bypass Route 2	Bypass Route 1	Route 4 impacts a historical area and a residential area. The proposed road does nothing to alleviate traffic when 65 has back ups. It should not even be an option. The main issue when 65 has back ups is the issue of no additional road across the Salt River. Putting another bridge in is needed most and improvements on current roads.	Route 3 appears to be most important since it adds another path across the Salt River. Also, adding and exit ramp to 61 at the overpass just north of Shepherdsville on 65 is much needed.	Delay of travel time;
101	Rural Bullitt County	56-60	Male	No		Sidewalks won't help traffic.	?	3	8	8	3	6	2	Bypass Route 3	Bypass Route 6	Bypass Route 1	How about widening 480 and adding a truck weight limit.	They won't help much. Improve travel on 44, and stop building so many subdivisions and warehouses in an area that won't support expansion.	Higher volumes of vehicles on alternate routes to I-65;
102	Rural Bullitt County	41-45	Female	No				0	7	3	3	3	0	Bypass Route 2	Bypass Route 3	Bypass Route 5	We desperately need an exit from I65 to Hwy 61 and a stop light at Conestoga Pkwy and 61. It seems like this would be an easier and faster way to alleviate some of the congestion in downtown Shepherdsville and Hwy 44 near exit 117. Having an exit/onramp there would also make bypass route 2 work more efficiently, but the I65 to 61 exit should happen first.	I don't see how route 3 would be helpful. Route 1 is a terrible option because it pushes too far out into rural Bullitt county. It would negatively impact the nature preserve and the property owners in that area. Bypass route 2 is a better alternative to route 1.	Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
103	Shepherdsville	71-75	Female	No				10	10	10	10	10		Bypass Route 3	Bypass Route 1	Bypass Route 5			Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
104	Rural Bullitt County	51-55	Male	Yes	8. Cedar Grove Road (two segments);6. KY-61 Salt River Bridge (improved);7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;			0	8	10	5	5	0	Bypass Route 3	Bypass Route 2		You need to put an exit at I 65 and Preston Highway. Not sure why you guys put that back at the industrial park. Would have been much better suited for on and off ramps to Preston Highway. To me that's just common sense.	Quit moving farther out Cedar Grove. Shepherdsville is trying to take over the entire county.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Reroute distance;Safety risks;Should have been on an offramp to Preston Highway from interstate 65;
105	Hillview	41-45	Female	Yes			Hebron Ln											Widen 44 5 lanes. Bypass from Zoneton Rd to Mt Washington. Ramps to I-65 from 61 north of Shepherdsville.	Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
106	Mount Washington	26-30	Male	No	1. Joe B. Hall Avenue;			3	10	0	0	5	0	Bypass Route 2	Bypass Route 5	Bypass Route 1	I think bypass Route 2 combined with a new entrance/exit off 1-65 at Ky-61 will provide extreme relief to and from Mt Washington to I-65. I think we need to do whatever we can to get traffic off 44 in front of Bullitt Central and to I-65. That area is what backs up 44 so bad in the morning and afternoon.	Route 2 needs to happen ASAP!!! I think 3 is just going to add to the traffic in Shepardsville. Get the I-65 Mt Washington traffic out of Shepardsville.	Delay of travel time;General congestion;
107	Mount Washington	41-45	Male	No				5	0	4	5	5	0	Bypass Route 1	Bypass Route 1	Bypass Route 1			Delay of travel time;
108	Rural Bullitt County	51-55	Male	No	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;			1	1	8	1	1	3	Bypass Route 3	Bypass Route 6	Bypass Route 3			Delay of travel time;
109	Mount Washington	41-45	Male	No	5. KY-44 between Railroad and Adam Shepherd Parkway;	Not worried about sidewalks		10	8	10	3	1	0	Bypass Route 1	Bypass Route 3	Bypass Route 2			Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;
110	Mount Washington	41-45	Female	No				3	3	0	0	0	0	Bypass Route 1	Bypass Route 2	Bypass Route 3			Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;
111	Rural Bullitt County	51-55	Female	Yes	5. KY-44 between Railroad and Adam Shepherd Parkway;			3	3	0	0	0	0						Higher volumes of vehicles on alternate routes to I-65;
112	Rural Bullitt County	26-30	Male	Yes				1	5	8	0	0	3	Bypass Route 3	Bypass Route 2	Bypass Route 6	Routes 4 and 5 do not fix any congestion issues about Shepherdsville. Route 1 would just cause more unnecessary traffic to filter onto 480.	Route 3 would be the best to help with gridlock relating to crossing the Salt River. Right now, the only two options for crossing are state road 61 and I-65. It becomes unfeasible to go into Shepherdsville for residents south of the river if an accident occurs on I-65.	General congestion;Higher volumes of vehicles on alternate routes to I-65;Delay of travel time;Reroute distance;
113	Shepherdsville		Prefer not to say	Yes		N/A		1	1	2	3	0	1				Widen existing roads would be better. No tying the bypass back into 44 or Preston HWY as the infrastructure cannot handle the traffic flow.		All of these & accidents. Keeping lanes closed too long while making updates.;
114	Shepherdsville	66-70	Female	No													None of these does anything anything for 44		Higher volumes of vehicles on alternate routes to I-65;
115	Shepherdsville	61-65	Female	No				4	4	8	3	2	8	Bypass Route 1	Bypass Route 5	Bypass Route 6	I do not want Routes 2 & 3. This will impact my homes value and increase traffic noise and pollution.	I do not want Routes 2 & 3. This will impact my homes value and increase traffic noise and pollution.	Delay of travel time;General congestion;Safety risks;
116	Shepherdsville	71-75	Female	No		None	Everyone drives a car. If I want to walk I could choose the park.he park.	0	0	1	0	0	0				I would like to see Hwy 44 a four lane highway.	Not at this time	Delay of travel time;Safety risks;Higher volumes of vehicles on alternate routes to I-65;
117	Hillview	26-30	Male	No		No		10	10	10	10	10	10						Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
118	Shepherdsville	56-60	Female	Yes	2. Bullitt Lick Middle School Road;			7	8	9	7	8	4	Bypass Route 3	Bypass Route 5	Bypass Route 2			Delay of travel time;
119	Shepherdsville	51-55	Female	No		No	No	10	7	0	3	6	0	Bypass Route 1	Bypass Route 2	Bypass Route 5	No.	We need a connecter from 480 to 44	Delay of travel time;
120	Shepherdsville	46-50	Female	No				0	0	0	0	0	10	Bypass Route 6	Bypass Route 6	Bypass Route 6	I wish we didn't have any of this. I am a cedar grove Road resident.	Hate them all. 100% no.	
121	Rural Bullitt County	56-60	Male	Yes	3. South Plum Street from KY-44 to West Joe B. Hall Avenue;4. West 3rd Street from Lee Street to KY-61;5. KY-44 between Railroad and Adam Shepherd Parkway;7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;8. Cedar Grove Road (two segments);9. Salt Well Road from West Blue Lick Road to KY-44;2. Bullitt Lick Middle School Road;6. KY-61 Salt River Bridge (improved);1. Joe B. Hall Avenue;			8	8	8	8	10	8	Bypass Route 5	Bypass Route 1	Bypass Route 3			Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;Safety risks;
122	Shepherdsville	41-45	Male	Yes				6	7	5	10	10	0	Bypass Route 5	Bypass Route 4		Route 5 sets up longest mirror to 65 which gives us the best chance to mitigate i-65 issues and frees up some stress on highway 61 during the same times. Overall the most efficient route proposed.	route 3 just dumps more traffic into an already congest downtown area of Shepherdsville. We need to focus on moving traffic around Shepherdsville not funnel more traffic into it.	Delay of travel time;General congestion;Higher volumes of vehicles on alternate routes to I-65;
123	Shepherdsville	76+	Male	No		None	Don't know	0	0	0	0	0	0						General congestion;
124	Shepherdsville	46-50	Female	No	5. KY-44 between Railroad and Adam Shepherd Parkway;			0	0	10	0	0	0	Bypass Route 3			The selection of bypasses are asinine most of the traffic is being diverted right through Shepherdsville and not having anything to do with releasing the congestion you're making it worse cause you're finally at through us cause most people common sense will take off the on and off ramp, that's the closest to the state to the place. Your best bet would've been to add more on and off ramps at the new 65 over Preston Highway Junction.	Routes one and two don't help with the traffic all you're doing is the burden it straight through Shepherdsville all the way from 65 cause trust me people use that as the quickest way to get around when traffic backs up so then you're adding back traffic on top of the one from the 65 the bridge connection on number three from town 265 could alleviate some of the town traffic but you gotta think if you're making it that way people coming up on 65 N. we could come up that way as well. None of these bypasses are really any benefit to the town. You should've had the on and off ramps on 65 over at the new Preston Highway exit that could alleviate more stress right now. All this is gonna do is have all the traffic go through town not to mention you're gonna increase trash pollution and increase traffic and it's horrible. I don't wanna live by bypass. I did in Louisville by Watterson and Gene Snyder it was horrible.	General congestion;
125	Shepherdsville	51-55	Female	No	1. Joe B. Hall Avenue;5. KY-44 between Railroad and Adam Shepherd Parkway;	We need additional routes to Bullitt central that bypass 44		0	0	0	4	2	0					None of these routes will help me on my daily commute. Bullitt Central is a major issue as is 44 only being 2 lanes. Mt Washington to 65 cut through and widen 44.	Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;
126	Mount Washington	51-55	Female	Yes		No		0	0	10	0	0	0	Bypass Route 3	Bypass Route 3	Bypass Route 3			Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;General congestion;Safety risks;
127	Shepherdsville	71-75	Male	Yes	1. Joe B. Hall Avenue;2. Bullitt Lick Middle School Road;5. KY-44 between Railroad and Adam Shepherd Parkway;7. KY-61 Salt River Bridge to KY-480c and Beech Grove Road;			0	0	8			8	Bypass Route 3	Bypass Route 4	Bypass Route 6		Adds more unneefed traffic to 44	Delay of travel time;
128	Shepherdsville	51-55	Female	No	8. Cedar Grove Road (two segments);			5	6	6	3	7	1	Bypass Route 5	Bypass Route 3	Bypass Route 2			Delay of travel time;Higher volumes of vehicles on alternate routes to I-65;Safety risks;Reroute distance;
129	Rural Bullitt County	71-75	Female	No				2	7	0	3	8	0	Bypass Route 2	Bypass Route 5				Delay of travel time;General congestion;Reroute distance;Higher volumes of vehicles on alternate routes to I-65;Safety risks;

What improvements during lane closure events on I-65 are you most looking for?	An I-65 collision scenario reducing both northbound and southbound traffic from 3 lanes to 1 lane was modeled. Bypass Route 1 relieves congestion on I-65 but increases traffic on Bells Mill Road, ...	An I-65 collision scenario reducing both northbound and southbound traffic from 3 lanes to 1 lane was modeled. Bypass Route 2 relieves congestion on I-65 but increases traffic on KY-61 (north of t...	An I-65 collision scenario reducing both northbound and southbound traffic from 3 lanes to 1 lane was modeled. Bypass Route 3 relieves congestion on I-65 but increases traffic throughout the city....	In your opinion, which proposed bypass route has the greatest traffic relief benefit when I-65 has lane closures?	Would you like to be added to a mailing list about Central Bullitt County Planning Study updates?	If yes, please provide your name and email address here.
Reduction of additional travel time, reduced delay;	Although it provides a detour around the traffic, it is too far away to get people to use it. They will sit in traffic on Hwy 61 instead.	This detour will be used but it is still too far away to be used to its full potential.	This detour will be heavily used when 65 is down, but the overall congestion of Hwy 61 may not be able to handle the increased traffic	Bypass Route 3	No	
Reduction of additional travel time, reduced delay;	I feel like this helps traffic the most.	This is the worse model.	This would just make traffic worse around children and pedestrians.	Bypass Route 1	Yes	Jasmine Webb, Xena01818@gmail.com
Relief of congestion, better mobility;				Bypass Route 2	Yes	Denise Cannady maruah@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;As a truck driver, I deal with these situations a lot the most direct route is always the best in my opinion so to open up 61 in a way that has a minimal effect on the city would be best. ;	Unless bells Mill Road is widened and straightened a significant amount your increasing a road that was never meant to handle that amount of traffic.	Once again, this scenario only changes your bottleneck. It does not allow for traffic to flow it only spreads out the back up	Once again, option three does not allow for a greater flow of traffic. I believe that a dedicated highway 61 northbound three lanes on the existing 61 with an additional three lanes going south to the west of the current 61 would allow for a better flow of traffic also with staging lights dependent upon the effects of the interstate.	Bypass Route 3	Yes	Stephen Lawson email: 0000Stephen0000@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;				Bypass Route 2	Yes	Kimberly_jessie@yahoo.com
Reduction of additional travel time, reduced delay;More direct routes to reroute to;	Bells mill is a truly unsafe road due to curves, width of lanes, and speed limit		44 is in desperate need of widening for safety and traffic issues. Bypasses will only solve so much but does not actually resolve the main road concerns and conditions of 44	Bypass Route 2	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Awful. This will not fix a problem it will create a bigger one. 44 is not big enough to handle this or bells mill and bells mill is dangerous road and it is narrow	Fine. 61 can handle that amount of traffic and the gene synder isn't far from there.	No actually it doesn't. Because people go around Shepherdsville not down 44 when this happens and goes back through Brooks	Bypass Route 2	Yes	Morgan Scott m.scott424@yahoo.com
Relief of congestion, better mobility;				Bypass Route 1	Yes	millerlynn34@yaho.com
Relief of congestion, better mobility;Shepherdsville needs traffic control to make sure that the city doesn't come to a standstill. People block lanes while waiting to get onto an interstate even when it's closed. They need to come through and force people to keep moving and keep the resurface roads open. They need to block access to I 65 as soon as an accident is detected. Ideally having some sort of automated arm to stop cars from entering during traffic events, or a billboard with a note of an issue up ahead at 121 or 114 would be great (think railroad crossing arm). ;		This uses the least existing roadways. It will create a heavy highway in the middle of farmland. Beautiful land is why people move to Bullitt Co. We don't want this to end up like another Preston Highway right through the county.		Bypass Route 1	Yes	Abby Riggs; abbyk566@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;				Bypass Route 1	Yes	Shardin33@gmail.com / Sarah smith
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	It swings out a bit far to be a relief to 65.	It swings out a bit far to be a relief to 65.	It is most near the interstate, and would be a good option.	Bypass Route 3	No	
Relief of congestion, better mobility;More direct routes to reroute to;		This route would allow people to go from Preston down to cedar Grove and allows a third access for getting across the river. Without congesting up Bell's Mill and anyone that needs to go further east	If the congestion is there in Shepherdsville that is not going to help too much because you still have to get through Shepherdsville to get to this section	Bypass Route 2	Yes	Carmenr0380@Gmail.com
Widened 44, 61, more lanes on off ramps, 119 exit.;	This route only helps people getting from cedar grove to mt washington. Most traffic is north south. Connecting to highway 61 and improving that corridor is more important than connecting to bells mill which cannot support more than 2 lanes. Improvements on bells mell not shown. The solution you propose doesn't help in practical terms without widening bells mill	61, 65, and 44 should be prioritized for improvement. This option does nothing for northbound traffic which is the predominantly mode. The bridge for option 3 is better	This is the best solution.	Bypass Route 3	Yes	Amishifflett@yahoo.com
Relief of congestion, better mobility;				Bypass Route 3	No	
Relief of congestion, better mobility;					No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;				Bypass Route 3	No	
					Yes	adelliottky@gmail.com
More direct routes to reroute to;	Alternative bridge between 65 and 61 would be best solution	Alternative bridge between 65 and 61 would be best solution	Alternative bridge between 65 and 61 would be best solution	Bypass Route 3	No	
					Yes	tishifflett584@outlook.com
Relief of congestion, better mobility;				Bypass Route 3	No	
Relief of congestion, better mobility;					No	
Relief of congestion, better mobility;	No you need to find a different route. This puts a main highway on my family's property as well as mine. We don't want this. No one out here wants this. Leave our land alone	No you need to find a different route. This puts a main highway on my family's property as well as mine. We don't want this. No one out here wants this. Leave our land alone	This may help	Bypass Route 3	Yes	Michael Mudd Mmuddjr@gmail.com
					Yes	Phoenix Corbett Corbettphoenix1@gmail.com
Relief of congestion, better mobility;	Bells Mill and 480 cannot handle additional traffic!	480 cannot handle additional traffic!		Bypass Route 3	No	
Fixing the extremely rough lanes that are destroying the front end of our work trucks;				Bypass Route 3	No	
Relief of congestion, better mobility;More direct routes to reroute to;				Bypass Route 1	Yes	Pamfowler145@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;				Bypass Route 2	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;					Yes	Jennifer Stovall jennstovall5@gmail.com
More direct routes to reroute to;				Bypass Route 3	Yes	Donna diplady@windstream.net
Reduction of additional travel time, reduced delay;Relief of congestion, better mobility;				Bypass Route 3	Yes	katie20098@gmail.com
Relief of congestion, better mobility;				Bypass Route 1	No	
Relief of congestion, better mobility;More direct routes to reroute to;	Must of those roads are not built to handle an increase in traffic	Same as above. This causes more problems for larger vehicles	This is already occuring	Bypass Route 3	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;				Bypass Route 1	Yes	Rosemary Fowler / frosebud1@aol.com
Relief of congestion, better mobility;More direct routes to reroute to;				Bypass Route 2	No	
Relief of congestion, better mobility;	The reroute option has already congested roads even more congested	How will 44 be able to handle another feeder road?	Preston being 4 lanes can handle the heavier traffic	Bypass Route 3	Yes	Denise McGauley. Denisemfbbc@gmail.com
Relief of congestion, better mobility;	Yes	N/a	Yes	Bypass Route 2	Yes	David Collins
Reduction of additional travel time, reduced delay;				Bypass Route 3	Yes	Alice Buehler alice.solomon502@gmail.com
Reduction of additional travel time, reduced delay;Relief of congestion, better mobility;	At least the bridge on Bells Mill is new. I think the curves all along Bells Mill will increase the risk of car wrecks and much more congestion	That seems like a long Bypass, but could be beneficial.		Bypass Route 2	No	
Relief of congestion, better mobility;				Bypass Route 1	No	
Relief of congestion, better mobility;	no matter how many roads you put in they will still gridlock with traffic				No	
Relief of congestion, better mobility;More direct routes to reroute to;	There needs to be a connection between Preston highway and i65 north of shepherdsville	A connection between i65 and Preston north of Shepherdsville would help with this.		Bypass Route 2	Yes	
Relief of congestion, better mobility;					No	
				Bypass Route 3	Yes	James Linton jlintons@gmail.com
Relief of congestion, better mobility;	This bypass option creates more problems than what it helps	Same with this, creates more problems		Bypass Route 3	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	It should work	Yes definitely	Maybe	Bypass Route 1	Yes	Christy Collins christy_m_collins@yahoo.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	I believe that route will cause further expansion of the already congested county	Increased congestion on hwy 61 needs to be avoided	This gives an alternate route to get across the river.	Bypass Route 3	Yes	Joseph Klingbiel; joek380@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;				Bypass Route 3	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;					Yes	jeremymudd@ymail.com
More direct routes to reroute to;	Bells Mill Rd does not need truck traffic.	Increased traffic is to be expected; it has to go somewhere. At least those roads are better able to handle it.	We don't need any more traffic on 44 East until it is widened to the four lanes. Bells Mill is too curvy and hilly for any semi truck traffic.	Bypass Route 2	Yes	Janice Scanzillo 331 Cedar Place Dr Shepherdsville KY 40165
Relief of congestion, better mobility;More direct routes to reroute to;	Happens a lot	Worse case	No comment	Bypass Route 1	Yes	Michael Boyle Hulk215@gmail.com
Reduction of additional travel time, reduced delay;		44 seems to be significantly relieved. This is a positive and should seriously be considered	44 is still pretty red. Not the most important improvement	Bypass Route 2	No	
Relief of congestion, better mobility;				Bypass Route 3	Yes	Kevin Stearman hulkstear@gmail.com
Relief of congestion, better mobility;	Most of the traffic north and south is created by semi traffic re-routing during accidents. I think this study is focusing too much on locals re-routing and not deterring semi traffic from snarling infrastructure.	Again most of the traffic is being re-routed by travel apps and the slow downs are out of town semi traffic .	I believe the on and off ramps from 44 north and southbound are too short along with the northbound on ramp from 480 this is the cause of most of the accidents generated in the area.	Bypass Route 1	Yes	Thad Bewley thadbewley@gmail.com
Reduction of additional travel time, reduced delay;				Bypass Route 1	No	
Relief of congestion, better mobility;				Bypass Route 3	Yes	Caitlin Wilcheck caitlinwilcheck@gmail.com
Relief of congestion, better mobility;More direct routes to reroute to;					No	
Relief of congestion, better mobility;More direct routes to reroute to;					No	
More direct routes to reroute to;Reduction of additional travel time, reduced delay;Relief of congestion, better mobility;Not being stuck;				Bypass Route 1	No	
Relief of congestion, better mobility;More direct routes to reroute to;				Bypass Route 3	Yes	
Relief of congestion, better mobility;				Bypass Route 1	Yes	Mike Hieb - mike.hieb69@gmail.com
Reduction of additional travel time, reduced delay;			This sounds like it would make traffic worse?	Bypass Route 1	Yes	madison.ryle@gmail.com
Reduction of additional travel time, reduced delay;More direct routes to reroute to;Relief of congestion, better mobility;It's not even about lane closures, I65 is a daily nightmare ;	I65 should never be closed to 1 lane. You all are the only area shutting down that many lanes for every accident.	Figure out how to reduce collisions in that area. Cedar Grove ramp is too short and too close to Shepherdsville ramp, needs to be 4 lanes.	The city can't handle every day traffic		No	
Reduction of additional travel time, reduced delay;	Why is other areas congested if 65 is able to be bypassed and continue to have traffic flowing	It's better than 1&3	It's pointless	Bypass Route 2	Yes	Braun ashleybraun2016@yahoo.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Yes and increased traffic on Bells Mill is dangerous. And traffic backs upon to bells mill at the light to turn onto 44.	Heavy traffic is avoided on Bells Mill and is thus less dangerous.		Bypass Route 2	Yes	Lysa Harpe Lysa.harpe@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	It extends the traffic further from downtown	It extends the traffic further from downtown	Not the best option to relieve traffic	Bypass Route 2	Yes	Sego.mikey@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;					No	
Reduction of additional travel time, reduced delay;More direct routes to reroute to;				Bypass Route 1	No	
Relief of congestion, better mobility;	bells mill does not need extra traffic deverted on it.		looks like everyday now		No	
More direct routes to reroute to;Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	The route that's connected to Bell's mail down to Cedar Grove road would be extremely beneficial to me. This route would take me directly where I need to go and I imagine it would be a lot faster than trying to get all the way down into Shepherdsville and get on the 65 or Preston to get to Cedar Grove road which is actually further down Cedar Grove road than I need to be as well.	Similar to route 1, this route would be very beneficial as it would prevent me from having to go into downtown Shepherdsville and getting on the 65 that's backed up. It also will put me in a better spot on Cedar Grove road to get to where I need to be.	This route would have virtually no impact on me at all as I would still have to drive to downtown Shepherdsville and either get on the 65 or use the new bypass route which is likely to be backed up because 65 is backed up. It also puts me further down Cedar Grove than I need to be compared to routes one and two.	Bypass Route 1	Yes	Travis Whitworth (travis.whitworth@gmail.com)
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;				Bypass Route 3	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	No	This already happened and school traffic is severely affected	Bells mill is not wide enough for the volume of traffic. The road is falling apart	Bypass Route 3	Yes	Amy Perdue amperdue95@gmail.com
Relief of congestion, better mobility;				Bypass Route 2	No	
Reduction of additional travel time, reduced delay;	This looks awful	This is a better option	None	Bypass Route 1	Yes	Derrick Williams sonofberl@yahoo.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;				Bypass Route 2	No	
Relief of congestion, better mobility;More direct routes to reroute to;	Traffic still looks pretty congested	Traffic looks a lot better	Still a lot of congestion	Bypass Route 2	Yes	Karen- k.watkins018@gmail.com
More direct routes to reroute to;				Bypass Route 1	No	
More direct routes to reroute to;					Yes	Evan Littrell Sr. Evanlittrellsr862@gmail.com
Reduction of additional travel time, reduced delay;	Highly against	Highly against	Highly against	Bypass Route 3	No	
	Not a good solution. Bells Mill is not built to handle traffic volume (especially semis) to use as a bypass around Shepherdsville. This is dangerous.	Still not great. Better. But not great. But still has large environmental impacts to an area that has already been overly stressed by development. Also does not provide a quick entrance back to 65 north or south. The new intersection at 480 and 65 will be a gridlock nightmare. The northern part of the county will also suffer.	This is just terrible all the way around.		Yes	Grogers3434@gmail.com
10 years late;	BAD IDEAL		Semi trucks bad ideal	Bypass Route 3	Yes	puzzle.gibson@gmail.com
				Bypass Route 1	No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Not effective	Would be better than no alternative	Not helpful at all	Bypass Route 2	No	
Relief of congestion, better mobility;				Bypass Route 1	Yes	Angelaolson1964@email.com
Relief of congestion, better mobility;		No	Definitely no	Bypass Route 3		
Relief of congestion, better mobility;	Bells mill road is an old country road that needs to be widened in order to keep up with the construction. Plus the rock trucks should be not allowed on bells mill road, they are overloaded and hurting the road and bridge. That's why the bridge has been rebuilt		Definitely need a new bypass alternate route than bells mill road		Yes	Bennett Howell B69th@yahoo.com
Relief of congestion, better mobility;					No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	Bells mill is still closed which wouldn't help anyone. The road is curvy and sending more people that way would cause accidents	This would be a decent bypass, if 61 was widened to handle the extra flow of vehicles. Widened the existing salt river bridge to handle extra volume	Widen 44 from Shepherdsville to Mt Washington. Widen 61 through Shepherdsville to Lebanon Junction.			
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;					Yes	Dawnn Williamson/ dviney13@gmail.com
More direct routes to reroute to;				Bypass Route 2	Yes	Tracy Odle Tracy.odle@yahoo.com
More direct routes to reroute to;	480 residents deal with enough with all the warehouses. Please don't bring additional extra traffic to our once lovely community	480 residents deal with enough with all the warehouses. Please don't bring additional extra traffic to our once lovely community	Having a 3rd option for crossing the river is most important to my family	Bypass Route 3	Yes	Beth maraebeth@yahoo.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	This routes need to be out of the study. Makes no sense.	480 can not handle anymore traffic. It's already horrible. This route needs to taken out of the study.	It disperses traffic instead of it being in one area.	Bypass Route 3	No	
Reduction of additional travel time, reduced delay;			44 and Bells Mill already have too much traffic on them		Yes	Randy Wyrick Randy.wyrick@hotmail.com
More direct routes to reroute to;Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Any bypass option will see increased traffic with i65 lane closures.	Same comment as before. I would use this option less than option 1.	This bypass would be a nightmare. I would be unlikely to use it.	Bypass Route 1	Yes	Emily Ray - emily.coleman225@gmail.com
More direct routes to reroute to;				Bypass Route 2	Yes	tondaanderson@gmail.com
More direct routes to reroute to;	Widen bells mill	Put in the other ramp to 65 north of town and it gives a natural bypass from hillview to 245 or 480 or new 114 exit	New ramp to 65 north of town	Bypass Route 1	Yes	Chris stafford. Staffordc56@yahoo.com
Keeping them off 480;	480 is not a good alt route	Still hate it	Better	Bypass Route 3	No	
Reduction of additional travel time, reduced delay;				Bypass Route 3	No	
Reduction of additional travel time, reduced delay;	480 is too curvy, and narrow to accommodate much more traffic without improvements. Blind curves, and seasonal high water has already made it treacherous to drive. That and a lack of speed enforcement.	480 already has too much traffic. There is no infrastructure further east to accommodate traffic from Ky 31.		Bypass Route 3	Yes	11258 Cedar Grove road, Cox's Creek Ky. 40013. Yes it's a Nelson county address, but it's Bullitt county
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	Bells Mill cannot handle the additional traffic. Route 1 is not a good option.	M61 should be able to handle the additional traffic better than Bells Mill, making route 2 a more viable option.	Traffic through the city is already terrible. Any time an accident causes a backup on 65, city streets get backed up as well. Option 3 will not help this issue.	Bypass Route 2	Yes	Amanda Wilt amanda.wilt@outlook.com
The whole town shuts down for hours when there's an accident on 65. Having only one way to get across Salt River is crazy. ;	You have to keep 65 moving. Rerouting into Shepherdsville doesn't work. I-65 needs to be widened to accommadate the growth in Shepherdsville. There should be an exit from cedar grove road to 44 without merging onto I-65				Yes	Jonetta Palmer jonniemymy55@gmail.com
Another exit ramp. Need one at Preston Highway and interstate 65. This would have minimal impact on surrounding communities.;	No way. It does not need to come that far out on Cedar Grove Road. You would need to make Cedar Grove Road four lanes all of the way to Bardstown Road.	Nope	This one makes the most sense.	Bypass Route 3	Yes	Craig Troutman. Silverfox2t@att.net
More direct routes to reroute to;	When a event happens north or south bound on I-65. Have local authorities from LJ and Jefferson county reroute traffic at Gene Snyder or 313in LJ		See comment above		No	
Fix the right 2 lanes, they are terrible;Reduction of additional travel time, reduced delay;	Anything will help but this is not the most common problem. I believe more traffic comes to and from Louisville than south of Shepherdsville	This is a good bypass but needs an Exit/Entrance ramp to I-65 off Ky-61	I think this bypass just adds traffic and dosent make anything better.	Bypass Route 2	Yes	Kasey Kuebler kskuebler@gmail.com
Relief of congestion, better mobility;					No	
Reduction of additional travel time, reduced delay;				Bypass Route 3	No	
Relief of congestion, better mobility;				Bypass Route 2	No	
Reduction of additional travel time, reduced delay;	sounds awful		sounds awful	Bypass Route 2	No	
More direct routes to reroute to;					Yes	shelly@turpinfamily.cc
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;	KY-480 isn't made to handle the increased traffic.	KY-480 isn't built to handle the increased traffic.		Bypass Route 3	No	
All of them ;		There is not a good re-route	There is not a good re-route		Yes	A. Silver
					No	
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Ok	No	No	Bypass Route 1	No	
	I65 speed limit is not observed by anyone. Vehicles travel way too fast with no state police presence.				Yes	Sherry4dci@email.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;More direct routes to reroute to;					No	
Relief of congestion, better mobility;				Bypass Route 1	Yes	Danita Cobble danitacobble@gmail.com
More direct routes to reroute to;	This works best for my daily driving	Would help some	I feel like we already have 480c and Preston hwy or down 480 to bardstown rd. This one is redundant	Bypass Route 1	Yes	B Coolidge 522 Cameron Ridge Rd Shepherdsville Kentucky
	I don't want this	Don't want this either	Hate all the cedar grove road options		No	
More direct routes to reroute to;Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;				Bypass Route 1	Yes	John Mills / john.h.mills1@gmail.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;			bad idea	Bypass Route 2	No	
Relief of congestion, better mobility;				Bypass Route 1	No	
Better planning on when they have to do the construction;	Again, you're not helping with the congestion you're just making it worse because Highway 44 is only two lanes you divert all that traffic going through that to get to Bell Mill Road. You're just gonna back up even worse	Again, same scenario your divert in traffic onto a two-lane road and backing everything up all the way across the city all the way to Mount Washington, and not to mention the school zones that is not a viable option	This route in some ways could help because people get on and off Shepherdsville anyways at that small junction but again you will be increasing some of the city traffic, but the city can handle more than a two-way road	Bypass Route 3	Yes	Shelia Williams dragonlady10000@yahoo.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Sounds terrible. Bell mill is not built for congestion, too narrow and dangerous.	No thoughts on this one. 61 and 480 may be better suited to take this additional traffic but not sure.	Really terrible. 44 is already and issue. Too many fatalities and schools along this route. It would only relieve 65 pressures until the side roads backed up. Not fixing anything.	Bypass Route 3	Yes	Rachel Ramsey rackaree@msn.com
Relief of congestion, better mobility;Reduction of additional travel time, reduced delay;	Adding more traffic to a road that already gets a lot of traffic is silly	This isn't bad. I take 480 and the traffic is light until you get close to Amazon so 480 could likely handle it	Again, adding more traffic to roads that already has night traffic volume is silly	Bypass Route 2	Yes	RhondaGRushing@gmail.com Rhonda Rushing
More direct routes to reroute to;	Bells mill adds more traffic! That road is curving and dangerous needs to be avoided			Bypass Route 3	Yes	Joe newton jgnewt@yahoo.com
Relief of congestion, better mobility;					Yes	April.bennett_13@gmail.com
Relief of congestion, better mobility;				Bypass Route 2	No	

MICROSOFT FORM SURVEY RESPONSES SUMMARY

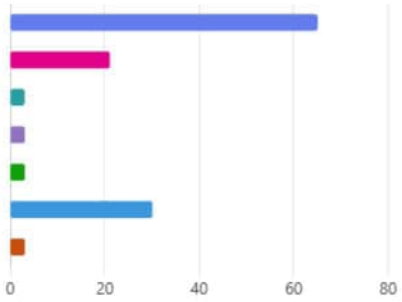
Responses Overview

Active

Responses	Average Time	Duration
128	21:11	28 Days

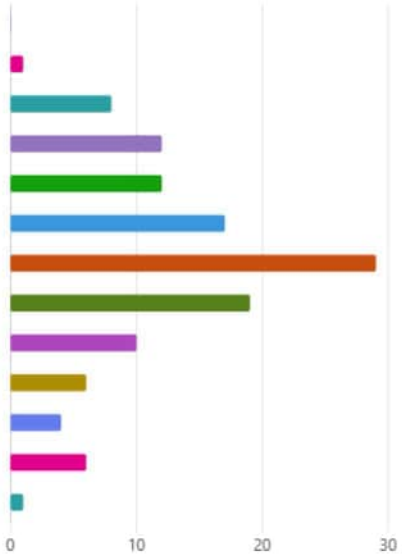
1. Area of Residence

Shepherdsville	65
Mount Washington	21
Hillview	3
Brooks	3
Lebanon Junction	3
Rural Bullitt County	30
Other	3



2. Age Range

16-20	0
21-25	1
26-30	8
31-35	12
36-40	12
41-45	17
46-50	29
51-55	19
56-60	10
61-65	6
66-70	4
71-75	6
76+	1

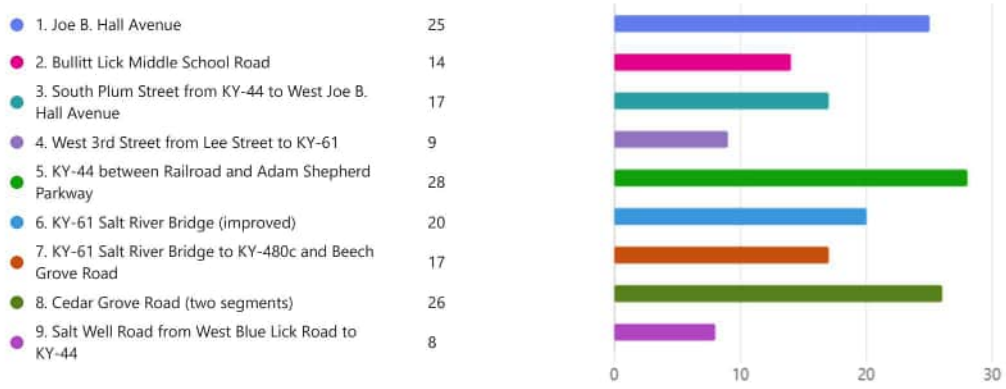


3. Gender

Female	72
Male	52
Prefer not to say	3

4. Do you work in Bullitt County?

5. Which proposed sidewalk(s) would you be most likely to use?

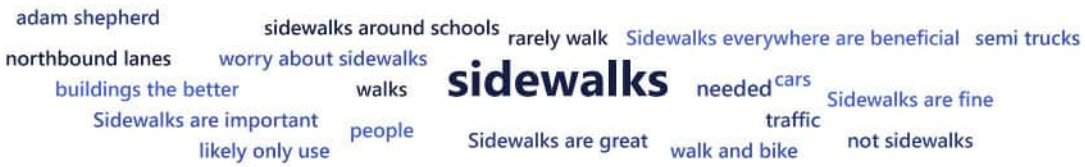


6. Do you have any comments on the proposed sidewalk connections?

50
Responses

Latest Responses
...

13 respondents (26%) answered sidewalks for this question.



7. Are there any additional locations or routes in Shepherdsville where sidewalks would be beneficial?

28
Responses

Latest Responses
...

3 respondents (11%) answered sidewalks for this question.

8. Bypass Route 1 runs from KY-480 to KY-44 and Bells Mill Road. Travel demand modeling shows that the bypass primarily serves traffic to/ from east Shepherdsville (including Mount Washington) to the logistics park area. This is shown with the increase in traffic volumes along KY-44 east of the bypass, and on Ohm Drive, Omega Parkway, and KY-480 west of the bypass.

Promoters	26
Passives	12
Detractors	80

9. Bypass Route 2 runs from KY-480 to KY-61 south of Bells Mill Road. With Route 2 in place, travel demand modeling shows an increase in t raffic from KY-480 southeast of Shepherdsville, as traffic uses this bypass to access KY-61 North. Traffic on Ohm Drive and Omega Parkwa y show increases as well.

Promoters	29
Passives	19
Detractors	71

10. Bypass Route 3 offers a new bridge connection between KY-61 and I-65 and provides the largest volume reductions over the Salt River. Volume redistributes to the state highways that have existing residual capacity.

Promoters	33
Passives	19
Detractors	68

11. Bypass Route 4 runs from KY-480 to KY-245 east of I-65. The north segment of this bypass route lies east of the industrial park. Travel de mand modeling shows that Bypass Route 4 causes an increase in traffic to/from KY-480 and KY-245 east of the bypass. Minimal traffic re duction and some volume increases occur within downtown Shepherdsville.

Promoters	8
Passives	10
Detractors	100

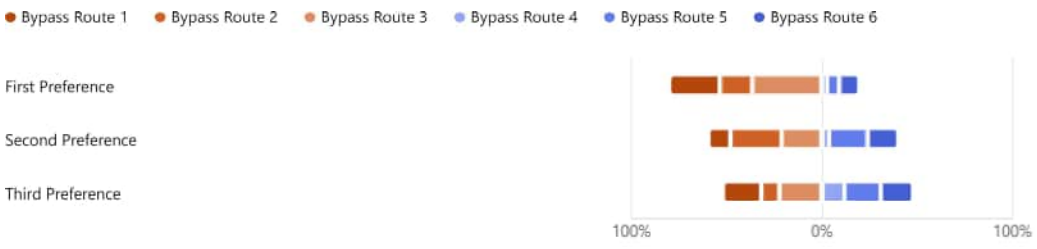
12. Bypass Route 5 combines Bypass Routes 2 and 4. Providing a full bypass route from KY-245 to KY-61 on the east side of I-65 does not s how a major benefit to downtown traffic when compared to the results from only using Bypass Routes 1 or 2.

Promoters	19
Passives	13
Detractors	87

13. Bypass Route 6 runs from KY-1020 to KY-61 on the west side of Shepherdsville. This route has the lowest volume of daily traffic and doe s not significantly reduce traffic on the existing, congested roadways.

Promoters	12
Passives	10
Detractors	97

14. Please select the three alternative bypass routes you prefer the most.



15. Do you have any comments about the bypass routes or other thoughts you'd like to share on additional routes?

76
Responses

Latest Responses
...

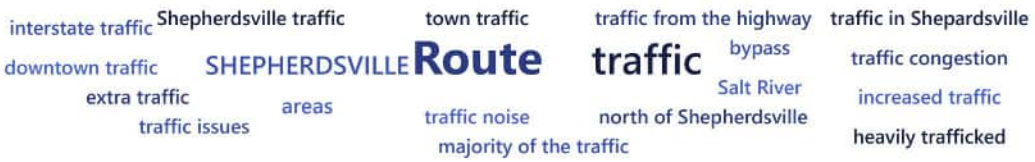
22 respondents (29%) answered Traffic for this question.

16. Routes 1, 2, and 3 are under further consideration for the next phase of study. Do you have additional comments on these routes?

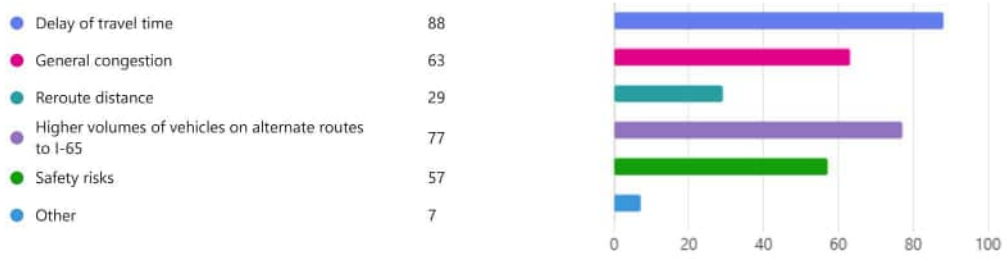
65
Responses

Latest Responses
"Adds more unneefed traffic to 44"
...

24 respondents (37%) answered Route for this question.

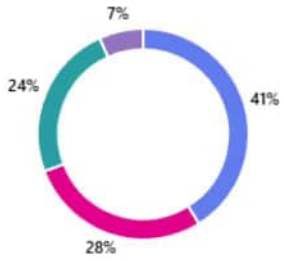


17. What are the biggest impacts to you as a driver due to a lane closure event on I-65?



18. What improvements during lane closure events on I-65 are you most looking for?

Relief of congestion, better mobility	79
Reduction of additional travel time, reduced delay	54
More direct routes to reroute to	46
Other	13



19. An I-65 collision scenario reducing both northbound and southbound traffic from 3 lanes to 1 lane was modeled. Bypass Route 1 relieves congestion on I-65 but increases traffic on Bells Mill Road, KY-480, Ohm Drive, and Omega Parkway.

58
Responses

Latest Responses
"Bells mill adds more traffic! That road is curving and dangerous needs to be avoi... "
• • •

25 respondents (43%) answered traffic for this question.

20. An I-65 collision scenario reducing both northbound and southbound traffic from 3 lanes to 1 lane was modeled. Bypass Route 2 relieves congestion on I-65 but increases traffic on KY-61 (north of the bypass), KY-480, Ohm Drive, and Omega Parkway.

53
Responses

Latest Responses
• • •

18 respondents (34%) answered traffic for this question.

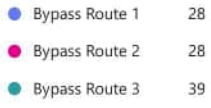
21. An I-65 collision scenario reducing both northbound and southbound traffic from 3 lanes to 1 lane was modeled. Bypass Route 3 relieves congestion on I-65 but increases traffic throughout the city. Affected routes include KY-44 (east of I-65) and Bells Mill Road.

54
Responses

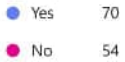
Latest Responses
...

16 respondents (30%) answered traffic for this question.

22. In your opinion, which proposed bypass route has the greatest traffic relief benefit when I-65 has lane closures?



23. Would you like to be added to a mailing list about Central Bullitt County Planning Study updates?



24. If yes, please provide your name and email address here.

68
Responses

Latest Responses
"April.bennett.13@gmail.com"
"Joe newton jgnewt@yahoo.com"
...

2 respondents (3%) answered KY for this question.

SYNOPSIS

The attached figures are intended to illustrate practical transportation alternatives focused on maximizing the performance of existing infrastructure prior to consideration of major corridor expansion into previously undeveloped areas. In transportation planning and systems engineering, optimization of existing infrastructure and correction of operational deficiencies are commonly evaluated before advancing large-scale corridor expansion alternatives. Figure 1 outlines several operational and corridor improvements that appear capable of providing substantial traffic relief using existing transportation assets. These improvements appear to address known choke points and operational deficiencies within the existing network while minimizing environmental impacts and residential relocations. Based on the information reviewed, these improvements may be capable of achieving a substantial portion of the stated study objectives. Additional evaluation of these operational and existing-corridor improvements may be warranted prior to advancing major new corridor infrastructure alternatives.

Figures 2 through 6 compare several modified corridor alternatives derived from the 2014 KYTC study and additional conceptual alignments, including the Valley View Connector, 1442 Connector, McCubbins Farm Connector, and Moody Lane alternatives. Based on publicly available information and conceptual review, several of these corridors appear capable of improving regional connectivity while reducing impacts to homes, agricultural boundaries, and environmental resources relative to portions of the current 2026 study corridors. The figures also suggest that certain previously evaluated corridors and existing transportation improvements may warrant additional consideration during the alternative screening and evaluation process.

Figure 7 summarizes conceptual concerns associated with the current Route 1 alignment identified in the 2026 study materials. Based on the available mapping and topographic information, the route appears likely to require a major bridge crossing approximately 75 feet in height and 700 feet in length across a significant topographic depression, potentially resulting in increased structural complexity and project cost relative to some alternative corridors. The alignment also appears to traverse previously undisturbed wetlands, karst terrain, and potential cultural resource areas. Option 2 appears to present similar constructability and environmental considerations. In contrast, several existing corridor improvements and previously evaluated alignments appear capable of providing lower-cost transportation improvements with fewer relocations and reduced environmental impacts. Based on the conceptual information reviewed, the Moody Lane Connector appears to warrant additional evaluation due to its apparent potential to reduce relocations and improve corridor efficiency. Within the framework of the 2026 study alternatives, Option 3 currently appears to provide a comparatively balanced combination of transportation benefit, constructability, and reduced impacts based on the publicly available information reviewed.

1

Central Bullitt Traffic Study

Slide 1: Practical Transportation Improvements to Evaluate Before New Rural Corridor Expansion
Slide 2: 2014 KYTC Traffic Study Summary
Slide 3: Corridor A - Valley View Connector
Slide 4: Corridor E – 1442 Connector
Slide 5: Corridor G - McCubbins Farm Connector
Slide 6 and 7: Alternate Route: Moody Lane
Slide 8: 2026 Route 1 Issues

2

MAXIMIZE EXISTING INFRASTRUCTURE IMPROVEMENTS FIRST

- Widen I-65 from 3 lanes to 4 lanes from Jefferson County to the 112 exit.
  - Most traffic on I-65 is still governed by N-S through traffic.
  - Most direct method to increase north-south through capacity and improve interstate level of service.
- Widen Hwy 61 to 5 lanes through Bullitt Co.
  - One of the most efficient improvements to increase through traffic capacity during delays on I-65.
  - Existing choke points and operational deficiencies should be evaluated prior to construction of new corridors.
  - New developments should properly contribute to infrastructure improvements as part of new construction.
- Add an I-65 exit at the Hwy 61 crossing.
  - Plan for additional improvements to Bells Mill Road.
- Widen Hwy 44 to 4 or 5 lanes through Mt. Washington.
  - Widen Bridges/Optimize traffic signal timing
  - Improve the intersections and better control new development on Adam Shepard and Conestoga Parkway
  - Limit the number of entrances for new developments along the corridor
  - Transportation impacts associated with new development should be proportionally mitigated.
- Add additional lanes to exits at the 117 and 121.
  - New developments should properly contribute to infrastructure improvements as part of new construction.
  - One of the most direct methods to improve through capacity and interstate level of service.

3

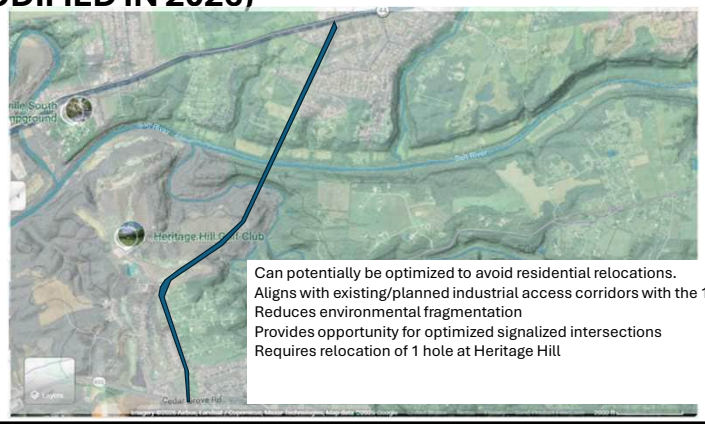
2014 KYTC STUDY - REVIEW

Several previously evaluated alignments appear to provide lower-impact alternatives than portions of the current study

- Corridor A: Valley View
  - It is not clear why this alignment is not considered in the current study
  - A re-aligned three-lane corridor is feasible without relocations of homes
  - The alignment can taper east and avoid most impacts to Heritage Hill.
- Corridor E: Hwy 1442 Crossing
  - It is not clear why this alignment is not considered in current study
  - 1442 can be raised, realigned, and routed to avoid most relocations
  - This appears to have evolved into portions of current Route 2; however, the original alignment shown here appears more favorable.
- Corridor G: New Highway
  - This alignment appears to have been converted into Route 1.
  - Route 2 has more relocations than Corridor G.
  - Route 2 has significant topographical, environmental, and cultural impacts.
  - It is unclear why a 3-lane Foley Road corridor was not advanced, as it appears capable of reducing relocations and preserving agricultural boundaries.
- Moody Lane
  - Why has a Moody Lane crossing not been included in any previous studies?

4

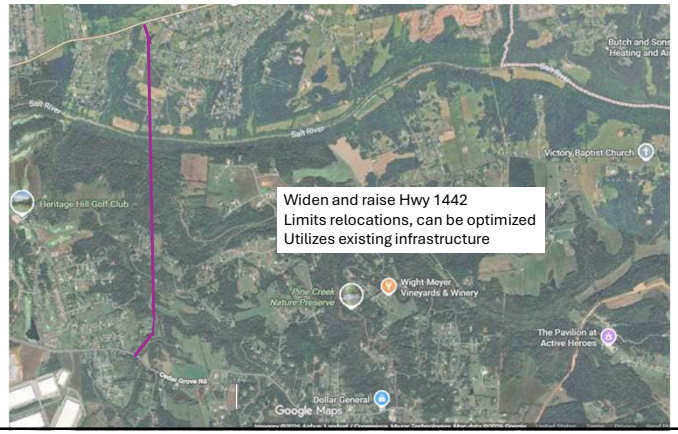
CORRIDOR A: VALLEY VIEW 3-LANE CONNECTOR (MODIFIED IN 2026)



Can potentially be optimized to avoid residential relocations.
Aligns with existing/planned industrial access corridors with the 114 exit
Reduces environmental fragmentation
Provides opportunity for optimized signalized intersections
Requires relocation of 1 hole at Heritage Hill

5

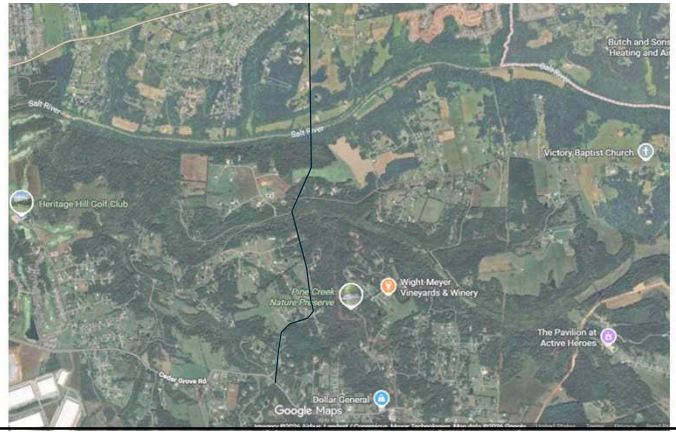
CORRIDOR E: 1442 CONNECTOR CORRIDOR (MODIFIED IN 2026)



Widen and raise Hwy 1442
Limits relocations, can be optimized
Utilizes existing infrastructure

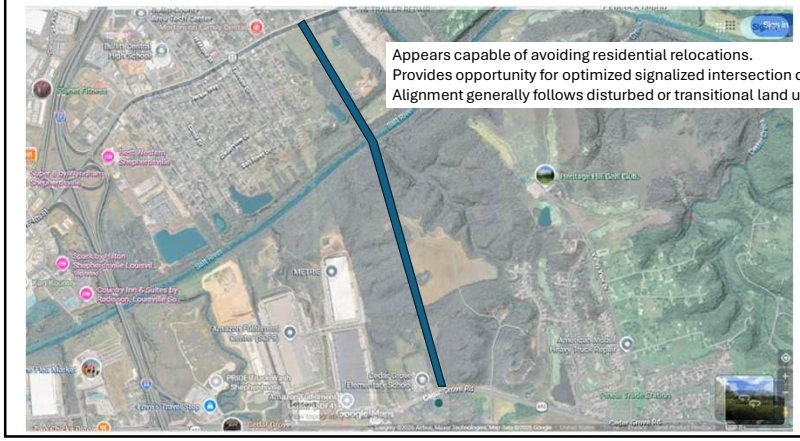
6

CORRIDOR G: MCCUBBINS FARM CONNECTOR (MODIFIED IN 2026)



7

OPTION W HWY 44 TO 480 BYPASS – MOODY LANE



Appears capable of avoiding residential relocations.
Provides opportunity for optimized signalized intersection design
Alignment generally follows disturbed or transitional land uses

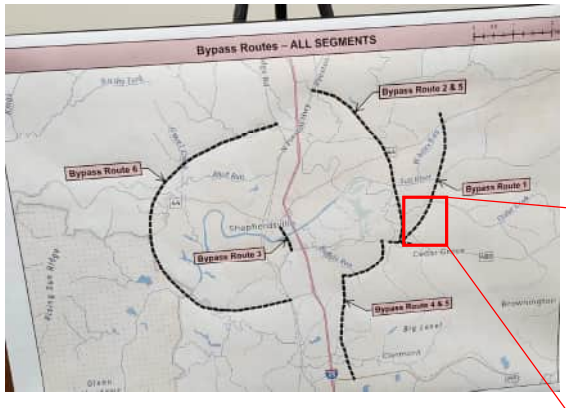
8

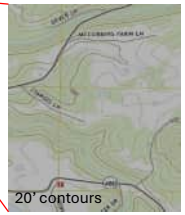
OPTION W HWY 44 TO 480 BYPASS – MOODY LANE

Appears capable of avoiding residential relocations.
Provides opportunity for optimized signalized intersection design
Alignment generally follows disturbed or transitional land uses

9

Route 1 Issues





1. Appears likely to require a major bridge structure approximately 75 feet in height and 700 feet in length.
2. Will require an EIS due to cultural/ environmental impacts
   - Undisturbed woodlands
   - Cultural Sites
   - Caves and groundwater quality
3. Existing corridor improvements may provide lower-cost alternatives/fewer relocations.

10

Question No.	Category	Question
1	Governance, Scope, and Decision Authority	Please confirm whether the Scope of Work specifically required Strand and Associates to evaluate transportation scenarios involving partial or full loss of service on I-65. If so, please explain the planning basis, technical justification, and consistency with KYTC and/or KIPDA transportation planning guidance.
2	Governance, Scope, and Decision Authority	Did KYTC and/or KIPDA formally review or approve the study methodology, assumptions, screening criteria, or alternative evaluation process at any point during the study?
3	Governance, Scope, and Decision Authority	To what extent were optimization and expansion of the existing transportation network evaluated to improve system redundancy and reduce risk associated with partial or full loss of service prior to development of new corridor alternatives
4	Governance, Scope, and Decision Authority	Were transportation projects already endorsed, programmed, or planned by KYTC, KIPDA, or local transportation plans incorporated into the study assumptions and traffic modeling?
5	Governance, Scope, and Decision Authority	What was the exact language used in the scope of work provided to the consultant team (Strand Associates)?
6	Governance, Scope, and Decision Authority	Please provide the Scope of Work for the Study, and all drafts/revisions of the scope of work, for review as part of the study results.
7	Governance, Scope, and Decision Authority	Was the consultant directed to evaluate all reasonable transportation alternatives, or were corridors/routes prescribed in advance?
8	Governance, Scope, and Decision Authority	Were corridor locations, terminal points, or study boundaries prescribed by the City of Shepherdsville and or representatives before or during the study period?
9	Governance, Scope, and Decision Authority	What assumptions, constraints, exclusions, or planning guidance were provided to the consultant prior to beginning the study?
10	Governance, Scope, and Decision Authority	Were any corridors excluded from consideration before the study began? If so, why?
11	Governance, Scope, and Decision Authority	What role did each of the following entities have in defining study objectives, screening criteria, corridor development, and alternative selection: city governments, fiscal court, planning and zoning, developers, contractors, KYTC, KIPDA, MPO organizations, and private stakeholders?
12	Governance, Scope, and Decision Authority	Who established the evaluation criteria and weighting factors used to rank alternatives?
13	Governance, Scope, and Decision Authority	Please identify the individuals, agencies, committees, consultants, and stakeholders involved in alternative screening, evaluation, and decision-making throughout the study.
14	Governance, Scope, and Decision Authority	Were alternatives screened out prior to detailed engineering, environmental, topographic, or cost evaluation? If so, what criteria were used?
15	Governance, Scope, and Decision Authority	Who had authority to eliminate alternatives from further consideration, and what documentation supports those decisions?
16	Governance, Scope, and Decision Authority	Were any alternatives excluded before public involvement occurred?
17	Governance, Scope, and Decision Authority	Were any alternatives advanced or retained despite having greater anticipated environmental, relocation, constructability, or cost impacts than other evaluated alternatives? If so, please explain the basis.
18	Traffic Modeling and Transportation Need	If traffic demand is predominantly north-south, what is the basis for prioritizing east-west connector improvements?
19	Traffic Modeling and Transportation Need	Were the study objectives focused on congestion relief, freight mobility, regional bypass development, industrial access, local circulation, or future growth accommodation?
20	Traffic Modeling and Transportation Need	What percentage of current congestion is caused by local, freight, regional through, and commuter traffic?
21	Traffic Modeling and Transportation Need	What is the distribution for these trip generators and what percentage of the destinations are N-S vs E-W? Provide the statistics from the traffic study and trip generator you are using as part of your study. Cite the traffic study these statistics come from.
22	Traffic Modeling and Transportation Need	Provide a detailed overview, rationale, and justification for the trip generation assumptions used?
23	Traffic Modeling and Transportation Need	What traffic generators were incorporated into the model.
24	Traffic Modeling and Transportation Need	What were the primary assumptions, constraints, objectives, and evaluation criteria used in the study?
25	Traffic Modeling and Transportation Need	What traffic growth assumptions were used, including population growth, industrial growth, warehouse/logistics growth, freight traffic, and commuter traffic?
26	Traffic Modeling and Transportation Need	Were existing and planned transportation improvements already included in the traffic model?
27	Traffic Modeling and Transportation Need	Was the study calibrated using current congestion data, truck percentages, travel times, and crash history?
28	Traffic Modeling and Transportation Need	Why was the full study, including technical appendices and supporting analysis, not publicly released?
29	Traffic Modeling and Transportation Need	Will traffic modeling files, assumptions, screening criteria, scoring matrices, environmental constraints, cost estimates, and alternative evaluation data be publicly released?
30	Traffic Modeling and Transportation Need	Were public comments or local stakeholder recommendations incorporated into alternatives development? If so, how?
31	Traffic Modeling and Transportation Need	Were any alternatives removed from consideration before detailed engineering or topographic evaluation was completed?
32	Traffic Modeling and Transportation Need	Were alternatives evaluated using benefit-cost analysis, travel time reduction, safety improvements, freight mobility, environmental impacts, and right-of-way impacts?
33	Traffic Modeling and Transportation Need	Would any proposed alternatives worsen congestion at existing interchanges?
34	Traffic Modeling and Transportation Need	Were traffic operational improvements evaluated before proposing new corridors?
35	Traffic Modeling and Transportation Need	To what extent were widening, interchange, signal, and operational improvements evaluated prior to advancing new corridor alternatives?
36	Existing Network, Corridor Screening, and Constructability	To what extent were widening, interchange, signal, and operational improvements comparatively evaluated prior to advancing new corridor alternatives?
37	Existing Network, Corridor Screening, and Constructability	Why is KY 61 not being widened?
38	Existing Network, Corridor Screening, and Constructability	Why is I-65 not being widened to four lanes between Jefferson County and Exit 112?
39	Existing Network, Corridor Screening, and Constructability	Were interchange improvements at Exit 117 evaluated?
40	Existing Network, Corridor Screening, and Constructability	Were interchange improvements at Exit 112 evaluated?
41	Existing Network, Corridor Screening, and Constructability	Were frontage roads or collector-distributor systems evaluated?
42	Existing Network, Corridor Screening, and Constructability	Were alternatives utilizing existing disturbed corridors considered as they would have the lowest environmental impacts?
43	Existing Network, Corridor Screening, and Constructability	Were phased improvements evaluated before recommending a major new corridor?
44	Existing Network, Corridor Screening, and Constructability	Could lower-cost operational improvements provide comparable traffic relief?
45	Existing Network, Corridor Screening, and Constructability	Why were recommendations from previous transportation studies not advanced or incorporated?
46	Existing Network, Corridor Screening, and Constructability	What deficiencies caused previous recommended corridors to be abandoned or modified?
47	Existing Network, Corridor Screening, and Constructability	Why were reroutes or improvements to existing local roads not more heavily considered?
48	Existing Network, Corridor Screening, and Constructability	Were routes minimizing residential relocations prioritized? Routes appear to exist that may avoid residential relocations but were not included - Moody Lane and Valley View, why?
49	Existing Network, Corridor Screening, and Constructability	Were direct north-south alignments evaluated for operational efficiency?
50	Existing Network, Corridor Screening, and Constructability	Were corridors screened based on overall benefit-to-impact ratio?
51	Existing Network, Corridor Screening, and Constructability	Were lower-impact bridge crossing locations evaluated?
52	Existing Network, Corridor Screening, and Constructability	Why were topographic constraints not a primary screening criterion?
53	Existing Network, Corridor Screening, and Constructability	Were terrain, slope stability, and roadway geometry evaluated equally across all alternatives?
54	Existing Network, Corridor Screening, and Constructability	Were roadway curvature and turning-radius limitations considered?
55	Existing Network, Corridor Screening, and Constructability	Were steep grades and cut/fill requirements evaluated?
56	Existing Network, Corridor Screening, and Constructability	Were earthwork quantities estimated for each corridor?
57	Existing Network, Corridor Screening, and Constructability	Were detailed topographic, grading, and constructability evaluations presented for each corridor?
58	Existing Network, Corridor Screening, and Constructability	Were karst geology, sinkhole risk, and subsurface conditions incorporated into screening criteria?
59	Existing Network, Corridor Screening, and Constructability	Were bridge lengths, retaining wall requirements, and major structure costs estimated for each corridor?
60	Existing Network, Corridor Screening, and Constructability	Were life-cycle maintenance costs considered for bridges, floodplain embankments, and major drainage structures?
61	Existing Network, Corridor Screening, and Constructability	Were future utility relocation costs included in planning-level cost estimates?
62	Existing Network, Corridor Screening, and Constructability	How were environmental mitigation costs estimated?
63	Environmental and Resource Impacts	Were floodplain impacts evaluated?
64	Environmental and Resource Impacts	Were impacts to Pine Creek Barrens evaluated?
65	Environmental and Resource Impacts	Were wildlife corridor and forest fragmentation impacts evaluated?
66	Environmental and Resource Impacts	Were archaeological and Native American cultural resources evaluated?
67	Environmental and Resource Impacts	Were potential mound sites or historic settlement areas evaluated?
68	Environmental and Resource Impacts	Were cumulative environmental impacts considered?
69	Environmental and Resource Impacts	Were noise impacts evaluated?
70	Environmental and Resource Impacts	Were air quality impacts evaluated?
71	Environmental and Resource Impacts	Were wetlands and stream impacts comparatively evaluated between alternatives?
72	Environmental and Resource Impacts	Were cave systems and karst groundwater impacts evaluated?
73	Environmental and Resource Impacts	Were long-term watershed and drainage impacts considered?
74	Environmental and Resource Impacts	Were climate resilience and future rainfall intensity changes evaluated?
75	Property, Community, Land Use, and Development	How were impacts to local property owners evaluated?
76	Property, Community, Land Use, and Development	Why do some alternatives appear to disproportionately impact rural and low income landowners?
77	Property, Community, Land Use, and Development	Were relocation impacts weighted appropriately during screening?
78	Property, Community, Land Use, and Development	Why does development appear to place greater burdens on local residents than on large commercial developments?
79	Property, Community, Land Use, and Development	Which alternatives create the greatest division of existing neighborhoods or rural communities?
80	Property, Community, Land Use, and Development	How do zoning and land-use decisions influence projected traffic growth?
81	Property, Community, Land Use, and Development	Why are large developments approved before transportation improvements are funded?
82	Property, Community, Land Use, and Development	Are developers required to contribute proportionally to transportation improvements?
83	Property, Community, Land Use, and Development	Were development-driven traffic projections independently verified?
84	Property, Community, Land Use, and Development	Is planning and zoning coordinated with transportation capacity planning?
85	Property, Community, Land Use, and Development	How is transportation infrastructure being protected from reactive growth patterns?
86	Property, Community, Land Use, and Development	How would each alternative affect future land values and development pressure?
87	Property, Community, Land Use, and Development	Could transportation improvements unintentionally shift congestion into currently rural areas?
88	Public Involvement, Transparency, and Review	Were citizens allowed to propose alternative corridors before preliminary screening?

89	Public Involvement, Transparency, and Review	How will public comments affect future corridor evaluations?
90	Public Involvement, Transparency, and Review	Will additional public meetings occur before corridor selection advances?
91	Public Involvement, Transparency, and Review	Will technical responses to public comments be published?
92	Public Involvement, Transparency, and Review	Will the City and consultant provide comparative maps showing impacts and geometry for all alternatives?
93	Public Involvement, Transparency, and Review	Will independent peer review of the study be considered before advancing a preferred corridor?
94	Public Involvement, Transparency, and Review	Will all technical assumptions and scoring methodologies be independently reviewable?
95	Operational Performance, Emergency Access, and Comparative Evaluation	What is the primary objective of the transportation program: downtown congestion relief, freight mobility, emergency redundancy, economic development, quality of life, or regional mobility?
96	Operational Performance, Emergency Access, and Comparative Evaluation	What are the actual AM and PM peak-hour travel time savings for each alternative?
97	Operational Performance, Emergency Access, and Comparative Evaluation	What are the expected queue lengths and delays at major intersections under each scenario?
98	Operational Performance, Emergency Access, and Comparative Evaluation	Which existing intersections continue to operate below acceptable levels of service for each alternative in the current study?
99	Operational Performance, Emergency Access, and Comparative Evaluation	It appears that an operational improvement scenario involving widening of local highways and interstate facilities (44, 61, and 65), combined with additional connector improvements, may warrant comparative evaluation against the current alternatives. Was this studied?
100	Operational Performance, Emergency Access, and Comparative Evaluation	Could signal timing, access management, turn lanes, ITS improvements, and ramp modifications in conjunction with highway 61 and 44 widening outperform major new roadway construction? Why was this not evaluated?
101	Operational Performance, Emergency Access, and Comparative Evaluation	If the Buckman Street streetscape project significantly reduces traffic capacity, should the streetscape concept be re-evaluated to preserve four travel lanes along KY 61 through downtown?
102	Operational Performance, Emergency Access, and Comparative Evaluation	Which alternative provides the best emergency detour during I-65 closures?
103	Operational Performance, Emergency Access, and Comparative Evaluation	What is the construction cost of each alternative, including bridges, right-of-way, utilities, and maintenance?
104	Operational Performance, Emergency Access, and Comparative Evaluation	Which alternative produces the lowest total societal cost?
105	Operational Performance, Emergency Access, and Comparative Evaluation	Which alternative has the best benefit-cost ratio?
106	Operational Performance, Emergency Access, and Comparative Evaluation	Which improvements can realistically be implemented within 25 years?
107	Operational Performance, Emergency Access, and Comparative Evaluation	Which route best avoids inducing uncontrolled suburban sprawl?
108	Operational Performance, Emergency Access, and Comparative Evaluation	Which alternative minimizes wetland and floodplain impacts?
109	Operational Performance, Emergency Access, and Comparative Evaluation	What is the likely NEPA class of action for each alternative? Route 1 crosses an 80 foot topographic low area, karst, and previously undisturbed wetlands.
110	Operational Performance, Emergency Access, and Comparative Evaluation	What percentage of congestion is caused by local intersection delay versus corridor capacity limitations?
111	Operational Performance, Emergency Access, and Comparative Evaluation	Which intersections or roadway segments are the true controlling bottlenecks?
112	Operational Performance, Emergency Access, and Comparative Evaluation	Synchronized signal improvements appear to warrant evaluation as part of the transportation model.
113	Operational Performance, Emergency Access, and Comparative Evaluation	What is the projected travel-time reliability improvement for each alternative?
114	Funding, Cost, Utilities, Resilience, and Implementation	What percentage of truck traffic is through-traffic versus locally generated industrial traffic?
115	Funding, Cost, Utilities, Resilience, and Implementation	Which alternatives are realistically fundable within current KYTC/MPO funding constraints?
116	Funding, Cost, Utilities, Resilience, and Implementation	What alternatives provide the greatest benefit per dollar spent?
117	Funding, Cost, Utilities, Resilience, and Implementation	Which alternatives have the highest risk of major cost overruns?
118	Funding, Cost, Utilities, Resilience, and Implementation	Which alternatives require the greatest number of major structures or utility relocations?
119	Funding, Cost, Utilities, Resilience, and Implementation	Were utility owners consulted during early corridor screening?
120	Funding, Cost, Utilities, Resilience, and Implementation	What percentage of congestion originates within Shepherdsville versus regional through traffic?
121	Funding, Cost, Utilities, Resilience, and Implementation	Which alternatives best preserve existing residential property values?
122	Funding, Cost, Utilities, Resilience, and Implementation	Which alternatives would create the greatest future maintenance burden on the City or State?
123	Funding, Cost, Utilities, Resilience, and Implementation	How would each alternative impact future utility expansion and infrastructure servicing?
124	Funding, Cost, Utilities, Resilience, and Implementation	Could incremental widening of KY 61 combined with interchange improvements defer the need for a new bypass? Hwy 61 should not be restricted to less than 4 lanes through Shepherdsville.
125	Funding, Cost, Utilities, Resilience, and Implementation	Were reversible lanes or managed-lane concepts evaluated?
126	Funding, Cost, Utilities, Resilience, and Implementation	Is the study consistent with regional and statewide transportation plans?
127	Funding, Cost, Utilities, Resilience, and Implementation	Will the City release traffic model documentation, GIS files, conceptual layouts, and cost assumptions?
128	Funding, Cost, Utilities, Resilience, and Implementation	What traffic modeling software and methodology were used?
129	Funding, Cost, Utilities, Resilience, and Implementation	Was the model calibrated to existing observed congestion conditions?
130	Funding, Cost, Utilities, Resilience, and Implementation	Were corridor alternatives screened consistently across all areas regardless of surrounding land use, development patterns, or property values?
131	Funding, Cost, Utilities, Resilience, and Implementation	Were alternatives evaluated based on total bridge length and complexity?
132	Funding, Cost, Utilities, Resilience, and Implementation	Were right-of-way acquisition costs fully included?
133	Funding, Cost, Utilities, Resilience, and Implementation	Were costs normalized for comparable roadway section widths and design standards?
134	Funding, Cost, Utilities, Resilience, and Implementation	How sensitive are project costs to inflation and right-of-way escalation?
135	Funding, Cost, Utilities, Resilience, and Implementation	What is the estimated congestion reduction benefit per dollar spent?
136	Funding, Cost, Utilities, Resilience, and Implementation	Were lower-cost phased alternatives evaluated comparatively?
137	Safety	Which corridors currently experience the highest crash rates and crash severity?
138	Safety	Which alternative provides the greatest safety improvement per dollar spent?

For more location information please visit www.strand.com

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