TRAFFIC IMPACT STUDY
Stumpf Travel Center

Webster County, IA

PREPARED BY:

McCLURE™

building strong communities.

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PREPARED FOR AND SUBMITTED TO:

The Iowa DOT and
Webster County

MEC #210178-001
July 2021

TRAFFIC IMPACT STUDY
STUMPF TRAVEL CENTER
WEBSTER COUNTY, IA
JULY 2021

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Lisa M Vandenberg

Date: 7/15/21

LISA M. VANDENBERG, P.E.

License No. **17021**

My renewal date is **December31**, **2021**

Pages or sheets covered by this seal:

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Table of Contents

1.0 INTRODUCTION

McClure has completed a traffic impact review associated with the development of a parcel located in Webster County for the Stumpf Travel Center. This parcel is located along Poplar Avenue approximately 400 feet north of US 20. The full build development is a gasoline service station with 9,750 sf building for convenience store and restaurant located on approximately 8.8 acres.

Access to the Stumpf Travel Center would be via two full accesses; both along Poplar Ave. Two access will provide for good internal circulation and make it easier for trucks using the diesel fueling pumps. An overview map is shown on the next page in **Figure 1** and site plan shown in **Appendix VI**.

2.0 EXISTING CONDITIONS

US 20 is an east-west roadway spanning the width of the state running between Sioux City and Dubuque. The study area is located east of the City of Fort Dodge. Within the study area, US 20 is a four-lane facility with turn lanes at major at-grade intersections and grade separated interchanges at major highways. The speed limit on US 20 is 65 miles per hour (mph) in the vicinity of the study area. There is a high percent of trucks on the roadway; 20-27 percent according to the one-day count collected for this study. The Iowa Department of Transportation (Iowa DOT) classifies it as a principal arterial roadway throughout its entirety.

Poplar Avenue is a two-lane bi-directional roadway from south of 235th Street to 230th Street. The speed limit is 55 mph. The Iowa DOT classifies the road as a local road.

The intersection of US 20 and Poplar Avenue is two-way stop controlled with stop signs placed on north-south Poplar Avenue. The intersection of Poplar Avenue and 235th Street is a two-way stop controlled with stop signs placed on north-south Poplar Avenue.

Land adjacently surrounding the proposed Stumpf Travel Center is undeveloped agricultural.

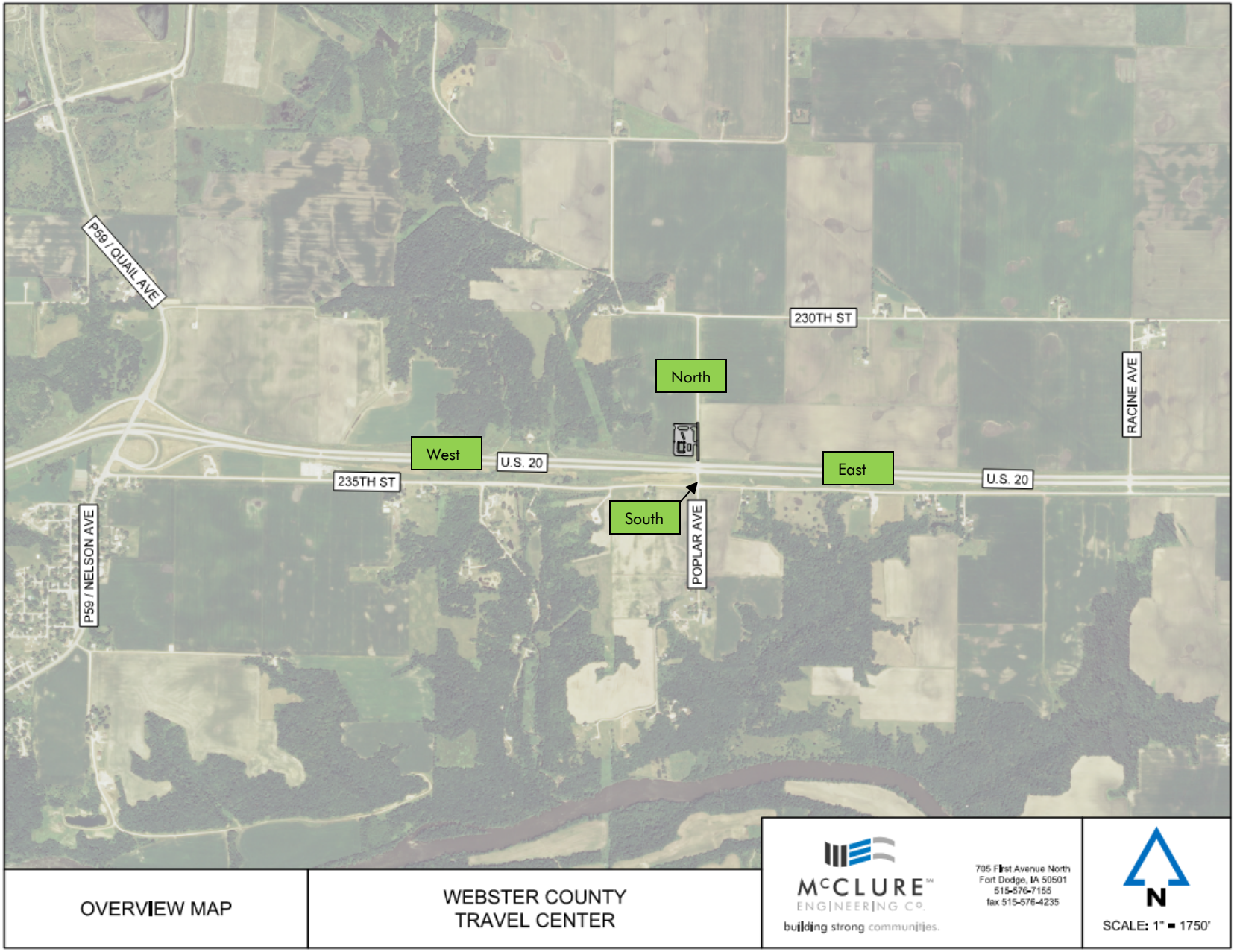

Figure 1: Existing Conditions Overview with Proposed Development

2.1 Data Collection

Video data was collected at two intersections on Wednesday, May 12th, 2021. All counts were taken from 6am-7pm during daylight hours. This data was collected on a typical weekday with no unusual events or activities for this area during this time. The data includes traffic turning movement counts, percent of heavy vehicles and peak hour factors. AM peak hour turning movement volumes are shown below in **Figure 2**. PM peak hour turning movement volumes are shown below in **Figure 3**. Peak hour times were established as 7:15 to 8:15 am for the AM and 3:30 to 4:30 pm for the PM peak hour. More detailed traffic count data for each 15-minute period is found in **Appendix I**.

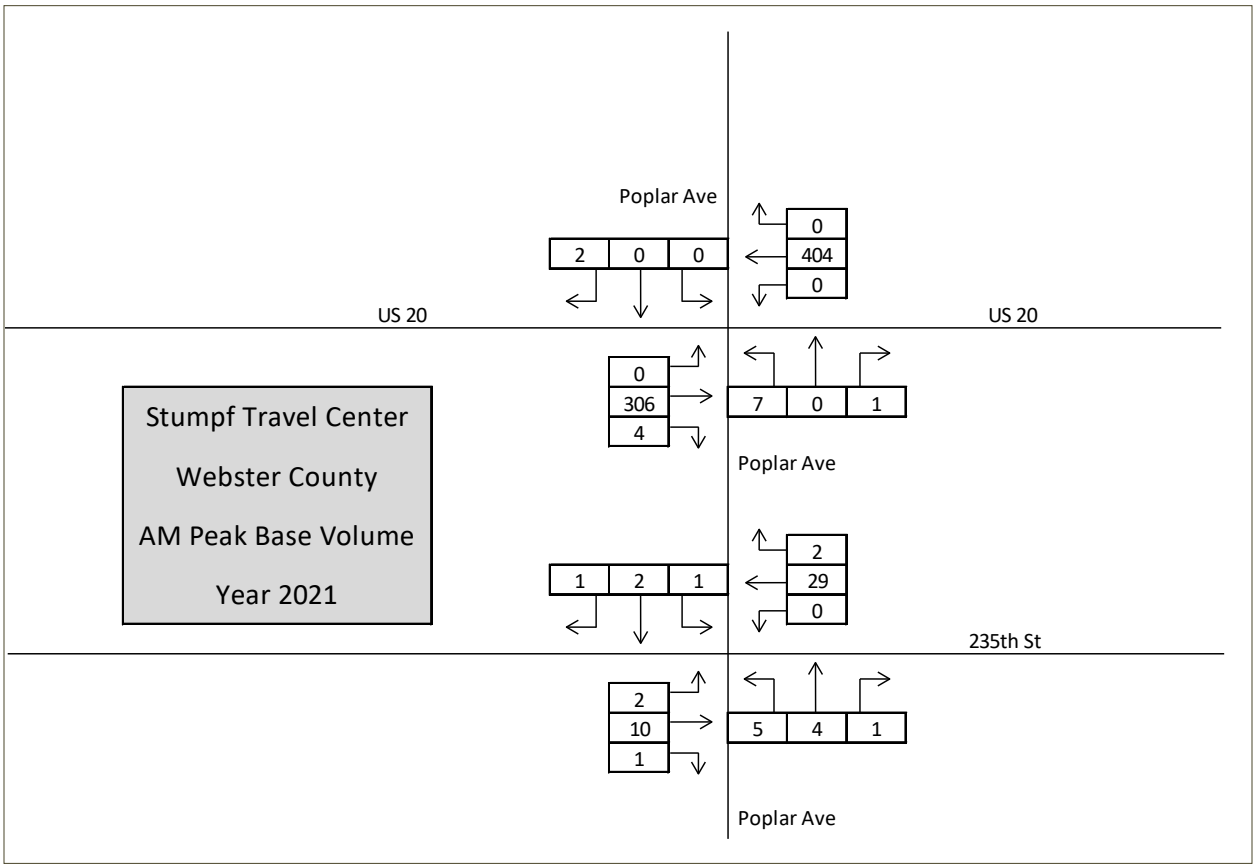

Figure 2: Existing Turning Movement Volumes – AM Peak Hour

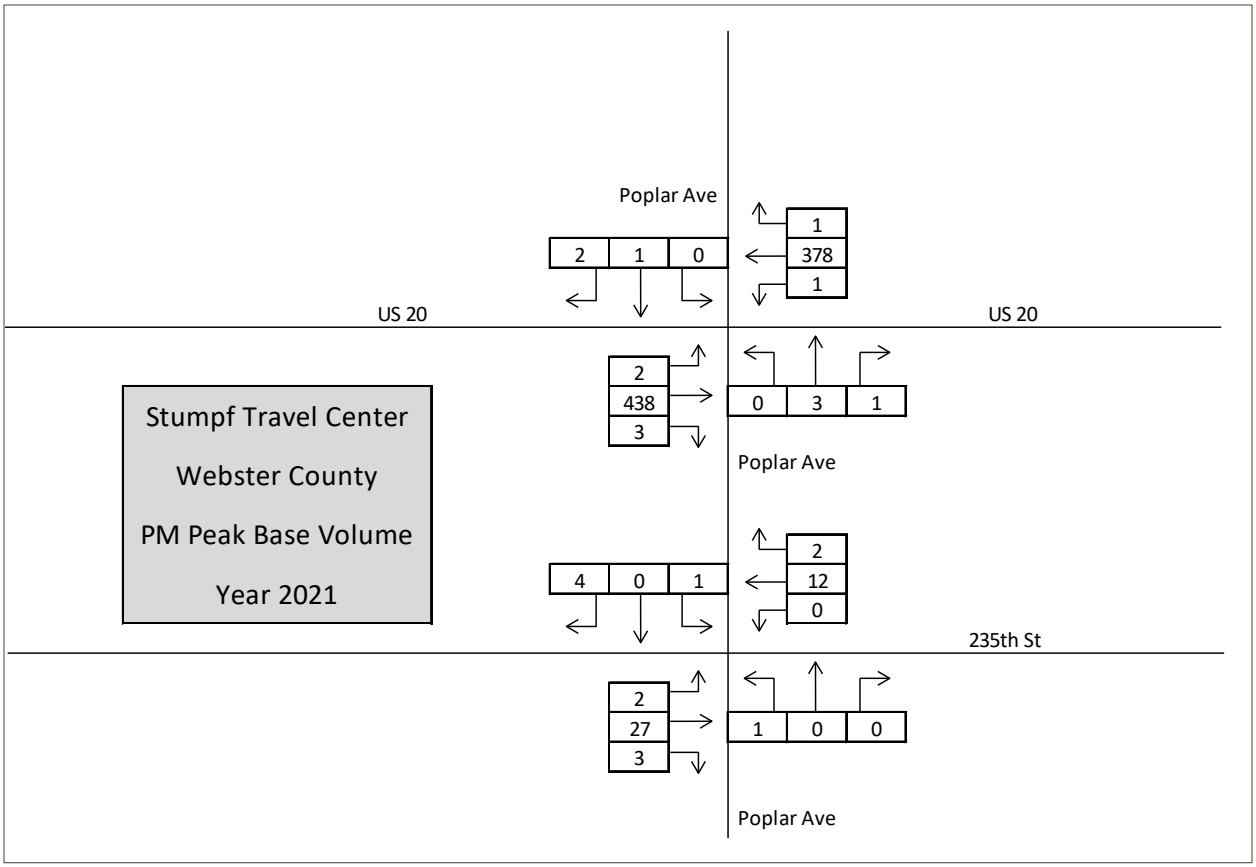

Figure 3: Existing Turning Movement Volumes – PM Peak Hour

2.2 Traffic Growth Projections

Traffic growth is discussed in the Traffic Volume Assumptions memorandum dated June 14, 2021 and presented to the Iowa DOT for review. The 2% per year annual growth rate was used for determining the 2041 AM and PM peak hour turning movement volumes. The memorandum is provided in **Appendix III** and contains information on traffic volume projection assumptions and exhibits showing trip distributions and total volumes.

3.0 CRASH ANALYSIS

Two intersections were analyzed considering past crash data. This information was extracted using the online Iowa Crash Analysis Tool (ICAT) developed by the Iowa DOT. Because of the higher speed and classification of the main US 20 intersection, all crashes were included within 1200 ft of the primary arterial intersection at US 20 and Poplar Avenue for the 5-year period from 2016 to 2020. There were two crashes at US 20/Poplar Avenue during this period. A buffer distance of 500 feet was used for the local road intersection of Poplar Avenue and 235th Street. There were no crashes near the local road intersection during this same 5-year period. The results are seen below in **Table 1.**

Table 1: Intersection 5-Year Crash Summary (2016-2020)

Intersection	Total Crashes	Fatalities+Injuries	DEV*	Crash/ MEV**	State Avg. Crash/MEV***	Avg % Diff.
US 20 & Poplar Ave	2	0	8,850	0.1	0.8	-88%

*Daily Entering Vehicles
**Million Entering Vehicles
***from Iowa DOT *Accident and Related Data for Rural and Municipal Intersections in Iowa*

This table shows that the US 20 and Poplar Avenue intersection currently experiences a low number of crashes relative to the statewide average for a similar type of facility. Both crashes were single-vehicle, animal related crashes with property damage only and no injuries.

4.0 PROPOSED DEVELOPMENT

Travel Center: A proposed travel center is planned for the northwest quadrant at the intersection of US 20 and Poplar Avenue. This travel center would include a 9,750-foot building designed to house a convenience store and restaurant. The travel center would provide separate canopy fueling areas for gasoline and diesel. The current site layout provides for passenger car parking and no delineated truck parking although there may be enough area to park a truck or two for short stops without impacting circulation.

Future General Light Industrial: While there is considerable undeveloped land area, only one other parcel is anticipated to be developed within the next 20-years. This parcel is north of the proposed travel center and would be occupied by a 120,000-sf warehouse building. This development will be included as a part of the Future Year analysis scenarios.

No internal capture rate was applied to this study. Pass-by rates were applicable to the gasoline/service station land use. The lowest pass-by rate (not the average) was assumed. For more details, see the Traffic Assumptions Memorandum in Appendix III.

The spacing between Drive 1 (south full access) and Drive 2 (north full access) is approximately 265 ft centerline to centerline. The spacing between Drive 1 and US 20 is approximately 375 ft centerline to centerline. This study will demonstrate the potential operation and queuing of the driveways and show their adequacy in terms of functionality and spacing.

5.0 MODELING SCENARIOS

This study will determine the lane configuration and geometry needed at the US 20 and Poplar Avenue intersection by analyzing two intersection types (exhibits shown in **Appendix VII**):

- Standard intersection with extended turn lanes
- Restricted Crossing U-Turn (RCUT) intersection

Twelve scenarios were considered for this study:

- 2021 Existing Volumes – AM Peak Hour
- 2021 Existing Volumes – PM Peak Hour
- 2021 Opening Day Volumes, Standard Intersection – AM Peak Hour
- 2021 Opening Day Volumes, Standard Intersection – PM Peak Hour
- 2021 Opening Day Volumes, RCUT – AM Peak Hour
- 2021 Opening Day Volumes, RCUT – PM Peak Hour
- 2041 Future Volumes, No Build – AM Peak Hour
- 2041 Future Volumes, No Build – PM Peak Hour
- 2041 Future Volumes Build, Standard Intersection – AM Peak Hour
- 2041 Future Volumes Build, Standard Intersection – PM Peak Hour
- 2041 Future Volumes Build, RCUT – AM Peak Hour
- 2041 Future Volumes Build, RCUT – PM Peak Hour

The 2021 Existing scenario will include all current geometric layouts and traffic volumes for each intersection. The 2021 Opening Day scenario will include the additional proposed Stumpf Travel Center traffic. The 2041 No Build scenario will include 20-years of background traffic growth with current existing geometry without the proposed Stumpf Travel Center Development. The 2041 Future Build scenario will include 20-years of background traffic growth with additional proposed Stumpf Travel Center Development and the future Light Industrial/Warehouse traffic.

5.1 TRIP GENERATION AND DISTRIBUTION

The Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition was used to estimate the daily weekday AM and PM peak hour trip volumes for the development. The resulting Opening Day total trips were 159 inbound trips and 150 outbound trips in the AM peak hour and 209 inbound trips and 196 outbound trips in the PM peak hour. The additional Future Year total trips were 45 inbound trips and 6 outbound trips in the AM peak hour and 5 inbound trips and 36 outbound trips in the PM peak hour. Trip generation is shown in **Table 2**. 2021 Existing, 2021 Opening Day, 2041 Future No Build and 2041 Future Full Build volume diagrams are contained in **Appendix IV**.

Table 2: Trip Generation

Stumpf Travel Center					AM Peak					PM Peak				
Area #	Code	Use	Unit of Measure	Number	Avg Rate	Enter		Exit		Avg Rate	Enter		Exit	
1	945	Gasoline/Service Station wi	Fueling Positions	24	12.47	51%	153	49%	147	13.99	51%	171	49%	165
2	930	Fast Casual Restaurant	1000 ft^2	4.9	2.07	67%	7	33%	3	14.13	55%	38	45%	31
		Trip Ends					**159**		**150**			**209**		**196**
		Pass-By Trips					70		67			79		76
		New Trips					89		83			130		120

Stumpf North Property					AM Peak					PM Peak				
Area #	Code	Use	Unit of Measure	Number	Equation	Enter		Exit		Equation	Enter		Exit	
A	110	General Light Industrial	1000 ft^2	120.0	51.05	88%	45	12%	6	41.82	13%	5	87%	36
		Trip Ends					**45**		**6**			**5**		**36**
		Pass-By Trips					0		0			0		0
		New Trips					45		6			5		36

The zones which traffic arrives and departs are shown in green boxes in Figure 1. These distribution percentages for the AM and PM peak hour were derived from existing traffic volumes. The percentage of vehicles entering and exiting these zones is shown broken down by trip generation zone in Appendix II.

6.0 METHODOLOGY OF ANALYSIS

6.1 Level of Service (LOS) Capacity

A street's capacity is predominantly determined by the operations at its stop-controlled and signalized intersections. Therefore, an intersection analysis was performed at the two existing study intersections and two proposed access drives to assess operations.

Synchro software was used to create a model of the entire study area and the proposed intersection locations. Stop-controlled intersections were analyzed per Highway Capacity Manual 6th Edition (HCM) methodologies with HCM reports being generated from the models. For unsignalized stop-controlled intersections, the LOS for the stopped approach is reported as it is the approach which experience delay. All HCM reports mentioned in this section can be found in the Appendix IV.

For intersection analysis, the HCM defines LOS in terms of the average control delay at the intersection in seconds per vehicle. The results of an HCM analysis are typically presented in the form of a letter grade (A-F,) as seen in Table 3, that provides a qualitative estimate of the operational efficiency or effectiveness of the corridor. Much like an academic report card, LOS A represents the best range of operating conditions (i.e., motorists experiencing little delay or congestion) and LOS F represents the worst (i.e., extreme delay or severe congestion).

Common acceptable levels of service for stop-controlled intersections would ideally be LOS C or better, with LOS D being acceptable.

Table 3: Intersection Level of Service Summary by Traffic Control Type

LOS	Delay (Two/One-way Stop Intersection)
A	< 10 seconds
B	10 – 15 seconds
C	15 – 25 seconds
D	25 – 35 seconds
E	35 – 50 seconds
F	> 50 seconds

6.2 Queue Lengths

While intersection delay is one measure of intersection performance, queuing analysis is a complimentary form of analysis. Rather than measuring the average vehicle delay, the length of vehicles waiting at the intersection is observed. This simulation is conducted using SimTraffic software. It runs a microsimulation which sends virtual cars through the model and analyzes their behavior to determine the max queue length. This analysis can reveal traffic bottlenecks and breakdowns previously unclear using only delay models. It also can be utilized to assess adequacy of turn lane lengths. Simulation runs utilized default calibration factors. A 15-minute seeding period was applied to populate the model. This was followed by a 60-minute evaluation period. Simulations were run ten times for each model.

7.0 OPERATIONAL ANALYSIS

The following operational analysis has been conducted implementing the data inputs and methodology from the previous section.

7.1 Level of Service Analysis

The overall intersection LOS is shown below in **Table 4** and **Table 5**.

Table 4: Existing and No Build Intersection Level of Service (Delay seconds/vehicle)

Scenario	Existing		No Build	
Year	2021		2041	
Intersection	AM	PM	AM	PM
US 20 & Poplar	B (12)	B (15)	C (16)	C (20)
Poplar & 235th	A (9)	A (9)	A (10)	A (9)
Poplar & Dr 1				
Poplar & Dr 2				

D E F Intersection Not Present for Scenario

Table 5: Build Intersection Level of Service for standard intersection and RCUT design (Delay seconds/vehicle)

Scenario	Opening Day		Opening Day		Full Build		Full Build	
Year	2021		2021 RCUT		2041		2041 RCUT	
Intersection	AM	PM	AM	PM	AM	PM	AM	PM
US 20 & Poplar	E (39)	F (105)	B (11)	B (12)	F (167)	F (609)	B (13)	B (14)
Poplar & 235th	A (9)	A (9)	A (9)	A (9)	B (10)	A (9)	B (10)	A (9)
Poplar & Dr 1	A (9)	B (10)	A (9)	B (10)	A (9)	B (10)	A (9)	B (10)
Poplar & Dr 2	A (9)	A (9)	A (9)	A (9)	A (9)	A (9)	A (9)	A (9)

D E F Intersection Not Present for Scenario

2021 Existing and 2041 No Build assumes development would not occur, so these scenarios only include background growth and none of the proposed Stumpf Travel Center or Future Warehouse traffic. **Table 5** shows that all intersections are operating at or better than LOS C under 2021 Existing and 2041 No Build conditions.

2021 Opening Day and 2041 Full Build assume the proposed Stumpf Travel Center and Future Warehouse would be fully built out. The level of service upon 2021 Opening Day under a standard intersection design would be unacceptable with LOS E in the AM peak hour and LOS F in the PM peak hour. The standard intersection design would include an eastbound left turn lane extension to accommodate truck traffic and a two-lane approach for southbound traffic. With an RCUT intersection design, the levels of service for both 2021 Opening Day and 2041Full Build scenarios would be LOS B for both the AM and PM peak hours. This is an indication, but not the sole measure, that an alternate design, such as an RCUT intersection would be needed for acceptable levels of operation with the addition of the proposed developments.

7.2 Queuing Analysis

Using the methodology from Section 6.2, the models were run to simulate vehicle queue lengths. The results for queuing can be seen in **Table 6** on page 11. The red highlighting in the table represents movements within each scenario with queues in excess of the provided storage length. The yellow highlighting represents movements that experience queues due to southbound Poplar Avenue backing from the US 20 intersection.

This table shows that no movements are experiencing queues exceeding their provided storage length for the existing volumes.

2021 Opening Day shows that no movements would have queues that exceed the provided storage length for the projected volumes under the development concept. This does assume improvements in the form of turn lane additions. The RCUT intersection design does show less queuing than the traditional intersection. With the RCUT design, a two-lane approach would not be needed for southbound traffic.

The 2041 No Build (20-year) scenario shows no movements would experience queues exceeding their provided storage length for the future no-build volumes. No lane improvements would be needed.

The 2041 (20-year) Build scenario (traditional intersection) shows southbound queues would back beyond the first driveway causing interactional issues with the drive and excess queuing with long delays at the US 20 intersection. This assumes geometric improvements with the addition of a southbound right turn lane and an extended eastbound left turn lane at the US 20/Poplar intersection.

The 2041 (20-year) Build scenario (RCUT intersection) shows no significant queues with the longest queue being the southbound right-turn only reaching 123 feet during the PM peak hour. This equates to approximately 5 passenger car lengths.

More detailed queuing reports can be found in **Appendix VI**.

Table 6: Movement Queuing (feet)

Int	Mvmt	95th Percentile Queue											
		Existing 2021		Opening Day 2021		Opening Day 2021 RCUT		No Build 2041		Full Build 2041		Full Build 2041 RCUT	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
US 20 & Poplar Ave	EBL	0	4	61	69	36	40		7	80	80	60	67
	EBR				3								
	EBT												
	NBL	29	21	37	37			36	28	52	46		
	NBR	29	21	37	37	35	33	36	28	52	46	40	37
	NBT	29	21	37	37			36	28	52	46		
	SBL	11	14	121	191			14	17	309	376		
	SBR	11	14	85	115	76	91	14	17	170	245	103	123
	SBT	11	14	121	191			14	17	309	376		
	WBL	0	5	0	2	0	2		6	0	6	0	4
	WBR			8	9	14	24			10	15	23	22
	WBT									10	15	23	22
Poplar Ave & 235th St	EBL			3			3	3		5	4	4	5
	EBR			3			3	3		5	4	4	5
	EBT			3			3	3		5	4	4	5
	NBL	26		26	10	26	9	32	7	30	8	30	8
	NBR	26		26	10	26	9	32	7	30	8	30	8
	NBT	26		26	10	26	9	32	7	30	8	30	8
	SBL	21		31	34	31	33	26	26	34	35	30	35
	SBR	21		31	34	31	33	26	26	34	35	30	35
	SBT	21		31	34	31	33	26	26	34	35	30	35
	WBL												
	WBR												
	WBT												
Poplar Ave & Drive 1	EBL			84	97	86	102			120	164	91	100
	EBR			84	97	86	102			120	164	91	100
	SBR				6		8			49	57		4
	SBT				6		8			49	57		4
	NBL			30	40	35	41			40	214	37	52
	NBT			30	40	35	41			40	214	37	52
Poplar Ave & Drive 2	EBL			65	68	67	52			68	84	69	54
	EBR			65	68	67	52			68	84	69	54
	SBR										54		
	SBT										54		
	NBL				3	6					21	10	15
	NBT				3	6					21	10	15

Note: Blanks in "Provided Storage Length" indicate combination lanes where no storage is provided for the associated turning movement.

Movement not Present for Scenario	Queue Exceeds Provided Storage Length	Queue Caused by US 20/Poplar Intersection Queues Backing across Driveway.

7.3 Network Measures of Effectiveness (MOE's)

Additional measures of operation in the form of total network performance was evaluated using SimTraffic. The results of this evaluation are primarily total network delay, network travel time and average network speed. The results are presented in **Table 7**.

Table 7: Network MOE's

Scenario	Full Build		Full Build	
Year	2041		2041 RCUT	
MOE	AM	PM	AM	PM
Total Delay (hr)	5.6	14.4	2.4	3.2
Travel Time (hr)	21.6	44.9	19.2	23.3
Avg Speed (mph)	41	30	47	45

The RCUT intersection performs better overall in terms of delay, total network travel time and average speeds.

8.0 MULTIMODAL REVIEW

The are no pedestrian or bicycle facilities on US 20. The nature of a US highway does not lend itself to multi-modal transportation as that is not its primary function.

9.0 CONCLUSIONS AND RECOMMENDATIONS

The proposed Stumpf Travel Center in Webster County near US 20 and Poplar Avenue is expected to have AM and PM peak hour traffic operations that satisfy operational requirements for both proposed access drives for the 2021 Opening Day and 2041 year (with the RCUT intersection design).

A standard intersection design with added turn lanes and turn lane extensions did not prove adequate to handle additional traffic volumes in terms of traffic operations per results from the level of service and queue analysis.

Recommended improvements based on this analysis are:

- Construct an unsignalized Restricted Crossing U-Turn (RCUT) Intersection with geometrics for the left-turn crossover and the U-turn Crossovers per the Iowa DOT Design Bureau's guidance and the design manual draft chapter for RCUT intersections. A conceptual layout exhibit for the RCUT intersection is shown in **Appendix VII.**

10.0 APPENDICES

McCLURE™

APPENDIX

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Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021

Turning Movement Data

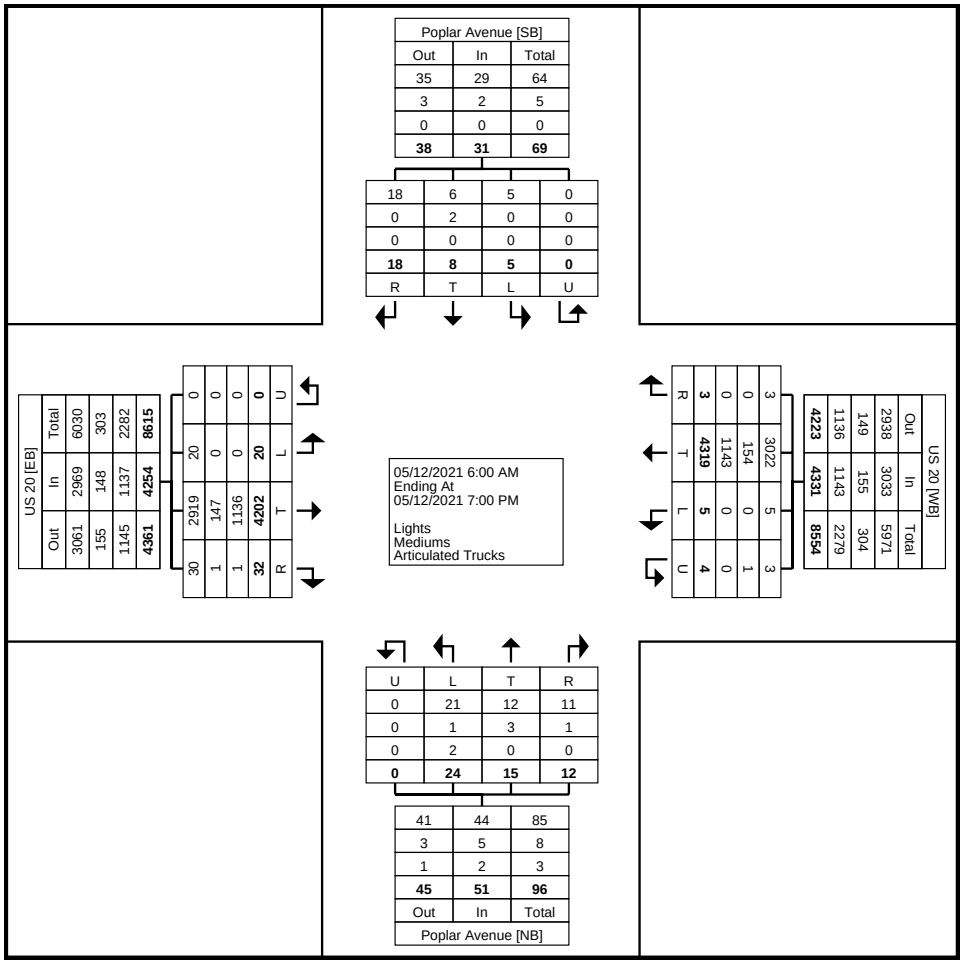
Start Time	Poplar Avenue Southbound					US 20 Westbound					Poplar Avenue Northbound					US 20 Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
6:00 AM	0	0	0	0	0	0	54	0	0	54	2	0	0	0	2	0	38	0	0	38	94
6:15 AM	1	0	0	0	1	1	58	0	0	59	0	0	0	0	0	0	45	1	0	46	106
6:30 AM	1	0	0	0	1	0	54	0	0	54	0	1	0	0	1	0	67	0	0	67	123
6:45 AM	0	0	0	0	0	0	57	0	0	57	4	0	0	0	4	0	58	0	0	58	119
Hourly Total	2	0	0	0	2	1	223	0	0	224	6	1	0	0	7	0	208	1	0	209	442
7:00 AM	0	0	0	0	0	0	61	0	0	61	1	0	0	0	1	0	47	0	0	47	109
7:15 AM	0	0	0	0	0	0	91	0	0	91	1	0	0	0	1	0	74	1	0	75	167
7:30 AM	0	0	1	0	1	0	117	0	0	117	2	0	0	0	2	0	79	0	0	79	199
7:45 AM	0	0	1	0	1	0	100	0	1	101	2	0	0	0	2	0	72	1	0	73	177
Hourly Total	0	0	2	0	2	0	369	0	1	370	6	0	0	0	6	0	272	2	0	274	652
8:00 AM	0	0	0	0	0	0	95	0	0	95	2	0	1	0	3	0	81	2	0	83	181
8:15 AM	0	0	1	0	1	0	87	0	0	87	0	2	0	0	2	1	75	1	0	77	167
8:30 AM	0	0	2	0	2	0	98	0	0	98	0	1	1	0	2	0	65	0	0	65	167
8:45 AM	0	0	0	0	0	0	76	0	0	76	0	2	0	0	2	0	77	0	0	77	155
Hourly Total	0	0	3	0	3	0	356	0	0	356	2	5	2	0	9	1	298	3	0	302	670
9:00 AM	0	0	0	0	0	0	81	0	0	81	0	0	0	0	0	1	68	0	0	69	150
9:15 AM	0	0	2	0	2	0	81	0	0	81	0	0	0	0	0	1	86	0	0	87	170
9:30 AM	0	0	1	0	1	0	80	0	0	80	0	0	0	0	0	2	65	0	0	67	148
9:45 AM	0	0	1	0	1	0	97	0	0	97	0	0	0	0	0	0	74	0	0	74	172
Hourly Total	0	0	4	0	4	0	339	0	0	339	0	0	0	0	0	4	293	0	0	297	640
10:00 AM	0	0	0	0	0	0	74	0	0	74	0	1	0	0	1	0	77	0	0	77	152
10:15 AM	0	0	0	0	0	0	87	0	0	87	0	0	1	0	1	0	91	2	0	93	181
10:30 AM	0	0	0	0	0	1	107	0	0	108	1	0	0	0	1	0	85	0	0	85	194
10:45 AM	0	0	0	0	0	0	88	0	0	88	0	0	0	0	0	0	79	1	0	80	168
Hourly Total	0	0	0	0	0	1	356	0	0	357	1	1	1	0	3	0	332	3	0	335	695
11:00 AM	0	0	0	0	0	0	74	0	0	74	1	0	1	0	2	1	88	0	0	89	165
11:15 AM	0	0	1	0	1	0	76	0	0	76	4	0	0	0	4	2	61	2	0	65	146
11:30 AM	0	0	1	0	1	0	70	0	0	70	1	0	0	0	1	0	82	0	0	82	154
11:45 AM	0	2	0	0	2	0	78	0	0	78	0	0	0	0	0	0	87	0	0	87	167
Hourly Total	0	2	2	0	4	0	298	0	0	298	6	0	1	0	7	3	318	2	0	323	632
12:00 PM	0	0	0	0	0	0	92	0	0	92	0	0	1	0	1	0	83	0	0	83	176
12:15 PM	0	0	0	0	0	0	96	0	0	96	0	0	0	0	0	0	83	0	0	83	179
12:30 PM	0	0	0	0	0	0	69	0	0	69	0	0	1	0	1	0	93	1	0	94	164
12:45 PM	0	0	0	0	0	0	65	0	0	65	0	0	1	0	1	0	95	0	0	95	161
Hourly Total	0	0	0	0	0	0	322	0	0	322	0	0	3	0	3	0	354	1	0	355	680
1:00 PM	0	1	1	0	2	0	83	0	0	83	0	0	1	0	1	0	75	0	0	75	161

1:15 PM	0	0	0	0	0	0	79	0	0	79	1	0	0	0	1	1	98	0	0	99	179
1:30 PM	0	1	0	0	1	0	92	1	0	93	0	1	0	0	1	0	77	0	0	77	172
1:45 PM	0	0	1	0	1	0	97	0	0	97	0	0	1	0	1	0	78	0	0	78	177
Hourly Total	0	2	2	0	4	0	351	1	0	352	1	1	2	0	4	1	328	0	0	329	689
2:00 PM	0	0	0	0	0	0	76	0	0	76	0	0	0	0	0	0	100	0	0	100	176
2:15 PM	0	0	0	0	0	0	90	0	0	90	0	0	0	0	0	0	91	1	0	92	182
2:30 PM	0	0	0	0	0	0	79	0	0	79	0	0	0	0	0	0	89	0	0	89	168
2:45 PM	0	1	1	0	2	0	93	0	0	93	0	0	0	0	0	0	114	0	0	114	209
Hourly Total	0	1	1	0	2	0	338	0	0	338	0	0	0	0	0	0	394	1	0	395	735
3:00 PM	0	0	0	0	0	0	78	0	0	78	0	1	0	0	1	0	103	0	0	103	182
3:15 PM	0	0	0	0	0	1	88	0	0	89	1	0	0	0	1	0	80	0	0	80	170
3:30 PM	0	1	0	0	1	0	95	0	0	95	0	1	0	0	1	0	109	1	0	110	207
3:45 PM	0	0	0	0	0	1	115	0	1	117	0	1	1	0	2	0	113	0	0	113	232
Hourly Total	0	1	0	0	1	2	376	0	1	379	1	3	1	0	5	0	405	1	0	406	791
4:00 PM	0	0	1	0	1	0	75	0	1	76	0	1	0	0	1	2	118	1	0	121	199
4:15 PM	0	0	1	0	1	0	93	1	0	94	0	0	0	0	0	0	98	1	0	99	194
4:30 PM	1	1	0	0	2	0	96	0	0	96	0	0	0	0	0	1	90	0	0	91	189
4:45 PM	0	0	0	0	0	0	92	1	0	93	0	0	0	0	0	3	99	5	0	107	200
Hourly Total	1	1	2	0	4	0	356	2	1	359	0	1	0	0	1	6	405	7	0	418	782
5:00 PM	1	1	1	0	3	0	83	0	0	83	1	0	0	0	1	0	126	2	0	128	215
5:15 PM	0	0	0	0	0	0	101	0	0	101	0	0	0	0	0	1	97	1	0	99	200
5:30 PM	0	0	0	0	0	1	95	0	0	96	0	2	0	0	2	0	85	1	0	86	184
5:45 PM	0	0	0	0	0	0	75	0	0	75	0	1	1	0	2	1	78	2	0	81	158
Hourly Total	1	1	1	0	3	1	354	0	0	355	1	3	1	0	5	2	386	6	0	394	757
6:00 PM	1	0	0	0	1	0	81	0	1	82	0	0	1	0	1	1	60	0	0	61	145
6:15 PM	0	0	0	0	0	0	73	0	0	73	0	0	0	0	0	1	51	3	0	55	128
6:30 PM	0	0	1	0	1	0	70	0	0	70	0	0	0	0	0	1	51	2	0	54	125
6:45 PM	0	0	0	0	0	0	57	0	0	57	0	0	0	0	0	0	47	0	0	47	104
Hourly Total	1	0	1	0	2	0	281	0	1	282	0	0	1	0	1	3	209	5	0	217	502
Grand Total	5	8	18	0	31	5	4319	3	4	4331	24	15	12	0	51	20	4202	32	0	4254	8667
Approach %	16.1	25.8	58.1	0.0	-	0.1	99.7	0.1	0.1	-	47.1	29.4	23.5	0.0	-	0.5	98.8	0.8	0.0	-	-
Total %	0.1	0.1	0.2	0.0	0.4	0.1	49.8	0.0	0.0	50.0	0.3	0.2	0.1	0.0	0.6	0.2	48.5	0.4	0.0	49.1	-
Lights	5	6	18	0	29	5	3022	3	3	3033	21	12	11	0	44	20	2919	30	0	2969	6075
% Lights	100.0	75.0	100.0	-	93.5	100.0	70.0	100.0	75.0	70.0	87.5	80.0	91.7	-	86.3	100.0	69.5	93.8	-	69.8	70.1
Mediums	0	2	0	0	2	0	154	0	1	155	1	3	1	0	5	0	147	1	0	148	310
% Mediums	0.0	25.0	0.0	-	6.5	0.0	3.6	0.0	25.0	3.6	4.2	20.0	8.3	-	9.8	0.0	3.5	3.1	-	3.5	3.6
Articulated Trucks	0	0	0	0	0	0	1143	0	0	1143	2	0	0	0	2	0	1136	1	0	1137	2282
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	26.5	0.0	0.0	26.4	8.3	0.0	0.0	-	3.9	0.0	27.0	3.1	-	26.7	26.3

McClure Engineering Company
1360 NW 121st Street

Clive, Iowa, United States 50325
515-964-1229 lvandenberg@mecresults.com

Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021



Turning Movement Data Plot

McClure Engineering Company
1360 NW 121st Street

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Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Poplar Avenue Southbound					US 20 Westbound					Poplar Avenue Northbound					US 20 Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:15 AM	0	0	0	0	0	0	91	0	0	91	1	0	0	0	1	0	74	1	0	75	167
7:30 AM	0	0	1	0	1	0	117	0	0	117	2	0	0	0	2	0	79	0	0	79	199
7:45 AM	0	0	1	0	1	0	100	0	1	101	2	0	0	0	2	0	72	1	0	73	177
8:00 AM	0	0	0	0	0	0	95	0	0	95	2	0	1	0	3	0	81	2	0	83	181
Total	0	0	2	0	2	0	403	0	1	404	7	0	1	0	8	0	306	4	0	310	724
Approach %	0.0	0.0	100.0	0.0	-	0.0	99.8	0.0	0.2	-	87.5	0.0	12.5	0.0	-	0.0	98.7	1.3	0.0	-	-
Total %	0.0	0.0	0.3	0.0	0.3	0.0	55.7	0.0	0.1	55.8	1.0	0.0	0.1	0.0	1.1	0.0	42.3	0.6	0.0	42.8	-
PHF	0.000	0.000	0.500	0.000	0.500	0.000	0.861	0.000	0.250	0.863	0.875	0.000	0.250	0.000	0.667	0.000	0.944	0.500	0.000	0.934	0.910
Lights	0	0	2	0	2	0	303	0	1	304	6	0	1	0	7	0	214	3	0	217	530
% Lights	-	-	100.0	-	100.0	-	75.2	-	100.0	75.2	85.7	-	100.0	-	87.5	-	69.9	75.0	-	70.0	73.2
Mediums	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	11	1	0	12	32
% Mediums	-	-	0.0	-	0.0	-	5.0	-	0.0	5.0	0.0	-	0.0	-	0.0	-	3.6	25.0	-	3.9	4.4
Articulated Trucks	0	0	0	0	0	0	80	0	0	80	1	0	0	0	1	0	81	0	0	81	162
% Articulated Trucks	-	-	0.0	-	0.0	-	19.9	-	0.0	19.8	14.3	-	0.0	-	12.5	-	26.5	0.0	-	26.1	22.4

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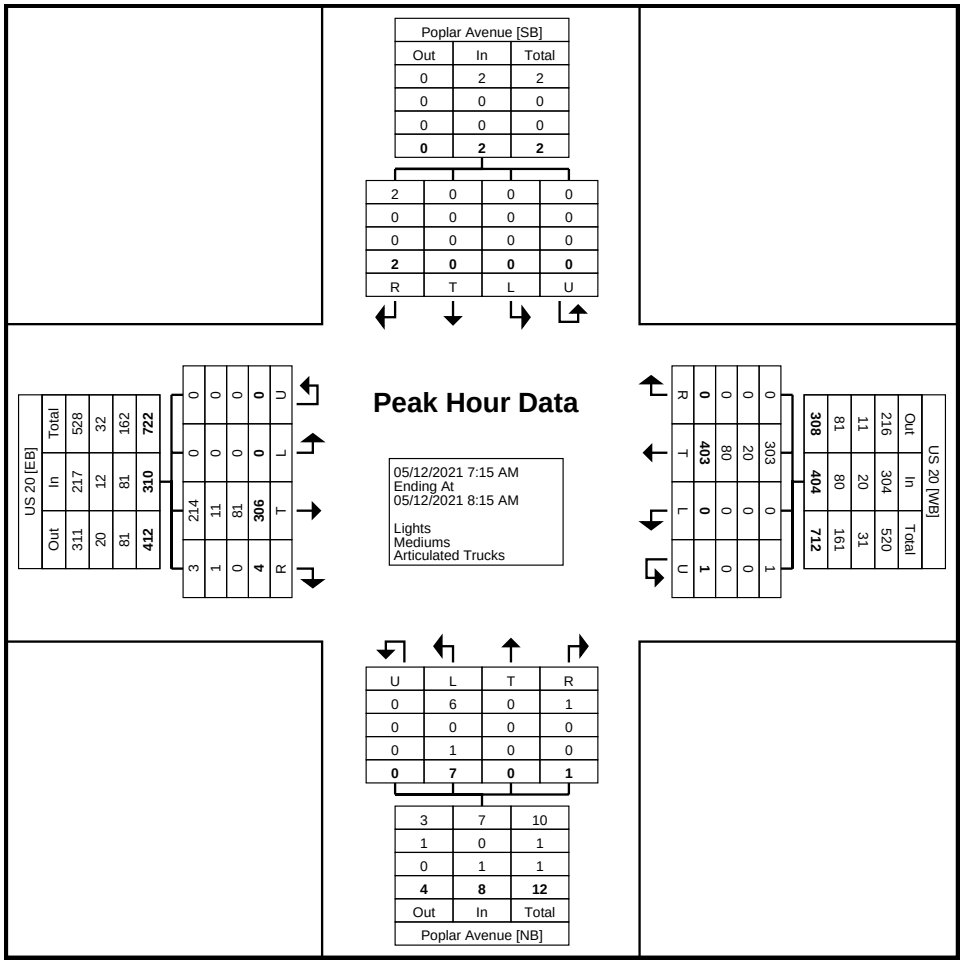
Start Date: 05/12/2021



Turning Movement Peak Hour Data Plot (7:15 AM)

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Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021

Turning Movement Peak Hour Data (3:30 PM)

Start Time	Poplar Avenue Southbound					US 20 Westbound					Poplar Avenue Northbound					US 20 Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
3:30 PM	0	1	0	0	1	0	95	0	0	95	0	1	0	0	1	0	109	1	0	110	207
3:45 PM	0	0	0	0	0	1	115	0	1	117	0	1	1	0	2	0	113	0	0	113	232
4:00 PM	0	0	1	0	1	0	75	0	1	76	0	1	0	0	1	2	118	1	0	121	199
4:15 PM	0	0	1	0	1	0	93	1	0	94	0	0	0	0	0	0	98	1	0	99	194
Total	0	1	2	0	3	1	378	1	2	382	0	3	1	0	4	2	438	3	0	443	832
Approach %	0.0	33.3	66.7	0.0	-	0.3	99.0	0.3	0.5	-	0.0	75.0	25.0	0.0	-	0.5	98.9	0.7	0.0	-	-
Total %	0.0	0.1	0.2	0.0	0.4	0.1	45.4	0.1	0.2	45.9	0.0	0.4	0.1	0.0	0.5	0.2	52.6	0.4	0.0	53.2	-
PHF	0.000	0.250	0.500	0.000	0.750	0.250	0.822	0.250	0.500	0.816	0.000	0.750	0.250	0.000	0.500	0.250	0.928	0.750	0.000	0.915	0.897
Lights	0	0	2	0	2	1	293	1	2	297	0	1	1	0	2	2	304	3	0	309	610
% Lights	-	0.0	100.0	-	66.7	100.0	77.5	100.0	100.0	77.7	-	33.3	100.0	-	50.0	100.0	69.4	100.0	-	69.8	73.3
Mediums	0	1	0	0	1	0	10	0	0	10	0	2	0	0	2	0	14	0	0	14	27
% Mediums	-	100.0	0.0	-	33.3	0.0	2.6	0.0	0.0	2.6	-	66.7	0.0	-	50.0	0.0	3.2	0.0	-	3.2	3.2
Articulated Trucks	0	0	0	0	0	0	75	0	0	75	0	0	0	0	0	0	120	0	0	120	195
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	19.8	0.0	0.0	19.6	-	0.0	0.0	-	0.0	0.0	27.4	0.0	-	27.1	23.4

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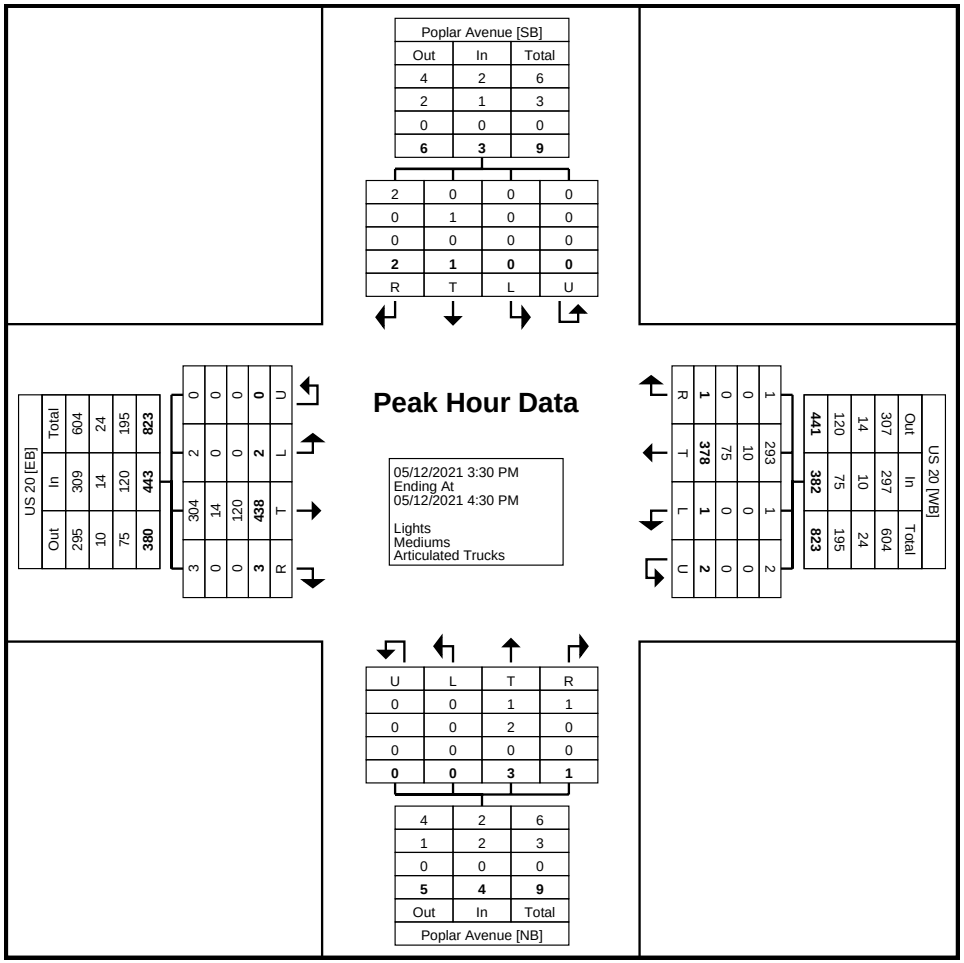
Start Date: 05/12/2021



Turning Movement Peak Hour Data Plot (3:30 PM)

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Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021

Turning Movement Data

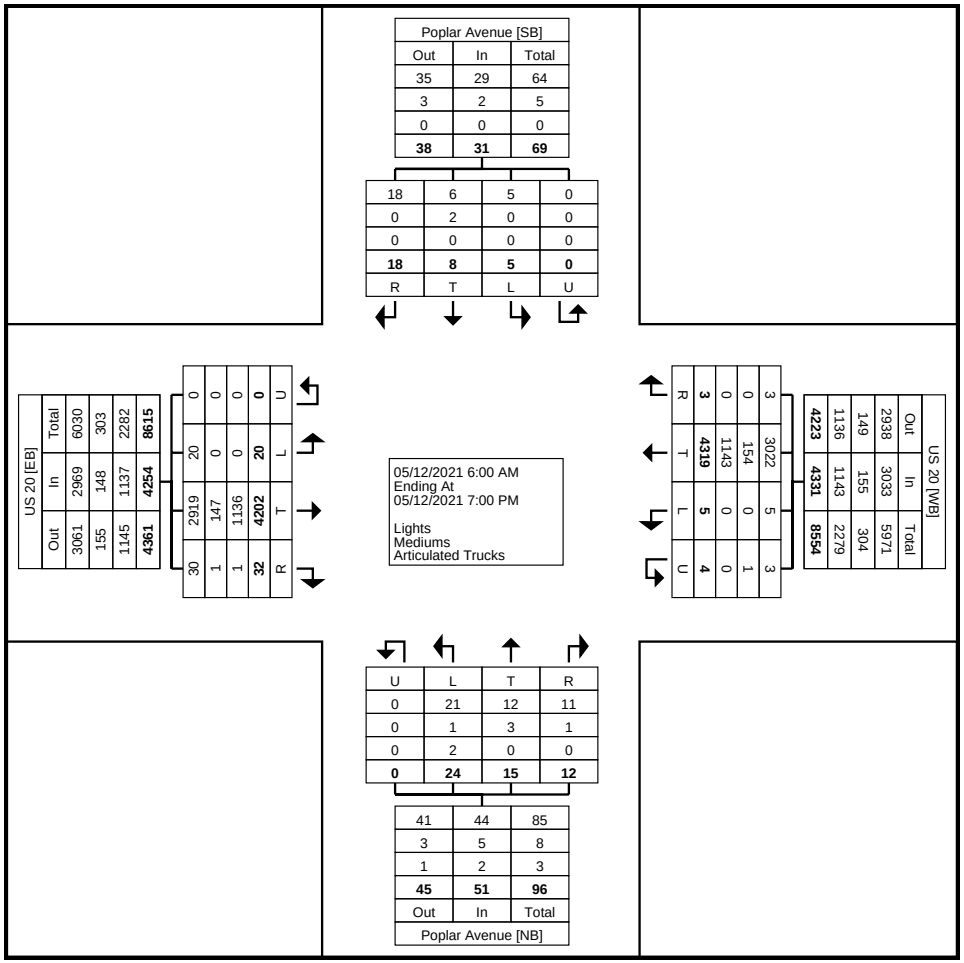
Start Time	Poplar Avenue Southbound					US 20 Westbound					Poplar Avenue Northbound					US 20 Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
6:00 AM	0	0	0	0	0	0	54	0	0	54	2	0	0	0	2	0	38	0	0	38	94
6:15 AM	1	0	0	0	1	1	58	0	0	59	0	0	0	0	0	0	45	1	0	46	106
6:30 AM	1	0	0	0	1	0	54	0	0	54	0	1	0	0	1	0	67	0	0	67	123
6:45 AM	0	0	0	0	0	0	57	0	0	57	4	0	0	0	4	0	58	0	0	58	119
Hourly Total	2	0	0	0	2	1	223	0	0	224	6	1	0	0	7	0	208	1	0	209	442
7:00 AM	0	0	0	0	0	0	61	0	0	61	1	0	0	0	1	0	47	0	0	47	109
7:15 AM	0	0	0	0	0	0	91	0	0	91	1	0	0	0	1	0	74	1	0	75	167
7:30 AM	0	0	1	0	1	0	117	0	0	117	2	0	0	0	2	0	79	0	0	79	199
7:45 AM	0	0	1	0	1	0	100	0	1	101	2	0	0	0	2	0	72	1	0	73	177
Hourly Total	0	0	2	0	2	0	369	0	1	370	6	0	0	0	6	0	272	2	0	274	652
8:00 AM	0	0	0	0	0	0	95	0	0	95	2	0	1	0	3	0	81	2	0	83	181
8:15 AM	0	0	1	0	1	0	87	0	0	87	0	2	0	0	2	1	75	1	0	77	167
8:30 AM	0	0	2	0	2	0	98	0	0	98	0	1	1	0	2	0	65	0	0	65	167
8:45 AM	0	0	0	0	0	0	76	0	0	76	0	2	0	0	2	0	77	0	0	77	155
Hourly Total	0	0	3	0	3	0	356	0	0	356	2	5	2	0	9	1	298	3	0	302	670
9:00 AM	0	0	0	0	0	0	81	0	0	81	0	0	0	0	0	1	68	0	0	69	150
9:15 AM	0	0	2	0	2	0	81	0	0	81	0	0	0	0	0	1	86	0	0	87	170
9:30 AM	0	0	1	0	1	0	80	0	0	80	0	0	0	0	0	2	65	0	0	67	148
9:45 AM	0	0	1	0	1	0	97	0	0	97	0	0	0	0	0	0	74	0	0	74	172
Hourly Total	0	0	4	0	4	0	339	0	0	339	0	0	0	0	0	4	293	0	0	297	640
10:00 AM	0	0	0	0	0	0	74	0	0	74	0	1	0	0	1	0	77	0	0	77	152
10:15 AM	0	0	0	0	0	0	87	0	0	87	0	0	1	0	1	0	91	2	0	93	181
10:30 AM	0	0	0	0	0	1	107	0	0	108	1	0	0	0	1	0	85	0	0	85	194
10:45 AM	0	0	0	0	0	0	88	0	0	88	0	0	0	0	0	0	79	1	0	80	168
Hourly Total	0	0	0	0	0	1	356	0	0	357	1	1	1	0	3	0	332	3	0	335	695
11:00 AM	0	0	0	0	0	0	74	0	0	74	1	0	1	0	2	1	88	0	0	89	165
11:15 AM	0	0	1	0	1	0	76	0	0	76	4	0	0	0	4	2	61	2	0	65	146
11:30 AM	0	0	1	0	1	0	70	0	0	70	1	0	0	0	1	0	82	0	0	82	154
11:45 AM	0	2	0	0	2	0	78	0	0	78	0	0	0	0	0	0	87	0	0	87	167
Hourly Total	0	2	2	0	4	0	298	0	0	298	6	0	1	0	7	3	318	2	0	323	632
12:00 PM	0	0	0	0	0	0	92	0	0	92	0	0	1	0	1	0	83	0	0	83	176
12:15 PM	0	0	0	0	0	0	96	0	0	96	0	0	0	0	0	0	83	0	0	83	179
12:30 PM	0	0	0	0	0	0	69	0	0	69	0	0	1	0	1	0	93	1	0	94	164
12:45 PM	0	0	0	0	0	0	65	0	0	65	0	0	1	0	1	0	95	0	0	95	161
Hourly Total	0	0	0	0	0	0	322	0	0	322	0	0	3	0	3	0	354	1	0	355	680
1:00 PM	0	1	1	0	2	0	83	0	0	83	0	0	1	0	1	0	75	0	0	75	161

1:15 PM	0	0	0	0	0	0	79	0	0	79	1	0	0	0	1	1	98	0	0	99	179
1:30 PM	0	1	0	0	1	0	92	1	0	93	0	1	0	0	1	0	77	0	0	77	172
1:45 PM	0	0	1	0	1	0	97	0	0	97	0	0	1	0	1	0	78	0	0	78	177
Hourly Total	0	2	2	0	4	0	351	1	0	352	1	1	2	0	4	1	328	0	0	329	689
2:00 PM	0	0	0	0	0	0	76	0	0	76	0	0	0	0	0	0	100	0	0	100	176
2:15 PM	0	0	0	0	0	0	90	0	0	90	0	0	0	0	0	0	91	1	0	92	182
2:30 PM	0	0	0	0	0	0	79	0	0	79	0	0	0	0	0	0	89	0	0	89	168
2:45 PM	0	1	1	0	2	0	93	0	0	93	0	0	0	0	0	0	114	0	0	114	209
Hourly Total	0	1	1	0	2	0	338	0	0	338	0	0	0	0	0	0	394	1	0	395	735
3:00 PM	0	0	0	0	0	0	78	0	0	78	0	1	0	0	1	0	103	0	0	103	182
3:15 PM	0	0	0	0	0	1	88	0	0	89	1	0	0	0	1	0	80	0	0	80	170
3:30 PM	0	1	0	0	1	0	95	0	0	95	0	1	0	0	1	0	109	1	0	110	207
3:45 PM	0	0	0	0	0	1	115	0	1	117	0	1	1	0	2	0	113	0	0	113	232
Hourly Total	0	1	0	0	1	2	376	0	1	379	1	3	1	0	5	0	405	1	0	406	791
4:00 PM	0	0	1	0	1	0	75	0	1	76	0	1	0	0	1	2	118	1	0	121	199
4:15 PM	0	0	1	0	1	0	93	1	0	94	0	0	0	0	0	0	98	1	0	99	194
4:30 PM	1	1	0	0	2	0	96	0	0	96	0	0	0	0	0	1	90	0	0	91	189
4:45 PM	0	0	0	0	0	0	92	1	0	93	0	0	0	0	0	3	99	5	0	107	200
Hourly Total	1	1	2	0	4	0	356	2	1	359	0	1	0	0	1	6	405	7	0	418	782
5:00 PM	1	1	1	0	3	0	83	0	0	83	1	0	0	0	1	0	126	2	0	128	215
5:15 PM	0	0	0	0	0	0	101	0	0	101	0	0	0	0	0	1	97	1	0	99	200
5:30 PM	0	0	0	0	0	1	95	0	0	96	0	2	0	0	2	0	85	1	0	86	184
5:45 PM	0	0	0	0	0	0	75	0	0	75	0	1	1	0	2	1	78	2	0	81	158
Hourly Total	1	1	1	0	3	1	354	0	0	355	1	3	1	0	5	2	386	6	0	394	757
6:00 PM	1	0	0	0	1	0	81	0	1	82	0	0	1	0	1	1	60	0	0	61	145
6:15 PM	0	0	0	0	0	0	73	0	0	73	0	0	0	0	0	1	51	3	0	55	128
6:30 PM	0	0	1	0	1	0	70	0	0	70	0	0	0	0	0	1	51	2	0	54	125
6:45 PM	0	0	0	0	0	0	57	0	0	57	0	0	0	0	0	0	47	0	0	47	104
Hourly Total	1	0	1	0	2	0	281	0	1	282	0	0	1	0	1	3	209	5	0	217	502
Grand Total	5	8	18	0	31	5	4319	3	4	4331	24	15	12	0	51	20	4202	32	0	4254	8667
Approach %	16.1	25.8	58.1	0.0	-	0.1	99.7	0.1	0.1	-	47.1	29.4	23.5	0.0	-	0.5	98.8	0.8	0.0	-	-
Total %	0.1	0.1	0.2	0.0	0.4	0.1	49.8	0.0	0.0	50.0	0.3	0.2	0.1	0.0	0.6	0.2	48.5	0.4	0.0	49.1	-
Lights	5	6	18	0	29	5	3022	3	3	3033	21	12	11	0	44	20	2919	30	0	2969	6075
% Lights	100.0	75.0	100.0	-	93.5	100.0	70.0	100.0	75.0	70.0	87.5	80.0	91.7	-	86.3	100.0	69.5	93.8	-	69.8	70.1
Mediums	0	2	0	0	2	0	154	0	1	155	1	3	1	0	5	0	147	1	0	148	310
% Mediums	0.0	25.0	0.0	-	6.5	0.0	3.6	0.0	25.0	3.6	4.2	20.0	8.3	-	9.8	0.0	3.5	3.1	-	3.5	3.6
Articulated Trucks	0	0	0	0	0	0	1143	0	0	1143	2	0	0	0	2	0	1136	1	0	1137	2282
% Articulated Trucks	0.0	0.0	0.0	-	0.0	0.0	26.5	0.0	0.0	26.4	8.3	0.0	0.0	-	3.9	0.0	27.0	3.1	-	26.7	26.3

McClure Engineering Company
1360 NW 121st Street

Clive, Iowa, United States 50325
515-964-1229 lvandenberg@mecresults.com

Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021



Turning Movement Data Plot

McClure Engineering Company
1360 NW 121st Street

Clive, Iowa, United States 50325
515-964-1229 lvandenberg@mecresults.com

Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Poplar Avenue Southbound					US 20 Westbound					Poplar Avenue Northbound					US 20 Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:15 AM	0	0	0	0	0	0	91	0	0	91	1	0	0	0	1	0	74	1	0	75	167
7:30 AM	0	0	1	0	1	0	117	0	0	117	2	0	0	0	2	0	79	0	0	79	199
7:45 AM	0	0	1	0	1	0	100	0	1	101	2	0	0	0	2	0	72	1	0	73	177
8:00 AM	0	0	0	0	0	0	95	0	0	95	2	0	1	0	3	0	81	2	0	83	181
Total	0	0	2	0	2	0	403	0	1	404	7	0	1	0	8	0	306	4	0	310	724
Approach %	0.0	0.0	100.0	0.0	-	0.0	99.8	0.0	0.2	-	87.5	0.0	12.5	0.0	-	0.0	98.7	1.3	0.0	-	-
Total %	0.0	0.0	0.3	0.0	0.3	0.0	55.7	0.0	0.1	55.8	1.0	0.0	0.1	0.0	1.1	0.0	42.3	0.6	0.0	42.8	-
PHF	0.000	0.000	0.500	0.000	0.500	0.000	0.861	0.000	0.250	0.863	0.875	0.000	0.250	0.000	0.667	0.000	0.944	0.500	0.000	0.934	0.910
Lights	0	0	2	0	2	0	303	0	1	304	6	0	1	0	7	0	214	3	0	217	530
% Lights	-	-	100.0	-	100.0	-	75.2	-	100.0	75.2	85.7	-	100.0	-	87.5	-	69.9	75.0	-	70.0	73.2
Mediums	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	11	1	0	12	32
% Mediums	-	-	0.0	-	0.0	-	5.0	-	0.0	5.0	0.0	-	0.0	-	0.0	-	3.6	25.0	-	3.9	4.4
Articulated Trucks	0	0	0	0	0	0	80	0	0	80	1	0	0	0	1	0	81	0	0	81	162
% Articulated Trucks	-	-	0.0	-	0.0	-	19.9	-	0.0	19.8	14.3	-	0.0	-	12.5	-	26.5	0.0	-	26.1	22.4

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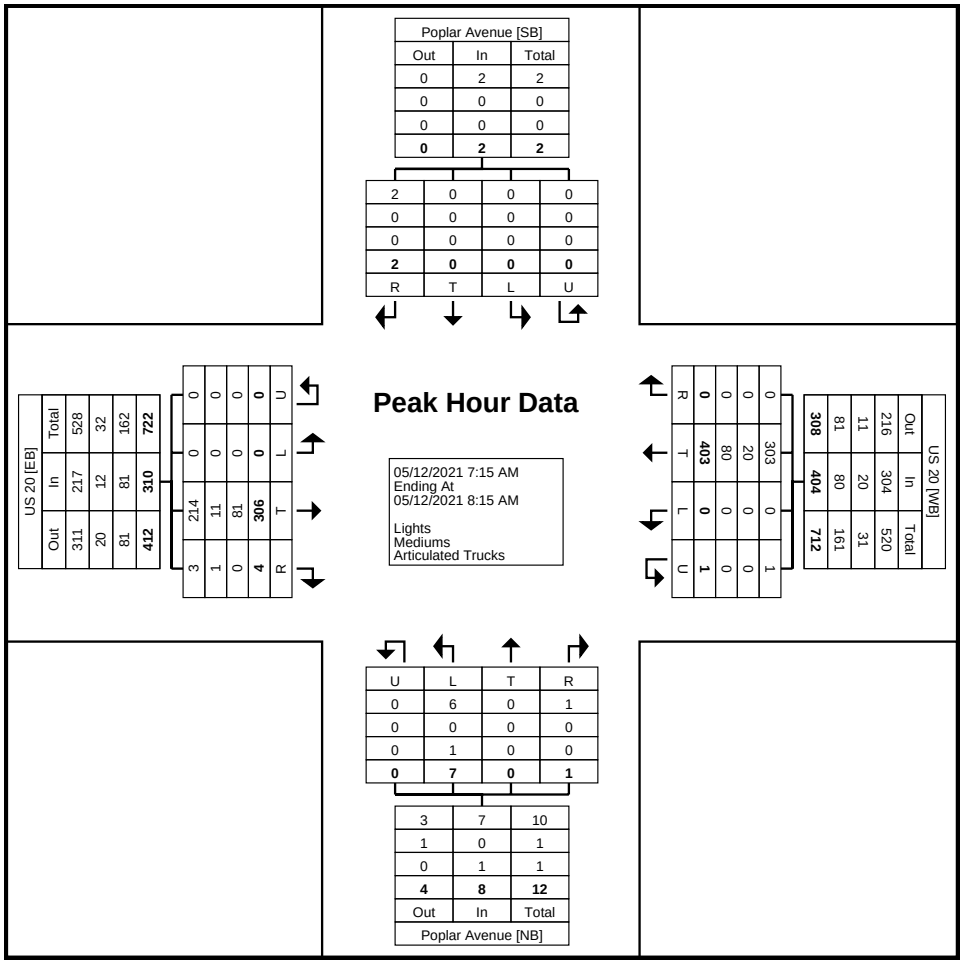
Start Date: 05/12/2021



Turning Movement Peak Hour Data Plot (7:15 AM)

McClure Engineering Company
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Clive, Iowa, United States 50325
515-964-1229 lvandenberg@mecresults.com

Count Name: US 20 and Poplar Intersection
Site Code: US 20 and Poplar
Start Date: 05/12/2021

Turning Movement Peak Hour Data (3:30 PM)

Start Time	Poplar Avenue Southbound					US 20 Westbound					Poplar Avenue Northbound					US 20 Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
3:30 PM	0	1	0	0	1	0	95	0	0	95	0	1	0	0	1	0	109	1	0	110	207
3:45 PM	0	0	0	0	0	1	115	0	1	117	0	1	1	0	2	0	113	0	0	113	232
4:00 PM	0	0	1	0	1	0	75	0	1	76	0	1	0	0	1	2	118	1	0	121	199
4:15 PM	0	0	1	0	1	0	93	1	0	94	0	0	0	0	0	0	98	1	0	99	194
Total	0	1	2	0	3	1	378	1	2	382	0	3	1	0	4	2	438	3	0	443	832
Approach %	0.0	33.3	66.7	0.0	-	0.3	99.0	0.3	0.5	-	0.0	75.0	25.0	0.0	-	0.5	98.9	0.7	0.0	-	-
Total %	0.0	0.1	0.2	0.0	0.4	0.1	45.4	0.1	0.2	45.9	0.0	0.4	0.1	0.0	0.5	0.2	52.6	0.4	0.0	53.2	-
PHF	0.000	0.250	0.500	0.000	0.750	0.250	0.822	0.250	0.500	0.816	0.000	0.750	0.250	0.000	0.500	0.250	0.928	0.750	0.000	0.915	0.897
Lights	0	0	2	0	2	1	293	1	2	297	0	1	1	0	2	2	304	3	0	309	610
% Lights	-	0.0	100.0	-	66.7	100.0	77.5	100.0	100.0	77.7	-	33.3	100.0	-	50.0	100.0	69.4	100.0	-	69.8	73.3
Mediums	0	1	0	0	1	0	10	0	0	10	0	2	0	0	2	0	14	0	0	14	27
% Mediums	-	100.0	0.0	-	33.3	0.0	2.6	0.0	0.0	2.6	-	66.7	0.0	-	50.0	0.0	3.2	0.0	-	3.2	3.2
Articulated Trucks	0	0	0	0	0	0	75	0	0	75	0	0	0	0	0	0	120	0	0	120	195
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	19.8	0.0	0.0	19.6	-	0.0	0.0	-	0.0	0.0	27.4	0.0	-	27.1	23.4

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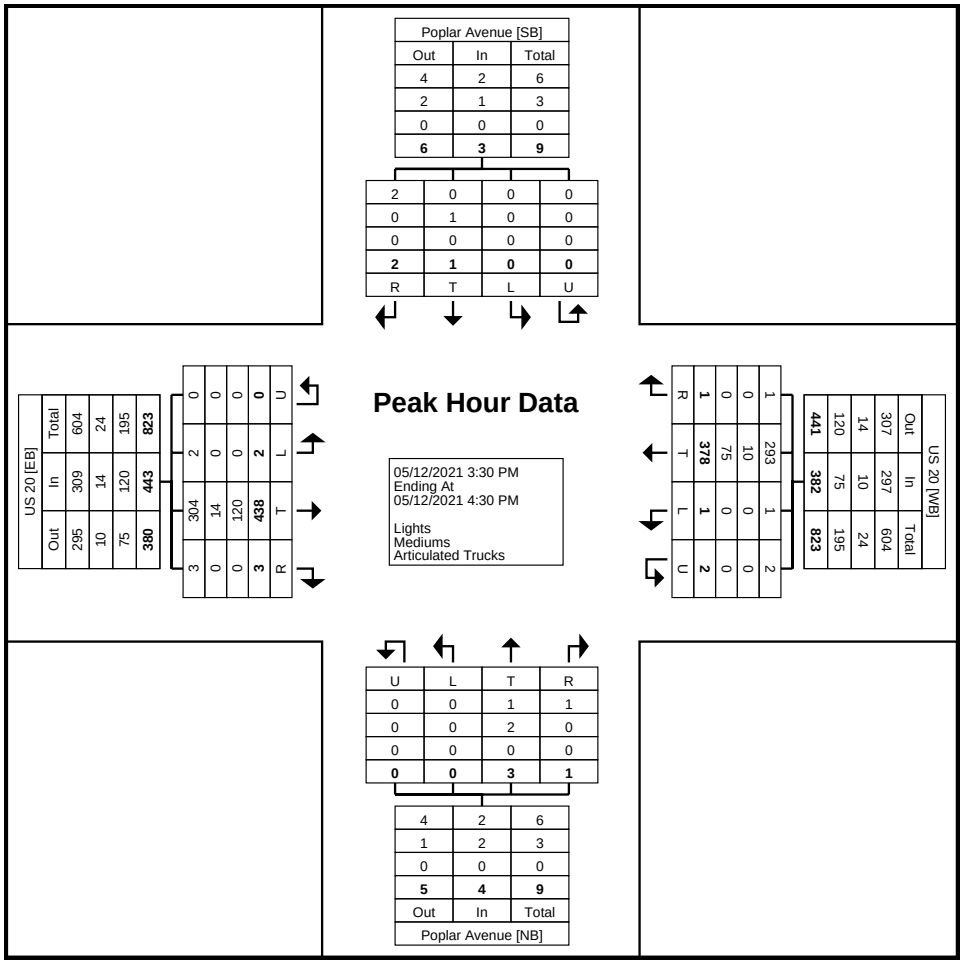

Turning Movement Peak Hour Data Plot (3:30 PM)

TRAFFIC FLOW MAP OF
WEBSTER COUNTY
IOWA

Prepared By

IOWADOT

SYSTEMS PLANNING BUREAU
Phone: (515) 239-1664
WWW.IOWADOT.GOV/MAPS

In Cooperation With
United States
Department of Transportation

JANUARY 1, 2020

MILES
0 1 2 3 4
0 1 2 3 4 5 6
KILOMETERS

12 - 20 - 19

LEGEND

- DIVIDED HIGHWAY
- PAVED ROAD
- BITUMINOUS ROAD
- GRAVEL ROAD
- EARTHEN ROAD
- LEGAL NOT OPEN ROAD

(2019) ANNUAL AVERAGE DAILY TRAFFIC
2015 ANNUAL AVERAGE DAILY TRAFFIC

2019

94

McCLURE™

APPENDIX

Stumpf Travel Center

Links	Exiting		Entering	
	AM Peak	PM Peak	AM Peak	PM Peak
North	0%	0%	0%	0%
South	6%	6%	6%	7%
East	54%	43%	41%	50%
West	40%	50%	53%	43%
Total	100%	100%	100%	100%

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APPENDIX

STUMPF TRAVEL CENTER TRAFFIC VOLUMES

Trip Distribution Assumptions and Notes

June 14, 2021

Completed for Iowa DOT and Webster County

Purpose: To summarize the assumptions for the traffic volume projections for the AM and PM peak traffic study hours created for use in the analysis of the traffic impact study being prepared for the development.

Basis for growth assumptions: Fort Dodge's population growth data shows a slow decline over the last 14+ years. The 2019 census shows a population of 23,888 residents; going back to 2007 the population was 25,161 and the trend between years has been a slow decline.

Along US 20 in the region Iowa DOT traffic data shows an increase in daily traffic volumes. Very little data exists at Poplar Avenue. To the east on US 20, the average growth rate has been 2% per year (rounded to the nearest percent, from 2.2%). Growth rates to the west (near Hwy 169 and P59) are generally higher and more volatile in up/down trends. This could be due to factors affecting traffic near Hwy 169. Considering both traffic volumes and population figures, a 2% per year growth is being assumed for this traffic study.

Travel Center: A proposed travel center is planned for the northwest quadrant at the intersection of US 20 and Poplar Avenue. This travel center would include a 9,750-foot building designed to house a convenience store and restaurant. The travel center would provide separate canopy fueling areas for gasoline and diesel. The current site layout provides for passenger car parking and no delineated truck parking although there may be enough area to park a truck or two for short stops without impacting circulation.

Future General Light Industrial: While there is considerable undeveloped land area, only one other parcel is anticipated to be developed within the next 20-years. This parcel is north of the proposed travel center and would be occupied by a 120,000-sf warehouse building. This development will be included as a part of the Future Year analysis scenarios.

I. Trip Generation

A. The Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition was used to estimate the daily weekday AM and PM peak hour trip volumes for the development. The resulting total trips from both sites were 159 inbound trips and 150 outbound trips in the AM peak hour and 209 inbound trips and 196 outbound trips in the PM peak hour. Trip generation is shown in Table 1.

B. Land Use Code 945 Gasoline/Service Station with Convenience Market was chosen over Land Use Code 950 Truck Stop as it yielded a larger number of trips, thus resulting in more conservative recommendations. Number of fueling positions was used as the independent variable for Land Use Code 945 as the study sample sizes were more applicable to the size of the development than other independent variables.

Stumpf Travel Center					ADT		AM Peak					PM Peak				
Area #	Code	Use	Unit of Measure	Number	Avg Rate or Eq.	Trips	Avg Rate	Enter		Exit		Avg Rate	Enter		Exit	
1	945	Gasoline/Service Station wi	Fueling Positions	24	205.36	4,929	12.47	51%	153	49%	147	13.99	51%	171	49%	165
2	930	Fast Casual Restaurant	1000 ft^2	4.9	315.17	1536	2.07	67%	7	33%	3	14.13	55%	38	45%	31
		Trip Ends							**159**		**150**			**209**		**196**
		Pass-By Trips							70		67			79		76
		New Trips							89		83			130		120

II. **Land Area Splits between Driveway Locations**

A. Each driveway was assigned a certain percent of the total of the land uses (gas station with convenience store and restaurant) dependent mostly upon proximity and probability of using the drive.

B. Driveway location splits can be seen in the exhibits at the end of this report.

III. Driveway Splits

A. **2021 Opening Day** Existing traffic volumes at US 20 and Poplar Avenue were used as the basis for left/right, in/out splits for trip traffic. Traffic at the US 20 intersection is about 40-55% on the west leg, 40-55% on the east leg, and 6-7% on the south leg depending on the direction (inbound or outbound) and the hour of the day. No trips were assumed to be to/from the north. Specific splits can be seen in the Trip Distribution tables.

B. **2040 Future** The same distribution and split assumptions were made for the General Light Industrial warehouse use for the future development on the parcel to the north.

IV. Opening Day Trips

A. **New Trips** The driveway split for each turning movement is applied to the sum of the trip generation calculations for each lot's driveway usage.

B. Pass-By Trips Pass-By trips were assigned to both the driveways serving the commercial service trips per the ITE Trip Generation Handbook. Pass-by trips for the gas station land use are for the AM and PM peak hour. In this case, the lowest pass-by rate (not the average) was assumed. This was done to be conservative in assumptions and to minimize the pass-by corrections to existing volumes on the network.

V. 2020 Existing/Background Peak Hour Volumes

A. Traffic counts were taken on Wednesday May 12th at the intersections of:
- US 20 and Poplar Avenue (6am-7pm, turning movement count)

B. Based on the traffic counts, the peak hours were determined to be:
- 7:15-8:15 am
- 3:30-4:30 pm

C. Truck percentages were calculated at the intersection of US 20 and Poplar Avenue for the AM and PM peak hours.
- AM Peak Hour – eastbound through 26.5%; westbound through 19.9%
- PM Peak Hour – eastbound through 27.4%; westbound through 19.8%

- Truck percentages are applied by movement for level of service analysis at the study intersections.
- Peak hour factors are applied by movement for the level of service analysis at the study intersections.

VI. 2020 Opening Day Volumes

A. Opening Day total traffic turning movement volumes are the sum of the background traffic, site generated new trips and pass-by trips.

VII. 2040 Future Trips

A. **Driveway Splits** These are as described in Item II. The lack of other developments on Poplar Avenue and no change in network facilities supports the use of the same driveway splits as used in the 2020 Opening Day scenario.

B. **New Trips** The driveway split for each turning movement is applied to the sum of the trip generation calculations for each lot's driveway usage.

C. **Pass-By Trips** Pass-By trips were assigned to both the driveways serving the commercial service trips per the ITE Trip Generation Handbook. Pass-by trips for the gas station land use are for the AM and PM peak hour. In this case, the lowest pass-by rate (not the average) was assumed. This was done to be conservative in assumptions and to minimize the pass-by corrections to existing volumes on the network.

VIII. 2040 Future Background Traffic

A. **Growth Rate** Per page 1 of this memorandum, a 2% growth rate is being assumed.

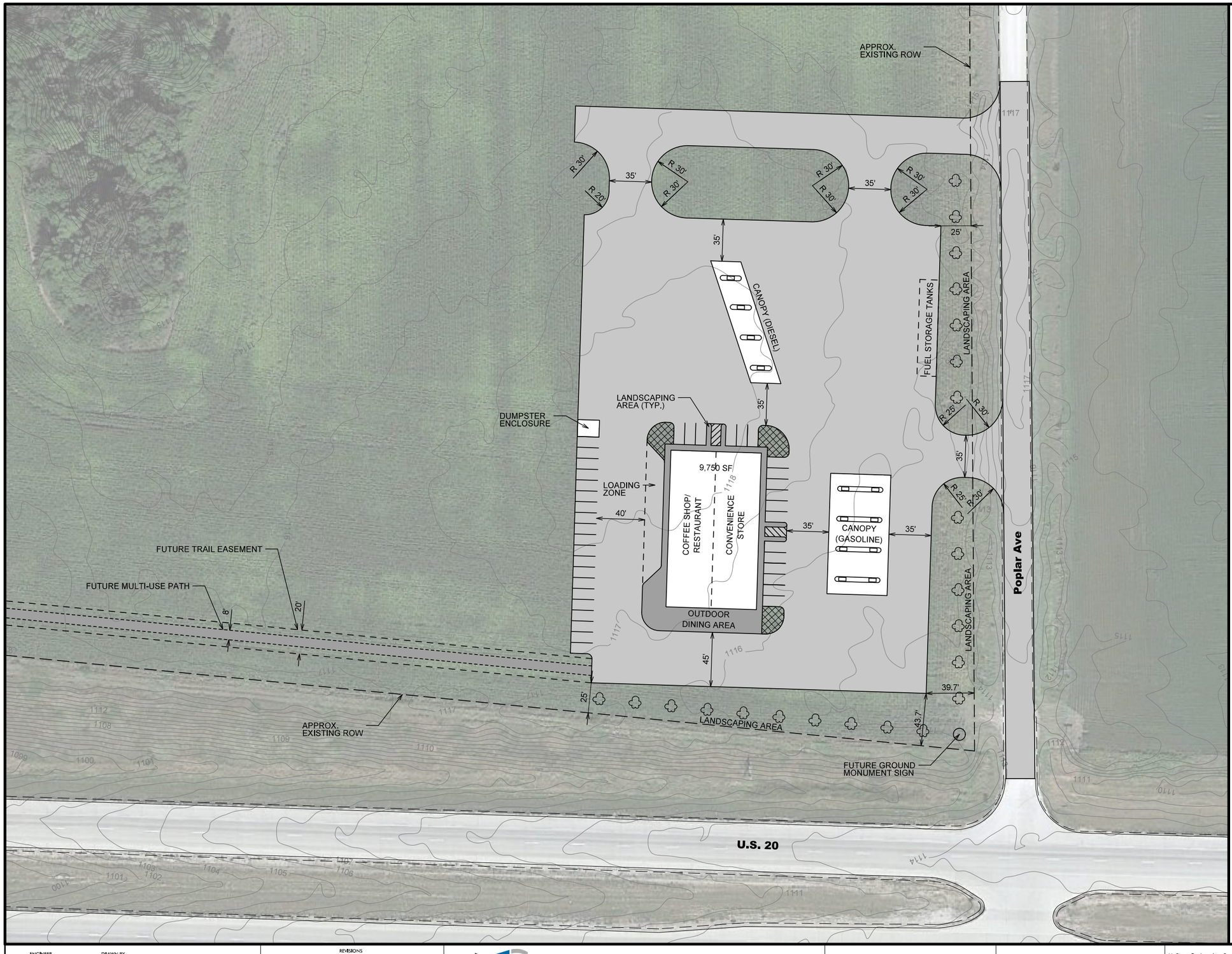
IX. 2040 Future Traffic Volumes

A. **2040 Future Volumes** Future total traffic turning movement volumes are the sum of the 2040 background traffic, all sites generated new trips and pass-by trips.

Attachments:

- *Stump Travel Center Site Layout*
- *Stumpf Property for Future Warehouse*
- *Trip Generation Tables*
- *Traffic Count Data*
- *PDFs of Traffic Volume Projections*

Respectfully submitted by Lisa VanDenBerg 6.14.2021



PROPERTY SIZE: 8.8 ACRES

CURRENT ZONING:	A-1 (AGRICULTURAL PRESERVATION DISTRICT)
PROPOSED ZONING:	C-1 (GENERAL COMMERCIAL DISTRICT)
EXISTING USE:	AGRICULTURAL LAND
PROPOSED USE:	CONVENIENCE STORE WITH FUEL SALES

PROPOSED BUILDING HEIGHT: NOT TO EXCEED 35 FEET

PROPOSED BUILDING SETBACKS:

FRONT = 50 FEET

SIDE (EAST) = 35 FEET

SIDE (WEST) = 35 FEET

REAR = 25 FEET

NUMBER OF REQUIRED PAVED PARKING STALLS: 20

NUMBER OF PROVIDED PAVED PARKING STALLS: 37

NUMBER OF REQUIRED ADA PARKING STALLS: 1

NUMBER OF PROVIDED ADA PARKING STALLS: 1

WATER SERVICE:	POTABLE WELL
SEWER SERVICE:	SEPTIC SYSTEM

LEGEND

- PCC PAVEMENT SHADING
- SIDEWALK/TRAIL SHADING
- FOUNDATION PLANTINGS/SHRUBS
- LARGE TREE SPECIES

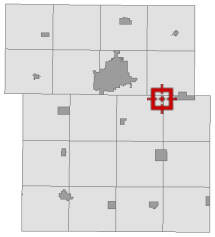
0 20 40 80

GRAPHIC SCALE

ENGINEER: CFF CHECKED BY: CFF	DRAWN BY: JMT FIELD BOOK NO.: -	STUMPF MEC JOB #: 210178 MARCH 2021	REVISIONS	McCLURE™ making lives better.	1360 NW 121st Street, Suite A Clive, IA 50325 main 515-964-1229 fax 515-964-2370	STUMPF WEBSTER COUNTY TRAVEL CENTER	SITE PLAN

Beacon™ Webster County, IA

Overview



Stumpf Travel Center					ADT		AM Peak					PM Peak				
Area #	Code	Use	Unit of Measure	Number	Avg Rate or Eq.	Trips	Avg Rate	Enter		Exit		Avg Rate	Enter		Exit	
1	945	Gasoline/Service Station wit	Fueling Positions	24	205.36	4,929	12.47	51%	153	49%	147	13.99	51%	171	49%	165
2	930	Fast Casual Restaurant	1000 ft^2	4.9	315.17	1536	2.07	67%	7	33%	3	14.13	55%	38	45%	31
		Trip Ends							**159**		**150**			**209**		**196**
		Pass-By Trips							70		67			79		76
		New Trips							89		83			130		120

Stumpf North Property					ADT		AM Peak					PM Peak				
Area #	Code	Use	Unit of Measure	Number	or Eq.	Trips	Equation	Enter		Exit		Equation	Enter		Exit	
A	110	General Light Industrial	1000 ft^2	120.0	4.96	595	51.05	88%	45	12%	6	41.82	13%	5	87%	36
		Trip Ends							**45**		**6**			**5**		**36**
		Pass-By Trips							0		0			0		0
		New Trips							45		6			5		36

Stumpf Travel Center

Links	Exiting		Entering	
	AM Peak	PM Peak	AM Peak	PM Peak
North	0%	0%	0%	0%
South	6%	6%	6%	7%
East	54%	43%	41%	50%
West	40%	50%	53%	43%
Total	100%	100%	100%	100%

Gas/Convenience Store and Restaurant

South	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
DR 1	90%		90%				90%					90%	
DR 2	10%		10%				10%					10%	**AM Peak**

East	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
DR 1	70%		70%				70%					70%	
DR 2	30%		30%				30%					30%	**AM Peak**

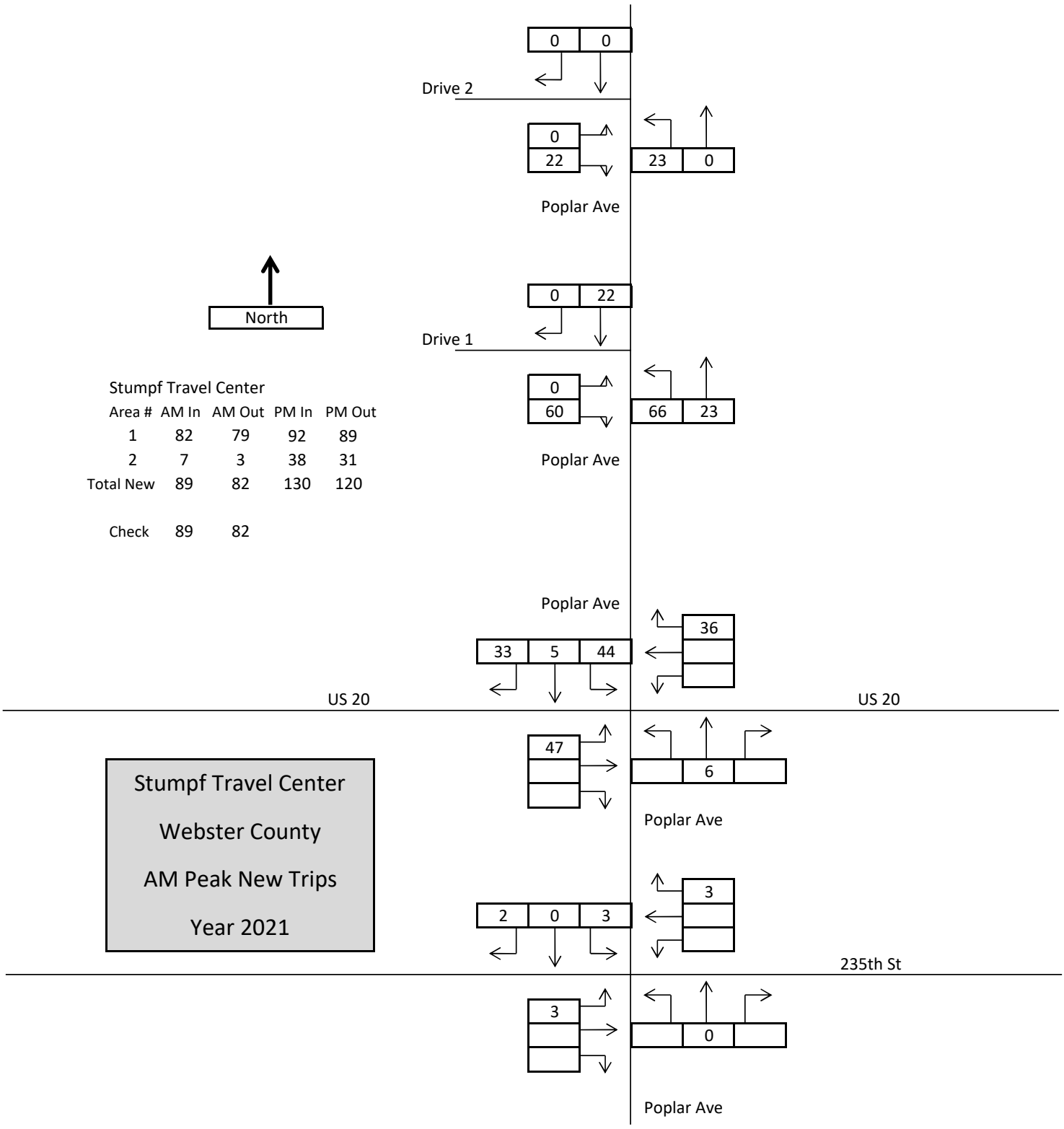
West	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
DR 1	75%		75%				75%					75%	
DR 2	25%		25%				25%					25%	**AM Peak**

Gas/Convenience Store and Restaurant

South	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
DR 1	90%		90%				90%					90%	
DR 2	10%		10%				10%					10%	**PM Peak**

East	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
DR 1	70%		70%				70%					70%	
DR 2	30%		30%				30%					30%	**PM Peak**

West	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
DR 1	75%		75%				75%					75%	
DR 2	25%		25%				25%					25%	**PM Peak**



Stumpf Travel Center

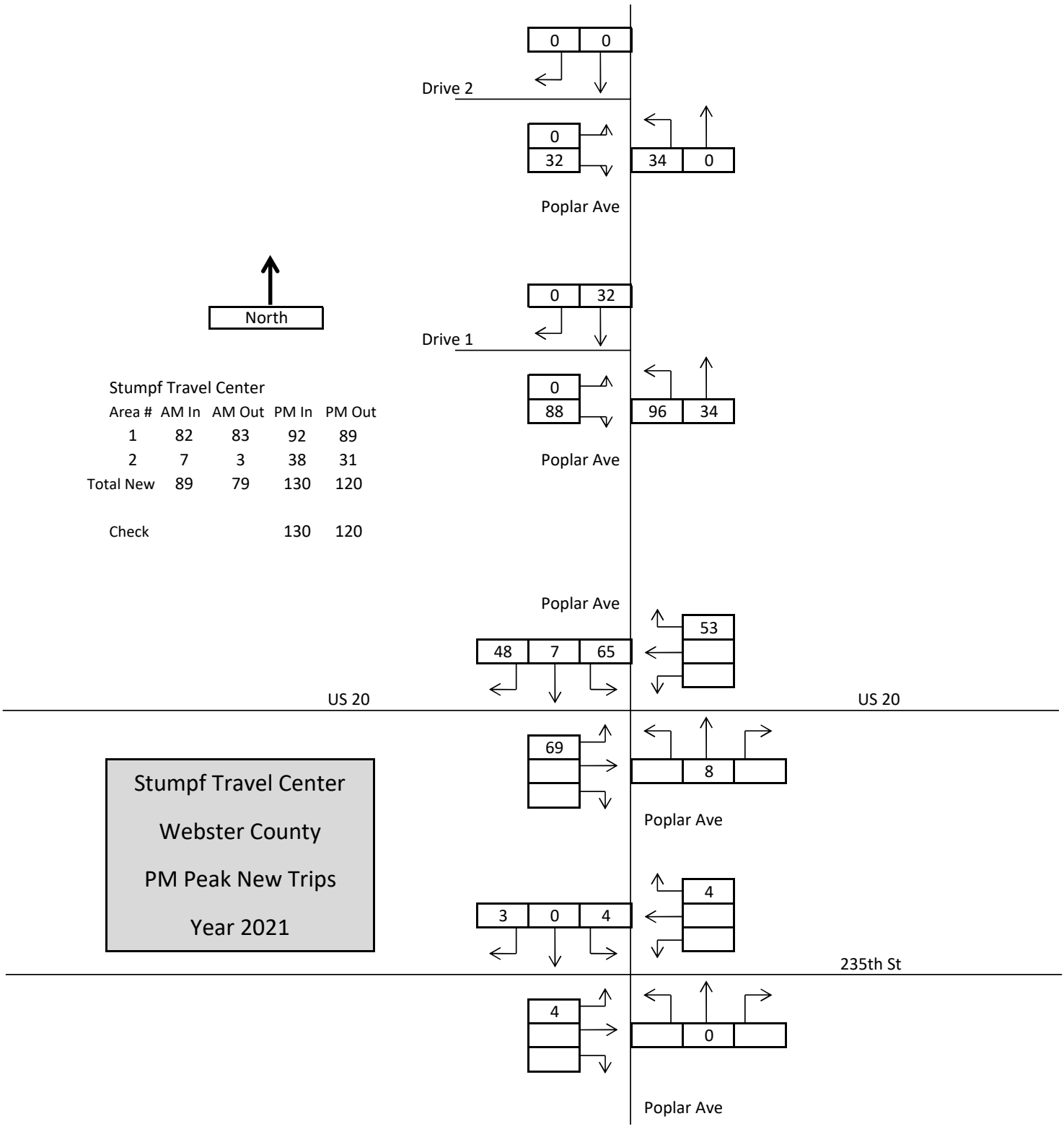
Area #	AM In	AM Out	PM In	PM Out
1	82	79	92	89
2	7	3	38	31
Total New	89	82	130	120
Check	89	82		

Stumpf Travel Center

Webster County

AM Peak New Trips

Year 2021



Stumpf Travel Center

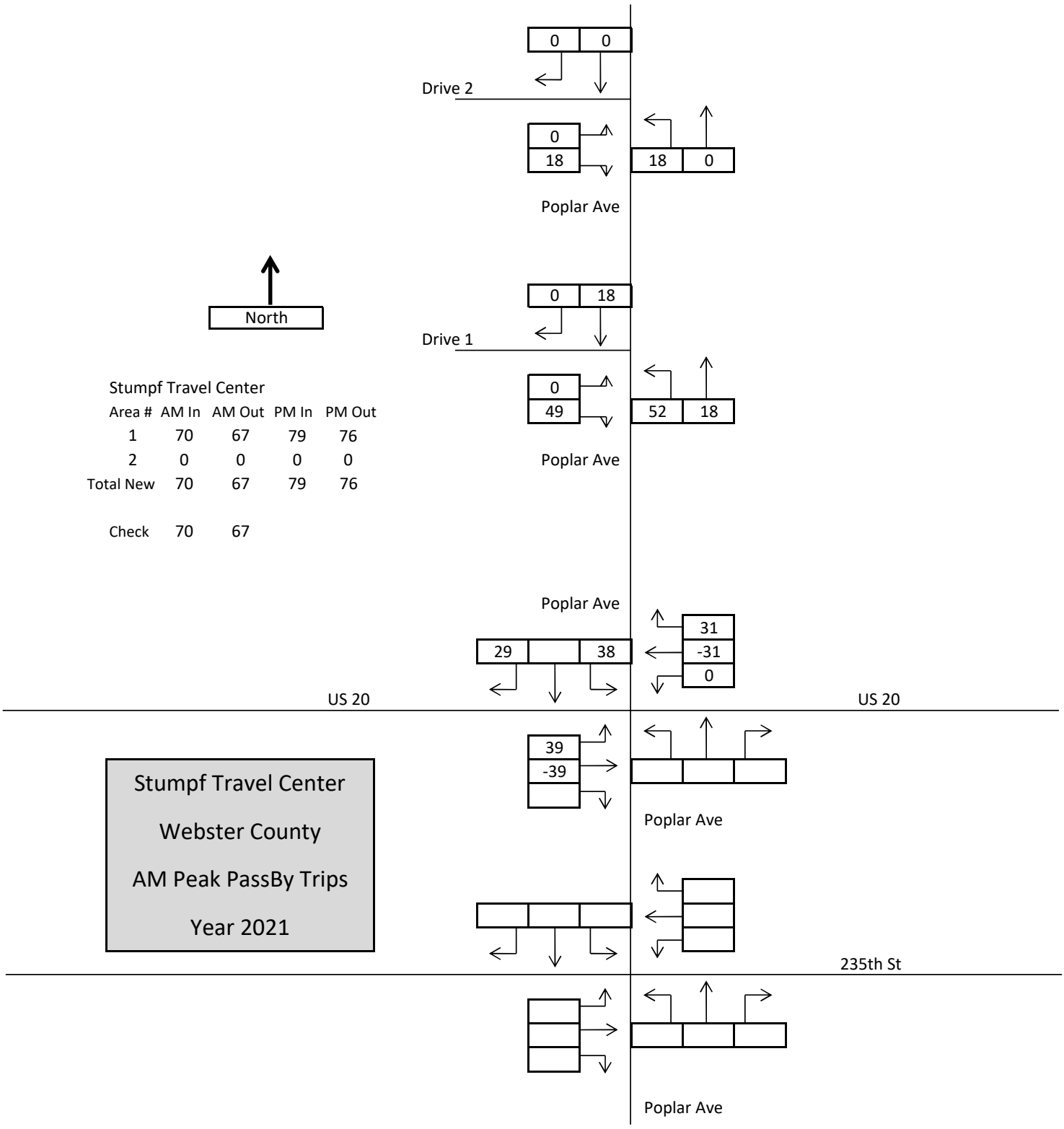
Area #	AM In	AM Out	PM In	PM Out
1	82	83	92	89
2	7	3	38	31
Total New	89	79	130	120
Check			130	120

Stumpf Travel Center

Webster County

PM Peak New Trips

Year 2021



Stumpf Travel Center

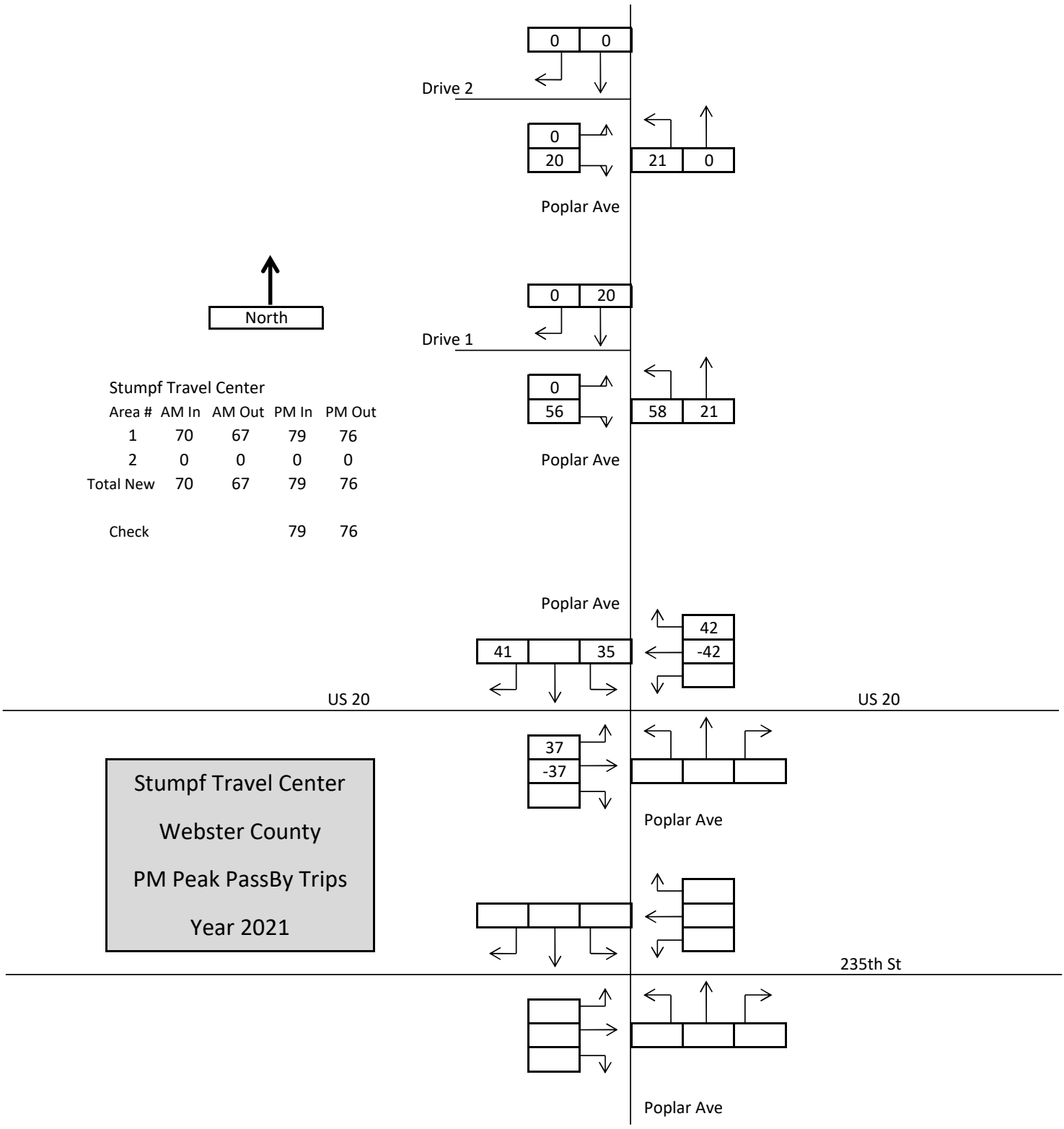
Area #	AM In	AM Out	PM In	PM Out
1	70	67	79	76
2	0	0	0	0
Total New	70	67	79	76
Check	70	67		

Stumpf Travel Center

Webster County

AM Peak PassBy Trips

Year 2021



Stumpf Travel Center

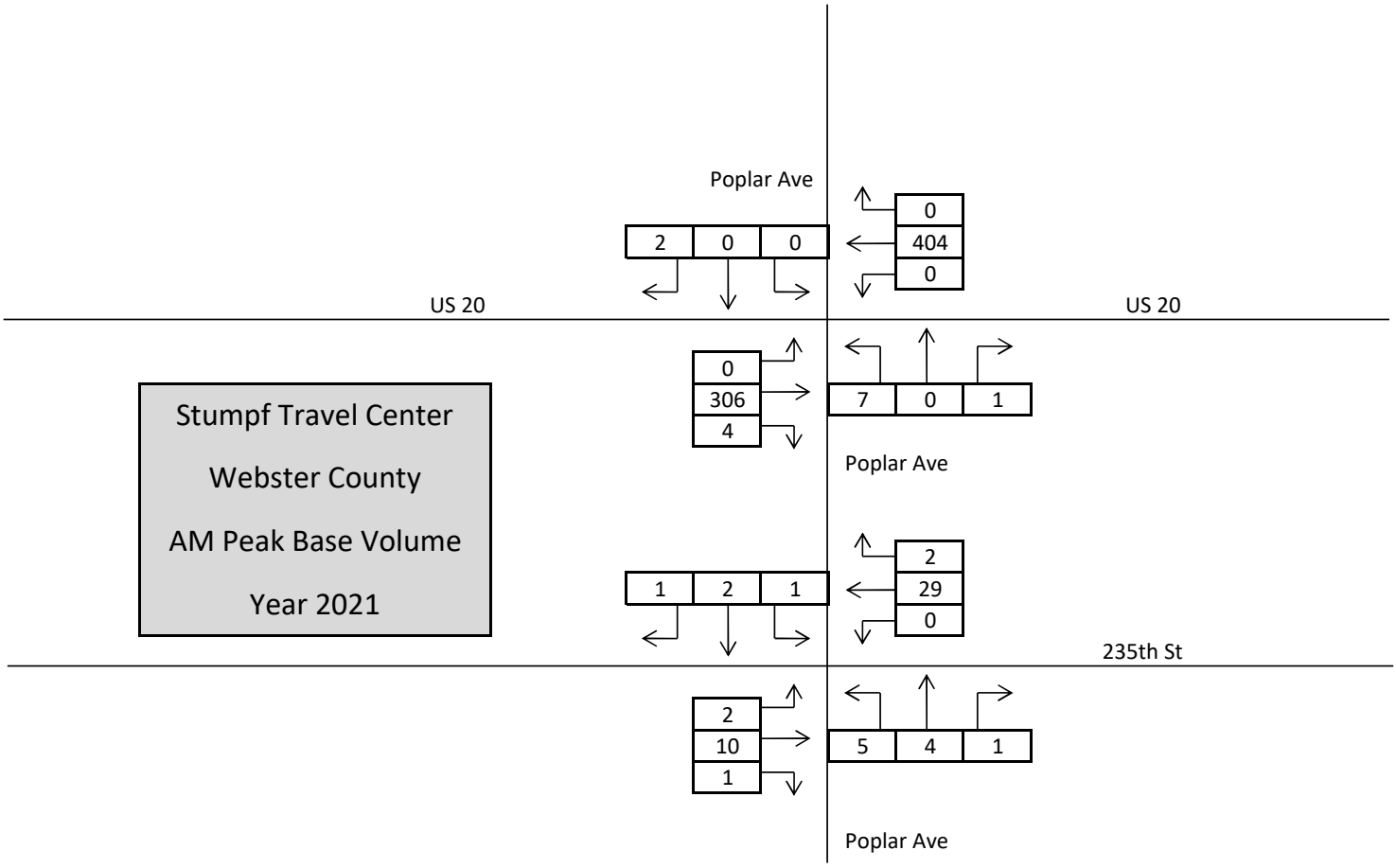
Area #	AM In	AM Out	PM In	PM Out
1	70	67	79	76
2	0	0	0	0
Total New	70	67	79	76
Check			79	76

Stumpf Travel Center

Webster County

PM Peak PassBy Trips

Year 2021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Stumpf Travel Center
Webster County
AM Peak Base Volume
Year 2021
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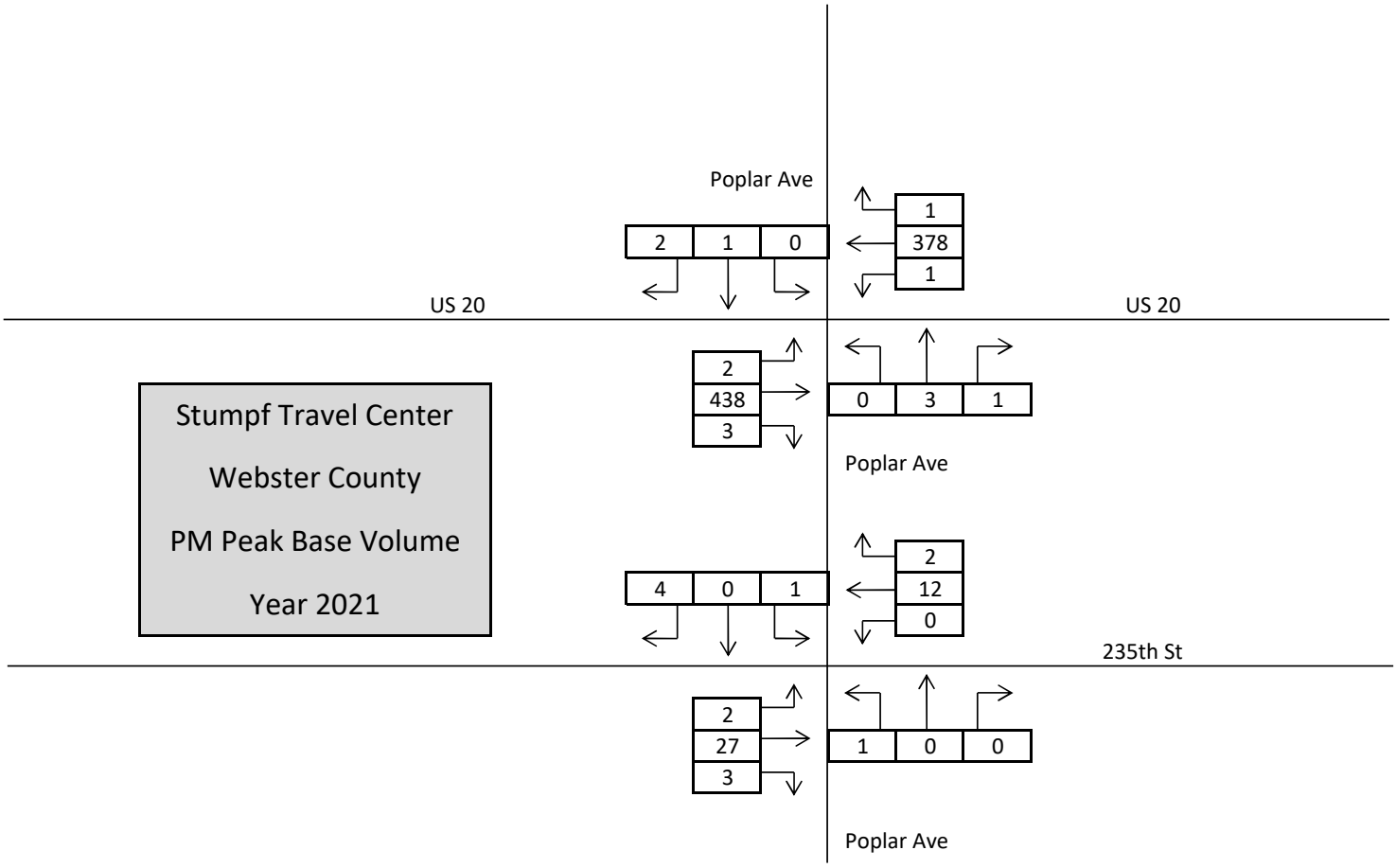
2
10
1
5
4
1
Poplar Ave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Webster County
PM Peak Base Volume
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2
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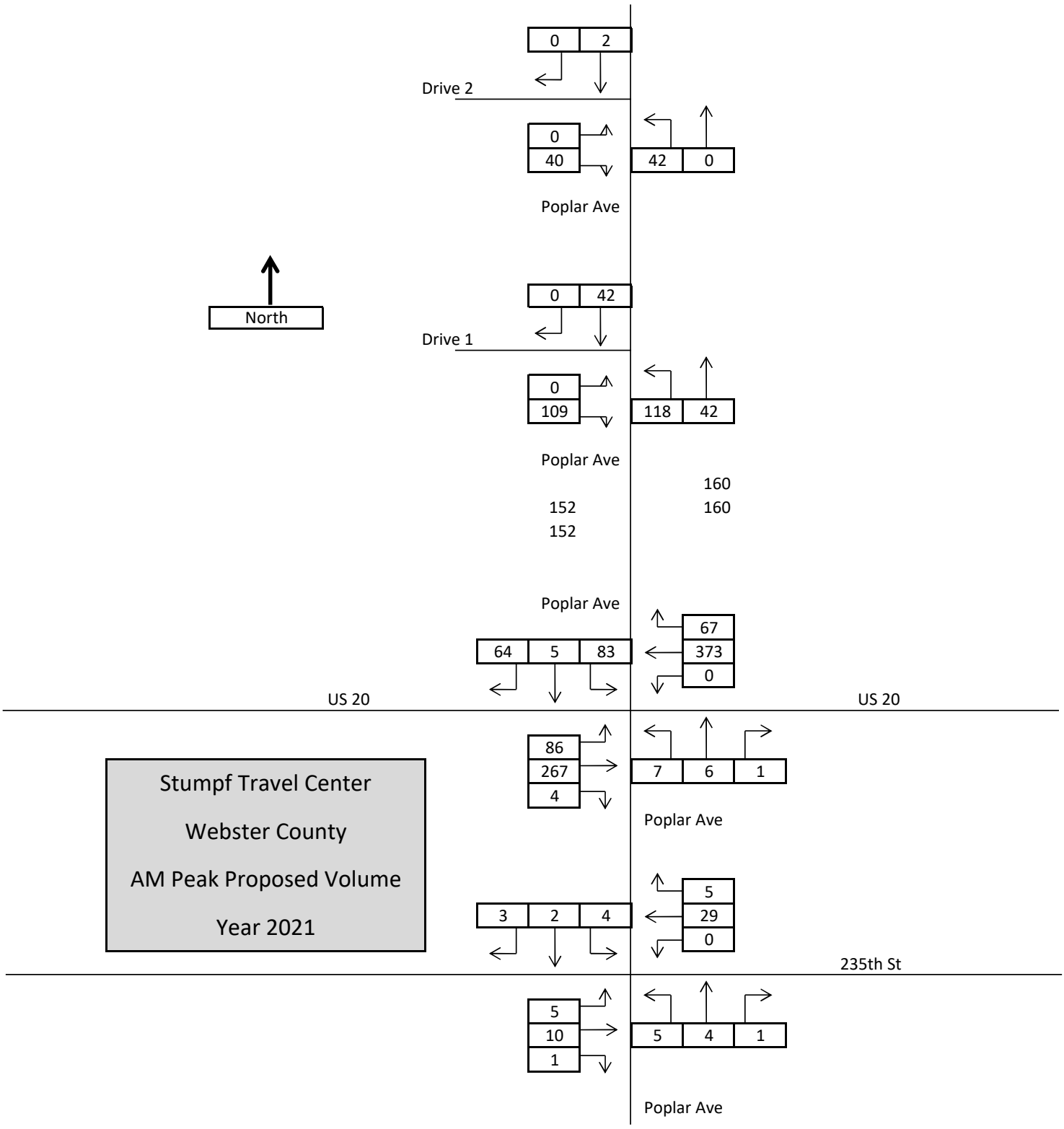
Poplar Ave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160
152
152
Poplar Ave
67
64
5
83
373
0
US 20
US 20
86
267
4
7
6
1
Poplar Ave
Stumpf Travel Center
Webster County
AM Peak Proposed Volume
Year 2021
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3
2
4
29
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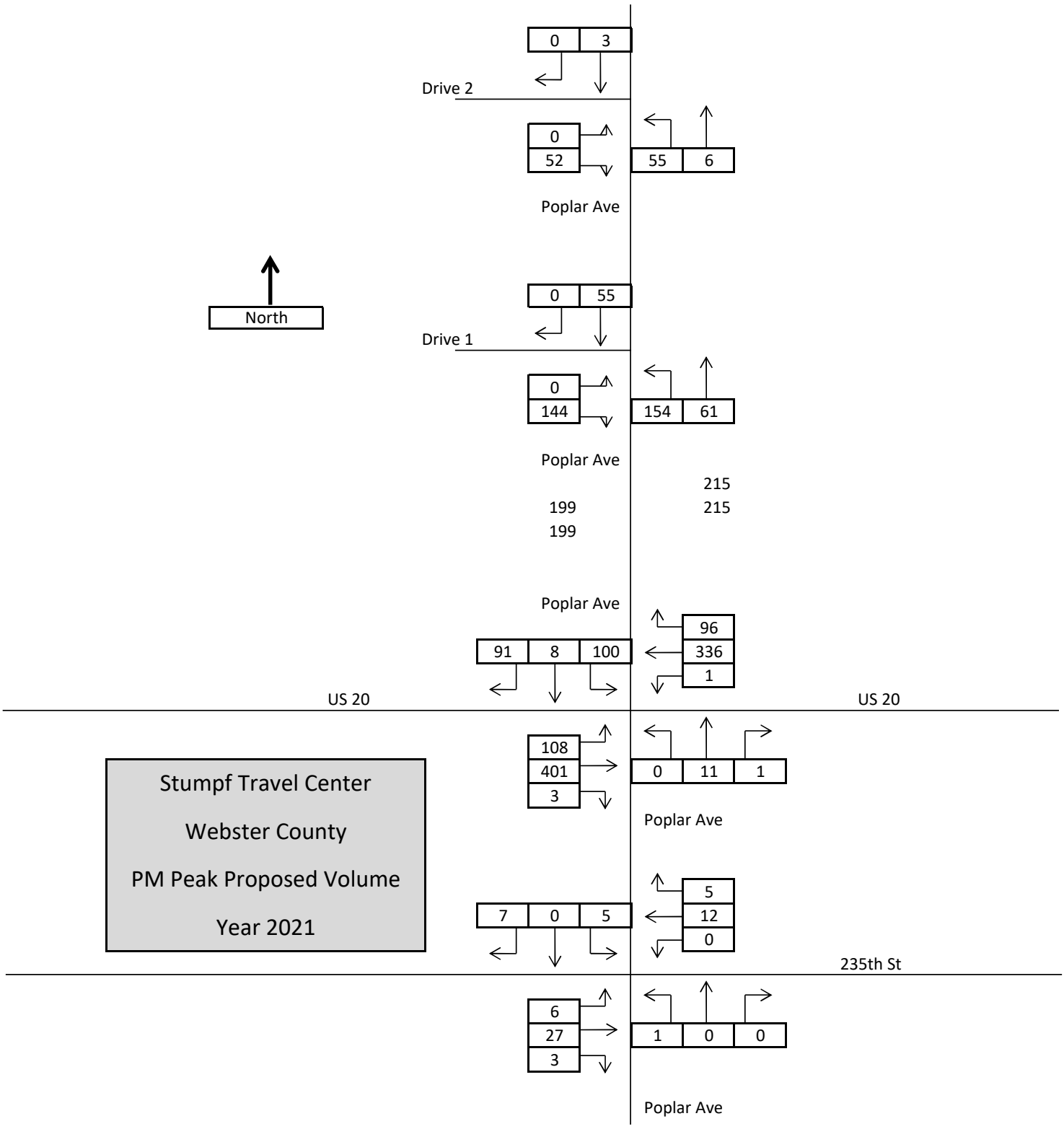
5
10
1
5
4
1
Poplar Ave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215
199
215
199
Poplar Ave
96
91
8
100
336
1
US 20
US 20
108
401
3
0
11
1
Poplar Ave
Stumpf Travel Center
Webster County
PM Peak Proposed Volume
Year 2021
5
7
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12
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235th St
6
27
3
1
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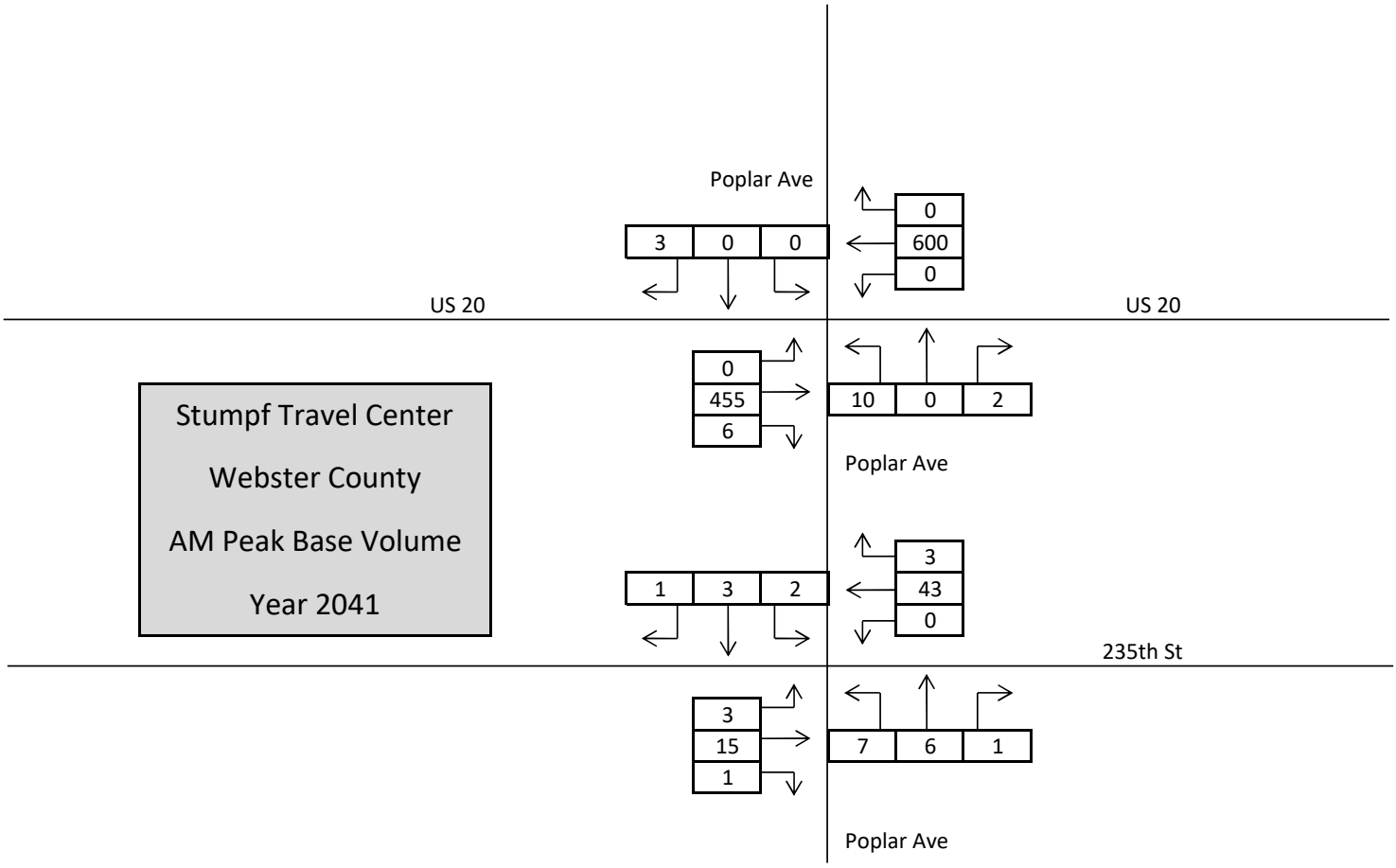
Poplar Ave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2
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Stumpf Travel Center
Webster County
AM Peak Base Volume
Year 2041
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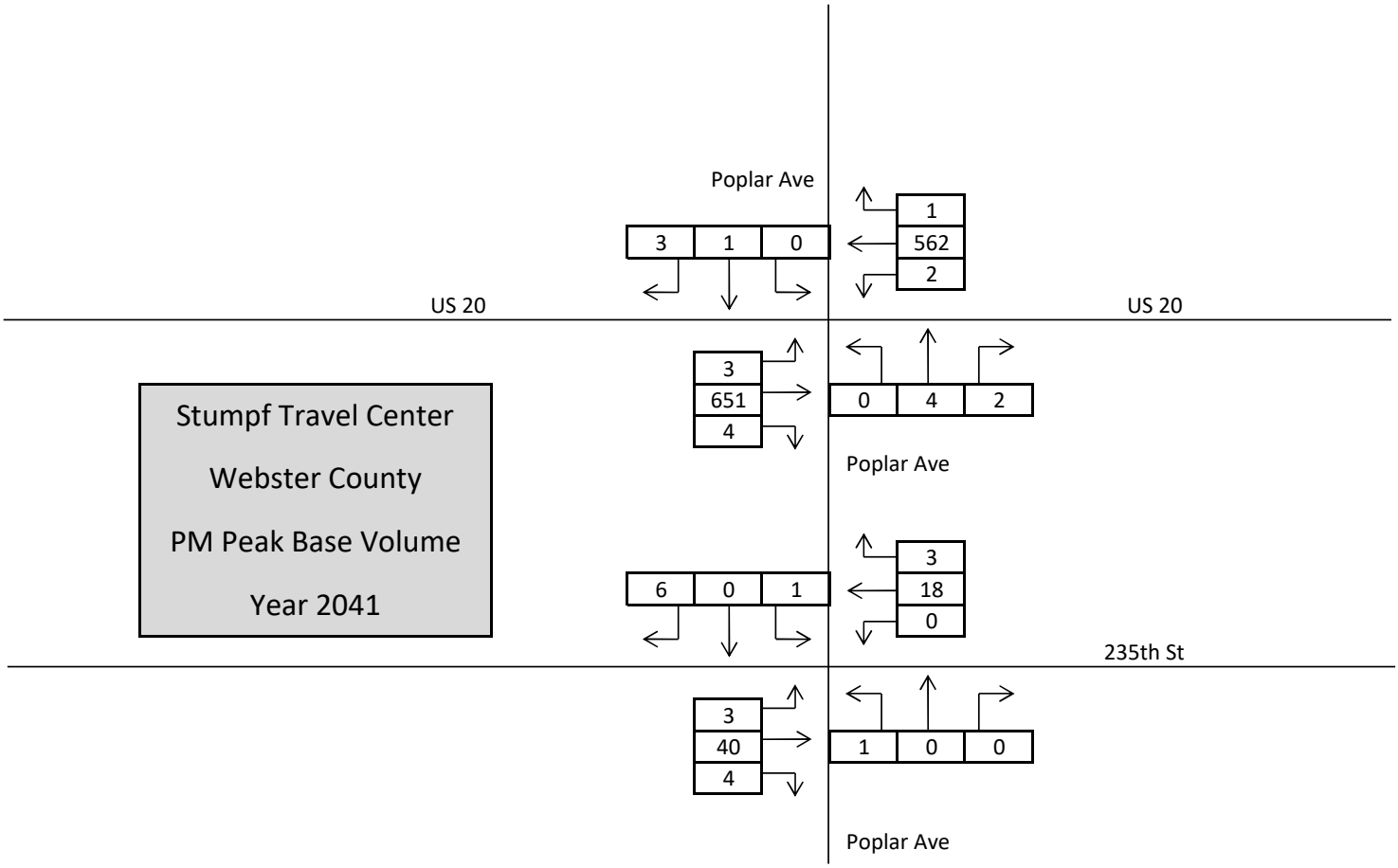
3
2
3
43
0
235th St
3
15
1
7
6
1
Poplar Ave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US 20
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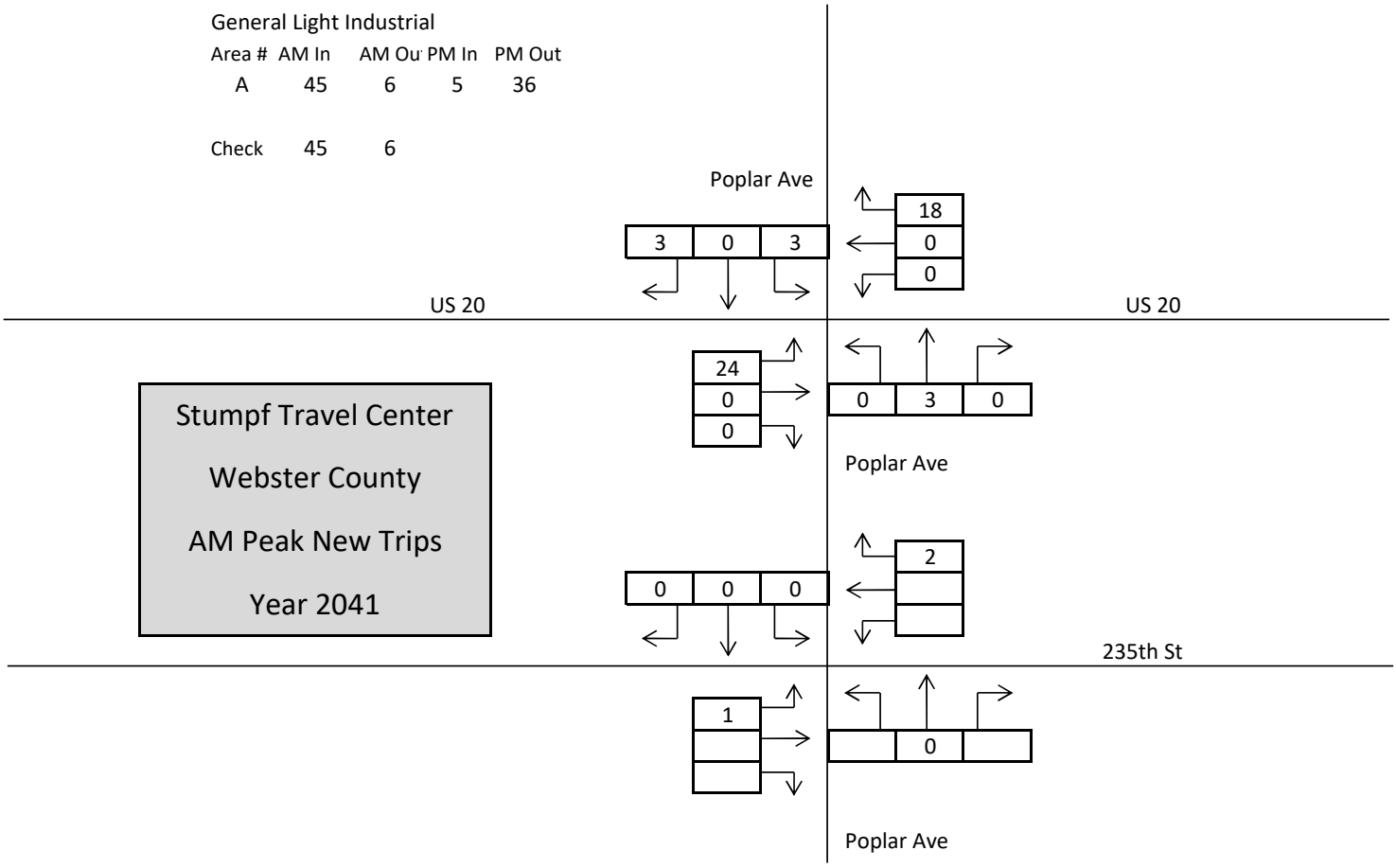
651
4
0
4
2
Poplar Ave
Stumpf Travel Center
Webster County
PM Peak Base Volume
Year 2041
6
0
1
3
18
0
235th St
3
40
4
1
0
0
Poplar Ave

General Light Industrial

Area #	AM In	AM Ou	PM In	PM Out
A	45	6	5	36
Check	45	6		



Stumpf Travel Center

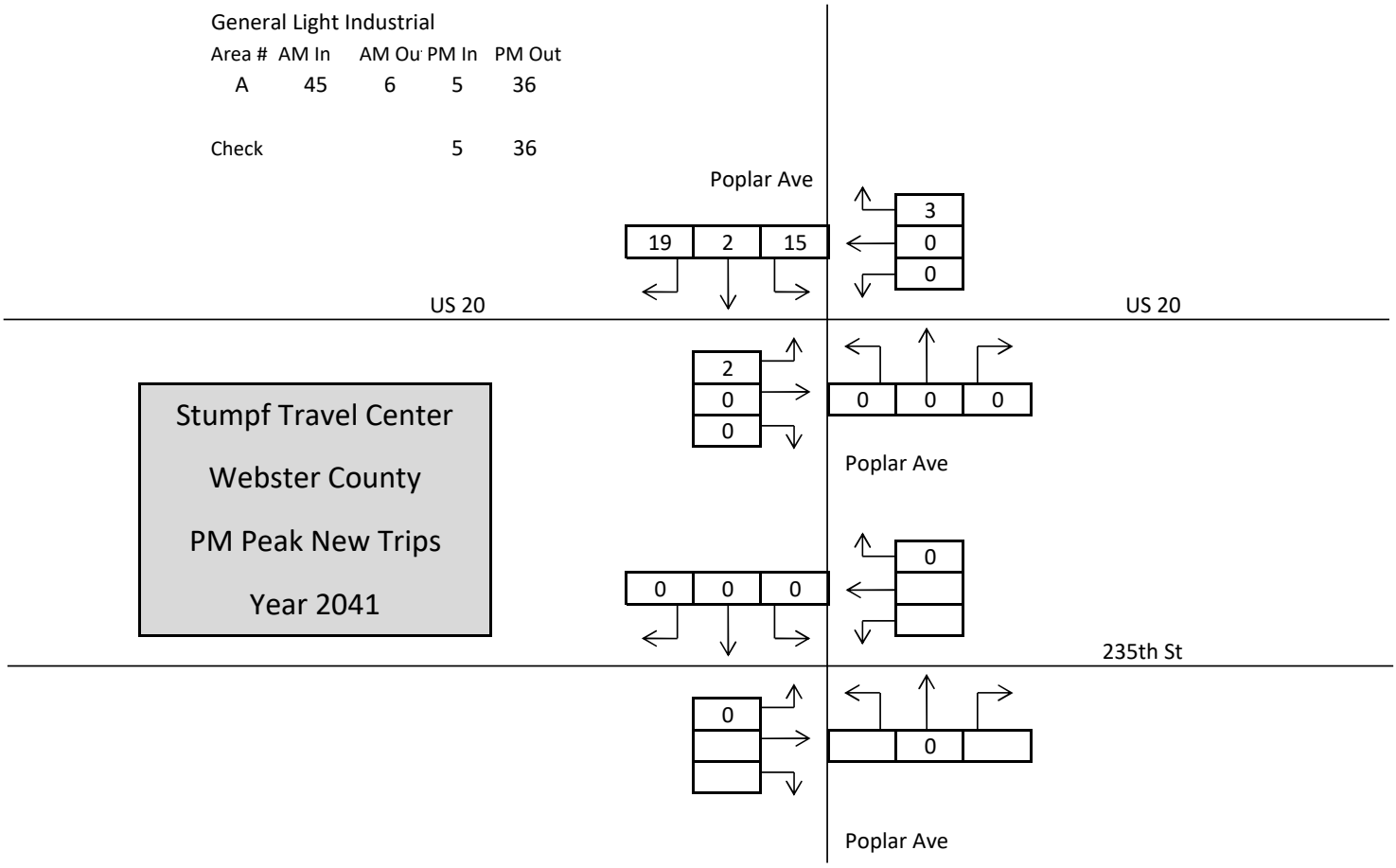
Webster County

AM Peak New Trips

Year 2041

General Light Industrial

Area #	AM In	AM Ou	PM In	PM Out
A	45	6	5	36
Check			5	36

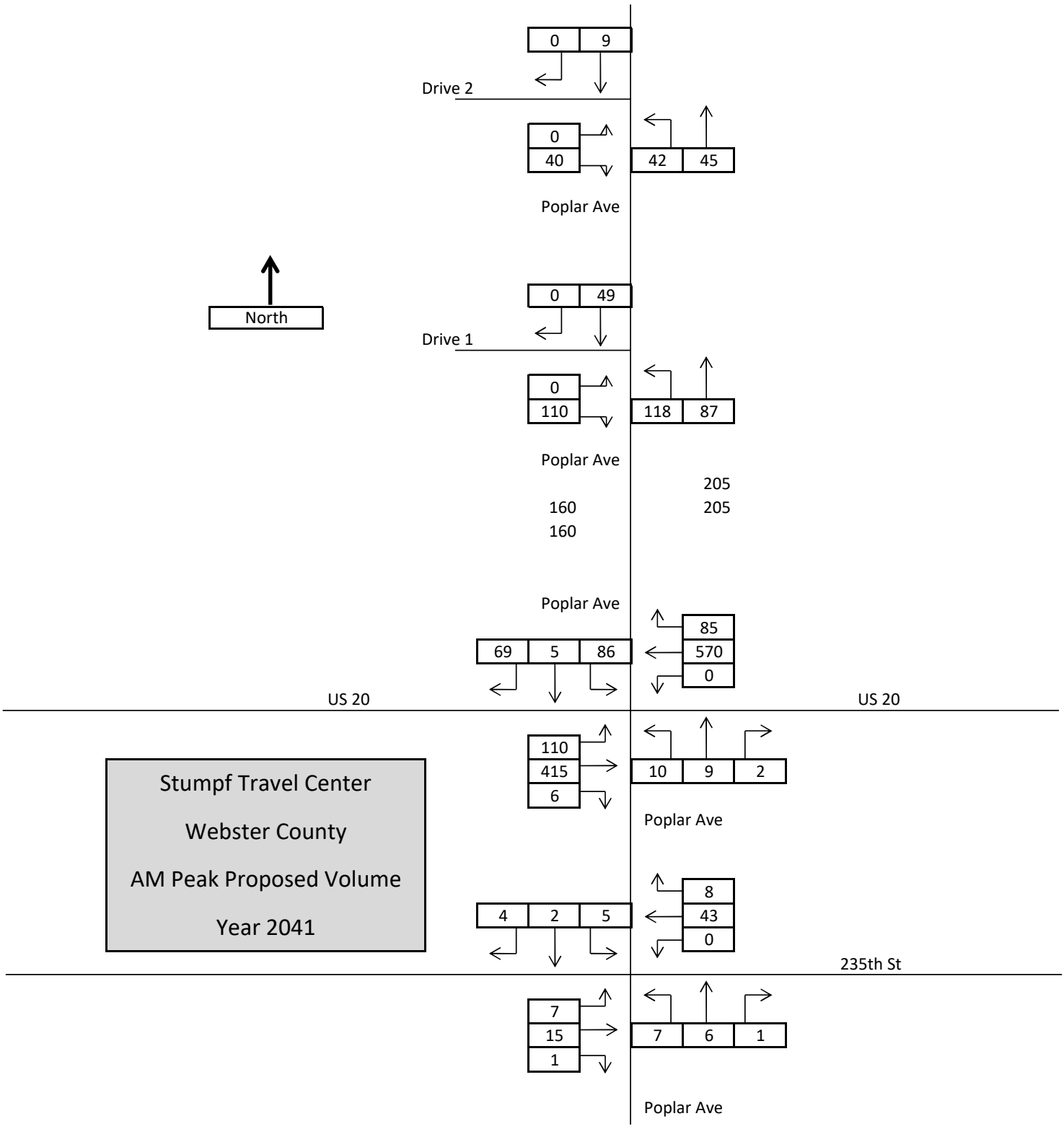


Stumpf Travel Center

Webster County

PM Peak New Trips

Year 2041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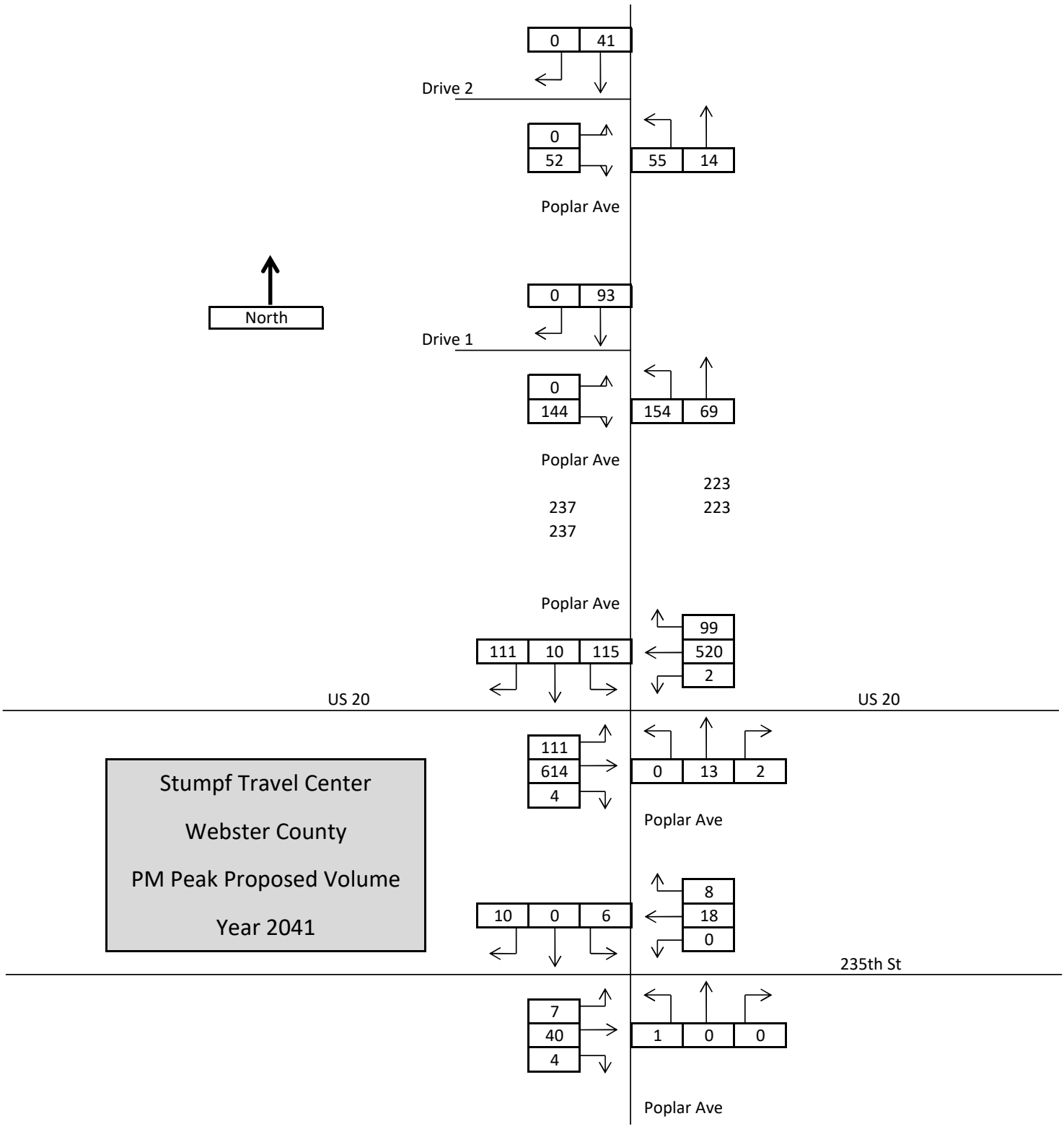
0
40
42
45
Poplar Ave
North
0
49
Drive 1
0
110
118
87
Poplar Ave
205
160
205
160
Poplar Ave
85
69
5
86
570
0
US 20
US 20
110
415
6
10
9
2
Poplar Ave
Stumpf Travel Center
Webster County
AM Peak Proposed Volume
Year 2041
8
4
2
5
43
0
235th St
7
15
1
7
6
1
Poplar Ave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North
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144
154
69
Poplar Ave
223
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223
237
Poplar Ave
99
111
10
115
520
2
US 20
US 20
111
614
4
0
13
2
Poplar Ave
Stumpf Travel Center
Webster County
PM Peak Proposed Volume
Year 2041
8
10
0
6
18
0
235th St
7
40
4
1
0
0
Poplar Ave

McCLURE™

APPENDIX

iV

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	306	4	0	404	0	7	0	1	0	0	2
Future Vol, veh/h	0	306	4	0	404	0	7	0	1	0	0	2
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	200	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	94	50	88	86	88	88	88	25	88	88	50
Heavy Vehicles, %	0	27	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	0	326	8	0	470	0	8	0	4	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	470	0	0	334	0	0	565	800	167	633	804	235
Stage 1	-	-	-	-	-	-	330	330	-	470	470	-
Stage 2	-	-	-	-	-	-	235	470	-	163	334	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1102	-	-	1237	-	-	412	320	854	368	319	773
Stage 1	-	-	-	-	-	-	663	649	-	548	563	-
Stage 2	-	-	-	-	-	-	753	563	-	829	647	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1102	-	-	1237	-	-	410	320	854	366	319	773
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	320	-	366	319	-
Stage 1	-	-	-	-	-	-	663	649	-	548	563	-
Stage 2	-	-	-	-	-	-	749	563	-	825	647	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.4	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	496	1102	-	-	1237	-	-	773
HCM Lane V/C Ratio	0.024	-	-	-	-	-	-	0.005
HCM Control Delay (s)	12.4	0	-	-	0	-	-	9.7
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	10	1	0	29	2	5	4	1	1	2	1
Future Vol, veh/h	2	10	1	0	29	2	5	4	1	1	2	1
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	25	83	25	88	61	25	63	50	25	25	25	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	12	4	0	48	8	8	8	4	4	8	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	56	0	0	16	0	0	87	86	14	88	84	52
Stage 1	-	-	-	-	-	-	30	30	-	52	52	-
Stage 2	-	-	-	-	-	-	57	56	-	36	32	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1562	-	-	1615	-	-	904	808	1072	902	810	1021
Stage 1	-	-	-	-	-	-	992	874	-	966	856	-
Stage 2	-	-	-	-	-	-	960	852	-	985	872	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1562	-	-	1615	-	-	893	804	1072	888	806	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	893	804	-	888	806	-
Stage 1	-	-	-	-	-	-	987	870	-	961	856	-
Stage 2	-	-	-	-	-	-	950	852	-	967	868	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0	9.2	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	883	1562	-	-	1615	-	-	845
HCM Lane V/C Ratio	0.023	0.005	-	-	-	-	-	0.016
HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	9.3
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	438	3	1	378	1	0	3	1	0	1	2
Future Vol, veh/h	2	438	3	1	378	1	0	3	1	0	1	2
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	200	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	93	75	25	82	25	88	75	25	88	25	50
Heavy Vehicles, %	0	27	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	8	471	4	4	461	4	0	4	4	0	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	465	0	0	475	0	0	730	962	238	725	962	233
Stage 1	-	-	-	-	-	-	489	489	-	471	471	-
Stage 2	-	-	-	-	-	-	241	473	-	254	491	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1107	-	-	1098	-	-	314	258	769	317	258	775
Stage 1	-	-	-	-	-	-	534	553	-	548	563	-
Stage 2	-	-	-	-	-	-	747	562	-	734	552	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1107	-	-	1098	-	-	306	255	769	309	255	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	306	255	-	309	255	-
Stage 1	-	-	-	-	-	-	530	549	-	544	561	-
Stage 2	-	-	-	-	-	-	735	560	-	720	548	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	14.6	14.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	383	1107	-	-	1098	-	-	384
HCM Lane V/C Ratio	0.021	0.007	-	-	0.004	-	-	0.021
HCM Control Delay (s)	14.6	8.3	-	-	8.3	-	-	14.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	27	3	0	12	2	1	0	0	1	0	4
Future Vol, veh/h	2	27	3	0	12	2	1	0	0	1	0	4
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	68	50	88	69	25	50	25	25	63	25	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	2	40	6	0	17	8	2	0	0	2	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	25	0	0	46	0	0	72	72	43	68	71	21
Stage 1	-	-	-	-	-	-	47	47	-	21	21	-
Stage 2	-	-	-	-	-	-	25	25	-	47	50	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1603	-	-	1575	-	-	924	822	1033	930	823	1062
Stage 1	-	-	-	-	-	-	972	860	-	1003	882	-
Stage 2	-	-	-	-	-	-	998	878	-	972	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1603	-	-	1575	-	-	917	821	1033	929	822	1062
Mov Cap-2 Maneuver	-	-	-	-	-	-	917	821	-	929	822	-
Stage 1	-	-	-	-	-	-	971	859	-	1002	882	-
Stage 2	-	-	-	-	-	-	990	878	-	971	856	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	8.9	8.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	917	1603	-	-	1575	-	-	1037
HCM Lane V/C Ratio	0.002	0.001	-	-	-	-	-	0.009
HCM Control Delay (s)	8.9	7.2	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	267	4	0	373	67	7	6	1	83	5	64
Future Vol, veh/h	86	267	4	0	373	67	7	6	1	83	5	64
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	790	-	-	200	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	94	50	88	86	88	63	50	25	88	88	88
Heavy Vehicles, %	27	27	0	0	20	20	0	0	0	27	0	20
Mvmt Flow	98	284	8	0	434	76	11	12	4	94	6	73

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	510	0	0	292	0	0	704	994	146	816	960	255
Stage 1	-	-	-	-	-	-	484	484	-	472	472	-
Stage 2	-	-	-	-	-	-	220	510	-	344	488	-
Critical Hdwy	4.64	-	-	4.1	-	-	7.5	6.5	6.9	8.04	6.5	7.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Follow-up Hdwy	2.47	-	-	2.2	-	-	3.5	4	3.3	3.77	4	3.5
Pot Cap-1 Maneuver	895	-	-	1281	-	-	328	247	881	230	259	692
Stage 1	-	-	-	-	-	-	538	555	-	481	562	-
Stage 2	-	-	-	-	-	-	768	541	-	580	553	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	895	-	-	1281	-	-	264	220	881	201	231	692
Mov Cap-2 Maneuver	-	-	-	-	-	-	264	220	-	201	231	-
Stage 1	-	-	-	-	-	-	479	495	-	429	562	-
Stage 2	-	-	-	-	-	-	680	541	-	502	493	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0	19.9	27.2
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	268	895	-	-	1281	-	-	202	692
HCM Lane V/C Ratio	0.101	0.109	-	-	-	-	-	0.495	0.105
HCM Control Delay (s)	19.9	9.5	-	-	0	-	-	39.1	10.8
HCM Lane LOS	C	A	-	-	A	-	-	E	B
HCM 95th %tile Q(veh)	0.3	0.4	-	-	0	-	-	2.5	0.4

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	10	1	0	29	5	5	4	1	4	2	3
Future Vol, veh/h	5	10	1	0	29	5	5	4	1	4	2	3
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	25	83	25	88	61	25	63	50	25	25	25	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	12	4	0	48	20	8	8	4	16	8	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	16	0	0	118	122	14	118	114	58
Stage 1	-	-	-	-	-	-	54	54	-	58	58	-
Stage 2	-	-	-	-	-	-	64	68	-	60	56	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1546	-	-	1615	-	-	863	772	1072	863	780	1014
Stage 1	-	-	-	-	-	-	963	854	-	959	851	-
Stage 2	-	-	-	-	-	-	952	842	-	957	852	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1615	-	-	845	762	1072	845	770	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	845	762	-	845	770	-
Stage 1	-	-	-	-	-	-	950	843	-	947	851	-
Stage 2	-	-	-	-	-	-	940	842	-	932	841	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.1	0	9.4	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	844	1546	-	-	1615	-	-	839
HCM Lane V/C Ratio	0.024	0.013	-	-	-	-	-	0.033
HCM Control Delay (s)	9.4	7.4	0	-	0	-	-	9.4
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	109	118	42	42	0
Future Vol, veh/h	0	109	118	42	42	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	24	24	0
Mvmt Flow	0	124	134	48	48	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	364	48	48	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	639	962	1429	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	578	962	1429	-	-	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	5.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1429	-	962	-	-
HCM Lane V/C Ratio	0.094	-	0.129	-	-
HCM Control Delay (s)	7.8	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	42	0	2	0
Future Vol, veh/h	0	40	42	0	2	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	0	0	0
Mvmt Flow	0	45	48	0	2	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	98	2	2	0	-	0
Stage 1	2	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	906	1021	1487	-	-	-
Stage 1	1026	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	877	1021	1487	-	-	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	7.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1487	-	1021	-	-
HCM Lane V/C Ratio	0.032	-	0.045	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	13.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	108	401	3	1	336	96	0	11	1	100	8	91
Future Vol, veh/h	108	401	3	1	336	96	0	11	1	100	8	91
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	790	-	-	200	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	75	25	82	82	88	75	25	88	25	88
Heavy Vehicles, %	27	27	0	0	20	20	0	0	0	27	0	20
Mvmt Flow	116	431	4	4	410	117	0	15	4	114	32	103

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	527	0	0	435	0	0	894	1200	218	932	1144	264
Stage 1	-	-	-	-	-	-	665	665	-	477	477	-
Stage 2	-	-	-	-	-	-	229	535	-	455	667	-
Critical Hdwy	4.64	-	-	4.1	-	-	7.5	6.5	6.9	8.04	6.5	7.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Follow-up Hdwy	2.47	-	-	2.2	-	-	3.5	4	3.3	3.77	4	3.5
Pot Cap-1 Maneuver	881	-	-	1135	-	-	239	187	792	187	202	683
Stage 1	-	-	-	-	-	-	420	461	-	477	559	-
Stage 2	-	-	-	-	-	-	759	527	-	493	460	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	881	-	-	1135	-	-	157	162	792	156	175	683
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	162	-	156	175	-
Stage 1	-	-	-	-	-	-	365	400	-	414	557	-
Stage 2	-	-	-	-	-	-	605	525	-	410	399	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.1	25.4	66.3
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	195	881	-	-	1135	-	-	160	683
HCM Lane V/C Ratio	0.096	0.132	-	-	0.004	-	-	0.91	0.151
HCM Control Delay (s)	25.4	9.7	-	-	8.2	-	-	105.4	11.2
HCM Lane LOS	D	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	0.3	0.5	-	-	0	-	-	6.5	0.5

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	27	3	0	12	6	1	0	0	5	0	7
Future Vol, veh/h	6	27	3	0	12	6	1	0	0	5	0	7
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	68	50	69	69	25	50	25	25	63	25	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	7	40	6	0	17	24	2	0	0	8	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	41	0	0	46	0	0	93	98	43	86	89	29
Stage 1	-	-	-	-	-	-	57	57	-	29	29	-
Stage 2	-	-	-	-	-	-	36	41	-	57	60	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1581	-	-	1575	-	-	895	796	1033	905	805	1052
Stage 1	-	-	-	-	-	-	960	851	-	993	875	-
Stage 2	-	-	-	-	-	-	985	865	-	960	849	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1581	-	-	1575	-	-	880	792	1033	901	801	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	880	792	-	901	801	-
Stage 1	-	-	-	-	-	-	955	847	-	988	875	-
Stage 2	-	-	-	-	-	-	972	865	-	955	845	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	9.1	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	880	1581	-	-	1575	-	-	992
HCM Lane V/C Ratio	0.002	0.004	-	-	-	-	-	0.022
HCM Control Delay (s)	9.1	7.3	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	144	154	61	55	0
Future Vol, veh/h	0	144	154	61	55	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	24	24	0
Mvmt Flow	0	164	175	69	63	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	482	63	63	0	-	0
Stage 1	63	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	547	943	1410	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	476	943	1410	-	-	-
Mov Cap-2 Maneuver	476	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	5.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1410	-	943	-	-
HCM Lane V/C Ratio	0.124	-	0.174	-	-
HCM Control Delay (s)	7.9	0	9.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	52	55	6	3	0
Future Vol, veh/h	0	52	55	6	3	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	0	0	0
Mvmt Flow	0	59	63	7	3	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	136	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	862	1020	1486	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	825	1020	1486	-	-	-
Mov Cap-2 Maneuver	825	-	-	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	6.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1486	-	1020	-	-
HCM Lane V/C Ratio	0.042	-	0.058	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	380	73	0	86	0	0	0	152
Future Vol, veh/h	0	0	0	0	380	73	0	86	0	0	0	152
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	550	-	700	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	94	50	88	86	88	88	88	88	88	88	88
Heavy Vehicles, %	20	20	0	0	20	20	0	27	0	20	2	20
Mvmt Flow	0	0	0	0	442	83	0	98	0	0	0	173

Major/Minor	Major2			Major1			Minor2		
Conflicting Flow All	98	0	0	-	0	-	-	-	221
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	-	-	-	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	-	-	-	3.49
Pot Cap-1 Maneuver	1508	-	-	0	-	0	0	0	737
Stage 1	-	-	-	0	-	0	0	0	-
Stage 2	-	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1508	-	-	-	-	-	-	0	737
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1508	-	-	737
HCM Lane V/C Ratio	-	-	-	-	0.234
HCM Control Delay (s)	-	0	-	-	11.4
HCM Lane LOS	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0.9

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	350	9	0	0	0	0	0	14	0	0	0
Future Vol, veh/h	86	350	9	0	0	0	0	0	14	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	550	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	94	50	88	88	88	63	50	50	88	88	88
Heavy Vehicles, %	27	27	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	98	372	18	0	0	0	0	0	28	0	0	0

Major/Minor	Major1			Minor1			Major2		
Conflicting Flow All	1	0	0	-	-	195	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.505	-	-	-	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.4565	-	-	-	-	3.3	-	-	-
Pot Cap-1 Maneuver	1464	-	-	0	0	820	0	-	0
Stage 1	-	-	-	0	0	-	0	-	0
Stage 2	-	-	-	0	0	-	0	-	0
Platoon blocked, %		-	-					-	
Mov Cap-1 Maneuver	1464	-	-	-	0	820	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	0	-	-	-	-
Stage 1	-	-	-	-	0	-	-	-	-
Stage 2	-	-	-	-	0	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	1.5	9.5	0
HCM LOS		A	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBT
Capacity (veh/h)	820	1464	-	-	-
HCM Lane V/C Ratio	0.034	0.067	-	-	-
HCM Control Delay (s)	9.5	7.6	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	10	1	0	29	5	5	4	1	4	2	3
Future Vol, veh/h	5	10	1	0	29	5	5	4	1	4	2	3
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	25	83	25	88	61	25	63	50	25	25	25	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	12	4	0	48	20	8	8	4	16	8	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	16	0	0	118	122	14	118	114	58
Stage 1	-	-	-	-	-	-	54	54	-	58	58	-
Stage 2	-	-	-	-	-	-	64	68	-	60	56	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1546	-	-	1615	-	-	863	772	1072	863	780	1014
Stage 1	-	-	-	-	-	-	963	854	-	959	851	-
Stage 2	-	-	-	-	-	-	952	842	-	957	852	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1615	-	-	845	762	1072	845	770	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	845	762	-	845	770	-
Stage 1	-	-	-	-	-	-	950	843	-	947	851	-
Stage 2	-	-	-	-	-	-	940	842	-	932	841	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.1	0	9.4	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	844	1546	-	-	1615	-	-	839
HCM Lane V/C Ratio	0.024	0.013	-	-	-	-	-	0.033
HCM Control Delay (s)	9.4	7.4	0	-	0	-	-	9.4
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	109	118	42	42	0
Future Vol, veh/h	0	109	118	42	42	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	24	24	0
Mvmt Flow	0	124	134	48	48	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	364	48	48	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	639	962	1429	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	578	962	1429	-	-	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	5.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1429	-	962	-	-
HCM Lane V/C Ratio	0.094	-	0.129	-	-
HCM Control Delay (s)	7.8	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	42	0	2	0
Future Vol, veh/h	0	40	42	0	2	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	0	0	0
Mvmt Flow	0	45	48	0	2	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	98	2	2	0	-	0
Stage 1	2	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	906	1021	1487	-	-	-
Stage 1	1026	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	877	1021	1487	-	-	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	933	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	7.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1487	-	1021	-	-
HCM Lane V/C Ratio	0.032	-	0.045	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	1	336	107	0	108	0	0	0	199
Future Vol, veh/h	0	0	0	1	336	107	0	108	0	0	0	199
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	550	-	700	-	-	-	-	-	0
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	75	25	82	82	93	93	93	88	88	88
Heavy Vehicles, %	20	20	0	0	20	20	0	27	0	20	2	20
Mvmt Flow	0	0	0	4	410	130	0	116	0	0	0	226

Major/Minor	Major2			Major1			Minor2		
Conflicting Flow All	116	0	0	-	0	-	-	-	205
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	-	-	-	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	-	-	-	3.49
Pot Cap-1 Maneuver	1485	-	-	0	-	0	0	0	755
Stage 1	-	-	-	0	-	0	0	0	-
Stage 2	-	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1485	-	-	-	-	-	-	0	755
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	0.1	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1485	-	-	755
HCM Lane V/C Ratio	-	0.003	-	-	0.3
HCM Control Delay (s)	-	7.4	-	-	11.8
HCM Lane LOS	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	1.3

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	108	501	11	0	0	0	0	0	12	0	1	0
Future Vol, veh/h	108	501	11	0	0	0	0	0	12	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	550	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	75	25	82	82	75	75	75	88	25	88
Heavy Vehicles, %	27	27	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	116	539	15	0	0	0	0	0	16	0	4	0

Major/Minor	Major1			Minor1			Major2		
Conflicting Flow All	4	0	0	-	-	277	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.505	-	-	-	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.4565	-	-	-	-	3.3	-	-	-
Pot Cap-1 Maneuver	1460	-	-	0	0	726	0	-	0
Stage 1	-	-	-	0	0	-	0	-	0
Stage 2	-	-	-	0	0	-	0	-	0
Platoon blocked, %		-	-					-	
Mov Cap-1 Maneuver	1460	-	-	-	0	726	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	0	-	-	-	-
Stage 1	-	-	-	-	0	-	-	-	-
Stage 2	-	-	-	-	0	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	1.3	10.1	0
HCM LOS		B	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBT
Capacity (veh/h)	726	1460	-	-	-
HCM Lane V/C Ratio	0.022	0.08	-	-	-
HCM Control Delay (s)	10.1	7.7	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.3	-	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	6	27	3	0	12	6	1	0	0	5	0	7
Future Vol, veh/h	6	27	3	0	12	6	1	0	0	5	0	7
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	68	50	69	69	25	50	25	25	63	25	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	7	40	6	0	17	24	2	0	0	8	0	14

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	41	0	0	46	0	0	93	98	43	86	89	29
Stage 1	-	-	-	-	-	-	57	57	-	29	29	-
Stage 2	-	-	-	-	-	-	36	41	-	57	60	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1581	-	-	1575	-	-	895	796	1033	905	805	1052
Stage 1	-	-	-	-	-	-	960	851	-	993	875	-
Stage 2	-	-	-	-	-	-	985	865	-	960	849	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1581	-	-	1575	-	-	880	792	1033	901	801	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	880	792	-	901	801	-
Stage 1	-	-	-	-	-	-	955	847	-	988	875	-
Stage 2	-	-	-	-	-	-	972	865	-	955	845	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	9.1	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	880	1581	-	-	1575	-	-	992
HCM Lane V/C Ratio	0.002	0.004	-	-	-	-	-	0.022
HCM Control Delay (s)	9.1	7.3	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	144	154	61	55	0
Future Vol, veh/h	0	144	154	61	55	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	27	15	0	15	0
Mvmt Flow	0	164	175	69	63	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	482	63	63	0	-	0
Stage 1	63	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.4	6.47	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.543	2.335	-	-	-
Pot Cap-1 Maneuver	547	936	1461	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	479	936	1461	-	-	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	5.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1461	-	936	-	-
HCM Lane V/C Ratio	0.12	-	0.175	-	-
HCM Control Delay (s)	7.8	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	52	55	6	3	0
Future Vol, veh/h	0	52	55	6	3	0
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	88	88	88	88	88	100
Heavy Vehicles, %	2	2	20	0	0	0
Mvmt Flow	0	59	63	7	3	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	136	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	133	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.3	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.38	-	-	-
Pot Cap-1 Maneuver	857	1081	1509	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	821	1081	1509	-	-	-
Mov Cap-2 Maneuver	821	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	893	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	6.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1509	-	1081	-	-
HCM Lane V/C Ratio	0.041	-	0.055	-	-
HCM Control Delay (s)	7.5	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	455	6	0	600	0	10	0	2	0	0	3
Future Vol, veh/h	0	455	6	0	600	0	10	0	2	0	0	3
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	200	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	94	50	88	86	88	88	88	25	88	88	50
Heavy Vehicles, %	0	27	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	0	484	12	0	698	0	11	0	8	0	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	698	0	0	496	0	0	839	1188	248	940	1194	349
Stage 1	-	-	-	-	-	-	490	490	-	698	698	-
Stage 2	-	-	-	-	-	-	349	698	-	242	496	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	908	-	-	1078	-	-	262	190	758	221	188	653
Stage 1	-	-	-	-	-	-	534	552	-	402	445	-
Stage 2	-	-	-	-	-	-	646	445	-	746	549	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	908	-	-	1078	-	-	260	190	758	219	188	653
Mov Cap-2 Maneuver	-	-	-	-	-	-	260	190	-	219	188	-
Stage 1	-	-	-	-	-	-	534	552	-	402	445	-
Stage 2	-	-	-	-	-	-	640	445	-	738	549	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	15.7	10.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	908	-	-	1078	-	-	653
HCM Lane V/C Ratio	0.054	-	-	-	-	-	-	0.009
HCM Control Delay (s)	15.7	0	-	-	0	-	-	10.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	3	15	1	0	43	3	7	6	1	2	3	1
Future Vol, veh/h	3	15	1	0	43	3	7	6	1	2	3	1
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	25	83	25	88	61	25	63	50	25	25	25	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	18	4	0	70	12	11	12	4	8	12	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	22	0	0	127	126	20	128	122	76
Stage 1	-	-	-	-	-	-	44	44	-	76	76	-
Stage 2	-	-	-	-	-	-	83	82	-	52	46	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1528	-	-	1607	-	-	851	768	1064	850	772	991
Stage 1	-	-	-	-	-	-	975	862	-	938	836	-
Stage 2	-	-	-	-	-	-	930	831	-	966	861	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1528	-	-	1607	-	-	835	762	1064	831	766	991
Mov Cap-2 Maneuver	-	-	-	-	-	-	835	762	-	831	766	-
Stage 1	-	-	-	-	-	-	967	855	-	930	836	-
Stage 2	-	-	-	-	-	-	916	831	-	941	854	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	0	9.5	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	826	1528	-	-	1607	-	-	799
HCM Lane V/C Ratio	0.033	0.008	-	-	-	-	-	0.026
HCM Control Delay (s)	9.5	7.4	0	-	0	-	-	9.6
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	651	4	2	562	1	0	4	2	0	1	3
Future Vol, veh/h	2	651	4	2	562	1	0	4	2	0	1	3
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	200	-	-	200	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	93	75	25	82	25	88	75	25	88	25	50
Heavy Vehicles, %	0	27	0	0	20	0	0	0	0	0	0	0
Mvmt Flow	8	700	5	8	685	4	0	5	8	0	4	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	689	0	0	705	0	0	1080	1424	353	1072	1424	345
Stage 1	-	-	-	-	-	-	719	719	-	703	703	-
Stage 2	-	-	-	-	-	-	361	705	-	369	721	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	915	-	-	902	-	-	175	137	649	177	137	657
Stage 1	-	-	-	-	-	-	390	436	-	399	443	-
Stage 2	-	-	-	-	-	-	636	442	-	629	435	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	915	-	-	902	-	-	167	135	649	167	135	657
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	135	-	167	135	-
Stage 1	-	-	-	-	-	-	386	432	-	395	439	-
Stage 2	-	-	-	-	-	-	619	438	-	608	431	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	19.8	19.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	257	915	-	-	902	-	-	258
HCM Lane V/C Ratio	0.052	0.009	-	-	0.009	-	-	0.039
HCM Control Delay (s)	19.8	9	-	-	9	-	-	19.5
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	40	4	0	18	3	1	0	0	1	0	6
Future Vol, veh/h	3	40	4	0	18	3	1	0	0	1	0	6
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	68	50	88	69	25	50	25	25	63	25	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	59	8	0	26	12	2	0	0	2	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	67	0	0	107	107	63	101	105	32
Stage 1	-	-	-	-	-	-	69	69	-	32	32	-
Stage 2	-	-	-	-	-	-	38	38	-	69	73	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1585	-	-	1547	-	-	877	787	1007	885	789	1048
Stage 1	-	-	-	-	-	-	946	841	-	990	872	-
Stage 2	-	-	-	-	-	-	982	867	-	946	838	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1585	-	-	1547	-	-	866	785	1007	883	787	1048
Mov Cap-2 Maneuver	-	-	-	-	-	-	866	785	-	883	787	-
Stage 1	-	-	-	-	-	-	944	839	-	988	872	-
Stage 2	-	-	-	-	-	-	971	867	-	944	836	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	9.2	8.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	866	1585	-	-	1547	-	-	1026
HCM Lane V/C Ratio	0.002	0.002	-	-	-	-	-	0.013
HCM Control Delay (s)	9.2	7.3	0	-	0	-	-	8.6
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	13.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	415	6	0	570	85	10	9	2	86	5	69
Future Vol, veh/h	110	415	6	0	570	85	10	9	2	86	5	69
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	790	-	-	200	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	94	50	88	92	88	88	88	25	88	88	88
Heavy Vehicles, %	27	27	0	0	20	20	0	0	0	27	0	20
Mvmt Flow	125	441	12	0	620	97	11	10	8	98	6	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	717	0	0	453	0	0	1010	1414	227	1145	1372	359
Stage 1	-	-	-	-	-	-	697	697	-	669	669	-
Stage 2	-	-	-	-	-	-	313	717	-	476	703	-
Critical Hdwy	4.64	-	-	4.1	-	-	7.5	6.5	6.9	8.04	6.5	7.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Follow-up Hdwy	2.47	-	-	2.2	-	-	3.5	4	3.3	3.77	4	3.5
Pot Cap-1 Maneuver	732	-	-	1118	-	-	197	139	782	127	147	588
Stage 1	-	-	-	-	-	-	402	446	-	359	459	-
Stage 2	-	-	-	-	-	-	678	437	-	478	443	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	732	-	-	1118	-	-	143	115	782	102	122	588
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	115	-	102	122	-
Stage 1	-	-	-	-	-	-	333	370	-	298	459	-
Stage 2	-	-	-	-	-	-	580	437	-	381	367	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.4	0	31.3	99.9
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	166	732	-	-	1118	-	-	103	588
HCM Lane V/C Ratio	0.178	0.171	-	-	-	-	-	1.004	0.133
HCM Control Delay (s)	31.3	10.9	-	-	0	-	-	166.5	12.1
HCM Lane LOS	D	B	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	0.6	0.6	-	-	0	-	-	6.3	0.5

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	7	15	1	0	43	8	7	6	1	5	2	4
Future Vol, veh/h	7	15	1	0	43	8	7	6	1	5	2	4
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	25	83	25	88	61	25	63	50	25	25	25	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	28	18	4	0	70	32	11	12	4	20	8	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	102	0	0	22	0	0	169	178	20	170	164	86
Stage 1	-	-	-	-	-	-	76	76	-	86	86	-
Stage 2	-	-	-	-	-	-	93	102	-	84	78	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1503	-	-	1607	-	-	799	719	1064	798	732	978
Stage 1	-	-	-	-	-	-	938	836	-	927	827	-
Stage 2	-	-	-	-	-	-	919	815	-	929	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1503	-	-	1607	-	-	777	705	1064	773	718	978
Mov Cap-2 Maneuver	-	-	-	-	-	-	777	705	-	773	718	-
Stage 1	-	-	-	-	-	-	920	820	-	909	827	-
Stage 2	-	-	-	-	-	-	906	815	-	895	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.2	0	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	773	1503	-	-	1607	-	-	781
HCM Lane V/C Ratio	0.035	0.019	-	-	-	-	-	0.042
HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	110	118	87	49	0
Future Vol, veh/h	0	110	118	87	49	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	24	24	0
Mvmt Flow	0	125	134	99	56	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	423	56	56	0	-	0
Stage 1	56	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	591	952	1419	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	952	1419	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	4.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1419	-	952	-	-
HCM Lane V/C Ratio	0.094	-	0.131	-	-
HCM Control Delay (s)	7.8	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	42	45	9	0
Future Vol, veh/h	0	40	42	45	9	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	0	0	0
Mvmt Flow	0	45	48	51	10	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	157	10	10	0	-	0
Stage 1	10	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	839	1011	1477	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	811	1011	1477	-	-	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	3.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1477	-	1011	-	-
HCM Lane V/C Ratio	0.032	-	0.045	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	59.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	614	4	2	520	99	0	13	2	115	10	111
Future Vol, veh/h	111	614	4	2	520	99	0	13	2	115	10	111
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	790	-	-	200	-	-	-	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	93	75	25	92	82	88	75	25	88	25	88
Heavy Vehicles, %	27	27	0	0	20	20	0	0	0	27	0	20
Mvmt Flow	126	660	5	8	565	121	0	17	8	131	40	126

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	686	0	0	665	0	0	1234	1617	333	1233	1559	343
Stage 1	-	-	-	-	-	-	915	915	-	642	642	-
Stage 2	-	-	-	-	-	-	319	702	-	591	917	-
Critical Hdwy	4.64	-	-	4.1	-	-	7.5	6.5	6.9	8.04	6.5	7.3
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7.04	5.5	-
Follow-up Hdwy	2.47	-	-	2.2	-	-	3.5	4	3.3	3.77	4	3.5
Pot Cap-1 Maneuver	755	-	-	934	-	-	135	105	669	~ 108	113	603
Stage 1	-	-	-	-	-	-	298	354	-	374	472	-
Stage 2	-	-	-	-	-	-	673	443	-	403	354	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	755	-	-	934	-	-	62	87	669	~ 79	93	603
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	87	-	~ 79	93	-
Stage 1	-	-	-	-	-	-	248	295	-	312	468	-
Stage 2	-	-	-	-	-	-	483	439	-	312	295	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.1	42.9	$ 355.5
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	120	755	-	-	934	-	-	82	603
HCM Lane V/C Ratio	0.211	0.167	-	-	0.009	-	-	2.081	0.209
HCM Control Delay (s)	42.9	10.7	-	-	8.9	-	-	$ 609	12.5
HCM Lane LOS	E	B	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	0.8	0.6	-	-	0	-	-	15.3	0.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	40	4	0	18	8	1	0	0	6	0	10
Future Vol, veh/h	7	40	4	0	18	8	1	0	0	6	0	10
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	68	50	88	69	25	50	25	25	63	25	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	59	8	0	26	32	2	0	0	10	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	58	0	0	67	0	0	131	137	63	121	125	42
Stage 1	-	-	-	-	-	-	79	79	-	42	42	-
Stage 2	-	-	-	-	-	-	52	58	-	79	83	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1559	-	-	1547	-	-	846	758	1007	859	769	1034
Stage 1	-	-	-	-	-	-	935	833	-	978	864	-
Stage 2	-	-	-	-	-	-	966	851	-	935	830	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1547	-	-	827	754	1007	856	765	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	827	754	-	856	765	-
Stage 1	-	-	-	-	-	-	930	829	-	973	864	-
Stage 2	-	-	-	-	-	-	947	851	-	930	826	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	9.4	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	827	1559	-	-	1547	-	-	969
HCM Lane V/C Ratio	0.002	0.005	-	-	-	-	-	0.03
HCM Control Delay (s)	9.4	7.3	0	-	0	-	-	8.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	144	154	69	92	0
Future Vol, veh/h	0	144	154	69	92	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	24	24	0
Mvmt Flow	0	164	175	78	105	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	533	105	105	0	-	0
Stage 1	105	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	511	893	1360	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	442	893	1360	-	-	-
Mov Cap-2 Maneuver	442	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	662	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	5.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1360	-	893	-	-
HCM Lane V/C Ratio	0.129	-	0.183	-	-
HCM Control Delay (s)	8	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.4	-	0.7	-	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	52	55	14	40	0
Future Vol, veh/h	0	52	55	14	40	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	0	0	0
Mvmt Flow	0	59	63	16	45	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	187	45	45	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	142	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	807	966	1433	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	771	966	1433	-	-	-
Mov Cap-2 Maneuver	771	-	-	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	6.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1433	-	966	-	-
HCM Lane V/C Ratio	0.044	-	0.061	-	-
HCM Control Delay (s)	7.6	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	580	94	0	110	0	0	0	160
Future Vol, veh/h	0	0	0	0	580	94	0	110	0	0	0	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	550	-	700	-	-	-	-	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	85	25	92	88	92	92	92	88	88	88
Heavy Vehicles, %	20	20	0	0	20	20	0	27	0	20	2	20
Mvmt Flow	0	0	0	0	630	107	0	120	0	0	0	182

Major/Minor	Major2			Major1			Minor2		
Conflicting Flow All	120	0	0	-	0	-	-	-	315
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	-	-	-	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	-	-	-	3.49
Pot Cap-1 Maneuver	1480	-	-	0	-	0	0	0	638
Stage 1	-	-	-	0	-	0	0	0	-
Stage 2	-	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1480	-	-	-	-	-	-	0	638
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1480	-	-	638
HCM Lane V/C Ratio	-	-	-	-	0.285
HCM Control Delay (s)	-	0	-	-	12.9
HCM Lane LOS	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	1.2

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	501	11	0	0	0	0	0	21	0	0	0
Future Vol, veh/h	110	501	11	0	0	0	0	0	21	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	550	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	92	92	92	92	92	92	68	92	25	92
Heavy Vehicles, %	27	27	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	125	545	12	0	0	0	0	0	31	0	0	0

Major/Minor	Major1			Minor1			Major2		
Conflicting Flow All	4	0	0	-	-	279	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.505	-	-	-	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.4565	-	-	-	-	3.3	-	-	-
Pot Cap-1 Maneuver	1460	-	-	0	0	724	0	-	0
Stage 1	-	-	-	0	0	-	0	-	0
Stage 2	-	-	-	0	0	-	0	-	0
Platoon blocked, %		-	-					-	
Mov Cap-1 Maneuver	1460	-	-	-	0	724	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	0	-	-	-	-
Stage 1	-	-	-	-	0	-	-	-	-
Stage 2	-	-	-	-	0	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	1.4	10.2	0
HCM LOS		B	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBT
Capacity (veh/h)	724	1460	-	-	-
HCM Lane V/C Ratio	0.043	0.086	-	-	-
HCM Control Delay (s)	10.2	7.7	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.3	-	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	15	1	0	43	8	7	6	1	5	2	4
Future Vol, veh/h	7	15	1	0	43	8	7	6	1	5	2	4
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	25	83	25	88	61	25	63	50	25	25	25	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	28	18	4	0	70	32	11	12	4	20	8	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	102	0	0	22	0	0	169	178	20	170	164	86
Stage 1	-	-	-	-	-	-	76	76	-	86	86	-
Stage 2	-	-	-	-	-	-	93	102	-	84	78	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1503	-	-	1607	-	-	799	719	1064	798	732	978
Stage 1	-	-	-	-	-	-	938	836	-	927	827	-
Stage 2	-	-	-	-	-	-	919	815	-	929	834	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1503	-	-	1607	-	-	777	705	1064	773	718	978
Mov Cap-2 Maneuver	-	-	-	-	-	-	777	705	-	773	718	-
Stage 1	-	-	-	-	-	-	920	820	-	909	827	-
Stage 2	-	-	-	-	-	-	906	815	-	895	818	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.2	0	9.8	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	773	1503	-	-	1607	-	-	781
HCM Lane V/C Ratio	0.035	0.019	-	-	-	-	-	0.042
HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	9.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	110	118	87	49	0
Future Vol, veh/h	0	110	118	87	49	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	24	24	0
Mvmt Flow	0	125	134	99	56	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	423	56	56	0	-	0
Stage 1	56	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	591	952	1419	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	952	1419	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	4.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1419	-	952	-	-
HCM Lane V/C Ratio	0.094	-	0.131	-	-
HCM Control Delay (s)	7.8	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	42	45	9	0
Future Vol, veh/h	0	40	42	45	9	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	24	24	0	0	0
Mvmt Flow	0	45	48	51	10	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	157	10	10	0	-	0
Stage 1	10	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.4	6.44	4.34	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.516	2.416	-	-	-
Pot Cap-1 Maneuver	839	1011	1477	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	811	1011	1477	-	-	-
Mov Cap-2 Maneuver	811	-	-	-	-	-
Stage 1	984	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	3.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1477	-	1011	-	-
HCM Lane V/C Ratio	0.032	-	0.045	-	-
HCM Control Delay (s)	7.5	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	2	520	112	0	111	0	0	0	236
Future Vol, veh/h	0	0	0	2	520	112	0	111	0	0	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	550	-	700	-	-	-	-	-	0
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	85	25	92	88	87	88	88	88	88	88
Heavy Vehicles, %	20	20	0	0	20	20	0	27	0	20	2	20
Mvmt Flow	0	0	0	8	565	127	0	126	0	0	0	268

Major/Minor	Major2			Major1			Minor2		
Conflicting Flow All	126	0	0	-	0	-	-	-	283
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.1	-	-	-	-	-	-	-	7.2
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.2	-	-	-	-	-	-	-	3.49
Pot Cap-1 Maneuver	1473	-	-	0	-	0	0	0	670
Stage 1	-	-	-	0	-	0	0	0	-
Stage 2	-	-	-	0	-	0	0	0	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	1473	-	-	-	-	-	-	0	670
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-
Stage 1	-	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	0.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBT	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1473	-	-	670
HCM Lane V/C Ratio	-	0.005	-	-	0.4
HCM Control Delay (s)	-	7.5	-	-	13.9
HCM Lane LOS	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	1.9

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	729	14	0	0	0	0	0	15	0	2	0
Future Vol, veh/h	111	729	14	0	0	0	0	0	15	0	2	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	550	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	92	92	92	92	92	92	92	68	92	25	92
Heavy Vehicles, %	27	27	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	126	792	15	0	0	0	0	0	22	0	8	0

Major/Minor	Major1			Minor1			Major2		
Conflicting Flow All	8	0	0	-	-	404	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.505	-	-	-	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.4565	-	-	-	-	3.3	-	-	-
Pot Cap-1 Maneuver	1455	-	-	0	0	602	0	-	0
Stage 1	-	-	-	0	0	-	0	-	0
Stage 2	-	-	-	0	0	-	0	-	0
Platoon blocked, %		-	-					-	
Mov Cap-1 Maneuver	1455	-	-	-	0	602	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	0	-	-	-	-
Stage 1	-	-	-	-	0	-	-	-	-
Stage 2	-	-	-	-	0	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	1	11.2	0
HCM LOS		B	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBT
Capacity (veh/h)	602	1455	-	-	-
HCM Lane V/C Ratio	0.037	0.087	-	-	-
HCM Control Delay (s)	11.2	7.7	-	-	-
HCM Lane LOS	B	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.3	-	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	40	4	0	18	8	1	0	0	6	0	10
Future Vol, veh/h	7	40	4	0	18	8	1	0	0	6	0	10
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	68	50	69	69	25	50	25	25	63	25	50
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	59	8	0	26	32	2	0	0	10	0	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	58	0	0	67	0	0	131	137	63	121	125	42
Stage 1	-	-	-	-	-	-	79	79	-	42	42	-
Stage 2	-	-	-	-	-	-	52	58	-	79	83	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1559	-	-	1547	-	-	846	758	1007	859	769	1034
Stage 1	-	-	-	-	-	-	935	833	-	978	864	-
Stage 2	-	-	-	-	-	-	966	851	-	935	830	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1559	-	-	1547	-	-	827	754	1007	856	765	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	827	754	-	856	765	-
Stage 1	-	-	-	-	-	-	930	829	-	973	864	-
Stage 2	-	-	-	-	-	-	947	851	-	930	826	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	9.4	8.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	827	1559	-	-	1547	-	-	969
HCM Lane V/C Ratio	0.002	0.005	-	-	-	-	-	0.03
HCM Control Delay (s)	9.4	7.3	0	-	0	-	-	8.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	144	154	69	92	0
Future Vol, veh/h	0	144	154	69	92	0
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	88	88	88	88	88	88
Heavy Vehicles, %	0	27	15	0	15	0
Mvmt Flow	0	164	175	78	105	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	533	105	105	0	-	0
Stage 1	105	-	-	-	-	-
Stage 2	428	-	-	-	-	-
Critical Hdwy	6.4	6.47	4.25	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.543	2.335	-	-	-
Pot Cap-1 Maneuver	511	886	1409	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	445	886	1409	-	-	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	662	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	5.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1409	-	886	-	-
HCM Lane V/C Ratio	0.124	-	0.185	-	-
HCM Control Delay (s)	7.9	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.7	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	52	55	14	40	0
Future Vol, veh/h	0	52	55	14	40	0
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	88	88	88	88	88	88
Heavy Vehicles, %	2	2	20	0	0	0
Mvmt Flow	0	59	63	16	45	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	187	45	45	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	142	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.3	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.38	-	-	-
Pot Cap-1 Maneuver	802	1025	1455	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	767	1025	1455	-	-	-
Mov Cap-2 Maneuver	767	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	885	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1455	-	1025	-	-
HCM Lane V/C Ratio	0.043	-	0.058	-	-
HCM Control Delay (s)	7.6	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

McCLURE™

APPENDIX

V

Intersection: 1: Poplar Ave & US 20

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	35	22
Average Queue (ft)	7	1
95th Queue (ft)	29	11
Link Distance (ft)	188	826
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Poplar Ave & 235th St

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	31
Average Queue (ft)	7	4
95th Queue (ft)	26	21
Link Distance (ft)	654	188
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Poplar Ave & US 20

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	5	7	33	25
Average Queue (ft)	0	0	4	2
95th Queue (ft)	4	5	21	14
Link Distance (ft)			188	826
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200	200		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Poplar Ave & 235th St

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	15	31
Average Queue (ft)	1	5
95th Queue (ft)	9	24
Link Distance (ft)	654	188
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Poplar Ave & US 20

Movement	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	LT	R
Maximum Queue (ft)	78	12	39	164	126
Average Queue (ft)	24	0	12	59	39
95th Queue (ft)	61	8	37	121	85
Link Distance (ft)		1635	188	288	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	790				150
Storage Blk Time (%)				1	0
Queuing Penalty (veh)				1	0

Intersection: 6: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	5	29	31
Average Queue (ft)	0	7	8
95th Queue (ft)	3	26	31
Link Distance (ft)	447	654	188
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Poplar Ave & Drive 1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	100	48
Average Queue (ft)	50	7
95th Queue (ft)	84	30
Link Distance (ft)	99	288
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Poplar Ave & Drive 2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	75
Average Queue (ft)	29
95th Queue (ft)	65
Link Distance (ft)	117
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1

Intersection: 1: Poplar Ave & US 20

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	LTR	LT	R
Maximum Queue (ft)	93	4	2	20	46	256	164
Average Queue (ft)	29	0	0	1	11	89	50
95th Queue (ft)	69	3	2	9	37	191	115
Link Distance (ft)		1859		1635	188	288	
Upstream Blk Time (%)						1	
Queuing Penalty (veh)						1	
Storage Bay Dist (ft)	790		200				150
Storage Blk Time (%)						5	0
Queuing Penalty (veh)						4	0

Intersection: 6: Poplar Ave & 235th St

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	22	31
Average Queue (ft)	1	10
95th Queue (ft)	10	34
Link Distance (ft)	654	188
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Poplar Ave & Drive 1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	113	57	7
Average Queue (ft)	57	10	0
95th Queue (ft)	97	40	6
Link Distance (ft)	99	288	209
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Poplar Ave & Drive 2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	79	3
Average Queue (ft)	34	0
95th Queue (ft)	68	3
Link Distance (ft)	117	209
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 6

Intersection: 1: Cambridge St/Poplar Ave & US 20 Westbound

Movement	WB	WB	WB	NB	SB
Directions Served	T	T	R	T	R
Maximum Queue (ft)	41	15	28	49	96
Average Queue (ft)	2	0	2	7	44
95th Queue (ft)	16	6	14	30	76
Link Distance (ft)	952	952		24	228
Upstream Blk Time (%)				0	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)			700		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Poplar Ave/Cambridge St & US 20 Eastbound

Movement	EB	NB
Directions Served	L	R
Maximum Queue (ft)	12	33
Average Queue (ft)	0	11
95th Queue (ft)	6	35
Link Distance (ft)		144
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	550	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: US 20 Westbound

Movement	WB
Directions Served	L
Maximum Queue (ft)	60
Average Queue (ft)	5
95th Queue (ft)	28
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	700
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: US 20 Eastbound

Movement	SB
Directions Served	L
Maximum Queue (ft)	94
Average Queue (ft)	39
95th Queue (ft)	88
Link Distance (ft)	42
Upstream Blk Time (%)	5
Queuing Penalty (veh)	4
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: US 20 Westbound

Movement	NB
Directions Served	L
Maximum Queue (ft)	63
Average Queue (ft)	9
95th Queue (ft)	43
Link Distance (ft)	41
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: US 20 Eastbound

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 13: Poplar Ave & 235th St

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	29	31
Average Queue (ft)	7	9
95th Queue (ft)	26	31
Link Distance (ft)	657	144
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: Poplar Ave & Drive 1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	105	62
Average Queue (ft)	51	7
95th Queue (ft)	86	35
Link Distance (ft)	102	228
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18: Poplar Ave & Drive 2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	86	8
Average Queue (ft)	31	0
95th Queue (ft)	67	6
Link Distance (ft)	117	210
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 5

Intersection: 1: Cambridge St/Poplar Ave & US 20 Westbound

Movement	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	T	R
Maximum Queue (ft)	2	37	15	45	46	117
Average Queue (ft)	0	3	1	4	6	51
95th Queue (ft)	2	19	10	24	27	91
Link Distance (ft)		952	952		24	228
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					1	
Storage Bay Dist (ft)	550			700		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Poplar Ave/Cambridge St & US 20 Eastbound

Movement	EB	NB	SB
Directions Served	L	R	T
Maximum Queue (ft)	29	33	5
Average Queue (ft)	1	10	0
95th Queue (ft)	13	33	3
Link Distance (ft)		144	24
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)	550		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: US 20 Westbound

Movement	WB
Directions Served	L
Maximum Queue (ft)	65
Average Queue (ft)	8
95th Queue (ft)	37
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	700
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: US 20 Eastbound

Movement	SB
Directions Served	L
Maximum Queue (ft)	100
Average Queue (ft)	54
95th Queue (ft)	95
Link Distance (ft)	42
Upstream Blk Time (%)	10
Queuing Penalty (veh)	11
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: US 20 Westbound

Movement	NB
Directions Served	L
Maximum Queue (ft)	64
Average Queue (ft)	7
95th Queue (ft)	39
Link Distance (ft)	41
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: US 20 Eastbound

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 13: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	3	17	31
Average Queue (ft)	0	1	10
95th Queue (ft)	3	9	33
Link Distance (ft)	448	657	144
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: Poplar Ave & Drive 1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	129	71	11
Average Queue (ft)	61	10	0
95th Queue (ft)	102	41	8
Link Distance (ft)	102	228	210
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Poplar Ave & Drive 2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	59
Average Queue (ft)	28
95th Queue (ft)	52
Link Distance (ft)	117
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 11

Intersection: 1: Poplar Ave & US 20

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	36	24
Average Queue (ft)	11	2
95th Queue (ft)	36	14
Link Distance (ft)	188	826
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	3	30	31
Average Queue (ft)	0	11	6
95th Queue (ft)	3	32	26
Link Distance (ft)	447	654	188
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Poplar Ave & US 20

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	14	9	35	26
Average Queue (ft)	1	0	7	3
95th Queue (ft)	7	6	28	17
Link Distance (ft)			188	826
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200	200		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Poplar Ave & 235th St

Movement	NB	SB
Directions Served	LTR	LTR
Maximum Queue (ft)	14	31
Average Queue (ft)	1	6
95th Queue (ft)	7	26
Link Distance (ft)	654	188
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Poplar Ave & US 20

Movement	EB	WB	NB	SB	SB
Directions Served	L	TR	LTR	LT	R
Maximum Queue (ft)	104	19	63	282	165
Average Queue (ft)	38	1	20	142	67
95th Queue (ft)	80	10	52	309	170
Link Distance (ft)		1635	188	288	
Upstream Blk Time (%)				15	
Queuing Penalty (veh)				23	
Storage Bay Dist (ft)	790				150
Storage Blk Time (%)				28	0
Queuing Penalty (veh)				19	0

Intersection: 6: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	10	32	31
Average Queue (ft)	0	9	10
95th Queue (ft)	5	30	34
Link Distance (ft)	447	654	188
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Poplar Ave & Drive 1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	130	60	73
Average Queue (ft)	63	9	9
95th Queue (ft)	120	40	49
Link Distance (ft)	99	288	209
Upstream Blk Time (%)	11		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Poplar Ave & Drive 2

Movement	EB
Directions Served	LR
Maximum Queue (ft)	74
Average Queue (ft)	31
95th Queue (ft)	68
Link Distance (ft)	117
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 43

Intersection: 1: Poplar Ave & US 20

Movement	EB	WB	WB	NB	SB	SB
Directions Served	L	L	TR	LTR	LT	R
Maximum Queue (ft)	111	12	35	56	304	175
Average Queue (ft)	36	0	2	17	265	136
95th Queue (ft)	80	6	15	46	376	245
Link Distance (ft)			1635	188	288	
Upstream Blk Time (%)					54	
Queuing Penalty (veh)					128	
Storage Bay Dist (ft)	790	200				150
Storage Blk Time (%)					77	1
Queuing Penalty (veh)					86	1

Intersection: 6: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	5	15	31
Average Queue (ft)	0	1	11
95th Queue (ft)	4	8	35
Link Distance (ft)	447	654	188
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: Poplar Ave & Drive 1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	160	78	215
Average Queue (ft)	105	18	86
95th Queue (ft)	164	57	214
Link Distance (ft)	99	288	209
Upstream Blk Time (%)	66		9
Queuing Penalty (veh)	0		8
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Poplar Ave & Drive 2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	105	38	54
Average Queue (ft)	39	3	7
95th Queue (ft)	84	21	54
Link Distance (ft)	117	209	218
Upstream Blk Time (%)	1		0
Queuing Penalty (veh)	0		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 223

Intersection: 1: Cambridge St/Poplar Ave & US 20 Westbound

Movement	WB	WB	WB	NB	SB
Directions Served	T	T	R	T	R
Maximum Queue (ft)	49	32	47	63	144
Average Queue (ft)	6	2	4	14	54
95th Queue (ft)	27	15	23	45	103
Link Distance (ft)	952	952		24	228
Upstream Blk Time (%)				1	
Queuing Penalty (veh)				2	
Storage Bay Dist (ft)			700		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Poplar Ave/Cambridge St & US 20 Eastbound

Movement	EB	NB
Directions Served	L	R
Maximum Queue (ft)	34	35
Average Queue (ft)	2	15
95th Queue (ft)	15	40
Link Distance (ft)		144
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	550	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: US 20 Westbound

Movement	WB
Directions Served	L
Maximum Queue (ft)	51
Average Queue (ft)	5
95th Queue (ft)	27
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	700
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: US 20 Eastbound

Movement	EB	SB
Directions Served	T	L
Maximum Queue (ft)	2	94
Average Queue (ft)	0	49
95th Queue (ft)	2	92
Link Distance (ft)	868	42
Upstream Blk Time (%)		8
Queuing Penalty (veh)		7
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: US 20 Westbound

Movement	NB
Directions Served	L
Maximum Queue (ft)	70
Average Queue (ft)	17
95th Queue (ft)	59
Link Distance (ft)	41
Upstream Blk Time (%)	2
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: US 20 Eastbound

Movement	EB
Directions Served	L
Maximum Queue (ft)	10
Average Queue (ft)	0
95th Queue (ft)	6
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	700
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	3	29	31
Average Queue (ft)	0	10	8
95th Queue (ft)	4	30	30
Link Distance (ft)	448	657	144
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: Poplar Ave & Drive 1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	113	62
Average Queue (ft)	52	9
95th Queue (ft)	91	37
Link Distance (ft)	102	228
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18: Poplar Ave & Drive 2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	81	19
Average Queue (ft)	30	1
95th Queue (ft)	69	10
Link Distance (ft)	117	210
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 9

Intersection: 1: Cambridge St/Poplar Ave & US 20 Westbound

Movement	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	T	R
Maximum Queue (ft)	7	48	29	42	60	160
Average Queue (ft)	0	5	2	4	13	64
95th Queue (ft)	4	27	17	22	45	123
Link Distance (ft)		952	952		24	228
Upstream Blk Time (%)					1	0
Queuing Penalty (veh)					1	0
Storage Bay Dist (ft)	550			700		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Poplar Ave/Cambridge St & US 20 Eastbound

Movement	EB	NB	SB
Directions Served	L	R	T
Maximum Queue (ft)	46	33	12
Average Queue (ft)	3	12	1
95th Queue (ft)	22	37	7
Link Distance (ft)		144	24
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)	550		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 9: US 20 Westbound

Movement	WB
Directions Served	L
Maximum Queue (ft)	92
Average Queue (ft)	20
95th Queue (ft)	64
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	700
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 10: US 20 Eastbound

Movement	EB	EB	SB
Directions Served	T	T	L
Maximum Queue (ft)	11	2	105
Average Queue (ft)	0	0	63
95th Queue (ft)	8	2	98
Link Distance (ft)	868	868	42
Upstream Blk Time (%)			19
Queuing Penalty (veh)			23
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: US 20 Westbound

Movement	NB
Directions Served	L
Maximum Queue (ft)	64
Average Queue (ft)	11
95th Queue (ft)	48
Link Distance (ft)	41
Upstream Blk Time (%)	1
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: US 20 Eastbound

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 13: Poplar Ave & 235th St

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	8	15	31
Average Queue (ft)	0	1	11
95th Queue (ft)	5	8	35
Link Distance (ft)	448	657	144
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 16: Poplar Ave & Drive 1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	120	70	7
Average Queue (ft)	62	16	0
95th Queue (ft)	100	52	4
Link Distance (ft)	102	228	210
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Poplar Ave & Drive 2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	67	31
Average Queue (ft)	28	2
95th Queue (ft)	54	15
Link Distance (ft)	117	210
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 25

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.2	0.2	0.5	0.1	0.1	0.6	2.5
Denied Del/Veh (s)	0.4	0.4	1.3	0.4	0.4	1.5	5.9
Total Delay (hr)	4.3	5.3	5.2	5.0	2.5	7.0	8.9
Total Del/Veh (s)	10.6	12.9	12.6	12.4	6.1	17.3	20.9
Travel Dist (mi)	846.4	865.1	848.2	832.5	845.5	837.0	889.0
Travel Time (hr)	19.9	21.0	21.1	20.4	17.9	22.8	27.5
Avg Speed (mph)	43	41	41	41	48	38	36

Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.1	1.0	0.4	0.6
Denied Del/Veh (s)	0.3	2.5	1.1	1.4
Total Delay (hr)	3.0	9.1	5.5	5.6
Total Del/Veh (s)	7.3	22.5	13.3	13.6
Travel Dist (mi)	864.9	841.7	856.3	852.6
Travel Time (hr)	18.6	25.6	21.5	21.6
Avg Speed (mph)	47	34	41	41

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	21.5	23.7	22.9	12.4	4.4	8.0	2.7
Denied Del/Veh (s)	44.2	49.0	48.0	26.9	9.6	17.0	5.8
Total Delay (hr)	16.2	20.1	15.3	15.7	11.9	14.7	11.6
Total Del/Veh (s)	33.7	42.5	32.6	34.4	25.7	31.4	24.7
Travel Dist (mi)	1004.4	987.5	975.8	936.3	960.4	971.0	969.4
Travel Time (hr)	56.1	61.4	55.7	45.3	33.7	40.1	32.1
Avg Speed (mph)	29	26	30	28	33	30	33

Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	6.1	23.3	3.3	12.8
Denied Del/Veh (s)	12.9	48.9	7.2	27.3
Total Delay (hr)	13.3	16.3	8.9	14.4
Total Del/Veh (s)	28.1	34.7	19.1	30.8
Travel Dist (mi)	980.3	986.1	971.4	974.3
Travel Time (hr)	37.1	57.4	29.9	44.9
Avg Speed (mph)	32	29	37	30

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Denied Del/Veh (s)	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Delay (hr)	2.2	2.1	2.4	2.4	2.3	2.3	2.6
Total Del/Veh (s)	4.9	4.7	5.3	5.2	5.0	5.1	5.5
Travel Dist (mi)	865.9	876.8	896.8	887.0	883.4	878.0	906.0
Travel Time (hr)	18.6	18.6	19.4	19.3	18.9	18.9	19.8
Avg Speed (mph)	47	47	46	46	47	47	46

Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.1	0.1	0.1	0.1
Denied Del/Veh (s)	0.2	0.2	0.2	0.2
Total Delay (hr)	2.9	2.2	2.4	2.4
Total Del/Veh (s)	6.1	4.8	5.0	5.2
Travel Dist (mi)	912.6	874.2	925.3	890.6
Travel Time (hr)	20.1	18.8	19.8	19.2
Avg Speed (mph)	46	47	47	47

Total Network Performance By Run

Run Number	1	2	3	4	5	6	7
Denied Delay (hr)	0.1	0.2	0.1	0.1	0.1	0.3	0.2
Denied Del/Veh (s)	0.2	0.3	0.2	0.2	0.2	0.5	0.3
Total Delay (hr)	3.2	3.5	2.9	3.3	2.8	3.0	3.9
Total Del/Veh (s)	6.1	6.3	5.6	6.0	5.4	5.5	6.9
Travel Dist (mi)	1014.5	1050.4	1001.9	1046.4	1011.4	1038.8	1117.3
Travel Time (hr)	22.9	23.6	22.0	23.2	22.2	22.8	25.2
Avg Speed (mph)	45	45	46	45	46	46	45

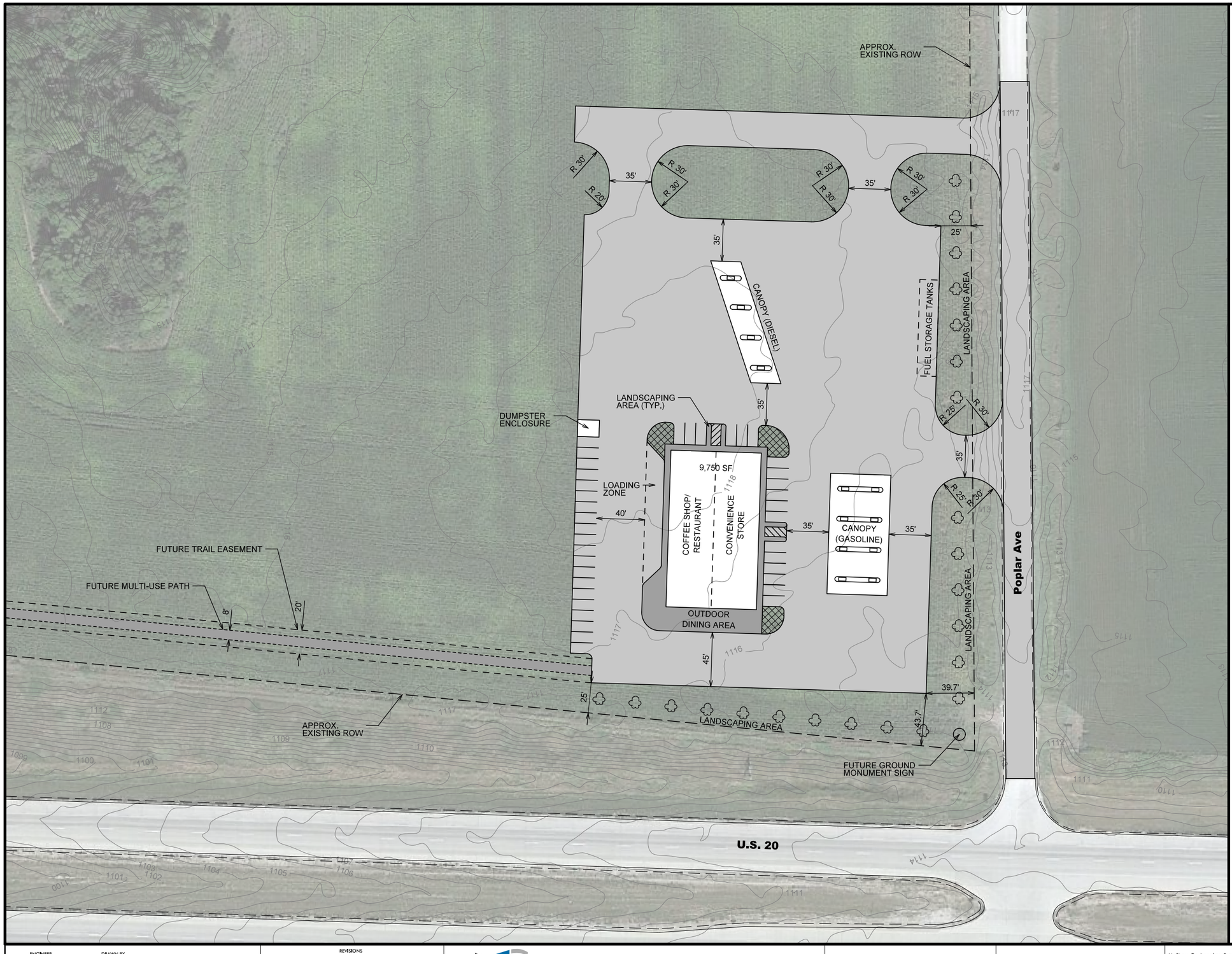
Total Network Performance By Run

Run Number	8	9	10	Avg
Denied Delay (hr)	0.1	0.1	0.1	0.1
Denied Del/Veh (s)	0.2	0.2	0.2	0.3
Total Delay (hr)	3.4	3.2	3.2	3.2
Total Del/Veh (s)	6.1	5.7	5.7	5.9
Travel Dist (mi)	1046.1	1069.4	1078.9	1047.5
Travel Time (hr)	23.5	23.7	23.6	23.3
Avg Speed (mph)	45	45	46	45

McCLURE™

APPENDIX

Vi



PROPERTY SIZE: 8.8 ACRES

CURRENT ZONING:	A-1 (AGRICULTURAL PRESERVATION DISTRICT)
PROPOSED ZONING:	C-1 (GENERAL COMMERCIAL DISTRICT)
EXISTING USE:	AGRICULTURAL LAND
PROPOSED USE:	CONVENIENCE STORE WITH FUEL SALES

PROPOSED BUILDING HEIGHT: NOT TO EXCEED 35 FEET

PROPOSED BUILDING SETBACKS:

FRONT = 50 FEET

SIDE (EAST) = 35 FEET

SIDE (WEST) = 35 FEET

REAR = 25 FEET

NUMBER OF REQUIRED PAVED PARKING STALLS: 20

NUMBER OF PROVIDED PAVED PARKING STALLS: 37

NUMBER OF REQUIRED ADA PARKING STALLS: 1

NUMBER OF PROVIDED ADA PARKING STALLS: 1

WATER SERVICE:	POTABLE WELL
SEWER SERVICE:	SEPTIC SYSTEM

LEGEND

- PCC PAVEMENT SHADING
- SIDEWALK/TRAIL SHADING
- FOUNDATION PLANTINGS/SHRUBS
- LARGE TREE SPECIES

0 20 40 80

GRAPHIC SCALE

ENGINEER: CFF CHECKED BY: CFF	DRAWN BY: JMT FIELD BOOK NO.: -	STUMPF MEC JOB #: 210178 MARCH 2021	REVISIONS	McCLURE™ making lives better.	1360 NW 121st Street, Suite A Clive, IA 50325 main 515-964-1229 fax 515-964-2370	STUMPF WEBSTER COUNTY TRAVEL CENTER	SITE PLAN

GENERAL NOTES:

1. THE DEVELOPMENT SHALL BE CONSTRUCTED IN CONFORMITY WITH THE SITE PLAN SUBMITTED WITH THE REZONING PETITION. IF THERE ARE SUBSTANTIAL MODIFICATIONS MADE, THE APPLICANT SHALL PROVIDE A REVISED SITE PLAN TO THE COUNTY TO BE REVIEWED AND APPROVED BY THE PLANNING AND ZONING COMMISSION AND BOARD OF SUPERVISORS.

2. THE APPLICANT SHALL BE RESPONSIBLE FOR ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS AND LICENSES TO OPERATE SAID USES ON THE SUBJECT PROPERTY.

3. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, A TRAFFIC IMPACT REPORT (TIR) SHALL BE PREPARED BY A LICENSED TRAFFIC ENGINEER TO REVIEW EXISTING AND PROPOSED TRAFFIC. THE TIR SHALL BE REVIEWED BY THE COUNTY'S TRAFFIC CONSULTANT AT THE EXPENSE OF THE PROPERTY OWNER/APPLICANT. SAID TIR SHALL IDENTIFY ANY REQUIRED ON-SITE AND OFF-SITE IMPROVEMENTS (TURN-LANES, TURNING RADIUS, QUEUING, TRAFFIC CONTROL DEVICES (SIGNAGE, STRIPING, ETC.). THESE IMPROVEMENTS SHALL BE SHOWN ON THE CONSTRUCTION PLANS FOR BUILDING PERMIT REVIEW.

4. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, A LANDSCAPE PLAN SHALL BE PREPARED BY AN IOWA LICENSED LANDSCAPE ARCHITECT AND SUBMITTED TO COUNTY STAFF FOR REVIEW AND APPROVAL.

5. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, A PHOTOMETRIC/ EXTERIOR LIGHTING PLAN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY COUNTY STAFF. FOOT-CANDLE READINGS SHALL NOT EXCEED 0.01 AT THE PROPERTY LINES.

6. PRIOR TO OCCUPYING THE CONVENIENCE STORE AND FUEL PUMPS, POPLAR ROAD SHALL BE CONSTRUCTED AND PAVED TO COUNTY ENGINEERING STANDARDS, WITH SAID PUBLIC ROAD ACCEPTED BY THE BOARD OF SUPERVISORS.

7. PRIOR TO OCCUPYING THE CONVENIENCE STORE AND FUEL PUMPS, ALL LANDSCAPING SHALL BE INSTALLED AS DEPICTED ON THE APPROVED LANDSCAPE PLAN. THE LANDSCAPE ARCHITECT SHALL PROVIDE A COMPLIANCE LETTER TO THE COUNTY AFTER TWO (2) YEARS, BUT NO MORE THAN THREE (3) YEARS FROM THE DATE OF OCCUPANCY, CERTIFYING THAT ALL LANDSCAPING QUANTITIES AND TYPES ARE INSTALLED AS PER APPROVED LANDSCAPE PLAN AND ARE ALIVE AND HEALTHY.

8. SUBJECT TO THE WEBSTER COUNTY CONSERVATION BOARD REVIEW AND APPROVAL, THE OWNER/APPLICANT SHALL PROVIDE UP TO A MAXIMUM 20 FOOT WIDE EASEMENT FOR THE CONSTRUCTION OF A MULTI-USE PATH TO CONNECT THE PARKING LOT TO THE COUNTY OWNED PROPERTY TO THE WEST. SAID EASEMENT SHALL BE RECORDED AT THE WEBSTER COUNTY RECORDER'S OFFICE.

9. ALL EXTERIOR SIGNAGE REQUIRES A WEBSTER COUNTY SIGN PERMIT.

ENGINEER CFF CHECKED BY CFF	DRAWN BY JMT FIELD BOOK NO. -	STUMPF MEC JOB #: 210178 MARCH 2021	REVISIONS	McCLURE™ making lives better.	1360 NW 121st Street, Suite A Clive, IA 50325 main 515-964-1229 fax 515-964-2370	STUMPF WEBSTER COUNTY TRAVEL CENTER	GENERAL NOTES		SHEET NO. 2 of 2

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APPENDIX

VII

ENGINEER CFF CHECKED BY -	DRAWN BY JMT FIELD BOOK NO. -	KEVIN STUMPF MEC JOB #: 210178-001 JUNE, 2021	REVISIONS - - -	McCLURE™ making lives better.	705 First Avenue North Fort Dodge, IA 50501 main 515-576-7155 fax 515-576-4235	HIGHWAY 20 & POPLAR AVENUE RCUT INTERSECTION FORT DODGE, IOWA	PLAN	SHEET NO. 1

ENGINEER CFF CHECKED BY -	DRAWN BY JMT FIELD BOOK NO. -	KEVIN STUMPF MEC JOB #: 210178-001 JULY, 2021	REVISIONS	McCLURE™ making lives better.	705 First Avenue North Fort Dodge, IA 50501 main 515-576-7155 fax 515-576-4235	HIGHWAY 20 & POPLAR AVENUE STANDARD INTERSECTION FORT DODGE, IOWA	PLAN	SHEET NO. 1