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BURL'S CREEK EVENT GROUNDS

Township of Oro-Medonte

Traffic Impact Study

prepared by:

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Burl's Creek Event Grounds

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1 Introduction

C.C. Tatham & Associates was retained by Burl's Creek Event Grounds to address the traffic impacts associated with the proposed Event Grounds development, located in the Township of Oro-Medonte. The location of the development site and the immediate area road network is illustrated in Figure 1.

The purpose of this study is to address the requirements of the Township of Oro-Medonte, the County of Simcoe and the Ministry of Transportation of Ontario (MTO) with respect to the potential transportation impacts of the development on the respective road systems (Township, County and Provincial). In particular, the following will be discussed:

- the operations of the road system through the study area prior to the proposed development;
- an estimation of the growth in the traffic volumes not otherwise attributed to the development (ie. from overall growth in the area and/or other developments);
- an estimation of the number of new trips the proposed Event Grounds development is likely to generate (in consideration of various levels of events);
- the operations of the study area road system upon completion of the development; and
- the resulting impacts and need for mitigating measures (if required) to ensure acceptable overall road operations.

Chapter 2 of this report addresses the existing conditions, detailing the road system and corresponding traffic operations. Chapter 3 addresses future conditions, prior to the completion of the proposed development, and will address the expected growth in the traffic levels and the resulting operating conditions. Chapters 4 and 5 address the proposed development, the ensuing vehicle trips that it will generate, and the associated impacts on the road system. Lastly, Chapter 6 summarizes the report and the key findings.

Burl's Creek has proposed a number of events to occur over the 2015 season, ranging from locally based events (eg. minor soccer and farmers market), to regionally based events (festivals and automotive flea market) to provincially (and beyond) based events (Wayhome Arts & Music Festival and Boots & Hearts Music Festival). In consideration of the event durations and significant traffic volumes associated with the noted major music festivals, a separate traffic study has been prepared by a special events transportation consultant to address corresponding traffic operations, routings and protocols. The intent of this study is therefore to address the remaining local and regional based events and the associated traffic impacts of such (if any).

2 Existing Conditions

This chapter will describe the road network, traffic volumes and operations for the existing conditions.

2.1 Study Area Road Network

The road network to be addressed by this study consists of: Highway 11; Simcoe Road 20 (Ridge Road); Line 7; Line 8 and Line 9. Photographs of the road system are provided in Figure 2.

2.1.1 Road Sections

Highway 11 is a provincial highway under the jurisdiction of the MTO. While through the immediate study area, the highway is oriented south-west to north-east and vice versa; in consideration of the larger area and general orientation, Highway 11 is referenced as north-south. The highway has a posted speed of 90 km/h and provides 2 travel lanes per direction with a median (box beam guiderail) separation. Although a provincial highway, there are numerous commercial access points and municipal road intersections along the highway. Given the divided nature of the highway, the access points and intersections are limited to right-in/right-out movements with the exception of those at Line 3, Line 5, Line 7, Line 9 and Simcoe Road 20. At these locations, full access to Highway 11 North and Highway 11 South is provided through means of an overpass and connections to the highway on either side. The capacity of Highway 11 has been determined following MTO procedures for maximum service flow for a multi-lane highway, considering factors such as base capacity (2000 vehicles per hour per lane) and adjustment factors for lane width and/or lateral clearance restrictions, presence of heavy vehicles, development environment and driver population. Based on the MTO methodology, a maximum service flow of 3270 vehicles has been determined per direction, which equates to 1635 vehicles per hour per lane for the 2-lane highway.

Simcoe Road 20 (known locally as Ridge Road) is classified as a secondary arterial in the *County of Simcoe Transportation Master Plan*, and thus under the jurisdiction of the County. As per the Master Plan, County roads are facilities where traffic movement is the primary consideration while land access is a secondary function. In this respect, County roads are intended to serve higher traffic volumes and all vehicle types. Simcoe Road 20 provides 1 lane per direction, with a posted speed limit of 60 km/h, reduced to 50 km/h through the hamlets of Oro-Station (at Line 7) and Hawkestone (at Line 11). Typically, County roads are assumed to have capacities of 900 to 1100 vehicles per hour per lane. In consideration of the "secondary arterial" designation and the reduced speed limit (County roads are typically posted 80 km/h), a reduced capacity of 800 vehicles per hour per lane has been assumed (which is consistent with assumptions as per the *County of Simcoe Transportation Master Plan*).

Line 7, Line 8 and Line 9 are all Township of Oro-Medonte roads, providing 1 lane per direction with an assumed capacity of 600 vehicles per hour per lane (in consideration of their role as collector roads). As with Simcoe Road 20, these roads have reduced speed limits of 60 km/h through the study area.

2.1.2 Key Intersections

The key intersections are those of the noted road sections, which are detailed below and illustrated in Figure 3.

As previously noted, the intersections of Line 7 and Line 9 with Highway 11 provide full moves access to/from the highway via a right-in/right-out intersection (as the highway is median separated) and an overpass with 2 stop controlled intersections with the Township road. In all cases, single lane approaches are provided (ie. no dedicated turn lanes exist). The intersection of Line 8 with Highway 11 is restricted to right-in/right-out movements only, both of which are yield controlled and single lanes. At each intersection with the highway, there are acceleration and deceleration lanes to accommodate the right-in and right-out movements.

The intersection of Line 7 with Simcoe Road 20 is a 4-way stop controlled intersection, with each leg providing a single approach lane. This intersection is located in Oro Station.

The intersection of Line 8 with Simcoe Road 20 is a 3-legged intersection (Line 8 terminates at the County road) with stop control on Line 8. All approaches are limited to a single lane.

Lastly, the intersection of Line 9 with Simcoe Road 20 is a 4-legged intersection stop controlled on Line 9, with single lanes on each approach.

2.2 Existing Traffic Volumes

2.2.1 Link Volumes

Traffic volumes on the study area road sections were requested of the MTO, Simcoe County and Township; a summary of which is provided in Table 1. The corresponding daily traffic volumes are presented in Table 2 for spring (May), summer (July-August) and fall (October) conditions, whereas additional details are provided in Appendix A. No recent count data was available for Line 8 or Line 9.

Table 1: Available Traffic Data

Road Section	Location	Source	Date	Type
Highway 11	Line 5 to Line 6 (8.23km north of Simcoe Road 93)	MTO	July 2014	24 hour counts by hour
Simcoe Road 20	Line 3 to Line 7 Line 7 to Line 11 Line 11 to Hwy 11	County	May 2014 August 2014 October 2014	24 hour counts by hour
Line 7	south of overpass	Township	May 2014	24 hour

Table 2: 2014 Daily Traffic Volumes

Road Section	Location	Spring	Summer	Fall
Highway 11	Line 5 to Line 6	-	40,000 to 58,000	-
Simcoe Road 20	Line 3 to Line 7	1500 to 1700	1350 to 1500	1350 to 1500
	Line 7 to Line 11	1000 to 1150	1000 to 1150	900 to 1000
	Line 11 to Hwy 11	1950 to 2050	1700 to 1850	1800 to 1950
Line 7	south of overpass	4100	-	-

2.2.2 Intersection Volumes

Further to the link volumes provided by the road authorities, additional traffic counts were completed at a number of the key intersections to provide an indication of peak hour turning volumes. Traffic counts were completed on Thursday April 2, 2015 from 7AM to 10AM and 4PM to 7PM at the following intersections (details of which are provided in Appendix A):

- Line 7 & Highway 11 overpass (both intersections);
- Line 8 & Highway 11 (right-in/right/out);
- Line 9 & Highway 11 overpass (both intersections); and
- Line 7 & Simcoe Road 20.

A Thursday count is considered representative of typical weekday operations, whereas April volumes are typically considered representative of average conditions throughout the year (as is October). While counts were not completed at the Line 7 and Line 9 right-in/right-outs with Highway 11, the traffic volumes can be established from the counts at the adjacent overpass intersections in that there are generally no significant traffic generators or attractors between the intersections. The exception is the access to the Tim Hortons/gas station on Line 7 between Highway 11 and the west overpass intersection (this access was included in the traffic count and thus associated volumes established).

2.2.3 Seasonal Variations

The traffic data for Simcoe Road 20 was reviewed for seasonal variations, given that the counts were completed in the spring, summer and fall. The corresponding daily volumes were relatively consistent suggesting no significant increases in summer volumes on Simcoe Road 20. For example, for the road section from Line 3 to Line 7, the average daily volumes observed in the spring, summer and fall were 1634, 1429, 1424. For the section from Line 7 to Line 11, the spring, summer and fall volumes were 1088, 1046 and 977 respectively.

On Highway 11, a review of published MTO average and summer daily traffic volumes for the year 2010 (the most current published data available) suggests summer volumes are approximately 12% greater than average volumes (43,200 vs 39,000). Given the significance of Highway 11 in serving areas to the north (eg. "cottage country"), such an increase as compared to Simcoe Road 20 is expected (ie. similar increases on the local road system, which primarily serve the local residences, are not expected).

2.2.4 Daily Variations

The available data was also reviewed with respect to daily variations (namely weekday vs weekend). Counts for Simcoe Road 20 were typically conducted Tuesday to Thursday with little variation, and thus are considered typical weekday. Counts were not completed over the weekend and thus there is no basis for comparison along Simcoe Road 20.

The Highway 11 counts were conducted for a continuous week, with the daily variations outlined in Table 3. Based on the summer 2014 traffic data observed between Line 5 and Line 6, the following increases were observed:

- Friday peak hour volumes are approximately 5% greater than the average, with a more pronounced increase during the northbound direction (which corresponds to travel to cottage country);
- Saturday peak hour volumes are approximately 30% greater than the average, with a greater increase in the AM northbound direction (which corresponds to travel to cottage country); and
- Sunday peak hour volumes are approximately 15% greater, with greater increases in the AM and PM southbound direction (which corresponds to travel from cottage country).

Table 3: 2014 Daily Traffic Variations on Highway 11

Date	AM Peak Hour		PM Peak Hour	
	NB	SB	NB	SB
Average Weekday	1500 vph	1210 vph	1985 vph	1400 vph
Friday	2515 vph	1245 vph	2790 vph	1505 vph
	67% higher	3% higher	41% higher	7% higher
Saturday	2490 vph	1565 vph	2450 vph	1620 vph
	66% higher	29% higher	23% higher	16% higher
Sunday	1735 vph	2190 vph	1695 vph	2580 vph
	16% higher	81% higher	15% lower	84% higher

vph - vehicles per hour

2.2.5 Peak Hour Volumes

The peak hour volumes reflective of weekday AM and PM peak hour conditions (as per the April 2, 2015 traffic count), are illustrated in Figure 4. Traffic volumes on Highway 11 correspond to the noted average weekday conditions from the MTO 2014 count, increased by 1% per annum to reflect 2015 conditions (further discussion of the noted growth rate is provided in Section 3.2). As traffic counts were not completed at the intersections of Line 8 and Line 9 with Simcoe Road 20, they have been estimated based on the available data. The volumes on Line 7 and Line 9 just east of Highway 11 are comparable (as per the intersection counts at the east Highway 11 overpass intersections) and thus comparable volumes at Simcoe Road 20 have also been assumed (ie. the volumes at Line 9/Simcoe Road 20 have been estimated based on the Line 7/Simcoe Road 20 intersection volumes). Volumes at the Line 8/Simcoe Road 20 intersection were estimated based on the volumes on Line 8 as determined from the traffic count at the Highway 11 right-in/right-out. In most cases, the traffic volumes are not considered significant and thus if the assumptions are understated, the corresponding margin of error will not be critical.

In consideration of the event schedules planned for Burl's Creek, consideration has also been given to Friday, Saturday and Sunday traffic levels. Given the broad range of days and intervals considered, traffic counts corresponding to each were not completed. Rather, the volumes for the Friday, Saturday and Sunday periods have been estimated in consideration of the daily variations observed on Highway 11 (not considering the increases corresponding to the peak cottage country demands). Namely:

- Friday volumes are estimated as 5% greater than the weekday volumes (as per the traffic counts);
- Saturday volumes are estimated as 30% greater; and
- Sunday volumes are estimated as 15% greater.

Given the local nature of the area road system in serving the local development, such increases are not likely. Furthermore, the commuter peaks, as evident in the weekday data, would not be expected to be as significant over the weekends (travel over the weekends tends to be more distributed throughout the day, and not as pronounced during the early morning and late afternoon). Notwithstanding, the noted factors have been assumed to employ a conservative approach.

Traffic volumes on Highway 11 have been established for each of the noted days and peak periods based on the actual 2014 Highway 11 traffic counts, adjusted to reflect 2015 conditions.

The corresponding 2015 volumes are noted in Figure 5, Figure 6 and Figure 7 for the Friday, Saturday and Sunday peak hour periods.

2.3 Existing Traffic Operations

2.3.1 Intersection Operations

The assessment of existing conditions provides the baseline from which the future traffic volumes and operations (both with and without the subject development) can be assessed. The capacity, and hence operations, of a road system is effectively dictated by its intersections and thus the operational analysis considers the operations of the key intersections previously noted. The analysis is based on the 2015 Saturday traffic volumes, the existing intersection configuration and controls, and procedures outlined in the *2010 Highway Capacity Manual*[1] (using Synchro v.8 software). As the Saturday traffic volumes at the key intersections are greatest, their use in the assessment will represent the most conservative operational assessment. While it is acknowledged that travel patterns on Highway 11 vary between the Saturday and Sunday peak hours (on Saturday, the northbound volumes are greatest, whereas on Sunday the southbound volumes are greatest), these volumes have no bearing on the operations of the key intersections.

A summary of the 2015 Saturday peak hour traffic volumes analyses is provided in Table 4. Results of the operational assessment are provided in the form of average delay (measured in seconds), level of service (LOS) and volume to capacity (v/c) for the critical stop controlled movements. Level of service A corresponds to the best operating condition with minimal delays whereas level of service F corresponds to poor operations resulting from high intersection delays. A v/c ratio of less than 1.0 indicates the intersection movement/approach is operating at less than capacity while v/c of 1.0 indicates capacity has been reached. Detailed operations worksheets for the existing traffic conditions are included in Appendix B.

As indicated, all of the key study area intersections are currently providing excellent levels of service (level of service A or B) with minimal delays. In this respect, no improvements to the existing road system are considered necessary to support the existing peak hour traffic volumes. As the traffic operations under the peak Saturday conditions are considered acceptable, it can be inferred that operations under the weekday, Friday and Sunday conditions will also be acceptable recognizing that the intersection volumes will be less for these time periods.

[1] *Highway Capacity Manual*. Transportation Research Board, Washington DC, 2010.

Table 4: Intersection Operations - 2015 Saturday

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	SB	stop	1	A	0.01	4	A	0.02
Line 7 & Hwy 11 Overpass E	SB	stop	6	A	0.06	4	A	0.07
Line 7 & Simcoe Road 20	EB	4-way stop	8	A	?	8	A	0.09
	WB		8	A	?	8	A	0.08
	NB		9	A	?	8	A	0.11
	SB		8	A	?	8	A	0.20
Line 8 & Simcoe Road 20	SB	stop	8.9	A	0.02	9	A	0.02
Line 9 & Hwy 11 Overpass W	SB	stop	0	A	0.03	0	A	0.02
Line 9 & Hwy 11 Overpass E	SB	stop	0	A	0.03	0	A	0.06
Line 9 & Simcoe Road 20	NB	stop	11	B	0.25	11	B	0.12
	SB	stop	9	A	0.06	11	B	0.17

2.3.2 Road Section Operations

Further to the operations of the key intersections, the operations of the key road sections has also been investigated, based on the projected volumes and the following lane capacities (as previously presented):

- 1635 vehicles per hour per lane (vphpl) for Highway 11 (3270 vehicles per hour given 2 lanes per direction);
- 800 vphpl for Simcoe Road 20; and
- 600 vphpl for Line 7, Line 8 and Line 9.

A summary of the corresponding traffic volumes, road capacities and resulting volume to capacity (v/c) ratios is provided in Table 5. A v/c ratio of 1.0 or greater suggests that the road section is operating at or above capacity; v/c of less than 1.0 indicates that there is excess capacity available.

Table 5: Road Section Operations - 2015

Road Section & Period		AM Peak Hour Volumes		PM Peak Hour Volumes		AM Peak Volume/Capacity		PM Peak Volume/Capacity	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Highway 11	Friday	2,540	1,260	2,820	1,525	0.78	0.39	0.86	0.47
	Saturday	2,520	1,585	2,475	1,640	0.77	0.48	0.76	0.50
	Sunday	1,755	2,215	1,715	2,605	0.54	0.68	0.52	0.80
	Weekday	1,520	1,225	2,005	1,420	0.46	0.37	0.61	0.43
Simcoe Road 20 (Line 3 to Line 7)	Friday	35	55	55	45	0.04	0.07	0.07	0.06
	Saturday	40	65	70	55	0.05	0.08	0.09	0.07
	Sunday	35	55	60	50	0.04	0.07	0.08	0.06
	Weekday	35	50	55	40	0.04	0.06	0.07	0.05
Simcoe Road 20 (Line 7 to Line 11)	Friday	30	50	60	45	0.04	0.06	0.08	0.06
	Saturday	30	60	65	60	0.04	0.08	0.08	0.08
	Sunday	30	50	60	55	0.04	0.06	0.08	0.07
	Weekday	25	45	50	45	0.03	0.06	0.06	0.06
Line 7	Friday	60	175	120	85	0.10	0.29	0.20	0.14
	Saturday	70	215	145	105	0.12	0.36	0.24	0.18
	Sunday	65	190	130	90	0.11	0.32	0.22	0.15
	Weekday	55	165	110	80	0.09	0.28	0.18	0.13
Line 8	Friday	10	5	10	15	0.02	0.01	0.02	0.03
	Saturday	10	10	10	15	0.02	0.02	0.02	0.03
	Sunday	10	5	10	15	0.02	0.01	0.02	0.03
	Weekday	10	5	5	15	0.02	0.01	0.01	0.03
Line 9	Friday	30	140	90	60	0.05	0.23	0.15	0.10
	Saturday	40	170	110	70	0.07	0.28	0.18	0.12
	Sunday	30	155	100	65	0.05	0.26	0.17	0.11
	Weekday	30	135	85	55	0.05	0.23	0.14	0.09

As noted in the table, the maximum v/c ratios across the time periods considered are as follows (excess capacity is denoted in brackets):

- Highway 11 - 0.86 Friday PM northbound (excess capacity for 450 vehicles remaining);
- Simcoe Road 20 - 0.09 Saturday PM northbound (730 vehicles);
- Line 7 - 0.36 Saturday AM westbound (385 vehicles);
- Line 8 - 0.03 all days (585 vehicles); and
- Line 9 - 0.28 Saturday AM westbound (430 vehicles).

In consideration of the above, the existing road system has sufficient capacity to accommodate existing travel demands.

3 Future Background Conditions

This chapter will describe the road network and background traffic volumes (ie. without Burl's Creek Event Grounds) expected for the years 2020 and 2025, in order to consider the longer-term impacts (5 and 10 years beyond opening).

3.1 Road Network

No planned improvements to the study area road network (apart from routine maintenance) have been identified and thus the road network as discussed in Section 2.1 will be maintained through all future horizons.

3.2 Background Traffic Volumes

Future background traffic volumes expected for the 2020 and 2025 horizon years have been determined based on the existing traffic volumes, historical and projected growth, and additional increases in volumes due to other development within the immediate area (apart from the subject development).

3.2.1 Background Growth

Historic traffic volumes on Highway 11 and Simcoe Road 20 through the study area were reviewed for the 10-year period 2000 through to 2010 for Highway 11 (the most current published MTO data) and for the period 2002 to 2014 for Simcoe Road 20 (corresponding data is provided in Appendix A); 10 year planning horizons have been employed to reflect more recent growth trends and changes in travel patterns and behaviours. The following annual growth rates were realized:

- 1.5% for average annual daily traffic and 0.1% for summer average daily traffic on Highway 11 (slightly higher growth rates of 2% and 1.1% were realized for the period 2000 to 2009); and
- 0.5 to 1.9% for daily traffic on Simcoe Road 20 (depending on road section).

To consider growth on the Township roads, population statistics have been reviewed. In 2011, the Township had a census population of 20,078, which represent an increase of 0.2% from the 2006 level of 20,031. On an annual basis, this translates to negligible growth over the same period. As per the *Simcoe County Transportation Master Plan*, the 2031 population is projected to be 28,100 which suggests an annual growth of 1.7% from 2011 to 2031 (which will largely be accommodated in the more developed, populated areas as opposed to the rural areas adjacent to the site).

In consideration of the historic growth in the area relating to both traffic (specifically the summer average daily traffic volumes in that the summer months are the subject of this study) and population,

and future growth projections for the Township, the annual growth rates as noted in Table 6 have been assumed. The resulting overall growth through to the 2020 and 2025 horizon years are also noted.

Table 6: Background Growth

Road	Annual Growth Rate	Growth in Horizon Period[1]		
		2014 to 2015	2015 to 2020	2015 to 2025
Highway 11	1%	1%	5%	10%
Simcoe Road 20	2%	-	10%	22%
Line 7	1%	-	5%	10%
Line 8	1%	-	5%	10%
Line 9	1%	-	5%	10%

note: compound growth has been assumed

3.2.2 Background Development

No other significant developments in the immediate area were identified by the Township for consideration in the background traffic volumes.

3.2.3 Traffic Volumes

The corresponding 2020 and 2025 background traffic volumes, as derived from the 2015 traffic counts and applying the noted adjustment and growth factors, are provided in Figure 8 through Figure 15.

3.3 Background Traffic Operations

3.3.1 Intersection Operations

The key intersections were again analysed given the projected background volumes, the results of which are provided in Table 7 for the critical 2025 Saturday peak hours. As the 2025 Saturday traffic volumes through the key intersections are greatest, this represents the worst case scenario. Provided the intersections operate with acceptable levels of service under 2025 Saturday operations, so too will they under 2020 conditions. Corresponding detailed worksheets are provided in Appendix C.

As indicated, despite the increase in background traffic volumes assumed, all of the study area key intersections will continue to provide excellent levels of service (level of service B or better) with minimal delays. In this regard, the existing road and intersection configurations are considered appropriate to serve the future background traffic volumes.

Table 7: Intersection Operations - 2025 Saturday

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	SB	stop	12	B	0.38	11	B	0.24
Line 7 & Hwy 11 Overpass E	SB	stop	11	B	0.17	13	B	0.18
Line 7 & Simcoe Road 20	EB	4-way stop	8	A	0.08	8	A	0.07
	WB		8	A	0.11	8	A	0.11
	NB		9	A	0.29	8	A	0.13
	SB		8	A	0.08	9	A	0.23
Line 8 & Simcoe Road 20	SB	stop	9	A	0.04	9	A	0.04
Line 9 & Hwy 11 Overpass W	SB	stop	10	A	0.19	9	A	0.11
Line 9 & Hwy 11 Overpass E	SB	stop	10	B	0.06	10	A	0.10
Line 9 & Simcoe Road 20	NB	stop	12	B	0.31	11	B	0.16
	SB	stop	10	B	0.08	12	B	0.21

3.3.2 Road Section Operations

The resulting 2020 and 2025 background traffic volumes are presented in Table 8 and Table 9 respectively. As with the 2015 conditions, the volume to capacity ratios (ie. the extent to which the available road capacity will be consumed) has been determined. In all cases, the projected traffic volumes remain less than the corresponding traffic volumes (ie. v/c < 1.0), thus suggesting despite the assumed annual growth, there will remain excess capacity to accommodate additional traffic. Of particular interest are the County and Township roads, which will operate at less than 12% and 45% of their respective capacities.

Table 8: Road Section Operations - 2020 Volumes

Road Section & Period		AM Peak Hour Volumes		PM Peak Hour Volumes		AM Peak Volume/Capacity		PM Peak Volume/Capacity	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Highway 11	Friday	2,685	1,335	2,980	1,610	0.82	0.41	0.91	0.49
	Saturday	2,660	1,675	2,615	1,730	0.81	0.51	0.80	0.53
	Sunday	1,855	2,340	1,815	2,745	0.57	0.72	0.56	0.84
	Weekday	1,695	1,295	2,240	1,580	0.52	0.40	0.69	0.48
Simcoe Road 20 (Line 3 to Line 7)	Friday	50	70	70	60	0.06	0.09	0.09	0.08
	Saturday	55	80	85	70	0.07	0.10	0.11	0.09
	Sunday	50	70	75	65	0.06	0.09	0.09	0.08
	Weekday	50	65	70	55	0.06	0.08	0.09	0.07
Simcoe Road 20 (Line 7 to Line 11)	Friday	45	65	75	60	0.06	0.08	0.09	0.08
	Saturday	45	75	80	75	0.06	0.09	0.10	0.09
	Sunday	45	65	75	70	0.06	0.08	0.09	0.09
	Weekday	40	60	65	60	0.05	0.08	0.08	0.08
Line 7	Friday	70	195	140	100	0.12	0.33	0.23	0.17
	Saturday	80	245	165	120	0.13	0.41	0.28	0.20
	Sunday	75	215	150	105	0.13	0.36	0.25	0.18
	Weekday	65	185	125	95	0.11	0.31	0.21	0.16
Line 8	Friday	15	10	15	20	0.03	0.02	0.03	0.03
	Saturday	15	15	15	20	0.03	0.03	0.03	0.03
	Sunday	15	10	15	20	0.03	0.02	0.03	0.03
	Weekday	15	10	10	20	0.03	0.02	0.02	0.03
Line 9	Friday	40	160	105	70	0.07	0.27	0.18	0.12
	Saturday	50	195	125	85	0.08	0.33	0.21	0.14
	Sunday	40	175	115	75	0.07	0.29	0.19	0.13
	Weekday	40	150	100	65	0.07	0.25	0.17	0.11

Table 9: Road Section Operations - 2025 Volumes

Road Section & Period		AM Peak Hour Volumes		PM Peak Hour Volumes		AM Peak Volume/Capacity		PM Peak Volume/Capacity	
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Highway 11	Friday	2,820	1,410	3,145	1,700	0.86	0.43	0.96	0.52
	Saturday	2,805	1,770	2,760	1,825	0.86	0.54	0.84	0.56
	Sunday	1,955	2,465	1,920	2,890	0.60	0.75	0.59	0.88
	Weekday	1,695	1,370	2,240	1,580	0.52	0.42	0.69	0.48
Simcoe Road 20 (Line 3 to Line 7)	Friday	50	75	75	65	0.06	0.09	0.09	0.08
	Saturday	55	90	95	75	0.07	0.11	0.12	0.09
	Sunday	50	75	85	70	0.06	0.09	0.11	0.09
	Weekday	50	65	75	60	0.06	0.08	0.09	0.08
Simcoe Road 20 (Line 7 to Line 11)	Friday	45	70	80	65	0.06	0.09	0.10	0.08
	Saturday	45	80	85	80	0.06	0.10	0.11	0.10
	Sunday	45	70	80	75	0.06	0.09	0.10	0.09
	Weekday	40	60	70	65	0.05	0.08	0.09	0.08
Line 7	Friday	75	215	155	110	0.13	0.36	0.26	0.18
	Saturday	90	270	180	130	0.15	0.45	0.30	0.22
	Sunday	85	235	165	115	0.14	0.39	0.28	0.19
	Weekday	70	205	135	105	0.12	0.34	0.23	0.18
Line 8	Friday	15	10	15	20	0.03	0.02	0.03	0.03
	Saturday	15	15	15	20	0.03	0.03	0.03	0.03
	Sunday	15	10	15	20	0.03	0.02	0.03	0.03
	Weekday	15	10	10	20	0.03	0.02	0.02	0.03
Line 9	Friday	40	175	115	75	0.07	0.29	0.19	0.13
	Saturday	50	215	135	90	0.08	0.36	0.23	0.15
	Sunday	40	190	125	80	0.07	0.32	0.21	0.13
	Weekday	40	170	110	70	0.07	0.28	0.18	0.12

4 Burl's Creek Event Grounds

This chapter will provide additional details with respect to the proposed development, including its location, the projected site generated traffic volumes and the assignment of such to the adjacent road network.

4.1 Proposed Use

The Burl's Creek Event Grounds is planned to be a premier event venue within Simcoe County. A range of events are to be hosted through the year including, but not limited to:

- music events;
- flea markets;
- camping and arts festivals;
- Oro-Medonte minor soccer; and
- a farmers market.

A site plan is provided in Figure 16.

4.2 Location & Access

As illustrated in Figure 1, Burl's Creek Events Ground is situated between Line 7 and Line 9, on the east side (water side) of Highway 11.

As per the site plan of Figure 16, access to the site is provided via each of Line 7, Line 8 (several access points) and Line 9. In all cases, the access points will provide for a single entry lane and single exit lane. Access points on Line 7 and Line 8 currently exist and served previous site uses; the access on Line 9 is proposed. The actual use of the access points will be dictated by the on-site event and location of activities within the site. For the larger musical events, control gates will be implemented immediately within the site boundaries at each of the Line 7, Line 8 and Line 9 access points - the single lane entry will flare to 18 control gates at Line 7, 9 at Line 8 (for VIP and RV access only) and 16 at Line 9.

The distances between the centre of Highway 11 and the centre of the access points are as follows:

- 830 metres for the Line 7 access point;
- 115, 465 and 1040 metres for the Line 8 access points;
- 1400 metres for the Line 9 access point.

4.3 Scheduled Events

A calendar of events planned for the year 2015 is provided in Appendix D, spanning from May to mid-October. For purposes of this assessment, 3 levels of events have been established as described below.

4.3.1 Level 1 Events

Level 1 events are more local in nature drawing from the Township of Oro-Medonte and immediately surrounding areas. They are expected to have shorter durations and/or fewer participants, and thus will generate fewer vehicle trips. These events include the following, with the noted number of occurrences scheduled in 2015:

- Huronia Fur & Feathers (1 Sunday morning event);
- Farmers Market (15 Friday events); and
- Oro-Medonte Minor Soccer (13 Wednesday evening events).

4.3.2 Level 2 Events

Level 2 events are intended to draw from a more significant regional market, resulting in greater attendance and associated traffic levels. Events considered as Level 2 include:

- Tough Mudder parking (1 Saturday event);
- Contemporary Music & Camping Festival (1 Saturday to Sunday event); and
- Automotive Flea Market (2 Thursday to Sunday events).

4.3.3 Level 3 Events

Level 3 events are the highest level of events to be staged at Burl's Creek. These events have broad market draw (provincial and beyond) and include:

- Wayhome Arts & Music Festival (1 Thursday to Sunday event); and
- Boots and Hearts Music Festival (1 Wednesday to Sunday event).

4.4 Event Traffic - Trip Generation

Typically, estimates of site generated traffic volumes are based on the proposed land use, size of development and trip generation rates published in the ITE *Trip Generation Manual*. However, given the uniqueness of the proposed undertaking, applicable trip rates are not available. Rather trip generation estimates have been established in consideration of the specific events and operating

details associated with each, as provided by Burl's Creek Events Ground and/or as determined from the event organizers. Specific details pertaining to the derivation of the site traffic volumes for each event are detailed in the following sections.

4.4.1 Level 1 Events

Huronia Fur & Feathers

The Huronia Fur and Feathers event is oriented towards the buying, selling and/or trading of poultry, game birds, pigeons, waterfowl, rabbits, cavies, etc., as hosted by the Huronia Fur and Feather Breeders Association. Assumptions regarding the event operations are:

- auto occupancy of 1.5 people per vehicle to reflect the specialized nature of the event and propensity for single attendees; and
- on average, 20% of the daily trips will occur during each event hour (5 hour duration); assume 40% (2x average) of daily trips in the peak hour with equal inbound and outbound trips.

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips		
				Time	In	Out
Sunday (x1) 7AM to 12PM	500	1.5 per vehicle	333	mid-morning	133	133

Farmers Market

The Farmers Market is a multi-stall market at which local farmers/producers sell products and merchandise directly to the general public, such as fresh fruit and vegetables, meat products, and other associated merchandise. Assumptions regarding the event operations are:

- vendors will arrive at the start of the market and depart at the end of the market, but market patrons will arrive/depart throughout the event;
- auto occupancy of 1.5 people per vehicle to reflect the specialized nature of the event and propensity for single attendees (which is considered conservative in that many families attend farmers markets); and
- on average, 11% of the daily trips will occur during each event hour (9 hour duration); assume 25% (2x average) of daily trips in the peak hour with equal inbound and outbound trips

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips		
				Time	In	Out
Friday (x15) 12PM to 9PM	500	1.5 per vehicle	333	mid-event	83	83

Oro-Medonte Minor Soccer

Assumptions regarding the soccer matches are:

- as per the Oro-Medonte Minor Soccer website, athletes will train from 6:15PM to 6:40PM with a game to follow;
- younger athletes will end at 7:30PM or 7:40PM, whereas the older athletes will end at 8:00PM;
- auto occupancy of 1.2 athletes per vehicle to reflect multiple athlete families recognizing that all athletes will play at the same time; and
- assume all athletes arrive during the initial event hour and depart during the final event hour with 10% of athletes being dropped-off and picked-up

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips			
					Time	In	Out
Wednesday (x13) 6PM to 8PM	600 athletes	1.2 athletes per vehicle	400	start:	5:15 to 6:15PM	400	40
				end:	7:30 to 8:30PM	40	400

4.4.2 Level 2 Events

Tough Mudder

Tough Mudder is an endurance event series in which participants attempt a military-style obstacle course. The event will be hosted at Mount St. Louis Moonstone, but Burl's Creek Events Ground will serve as the event parking facility with shuttle services provided to Mount St. Louis Moonstone. In considering the associated traffic volumes, the following have been assumed:

- 2000 vehicles to be parked;
- arrivals to the parking area are expected to occur between 5AM and 1PM (8 hours); departures are to occur between 11AM and 7PM (8 hours); and
- on average, 12.5% of the daily trips will occur during each arrival or departure hour (8 hour durations); assume 25% (2x average) of daily trips in the peak hour for peak direction

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips			
					Time	In	Out
Saturday (x1) 5AM to 7PM	2000 cars per day	n/a	2000 per day	arrive:	mid-morning	500	250
				depart:	mid-afternoon	250	500

Contemporary Music & Camping Festival

Assumptions regarding the event operations are:

- weekend event with 50% of participants to arrive on the Saturday and 50% to arrive on the Sunday;
- auto occupancy of 2.5 people per vehicle;
- 25% of daily participants are assumed to arrive during the 1 hour period prior to the start of the event with the remaining arriving during the course of the event; and
- 50% of participants are assumed to depart during the 1 hour period following the end of the event with the remaining 50% to camp overnight and depart the next morning (over the course of the morning).

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips			
					Time	In	Out
Sat to Sun (x1) 12PM to 11PM	8000	2.5 per vehicle	3200 per day	Sat:	11AM to 12PM	400	-
				Sun:	11PM to 12AM	-	1600

With respect to the auto occupancy, data has been compiled by Burl's Creek from 12 similar events as noted below, including the 2014 Boots & Hearts festival.

- Bonnaroo (2009 to 2013) 2.56 persons per vehicle
- Life is Good (2010) 2.98
- Electric Forest (2013) 2.48
- Rothbury (2008-2009) 2.52
- Jimmy Buffet (2010) 2.73
- All Good (2011) 2.43
- Boots & Hearts (2014) 2.66

The above provide a range of auto occupancies from 2.43 to 2.98 people per vehicle with an average of 2.62. For this assessment, the occupancy of 2.5 has been assumed to provide a conservative assessment.

Barrie Automotive Flea Market

The Barrie Automotive Flea Market is an event oriented to collectibles, classic cars and automotive parts. There are also automobile auctions, shows and other associated events. Assumptions regarding the event operations are:

- auto occupancy of 2.5 persons per car to reflect the greater number of attendees, and varied nature and target markets for the event;
- vendors will arrive at the start of the flea market and depart at the end of the flea market, but patrons will arrive/depart throughout the event;
- some vendors and/or patrons will camp overnight on site; and
- on average, 8% of the daily trips will occur during each event hour (12 hour duration per day); assume 15% (2x average) of daily trips in the peak hour with equal inbound and outbound trips.

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips		
				Time	In	Out
Thurs to Sun (x2) 7AM to 7PM	10,000 per day	2.5 per vehicle	4000 per day	mid-event	600	600

4.4.3 Level 3 Events

The Level 3 events are major music festivals, namely Wayhome Arts & Music Festival and Boots & Hearts Music Festival.

Wayhome Arts & Music Festival

Assumptions regarding the event operations are:

- auto occupancy of 2.5 people per vehicle as per the previous music festival discussion (refer to the Level 2 event Contemporary Music & Camping Festival);
- vehicle arrivals and departures as per past events, corresponding data for which is provided in Figure 17;
- arrivals are to begin on Thursday with peak arrivals late morning/early afternoon Friday (10:00AM to 1:00PM as per past events); and
- 50% of participants are assumed to depart at the conclusion of the event (likely over several hours), with the remaining 50% to camp overnight and depart the next morning (over the course of the morning).

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips			
					Time	In	Out
Thurs to Sun (x1)	40,000	2.5 per vehicle	16,000	arrive:	late morn/early aft Friday	1200	-
				depart:	Sun night	-	2400

Boots & Hearts Music Festival

Assumptions regarding the event operations, as considered in the above, are:

- auto occupancy of 2.5 people per vehicle as per the previous music festival discussion (refer to the Level 2 event Contemporary Music & Camping Festival);
- vehicle arrivals and departures as per past events, corresponding data for which is provided in Figure 18;
- arrivals are to begin on Wednesday with peak arrivals mid-day Friday (as per past events); and
- 50% of participants are assumed to depart at the conclusion of the event (likely over several hours), with the remaining 50% to camp overnight and depart the next morning (over the course of the morning).

Schedule	Event Attendance	Vehicle Occupancy	Event Vehicles	Peak Hour Vehicle Trips			
					Time	In	Out
Wed to Sun (x1)	40,000	2.5 per vehicle	16,000	arrive:	late morn/early aft Friday	900	-
				depart:	Sun night	-	2400

4.5 Event Traffic - Trip Distribution & Assignment

This section will detail the distribution of trips to surrounding areas and assignment of such to the road system.

4.5.1 Level 1 Events

For the Farmers Market and Oro-Medonte Minor Soccer, the visitors to Burl's Creek Event Grounds are expected to be from the immediately local area (ie. within the Township primarily). A slightly larger market area (encompassing the Cities and Orillia and Barrie, and other neighbouring Towns) is expected for the Huronia Fur and Feathers.

The following trip distributions have been assumed (based on the location of the Burl's Creek Event Grounds in relation to the anticipated markets and means of access to such):

	Farmers Market Minor Soccer	Huronia Fur and Feathers
▪ to/from Highway 11 south	30%	50%
▪ to/from Highway 11 north	30%	30%
▪ to/from Lines 7, 8 & 9 west	30%	10%
▪ to/from Simcoe Road 20 south	5%	5%
▪ to/from Simcoe Road 20 north	5%	5%

4.5.2 Level 2 Events

The assumed distribution for the Level 2 events is as follows:

	Contemporary Music & Camping Festival Automotive Flea Market	Tough Mudder
▪ to/from Highway 11 south	50%	70%
▪ to/from Highway 11 north	30%	20%
▪ to/from Lines 7, 8 & 9 west	10%	10%
▪ to/from Simcoe Road 20 south	5%	0%
▪ to/from Simcoe Road 20 north	5%	0%

As evident, it is assumed that the Tough Mudder will have a greater draw to areas to the south (eg. York Region and the GTA) and less of a draw from the local areas.

4.5.3 Level 3 Events

As previously noted, Level 3 events are considered major events and will generate significant traffic volumes. Given the limited occurrence of such, and the traffic volumes to be accommodated, separate traffic control plans have been established for the Wayhome Arts & Music Festival and the Boots & Hearts Music Festival, the intent of which is to establish transportation strategies to best accommodate the demands and minimize impacts through temporary traffic control measures. In this regard, these events have not been considered further in this assessment.

4.5.4 Traffic Volumes

The resulting assignments of the event related traffic volumes to the area road system, following the previously noted distributions, are presented in Figure 19 through Figure 24. The assignment of the site trips to the site access points recognizes the location of each event within the event grounds as per information provided by Burl's Creek Event Grounds (the information is noted on the event calendar and corresponding zone map in Appendix D). For those events with defined inbound and outbound peaks (ie. patrons will arrive at the start of the event and leave at the end), volumes have been illustrated separately.

5 Transportation Impacts

This chapter will address the resulting impacts of the proposed Burl's Creek Event Grounds development on the adjacent road system.

5.1 Traffic Volumes with Burl's Creek Traffic

The site generated traffic volumes for each individual event have been combined with the future 2015, 2020 and 2025 background traffic volumes for the corresponding day (eg. Friday, Saturday, Sunday or weekday) and time period (AM or PM) to realize the future total traffic volumes. For events over multiple days, volumes for the most critical day have been established. The AM or PM peak period was selected to best correspond to the peak hour of the event - the AM peak was used for events that peak mid-morning, whereas the PM peak was used for events that peak mid-afternoon or evening. In most cases, this represents a conservative approach in that the daily peaks (particularly on weekdays) correspond more closely to the start and end of the work day, volumes outside of these periods (during which the events are expected to peak) are generally less.

The corresponding traffic volumes are provided in Figure 25 through Figure 42; derivations of the future total traffic volumes (ie. background traffic volumes + site traffic volumes = total volumes) are provided for each event in Appendix E. Only data corresponding to the peak hour deemed most applicable to the event operations has been illustrated (eg. the Huronia Fur & Feathers event will occur during the morning, and thus only the AM peak hour has been considered as the event will not generate any significant traffic during the PM peak hour, if any at all).

5.2 Traffic Operations with Burl's Creek Traffic

5.2.1 Intersection Operations

The key intersections were again analyzed to establish potential impacts associated with the Burl's Creek Event Grounds. In consideration of the number of events and horizon years, the analysis has focussed on the 2025 horizon, recognizing that the associated volumes are greatest. Provided the 2025 traffic operations are acceptable, so too will the 2015 and 2020 operations be acceptable. The intermediate horizon years of 2015 and 2020 were only considered if significant operational impacts have been identified and further details as to related timings was considered necessary.

The results of the assessments are summarized in Table 10 through Table 15 for each specific event and considering the associated day and time of the event peak hours (eg. weekday evening vs Saturday morning). The corresponding detailed worksheets are provided in Appendix F.

Table 10: Intersection Operations - 2025 Huronia Fur & Feathers (Sunday mid-morning)

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	WB	stop	14	B	0.48	-	-	-
Line 7 & Hwy 11 Overpass E	WB	stop	16	C	0.34	-	-	-
Line 7 & Simcoe Road 20	EB	4-way stop	8	A	0.08	-	-	-
	WB		8	A	0.11	-	-	-
	NB		9	A	0.24	-	-	-
	SB		8	A	0.10	-	-	-
Line 8 & Simcoe Road 20	SB	stop	9	A	0.04	-	-	-
Line 9 & Hwy 11 Overpass W	EB	stop	9	A	0.17	-	-	-
Line 9 & Hwy 11 Overpass E	EB	stop	10	B	0.05	-	-	-
Line 9 & Simcoe Road 20	NB	stop	12	B	0.28	-	-	-
	SB	stop	11	B	0.08	-	-	-
Line 7 & Site Access	WB	stop	5	B	0.19	-	-	-
Line 8 & Site Access	EB	stop	0	A	0	-	-	-
	WB	stop	0	A	0	-	-	-
Line 9 & Site Access	EB	stop	0	A	0	-	-	-

Under the Huronia Fur and Feathers event, all intersection operations are considered excellent (levels of service A or B) with minimal delays. As such, no road system improvements are considered necessary to support this event, as based on the noted traffic operations.

Table 11: Intersection Operations - 2025 Farmers Market (Friday Evening)

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	WB	stop	-	-	-	10	B	0.20
Line 7 & Hwy 11 Overpass E	WB	stop	-	-	-	11	B	0.27
Line 7 & Simcoe Road 20	EB	4-way stop	-	-	-	8	A	0.11
	WB		-	-	-	8	A	0.10
	NB		-	-	-	8	A	0.12
	SB		-	-	-	9	A	0.19
Line 8 & Simcoe Road 20	SB	stop	-	-	-	9	A	0.05
Line 9 & Hwy 11 Overpass W	EB	stop	-	-	-	9	A	0.15
Line 9 & Hwy 11 Overpass E	EB	stop	-	-	-	10	A	0.08
Line 9 & Simcoe Road 20	NB	stop	-	-	-	11	B	0.14
	SB	stop	-	-	-	11	B	0.18
Line 7 & Site Access	WB	stop	-	-	-	0	A	0.19
Line 8 & Site Access	EB	stop	-	-	-	10	A	0.10
	WB	stop	-	-	-	0	A	0
Line 9 & Site Access	EB	stop	-	-	-	0	A	A

Under the Farmers Market event, all intersection operations are considered excellent (levels of service A or B) with minimal delays. As such, no road system improvements are considered necessary to support this event, as based on the noted traffic operations.

Table 12: Intersection Operations - 2025 Minor Soccer (Wednesday evening)

Intersection and Movement		Control	Inbound Peak Hour			Outbound Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	WB	stop	16	C	0.37	14	B	0.56
Line 7 & Hwy 11 Overpass E	WB	stop	60	F	0.93	20	C	0.32
Line 7 & Simcoe Road 20	EB	4-way stop	8	A	0.14	8	A	0.11
	WB		8	A	0.12	8	A	0.10
	NB		8	A	0.11	8	A	0.11
	SB		9	A	0.20	9	A	0.24
Line 8 & Simcoe Road 20	SB	stop	1	A	0.01	1	A	0.01
Line 9 & Hwy 11 Overpass W	EB	stop	9	A	0.09	9	A	0.09
Line 9 & Hwy 11 Overpass E	EB	stop	9	A	0.08	9.4	A	0.08
Line 9 & Simcoe Road 20	NB	stop	11	B	0.10	11	B	0.10
	SB	stop	11	B	0.15	11	B	0.15
Line 7 & Site Access	WB	stop	12	B	0.10	15	B	0.59
Line 8 & Site Access	EB	stop	0	A	0.10	0	A	0.10
	WB	stop	0	A	0	0	A	0
Line 9 & Site Access	EB	stop	0	A	0	0	A	0

For the Minor Soccer events, some higher delays are incurred, resulting in slightly poorer levels of service. Notwithstanding, all intersection operations are considered acceptable (in that they are less than the level of service F, which denotes the intersection or movement capacity has been fully consumed), with the exception of the intersection of Line 7 with the east Highway 11 overpass. At this intersection, the average delay is 60 seconds for the westbound movement, thus resulting in a level of service F. However, such a delay is not considered unbearable. Furthermore, as these conditions will be experienced only for the peak inbound direction of soccer related traffic, which is limited to a 1 hour period, no road improvements are considered necessary at this intersection.

Table 13: Intersection Operations - 2025 Tough Mudder (Saturday)

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	WB	stop	14	B	0.42	11	B	0.24
Line 7 & Hwy 11 Overpass E	WB	stop	12	B	0.34	12	B	0.24
Line 7 & Simcoe Road 20	EB	4-way stop	8	A	0.07	8	A	0.12
	WB		8	A	0.10	8	A	0.10
	NB		9	A	0.27	8	A	0.14
	SB		8	A	0.08	9	A	0.23
Line 8 & Simcoe Road 20	SB	stop	9	A	0.04	1	A	0.01
Line 9 & Hwy 11 Overpass W	EB	stop	11	B	0.39	13	B	0.54
Line 9 & Hwy 11 Overpass E	EB	stop	12	B	0.07	17	C	0.21
Line 9 & Simcoe Road 20	NB	stop	12	B	0.29	11	B	0.15
	SB	stop	10	B	0.08	11	B	0.20
Line 7 & Site Access	WB	stop	0	A	0	0	A	0
Line 8 & Site Access	EB	stop	0	A	0	0	A	0
	WB	stop	10	A	0.26	12	B	0.51
Line 9 & Site Access	EB	stop	0	A	0	0	A	0

During the Tough Mudder peak hour operations, all intersections will provide acceptable operations (level of service C or better) and thus no improvements are considered necessary.

Table 14: Intersection Operations - 2025 Contemporary Music & Camping Festival (Sat mid-day)

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	WB	stop	-	-	-	12	B	0.30
Line 7 & Hwy 11 Overpass E	WB	stop	-	-	-	12	B	0.36
Line 7 & Simcoe Road 20	EB	4-way stop	-	-	-	9	A	0.16
	WB		-	-	-	8	A	0.11
	NB		-	-	-	8	A	0.15
	SB		-	-	-	9	A	0.24
Line 8 & Simcoe Road 20	SB	stop	-	-	-	9.5	A	0.04
Line 9 & Hwy 11 Overpass W	EB	stop	-	-	-	9	A	0.11
Line 9 & Hwy 11 Overpass E	EB	stop	-	-	-	10	A	0.10
Line 9 & Simcoe Road 20	NB	stop	-	-	-	11	B	0.16
	SB	stop	-	-	-	12	B	0.21
Line 7 & Site Access	WB	stop	-	-	-	0	A	0
Line 8 & Site Access	EB	stop	-	-	-	0	A	0
	WB	stop	-	-	-	0	A	0.51
Line 9 & Site Access	EB	stop	-	-	-	0	A	0

Under the Contemporary Music and Camping Festival, all intersection operations are considered excellent (levels of service A or B) with minimal delays. As such, no road system improvements are considered necessary to support this event, as based on the noted traffic operations.

Table 15: Intersection Operations - 2025 Barrie Automotive Flea Market (Sat mid-day)

Intersection and Movement		Control	AM Peak Hour			PM Peak Hour		
			delay	LOS	v/c	delay	LOS	v/c
Line 7 & Hwy 11 Overpass W	WB	stop	17	C	0.58	-	-	-
Line 7 & Hwy 11 Overpass E	WB	stop	30	D	0.66	-	-	-
Line 7 & Simcoe Road 20	EB	4-way stop	9	A	0.18	-	-	-
	WB		9	A	0.14	-	-	-
	NB		9	A	0.15	-	-	-
	SB		10	A	0.29	-	-	-
Line 8 & Simcoe Road 20	SB	stop	1	A	0.01	-	-	-
Line 9 & Hwy 11 Overpass W	EB	stop	11	B	0.34	-	-	-
Line 9 & Hwy 11 Overpass E	EB	stop	11	B	0.24	-	-	-
Line 9 & Simcoe Road 20	NB	stop	12	B	0.18	-	-	-
	SB	stop	12	B	0.33	-	-	-
Line 7 & Site Access	WB	stop	13	B	0.43	-	-	-
Line 8 & Site Access	EB	stop	0	A	0	-	-	-
	WB	stop	0	A	0.51	-	-	-
Line 9 & Site Access	EB	stop	0	A	0	-	-	-

All intersection operating conditions are considered acceptable under this event (level of service D or better) and thus no improvements are warranted to address poor traffic operations.

5.2.2 Queue Operations

Further to the intersection operations, the presence of traffic queues has been reviewed for each stop controlled movement and also the left turns on the major roads (which operate under free flow conditions and are thus only obstructed by opposing traffic). The corresponding 95th percentile queues are noted in Table 16 for the 2025 Saturday operations (the 95th percentile queue represents the queue length that would only be exceeded 5% of the time).

Table 16: Queue Operations - 2025 with Burl's Creek

Intersection and Movement		Control	95th Percentile Queues (metres)					
			Fur & Fathers	Farmer Market	Minor Soccer	Tough Mudder	Music & Camping	Automotive Flea Market
Line 7 & Hwy 11 Overpass W	WB	stop	20	6	13	7	9	28
	SB	left	1	1	4	1	2	1
Line 7 & Hwy 11 Overpass E	WB	stop	11	8	79	7	13	35
	SB	left	2	2	2	2	2	3
Line 7 & Simcoe Road 20	EB	4-way stop	1	1	1	1	1	1
	WB		1	1	1	1	1	1
	NB		1	1	1	1	1	1
	SB		1	1	1	1	1	1
Line 8 & Simcoe Road 20	SB	stop	1	1	1	1	1	1
	EB	left	1	1	1	1	1	1
Line 9 & Hwy 11 Overpass W	EB	stop	5	4	2	26	3	12
	NB	left	1	1	1	1	1	3
Line 9 & Hwy 11 Overpass E	EB	stop	1	2	2	6	3	7
	NB	left	2	1	1	2	1	0
Line 9 & Simcoe Road 20	NB	stop	1	1	1	1	1	1
	SB	stop	1	1	1	1	2	1
	EB	left	9	4	3	4	11	5
	WB	left	2	5	4	6	12	11

Intersection and Movement		Control	95th Percentile Queues (metres)					
			Fur & Fathers	Farmer Market	Minor Soccer	Tough Mudder	Music & Camping	Automotive Flea Market
Line 7 & Site Access	WB	stop	5	0	2	0	0	17
	SB	left	0	0	12	0	0	5
Line 8 & Site Access	EB	stop	0	3	0	0	0	0
	WB	stop	0	0	0	23	0	0
	NB	left	0	1	0	0	1	0
	SB	left	0	0	0	5	0	5
Line 9 & Site Access	EB	stop	0	0	0	0	0	0
	NB	left	0	0	0	0	0	0

As noted, the 95th percentile queues are typically in the order of 1 vehicle or less (1 vehicle = 7.6 metre queue length). Queues at the Line 7 and Line 9 overpass intersections are somewhat greater (up to 10 cars or 79 metres under the Minor Soccer event), but remain within reason. At the site access points, any queueing can be accommodated readily within the site. At no point are traffic queues on Line 7 or Line 9 projected to extend to Highway 11 thus interfering with highway operations.

5.2.3 Right-In/Right-Out Operations

There are 2 right-in/right-out intersections at each of the intersections of Line 7, Line 8 and Line 9 with Highway 11. In all cases, the right-in to the highway is provided with a free flow movement, with an acceleration lane provided on the highway. This allows motorists to enter the highway and attain an appropriate travel speed prior to merging with the outside lane of traffic. Similarly, each right-out movement has a separate deceleration and a free-flow exit manoeuvre from the highway, thereby minimizing (if not negating) potential impacts to Highway 11. In consideration of these operations, the right-in/right-out intersections were not specifically considered (as each movement operates under free flow there are no delays and hence a level of service A results).

Traffic simulations were also reviewed for the Tough Mudder event, which results in the greatest volume of traffic entering and exiting Highway 11 at a single right-in/right-out location (the corresponding projected volumes are estimated at 515 to 520 vehicles per hour, which equates to less than 10 vehicles per minute). Based on the simulation results, no impacts to the highway operations are expected.

5.2.4 Link Operations

The resulting 2015, 2020 and 2025 total volume to capacity ratios are presented in the tables of Appendix E for each event being considered, for those days and time periods to which the event contributes additional traffic. Summaries of the peak hour v/c ratios for each event are provided in Table 17, Table 18 and Table 19 for the 2015, 2020 and 2025 horizon years. Where an event has multiple peaks, only the most critical figures are noted (ie. the greatest v/c ratios). When a v/c ratio exceeds 0.90, the road section is nearing capacity whereas when the v/c exceeds 1.0, the road section volumes surpass the capacity.

Table 17: Volume to Capacity Ratios - 2015 Volumes with Burl's Creek

Road Section & Direction		Level 1 Events			Level 2 Events		
		Fur & Feathers	Farmers Market	Minor Soccer	Tough Mudder	Music & Camping	Auto Flea Market
Highway 11	NB	0.56	0.89	0.66	0.92	0.82	0.86
	SB	0.70	0.48	0.48	0.62	0.83	0.89
Simcoe Road 20	NB	0.05	0.08	0.10	-	0.11	0.13
	SB	0.08	0.06	0.09	-	0.10	0.12
Line 7	NB	0.31	-	0.93	-	-	0.62
	SB	0.52	-	0.88	-	-	0.81
Line 8	EB	-	0.14	-	0.85	0.62	0.39
	WB	-	0.15	-	0.86	0.09	0.48
Line 9	EB	-	0.23	-	0.52	-	0.48
	WB	-	-	-	-	-	-

Highway 11 Operations

In considering operations on Highway 11, the various events will contribute an additional 30 to 500 vehicles per hour per direction on select sections of Highway 11. Combined with the existing and future traffic volumes on the highway, the future total traffic volumes (ie. with consideration for Burl's Creek) on Highway 11 will approach capacity (ie. v/c > 0.90) or slightly exceed its capacity (v/c of 1.01) during the associated peak hours of the noted events.

Table 18: Volume to Capacity Ratios - 2020 Volumes with Burl's Creek

Road Section & Direction		Level 1 Events			Level 2 Events		
		Fur & Feathers	Farmers Market	Minor Soccer	Tough Mudder	Music & Camping	Auto Flea Market
Highway 11	NB	0.59	**0.93**	0.73	**0.97**	0.86	**0.91**
	SB	0.74	0.51	0.53	0.65	0.88	**0.93**
Simcoe Road 20	NB	0.07	0.10	0.12	-	0.13	0.14
	SB	0.10	0.08	0.11	-	0.12	0.14
Line 7	NB	0.33	-	**0.96**	-	-	0.65
	SB	0.56	-	**0.91**	-	-	0.86
Line 8	EB	-	0.15	-	0.86	0.63	0.40
	WB	-	0.16	-	0.87	0.10	0.48
Line 9	EB	-	0.26	-	0.54		0.51
	WB	-	-	-	-	-	-

Table 19: Volume to Capacity Ratios - 2025 Volumes with Burl's Creek

Road Section & Direction		Level 1 Events			Level 2 Events		
		Fur & Feathers	Farmers Market	Minor Soccer	Tough Mudder	Music & Camping	Auto Flea Market
Highway 11	NB	0.62	**0.98**	0.73	**1.01**	**0.91**	**0.95**
	SB	0.77	0.54	0.53	0.68	**0.92**	**0.98**
Simcoe Road 20	NB	0.07	0.11	0.13	-	0.14	0.16
	SB	0.10	0.09	0.11	-	0.13	0.15
Line 7	NB	0.34	-	**0.98**	-	-	0.68
	SB	0.59	-	**0.93**	-	-	0.90
Line 8	EB	-	0.15	-	0.86	0.63	0.40
	WB	-	0.16	-	0.87	0.10	0.48
Line 9	EB	-	0.28	-	0.56	-	0.53
	WB	-	-	-	-	-	-

The greatest increase will result from the Tough Mudder event (only 1 occurrence) with arrivals primarily occurring the morning hours and departures during the afternoon hours on the corresponding Saturday. The associated v/c ratios range from 0.92 to 1.01 in the Highway 11 northbound direction of the AM peak hour, which is conservative in that it assumes the peak hours for the Tough Mudder will correspond to the peak hours of the highway. It is further noted that only the section of Highway 11 between Line 7 and Line 8 will realize an increase of 500 vehicles during the arrival peak hour, whereas only the section from Line 8 to Line 9 will realize the same increase during the departure peak hour. Outside of these road sections, the additional volumes are projected in the order of 100 to 350 vehicles depending on direction of travel. This increase results from the need for travelers to utilize the downstream intersections at Line 9 and Line 7 to change travel direction for access to/from Line 8. This also assumes that all vehicles travelling to/from the site will utilize Line 8 to access the highway. Any redistribution of traffic to Line 7 or Line 9 will lessen the incremental increases in traffic volumes through the noted sections of Highway 11. Given the short duration of the increased traffic volumes, the operating conditions are considered acceptable, and thus no improvements are warranted. It is noted that consideration could be given to providing access to the parking area via Line 7 or Line 9 as appropriate, to provide a more distributed arrival pattern during the Tough Mudder event.

The Automotive Flea Market is expected to contribute 300 vehicles per hour per direction on Highway 11 to/from areas to the south, resulting in a v/c ratio of 0.89 to 0.98 in the vicinity of Line 7. Burl's Creek will operate parking/access off Line 7 and Line 8 during this event, thus distributing the traffic between these 2 roads accordingly, and alleviating demands on the highway system beyond Line 7. Again, given the short nature of this event (2 occurences per year), no improvements to the highway system are considered necessary.

Simcoe Road 20 Operations

The existing traffic volumes on Simcoe Road 20 equate to approximately 9% or less of its available road capacity (ie. volumes of 70 vehicles per hour or less vs a capacity of 800 vehicles per hour per lane). While Simcoe Road 20 provides an alternative and parallel travel route to Highway 11, it does not extend beyond Line 11 to the north. To the south, Simcoe Road 20 turns into Shanty Bay Road in the north end of the City of Barrie. While Simcoe Road 20 provides a connection to the City, the majority of site visitors are expected to access the site via Highway 11. Increases of 20 to 30 vehicles per hour per direction are projected (as per Figure 19 through Figure 24), which can be readily accommodated on the road (25x the amount could in fact be accommodated).

Township Road Operations

The only noted issue on the Township roads is that of Line 7 associated with the Minor Soccer events, during which time traffic volumes from Highway 11 to the site access are projected to be 93 to 98% of capacity. During this event (13 Wednesday evening occurrences), all 600 athletes are assumed to arrive during the same hour in that all of the soccer sessions will commence at 6:15 (which corresponds to the commuter PM peak hour). Based on the traffic projections and assignment of

traffic volumes to the area roads, peak hour peak direction volumes during this arrival hour will approach 600 vehicles per hour (which is the assumed planning capacity of Line 7). It is assumed that the primary access route will consist of Line 7 from Highway 11 to the site, although there are other possible routes via Line 9 and Simcoe Road 20 that would reduce demands on Line 7. The concluding times for the soccer events will be staggered somewhat due to different match durations for different age groups. A similar approach could also be adopted to stagger the start times by age group, thus alleviating some of the peak hour demands. Given that the road will continue to operate below capacity, that other alternative routes are possible and that changes to the actual event operations can also be considered (eg. staggering start and end times, hosting the soccer matches over several nights or providing access via Line 8), no improvements to the road system are considered necessary to support the soccer events.

The more significant increases in traffic volumes on the local roads associated with the remaining events are as follows:

- 250 to 500 vehicles per direction on Line 8 and 200 per direction on Line 9 during Tough Mudder;
- up to 360 vehicles per direction on Line 8 during the Contemporary Music and Camping Festival; and
- 180 to 270 vehicles per direction on Lines 7, 8 and 9 during the Barrie Automotive Flea Market.

Notwithstanding the noted increases, the resulting total volumes will remain below the assumed road capacities (particularly on Line 8 on which existing volumes are minimal) and thus are acceptable.

5.3 Turn Lane Requirements

The need for turn lanes at the site access points has been considered based on the nature of the event (occurrences per year and duration) and corresponding traffic volumes (both existing and future). As several of the events will occur over a single day, and may only happen once or twice per year, it is not considered necessary to implement permanent infrastructure improvements.

5.3.1 Right Turn Lanes

As per the MTO *Geometric Design Guidelines for Ontario Highways*, right turn lanes are recommended when the turning volume exceeds 60 vehicles per hour and has the potential to impact through movements due to turning vehicles. In considering the projected volumes for each event (as per Figure 19 through Figure 24), the noted threshold for a right turn lane is exceeded during the following events:

- Farmers Market - 75 EB right turns at the Line 8 access (Friday evening);
- Contemporary Music & Camping Festival - 360 EB right turns at the Line 8 access (Saturday/ Sunday mid-day); and

- Barrie Automotive Flea Market - 120 WB right turns at the Line 8 access (Saturday/Sunday mid-day).

However, as Line 8 has a limited service area (it extends only from Highway 11 to Simcoe Road 20), existing volumes on this road section are minimal (less than 20 vehicles per during the peak hours). In this regard, any impacts to through traffic, resulting from the right turning traffic, will be negligible. In this regard, right turn lanes are not considered necessary.

5.3.2 Left Turn Lanes

As per the MTO *Geometric Design Guidelines for Ontario Highways*, the need for left turn lanes is based on left turn traffic volumes, through volumes and the design speed. As with right turn lanes, left turn lanes are recommended when the volume of turning traffic unduly impacts the through traffic. Increased left turn movements are anticipated for the following events:

- Huronia Fur & Feathers - 120 EB left turns at the Line 7 access (Sunday mid-morning);
- Minor Soccer - 450 EB left turns at the Line 7 access (Wednesday evening);
- Tough Mudder - 250 to 500 EB left turns at the Line 8 access (Saturday mid-morning and mid-afternoon); and
- Barrie Automotive Flea Market - 225 EB left turns at the Line 7 and Line 8 access (Saturday/Sunday mid-day).

Apart from Minor Soccer, the occurrences of the remaining events is limited (2 Sunday mornings for Fur & Feathers, 1 Saturday for Tough Mudder and 4 days for the Flea Market x 2 events) and thus left turn lanes to support these events are not considered necessary (particularly on Line 8 given the limited volume of other traffic on the road during the noted peak hours).

The Minor Soccer events are expected on 13 Wednesday evenings over the months of May, June, July and August. Based on the MTO left turn lane warrants, an EB left turn lane is warranted at the Line 7 access (the provision of which would also serve the remaining events using the same access). In considering a 70 km/h design speed (10 km/h over the speed limit), the left turn lane should consist of a 25 metre storage length, a 40 metre parallel lane and a 115 metre taper. Based on a review of Simcoe County mapping, Line 7 has a 26 metre right-of-way in the area of the site access (original 20 metres + 6 metre widening along the north side). As the road is centred in the original 20 metre right-of-way, it is offset to the south within the 26 metre right-of-way. In consideration of this, and given the line of large, mature trees along the south side of Line 7, the left turn lane should be implemented on the north side of the road where it can be more readily implemented with lesser impacts.

5.4 Monitoring of Traffic Operations

It is acknowledged that the traffic volumes for the basis of the operational and turn lane assessments have been established from limited available existing data and projections for the corresponding events. In this regard, it is recommended that site operations be monitored over the course of the initial year of operations to confirm traffic volumes along the area roads and to/from the site, from which the need for and exact timing of, the road improvements can be established.

As many of the events will have limited duration and limited occurrences, supporting permanent infrastructure may not be required. While some impacts may occur (eg. congestion and increased delays to the motoring public) such are tolerable given the limited nature. Furthermore, for particular events, temporary traffic control measures could be considered as warranted by operations (eg. traffic control persons at the site access points).

6 Summary

This study has reviewed the transportation impacts associated with the proposed Burl's Creek Event Grounds, located east of Highway 11 between Line 7 and Line 9 in Oro-Medonte.

Existing Traffic Operations

Based on 2014/15 traffic volumes on the study area roads, all relevant road sections (including those on Highway 11) are operating below their respective planning capacities. There are no known operational issues at any of the corresponding study area intersections given the limited volumes - single lane approaches and stop control are considered appropriate.

Future Traffic Operations

A 2015 horizon (opening year), 2020 horizon (5-year beyond opening) and 2025 horizon (10-year beyond opening) were considered for this study.

An annual growth rate of 1% was applied to the existing traffic volumes on Highway 11 and the local Township roads, and 2% on Simcoe Road 20 to estimate future background traffic volumes for the horizon years. These were based on historic growth in summer traffic conditions and in considering future growth potential in the area.

Under future background conditions (ie. without Burl's Creek Event Grounds traffic) the study area roads will continue to operate below their capacity levels. Highway 11 will operate at 86% or less of its capacity during the Saturday, Sunday and weekday peak hours, and 96% or less during the more critical Friday peak hour (which reflects the increase in NB traffic heading to "cottage country"). Simcoe Road 20 and the Township roads will operate at less than 12% and 36% of their respective capacities.

Burl's Creek Event Grounds

The Burl's Creek Event Grounds has 8 distinct events currently planned for the 2015 season, including soccer, music festivals, satellite parking, famer and flea markets, and camping. Attendance at the site events is expected to range from 500 people per day to 40,000 people per day. In considering auto occupancy levels of 1.5 to 2.5 persons per vehicles (depending on event) 333 to 16,000 vehicles are expected per day. Based on event durations and arrival/departure times, and not considering the major music festivals (which have been addressed in a separate traffic control report), the site is expected to generate 167 to 1200 vehicle trips per hour (total of inbound and outbound trips).

Existing site access will be largely maintained, providing access via Line 7 and Line 8 (with multiple access points along the latter road). Access is also proposed vial Line 9 for the major music festivals.

Future Traffic Operations with Burl's Creek

In considering the future total traffic volumes (eg. background traffic + event traffic) associated with each event (with the exception of the major music festivals), the area intersections will continue to operate below their capacities with a few exceptions.

- The key study area intersections will typically operate at level of service A or B, with decreased levels of service C or D occurring at select intersections under select events. All of these operations are considered acceptable.

- Under the Minor Soccer events, the intersection of Line 7 and the Highway 11 overpass on the east side of the highway will experience a level of service F under 2025 conditions resulting from increased delays for those at the stop sign. However, the corresponding delay of 60 seconds is not considered unbearable, and will only occur over a short arrival period (all athletes will arrive over the course of 1 hour). The 95th percentile queue for the southbound movements on the overpass is estimated at 79 metres under the 2025 conditions, which correlates to approximately 10 vehicles, and can be accommodated on the overpass.

Similarly, the key road sections will typically operate below their respective capacities, following consideration for the Burl's Creek Event Grounds site traffic.

- Highway 11 is projected to operate at 48% to 101% of capacity over the 2015 to 2025 horizon years (the maximum under the future background traffic levels was 96% with the incremental increase associated with site operations). As such, Highway 11, the major road providing service to the area can accommodate the projected event traffic (operations at capacity will be limited in duration and occurrence).

- Simcoe Road 20 is expected to operate at 5% to 16% during the same periods.

- On Line 7, the projected volumes will approach the planning capacity of 600 vehicles per hour per lane on the section from Highway 11 to the site access during the Minor Soccer events. Peak hour peak directional volumes are projected in the order of 555 to 585 vehicles per hour. However, this is not considered critical given the relatively short section of road in question and the rural and remote nature of the area, and limited duration (soccer occurs over 2 hours). Notwithstanding, consideration could be given to staggering the start time of the soccer matches to better accommodate arrival traffic (as it is, all 600 participants start at 6:15PM). There are also alternative routes to/from the soccer pitches that users will divert to should operations become problematic (the majority of traffic was assumed to access the site via Line 7 and Highway 11). Additional means of access to/from the site could also be provided for these events (eg. utilizing site access of Line 7 and Line 8).

- On Line 8, traffic volumes associated with the Tough Mudder will amount to in excess of 500 vehicles per hour through the section from Highway 11 to the site access (approximately 86% of capacity). However, this road has minimal background traffic volumes (ie. most of the noted volumes will be site related) and thus minimal impacts to other road users will result. This event is limited to a single day also.

In considering MTO warrants for left and right turn lanes, the associated event traffic volumes will exceed the thresholds for EB left turns at the Line 7 access; and EB left and WB right turns at the Line 8 access points.

- Notwithstanding, given the limited nature of the events and traffic otherwise on Line 8, no additional turn lanes are considered necessary. While the associated turn volumes may exceed the threshold limits, impacts to other road users will be limited (ie. it will primarily be site traffic on the road).

- At the Line 7 access, an EB left turn lane is recommended in consideration of the projected traffic volumes and more regular use of the Line 7 access for site events. Given the location of the road within the existing right-of-way, and presence of large mature trees on the south side of the road, the left turn lane is recommended to be constructed on the north side of the road. Prior to implementation, the need for the turn lane should be confirmed based on actual event and Line 7 traffic volumes during the course of the event (as suggested in the monitoring program).

Monitoring

The future traffic volumes projected under each event scenario have been established based on limited traffic volumes through the area and in consideration of anticipated event attendance and travel patterns. As the development proceeds, and events occur, it is recommended that traffic volumes and conditions on the area roads and at the site access points be counted and monitored during the initial year of operations to establish actual traffic levels and corresponding peak durations.

Based on the first year of operations, the need for and timing of, external road improvements can be confirmed (for implementation in the following year).

Temporary traffic control measures can also be considered as warranted (eg. traffic control persons at the site access points) during peak events to provide additional guidance and control to site visitors and those on the road system.

LICENSED PROFESSIONAL ENGINEER
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90592237
June 12/15
PROVINCE OF ONTARIO

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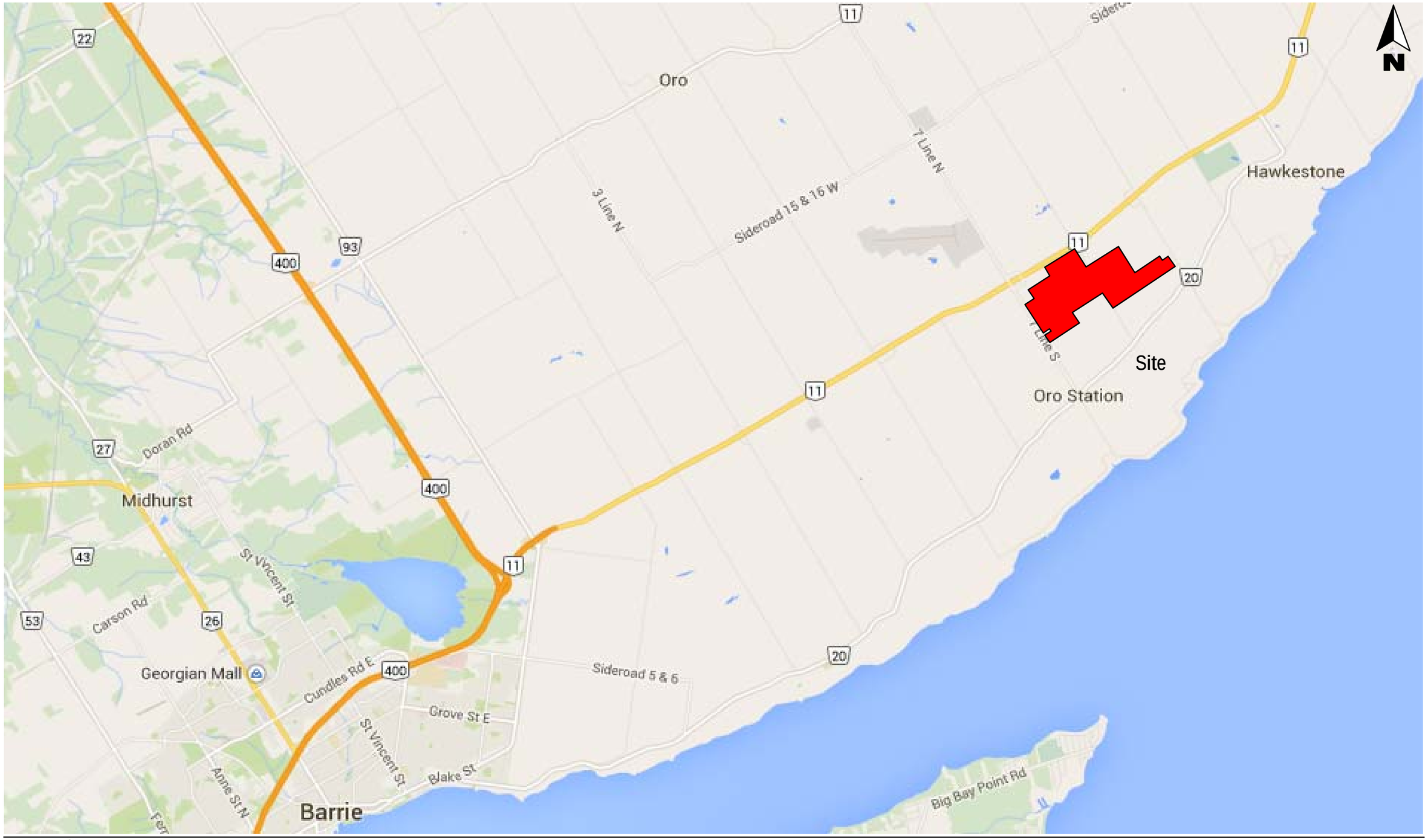

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Burl's Creek Event Grounds Traffic Impact Study

Site Location

Figure 1

Line 7 looking west towards Highway 11

Line 7 looking west towards Highway 11 overpass intersection

source: Google Streetview

Simcoe Road 20 looking south at Line 7

Highway 11 NB looking towards Line 8 right-in/right-out

Line 7 looking west at Burl's Creek access

Simcoe Road 20 looking south at Line 8

Line 9 looking west towards Highway 11

Line 7 looking east towards Simcoe Road 20

Simcoe Road 20 looking south at Line 9

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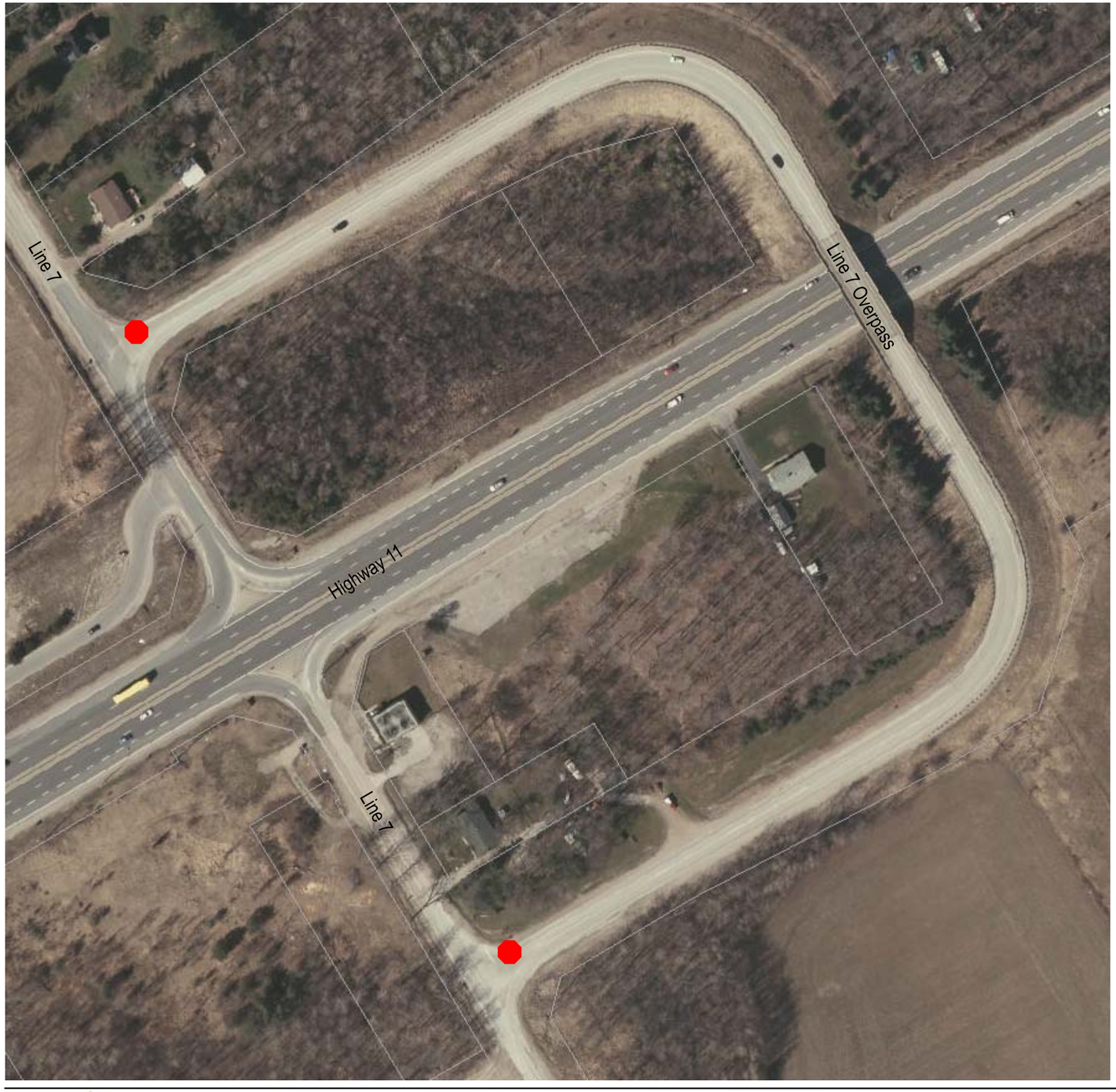
Burl's Creek Event Grounds Traffic Impact Study

Area Road Network

Figure

2



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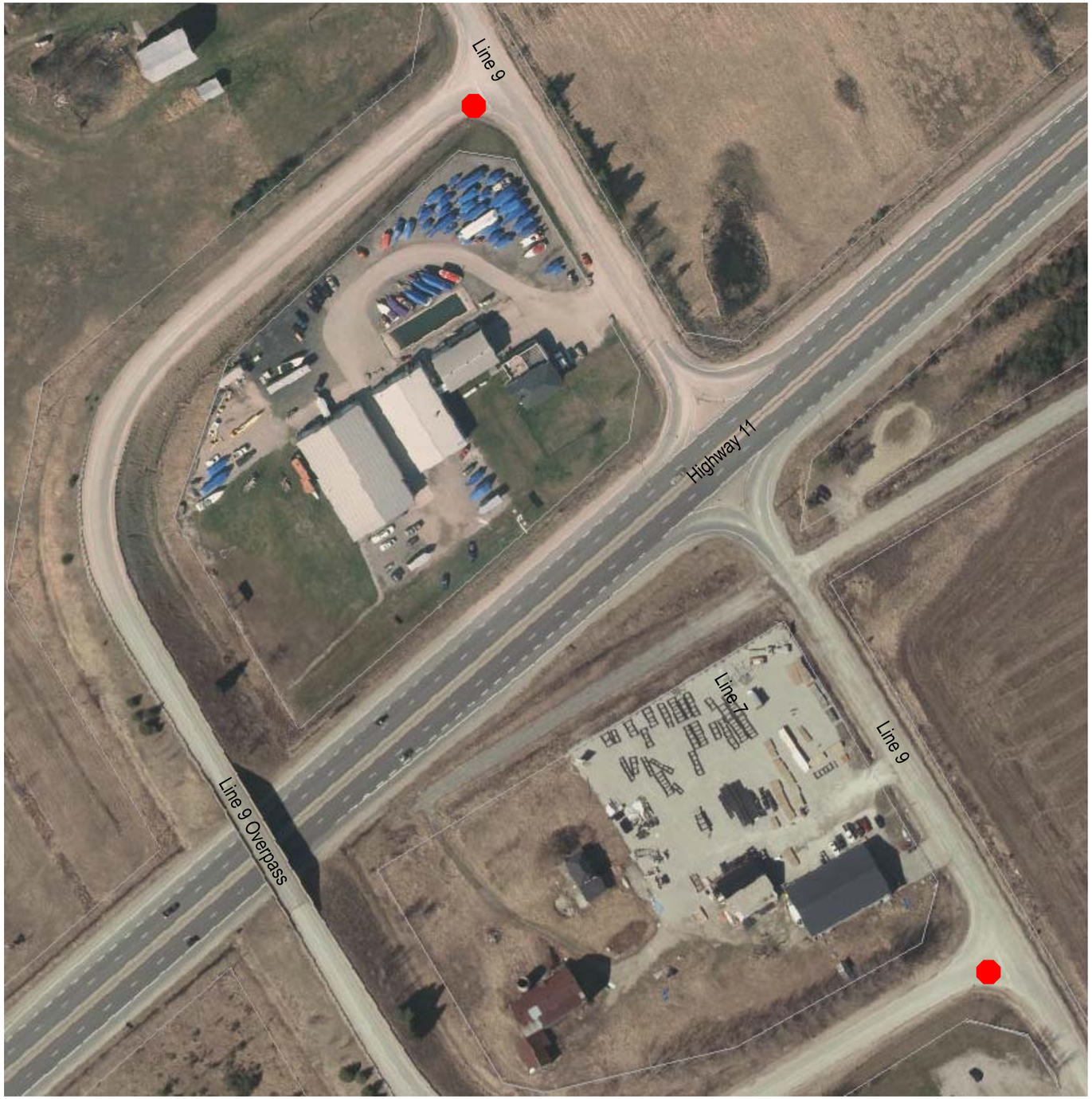
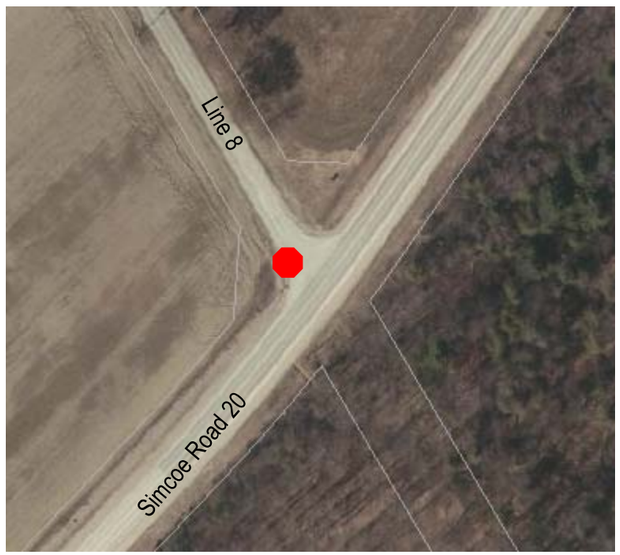
Burl's Creek Event Grounds Traffic Impact Study

Key Intersections

Figure

3a





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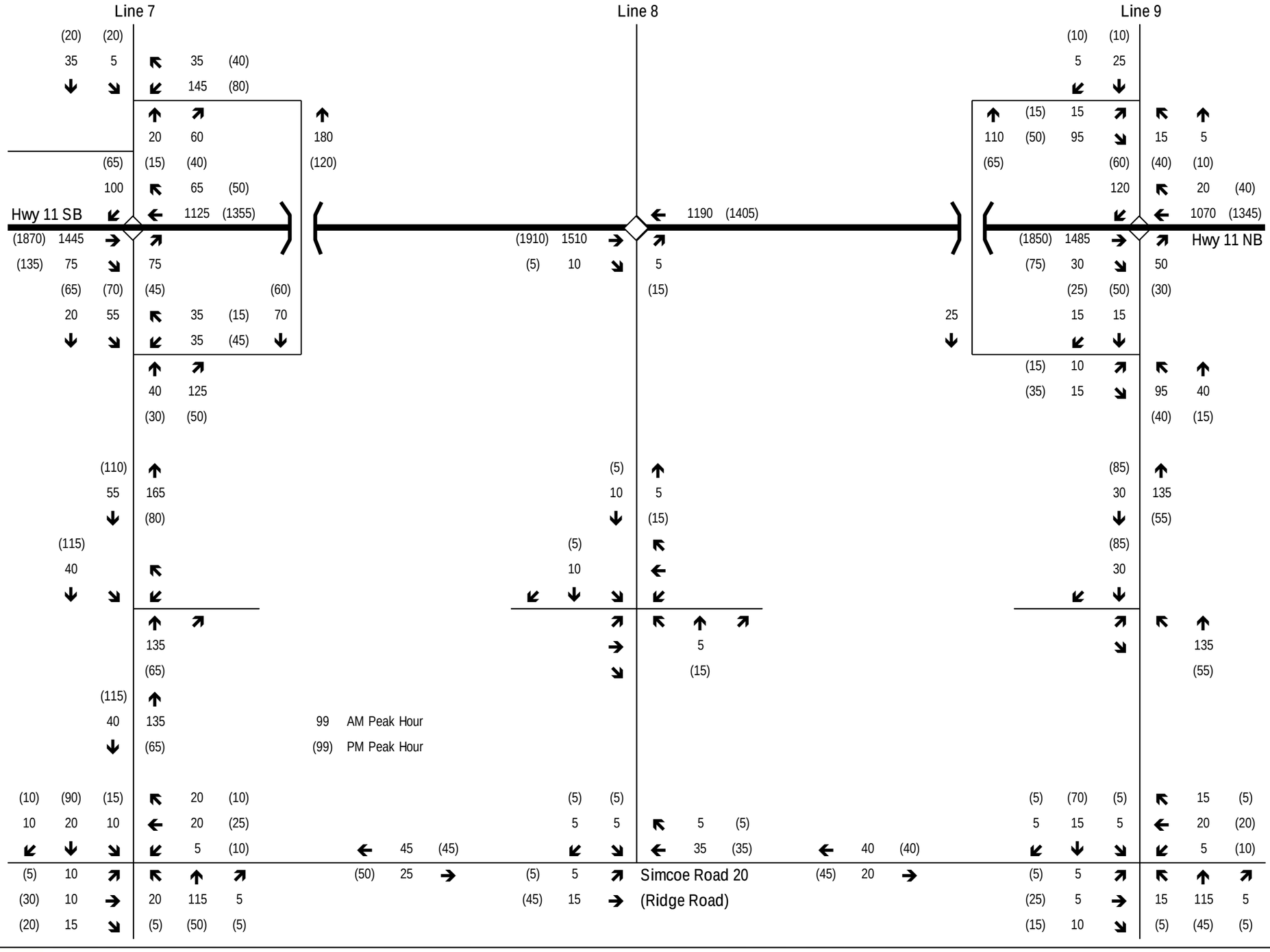
Burl's Creek Event Grounds Traffic Impact Study

Key Intersections

Figure 3b



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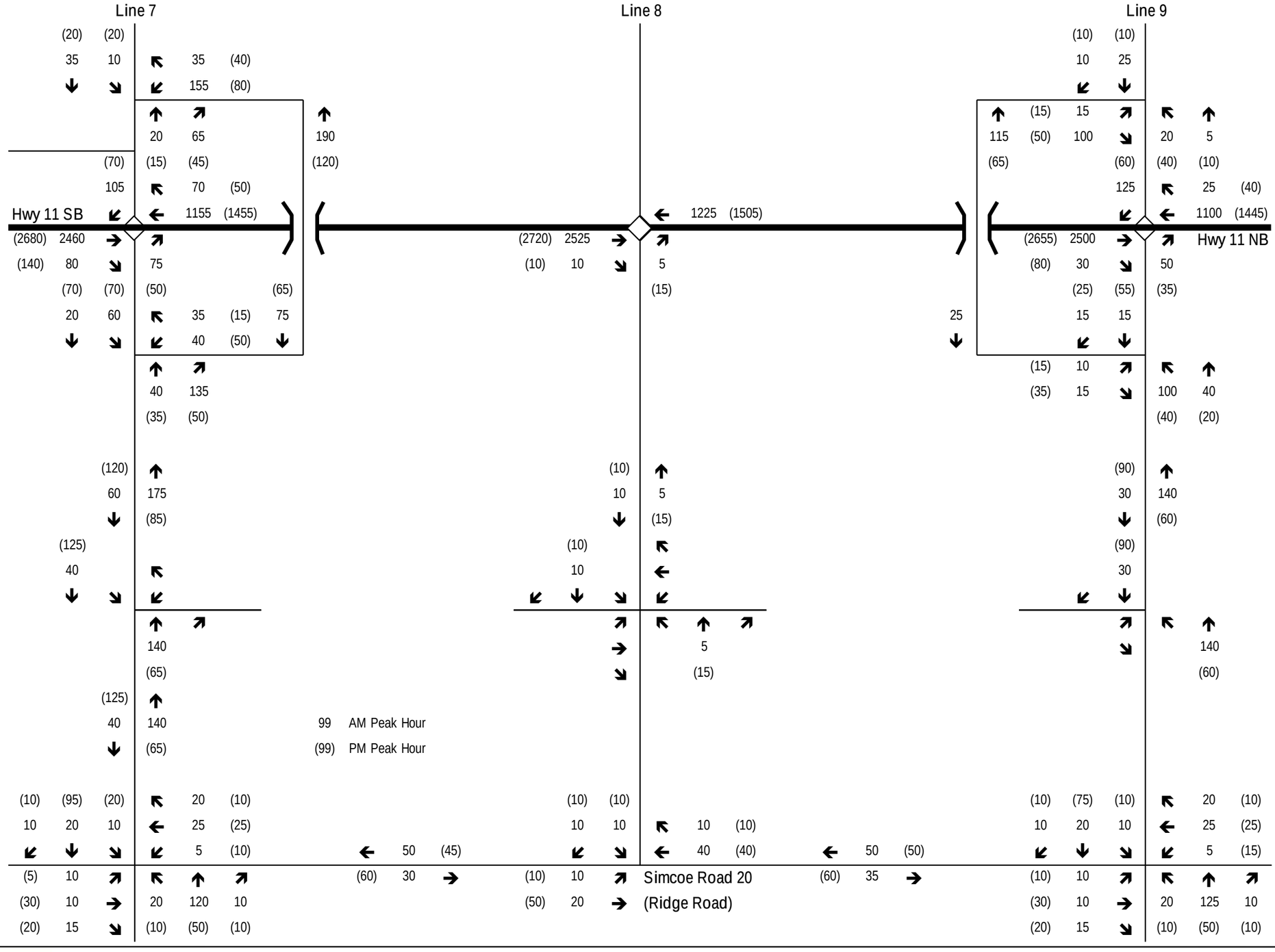
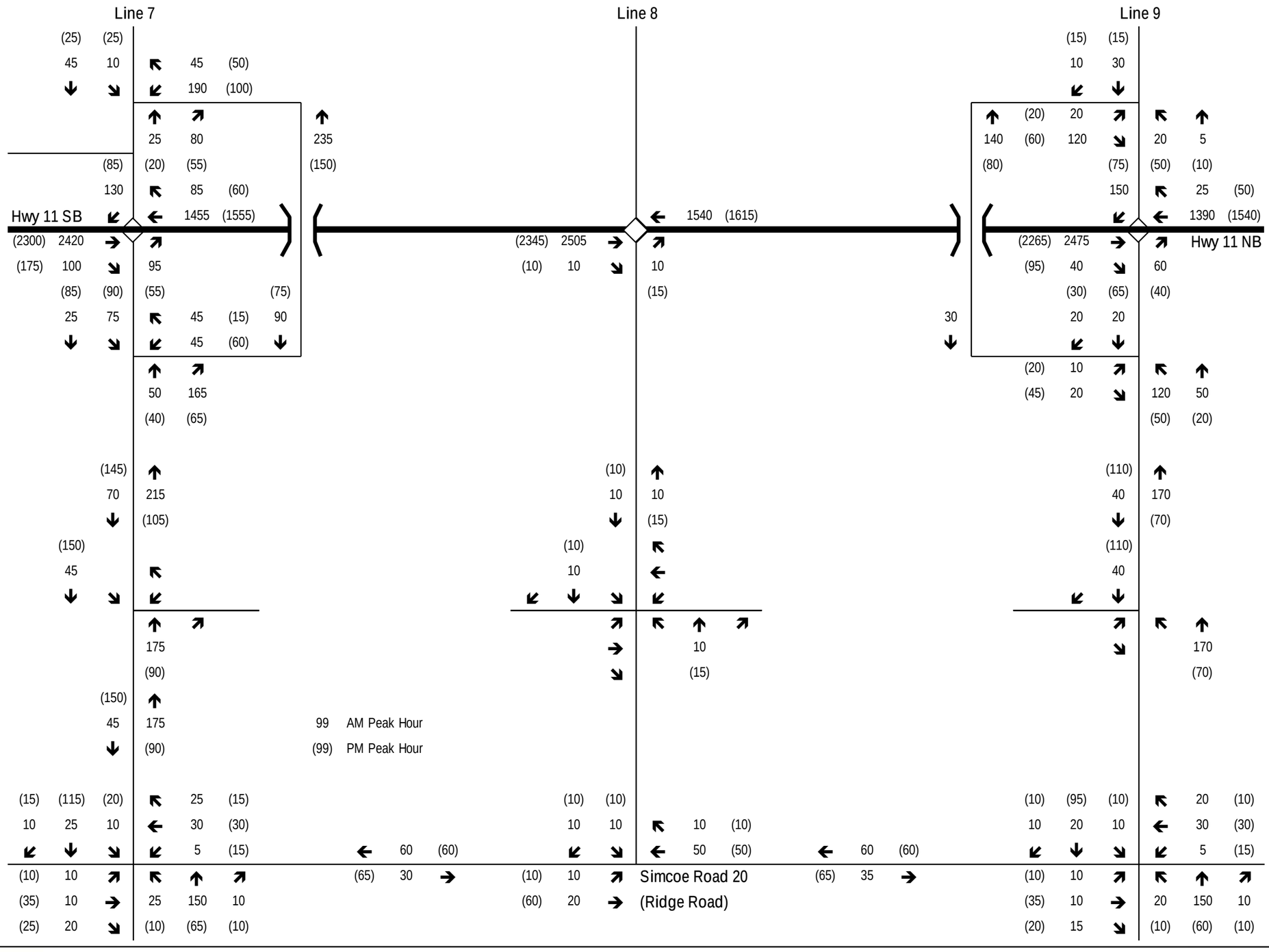
Burl's Creek Event Grounds Traffic Impact Study

2015 Traffic Volumes - Weekday Peak Hours

Figure 4


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
99 AM Peak Hour
(99) PM Peak Hour



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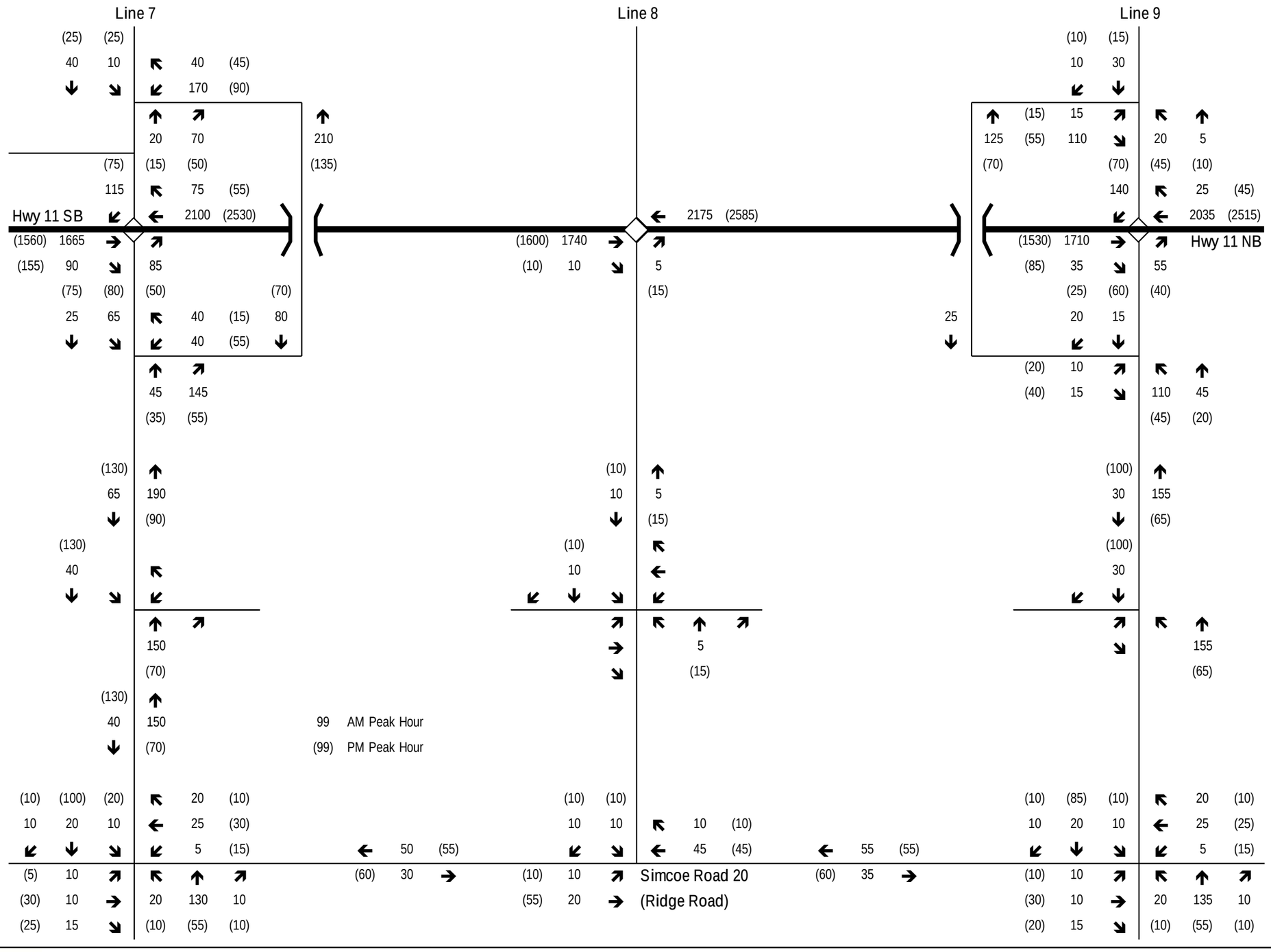
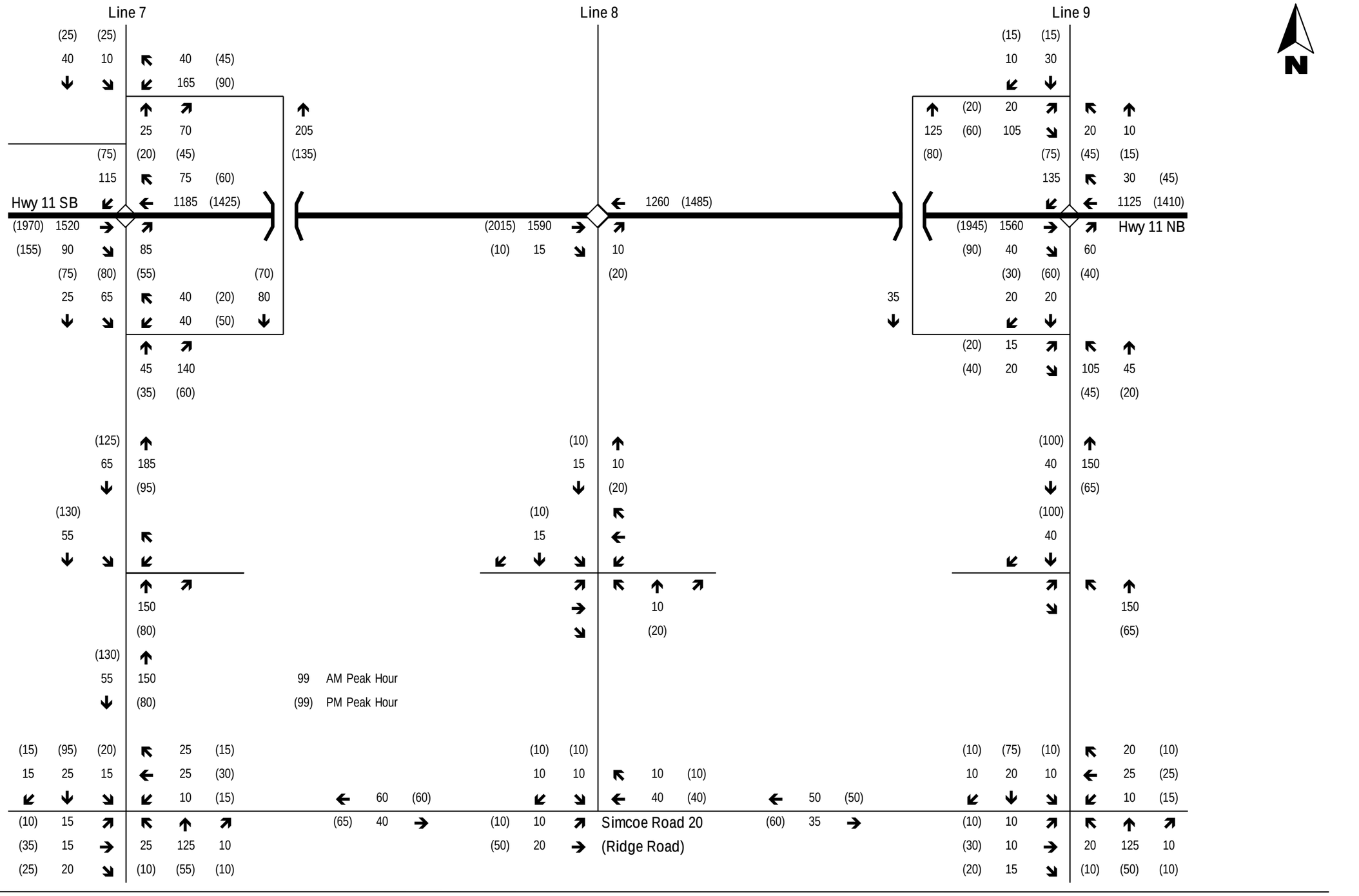
Burl's Creek Event Grounds Traffic Impact Study

2015 Traffic Volumes - Saturday Peak Hours

Figure 6


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
99 AM Peak Hour
(99) PM Peak Hour



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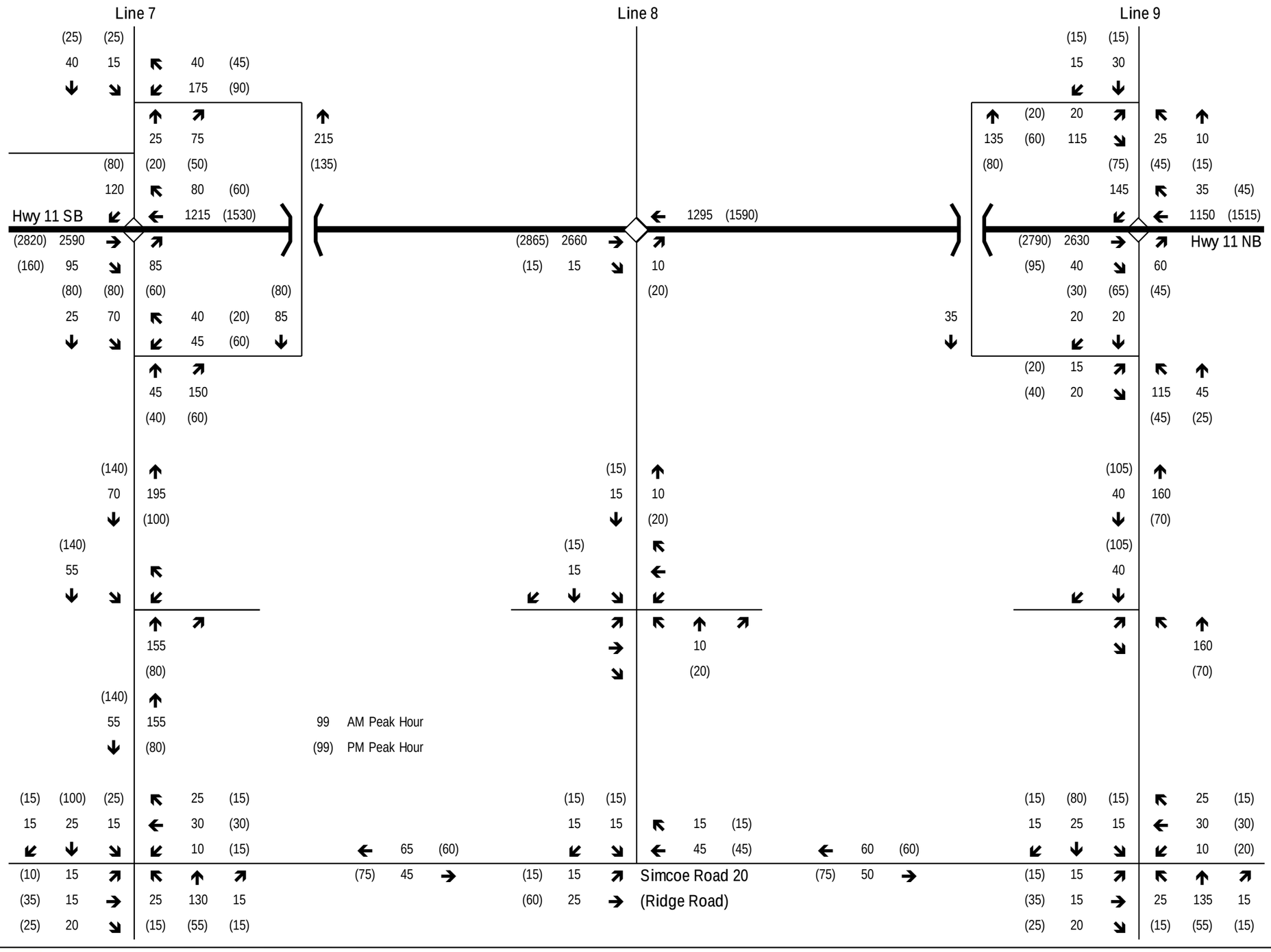
Burl's Creek Event Grounds Traffic Impact Study

2020 Traffic Volumes - Weekday Peak Hours

Figure 8



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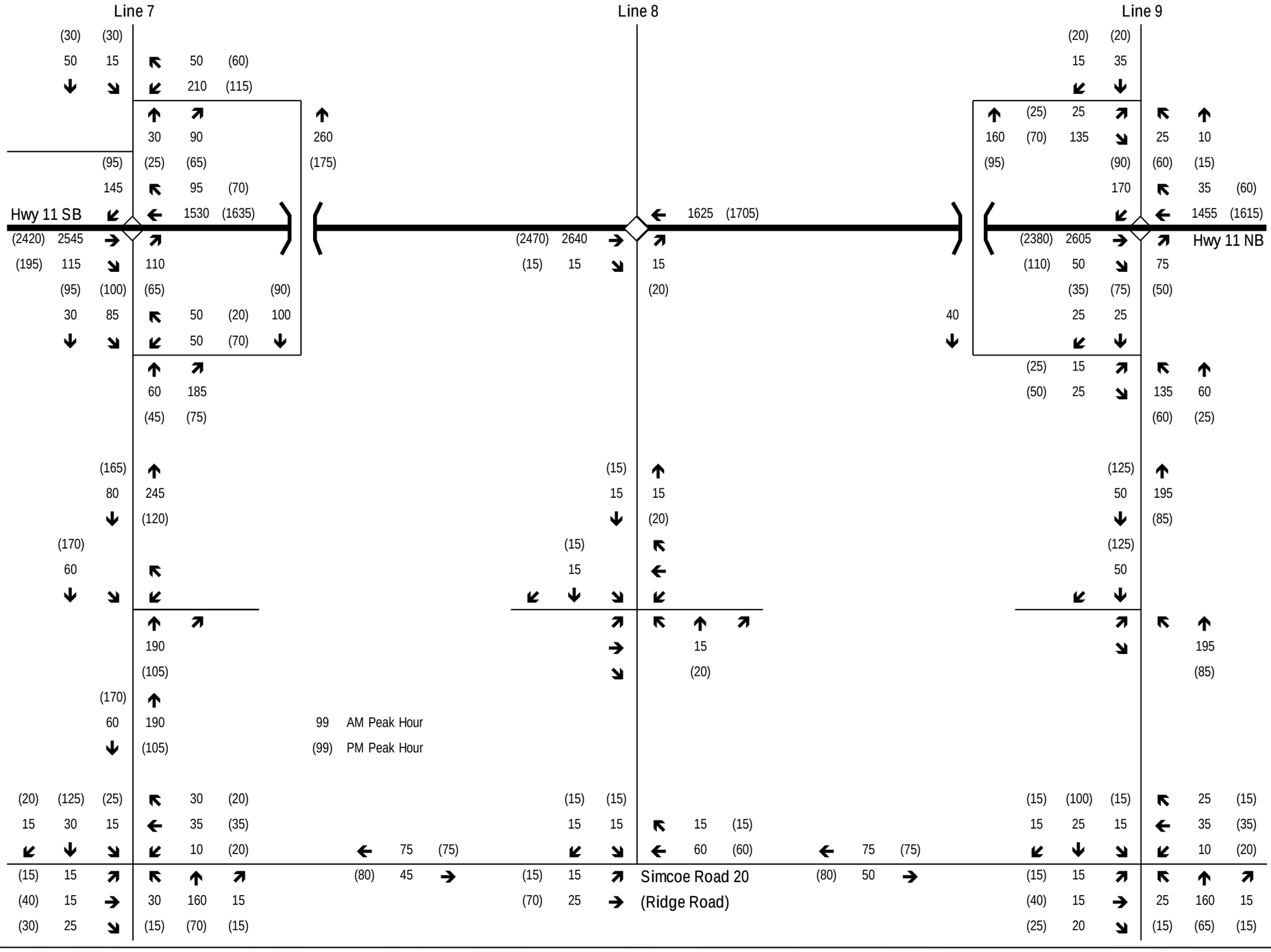
Burl's Creek Event Grounds Traffic Impact Study

2020 Traffic Volumes - Friday Peak Hours

Figure 9



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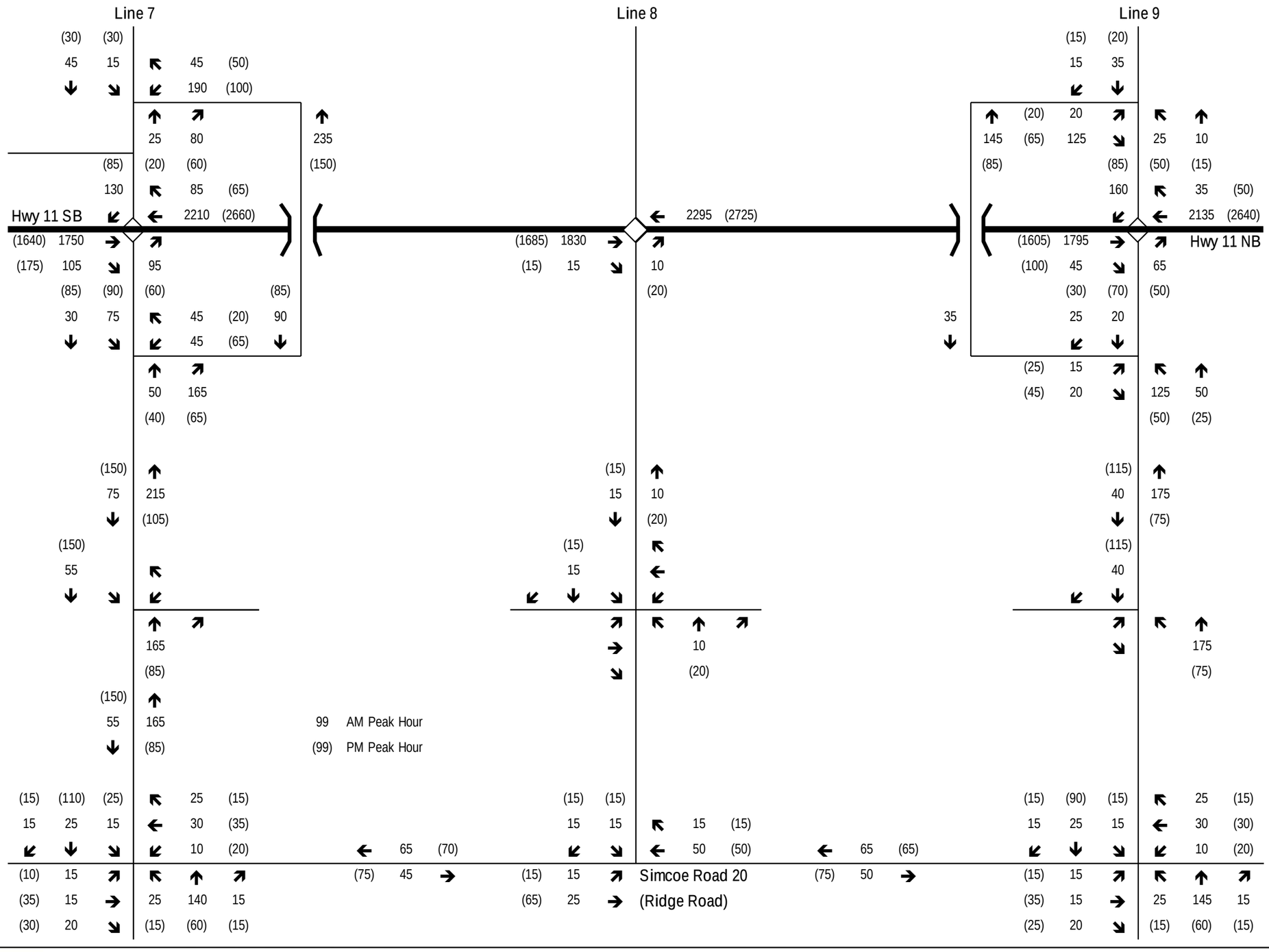
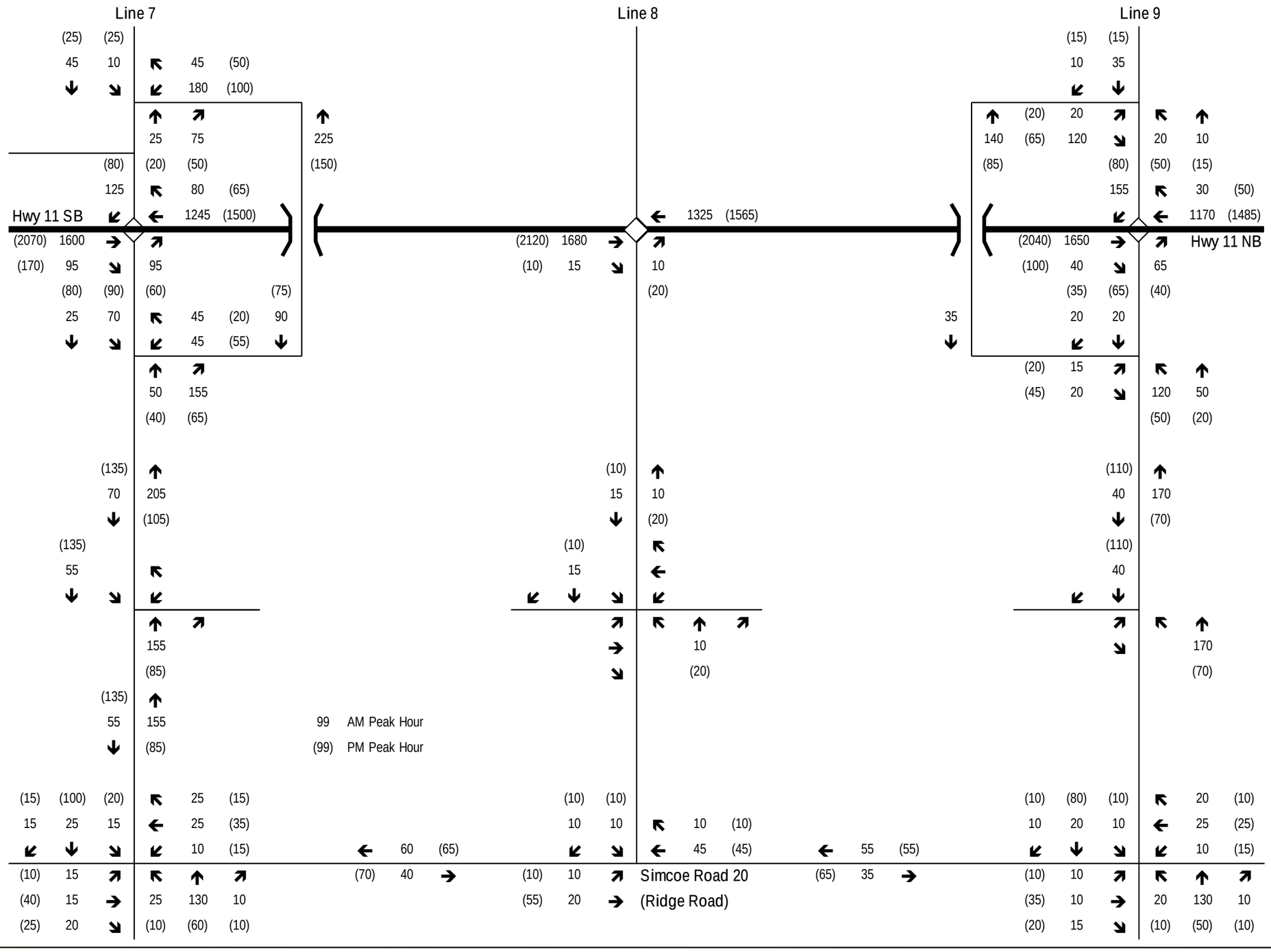
Burl's Creek Event Grounds Traffic Impact Study

2020 Traffic Volumes - Saturday Peak Hours

Figure 10


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
99 AM Peak Hour
(99) PM Peak Hour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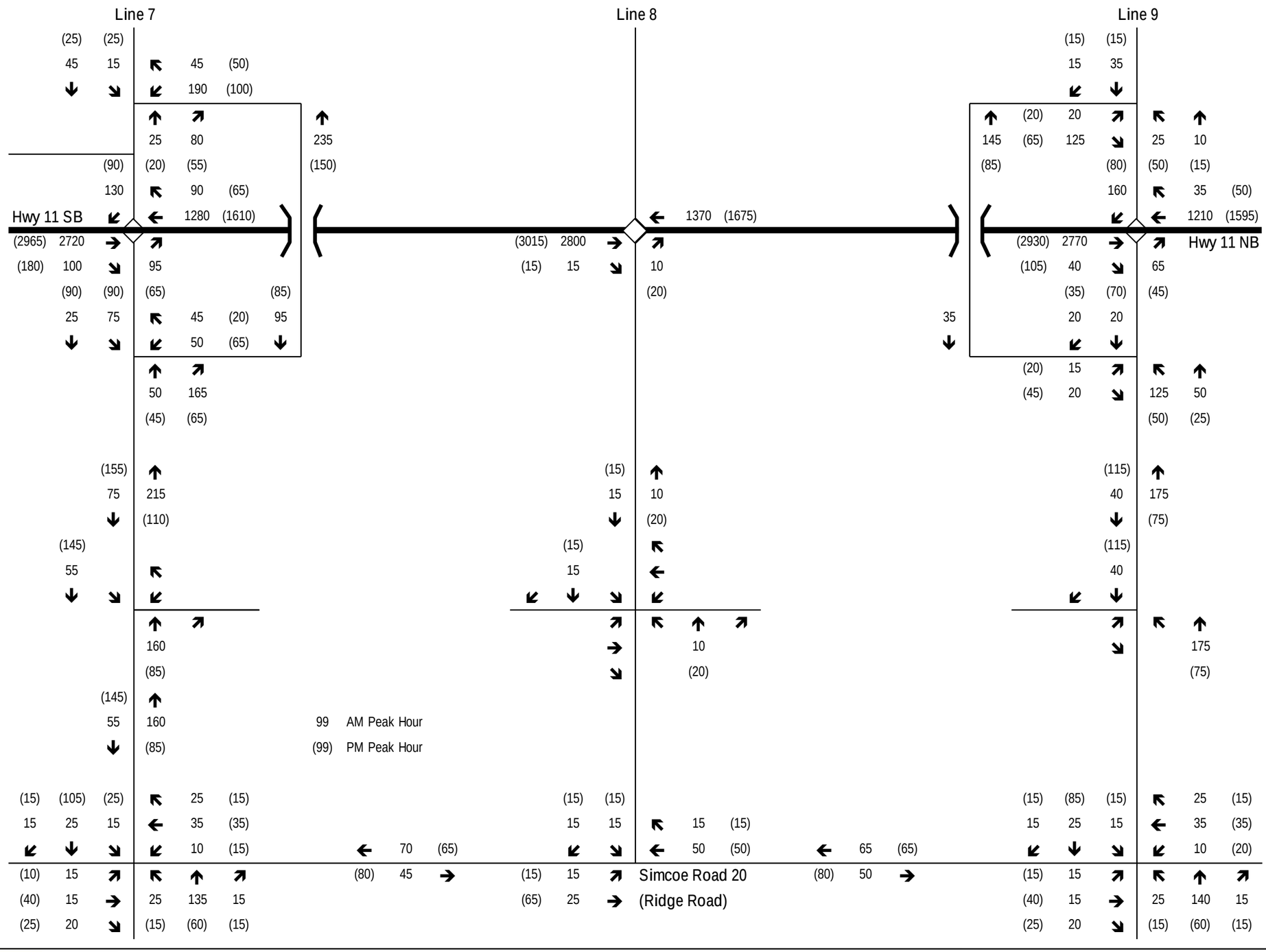
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
99 AM Peak Hour
(99) PM Peak Hour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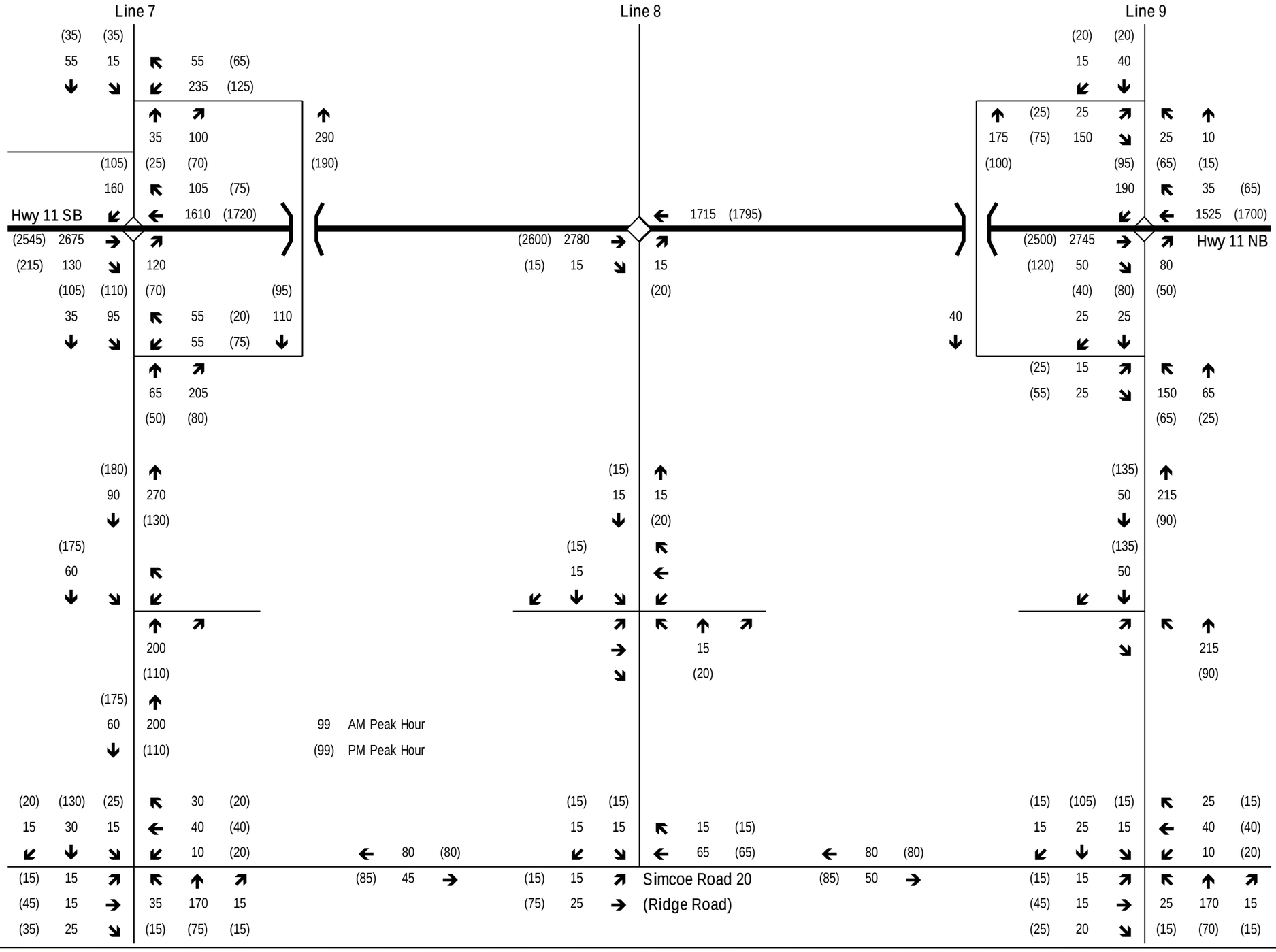
(99) PM Peak Hour



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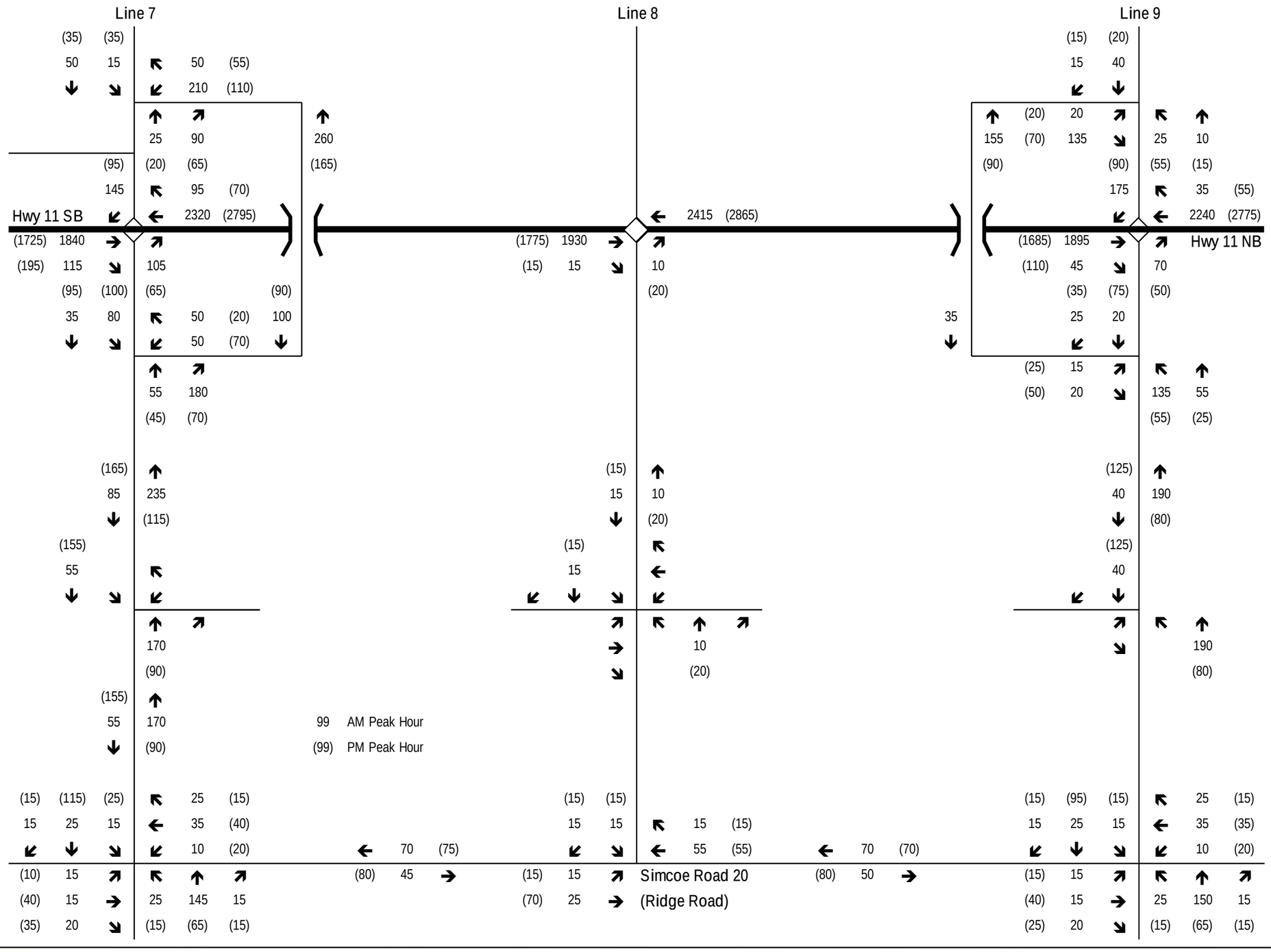
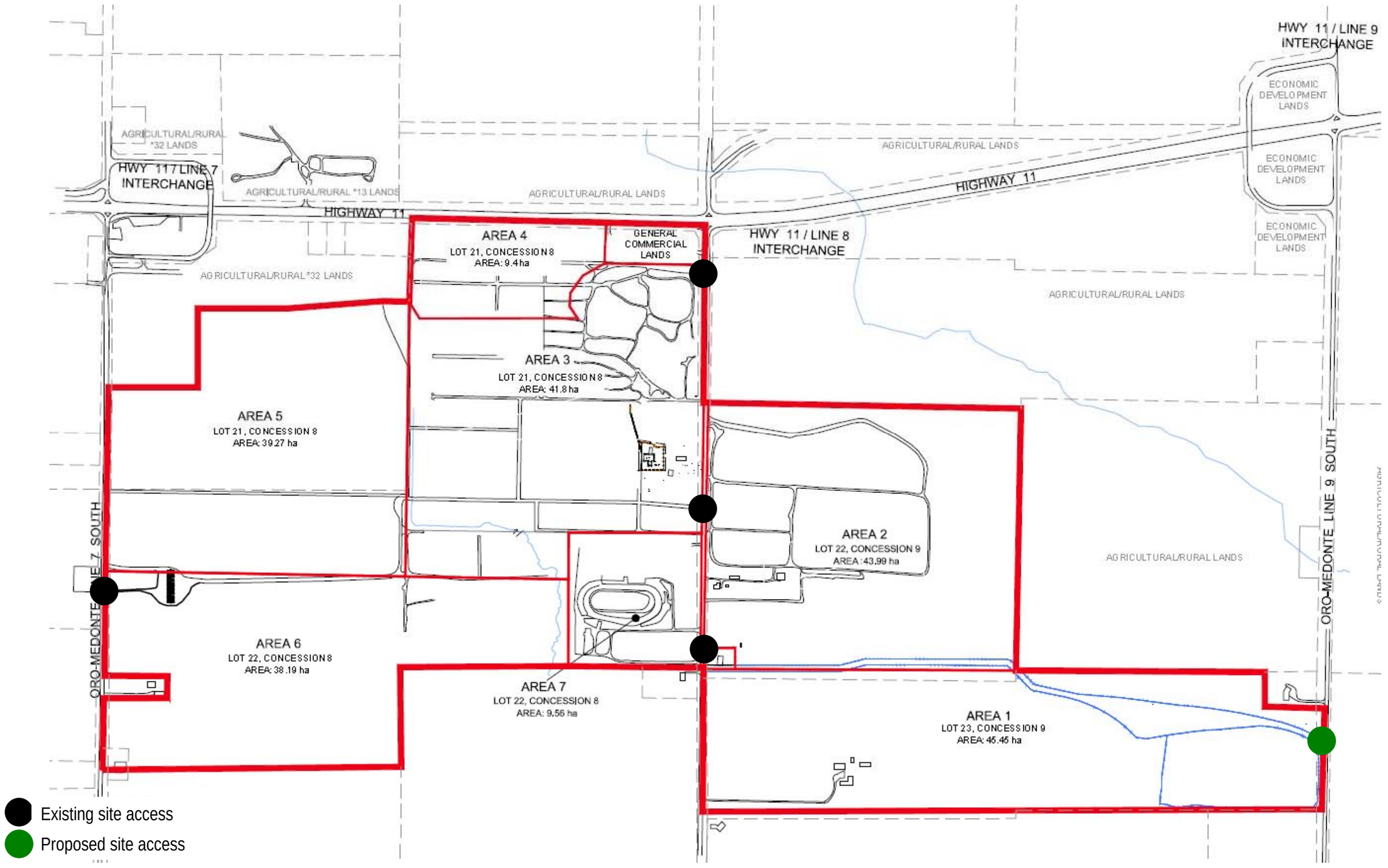
Burl's Creek Event Grounds Traffic Impact Study

2025 Traffic Volumes - Saturday Peak Hours

Figure 14


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
99 AM Peak Hour
(99) PM Peak Hour



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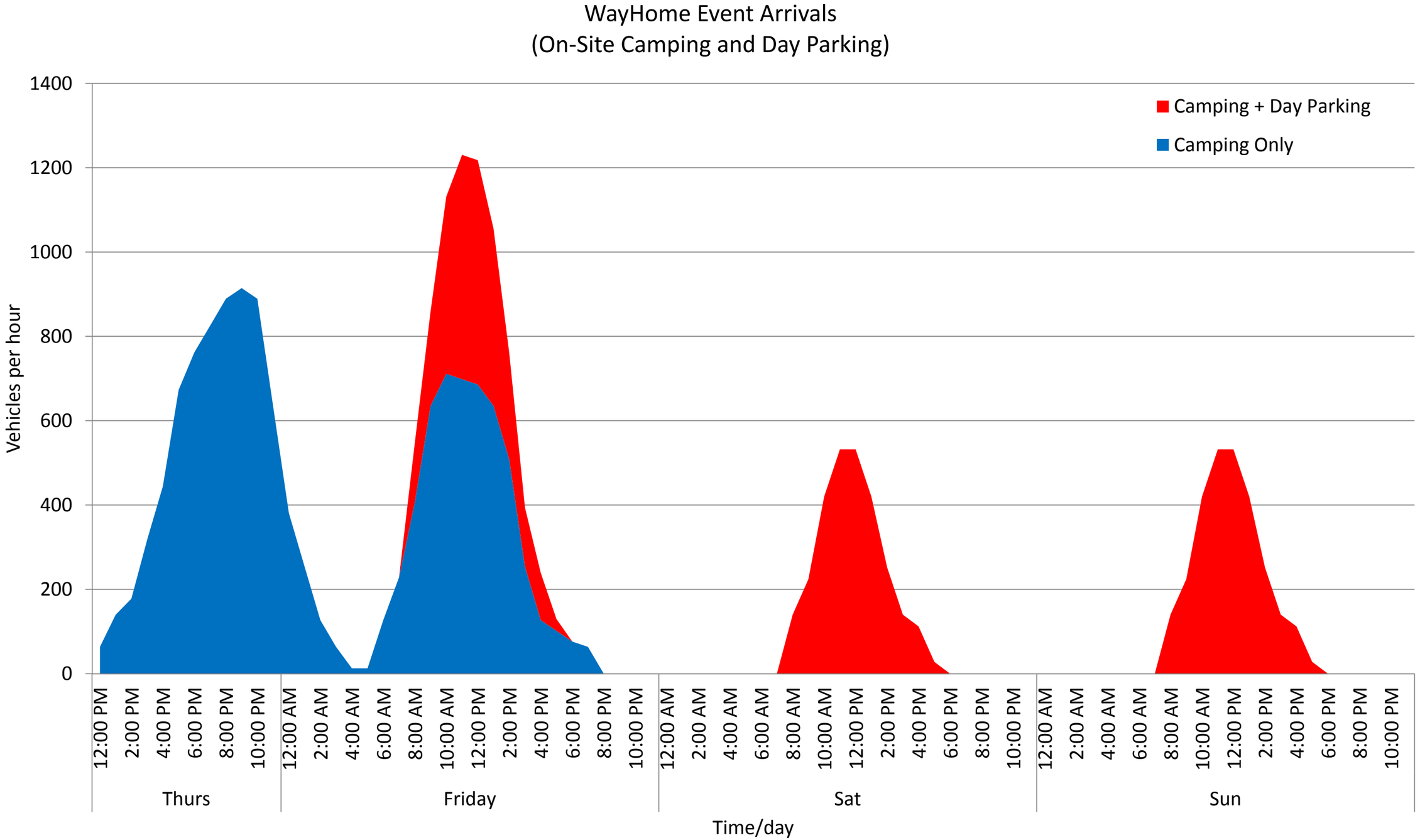
Burl's Creek Event Grounds Traffic Impact Study

Site Plan

Figure

16



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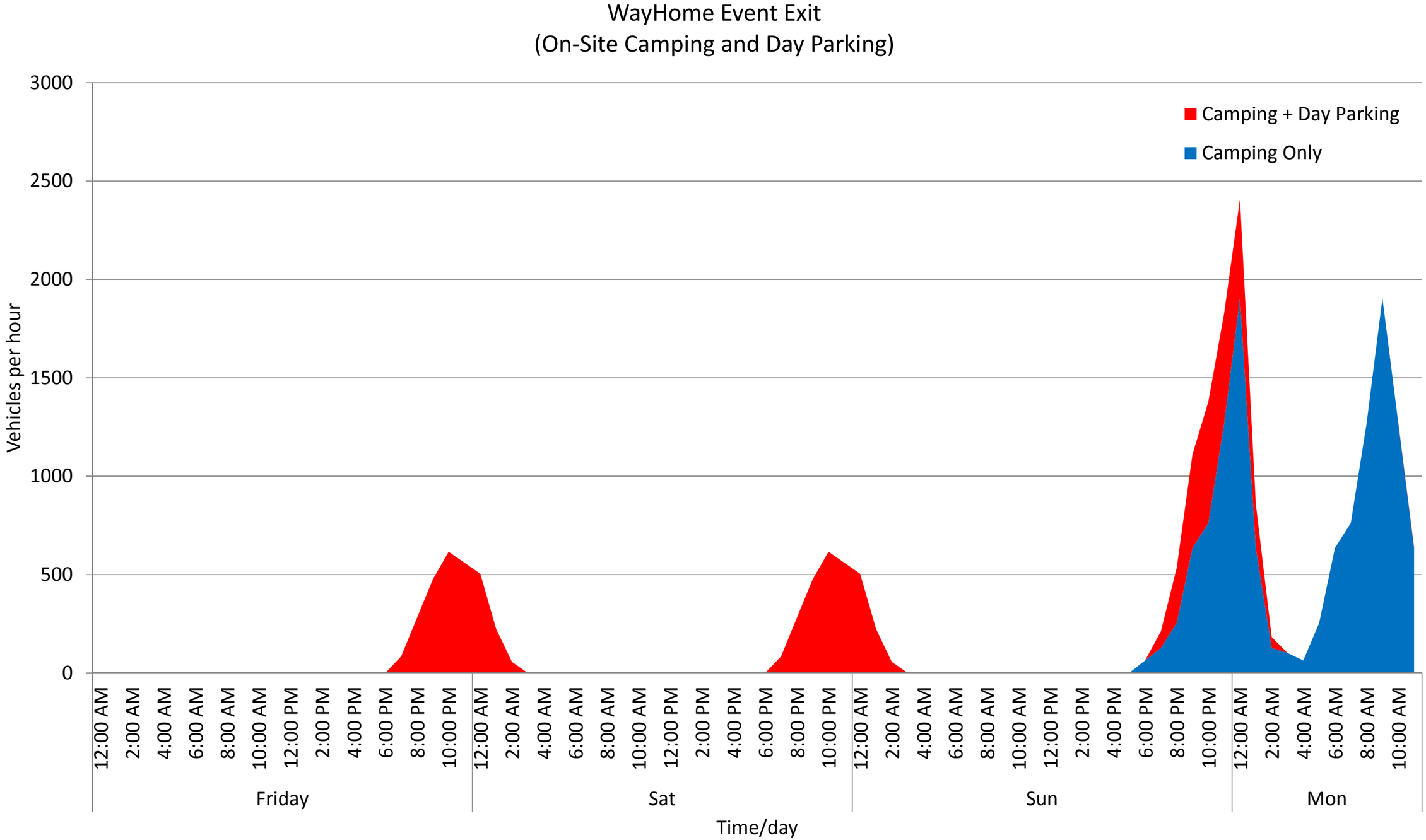
Burl's Creek Event Grounds Traffic Impact Study

Wayhome Music Festival Traffic Patterns

Figure

17a



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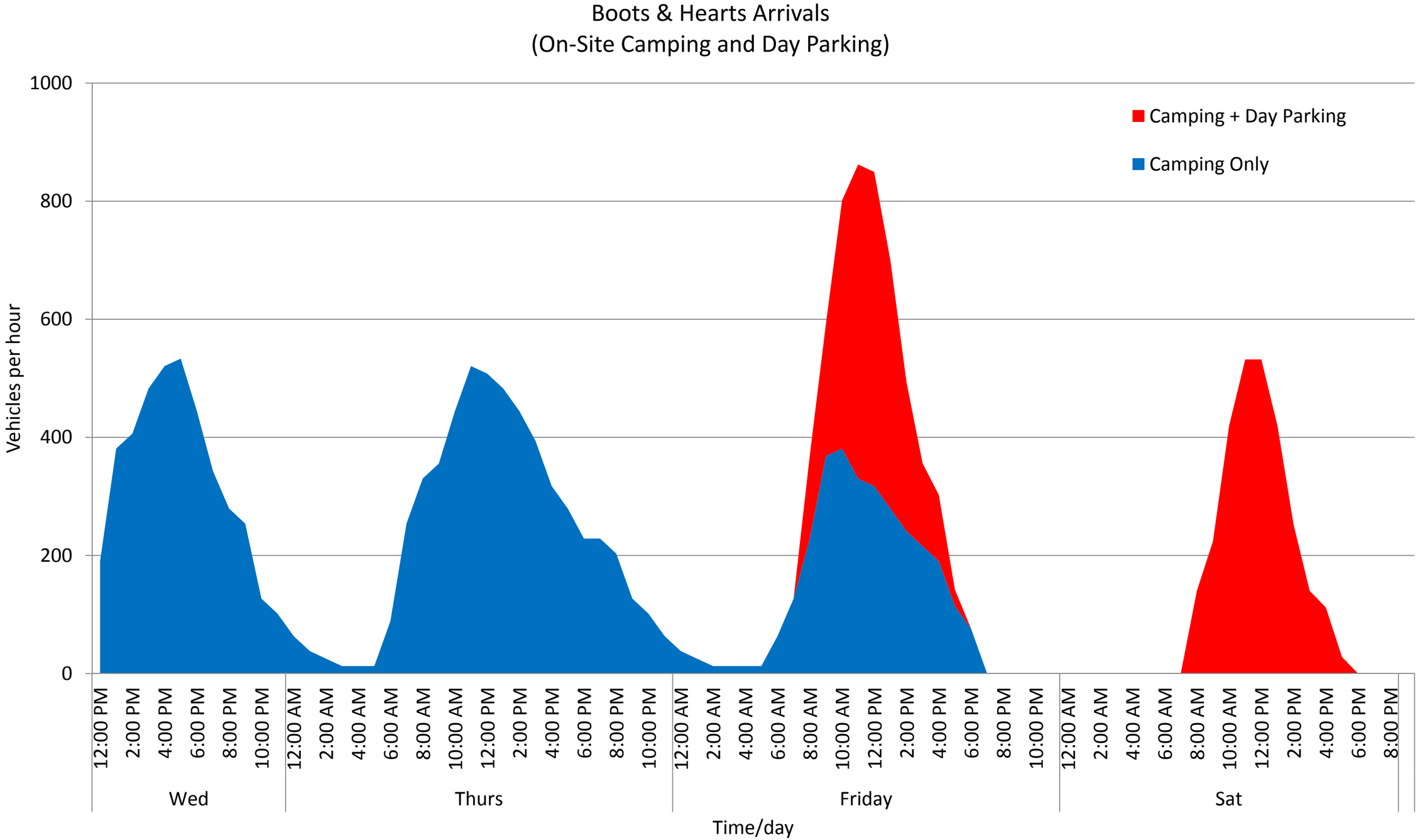
Burl's Creek Event Grounds Traffic Impact Study

Wayhome Music Festival Traffic Patterns

Figure

17b



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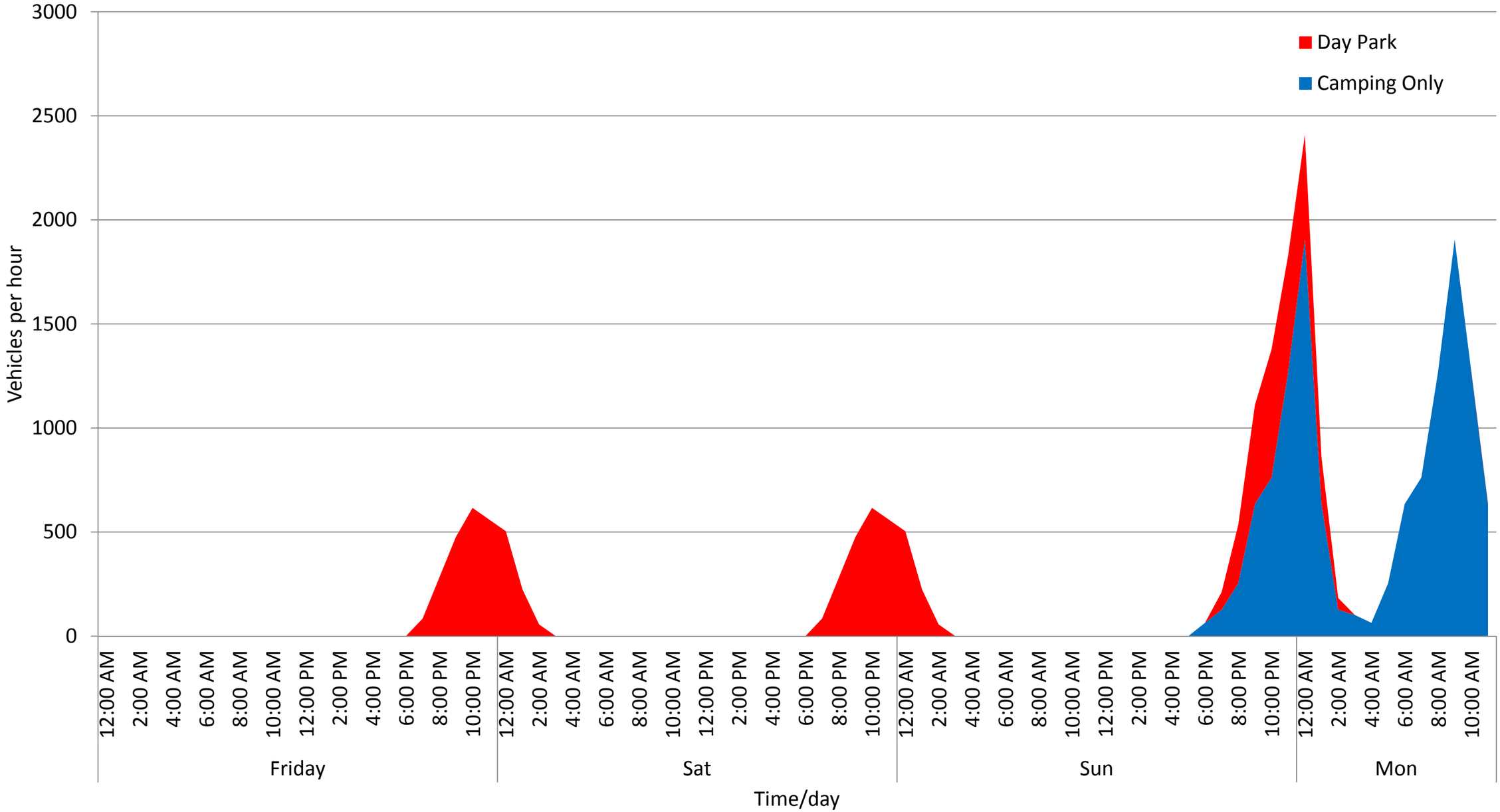
Burl's Creek Event Grounds Traffic Impact Study

Boots & Hearts Music Festival Traffic Patterns

Figure

18a

Boots & Hearts Exit
(On-Site Camping and Day Parking)



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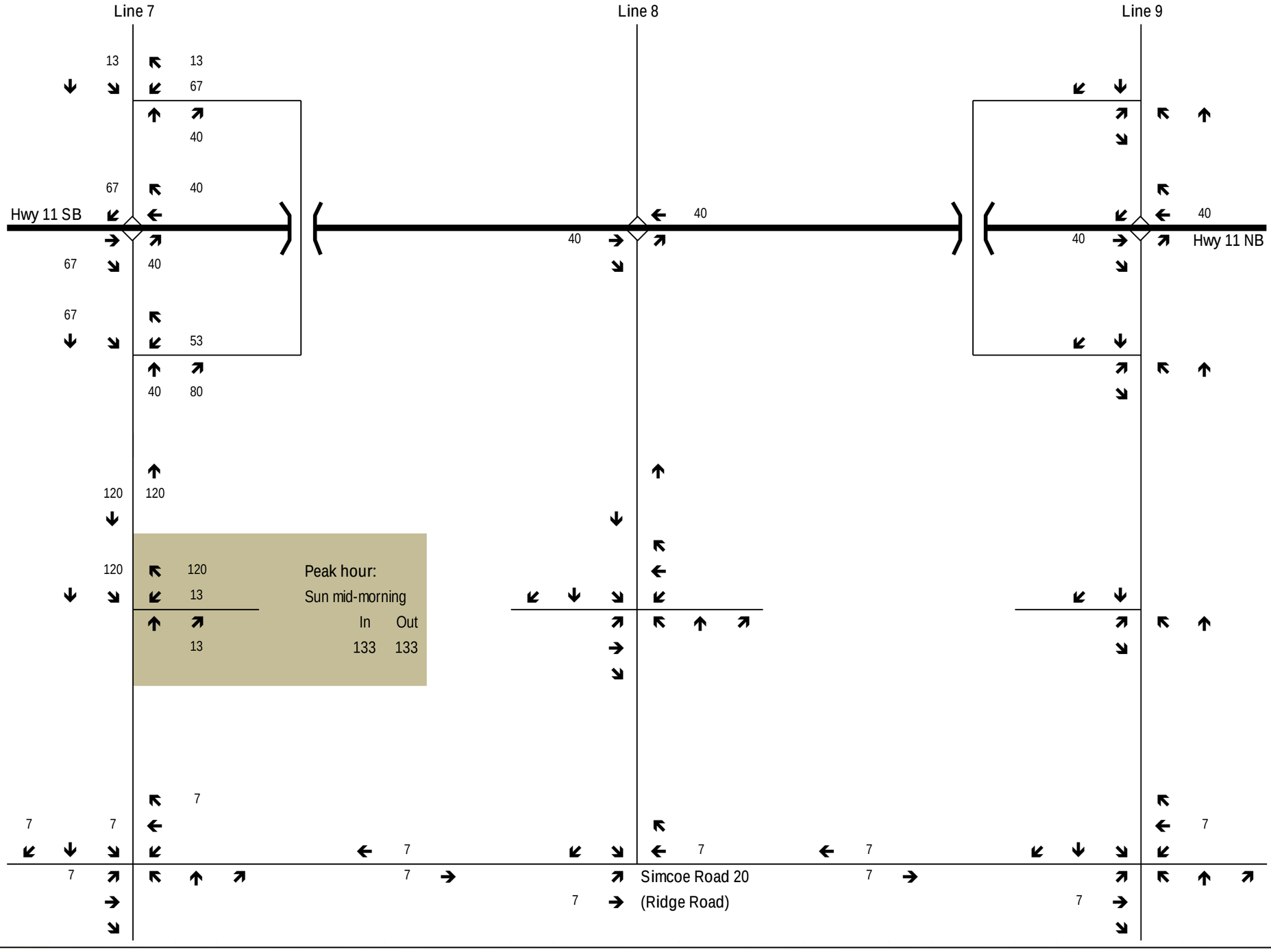
Burl's Creek Event Grounds Traffic Impact Study

Boots & Hearts Music Festival Traffic Patterns

Figure

18b



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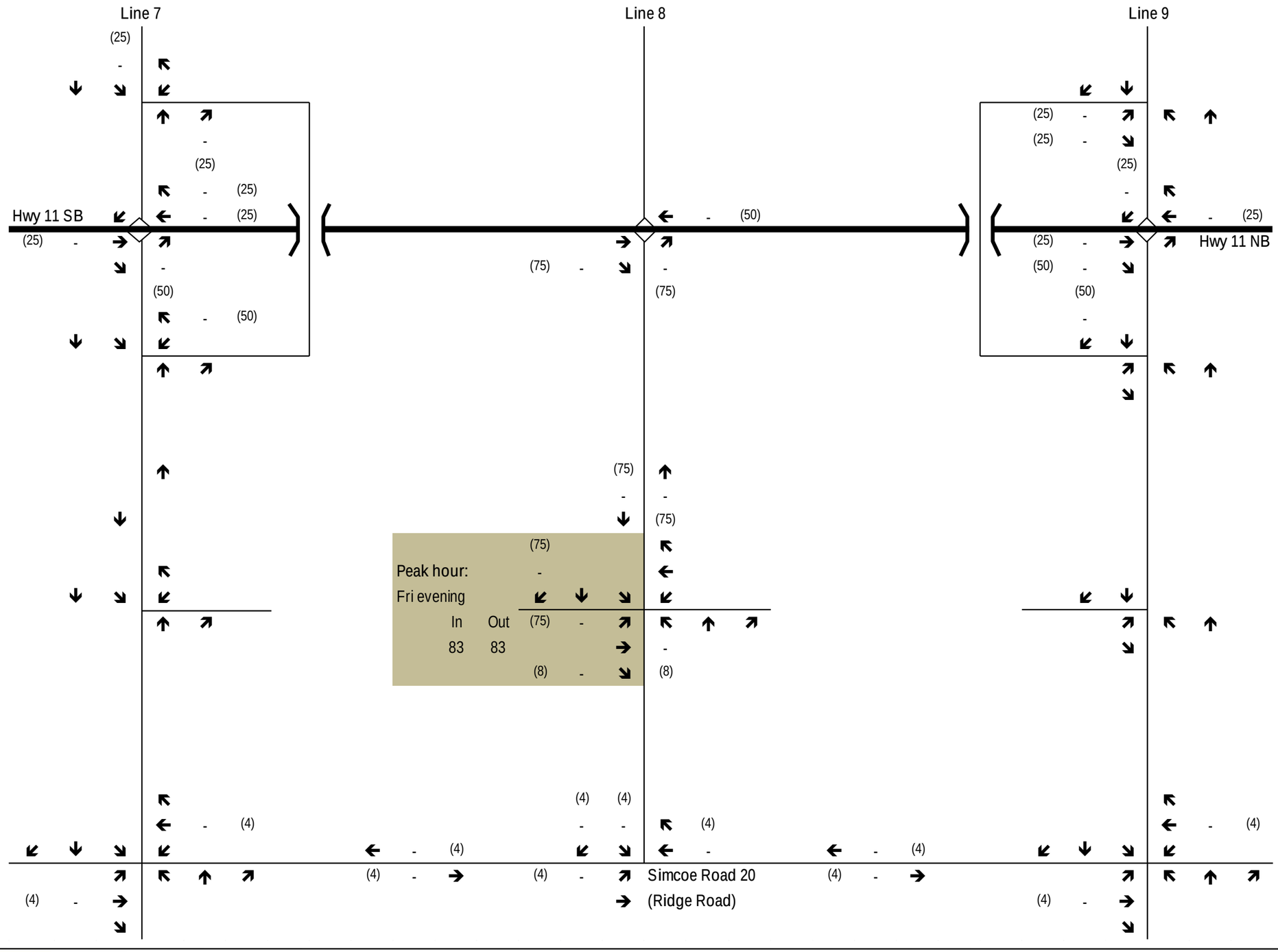
Burl's Creek Event Grounds Traffic Impact Study

Huronia Fur & Feathers - Peak Hour Volumes (Sunday mid-morning)

Figure 19



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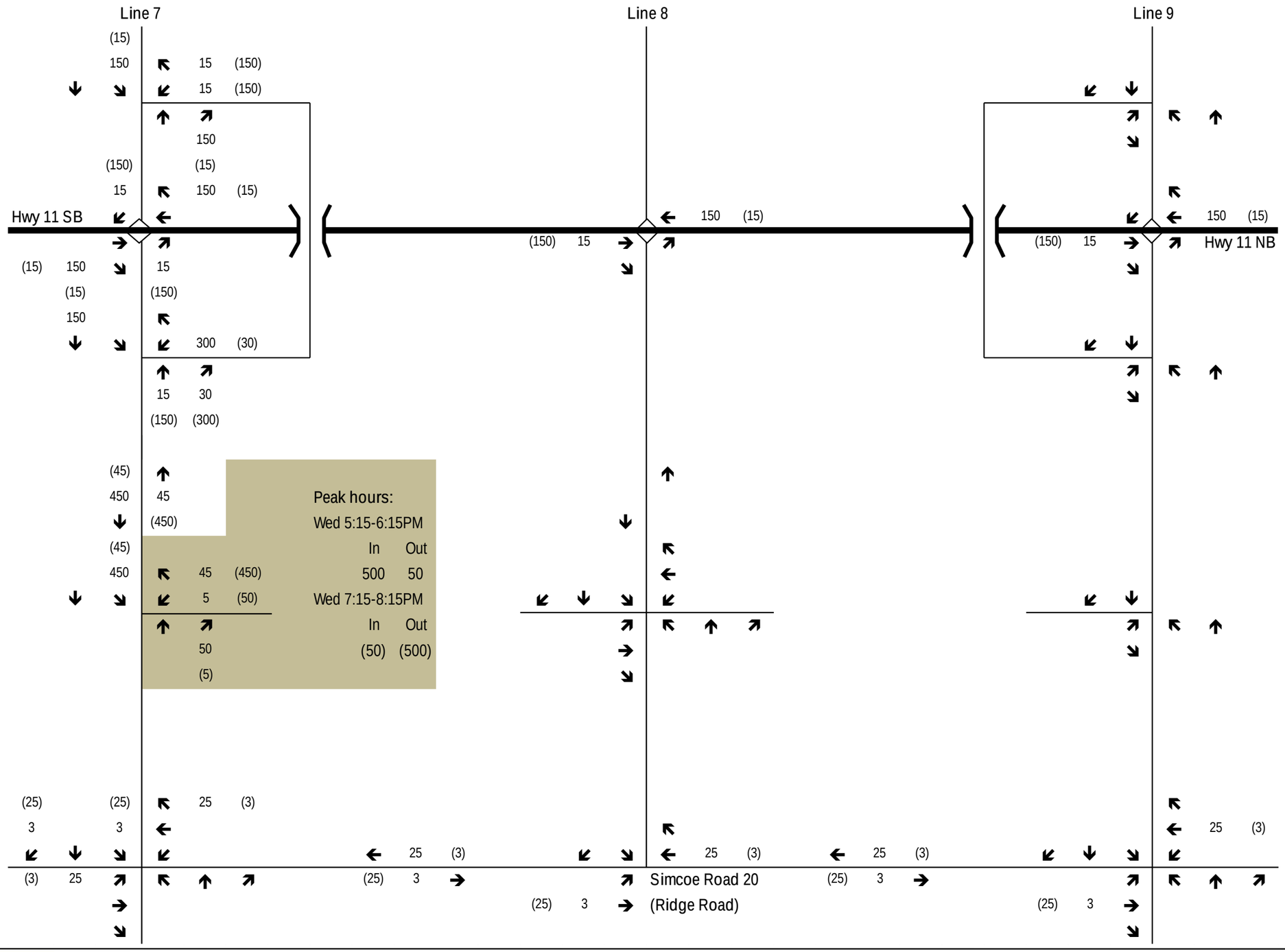
Burl's Creek Event Grounds Traffic Impact Study

Farmers Market - Peak Hour Volumes (Friday evening)

Figure 20



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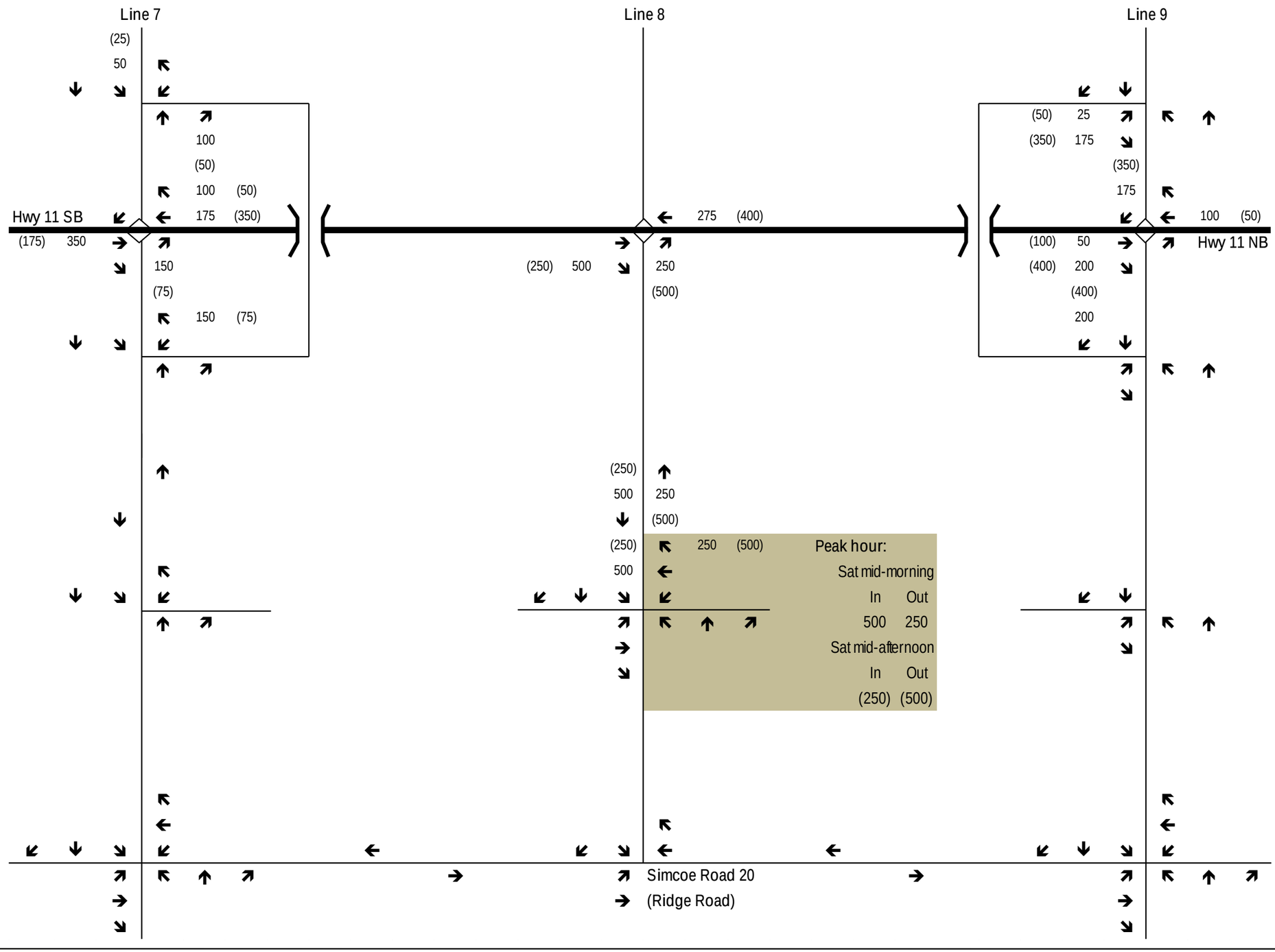
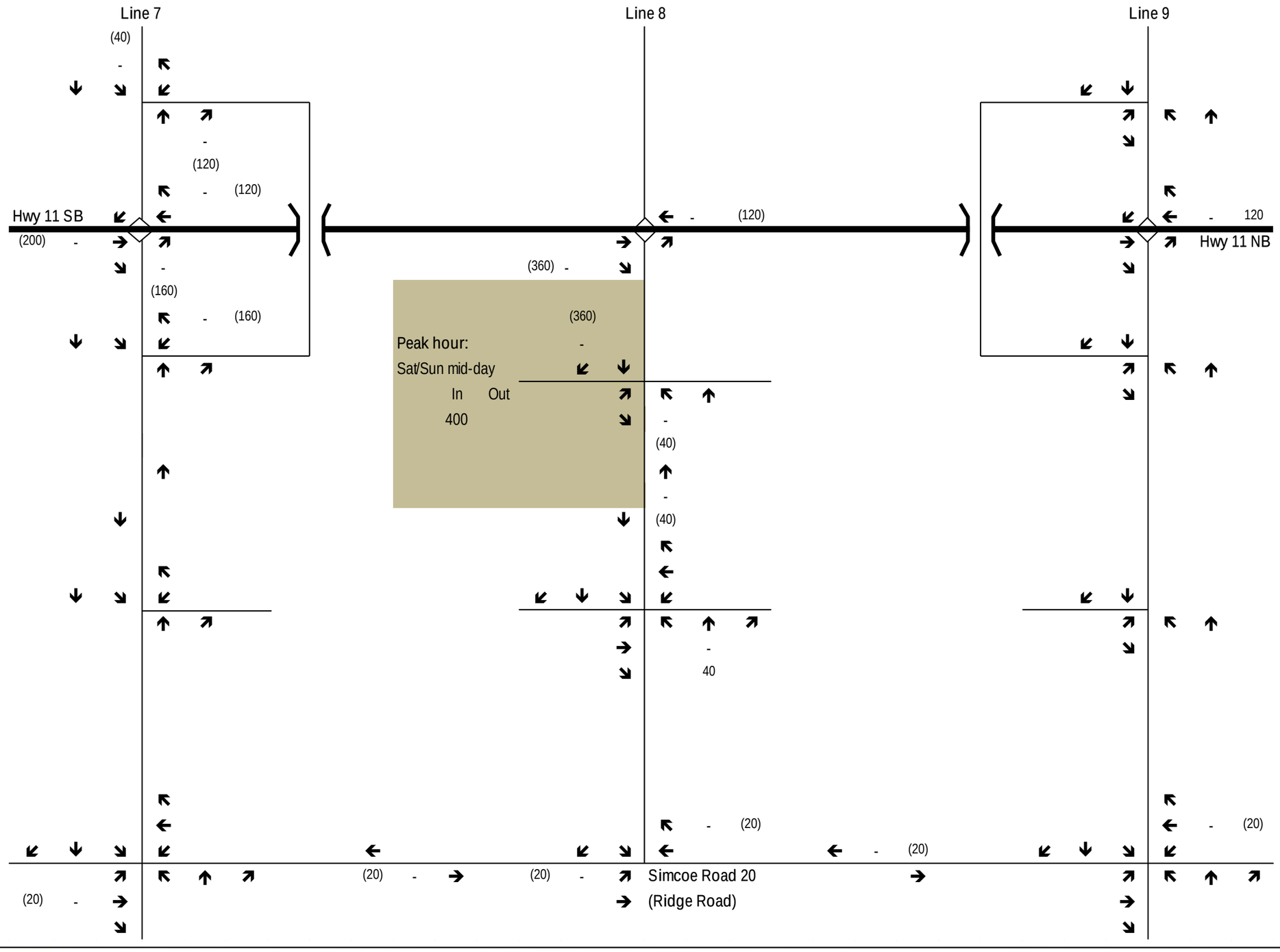
Burl's Creek Event Grounds Traffic Impact Study

Minor Soccer - Peak Hour Volumes (Wednesday evening)

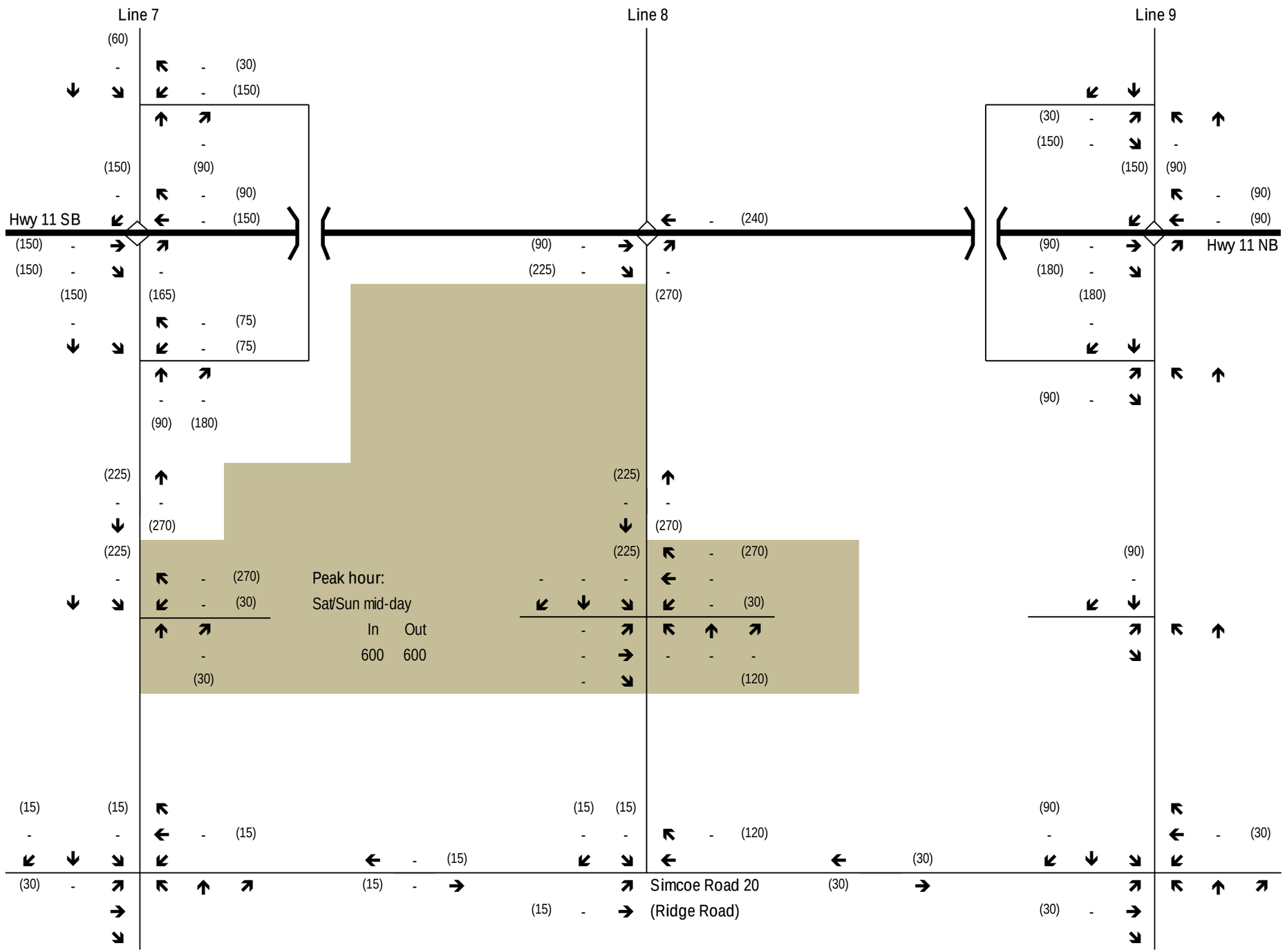
Figure 21



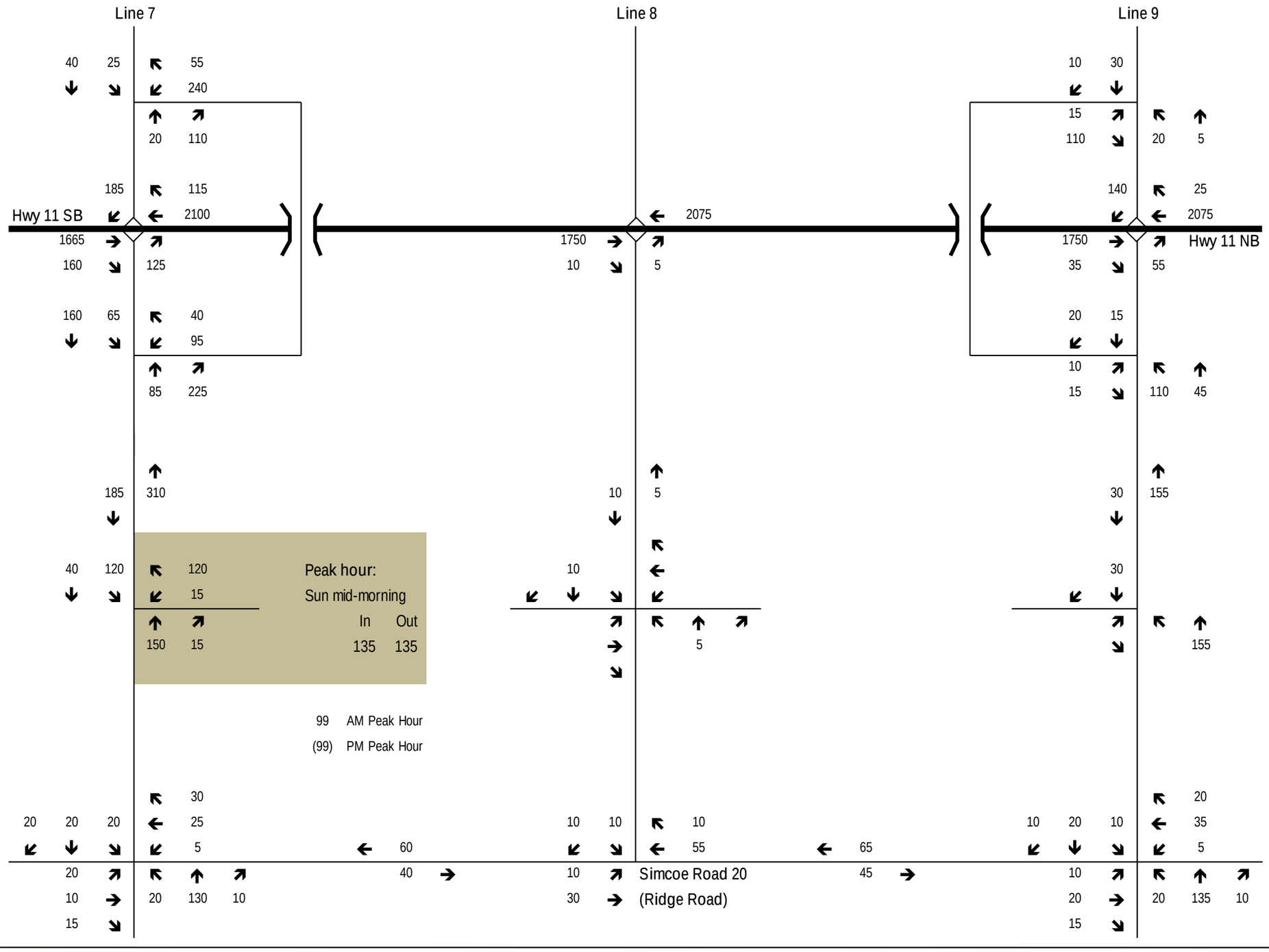
Tough Mudder - Peak Hour Volumes (Saturday mid-morning & mid-afternoon)

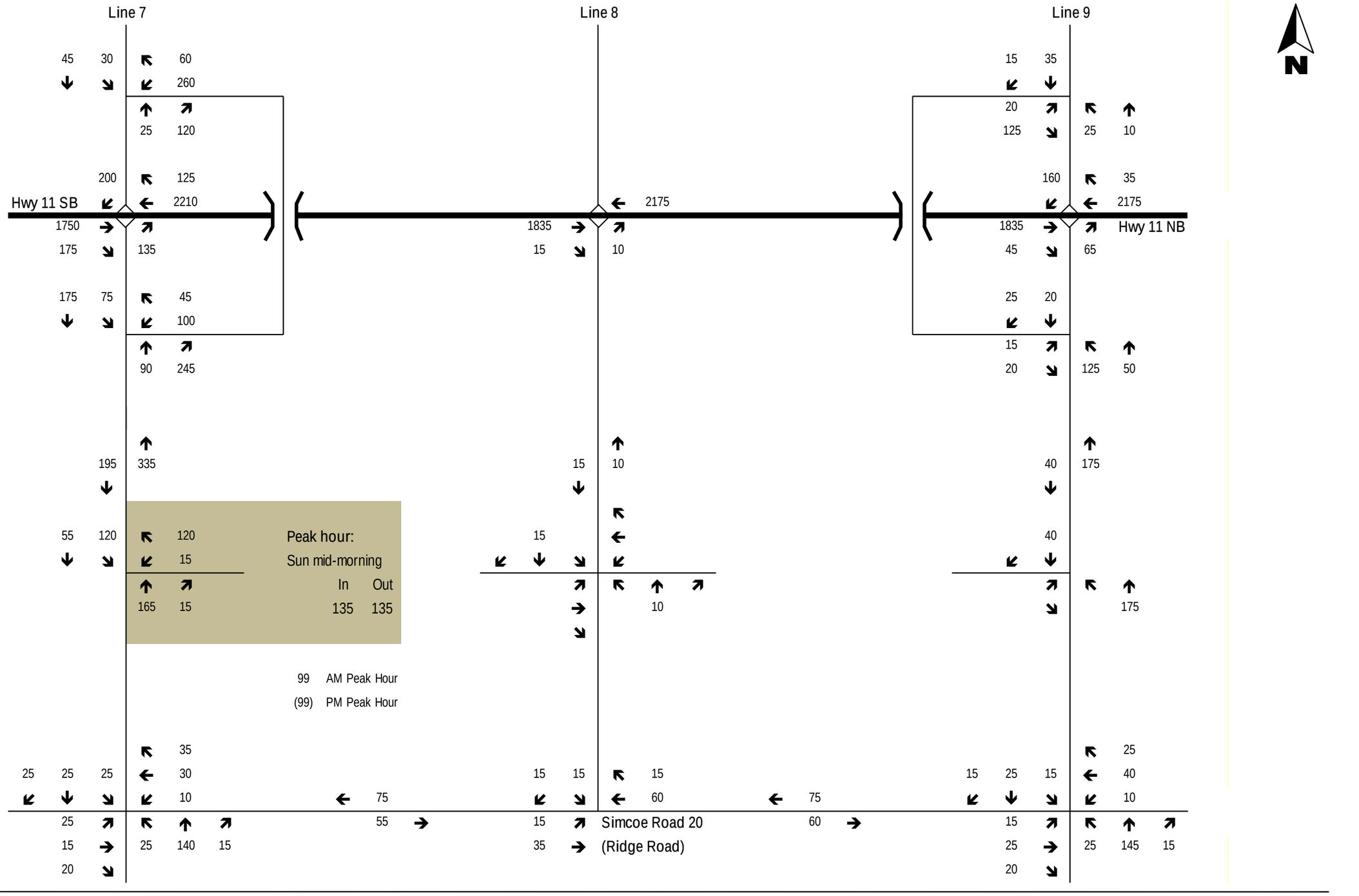


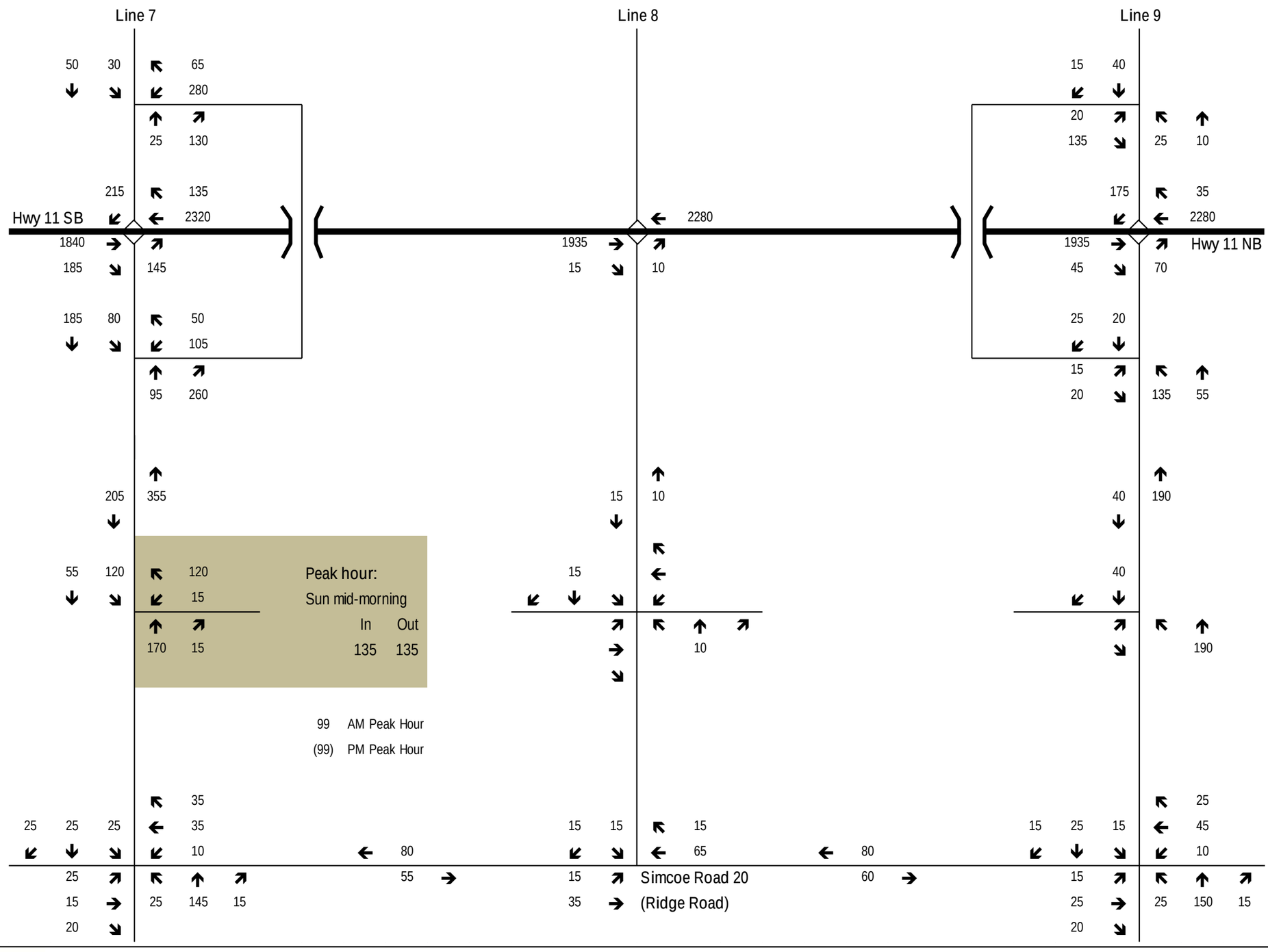
Contemporary Music & Camping Festival - Peak Hour Volumes (Saturday/Sunday mid-day)



Barrie Automotive Flea Market - Peak Hour Volumes (Saturday/Sunday mid-day)


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
Peak hour:
Sun mid-morning
In Out
135 135
99 AM Peak Hour
(99) PM Peak Hour


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
Peak hour:
Sun mid-morning
In Out
135 135
99 AM Peak Hour
(99) PM Peak Hour



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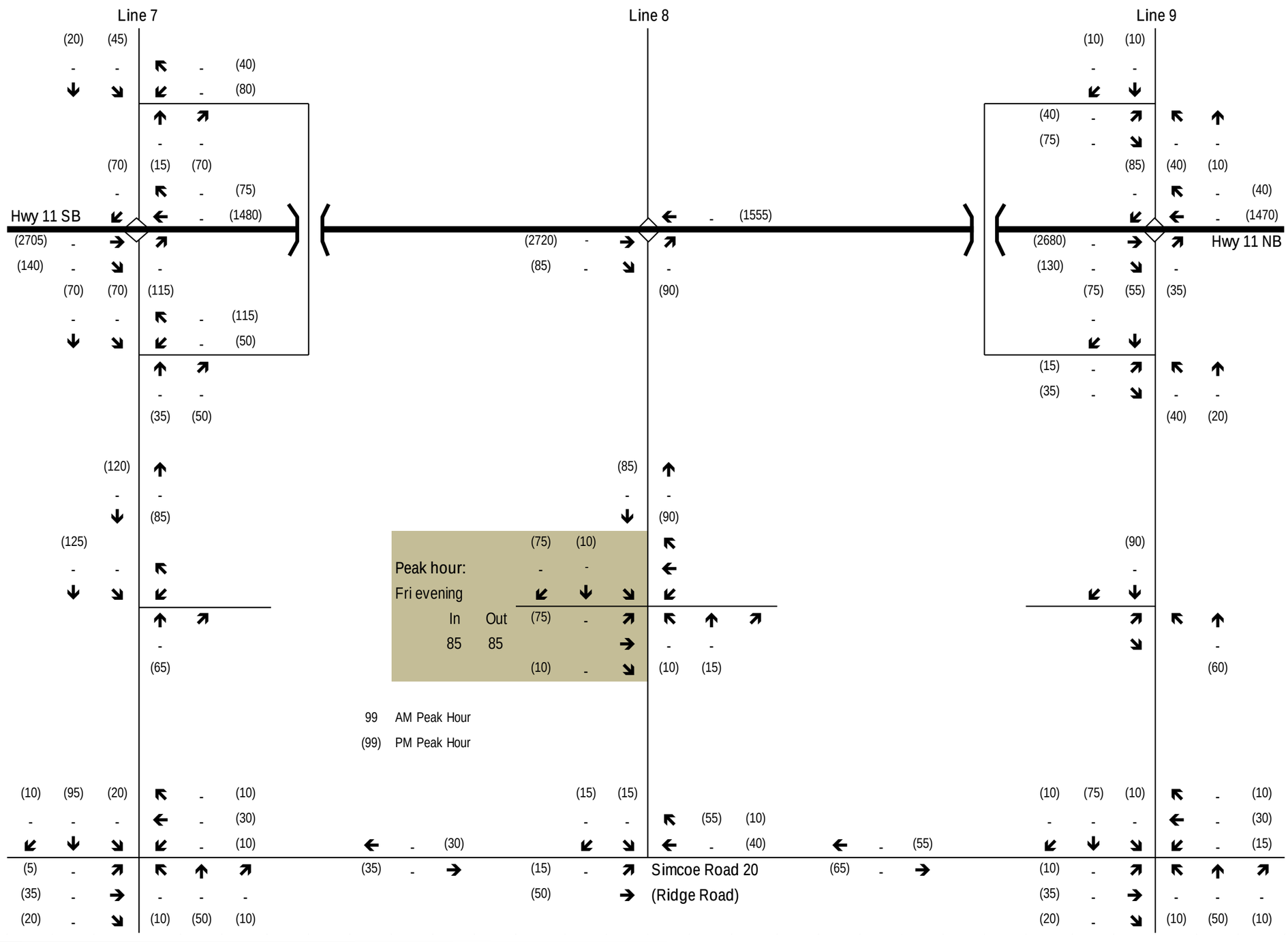
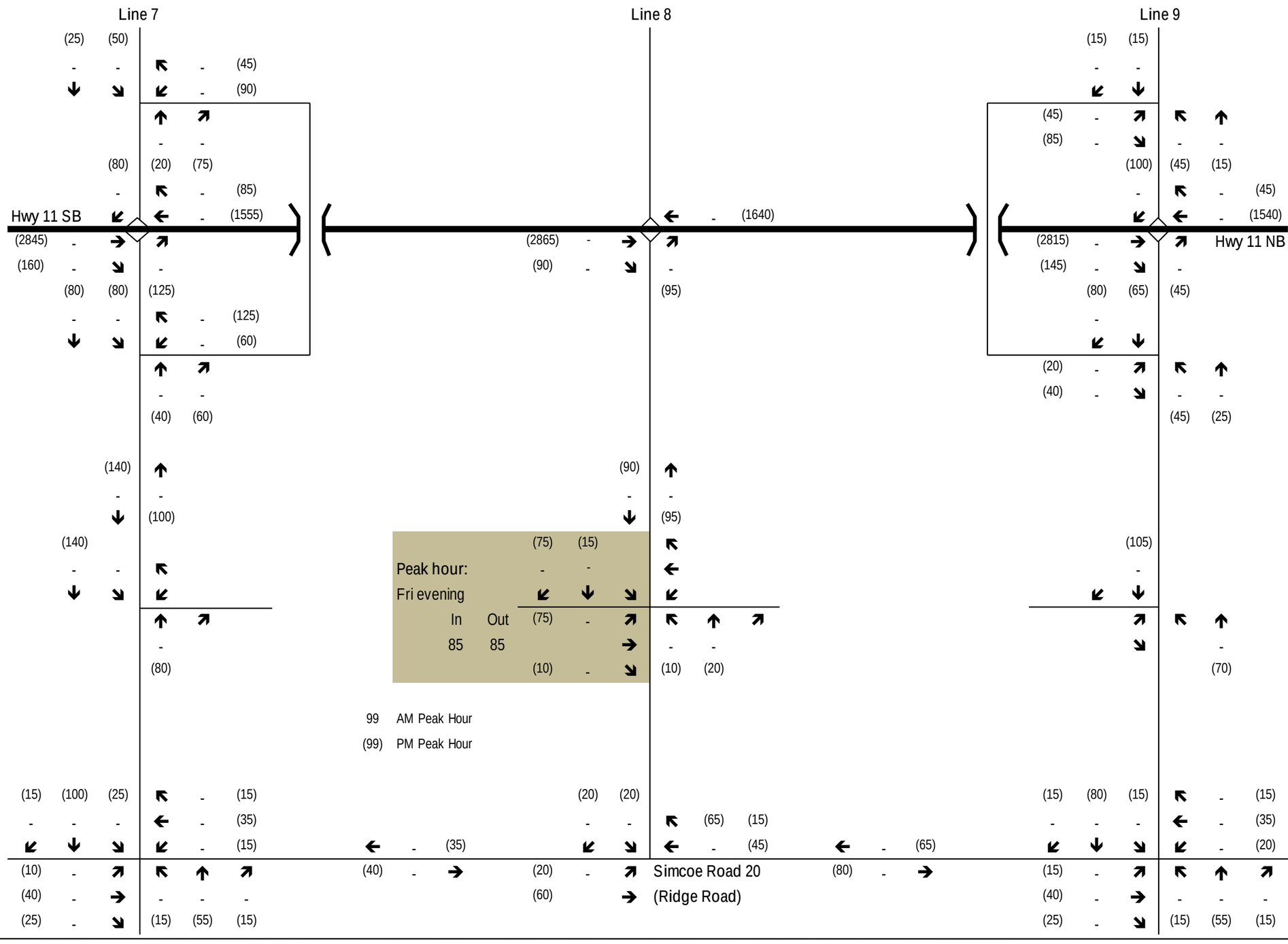
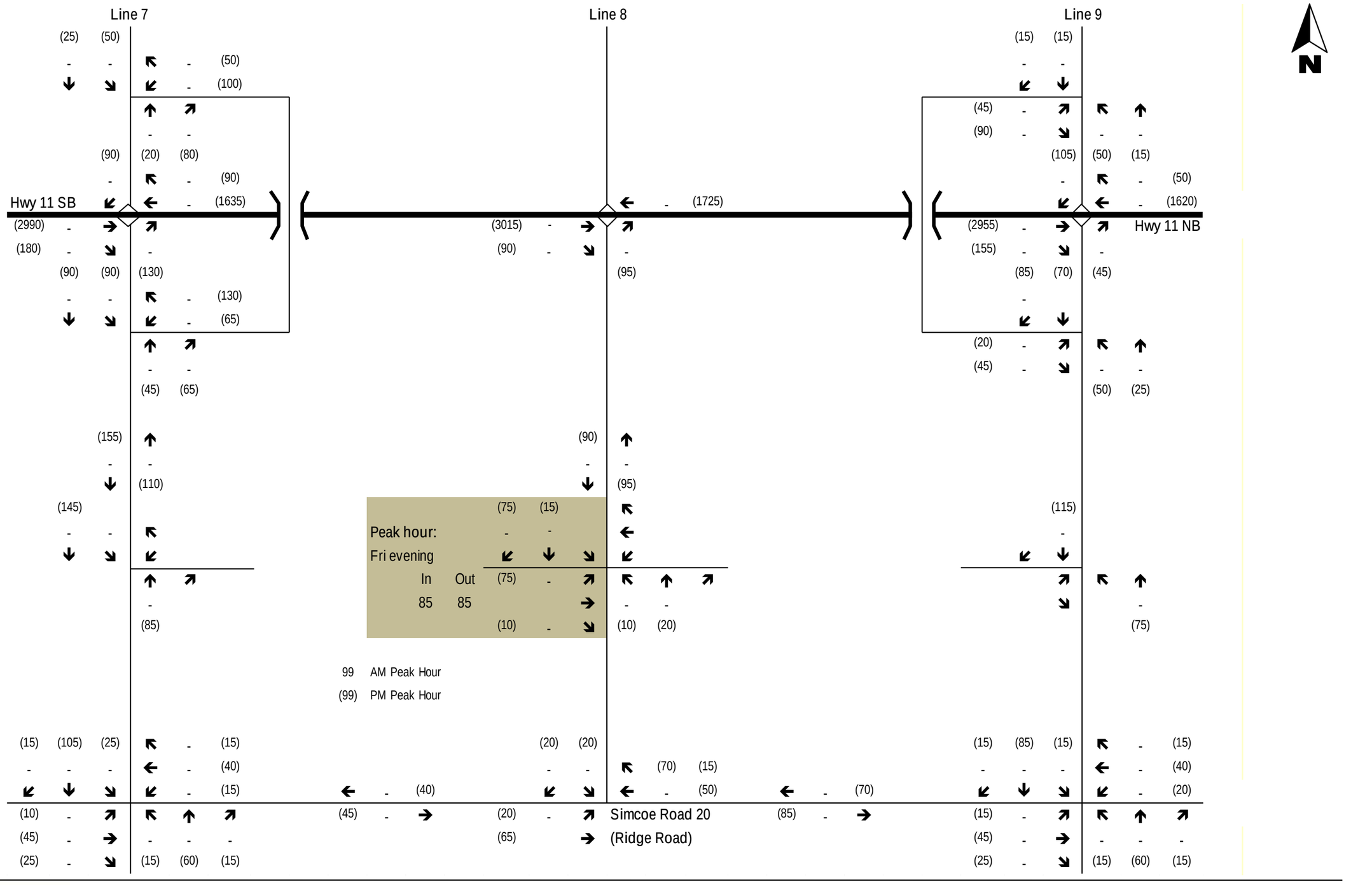
Burl's Creek Event Grounds Traffic Impact Study

Figure 27

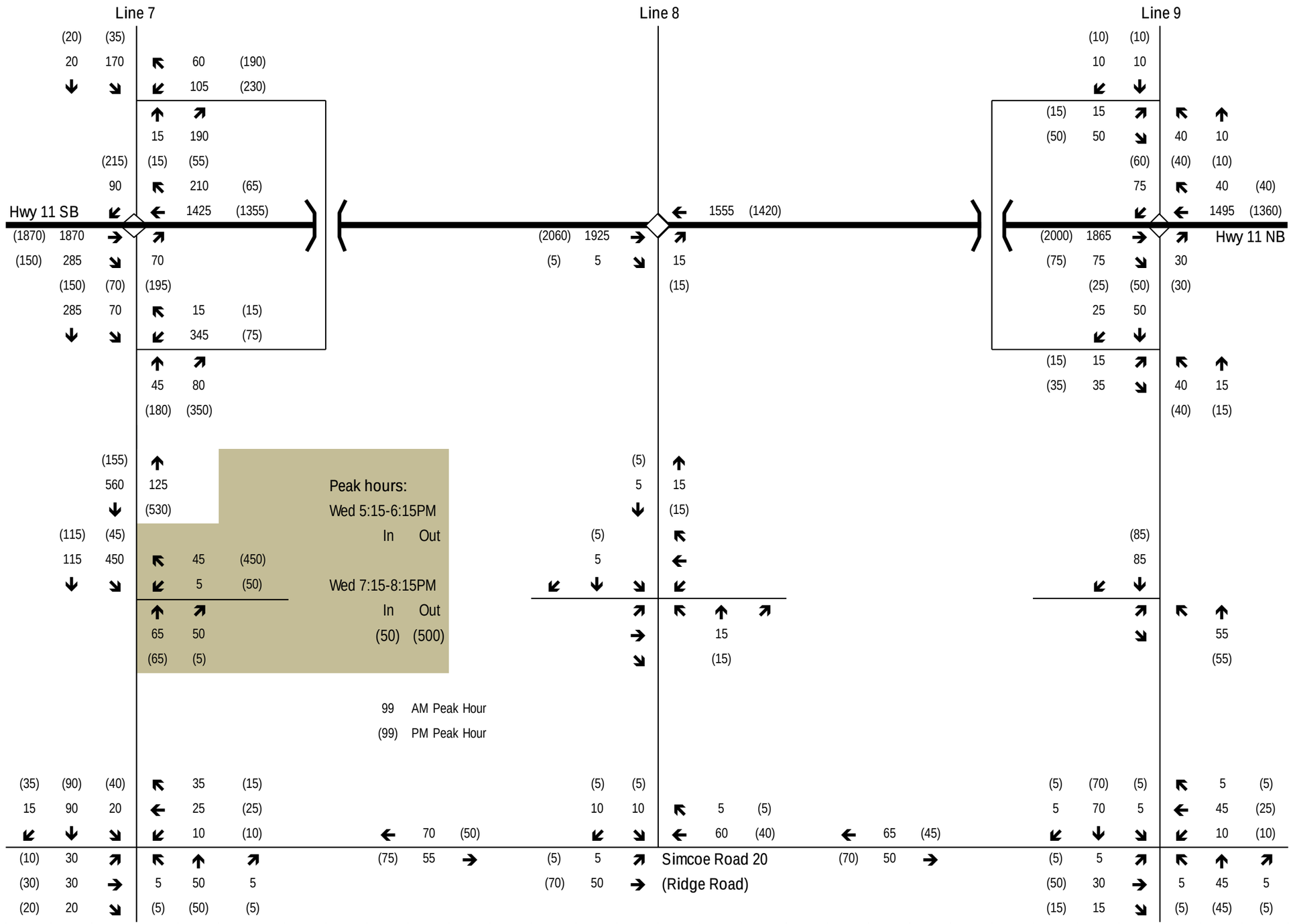
2025 Huronia Fur & Feathers - Peak Hour Volumes (Sunday mid-morning)


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
Peak hour:
Fri evening
In 85
Out 85
99 AM Peak Hour
(99) PM Peak Hour

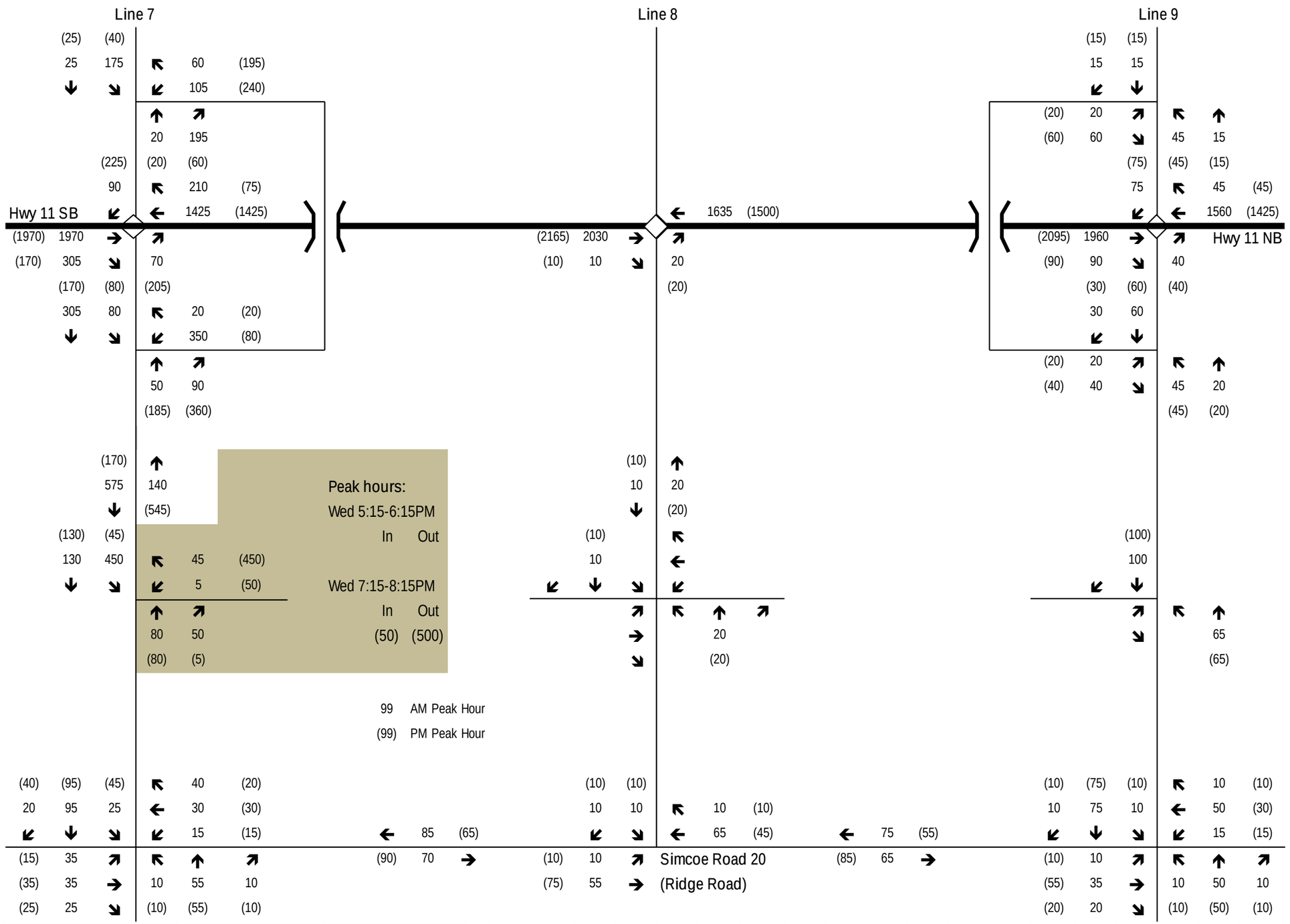

Line 7
Line 8
Line 9
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
Peak hour:
Fri evening
In Out
85 85
99 AM Peak Hour
(99) PM Peak Hour



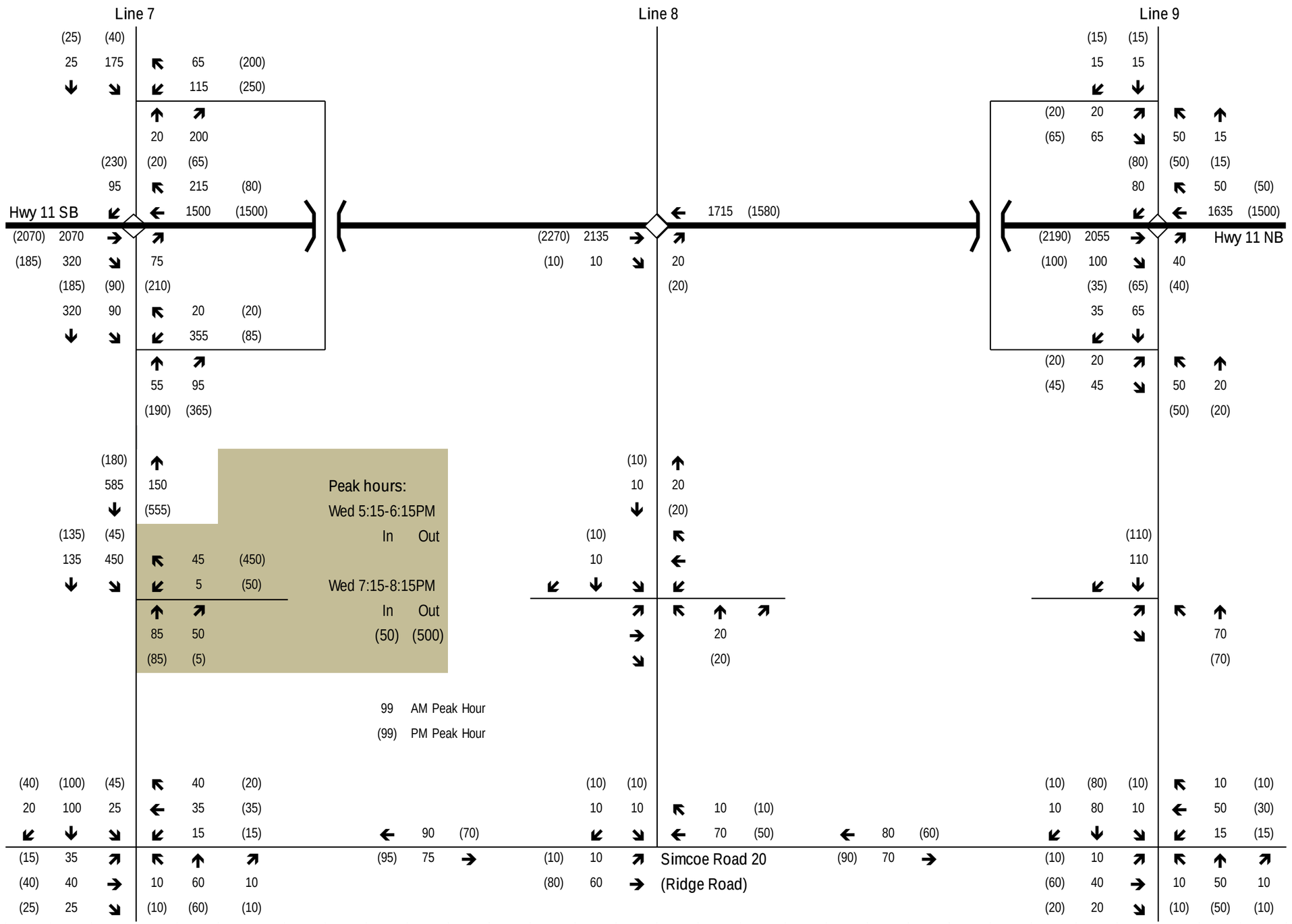
2025 Farmers Market - Peak Hour Volumes (Friday evening)



2015 Soccer - Peak Hour Volumes (Wednesday evening)



2020 Soccer - Peak Hour Volumes (Wednesday evening)



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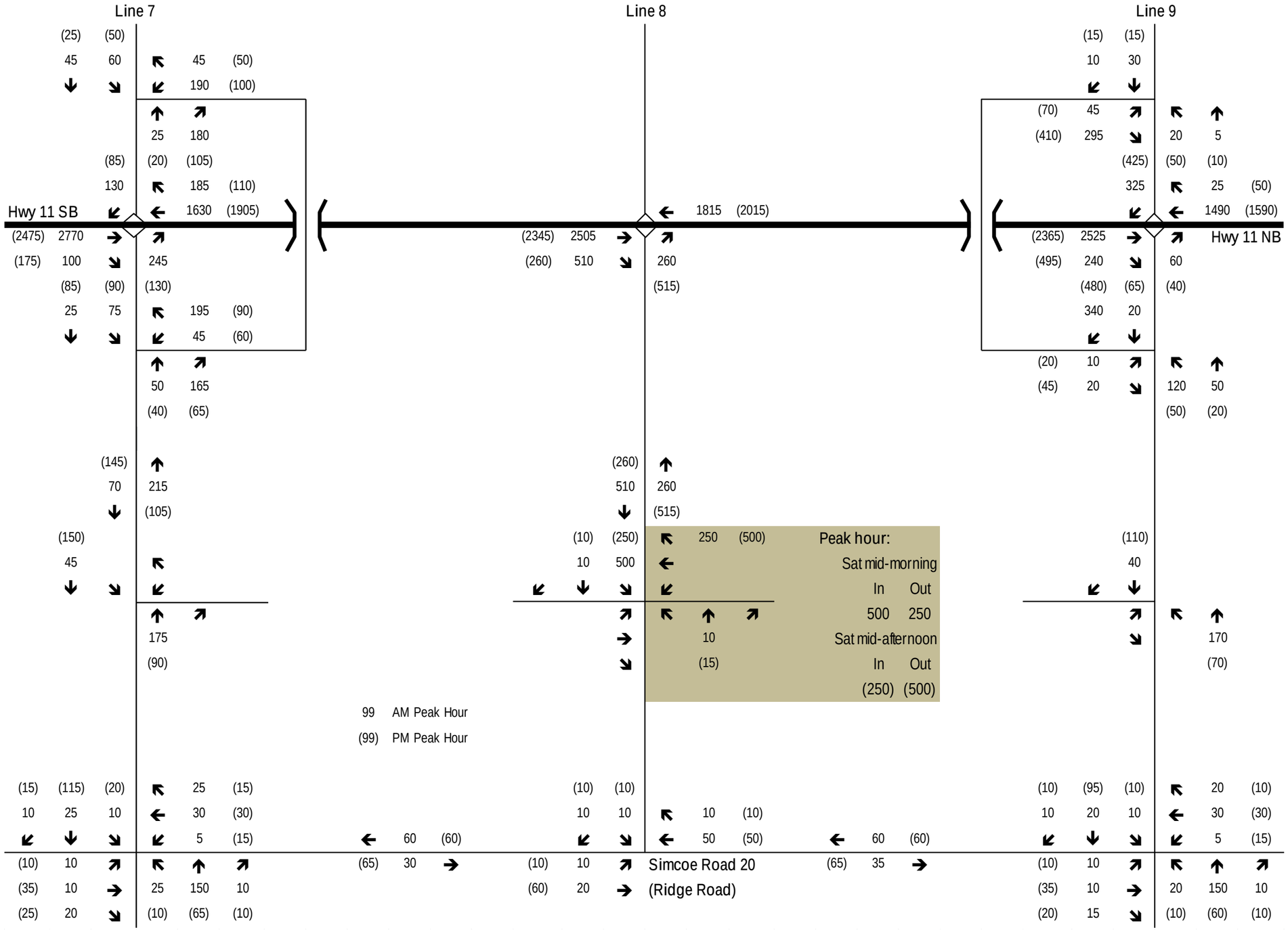
Burl's Creek Event Grounds Traffic Impact Study

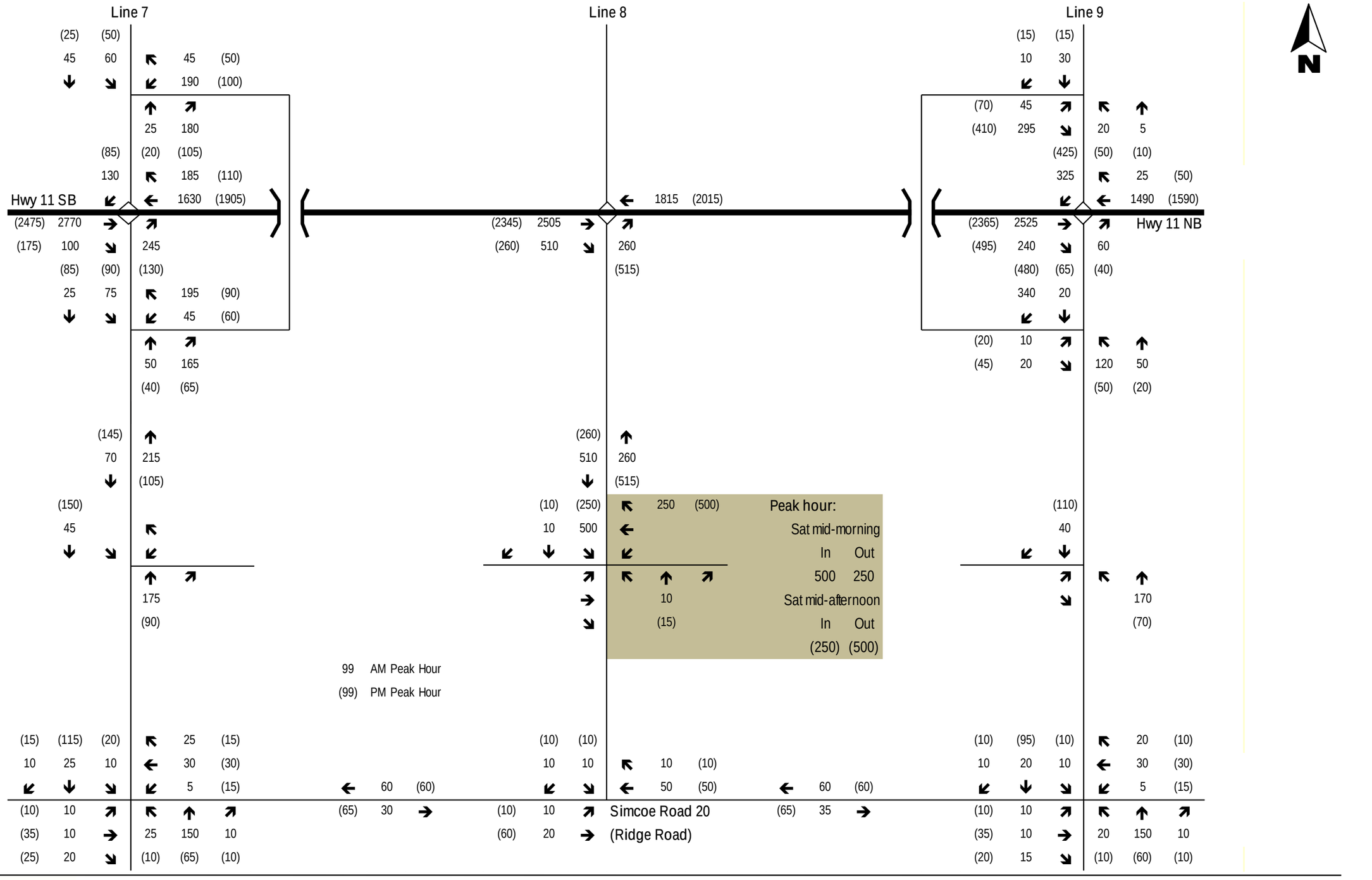
2025 Soccer - Peak Hour Volumes (Wednesday evening)

Figure

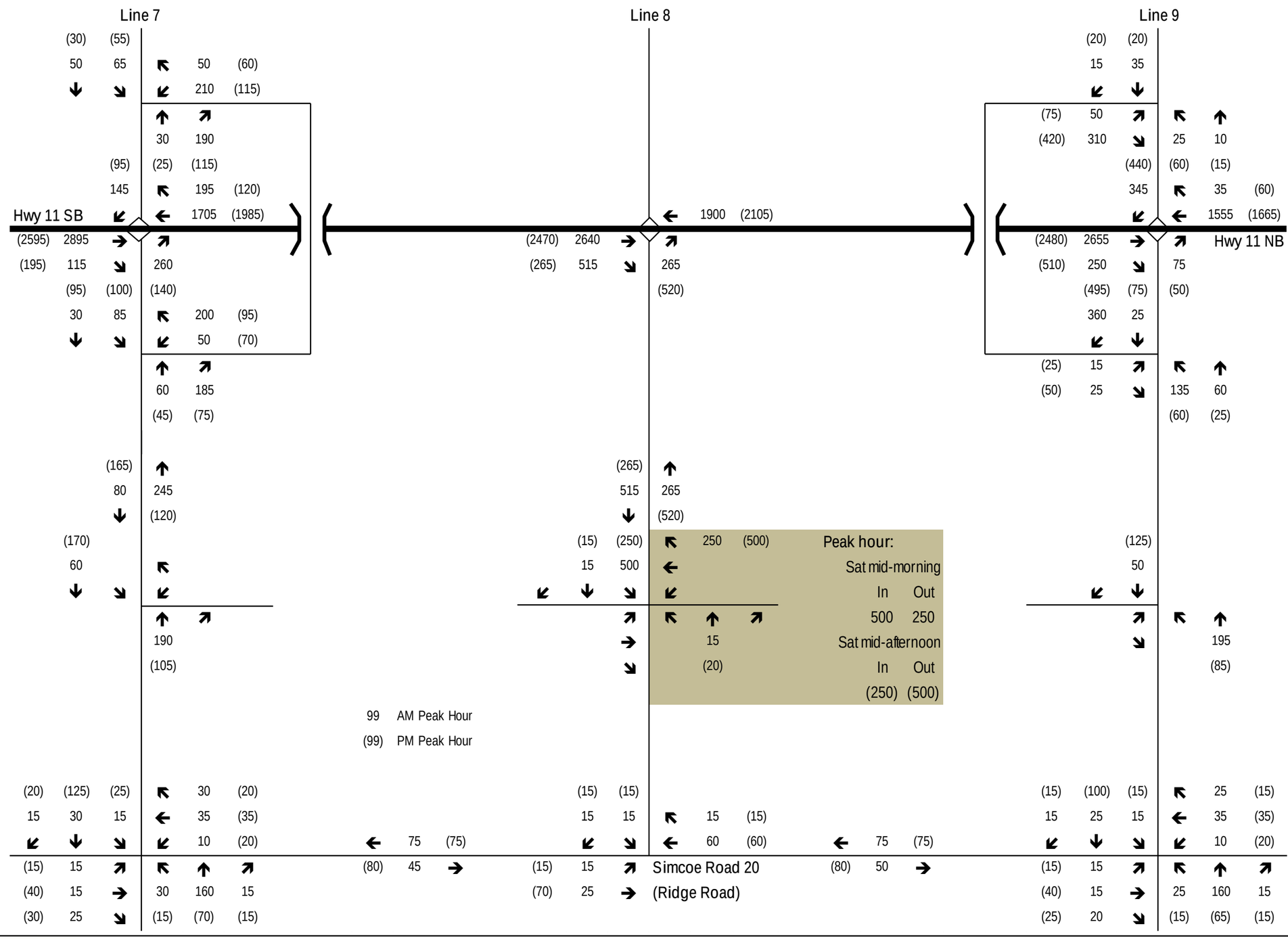
33



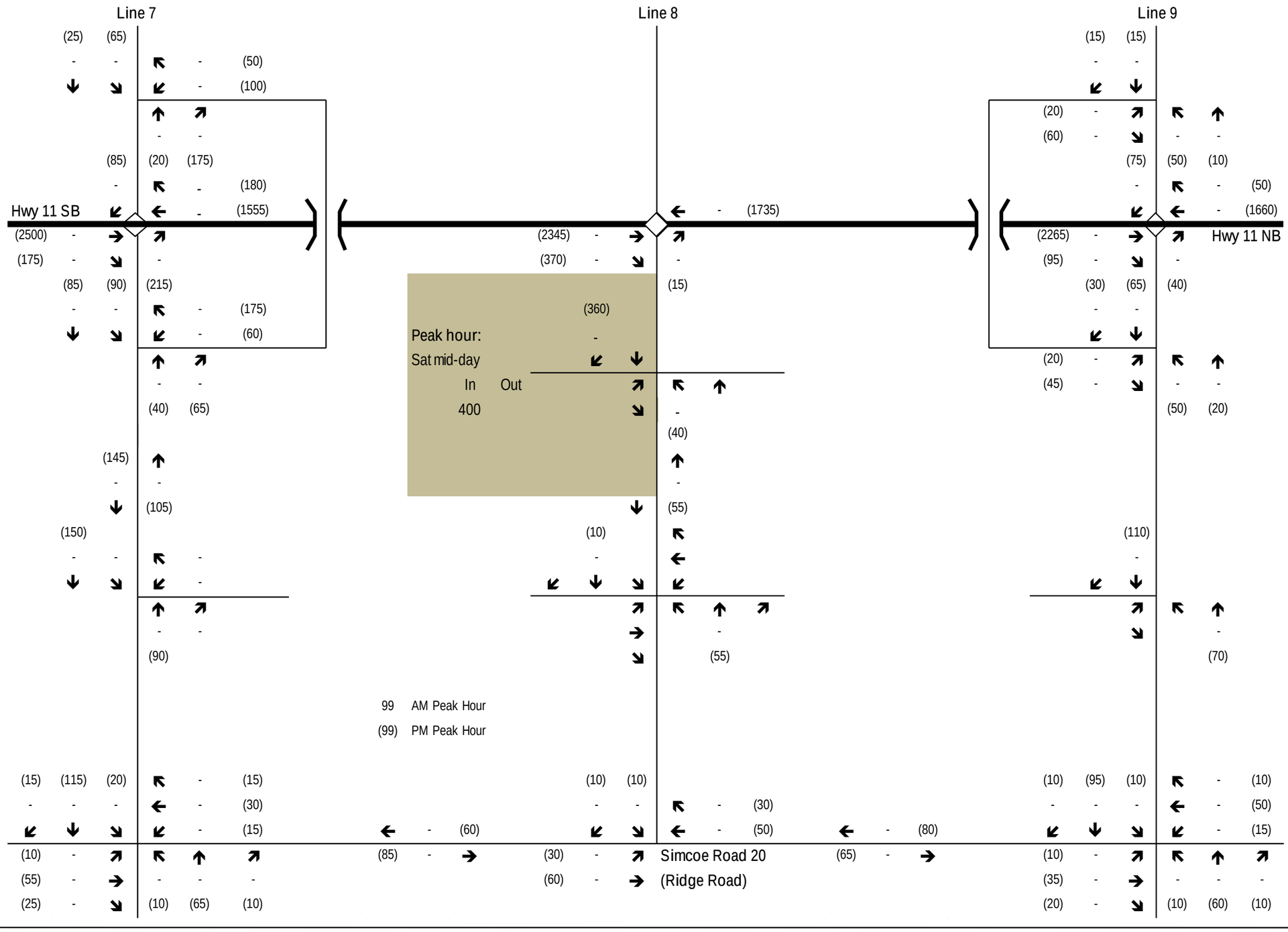
2015 Tough Mudder - Peak Hour Volumes (Saturday mid-morning & mid-afternoon)



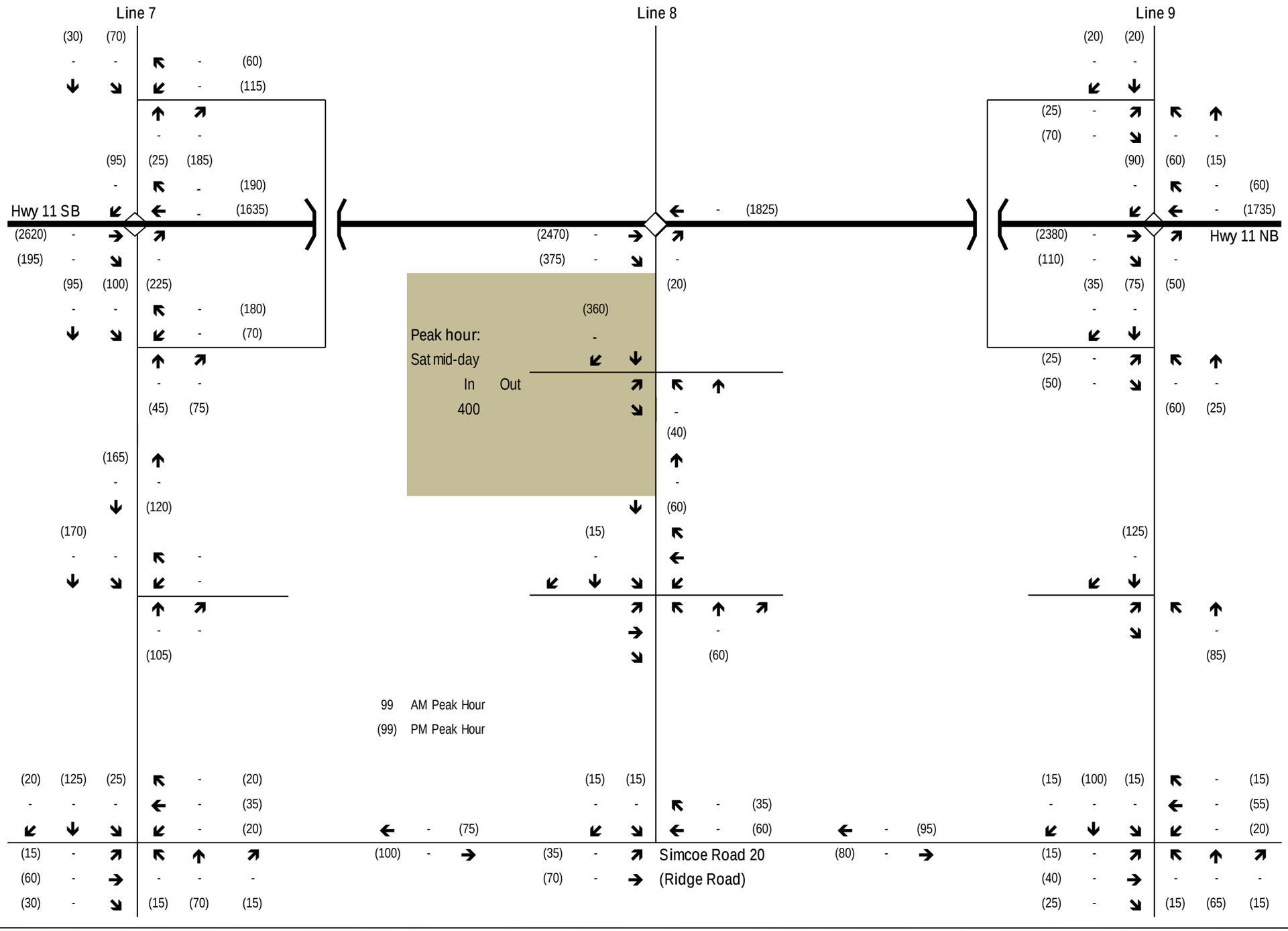
2020 Tough Mudder - Peak Hour Volumes (Saturday mid-morning & mid-afternoon)

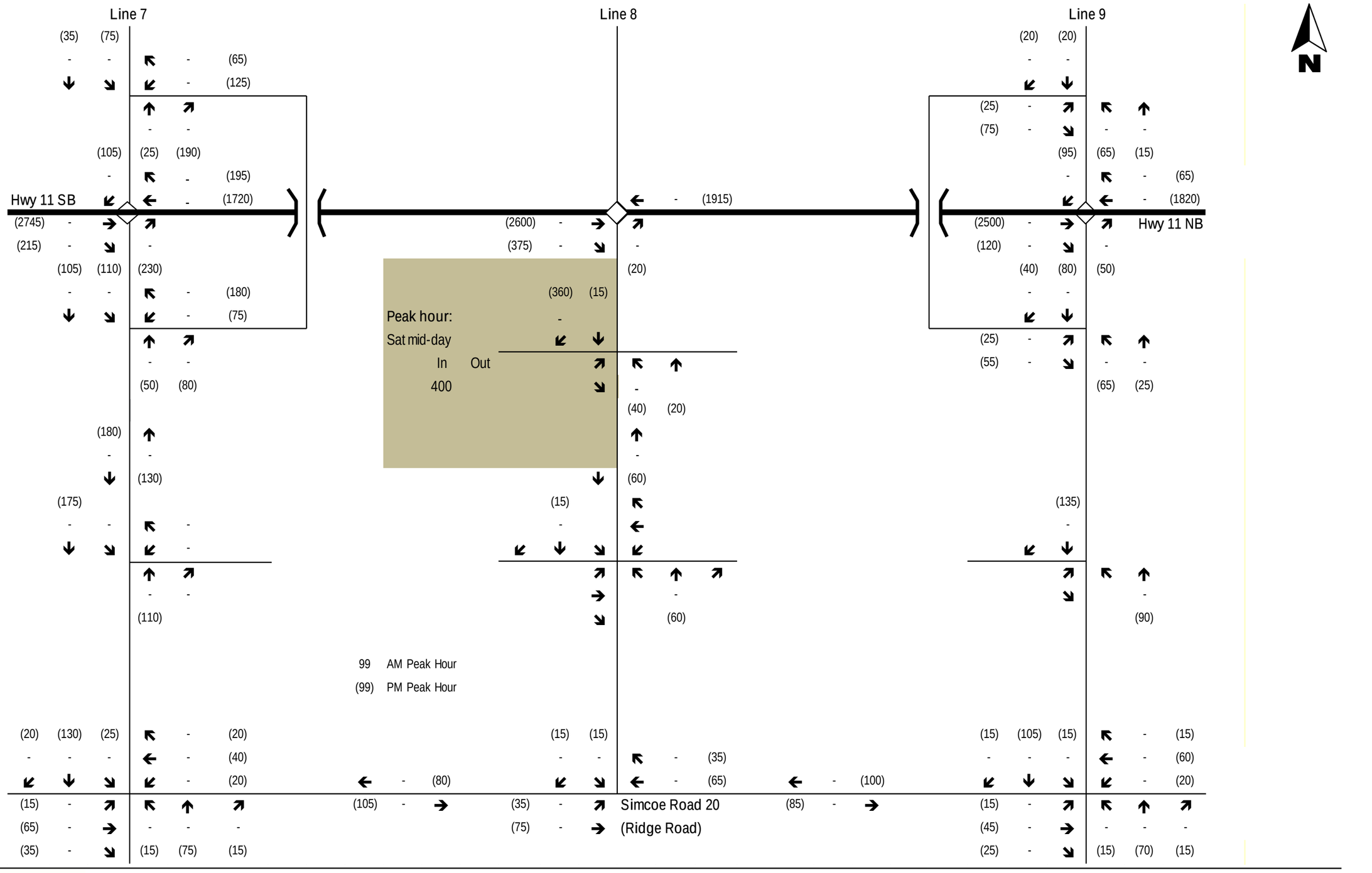


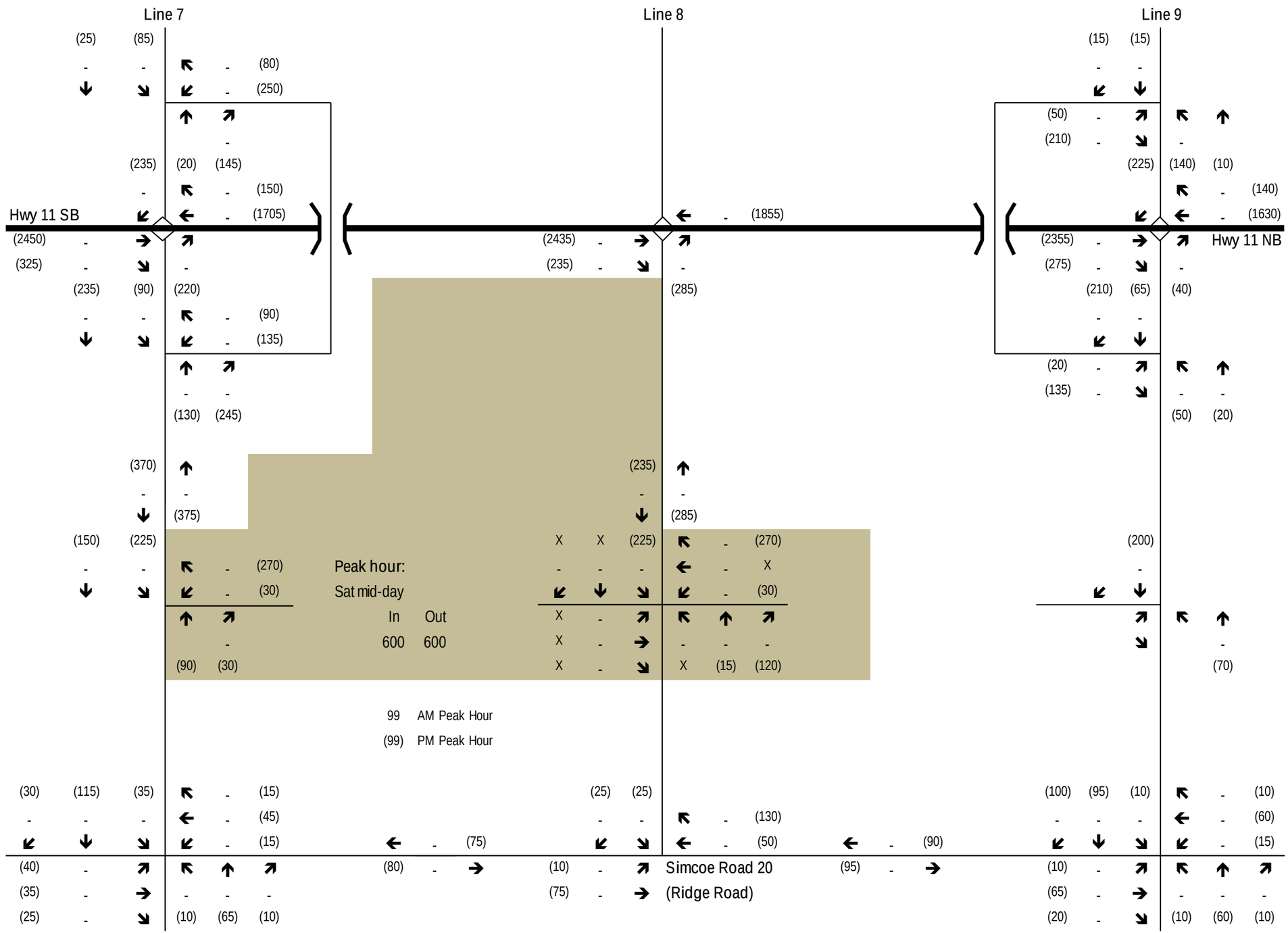
2025 Tough Mudder - Peak Hour Volumes (Saturday mid-morning & mid-afternoon)



2015 Contemporary Music & Camping Festival - Peak Hour Volumes (Saturday mid-day)


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Peak hour:
Sat mid-day
In Out
400
99 AM Peak Hour
(99) PM Peak Hour
Simcoe Road 20
(Ridge Road)


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Peak hour:
Sat mid-day
In Out
400
99 AM Peak Hour
(99) PM Peak Hour
Simcoe Road 20
(Ridge Road)



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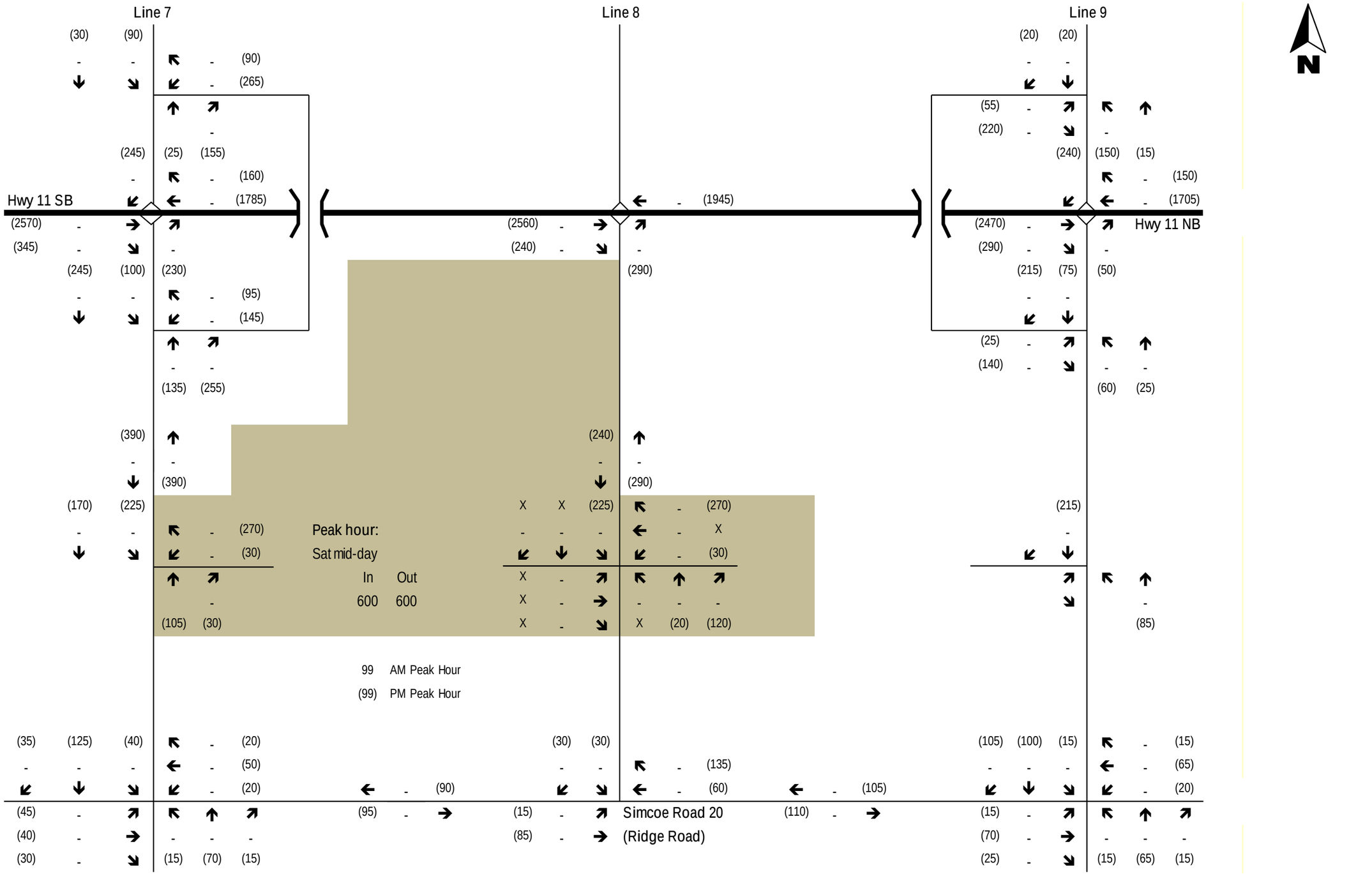
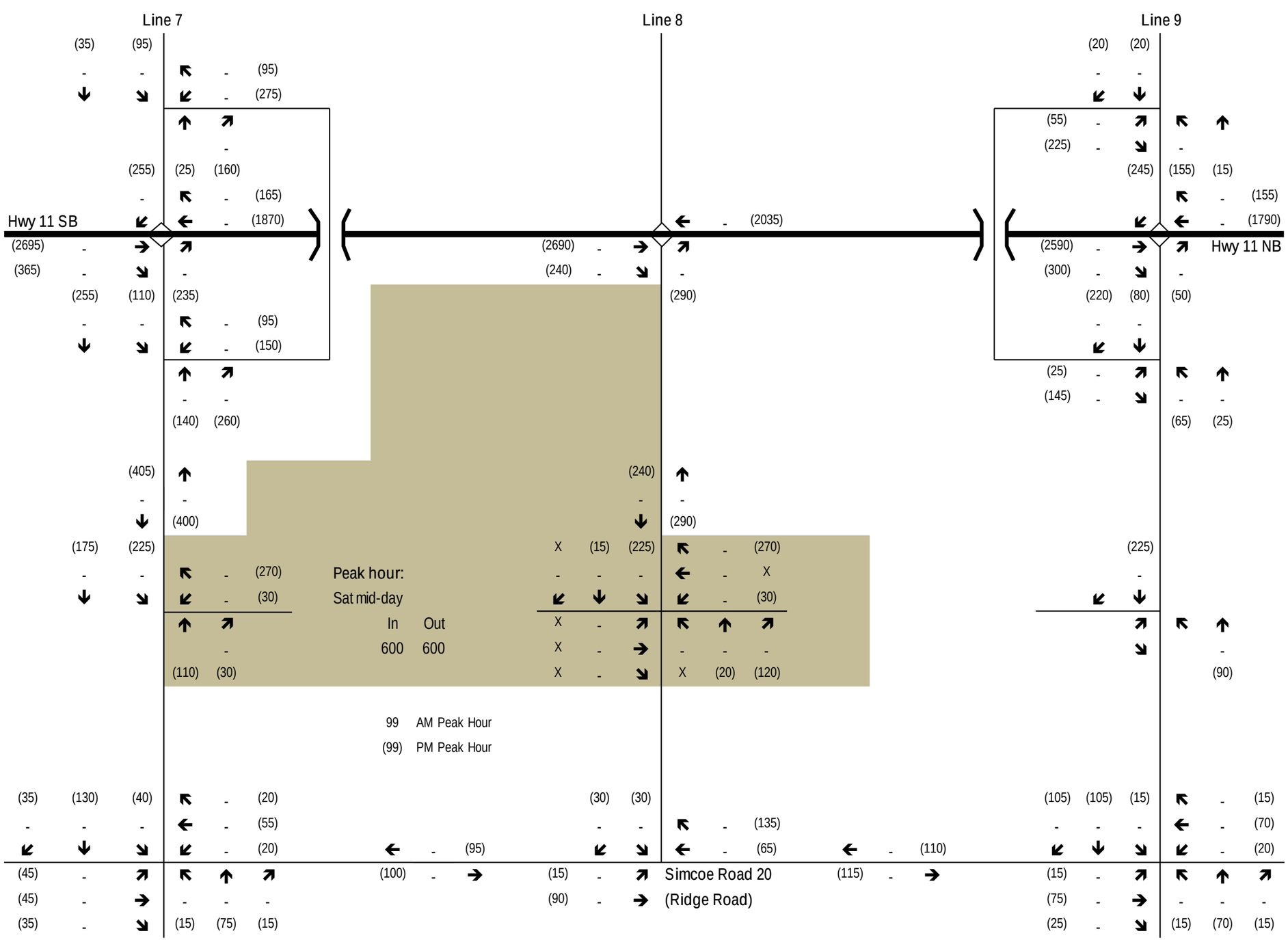
Burl's Creek Event Grounds Traffic Impact Study

2015 Barrie Automotive Flea Market - Peak Hour Volumes (Saturday mid-day)

Figure 40


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Peak hour:
Sat mid-day
In Out
600 600
99 AM Peak Hour
(99) PM Peak Hour
Simcoe Road 20
(Ridge Road)


Line 7
Line 8
Line 9
N
Hwy 11 SB
Hwy 11 NB
Simcoe Road 20
(Ridge Road)
Peak hour:
Sat mid-day
In Out
600 600
99 AM Peak Hour
(99) PM Peak Hour

APPENDIX A:
TRAFFIC COUNTS

Traffic Engineering Software

Weekly Volume Summary

Tue, Aug 12, 2014

Location: Hwy 11 - 8.23 km N of Simcoe Rd 93 - Hwy 400A

LHRS/Offset: 16950 / 8.23 **Region:** Central

Pattern Type: Intermediate Recreation **PCS#:** 4 **Hwy. TVIS#:** 11116

Count Direction: NB **Report Dates:** Jul 15, 2014 **to** Jul 21, 2014

Hour Interval	Tue 14/07/15	Wed 16	Thu 17	Fri 18	Sat 19	Sun 20	Mon 21	Tue 22
0:00- 1:00	168	200	218	276	412	227	161	
1:00- 2:00	182	177	179	171	317	206	110	
2:00- 3:00	122	149	115	141	189	110	76	
3:00- 4:00	76	92	90	76	113	62	58	
4:00- 5:00	130	110	91	148	147	59	105	
5:00- 6:00	561	319	311	293	209	95	241	
6:00- 7:00	645	679	627	669	494	197	496	
7:00- 8:00	1,148	1,158	1,180	1,266	1,052	414	1,177	
8:00- 9:00	1,290	1,365	1,322	1,540	2,090	753	1,364	
9:00-10:00	1,223	1,293	1,291	1,650	2,341	1,036	1,283	
10:00-11:00	1,208	1,334	1,497	1,896	2,285	1,394	1,352	
11:00-12:00	1,386	1,509	1,608	2,513	2,491	1,734	1,539	
AM Total	8,139	8,385	8,529	10,639	12,140	6,287	7,962	0
12:00-13:00	1,368	1,492	1,686	2,353	2,268	1,806	1,608	
13:00-14:00	1,366	1,476	1,823	2,541	2,447	1,695	1,577	
14:00-15:00	1,558	1,575	1,817	2,593	2,429	1,198	1,515	
15:00-16:00	1,644	1,743	2,028	2,645	2,305	1,572	1,582	
16:00-17:00	1,813	1,792	2,099	2,738	1,645	1,200	1,758	
17:00-18:00	1,838	1,936	2,180	2,789	1,331	1,166	1,723	
18:00-19:00	1,287	1,455	1,697	2,661	1,393	914	1,187	
19:00-20:00	979	1,002	1,628	2,487	1,075	845	985	
20:00-21:00	828	875	1,394	2,318	871	699	706	
21:00-22:00	686	729	1,159	2,129	711	554	606	
22:00-23:00	408	504	744	1,233	494	461	392	
23:00-24:00	328	332	413	728	368	237	312	
PM Total	14,103	14,911	18,668	27,215	17,337	12,347	13,951	0
24 Hr. Total	22,242	23,296	27,197	37,854	29,477	18,634	21,913	0
Noon - Noon	22,488	23,440	29,307	39,355	23,624	20,309	13,951	

Traffic Engineering Software

Weekly Volume Summary

Tue, Aug 12, 2014

Location: Hwy 11 - 8.23 km N of Simcoe Rd 93 - Hwy 400A

LHRS/Offset: 16950 / 8.23 **Region:** Central

Pattern Type: Intermediate Recreation **PCS#:** 4 **Hwy. TVIS#:** 11116

Count Direction: SB **Report Dates:** Jul 15, 2014 **to** Jul 21, 2014

Hour Interval	Tue 14/07/15	Wed 16	Thu 17	Fri 18	Sat 19	Sun 20	Mon 21	Tue 22
0:00- 1:00	105	280	104	245	169	432	174	
1:00- 2:00	50	93	63	102	110	227	80	
2:00- 3:00	66	75	71	84	98	129	86	
3:00- 4:00	63	87	69	83	72	113	77	
4:00- 5:00	190	175	177	156	94	81	245	
5:00- 6:00	423	487	452	413	126	97	553	
6:00- 7:00	752	725	769	695	256	183	967	
7:00- 8:00	1,106	1,073	1,027	967	398	298	1,229	
8:00- 9:00	1,163	1,128	1,084	968	647	537	1,332	
9:00-10:00	1,108	1,036	1,049	1,040	944	950	1,337	
10:00-11:00	1,262	1,161	1,153	1,093	1,237	1,630	1,496	
11:00-12:00	1,273	1,211	1,128	1,244	1,565	2,191	1,492	
AM Total	7,561	7,531	7,146	7,090	5,716	6,868	9,068	0
12:00-13:00	1,247	1,247	1,131	1,430	1,673	2,360	1,459	
13:00-14:00	1,224	1,236	1,197	1,434	1,633	2,357	1,516	
14:00-15:00	1,328	1,196	1,258	1,406	1,519	2,578	1,391	
15:00-16:00	1,313	1,284	1,308	1,505	1,494	2,322	1,440	
16:00-17:00	1,347	1,394	1,464	1,467	1,621	2,143	1,543	
17:00-18:00	1,292	1,353	1,388	1,349	1,388	2,364	1,432	
18:00-19:00	911	950	981	1,076	1,205	2,002	1,088	
19:00-20:00	634	754	772	935	1,057	1,639	846	
20:00-21:00	520	637	619	736	1,055	1,805	750	
21:00-22:00	500	490	522	642	1,038	1,541	602	
22:00-23:00	307	309	360	420	690	873	483	
23:00-24:00	312	187	498	269	548	312	248	
PM Total	10,935	11,037	11,498	12,669	14,921	22,296	12,798	0
24 Hr. Total	18,496	18,568	18,644	19,759	20,637	29,164	21,866	0
Noon - Noon	18,466	18,183	18,588	18,385	21,789	31,364	12,798	

Traffic Engineering Software

Weekly Volume Summary

Tue, Aug 12, 2014

Location: Hwy 11 - 8.23 km N of Simcoe Rd 93 - Hwy 400A

LHRS/Offset: 16950 / 8.23 **Region:** Central

Pattern Type: Intermediate Recreation **PCS#:** 4 **Hwy. TVIS#:** 11116

Count Direction: NB/SB **Report Dates:** Jul 15, 2014 **to** Jul 21, 2014

Hour Interval	Tue 14/07/15	Wed 16	Thu 17	Fri 18	Sat 19	Sun 20	Mon 21	Tue 22
0:00- 1:00	273	480	322	521	581	659	335	
1:00- 2:00	232	270	242	273	427	433	190	
2:00- 3:00	188	224	186	225	287	239	162	
3:00- 4:00	139	179	159	159	185	175	135	
4:00- 5:00	320	285	268	304	241	140	350	
5:00- 6:00	984	806	763	706	335	192	794	
6:00- 7:00	1,397	1,404	1,396	1,364	750	380	1,463	
7:00- 8:00	2,254	2,231	2,207	2,233	1,450	712	2,406	
8:00- 9:00	2,453	2,493	2,406	2,508	2,737	1,290	2,696	
9:00-10:00	2,331	2,329	2,340	2,690	3,285	1,986	2,620	
10:00-11:00	2,470	2,495	2,650	2,989	3,522	3,024	2,848	
11:00-12:00	2,659	2,720	2,736	3,757	4,056	3,925	3,031	
AM Total	15,700	15,916	15,675	17,729	17,856	13,155	17,030	0
12:00-13:00	2,615	2,739	2,817	3,783	3,941	4,166	3,067	
13:00-14:00	2,590	2,712	3,020	3,975	4,080	4,052	3,093	
14:00-15:00	2,886	2,771	3,075	3,999	3,948	3,776	2,906	
15:00-16:00	2,957	3,027	3,336	4,150	3,799	3,894	3,022	
16:00-17:00	3,160	3,186	3,563	4,205	3,266	3,343	3,301	
17:00-18:00	3,130	3,289	3,568	4,138	2,719	3,530	3,155	
18:00-19:00	2,198	2,405	2,678	3,737	2,598	2,916	2,275	
19:00-20:00	1,613	1,756	2,400	3,422	2,132	2,484	1,831	
20:00-21:00	1,348	1,512	2,013	3,054	1,926	2,504	1,456	
21:00-22:00	1,186	1,219	1,681	2,771	1,749	2,095	1,208	
22:00-23:00	715	813	1,104	1,653	1,184	1,334	875	
23:00-24:00	640	519	911	997	916	549	560	
PM Total	25,038	25,948	30,166	39,884	32,258	34,643	26,749	0
24 Hr. Total	40,738	41,864	45,841	57,613	50,114	47,798	43,779	0
Noon - Noon	40,954	41,623	47,895	57,740	45,413	51,673	26,749	

ADT	AWD	AADT	AAWD	SADT	SAWDT	WADT	DHV
46,821	43,056	36,928	36,574	43,944	39,866	31,389	4,431

Highway	Location Description	Dist	Year	Patt Type	AADT	SADT	SAWDT	WADT	AR
			1999	IR	31,100	38,300	33,900	27,200	0.6
			2000	IR	32,000	38,700	34,400	28,000	0.6
			2001	IR	32,900	40,100	35,200	28,600	0.5
			2002	IR	33,800	41,300	36,300	29,600	0.9
			2003	IR	34,700	42,300	37,100	30,500	0.6
			2004	IR	35,600	42,600	37,900	31,300	0.6
			2005	IR	36,500	43,500	38,700	31,900	0.5
			2006	IT	37,900	48,200	47,900	31,100	0.5
			2007	IT	38,400	49,200	51,400	31,400	0.6
			2008	IT	39,300	50,500	47,800	33,000	0.4
			2009	IR	40,200	45,700	44,200	36,500	0.3
			2010	IR	41,100	46,600	45,100	37,300	0.5
11	SIMCOE RD 20-ORO MEDONTE LINE 11 IC 121	7.8	1988	IR	22,400	29,100	22,600	17,900	0.7
			1989	IR	24,300	31,300	26,900	19,900	0.7
			1990	IR	26,250	33,300	29,100	21,500	0.8
			1991	IR	26,500	33,300	29,400	21,900	0.6
			1992	IR	26,800	32,900	29,400	22,700	0.8
			1993	IR	28,000	34,400	29,100	23,500	0.6
			1994	IR	28,900	36,100	30,900	24,600	0.4
			1995	IR	29,400	36,500	31,500	24,700	0.5
			1996	IR	30,000	39,300	34,800	24,200	0.7
			1997	IR	30,500	40,000	35,400	25,000	0.5
			1998	IR	31,000	40,000	35,600	24,800	0.5
			1999	IR	31,500	40,600	36,100	25,200	0.5
			2000	IR	33,500	42,900	38,400	27,000	0.6
			2001	IR	34,300	44,200	39,400	27,800	0.4
			2002	IR	35,200	45,400	40,300	28,700	0.5
			2003	IR	36,100	46,900	41,500	29,200	0.6
			2004	IR	37,300	47,200	42,300	30,200	0.2
			2005	IR	37,600	47,300	42,400	30,800	0.5
			2006	IR	37,800	45,600	41,300	32,100	0.4
			2007	IR	38,600	46,800	46,600	32,700	0.4
			2008	IR	40,200	48,700	47,800	34,400	0.4
			2009	IR	40,100	47,300	42,200	35,200	0.3
			2010	IC	39,000	43,200	43,500	34,600	0.5
11	MEMORIAL AVE IC	1.7	1988	IR	14,300	18,500	14,400	11,400	0.9
			1989	IR	16,300	21,000	18,000	13,300	1.0
			1990	LR	18,350	32,100	25,500	11,500	1.1
			1991	LR	19,600	34,400	27,200	12,300	0.7
			1992	LR	20,050	32,200	25,800	13,200	1.0
			1993	LR	22,250	32,200	26,200	15,500	0.6
			1994	LR	23,100	33,500	27,500	16,700	0.5
			1995	LR	24,400	36,600	29,500	17,600	0.5
			1996	LR	25,700	38,600	31,100	18,600	0.6

County of Simcoe

Transportation and Engineering Department
Midhurst, Ontario
(705)-726-9300

County Road 20 - Spring 2014
Line 2 Oro-Medonte to
Line 7 Oro-Medonte

Site Code: 020 02

Line 2 Oro-Medonte
Line 7 Oro-Medonte

Start	19-May-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	1	6	1	1	2	1	*	*	*	*	*	*	1	3
01:00	*	*	3	0	4	1	2	1	*	*	*	*	*	*	3	1
02:00	*	*	2	0	4	1	1	1	*	*	*	*	*	*	2	1
03:00	*	*	1	0	0	0	0	0	*	*	*	*	*	*	0	0
04:00	*	*	1	1	0	3	0	2	*	*	*	*	*	*	0	2
05:00	*	*	0	5	2	4	2	6	*	*	*	*	*	*	1	5
06:00	*	*	6	17	6	26	3	24	*	*	*	*	*	*	5	22
07:00	*	*	17	**73**	15	73	16	**73**	*	*	*	*	*	*	16	**73**
08:00	*	*	24	71	35	71	34	66	*	*	*	*	*	*	31	69
09:00	*	*	28	54	32	**74**	36	69	*	*	*	*	*	*	32	66
10:00	*	*	33	49	28	32	35	53	*	*	*	*	*	*	32	45
11:00	*	*	**43**	45	**44**	40	**44**	48	*	*	*	*	*	*	**44**	44
12:00 PM	*	*	56	54	57	54	54	54	*	*	*	*	*	*	56	54
01:00	*	*	50	53	50	49	51	59	*	*	*	*	*	*	50	54
02:00	*	*	66	46	50	53	50	57	*	*	*	*	*	*	55	52
03:00	*	*	55	46	52	50	62	33	*	*	*	*	*	*	56	43
04:00	*	*	79	**61**	72	63	69	61	*	*	*	*	*	*	73	**62**
05:00	*	*	**80**	46	88	50	**100**	55	*	*	*	*	*	*	**89**	50
06:00	*	*	71	46	**106**	47	84	**68**	*	*	*	*	*	*	87	54
07:00	*	*	58	33	57	34	81	45	*	*	*	*	*	*	65	37
08:00	*	*	44	34	54	**113**	67	36	*	*	*	*	*	*	55	61
09:00	*	*	16	11	32	26	22	20	*	*	*	*	*	*	23	19
10:00	*	*	17	7	19	10	19	9	*	*	*	*	*	*	18	9
11:00	*	*	12	2	8	4	9	7	*	*	*	*	*	*	10	4
Lane	0	0	763	760	816	879	843	848	0	0	0	0	0	0	804	830
Day	0		1523		1695		1691		0		0		0		1634	
AM Peak	-	-	11:00	07:00	11:00	09:00	11:00	07:00	-	-	-	-	-	-	11:00	07:00
Vol.	-	-	43	73	44	74	44	73	-	-	-	-	-	-	44	73
PM Peak	-	-	17:00	16:00	18:00	20:00	17:00	18:00	-	-	-	-	-	-	17:00	16:00
Vol.	-	-	80	61	106	113	100	68	-	-	-	-	-	-	89	62

Comb. Total	0	1523	1695	1691	0	0	0	1634

ADT ADT 1,636 AADT 1,636

County of Simcoe

Transportation and Engineering Department
Midhurst, Ontario
(705)-726-9300

County Road 20 - Summer 2014
Line 3 Oro-Medonte to
Line 7 Oro-Medonte

Site Code: 020 02

Line 3
Line 7

Start	11-Aug-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	4	5	3	5	6	4	3	1	*	*	*	*	*	*	4	4
01:00	2	0	3	1	4	3	5	1	*	*	*	*	*	*	4	1
02:00	2	2	2	2	2	2	2	2	*	*	*	*	*	*	2	2
03:00	4	1	3	1	2	0	4	1	*	*	*	*	*	*	3	1
04:00	1	3	0	1	0	2	0	0	*	*	*	*	*	*	0	2
05:00	1	3	1	3	2	7	1	7	*	*	*	*	*	*	1	5
06:00	5	12	3	13	5	20	4	15	*	*	*	*	*	*	4	15
07:00	14	31	7	47	8	39	14	43	*	*	*	*	*	*	11	40
08:00	18	**58**	27	**69**	24	**70**	20	**71**	*	*	*	*	*	*	22	**67**
09:00	25	50	24	38	33	55	34	38	*	*	*	*	*	*	29	45
10:00	33	51	29	42	36	42	**35**	41	*	*	*	*	*	*	33	44
11:00	**46**	55	**44**	46	**39**	47	30	46	*	*	*	*	*	*	**40**	48
12:00 PM	48	**65**	43	59	41	52	48	49	*	*	*	*	*	*	45	**56**
01:00	54	57	58	**62**	45	48	45	**52**	*	*	*	*	*	*	50	55
02:00	85	53	36	48	50	49	52	34	*	*	*	*	*	*	56	46
03:00	43	55	54	57	51	36	52	43	*	*	*	*	*	*	50	48
04:00	68	55	75	46	66	38	68	50	*	*	*	*	*	*	69	47
05:00	**93**	59	**124**	53	**78**	**55**	**96**	45	*	*	*	*	*	*	**98**	53
06:00	54	43	73	43	60	40	80	50	*	*	*	*	*	*	67	44
07:00	50	37	46	30	35	27	47	23	*	*	*	*	*	*	44	29
08:00	37	31	28	26	40	10	27	16	*	*	*	*	*	*	33	21
09:00	20	19	32	21	17	15	32	13	*	*	*	*	*	*	25	17
10:00	16	11	21	24	18	11	15	10	*	*	*	*	*	*	18	14
11:00	12	6	5	6	12	6	10	9	*	*	*	*	*	*	10	7
Lane	735	762	741	743	674	678	724	660	0	0	0	0	0	0	718	711
Day	1497		1484		1352		1384		0		0		0		1429	
AM Peak	11:00	08:00	11:00	08:00	11:00	08:00	10:00	08:00	-	-	-	-	-	-	11:00	08:00
Vol.	46	58	44	69	39	70	35	71	-	-	-	-	-	-	40	67
PM Peak	17:00	12:00	17:00	13:00	17:00	17:00	17:00	13:00	-	-	-	-	-	-	17:00	12:00
Vol.	93	65	124	62	78	55	96	52	-	-	-	-	-	-	98	56

Comb. Total	1497	1484	1352	1384	0	0	0	1429

ADT ADT 1,429 AADT 1,429

County of Simcoe

Transporation and Engineering Department
Midhurst, Ontario
(705) 726-9300

County Road 20 - Fall 2014
Line 3 - Oro Medonte to
Line 7 - Oro Medonte

Site Code: 020 02

Date Start: 14-Oct-14
Date End: 16-Oct-14

Start	13-Oct-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	3	1	3	1	6	1	*	*	*	*	*	*	4	1
01:00	*	*	3	1	1	0	1	1	*	*	*	*	*	*	2	1
02:00	*	*	6	2	3	1	2	1	*	*	*	*	*	*	4	1
03:00	*	*	0	1	0	1	0	0	*	*	*	*	*	*	0	1
04:00	*	*	1	4	2	2	1	2	*	*	*	*	*	*	1	3
05:00	*	*	2	7	2	4	0	5	*	*	*	*	*	*	1	5
06:00	*	*	4	30	3	32	3	29	*	*	*	*	*	*	3	30
07:00	*	*	15	**84**	9	**85**	13	**85**	*	*	*	*	*	*	12	**85**
08:00	*	*	27	61	34	72	27	61	*	*	*	*	*	*	29	65
09:00	*	*	38	45	21	51	30	53	*	*	*	*	*	*	30	50
10:00	*	*	28	42	27	42	31	41	*	*	*	*	*	*	29	42
11:00	*	*	**61**	44	**40**	38	**36**	44	*	*	*	*	*	*	**46**	42
12:00 PM	*	*	72	56	53	48	46	34	*	*	*	*	*	*	57	46
01:00	*	*	45	62	52	40	36	38	*	*	*	*	*	*	44	47
02:00	*	*	71	**66**	48	40	42	35	*	*	*	*	*	*	54	47
03:00	*	*	67	58	66	34	73	51	*	*	*	*	*	*	69	48
04:00	*	*	**95**	55	80	**51**	**98**	48	*	*	*	*	*	*	**91**	**51**
05:00	*	*	92	51	**86**	35	77	49	*	*	*	*	*	*	85	45
06:00	*	*	45	27	54	40	62	**52**	*	*	*	*	*	*	54	40
07:00	*	*	26	18	40	16	46	29	*	*	*	*	*	*	37	21
08:00	*	*	25	12	30	28	19	13	*	*	*	*	*	*	25	18
09:00	*	*	20	10	11	18	23	17	*	*	*	*	*	*	18	15
10:00	*	*	7	8	10	8	12	5	*	*	*	*	*	*	10	7
11:00	*	*	4	3	5	5	5	2	*	*	*	*	*	*	5	3
Lane	0	0	757	748	680	692	689	696	0	0	0	0	0	0	710	714
Day	0		1505		1372		1385		0		0		0		1424	
AM Peak	-	-	11:00	07:00	11:00	07:00	11:00	07:00	-	-	-	-	-	-	11:00	07:00
Vol.	-	-	61	84	40	85	36	85	-	-	-	-	-	-	46	85
PM Peak	-	-	16:00	14:00	17:00	16:00	16:00	18:00	-	-	-	-	-	-	16:00	16:00
Vol.	-	-	95	66	86	51	98	52	-	-	-	-	-	-	91	51

Comb. Total	0		1505		1372		1385		0		0		0		1424	

ADT ADT 1,421 AADT 1,421

County of Simcoe

Transportation and Engineering Department
Midhurst, Ontario
(705)-726-9300

County Road 20 - Spring 2014
Line 7 Oro-Medonte to
Line 11 Oro-Medonte

Site Code: 020 03

Line 7 Oro-Medonte
Line 11 Oro-Medonte

Start	19-May-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	0	2	1	0	0	0	*	*	*	*	*	*	0	1
01:00	*	*	2	0	0	1	0	2	*	*	*	*	*	*	1	1
02:00	*	*	1	1	2	2	1	1	*	*	*	*	*	*	1	1
03:00	*	*	0	6	0	10	1	8	*	*	*	*	*	*	0	8
04:00	*	*	3	17	3	13	4	12	*	*	*	*	*	*	3	14
05:00	*	*	4	20	5	25	5	21	*	*	*	*	*	*	5	22
06:00	*	*	21	**52**	14	**56**	15	50	*	*	*	*	*	*	17	**53**
07:00	*	*	22	36	**33**	45	29	**56**	*	*	*	*	*	*	28	46
08:00	*	*	19	36	20	35	19	46	*	*	*	*	*	*	19	39
09:00	*	*	25	32	27	29	20	34	*	*	*	*	*	*	24	32
10:00	*	*	25	31	20	30	27	34	*	*	*	*	*	*	24	32
11:00	*	*	**31**	29	28	26	**34**	31	*	*	*	*	*	*	**31**	29
12:00 PM	*	*	31	43	32	44	31	39	*	*	*	*	*	*	31	42
01:00	*	*	30	35	42	41	34	43	*	*	*	*	*	*	35	40
02:00	*	*	27	38	34	55	36	31	*	*	*	*	*	*	32	41
03:00	*	*	43	45	30	54	34	53	*	*	*	*	*	*	36	51
04:00	*	*	31	**56**	42	56	**48**	**61**	*	*	*	*	*	*	**40**	**58**
05:00	*	*	**44**	33	36	**74**	28	53	*	*	*	*	*	*	36	53
06:00	*	*	27	29	25	27	45	29	*	*	*	*	*	*	32	28
07:00	*	*	13	21	**43**	26	32	30	*	*	*	*	*	*	29	26
08:00	*	*	10	17	14	11	5	18	*	*	*	*	*	*	10	15
09:00	*	*	3	10	6	8	7	10	*	*	*	*	*	*	5	9
10:00	*	*	4	2	4	2	4	3	*	*	*	*	*	*	4	2
11:00	*	*	0	3	1	3	0	0	*	*	*	*	*	*	0	2
Lane	0	0	416	594	462	673	459	665	0	0	0	0	0	0	443	645
Day	0		1010		1135		1124		0		0		0		1088	
AM Peak	-	-	11:00	06:00	07:00	06:00	11:00	07:00	-	-	-	-	-	-	11:00	06:00
Vol.	-	-	31	52	33	56	34	56	-	-	-	-	-	-	31	53
PM Peak	-	-	17:00	16:00	19:00	17:00	16:00	16:00	-	-	-	-	-	-	16:00	16:00
Vol.	-	-	44	56	43	74	48	61	-	-	-	-	-	-	40	58

Comb. Total	0	1010	1135	1124	0	0	0	1088

ADT ADT 1,090 AADT 1,090

County of Simcoe

Transportation and Engineering Department
Midhurst, Ontario
(705)-726-9300

County Road 20 - Summer 2014
Line 7 Oro-Medonte to
Line 11 Oro-Medonte

Site Code: 020 03

Line 7
Line 11

Start	11-Aug-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	4	2	0	3	2	1	8	3	*	*	*	*	*	*	4	2
01:00	0	0	1	1	1	0	1	1	*	*	*	*	*	*	1	0
02:00	0	0	1	0	3	2	1	1	*	*	*	*	*	*	1	1
03:00	3	2	1	1	0	1	2	1	*	*	*	*	*	*	2	1
04:00	2	0	2	0	3	1	2	2	*	*	*	*	*	*	2	1
05:00	12	0	10	0	12	1	11	0	*	*	*	*	*	*	11	0
06:00	21	3	21	1	26	1	20	2	*	*	*	*	*	*	22	2
07:00	31	11	45	12	33	9	39	9	*	*	*	*	*	*	37	10
08:00	**50**	16	**51**	24	**53**	**30**	**52**	22	*	*	*	*	*	*	**52**	23
09:00	47	23	38	**26**	47	25	50	**39**	*	*	*	*	*	*	46	**28**
10:00	25	27	32	15	39	28	50	26	*	*	*	*	*	*	36	24
11:00	31	**34**	29	26	21	21	31	26	*	*	*	*	*	*	28	27
12:00 PM	**57**	33	31	34	32	30	40	32	*	*	*	*	*	*	40	32
01:00	38	27	**55**	31	48	27	**44**	34	*	*	*	*	*	*	46	30
02:00	42	39	41	30	36	28	26	33	*	*	*	*	*	*	36	32
03:00	43	38	34	20	29	33	38	38	*	*	*	*	*	*	36	32
04:00	52	31	46	**49**	41	30	32	36	*	*	*	*	*	*	43	36
05:00	53	**51**	44	43	**64**	**45**	41	38	*	*	*	*	*	*	**50**	**44**
06:00	44	45	35	41	37	24	39	**54**	*	*	*	*	*	*	39	41
07:00	43	26	23	23	30	21	31	29	*	*	*	*	*	*	32	25
08:00	39	26	18	13	18	14	16	18	*	*	*	*	*	*	23	18
09:00	22	12	14	5	12	10	13	9	*	*	*	*	*	*	15	9
10:00	9	7	12	11	11	7	10	5	*	*	*	*	*	*	10	8
11:00	3	1	1	6	2	7	4	11	*	*	*	*	*	*	2	6
Lane	671	454	585	415	600	396	601	469	0	0	0	0	0	0	614	432
Day	1125		1000		996		1070		0		0		0		1046	
AM Peak	08:00	11:00	08:00	09:00	08:00	08:00	08:00	09:00	-	-	-	-	-	-	08:00	09:00
Vol.	50	34	51	26	53	30	52	39	-	-	-	-	-	-	52	28
PM Peak	12:00	17:00	13:00	16:00	17:00	17:00	13:00	18:00	-	-	-	-	-	-	17:00	17:00
Vol.	57	51	55	49	64	45	44	54	-	-	-	-	-	-	50	44

Comb. Total	1125	1000	996	1070	0	0	0	1046

ADT ADT 1,048 AADT 1,048

County of Simcoe

Transporation and Engineering Department
Midhurst, Ontario
(705) 726-9300

County Road 20 - Fall 2014
Line 7 - Oro Medonte to
Line 11 - Oro Medonte

Site Code: 020 03

Date Start: 14-Oct-14
Date End: 16-Oct-14

Start	13-Oct-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	1	3	1	0	0	0	*	*	*	*	*	*	1	1
01:00	*	*	1	5	1	4	0	2	*	*	*	*	*	*	1	4
02:00	*	*	1	0	0	1	0	0	*	*	*	*	*	*	0	0
03:00	*	*	1	2	1	2	3	3	*	*	*	*	*	*	2	2
04:00	*	*	0	6	0	14	0	10	*	*	*	*	*	*	0	10
05:00	*	*	0	23	1	17	2	19	*	*	*	*	*	*	1	20
06:00	*	*	2	34	2	40	2	40	*	*	*	*	*	*	2	38
07:00	*	*	19	**44**	13	**46**	19	**57**	*	*	*	*	*	*	17	**49**
08:00	*	*	15	40	19	46	22	57	*	*	*	*	*	*	19	48
09:00	*	*	25	31	19	28	16	34	*	*	*	*	*	*	20	31
10:00	*	*	31	29	**24**	20	**29**	34	*	*	*	*	*	*	28	28
11:00	*	*	**40**	37	24	42	27	48	*	*	*	*	*	*	**30**	42
12:00 PM	*	*	31	33	26	35	27	21	*	*	*	*	*	*	28	30
01:00	*	*	28	43	27	32	29	31	*	*	*	*	*	*	28	35
02:00	*	*	28	**54**	28	26	21	41	*	*	*	*	*	*	26	40
03:00	*	*	30	34	28	38	**47**	36	*	*	*	*	*	*	35	36
04:00	*	*	35	37	**42**	31	40	**49**	*	*	*	*	*	*	39	39
05:00	*	*	**45**	43	33	35	41	46	*	*	*	*	*	*	**40**	**41**
06:00	*	*	29	34	33	**42**	30	35	*	*	*	*	*	*	31	37
07:00	*	*	14	20	16	21	15	28	*	*	*	*	*	*	15	23
08:00	*	*	9	12	6	20	17	10	*	*	*	*	*	*	11	14
09:00	*	*	9	13	11	5	4	10	*	*	*	*	*	*	8	9
10:00	*	*	2	6	2	6	6	12	*	*	*	*	*	*	3	8
11:00	*	*	4	1	5	4	2	3	*	*	*	*	*	*	4	3
Lane	0	0	400	584	362	555	399	626	0	0	0	0	0	0	389	588
Day	0		984		917		1025		0		0		0		977	
AM Peak	-	-	11:00	07:00	10:00	07:00	10:00	07:00	-	-	-	-	-	-	11:00	07:00
Vol.	-	-	40	44	24	46	29	57	-	-	-	-	-	-	30	49
PM Peak	-	-	17:00	14:00	16:00	18:00	15:00	16:00	-	-	-	-	-	-	17:00	17:00
Vol.	-	-	45	54	42	42	47	49	-	-	-	-	-	-	40	41

Comb. Total	0	984	917	1025	0	0	0	977

ADT ADT 975 AADT 975

County of Simcoe

Transportation and Engineering Department
Midhurst, Ontario
(705)-726-9300

County Road 20 - Spring 2014
Line 11 Oro-Medonte to
Line 11 / Highway 11

Site Code: 020 04

Line 11 Oro-Medonte
Line 11 / Highway 11

Start	19-May-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	*	*	1	10	3	9	*	*	*	*	*	*	2	10
01:00	*	*	*	*	1	3	0	1	*	*	*	*	*	*	0	2
02:00	*	*	*	*	1	5	0	3	*	*	*	*	*	*	0	4
03:00	*	*	*	*	2	3	2	2	*	*	*	*	*	*	2	2
04:00	*	*	*	*	7	1	6	2	*	*	*	*	*	*	6	2
05:00	*	*	*	*	19	1	19	0	*	*	*	*	*	*	19	0
06:00	*	*	*	*	41	3	46	5	*	*	*	*	*	*	44	4
07:00	*	*	*	*	63	26	64	24	*	*	*	*	*	*	64	25
08:00	*	*	*	*	92	49	**89**	43	*	*	*	*	*	*	**90**	46
09:00	*	*	*	*	**94**	37	78	40	*	*	*	*	*	*	86	38
10:00	*	*	*	*	43	51	52	**47**	*	*	*	*	*	*	48	49
11:00	*	*	*	*	46	**54**	37	47	*	*	*	*	*	*	42	**50**
12:00 PM	*	*	*	*	52	54	50	62	*	*	*	*	*	*	51	58
01:00	*	*	*	*	56	88	51	55	*	*	*	*	*	*	54	72
02:00	*	*	*	*	46	72	48	55	*	*	*	*	*	*	47	64
03:00	*	*	*	*	40	79	46	77	*	*	*	*	*	*	43	78
04:00	*	*	*	*	54	119	**58**	115	*	*	*	*	*	*	56	117
05:00	*	*	*	*	**64**	**164**	56	**156**	*	*	*	*	*	*	**60**	**160**
06:00	*	*	*	*	54	108	49	117	*	*	*	*	*	*	52	112
07:00	*	*	*	*	50	65	39	88	*	*	*	*	*	*	44	76
08:00	*	*	*	*	28	66	27	57	*	*	*	*	*	*	28	62
09:00	*	*	*	*	18	39	13	50	*	*	*	*	*	*	16	44
10:00	*	*	*	*	11	41	22	42	*	*	*	*	*	*	16	42
11:00	*	*	*	*	1	17	3	12	*	*	*	*	*	*	2	14
Lane	0	0	0	0	884	1155	858	1109	0	0	0	0	0	0	872	1131
Day	0		0		2039		1967		0		0		0		2003	
AM Peak	-	-	-	-	09:00	11:00	08:00	10:00	-	-	-	-	-	-	08:00	11:00
Vol.	-	-	-	-	94	54	89	47	-	-	-	-	-	-	90	50
PM Peak	-	-	-	-	17:00	17:00	16:00	17:00	-	-	-	-	-	-	17:00	17:00
Vol.	-	-	-	-	64	164	58	156	-	-	-	-	-	-	60	160

Comb. Total	0	0	2039	1967	0	0	0	2003

ADT ADT 1,965 AADT 1,965

County of Simcoe

Transportation and Engineering Department
Midhurst, Ontario
(705)-726-9300

County Road 20 - Summer 2014
Line 11 Oro-Medonte to
Line 11/ Highway 11

Site Code: 020 04

Line 11
Line 11/ Highway 11

Start	11-Aug-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	14	3	4	1	4	1	10	9	*	*	*	*	*	*	8	4
01:00	4	4	6	0	2	0	4	1	*	*	*	*	*	*	4	1
02:00	2	0	2	0	4	1	1	1	*	*	*	*	*	*	2	0
03:00	2	2	2	1	1	1	4	2	*	*	*	*	*	*	2	2
04:00	1	11	3	6	2	6	1	11	*	*	*	*	*	*	2	8
05:00	2	16	1	22	0	24	2	20	*	*	*	*	*	*	1	20
06:00	4	18	2	22	5	17	2	25	*	*	*	*	*	*	3	20
07:00	11	48	18	36	13	37	16	41	*	*	*	*	*	*	14	40
08:00	42	**94**	24	**87**	**41**	**95**	26	**90**	*	*	*	*	*	*	33	**92**
09:00	39	55	38	60	34	69	35	70	*	*	*	*	*	*	36	64
10:00	**45**	42	35	59	33	48	**48**	54	*	*	*	*	*	*	40	51
11:00	43	61	**61**	50	34	54	42	45	*	*	*	*	*	*	**45**	52
12:00 PM	60	56	43	50	51	40	61	46	*	*	*	*	*	*	54	48
01:00	71	59	64	52	64	34	58	48	*	*	*	*	*	*	64	48
02:00	71	40	56	37	62	42	46	40	*	*	*	*	*	*	59	40
03:00	74	50	67	39	81	50	59	41	*	*	*	*	*	*	70	45
04:00	103	51	95	50	95	49	102	58	*	*	*	*	*	*	99	52
05:00	**130**	**68**	**129**	**73**	**144**	**57**	**123**	**60**	*	*	*	*	*	*	**132**	**64**
06:00	93	56	98	44	101	37	122	50	*	*	*	*	*	*	104	47
07:00	69	40	62	24	50	28	62	40	*	*	*	*	*	*	61	33
08:00	58	28	47	28	47	28	53	23	*	*	*	*	*	*	51	27
09:00	44	14	35	14	44	11	46	20	*	*	*	*	*	*	42	15
10:00	34	10	30	3	28	9	32	6	*	*	*	*	*	*	31	7
11:00	20	9	12	1	18	10	20	5	*	*	*	*	*	*	18	6
Lane	1036	835	934	759	958	748	975	806	0	0	0	0	0	0	975	786
Day	1871		1693		1706		1781		0		0		0		1761	
AM Peak	10:00	08:00	11:00	08:00	08:00	08:00	10:00	08:00	-	-	-	-	-	-	11:00	08:00
Vol.	45	94	61	87	41	95	48	90	-	-	-	-	-	-	45	92
PM Peak	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	-	-	-	-	-	-	17:00	17:00
Vol.	130	68	129	73	144	57	123	60	-	-	-	-	-	-	132	64

Comb. Total	1871	1693	1706	1781	0	0	0	1761

ADT ADT 1,763 AADT 1,763

County of Simcoe

Transporation and Engineering Department
Midhurst, Ontario
(705) 726-9300

County Road 20 - Fall 2014
Line 11 - Oro Medonte to
Highway 11

Site Code: 020 04

Date Start: 14-Oct-14
Date End: 16-Oct-14

Start	13-Oct-14		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	9	4	7	1	8	0	*	*	*	*	*	*	8	2
01:00	*	*	7	0	5	1	6	0	*	*	*	*	*	*	6	0
02:00	*	*	3	1	4	1	3	0	*	*	*	*	*	*	3	1
03:00	*	*	1	3	1	4	2	4	*	*	*	*	*	*	1	4
04:00	*	*	1	12	1	15	1	14	*	*	*	*	*	*	1	14
05:00	*	*	4	19	2	21	2	16	*	*	*	*	*	*	3	19
06:00	*	*	9	48	10	48	7	44	*	*	*	*	*	*	9	47
07:00	*	*	26	**98**	19	**90**	38	85	*	*	*	*	*	*	28	**91**
08:00	*	*	40	75	35	83	32	**95**	*	*	*	*	*	*	36	84
09:00	*	*	**47**	56	31	51	33	45	*	*	*	*	*	*	37	51
10:00	*	*	45	54	38	41	32	59	*	*	*	*	*	*	38	51
11:00	*	*	47	39	**45**	57	**44**	51	*	*	*	*	*	*	**45**	49
12:00 PM	*	*	63	42	67	49	49	37	*	*	*	*	*	*	60	43
01:00	*	*	60	47	58	40	57	41	*	*	*	*	*	*	58	43
02:00	*	*	74	53	71	44	74	40	*	*	*	*	*	*	73	46
03:00	*	*	95	**54**	97	51	66	46	*	*	*	*	*	*	86	50
04:00	*	*	120	52	100	54	124	54	*	*	*	*	*	*	115	**53**
05:00	*	*	**128**	44	136	39	**128**	**59**	*	*	*	*	*	*	**131**	47
06:00	*	*	89	50	**164**	49	83	38	*	*	*	*	*	*	112	46
07:00	*	*	63	30	53	**74**	84	22	*	*	*	*	*	*	67	42
08:00	*	*	41	23	39	44	47	21	*	*	*	*	*	*	42	29
09:00	*	*	45	13	40	10	37	27	*	*	*	*	*	*	41	17
10:00	*	*	20	11	18	6	22	9	*	*	*	*	*	*	20	9
11:00	*	*	12	2	13	5	13	1	*	*	*	*	*	*	13	3
Lane	0	0	1049	830	1054	878	992	808	0	0	0	0	0	0	1033	841
Day	0		1879		1932		1800		0		0		0		1874	
AM Peak	-	-	09:00	07:00	11:00	07:00	11:00	08:00	-	-	-	-	-	-	11:00	07:00
Vol.	-	-	47	98	45	90	44	95	-	-	-	-	-	-	45	91
PM Peak	-	-	17:00	15:00	18:00	19:00	17:00	17:00	-	-	-	-	-	-	17:00	16:00
Vol.	-	-	128	54	164	74	128	59	-	-	-	-	-	-	131	53

Comb. Total	0	1879	1932	1800	0	0	0	1874

ADT ADT 1,870 AADT 1,870

TRANSPORTATION AND ENGINEERING

County of Simcoe

Transportation & Engineering

Annual Average Daily Traffic Summary (A.A.D.T.)

Updated Nov 2013

Road# - Section #	Distance	Link Description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		CR 27										
001-01	6.1		5,000			4,300			4,100			3,900
		15th SR New Tecumseth										
001-02	2.0		5,300			4,900			4,700			4,400
		East Limits / Beeton										
001-03	1.9		5,000			4,900			4,500			4,400
		CR 10										
001-04	3.1		2,300			3,000			3,200			2,400
		Adj/Tos Townline										
001-04A	2.9		N/A			N/A			N/A			2,800
		CR 50										
001-05	7.2		2,000			1,800			1,900			1,900
		Simcoe Boundary										
		CR 39										
003-01	3.1		4,600			4,400			4,700			4,100
		CR 4										
		Bradford Limits										
004-01	9.8		13,400			12,700			12,500			14,800
		CR 89 / CR 3										
004-02	4.4		8,600			9,600			9,200			11,500
		Line 4 / Churchill										
004-03	5.5		8,000			10,100			9,000			10,800
		CR 21										
004-04	2.8		10,500			11,200			11,200			11,900
		Victoria St. / Stroud										
004-05	2.9		10,800			11,700			13,000			13,600
		Lockhart Dr. / Barrie Limit										
		CR 15										
005-01	4.1		3,600			3,800			4,100			4,000
		CR 13										
005-02	5.6		1,800			1,700			2,400			1,800
		County Boundary										
		CR 27 N										
006-01	5.5		4,700			4,400			4,600			
		Conc 4 / Tiny										
006-02	8.2		3,900			3,700			4,200			
		CR 25 / Perkinsfield										
006-03	1.4		4,700			4,400			4,700			
		Conc 11/ Tiny										
006-04	2.8		3,400			3,400			3,900			
		Conc 13 / Tiny										
006-05	4.1		3,000			3,100			3,200			
		CR 26										

Road# - Section #	Distance	Link Description	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		CR 13										
012-01	3.9		1,400			1,400			1,300			1,400
		County Boundary										
		Hwy 89										
013-01	5.7		2,800			2,800			2,600			2,500
		CR 5										
013-02	9.5		2,000			1,900			1,900			2,900
		CR 12										
		CR 50										
014-01	3.8		1,000			1,000			950			1,200
		Adjala-New Tech Townline										
014-02	2.9		1,700			2,000			1,700			1,700
		CR 10										
		Victoria St. / Alliston										
015-01A	1.1		8,950			8,000			8,800			9,100
		Essa Rd										
015-01	4.7		5,100			5,800			5,600			5,200
		CR 5										
015-02	3.5		4,800			4,900			5,000			4,800
		CR 21										
015-03	1.2		3,100			3,000			2,400			2,100
		Base Borden South Limit										
		CR 23										
016-01	6.2			5,100			4,500			5,100		
		Hwy 400										
		Coldwater / North Limits										
017-01	6.8		1,600			2,100			1,500			
		Quarry Road										
017-02	4.3		1,200			1,200			1,200			
		4th Conc. Silkline										
017-03	11.9		450			400			400			
		Big Chute										
		Hwy 12										
019-01	2.5		1,000			900			1,200			
		Hwy 400										
019-02	2.0		1,700			1,500			1,600			
		8th Conc / Moonstone										
019-03	10.8		1,000			950			1,000			
		Hwy 93										
019-04	8.1		1,700			1,500			1,900			
		CR 27										
		Barrie Limits										
020-01	7.4		3,500			2,800			3,100			
		Line 3 Oro-Medonte										
020-02	6.0		1,800			1,800			1,500			
		Line 7 Oro-Medonte										
020-03	6.2		1,000			1,000			1,000			
		Line 11 Oro-Medonte										
020-04	1.1		1,900			1,800			1,800			
		Line 11 / Hwy 11										

TRANSPORTATION AND ENGINEERING

County of Simcoe

Transportation & Engineering

Annual Average Daily Traffic Summary (A.A.D.T.)

Updated Nov 2011

Road# - Section #	Distance	Link Description	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
		CR 27										
001-01	6.1				5,000			4,300			4,100	
		15th SR New Tecumseth										
001-02	2.0				5,300			4,900			4,700	
		East Limits / Beeton										
001-03	1.9				5,000			4,900			4,500	
		CR 10										
001-04	6.6				2,300			3,000			3,200	
		CR 50										
001-05	7.2				2,000			1,800			1,900	
		Simcoe Boundary										
		CR 39										
003-01	3.1				4,600			4,400			4,700	
		CR 4										
		Bradford Limits										
004-01	9.8				13,400			12,700			12,500	
		CR 89 / CR 3										
004-02	4.4				8,600			9,600			9,200	
		Line 4 / Churchill										
004-03	5.5				8,000			10,100			9,000	
		CR 21										
004-04	2.8				10,500			11,200			11,200	
		Victoria St. / Stroud										
004-05	2.9				10,800			11,700			13,000	
		Lockhart Dr. / Barrie Limit										
		CR 15										
005-01	4.1				3,600			3,800			4,100	
		CR 13										
005-02	5.6				1,800			1,700			2,400	
		County Boundary										
		CR 27 N										
006-01	5.5		4,700		4,700			4,400			4,600	
		Conc 4 / Tiny										
006-02	8.2		4,200		3,900			3,700			4,200	
		CR 25 / Perkinsfield										
006-03	1.4		4,700		4,700			4,400			4,700	
		Conc 11/ Tiny										
006-04	2.8				3,400			3,400			3,900	
		Conc 13 / Tiny										
006-05	4.1		3,200		3,000			3,100			3,200	
		CR 26										

Road# - Section #	Distance	Link Description	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
		Barrie Limits										
020-01	7.4		3,050			3,500			2,800			3,100
		Line 3 Oro-Medonte										
020-02	6.0		1,600			1,800			1,800			1,500
		Line 7 Oro-Medonte										
020-03	6.2		900			1,000			1,000			1,000
		Line 11 Oro-Medonte										
020-04	1.1		1,600			1,900			1,800			1,800
		Line 11 / Hwy 11										
		CR 39										
021-01	3.0				10,600			9,800			11,100	
		CR 4										
021-02	3.1				10,600			11,400			11,800	
		CR 54 (10th SR)										
021-03	2.2				12,000			13,800			14,000	
		Hwy 400										
021-04	0.6				10,900			11,700			13,100	
		5th SR Innisfil										
021-05	3.0				6,900			9,000			9,000	
		CR 27										
021-06	6.4				4,800			5,100			5,700	
		CR 56										
021-07	4.2				4,400			5,700			6,100	
		CR10										
021-08	4.2				3,300			3,600			4,700	
		CR 15										
		Hwy 12										
022-01	9.6		4,100		4,500			4,600			4,300	
		Coulson/ 7th Line										
022-02	4.9		4,100		4,100			4,600			4,300	
		Horseshoe Valley Resort Ent.										
022-03	5.2		5,700		6,100			6,200			5,500	
		CR 93										
022-04	1.4		5,600		6,100			6,200			5,800	
		Hwy 400										
022-05	4.6		4,900		5,300			5,300			5,600	
		CR 27										
022-06	2.6		4,000		4,100			4,400			4,400	
		Wilson Drive - Anten Mills										
022-07	3.9		4,200		3,900			3,900			3,900	
		CR 29										
022-08	0.5		5,500		5,200			5,200			6,200	
		Hwy 26										

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

Municipality: Oro-Medonte
Site #: 1503300002
Intersection: 7th Line & Highway 11 overpass
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

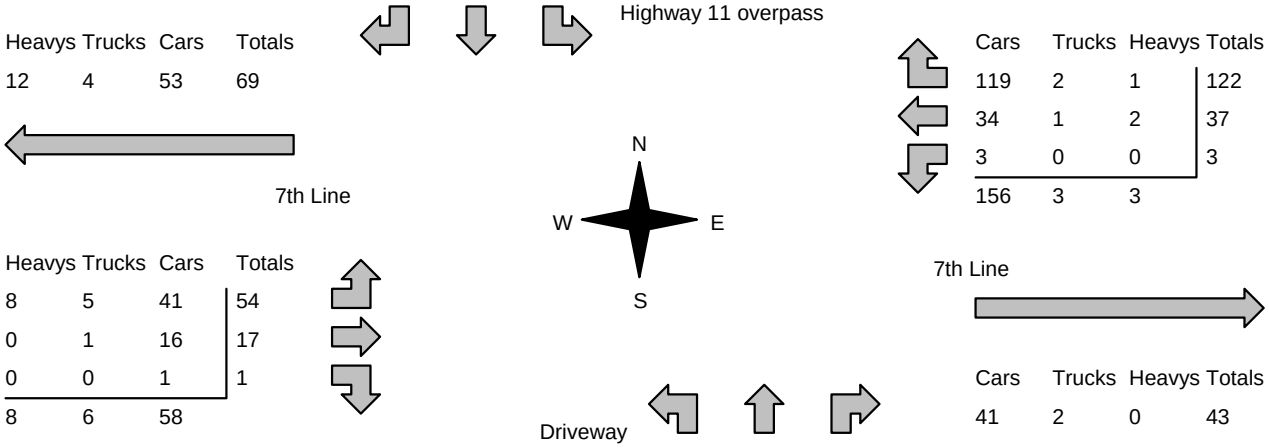
Major Road: 7th Line runs W/E

North Leg Total: 244
North Entering: 66
North Peds: 0
Peds Cross: ⋈

Heavys	10	0	0	10
Trucks	3	0	1	4
Cars	19	8	25	52
Totals	32	8	26	

Heavys	10
Trucks	7
Cars	161
Totals	178

East Leg Total: 205
East Entering: 162
East Peds: 0
Peds Cross: ⧖



Heavys	Trucks	Cars	Totals
12	4	53	69

Cars	Trucks	Heavys	Totals
119	2	1	122
34	1	2	37
3	0	0	3
156	3	3	

Heavys	Trucks	Cars	Totals
8	5	41	54
0	1	16	17
0	0	1	1
8	6	58	

Cars	Trucks	Heavys	Totals
41	2	0	43

Peds Cross: ⧖
West Peds: 0
West Entering: 72
West Leg Total: 141

Cars	12			
Trucks	0			
Heavys	0			
Totals	12			

Cars	0	1	0	1
Trucks	0	0	0	0
Heavys	0	1	0	1
Totals	0	2	0	

Peds Cross: ⋈
South Peds: 0
South Entering: 2
South Leg Total: 14

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 16:00:00
To: 17:00:00

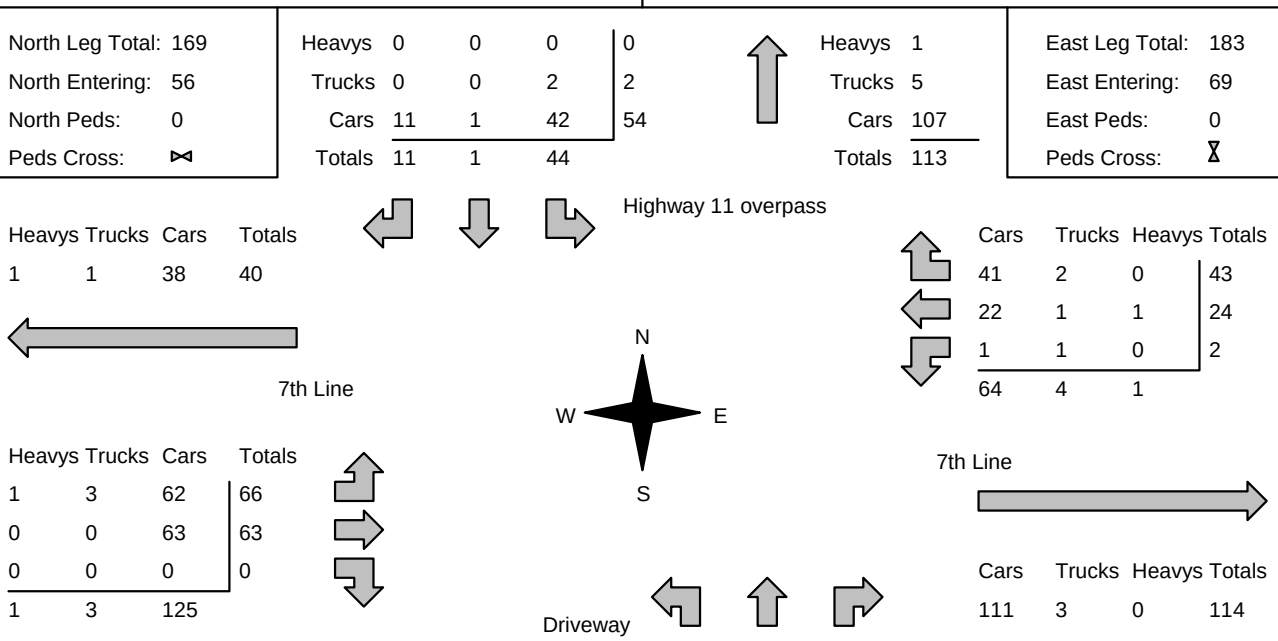
Municipality: Oro-Medonte
Site #: 1503300002
Intersection: 7th Line & Highway 11 overpass
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: 7th Line runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:30:00
To: 8:30:00

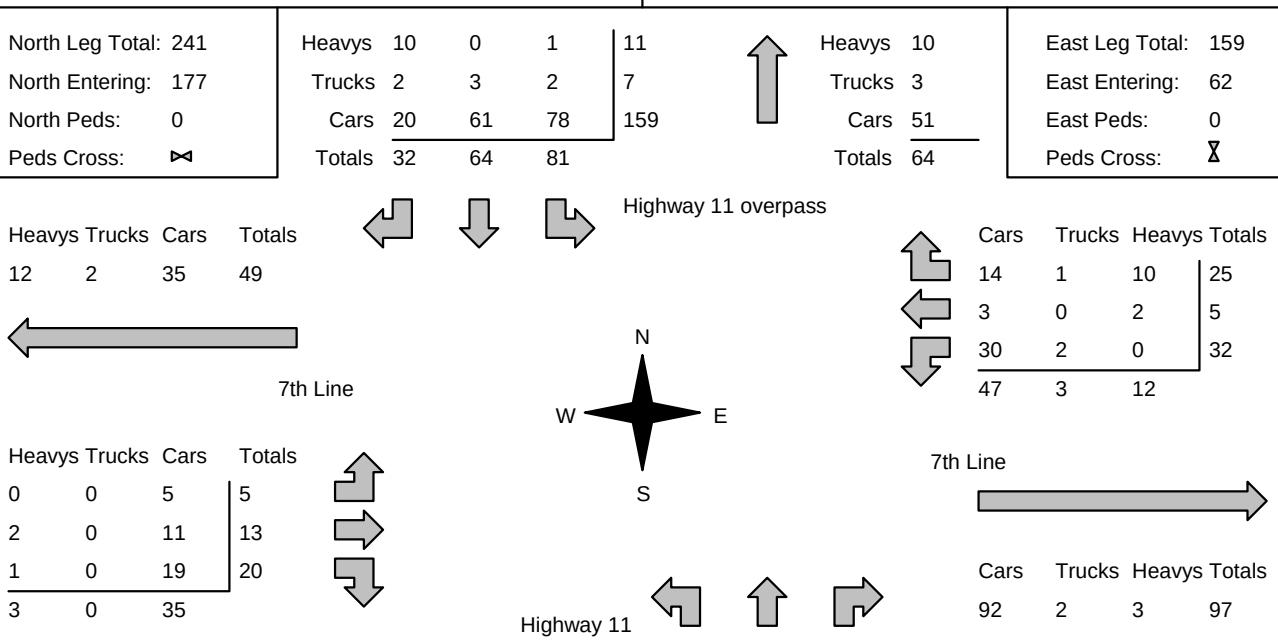
Municipality: Oro-Medonte
Site #: 1503300001
Intersection: Highway 11 & 7th Line
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Highway 11 runs N/S



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 16:00:00
To: 17:00:00

Municipality: Oro-Medonte
Site #: 1503300001
Intersection: Highway 11 & 7th Line
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Highway 11 runs N/S

North Leg Total: 172
North Entering: 114
North Peds: 0
Peds Cross: ⋈

Heavys	1	0	0	1
Trucks	2	1	2	5
Cars	35	22	51	108
Totals	38	23	53	

Heavys	0
Trucks	2
Cars	56
Totals	58

East Leg Total: 110
East Entering: 46
East Peds: 0
Peds Cross: ⧖

Highway 11 overpass

Heavys	Trucks	Cars	Totals
1	3	46	50

7th Line

Cars	Trucks	Heavys	Totals
27	0	0	27
4	1	0	5
14	0	0	14
45	1	0	

N
W E
S

Heavys	Trucks	Cars	Totals
0	1	17	18
2	1	8	11
0	2	5	7
2	4	30	

7th Line

Cars	Trucks	Heavys	Totals
59	3	2	64

Highway 11

Peds Cross: ⧖
West Peds: 0
West Entering: 36
West Leg Total: 86

Cars	41
Trucks	3
Heavys	0
Totals	44

Cars	7	12	0	19
Trucks	0	1	0	1
Heavys	0	0	0	0
Totals	7	13	0	

Peds Cross: ⋈
South Peds: 0
South Entering: 20
South Leg Total: 64

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:45:00
To: 8:45:00

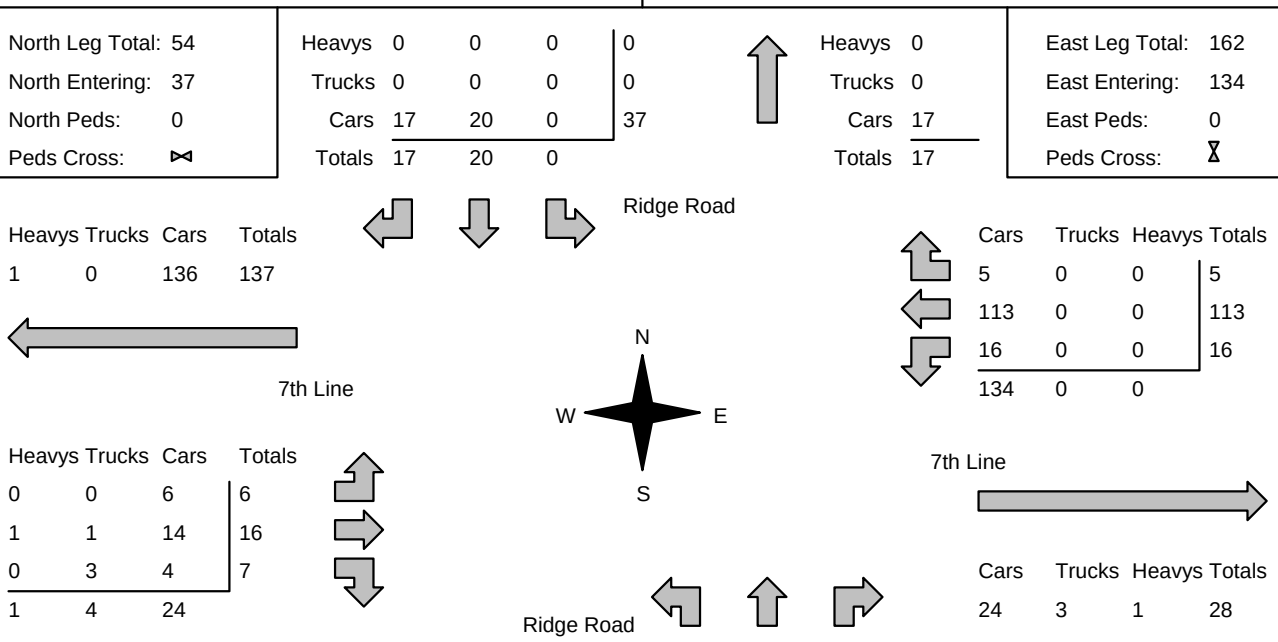
Municipality: Oro-Medonte
Site #: 1503300003
Intersection: 7th Line & Ridge Road
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: 7th Line runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 17:15:00
To: 18:15:00

Municipality: Oro-Medonte
Site #: 1503300003
Intersection: 7th Line & Ridge Road
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

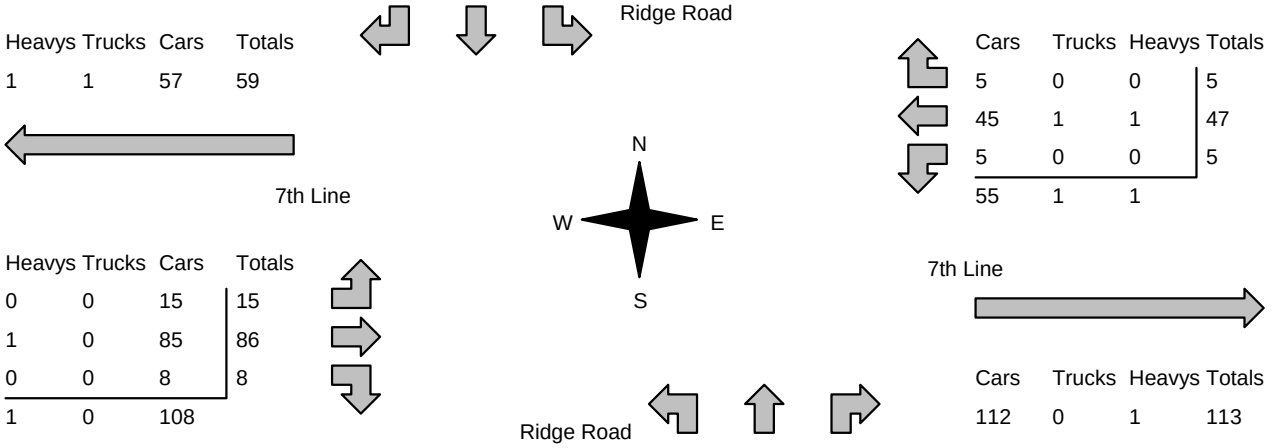
Major Road: 7th Line runs W/E

North Leg Total: 86
North Entering: 40
North Peds: 0
Peds Cross: ⋈

Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	8	23	9	40
Totals	8	23	9	

Heavys	0
Trucks	0
Cars	46
Totals	46

East Leg Total: 170
East Entering: 57
East Peds: 0
Peds Cross: ⧖



Heavys	Trucks	Cars	Totals
1	1	57	59

Cars	Trucks	Heavys	Totals
5	0	0	5
45	1	1	47
5	0	0	5
55	1	1	

Heavys	Trucks	Cars	Totals
0	0	15	15
1	0	85	86
0	0	8	8
1	0	108	

Cars	Trucks	Heavys	Totals
112	0	1	113

Peds Cross: ⧖
West Peds: 0
West Entering: 109
West Leg Total: 168

Cars	36			
Trucks	0			
Heavys	0			
Totals	36			

Cars	4	26	18	48
Trucks	0	0	0	0
Heavys	0	0	0	0
Totals	4	26	18	

Peds Cross: ⋈
South Peds: 0
South Entering: 48
South Leg Total: 84

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 7:15:00
To: 8:15:00

Municipality: Oro-Medonte
Site #: 1503300004
Intersection: Highway 11 & 8th Line
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: Highway 11 runs N/S

North Leg Total: 4
North Entering: 0
North Peds: 0
Peds Cross: ⋈

Heavys	0	0	0
Trucks	0	0	0
Cars	0	0	0
Totals	0	0	

Heavys	2
Trucks	0
Cars	2
Totals	4

East Leg Total: 10
East Entering: 4
East Peds: 0
Peds Cross: ⧗

Highway 11

	Cars	Trucks	Heavys	Totals
	2	0	2	4
	0	0	0	0
	2	0	2	

N
W E
S

8th Line

Cars	Trucks	Heavys	Totals
6	0	0	6

Highway 11

Cars	0		
Trucks	0		
Heavys	0		
Totals	0		

Cars	0	6	6
Trucks	0	0	0
Heavys	0	0	0
Totals	0	6	

Peds Cross: ⋈
South Peds: 0
South Entering: 6
South Leg Total: 6

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 16:00:00
To: 17:00:00

Municipality: Oro-Medonte
Site #: 1503300004
Intersection: Highway 11 & 8th Line
TFR File #: 1
Count date: 2-Apr-15

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

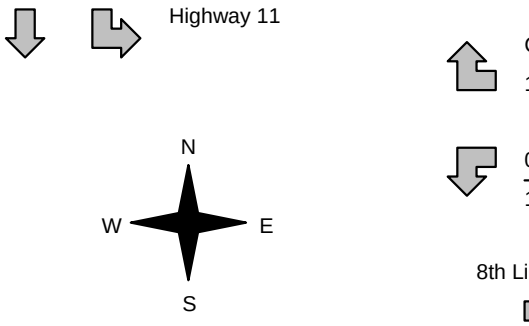
Major Road: Highway 11 runs N/S

North Leg Total: 11
North Entering: 0
North Peds: 0
Peds Cross: ⋈

Heavys	0	0	0
Trucks	0	0	0
Cars	0	0	0
Totals	0	0	

Heavys	1
Trucks	0
Cars	10
Totals	11

East Leg Total: 16
East Entering: 11
East Peds: 0
Peds Cross: ⋈



Cars	0		
Trucks	0		
Heavys	0		
Totals	0		

Cars	0	5	5
Trucks	0	0	0
Heavys	0	0	0
Totals	0	5	

Peds Cross: ⋈
South Peds: 0
South Entering: 5
South Leg Total: 5

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Oro-Medonte
Site #: 1503300006
Intersection: 9th Line & Highway 11 overpass
TFR File #: 1
Count date: 2-Apr-15

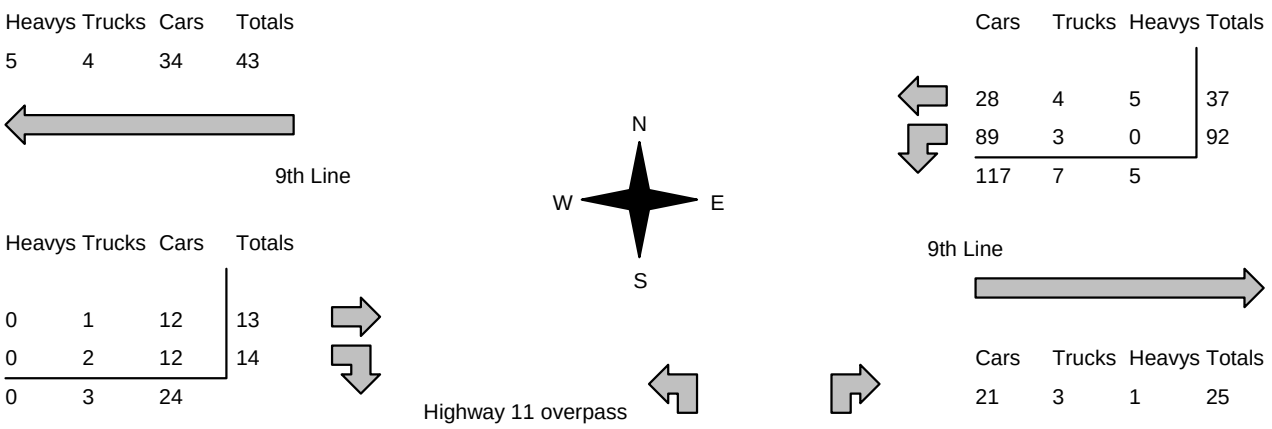
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: 9th Line runs W/E

East Leg Total: 154
East Entering: 129
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 27
West Leg Total: 70

Cars 101
Trucks 5
Heavys 0
Totals 106

Cars 6 9 15
Trucks 0 2 2
Heavys 0 1 1
Totals 6 12

Peds Cross: ⋈
South Peds: 0
South Entering: 18
South Leg Total: 124

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 17:15:00
To: 18:15:00

Municipality: Oro-Medonte
Site #: 1503300006
Intersection: 9th Line & Highway 11 overpass
TFR File #: 1
Count date: 2-Apr-15

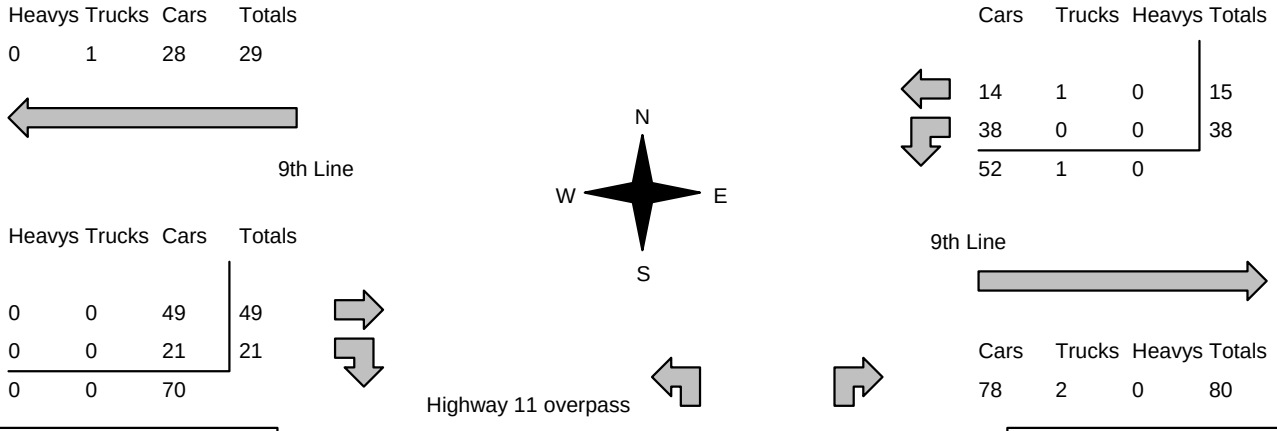
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: 9th Line runs W/E

East Leg Total: 133
East Entering: 53
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 70
West Leg Total: 99

Cars 59
Trucks 0
Heavys 0
Totals 59

Cars 14 29 43
Trucks 0 2 2
Heavys 0 0 0
Totals 14 31

Peds Cross: ⋈
South Peds: 0
South Entering: 45
South Leg Total: 104

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 10:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

Municipality: Oro-Medonte
Site #: 1503300005
Intersection: 9th Line & Highway 11 overpass
TFR File #: 1
Count date: 2-Apr-15

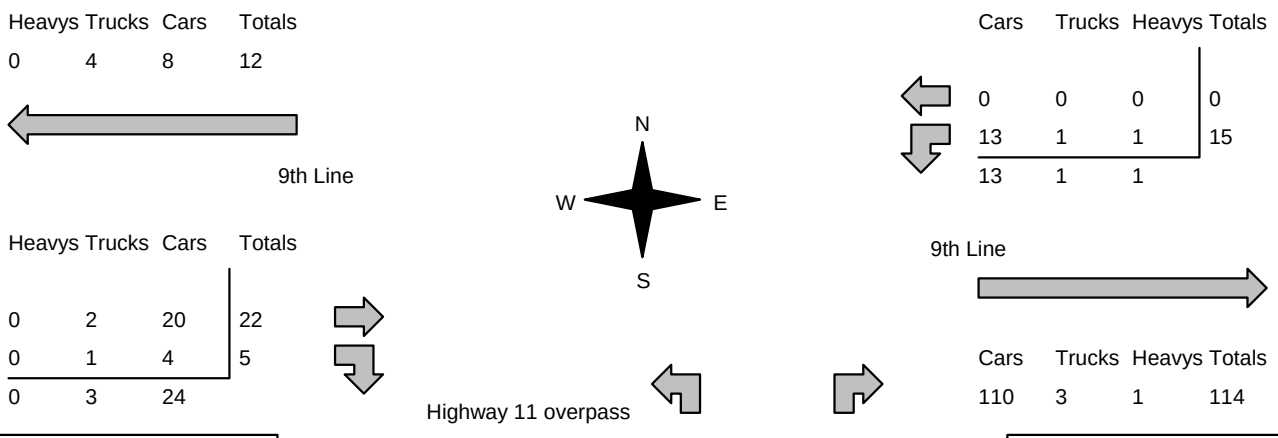
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: 9th Line runs W/E

East Leg Total: 129
East Entering: 15
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 27
West Leg Total: 39

Cars 17
Trucks 2
Heavys 1
Totals 20

Cars 8 90 98
Trucks 4 1 5
Heavys 0 1 1
Totals 12 92

Peds Cross: ⋈
South Peds: 0
South Entering: 104
South Leg Total: 124

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Accu-Traffic Inc.

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 19:00:00

One Hour Peak
From: 17:15:00
To: 18:15:00

Municipality: Oro-Medonte
Site #: 1503300005
Intersection: 9th Line & Highway 11 overpass
TFR File #: 1
Count date: 2-Apr-15

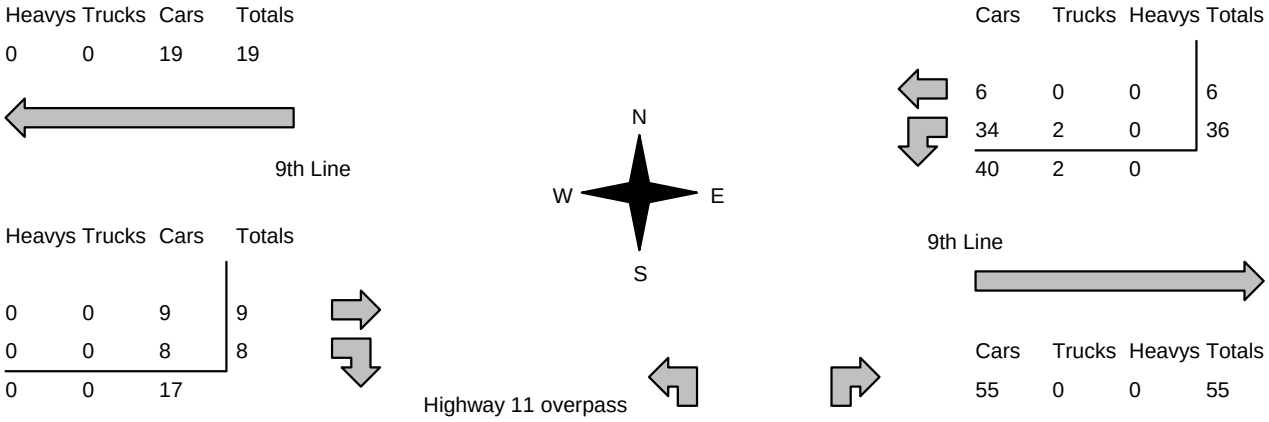
Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Non-Signalized Intersection ****

Major Road: 9th Line runs W/E

East Leg Total: 97
East Entering: 42
East Peds: 0
Peds Cross: ⧖



Peds Cross: ⧖
West Peds: 0
West Entering: 17
West Leg Total: 36

Cars 42
Trucks 2
Heavys 0
Totals 44

Cars 13 46 59
Trucks 0 0 0
Heavys 0 0 0
Totals 13 46

Peds Cross: ⋈
South Peds: 0
South Entering: 59
South Leg Total: 103

Comments

APPENDIX B:
2015 TRAFFIC OPERATIONS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	190	45	25	80	10	45
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	207	49	27	87	11	49
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	141	71			114	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	141	71			114	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	76	95			99	
cM capacity (veh/h)	845	992			1475	

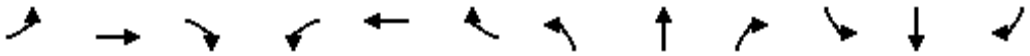
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	255	114	60
Volume Left	207	0	11
Volume Right	49	87	0
cSH	870	1700	1475
Volume to Capacity	0.29	0.07	0.01
Queue Length 95th (m)	9.3	0.0	0.2
Control Delay (s)	10.8	0.0	1.4
Lane LOS	B		A
Approach Delay (s)	10.8	0.0	1.4
Approach LOS	B		

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	45	45	50	165	75	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	49	54	179	82	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	334	144			234	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	334	144			234	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	95			94	
cM capacity (veh/h)	621	903			1334	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	98	234	109
Volume Left	49	0	82
Volume Right	49	179	0
cSH	736	1700	1334
Volume to Capacity	0.13	0.14	0.06
Queue Length 95th (m)	3.5	0.0	1.5
Control Delay (s)	10.6	0.0	6.0
Lane LOS	B		A
Approach Delay (s)	10.6	0.0	6.0
Approach LOS	B		

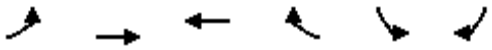
Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	5	30	25	25	150	10	10	25	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	11	5	33	27	27	163	11	11	27	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	33	65	201	49
Volume Left (vph)	11	5	27	11
Volume Right (vph)	11	27	11	11
Hadj (s)	-0.10	-0.20	0.03	-0.05
Departure Headway (s)	4.4	4.3	4.2	4.3
Degree Utilization, x	0.04	0.08	0.23	0.06
Capacity (veh/h)	762	780	831	811
Control Delay (s)	7.6	7.7	8.5	7.5
Approach Delay (s)	7.6	7.7	8.5	7.5
Approach LOS	A	A	A	A

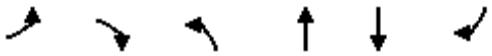
Intersection Summary			
Delay	8.1		
Level of Service	A		
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	20	50	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	22	54	11	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	65				103	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	65				103	60
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	1537				889	1006

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	33	65	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1537	1700	944
Volume to Capacity	0.01	0.04	0.02
Queue Length 95th (m)	0.2	0.0	0.5
Control Delay (s)	2.5	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	2.5	0.0	8.9
Approach LOS			A

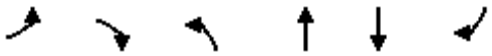
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	120	20	5	30	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	130	22	5	33	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	87	38	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87	38	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	87	99			
cM capacity (veh/h)	901	1034	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	152	27	43
Volume Left	22	22	0
Volume Right	130	0	11
cSH	1013	1565	1700
Volume to Capacity	0.15	0.01	0.03
Queue Length 95th (m)	4.0	0.3	0.0
Control Delay (s)	9.2	5.9	0.0
Lane LOS	A	A	
Approach Delay (s)	9.2	5.9	0.0
Approach LOS	A		

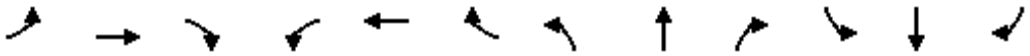
Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	20	120	50	20	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	22	130	54	22	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	348	33	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	348	33	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	98	92			
cM capacity (veh/h)	595	1041	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	185	43
Volume Left	11	130	0
Volume Right	22	0	22
cSH	833	1565	1700
Volume to Capacity	0.04	0.08	0.03
Queue Length 95th (m)	0.9	2.1	0.0
Control Delay (s)	9.5	5.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	5.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	15	5	30	20	20	150	10	10	20	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	16	5	33	22	22	163	11	11	22	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	54			27			117	106	19	188	103	43
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	54			27			117	106	19	188	103	43
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			97	79	99	98	97	99
cM capacity (veh/h)	1551			1587			826	776	1059	636	779	1027

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	38	60	196	43
Volume Left	11	5	22	11
Volume Right	16	22	11	11
cSH	1551	1587	793	782
Volume to Capacity	0.01	0.00	0.25	0.06
Queue Length 95th (m)	0.2	0.1	7.4	1.3
Control Delay (s)	2.1	0.7	11.0	9.9
Lane LOS	A	A	B	A
Approach Delay (s)	2.1	0.7	11.0	9.9
Approach LOS			B	A

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	100	50	20	55	25	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	54	22	60	27	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	133	52			82	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	133	52			82	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	95			98	
cM capacity (veh/h)	845	1016			1516	

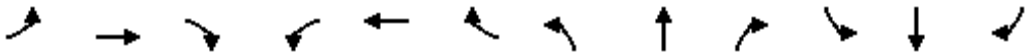
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	163	82	54
Volume Left	109	0	27
Volume Right	54	60	0
cSH	895	1700	1516
Volume to Capacity	0.18	0.05	0.02
Queue Length 95th (m)	5.0	0.0	0.4
Control Delay (s)	9.9	0.0	3.8
Lane LOS	A		A
Approach Delay (s)	9.9	0.0	3.8
Approach LOS	A		

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	60	15	40	65	90	85
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	65	16	43	71	98	92
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	367	79			114	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	367	79			114	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	89	98			93	
cM capacity (veh/h)	591	982			1475	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	82	114	190
Volume Left	65	0	98
Volume Right	16	71	0
cSH	642	1700	1475
Volume to Capacity	0.13	0.07	0.07
Queue Length 95th (m)	3.3	0.0	1.6
Control Delay (s)	11.4	0.0	4.2
Lane LOS	B		A
Approach Delay (s)	11.4	0.0	4.2
Approach LOS	B		

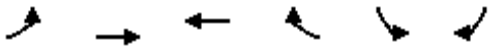
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	35	25	15	30	15	10	65	10	20	115	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	38	27	16	33	16	11	71	11	22	125	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	76	65	92	163
Volume Left (vph)	11	16	11	22
Volume Right (vph)	27	16	11	16
Hadj (s)	-0.15	-0.07	-0.01	0.00
Departure Headway (s)	4.4	4.5	4.4	4.3
Degree Utilization, x	0.09	0.08	0.11	0.20
Capacity (veh/h)	758	742	780	792
Control Delay (s)	7.9	7.9	8.0	8.4
Approach Delay (s)	7.9	7.9	8.0	8.4
Approach LOS	A	A	A	A

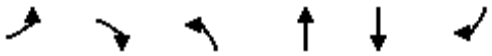
Intersection Summary				
Delay	8.1			
Level of Service	A			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	60	50	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	65	54	11	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	65				147	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	65				147	60
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	1537				840	1006

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	76	65	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1537	1700	915
Volume to Capacity	0.01	0.04	0.02
Queue Length 95th (m)	0.2	0.0	0.6
Control Delay (s)	1.1	0.0	9.0
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.0
Approach LOS			A

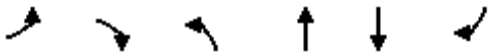
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	60	50	10	15	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	65	54	11	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	144	24	33			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	144	24	33			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	94	97			
cM capacity (veh/h)	819	1052	1579			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	87	65	33
Volume Left	22	54	0
Volume Right	65	0	16
cSH	982	1579	1700
Volume to Capacity	0.09	0.03	0.02
Queue Length 95th (m)	2.2	0.8	0.0
Control Delay (s)	9.0	6.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	6.2	0.0
Approach LOS	A		

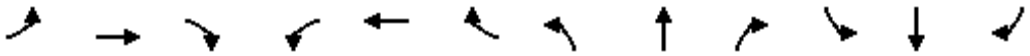
Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	45	50	20	65	30
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	49	54	22	71	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	217	87	103			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	217	87	103			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	95	96			
cM capacity (veh/h)	743	972	1489			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	71	76	103
Volume Left	22	54	0
Volume Right	49	0	33
cSH	887	1489	1700
Volume to Capacity	0.08	0.04	0.06
Queue Length 95th (m)	2.0	0.9	0.0
Control Delay (s)	9.4	5.4	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	5.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	35	20	15	30	10	10	60	10	10	95	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	38	22	16	33	11	11	65	11	11	103	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	43			60			204	147	49	185	152	38
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	43			60			204	147	49	185	152	38
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	91	99	98	86	99
cM capacity (veh/h)	1565			1544			656	732	1020	706	727	1034

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	71	60	87	125
Volume Left	11	16	11	11
Volume Right	22	11	11	11
cSH	1565	1544	747	744
Volume to Capacity	0.01	0.01	0.12	0.17
Queue Length 95th (m)	0.2	0.2	3.0	4.6
Control Delay (s)	1.2	2.1	10.5	10.8
Lane LOS	A	A	B	B
Approach Delay (s)	1.2	2.1	10.5	10.8
Approach LOS			B	B

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX C:
2025 TRAFFIC OPERATIONS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	235	55	35	100	15	55
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	255	60	38	109	16	60
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	185	92			147	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185	92			147	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	68	94			99	
cM capacity (veh/h)	795	965			1435	

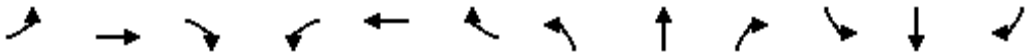
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	315	147	76
Volume Left	255	0	16
Volume Right	60	109	0
cSH	823	1700	1435
Volume to Capacity	0.38	0.09	0.01
Queue Length 95th (m)	13.8	0.0	0.3
Control Delay (s)	12.1	0.0	1.7
Lane LOS	B		A
Approach Delay (s)	12.1	0.0	1.7
Approach LOS	B		

Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	55	55	65	205	75	35
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	60	71	223	82	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	383	182			293	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	383	182			293	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	93			94	
cM capacity (veh/h)	580	860			1268	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	120	293	120
Volume Left	60	0	82
Volume Right	60	223	0
cSH	693	1700	1268
Volume to Capacity	0.17	0.17	0.06
Queue Length 95th (m)	4.7	0.0	1.6
Control Delay (s)	11.3	0.0	5.6
Lane LOS	B		A
Approach Delay (s)	11.3	0.0	5.6
Approach LOS	B		

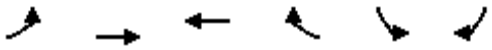
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	15	25	10	40	30	35	170	15	15	30	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	16	27	11	43	33	38	185	16	16	33	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	61	87	239	65
Volume Left (vph)	17	11	38	16
Volume Right (vph)	27	33	16	16
Hadj (s)	-0.18	-0.17	0.02	-0.07
Departure Headway (s)	4.5	4.5	4.4	4.4
Degree Utilization, x	0.08	0.11	0.29	0.08
Capacity (veh/h)	730	738	799	762
Control Delay (s)	7.9	8.1	9.1	7.8
Approach Delay (s)	7.9	8.1	9.1	7.8
Approach LOS	A	A	A	A

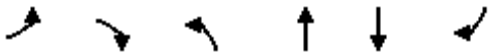
Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	26.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	25	65	15	15	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	27	71	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	87				139	79
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87				139	79
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	98
cM capacity (veh/h)	1509				845	982

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	43	87	33
Volume Left	16	0	16
Volume Right	0	16	16
cSH	1509	1700	908
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.2	0.0	0.8
Control Delay (s)	2.8	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	2.8	0.0	9.1
Approach LOS			A

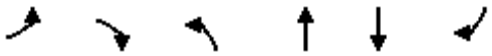
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	150	25	10	40	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	163	27	11	43	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	117	52	60			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	117	52	60			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	84	98			
cM capacity (veh/h)	864	1016	1544			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	190	38	60
Volume Left	27	27	0
Volume Right	163	0	16
cSH	991	1544	1700
Volume to Capacity	0.19	0.02	0.04
Queue Length 95th (m)	5.4	0.4	0.0
Control Delay (s)	9.5	5.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	5.3	0.0
Approach LOS	A		

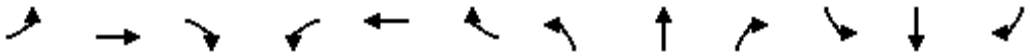
Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	25.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	25	150	65	25	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	27	163	71	27	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	438	41	54			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	438	41	54			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	97	89			
cM capacity (veh/h)	516	1030	1551			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	43	234	54
Volume Left	16	163	0
Volume Right	27	0	27
cSH	750	1551	1700
Volume to Capacity	0.06	0.11	0.03
Queue Length 95th (m)	1.4	2.7	0.0
Control Delay (s)	10.1	5.5	0.0
Lane LOS	B	A	
Approach Delay (s)	10.1	5.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	15	20	10	40	25	25	170	15	15	25	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	16	22	11	43	27	27	185	16	16	27	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	71			38			168	152	27	247	149	57
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	71			38			168	152	27	247	149	57
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			96	75	98	97	96	98
cM capacity (veh/h)	1530			1572			750	727	1048	552	729	1009

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	54	82	228	60
Volume Left	16	11	27	16
Volume Right	22	27	16	16
cSH	1530	1572	746	720
Volume to Capacity	0.01	0.01	0.31	0.08
Queue Length 95th (m)	0.2	0.2	9.9	2.1
Control Delay (s)	2.3	1.0	11.9	10.4
Lane LOS	A	A	B	B
Approach Delay (s)	2.3	1.0	11.9	10.4
Approach LOS			B	B

Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	125	65	25	70	35	35
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	136	71	27	76	38	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	179	65			103	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179	65			103	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	93			97	
cM capacity (veh/h)	790	999			1489	

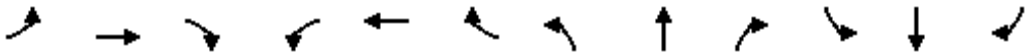
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	207	103	76
Volume Left	136	0	38
Volume Right	71	76	0
cSH	850	1700	1489
Volume to Capacity	0.24	0.06	0.03
Queue Length 95th (m)	7.2	0.0	0.6
Control Delay (s)	10.6	0.0	3.8
Lane LOS	B		A
Approach Delay (s)	10.6	0.0	3.8
Approach LOS	B		

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	75	20	50	80	110	105
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	22	54	87	120	114
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	451	98			141	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	451	98			141	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	98			92	
cM capacity (veh/h)	519	958			1442	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	103	141	234
Volume Left	82	0	120
Volume Right	22	87	0
cSH	575	1700	1442
Volume to Capacity	0.18	0.08	0.08
Queue Length 95th (m)	4.9	0.0	2.1
Control Delay (s)	12.6	0.0	4.3
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	4.3
Approach LOS	B		

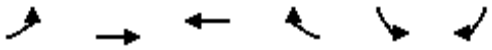
Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	15	25	20	40	20	15	75	10	25	130	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	16	27	22	43	22	16	82	11	27	141	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	60	87	109	190
Volume Left (vph)	16	22	16	27
Volume Right (vph)	27	22	11	22
Hadj (s)	-0.18	-0.07	0.00	-0.01
Departure Headway (s)	4.5	4.6	4.5	4.4
Degree Utilization, x	0.07	0.11	0.13	0.23
Capacity (veh/h)	733	725	767	786
Control Delay (s)	7.9	8.2	8.2	8.7
Approach Delay (s)	7.9	8.2	8.2	8.7
Approach LOS	A	A	A	A

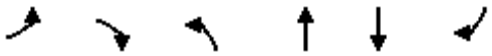
Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	75	65	15	15	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	82	71	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	87				193	79
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87				193	79
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	98
cM capacity (veh/h)	1509				787	982

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	98	87	33
Volume Left	16	0	16
Volume Right	0	16	16
cSH	1509	1700	874
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.2	0.0	0.9
Control Delay (s)	1.3	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	1.3	0.0	9.3
Approach LOS			A

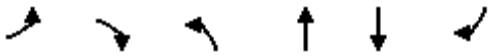
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	75	65	15	20	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	82	71	16	22	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	190	33	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	190	33	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	92	95			
cM capacity (veh/h)	763	1041	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	109	87	43
Volume Left	27	71	0
Volume Right	82	0	22
cSH	954	1565	1700
Volume to Capacity	0.11	0.05	0.03
Queue Length 95th (m)	2.9	1.1	0.0
Control Delay (s)	9.3	6.1	0.0
Lane LOS	A	A	
Approach Delay (s)	9.3	6.1	0.0
Approach LOS	A		

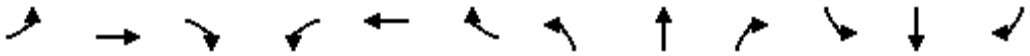
Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	55	65	25	80	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	60	71	27	87	43
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	277	109	130			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	277	109	130			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	94	95			
cM capacity (veh/h)	678	945	1455			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	87	98	130
Volume Left	27	71	0
Volume Right	60	0	43
cSH	841	1455	1700
Volume to Capacity	0.10	0.05	0.08
Queue Length 95th (m)	2.6	1.2	0.0
Control Delay (s)	9.8	5.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	5.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	45	25	20	40	15	15	70	15	15	105	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	49	27	22	43	16	16	76	16	16	114	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	60			76			264	198	62	245	204	52
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	60			76			264	198	62	245	204	52
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	89	98	97	83	98
cM capacity (veh/h)	1544			1523			579	680	1002	626	675	1016

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	82	109	147
Volume Left	16	22	16	16
Volume Right	27	16	16	16
cSH	1544	1523	696	695
Volume to Capacity	0.01	0.01	0.16	0.21
Queue Length 95th (m)	0.2	0.3	4.2	6.0
Control Delay (s)	1.4	2.1	11.1	11.6
Lane LOS	A	A	B	B
Approach Delay (s)	1.4	2.1	11.1	11.6
Approach LOS			B	B

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX D:
2015 BURL'S CREEK EVENT CALENDAR

	FARMER'S MARKET		FESTIVAL		SINGLE DAY EVENT		FLEA MARKET		COMMUNITY
	UNCONFIRMED		FESTIVAL SET UP/TEAR DOWN		EVENT SET UP/TEAR DOWN		MARKET SET UP/TEAR DOWN		SOCCER

May 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
				1	2	3
4	5	6 SOCCER	7	8	9	10
11	12	13 SOCCER	14	15	16	17
18	19	20 SOCCER	21	22	23	24
25	26	27 SOCCER	28	29	30	31

June 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4 BARRIE AUTOMOTIVE FLEA MARKET	5 BARRIE AUTOMOTIVE FLEA MARKET	6 BARRIE AUTOMOTIVE FLEA MARKET	7 BARRIE AUTOMOTIVE FLEA MARKET
8	9	10 SOCCER	11	12 FARMER'S MARKET	13	14
15	16	17 SOCCER	18	19 FARMER'S MARKET	20	21
22	23	24 SOCCER	25	26 FARMER'S MARKET	27 CONTEMORARY MUSIC CONCERT	28
29	30					

July 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
		1	2	3 FARMER'S MARKET	4	5
6	7	8 SOCCER	9	10 FARMER'S MARKET	11	12
13	14	15 SOCCER	16	17 FARMER'S MARKET	18	19
20	21	22	23	24 WAYHOME	25 WAYHOME	26 WAYHOME
27	28	29 SOCCER	30	31 FARMER'S MARKET		

August 2015

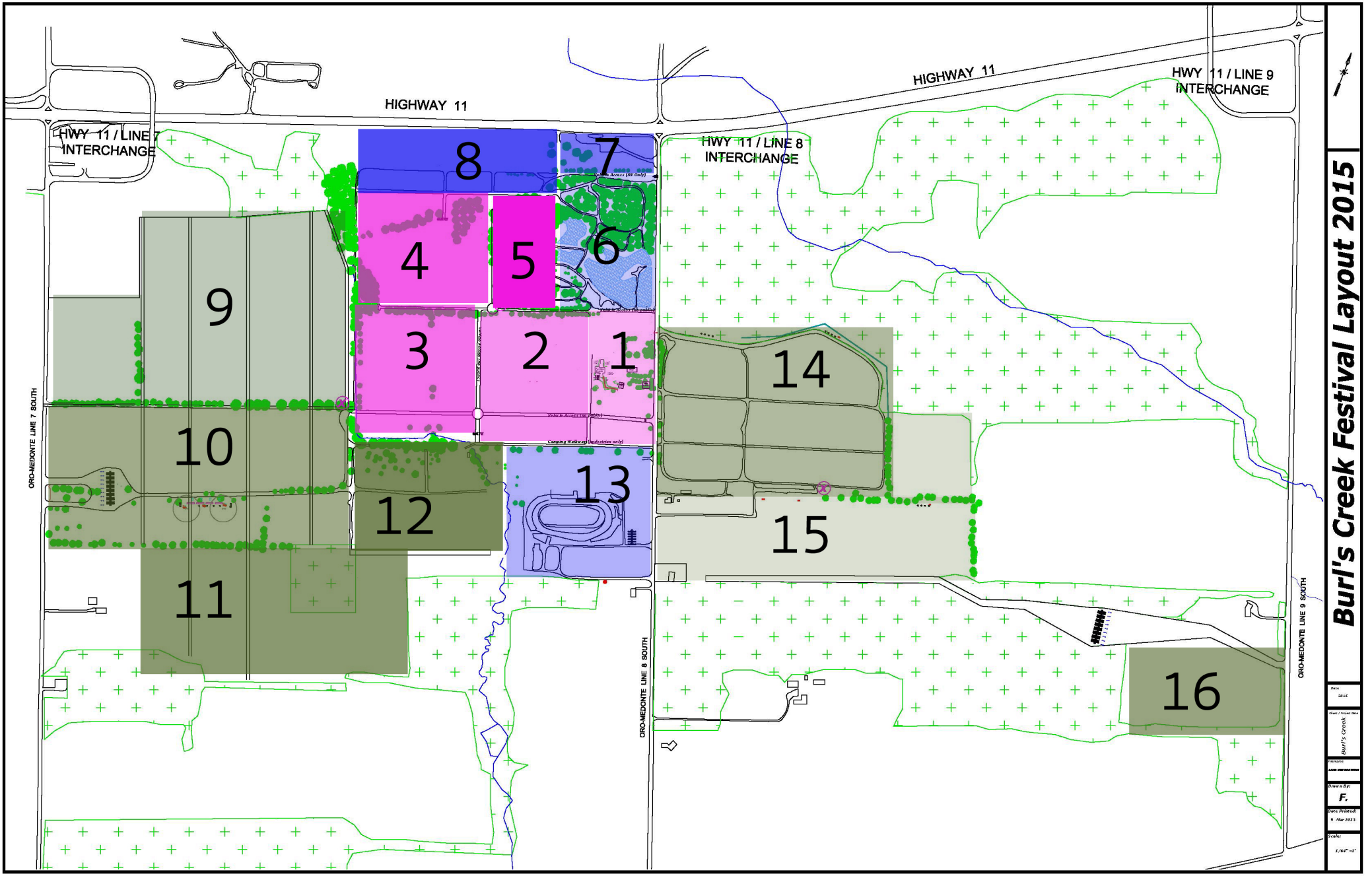
Mon	Tue	Wed	Thu	Fri	Sat	Sun
					1	2
3	4	5	6 BOOTS & HEARTS	7 BOOTS & HEARTS	8 BOOTS & HEARTS	9 BOOTS & HEARTS
10	11	12 SOCCER	13	14 FARMER'S MARKET	15 TOUGH MUDDER PARKING	16
17	18	19 SOCCER	20	21 FARMER'S MARKET	22	23
24	25	26 SOCCER	27	28 FARMER'S MARKET	29	30
31						

September 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
	1	2	3	4 FARMER'S MARKET	5	6
7	8	9	10 BARRIE AUTOMOTIVE FLEA MARKET	11 BARRIE AUTOMOTIVE FLEA MARKET	12 BARRIE AUTOMOTIVE FLEA MARKET	13 BARRIE AUTOMOTIVE FLEA MARKET
14	15	16	17	18 FARMER'S MARKET	19	20
21	22	23	24	25 FARMER'S MARKET	26	27 HURONIA FUR & FEATHERS
28	29	30				

October 2015

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2 FARMER'S MARKET	3	4
5	6	7	8	9 FARMER'S MARKET	10	11
12	13	14	15	16	17	18


HIGHWAY 11
HIGHWAY 11
HWY 11 / LINE 7 INTERCHANGE
HWY 11 / LINE 8 INTERCHANGE
HWY 11 / LINE 9 INTERCHANGE
ORO-MEDONTE LINE 7 SOUTH
ORO-MEDONTE LINE 8 SOUTH
ORO-MEDONTE LINE 9 SOUTH
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Burl's Creek Festival Layout 2015
Date
2015
Drawn By:
F.
Date Printed:
9 Mar 2015
Scale:
1/64" =1'

APPENDIX E:
BURL'S CREEK TRAFFIC VOLUMES

Huronia Fur & Feathers - Peak Hour Volumes (Sunday mid-morning)

Future Traffic Volumes

2015

		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,540	1,260	2,820	1,525					2,540	1,260	2,820	1,525					3,270
	Sat	2,520	1,585	2,475	1,640					2,520	1,585	2,475	1,640					3,270
	Sun	1,755	2,215	1,715	2,605	67	67			1,822	2,282	1,715	2,605	0.56	0.70			3,270
	Weekday	1,520	1,225	2,005	1,420					1,520	1,225	2,005	1,420					3,270
SR 20	Fri	35	55	55	45					35	55	55	45					800
Line 3-7	Sat	40	65	70	55					40	65	70	55					800
	Sun	35	55	60	50	7	7			42	62	60	50	0.05	0.08			800
	Weekday	35	50	55	40					35	50	55	40					800
SR 20	Fri	30	50	60	45					30	50	60	45					800
Line7-11	Sat	30	60	65	60					30	60	65	60					800
	Sun	30	50	60	55	7	7			37	57	60	55	0.05	0.07			800
	Weekday	25	45	50	45					25	45	50	45					800
Line 7	Fri	60	175	120	85					60	175	120	85					600
	Sat	70	215	145	105					70	215	145	105					600
	Sun	65	190	130	90	120	120			185	310	130	90	0.31	0.52			600
	Weekday	55	165	110	80					55	165	110	80					600
Line 8	Fri	10	5	10	15					10	5	10	15					600
	Sat	10	10	10	15					10	10	10	15					600
	Sun	10	5	10	15					10	5	10	15					600
	Weekday	10	5	5	15					10	5	5	15					600
Line 9	Fri	30	140	90	60					30	140	90	60					600
	Sat	40	170	110	70					40	170	110	70					600
	Sun	30	155	100	65					30	155	100	65					600
	Weekday	30	135	85	55					30	135	85	55					600

2020

		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,685	1,335	2,980	1,610					2,685	1,335	2,980	1,610					3,270
	Sat	2,660	1,675	2,615	1,730					2,660	1,675	2,615	1,730					3,270
	Sun	1,855	2,340	1,815	2,745	67	67			1,922	2,407	1,815	2,745	0.59	0.74			3,270
	Weekday	1,695	1,295	2,240	1,580					1,695	1,295	2,240	1,580					3,270
SR 20	Fri	50	70	70	60					50	70	70	60					800
Line 3-7	Sat	55	80	85	70					55	80	85	70					800
	Sun	50	70	75	65	7	7			57	77	75	65	0.07	0.10			800
	Weekday	50	65	70	55					50	65	70	55					800
SR 20	Fri	45	65	75	60					45	65	75	60					800
Line7-11	Sat	45	75	80	75					45	75	80	75					800
	Sun	45	65	75	70	7	7			52	72	75	70	0.06	0.09			800
	Weekday	40	60	65	60					40	60	65	60					800
Line 7	Fri	70	195	140	100					70	195	140	100					600
	Sat	80	245	165	120					80	245	165	120					600
	Sun	75	215	150	105	120	120			195	335	150	105	0.33	0.56			600
	Weekday	65	185	125	95					65	185	125	95					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20					15	15	15	20					600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	160	105	70					40	160	105	70					600
	Sat	50	195	125	85					50	195	125	85					600
	Sun	40	175	115	75					40	175	115	75					600
	Weekday	40	150	100	65					40	150	100	65					600

2025

		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,820	1,410	3,145	1,700					2,820	1,410	3,145	1,700					3,270
	Sat	2,805	1,770	2,760	1,825					2,805	1,770	2,760	1,825					3,270
	Sun	1,955	2,465	1,920	2,890	67	67			2,022	2,532	1,920	2,890	0.62	0.77			3,270
	Weekday	1,695	1,370	2,240	1,580					1,695	1,370	2,240	1,580					3,270
SR 20	Fri	50	75	75	65					50	75	75	65					800
Line 3-7	Sat	55	90	95	75					55	90	95	75					800
	Sun	50	75	85	70	7	7			57	82	85	70	0.07	0.10			800
	Weekday	50	65	75	60					50	65	75	60					800
SR 20	Fri	45	70	80	65					45	70	80	65					800
Line7-11	Sat	45	80	85	80					45	80	85	80					800
	Sun	45	70	80	75	7	7			52	77	80	75	0.06	0.10			800
	Weekday	40	60	70	65					40	60	70	65					800
Line 7	Fri	75	215	155	110					75	215	155	110					600
	Sat	90	270	180	130					90	270	180	130					600
	Sun	85	235	165	115	120	120			205	355	165	115	0.34	0.59			600
	Weekday	70	205	135	105					70	205	135	105					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20					15	15	15	20					600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	175	115	75					40	175	115	75					600
	Sat	50	215	135	90					50	215	135	90					600
	Sun	40	190	125	80					40	190	125	80					600
	Weekday	40	170	110	70					40	170	110	70					600

Farmers Market - Peak Hour Volumes (Friday evening)

Future Traffic Volumes

2015		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,540	1,260	2,820	1,525			75	50	2,540	1,260	2,895	1,575			0.89	0.48	3,270
	Sat	2,520	1,585	2,475	1,640					2,520	1,585	2,475	1,640					3,270
	Sun	1,755	2,215	1,715	2,605					1,755	2,215	1,715	2,605					3,270
	Weekday	1,520	1,225	2,005	1,420					1,520	1,225	2,005	1,420					3,270
SR 20	Fri	35	55	55	45			4	4	35	55	59	49			0.07	0.06	800
Line 3-7	Sat	40	65	70	55					40	65	70	55					800
	Sun	35	55	60	50					35	55	60	50					800
	Weekday	35	50	55	40					35	50	55	40					800
SR 20	Fri	30	50	60	45			4	4	30	50	64	49			0.08	0.06	800
Line7-11	Sat	30	60	65	60					30	60	65	60					800
	Sun	30	50	60	55					30	50	60	55					800
	Weekday	25	45	50	45					25	45	50	45					800
Line 7	Fri	60	175	120	85					60	175	120	85					600
	Sat	70	215	145	105					70	215	145	105					600
	Sun	65	190	130	90					65	190	130	90					600
	Weekday	55	165	110	80					55	165	110	80					600
Line 8	Fri	10	5	10	15			75	75	10	5	85	90			0.14	0.15	600
	Sat	10	10	10	15					10	10	10	15					600
	Sun	10	5	10	15					10	5	10	15					600
	Weekday	10	5	5	15					10	5	5	15					600
Line 9	Fri	30	140	90	60			50		30	140	140	60			0.23		600
	Sat	40	170	110	70					40	170	110	70					600
	Sun	30	155	100	65					30	155	100	65					600
	Weekday	30	135	85	55					30	135	85	55					600

2020		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,685	1,335	2,980	1,610			75	50	2,685	1,335	3,055	1,660			0.93	0.51	3,270
	Sat	2,660	1,675	2,615	1,730					2,660	1,675	2,615	1,730					3,270
	Sun	1,855	2,340	1,815	2,745					1,855	2,340	1,815	2,745					3,270
	Weekday	1,695	1,295	2,240	1,580					1,695	1,295	2,240	1,580					3,270
SR 20	Fri	50	70	70	60			4	4	50	70	74	64			0.09	0.08	800
Line 3-7	Sat	55	80	85	70					55	80	85	70					800
	Sun	50	70	75	65					50	70	75	65					800
	Weekday	50	65	70	55					50	65	70	55					800
SR 20	Fri	45	65	75	60			4	4	45	65	79	64			0.10	0.08	800
Line7-11	Sat	45	75	80	75					45	75	80	75					800
	Sun	45	65	75	70					45	65	75	70					800
	Weekday	40	60	65	60					40	60	65	60					800
Line 7	Fri	70	195	140	100					70	195	140	100					600
	Sat	80	245	165	120					80	245	165	120					600
	Sun	75	215	150	105					75	215	150	105					600
	Weekday	65	185	125	95					65	185	125	95					600
Line 8	Fri	15	10	15	20			75	75	15	10	90	95			0.15	0.16	600
	Sat	15	15	15	20					15	15	15	20					600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	160	105	70			50		40	160	155	70			0.26		600
	Sat	50	195	125	85					50	195	125	85					600
	Sun	40	175	115	75					40	175	115	75					600
	Weekday	40	150	100	65					40	150	100	65					600

2025		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,820	1,410	3,145	1,700			75	50	2,820	1,410	3,220	1,750			0.98	0.54	3,270
	Sat	2,805	1,770	2,760	1,825					2,805	1,770	2,760	1,825					3,270
	Sun	1,955	2,465	1,920	2,890					1,955	2,465	1,920	2,890					3,270
	Weekday	1,695	1,370	2,240	1,580					1,695	1,370	2,240	1,580					3,270
SR 20	Fri	50	75	75	65			4	4	50	75	79	69			0.10	0.09	800
Line 3-7	Sat	55	90	95	75					55	90	95	75					800
	Sun	50	75	85	70					50	75	85	70					800
	Weekday	50	65	75	60					50	65	75	60					800
SR 20	Fri	45	70	80	65			4	4	45	70	84	69			0.11	0.09	800
Line7-11	Sat	45	80	85	80					45	80	85	80					800
	Sun	45	70	80	75					45	70	80	75					800
	Weekday	40	60	70	65					40	60	70	65					800
Line 7	Fri	75	215	155	110					75	215	155	110					600
	Sat	90	270	180	130					90	270	180	130					600
	Sun	85	235	165	115					85	235	165	115					600
	Weekday	70	205	135	105					70	205	135	105					600
Line 8	Fri	15	10	15	20			75	75	15	10	90	95			0.15	0.16	600
	Sat	15	15	15	20					15	15	15	20					600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	175	115	75			50		40	175	165	75			0.28		600
	Sat	50	215	135	90					50	215	135	90					600
	Sun	40	190	125	80					40	190	125	80					600
	Weekday	40	170	110	70					40	170	110	70					600

Minor Soccer - Peak Hour Volumes (Wednesday evening)

Future Traffic Volumes

2015		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,540	1,260	2,820	1,525					2,540	1,260	2,820	1,525					3,270
	Sat	2,520	1,585	2,475	1,640					2,520	1,585	2,475	1,640					3,270
	Sun	1,755	2,215	1,715	2,605					1,755	2,215	1,715	2,605					3,270
	Weekday	1,520	1,225	2,005	1,420			150	150	1,520	1,225	2,155	1,570			0.66	0.48	3,270
SR 20	Fri	35	55	55	45					35	55	55	45					800
Line 3-7	Sat	40	65	70	55					40	65	70	55					800
	Sun	35	55	60	50					35	55	60	50					800
	Weekday	35	50	55	40			25	25	35	50	80	65			0.10	0.08	800
SR 20	Fri	30	50	60	45					30	50	60	45					800
Line7-11	Sat	30	60	65	60					30	60	65	60					800
	Sun	30	50	60	55					30	50	60	55					800
	Weekday	25	45	50	45			(25)	25	25	45	75	70			0.09	0.09	800
Line 7	Fri	60	175	120	85					60	175	120	85					600
	Sat	70	215	145	105					70	215	145	105					600
	Sun	65	190	130	90					65	190	130	90					600
	Weekday	55	165	110	80			450	450	55	165	560	530			0.93	0.88	600
Line 8	Fri	10	5	10	15					10	5	10	15					600
	Sat	10	10	10	15					10	10	10	15					600
	Sun	10	5	10	15					10	5	10	15					600
	Weekday	10	5	5	15					10	5	5	15					600
Line 9	Fri	30	140	90	60					30	140	90	60					600
	Sat	40	170	110	70					40	170	110	70					600
	Sun	30	155	100	65					30	155	100	65					600
	Weekday	30	135	85	55					30	135	85	55					600

2020		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,685	1,335	2,980	1,610					2,685	1,335	2,980	1,610					3,270
	Sat	2,660	1,675	2,615	1,730					2,660	1,675	2,615	1,730					3,270
	Sun	1,855	2,340	1,815	2,745					1,855	2,340	1,815	2,745					3,270
	Weekday	1,695	1,295	2,240	1,580			150	150	1,695	1,295	2,390	1,730			0.73	0.53	3,270
SR 20	Fri	50	70	70	60					50	70	70	60					800
Line 3-7	Sat	55	80	85	70					55	80	85	70					800
	Sun	50	70	75	65					50	70	75	65					800
	Weekday	50	65	70	55			25	25	50	65	95	80			0.12	0.10	800
SR 20	Fri	45	65	75	60					45	65	75	60					800
Line7-11	Sat	45	75	80	75					45	75	80	75					800
	Sun	45	65	75	70					45	65	75	70					800
	Weekday	40	60	65	60			25	25	40	60	90	85			0.11	0.11	800
Line 7	Fri	70	195	140	100					70	195	140	100					600
	Sat	80	245	165	120					80	245	165	120					600
	Sun	75	215	150	105					75	215	150	105					600
	Weekday	65	185	125	95			450	450	65	185	575	545			0.96	0.91	600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20					15	15	15	20					600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	160	105	70					40	160	105	70					600
	Sat	50	195	125	85					50	195	125	85					600
	Sun	40	175	115	75					40	175	115	75					600
	Weekday	40	150	100	65					40	150	100	65					600

2025		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,820	1,410	3,145	1,700					2,820	1,410	3,145	1,700					3,270
	Sat	2,805	1,770	2,760	1,825					2,805	1,770	2,760	1,825					3,270
	Sun	1,955	2,465	1,920	2,890					1,955	2,465	1,920	2,890					3,270
	Weekday	1,695	1,370	2,240	1,580			150	150	1,695	1,370	2,390	1,730			0.73	0.53	3,270
SR 20	Fri	50	75	75	65					50	75	75	65					800
Line 3-7	Sat	55	90	95	75					55	90	95	75					800
	Sun	50	75	85	70					50	75	85	70					800
	Weekday	50	65	75	60			25	25	50	65	100	85			0.13	0.11	800
SR 20	Fri	45	70	80	65					45	70	80	65					800
Line7-11	Sat	45	80	85	80					45	80	85	80					800
	Sun	45	70	80	75					45	70	80	75					800
	Weekday	40	60	70	65			25	25	40	60	95	90			0.12	0.11	800
Line 7	Fri	75	215	155	110					75	215	155	110					600
	Sat	90	270	180	130					90	270	180	130					600
	Sun	85	235	165	115					85	235	165	115					600
	Weekday	70	205	135	105			450	450	70	205	585	555			0.98	0.93	600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20					15	15	15	20					600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	175	115	75					40	175	115	75					600
	Sat	50	215	135	90					50	215	135	90					600
	Sun	40	190	125	80					40	190	125	80					600
	Weekday	40	170	110	70					40	170	110	70					600

Note: for site traffic, consider the peak directional volumes from both peak hours (ie. consider the maximum volumes)

Tough Mudder - Peak Hour Volumes (Saturday)

Future Traffic Volumes

2015		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,540	1,260	2,820	1,525					2,540	1,260	2,820	1,525					3,270
	Sat	2,520	1,585	2,475	1,640	500	275	250	400	3,020	1,860	2,725	2,040	0.92	0.57	0.83	0.62	3,270
	Sun	1,755	2,215	1,715	2,605					1,755	2,215	1,715	2,605					3,270
	Weekday	1,520	1,225	2,005	1,420					1,520	1,225	2,005	1,420					3,270
SR 20	Fri	35	55	55	45					35	55	55	45					800
Line 3-7	Sat	40	65	70	55					40	65	70	55					800
	Sun	35	55	60	50					35	55	60	50					800
	Weekday	35	50	55	40					35	50	55	40					800
SR 20	Fri	30	50	60	45					30	50	60	45					800
Line7-11	Sat	30	60	65	60					30	60	65	60					800
	Sun	30	50	60	55					30	50	60	55					800
	Weekday	25	45	50	45					25	45	50	45					800
Line 7	Fri	60	175	120	85					60	175	120	85					600
	Sat	70	215	145	105					70	215	145	105					600
	Sun	65	190	130	90					65	190	130	90					600
	Weekday	55	165	110	80					55	165	110	80					600
Line 8	Fri	10	5	10	15					10	5	10	15					600
	Sat	10	10	10	15	500	250	250	500	510	260	260	515	0.85	0.43	0.43	0.86	600
	Sun	10	5	10	15					10	5	10	15					600
	Weekday	10	5	5	15					10	5	5	15					600
Line 9	Fri	30	140	90	60					30	140	90	60					600
	Sat	40	170	110	70	200		200		240	170	310	70	0.40		0.52		600
	Sun	30	155	100	65					30	155	100	65					600
	Weekday	30	135	85	55					30	135	85	55					600

2020		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,685	1,335	2,980	1,610					2,685	1,335	2,980	1,610					3,270
	Sat	2,660	1,675	2,615	1,730	500	275	250	400	3,160	1,950	2,865	2,130	0.97	0.60	0.88	0.65	3,270
	Sun	1,855	2,340	1,815	2,745					1,855	2,340	1,815	2,745					3,270
	Weekday	1,695	1,295	2,240	1,580					1,695	1,295	2,240	1,580					3,270
SR 20	Fri	50	70	70	60					50	70	70	60					800
Line 3-7	Sat	55	80	85	70					55	80	85	70					800
	Sun	50	70	75	65					50	70	75	65					800
	Weekday	50	65	70	55					50	65	70	55					800
SR 20	Fri	45	65	75	60					45	65	75	60					800
Line7-11	Sat	45	75	80	75					45	75	80	75					800
	Sun	45	65	75	70					45	65	75	70					800
	Weekday	40	60	65	60					40	60	65	60					800
Line 7	Fri	70	195	140	100					70	195	140	100					600
	Sat	80	245	165	120					80	245	165	120					600
	Sun	75	215	150	105					75	215	150	105					600
	Weekday	65	185	125	95					65	185	125	95					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20	500	250	250	500	515	265	265	520	0.86	0.44	0.44	0.87	600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	160	105	70					40	160	105	70					600
	Sat	50	195	125	85	200		200		250	195	325	85	0.42		0.54		600
	Sun	40	175	115	75					40	175	115	75					600
	Weekday	40	150	100	65					40	150	100	65					600

2025		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,820	1,410	3,145	1,700					2,820	1,410	3,145	1,700					3,270
	Sat	2,805	1,770	2,760	1,825	500	275	250	400	3,305	2,045	3,010	2,225	1.01	0.63	0.92	0.68	3,270
	Sun	1,955	2,465	1,920	2,890					1,955	2,465	1,920	2,890					3,270
	Weekday	1,695	1,370	2,240	1,580					1,695	1,370	2,240	1,580					3,270
SR 20	Fri	50	75	75	65					50	75	75	65					800
Line 3-7	Sat	55	90	95	75					55	90	95	75					800
	Sun	50	75	85	70					50	75	85	70					800
	Weekday	50	65	75	60					50	65	75	60					800
SR 20	Fri	45	70	80	65					45	70	80	65					800
Line7-11	Sat	45	80	85	80					45	80	85	80					800
	Sun	45	70	80	75					45	70	80	75					800
	Weekday	40	60	70	65					40	60	70	65					800
Line 7	Fri	75	215	155	110					75	215	155	110					600
	Sat	90	270	180	130					90	270	180	130					600
	Sun	85	235	165	115					85	235	165	115					600
	Weekday	70	205	135	105					70	205	135	105					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20	500	250	250	500	515	265	265	520	0.86	0.44	0.44	0.87	600
	Sun	15	10	15	20					15	10	15	20					600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	175	115	75					40	175	115	75					600
	Sat	50	215	135	90	200		200		250	215	335	90	0.42		0.56		600
	Sun	40	190	125	80					40	190	125	80					600
	Weekday	40	170	110	70					40	170	110	70					600

Contemporary Music & Camping Festival - Peak Hour Volumes (Sat/Sun mid-day)

Future Traffic Volumes

2015		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,540	1,260	2,820	1,525					2,540	1,260	2,820	1,525					3,270
	Sat	2,520	1,585	2,475	1,640			200	120	2,520	1,585	2,675	1,760			0.82	0.54	3,270
	Sun	1,755	2,215	1,715	2,605			200	120	1,755	2,215	1,915	2,725			0.59	0.83	3,270
	Weekday	1,520	1,225	2,005	1,420					1,520	1,225	2,005	1,420					3,270
SR 20	Fri	35	55	55	45					35	55	55	45					800
Line 3-7	Sat	40	65	70	55			20		40	65	90	55			0.11		800
	Sun	35	55	60	50			20		35	55	80	50			0.10		800
	Weekday	35	50	55	40					35	50	55	40					800
SR 20	Fri	30	50	60	45					30	50	60	45					800
Line7-11	Sat	30	60	65	60			20	20	30	60	85	80			0.11	0.10	800
	Sun	30	50	60	55			20	20	30	50	80	75			0.10	0.09	800
	Weekday	25	45	50	45					25	45	50	45					800
Line 7	Fri	60	175	120	85					60	175	120	85					600
	Sat	70	215	145	105					70	215	145	105					600
	Sun	65	190	130	90					65	190	130	90					600
	Weekday	55	165	110	80					55	165	110	80					600
Line 8	Fri	10	5	10	15					10	5	10	15					600
	Sat	10	10	10	15			360	40	10	10	370	55			0.62	0.09	600
	Sun	10	5	10	15			360	40	10	5	370	55			0.62	0.09	600
	Weekday	10	5	5	15					10	5	5	15					600
Line 9	Fri	30	140	90	60					30	140	90	60					600
	Sat	40	170	110	70					40	170	110	70					600
	Sun	30	155	100	65					30	155	100	65					600
	Weekday	30	135	85	55					30	135	85	55					600

2020		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,685	1,335	2,980	1,610					2,685	1,335	2,980	1,610					3,270
	Sat	2,660	1,675	2,615	1,730			200	120	2,660	1,675	2,815	1,850			0.86	0.57	3,270
	Sun	1,855	2,340	1,815	2,745			200	120	1,855	2,340	2,015	2,865			0.62	0.88	3,270
	Weekday	1,695	1,295	2,240	1,580					1,695	1,295	2,240	1,580					3,270
SR 20	Fri	50	70	70	60					50	70	70	60					800
Line 3-7	Sat	55	80	85	70			20		55	80	105	70			0.13		800
	Sun	50	70	75	65			20		50	70	95	65			0.12		800
	Weekday	50	65	70	55					50	65	70	55					800
SR 20	Fri	45	65	75	60					45	65	75	60					800
Line7-11	Sat	45	75	80	75			20	20	45	75	100	95			0.13	0.12	800
	Sun	45	65	75	70			20	20	45	65	95	90			0.12	0.11	800
	Weekday	40	60	65	60					40	60	65	60					800
Line 7	Fri	70	195	140	100					70	195	140	100					600
	Sat	80	245	165	120					80	245	165	120					600
	Sun	75	215	150	105					75	215	150	105					600
	Weekday	65	185	125	95					65	185	125	95					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20			360	40	15	15	375	60			0.63	0.10	600
	Sun	15	10	15	20			360	40	15	10	375	60			0.63	0.10	600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	160	105	70					40	160	105	70					600
	Sat	50	195	125	85					50	195	125	85					600
	Sun	40	175	115	75					40	175	115	75					600
	Weekday	40	150	100	65					40	150	100	65					600

2025		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,820	1,410	3,145	1,700					2,820	1,410	3,145	1,700					3,270
	Sat	2,805	1,770	2,760	1,825			200	120	2,805	1,770	2,960	1,945			0.91	0.59	3,270
	Sun	1,955	2,465	1,920	2,890			200	120	1,955	2,465	2,120	3,010			0.65	0.92	3,270
	Weekday	1,695	1,370	2,240	1,580					1,695	1,370	2,240	1,580					3,270
SR 20	Fri	50	75	75	65					50	75	75	65					800
Line 3-7	Sat	55	90	95	75			20		55	90	115	75			0.14		800
	Sun	50	75	85	70			20		50	75	105	70			0.13		800
	Weekday	50	65	75	60					50	65	75	60					800
SR 20	Fri	45	70	80	65					45	70	80	65					800
Line7-11	Sat	45	80	85	80			20	20	45	80	105	100			0.13	0.13	800
	Sun	45	70	80	75			20	20	45	70	100	95			0.13	0.12	800
	Weekday	40	60	70	65					40	60	70	65					800
Line 7	Fri	75	215	155	110					75	215	155	110					600
	Sat	90	270	180	130					90	270	180	130					600
	Sun	85	235	165	115					85	235	165	115					600
	Weekday	70	205	135	105					70	205	135	105					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20			360	40	15	15	375	60			0.63	0.10	600
	Sun	15	10	15	20			360	40	15	10	375	60			0.63	0.10	600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	175	115	75					40	175	115	75					600
	Sat	50	215	135	90					50	215	135	90					600
	Sun	40	190	125	80					40	190	125	80					600
	Weekday	40	170	110	70					40	170	110	70					600

Barrie Automotive Flea Market - Peak Hour Volumes (Sat/Sun mid-day)

Future Traffic Volumes

2015

		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,540	1,260	2,820	1,525					2,540	1,260	2,820	1,525					3,270
	Sat	2,520	1,585	2,475	1,640	300	300	300	300	2,820	1,885	2,775	1,940	0.86	0.58	0.85	0.59	3,270
	Sun	1,755	2,215	1,715	2,605	300	300	300	300	2,055	2,515	2,015	2,905	0.63	0.77	0.62	0.89	3,270
	Weekday	1,520	1,225	2,005	1,420					1,520	1,225	2,005	1,420					3,270
SR 20	Fri	35	55	55	45					35	55	55	45					800
Line 3-7	Sat	40	65	70	55	30	30	30	30	70	95	100	85	0.09	0.12	0.13	0.11	800
	Sun	35	55	60	50	30	30	30	30	65	85	90	80	0.08	0.11	0.11	0.10	800
	Weekday	35	50	55	40					35	50	55	40					800
SR 20	Fri	30	50	60	45					30	50	60	45					800
Line7-11	Sat	30	60	65	60	30	30	30	30	60	90	95	90	0.08	0.11	0.12	0.11	800
	Sun	30	50	60	55	30	30	30	30	60	80	90	85	0.08	0.10	0.11	0.11	800
	Weekday	25	45	50	45					25	45	50	45					800
Line 7	Fri	60	175	120	85					60	175	120	85					600
	Sat	70	215	145	105	225	270	225	270	295	485	370	375	0.49	0.81	0.62	0.63	600
	Sun	65	190	130	90	225	270	225	270	290	460	355	360	0.48	0.77	0.59	0.60	600
	Weekday	55	165	110	80					55	165	110	80					600
Line 8	Fri	10	5	10	15					10	5	10	15					600
	Sat	10	10	10	15	225	270	225	270	235	280	235	285	0.39	0.47	0.39	0.48	600
	Sun	10	5	10	15	225	270	225	270	235	275	235	285	0.39	0.46	0.39	0.48	600
	Weekday	10	5	5	15					10	5	5	15					600
Line 9	Fri	30	140	90	60					30	140	90	60					600
	Sat	40	170	110	70	180		180		220	170	290	70	0.37		0.48		600
	Sun	30	155	100	65	180		180		210	155	280	65	0.35		0.47		600
	Weekday	30	135	85	55					30	135	85	55					600

2020

		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,685	1,335	2,980	1,610					2,685	1,335	2,980	1,610					3,270
	Sat	2,660	1,675	2,615	1,730	300	300	300	300	2,960	1,975	2,915	2,030	0.91	0.60	0.89	0.62	3,270
	Sun	1,855	2,340	1,815	2,745	300	300	300	300	2,155	2,640	2,115	3,045	0.66	0.81	0.65	0.93	3,270
	Weekday	1,695	1,295	2,240	1,580					1,695	1,295	2,240	1,580					3,270
SR 20	Fri	50	70	70	60					50	70	70	60					800
Line 3-7	Sat	55	80	85	70	30	30	30	30	85	110	115	100	0.11	0.14	0.14	0.13	800
	Sun	50	70	75	65	30	30	30	30	80	100	105	95	0.10	0.13	0.13	0.12	800
	Weekday	50	65	70	55					50	65	70	55					800
SR 20	Fri	45	65	75	60					45	65	75	60					800
Line7-11	Sat	45	75	80	75	30	30	30	30	75	105	110	105	0.09	0.13	0.14	0.13	800
	Sun	45	65	75	70	30	30	30	30	75	95	105	100	0.09	0.12	0.13	0.13	800
	Weekday	40	60	65	60					40	60	65	60					800
Line 7	Fri	70	195	140	100					70	195	140	100					600
	Sat	80	245	165	120	225	270	225	270	305	515	390	390	0.51	0.86	0.65	0.65	600
	Sun	75	215	150	105	225	270	225	270	300	485	375	375	0.50	0.81	0.63	0.63	600
	Weekday	65	185	125	95					65	185	125	95					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20	225	270	225	270	240	285	240	290	0.40	0.48	0.40	0.48	600
	Sun	15	10	15	20	225	270	225	270	240	280	240	290	0.40	0.47	0.40	0.48	600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	160	105	70					40	160	105	70					600
	Sat	50	195	125	85	180		180		230	195	305	85	0.38		0.51		600
	Sun	40	175	115	75	180		180		220	175	295	75	0.37		0.49		600
	Weekday	40	150	100	65					40	150	100	65					600

2025

		Background Traffic Volumes				Site Traffic Volumes				Total Traffic Volumes				Volume/Capacity				Total Capacity
		AM		PM		AM		PM		AM		PM		AM		PM		
		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Hwy 11	Fri	2,820	1,410	3,145	1,700					2,820	1,410	3,145	1,700					3,270
	Sat	2,805	1,770	2,760	1,825	300	300	300	300	3,105	2,070	3,060	2,125	0.95	0.63	0.94	0.65	3,270
	Sun	1,955	2,465	1,920	2,890	300	300	300	300	2,255	2,765	2,220	3,190	0.69	0.85	0.68	0.98	3,270
	Weekday	1,695	1,370	2,240	1,580					1,695	1,370	2,240	1,580					3,270
SR 20	Fri	50	75	75	65					50	75	75	65					800
Line 3-7	Sat	55	90	95	75	30	30	30	30	85	120	125	105	0.11	0.15	0.16	0.13	800
	Sun	50	75	85	70	30	30	30	30	80	105	115	100	0.10	0.13	0.14	0.13	800
	Weekday	50	65	75	60					50	65	75	60					800
SR 20	Fri	45	70	80	65					45	70	80	65					800
Line7-11	Sat	45	80	85	80	30	30	30	30	75	110	115	110	0.09	0.14	0.14	0.14	800
	Sun	45	70	80	75	30	30	30	30	75	100	110	105	0.09	0.13	0.14	0.13	800
	Weekday	40	60	70	65					40	60	70	65					800
Line 7	Fri	75	215	155	110					75	215	155	110					600
	Sat	90	270	180	130	225	270	225	270	315	540	405	400	0.53	0.90	0.68	0.67	600
	Sun	85	235	165	115	225	270	225	270	310	505	390	385	0.52	0.84	0.65	0.64	600
	Weekday	70	205	135	105					70	205	135	105					600
Line 8	Fri	15	10	15	20					15	10	15	20					600
	Sat	15	15	15	20	225	270	225	270	240	285	240	290	0.40	0.48	0.40	0.48	600
	Sun	15	10	15	20	225	270	225	270	240	280	240	290	0.40	0.47	0.40	0.48	600
	Weekday	15	10	10	20					15	10	10	20					600
Line 9	Fri	40	175	115	75					40	175	115	75					600
	Sat	50	215	135	90	180		180		230	215	315	90	0.38		0.53		600
	Sun	40	190	125	80	180		180		220	190	305	80	0.37		0.51		600
	Weekday	40	170	110	70					40	170	110	70					600

APPENDIX F:
2025 TRAFFIC OPERATIONS WITH BURL'S CREEK

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	280	65	25	130	30	50
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	304	71	27	141	33	54
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	217	98			168	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	217	98			168	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	60	93			98	
cM capacity (veh/h)	753	958			1409	

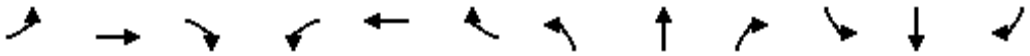
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	375	168	87
Volume Left	304	0	33
Volume Right	71	141	0
cSH	785	1700	1409
Volume to Capacity	0.48	0.10	0.02
Queue Length 95th (m)	19.9	0.0	0.5
Control Delay (s)	13.7	0.0	3.0
Lane LOS	B		A
Approach Delay (s)	13.7	0.0	3.0
Approach LOS	B		

Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	105	50	95	260	80	185
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	114	54	103	283	87	201
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	620	245			386	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	620	245			386	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	73	93			93	
cM capacity (veh/h)	418	794			1173	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	168	386	288
Volume Left	114	0	87
Volume Right	54	283	0
cSH	494	1700	1173
Volume to Capacity	0.34	0.23	0.07
Queue Length 95th (m)	11.4	0.0	1.8
Control Delay (s)	16.0	0.0	3.0
Lane LOS	C		A
Approach Delay (s)	16.0	0.0	3.0
Approach LOS	C		

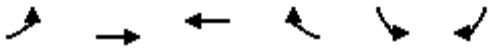
Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	15	20	10	35	35	25	145	15	25	25	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	16	22	11	38	38	27	158	16	27	27	27

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	65	87	201	82
Volume Left (vph)	27	11	27	27
Volume Right (vph)	22	38	16	27
Hadj (s)	-0.08	-0.20	0.01	-0.10
Departure Headway (s)	4.6	4.4	4.4	4.4
Degree Utilization, x	0.08	0.11	0.24	0.10
Capacity (veh/h)	727	753	793	774
Control Delay (s)	8.0	8.0	8.8	7.9
Approach Delay (s)	8.0	8.0	8.8	7.9
Approach LOS	A	A	A	A

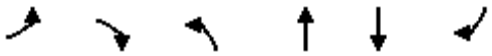
Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	25.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	35	65	15	15	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	38	71	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	87				149	79
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87				149	79
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	98
cM capacity (veh/h)	1509				833	982

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	54	87	33
Volume Left	16	0	16
Volume Right	0	16	16
cSH	1509	1700	901
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.2	0.0	0.9
Control Delay (s)	2.3	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	2.3	0.0	9.1
Approach LOS			A

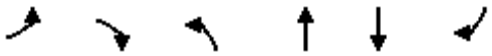
Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	19.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	135	25	10	40	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	147	27	11	43	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	117	52	60			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	117	52	60			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	86	98			
cM capacity (veh/h)	864	1016	1544			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	168	38	60
Volume Left	22	27	0
Volume Right	147	0	16
cSH	994	1544	1700
Volume to Capacity	0.17	0.02	0.04
Queue Length 95th (m)	4.6	0.4	0.0
Control Delay (s)	9.4	5.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	5.3	0.0
Approach LOS	A		

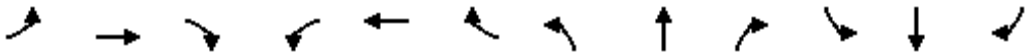
Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	20	135	55	20	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	22	147	60	22	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	389	35	49			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	389	35	49			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	98	91			
cM capacity (veh/h)	557	1037	1558			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	38	207	49
Volume Left	16	147	0
Volume Right	22	0	27
cSH	758	1558	1700
Volume to Capacity	0.05	0.09	0.03
Queue Length 95th (m)	1.2	2.4	0.0
Control Delay (s)	10.0	5.6	0.0
Lane LOS	B	A	
Approach Delay (s)	10.0	5.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	25	20	10	45	25	25	150	15	15	25	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	27	22	11	49	27	27	163	16	16	27	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	76			49			185	168	38	253	166	62
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	76			49			185	168	38	253	166	62
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			96	77	98	97	96	98
cM capacity (veh/h)	1523			1558			731	712	1034	560	714	1002

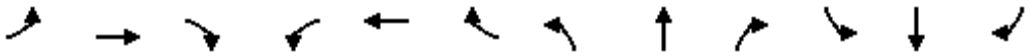
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	65	87	207	60
Volume Left	16	11	27	16
Volume Right	22	27	16	16
cSH	1523	1558	732	717
Volume to Capacity	0.01	0.01	0.28	0.08
Queue Length 95th (m)	0.2	0.2	8.8	2.1
Control Delay (s)	1.9	1.0	11.8	10.5
Lane LOS	A	A	B	B
Approach Delay (s)	1.9	1.0	11.8	10.5
Approach LOS			B	B

Intersection Summary				
Average Delay	7.8			
Intersection Capacity Utilization	24.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	15	120	170	15	120	50
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	130	185	16	130	54
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	508	193			201	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	508	193			201	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	85			90	
cM capacity (veh/h)	475	849			1371	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	147	201	185
Volume Left	16	0	130
Volume Right	130	16	0
cSH	780	1700	1371
Volume to Capacity	0.19	0.12	0.10
Queue Length 95th (m)	5.2	0.0	2.4
Control Delay (s)	10.7	0.0	5.8
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	5.8
Approach LOS	B		

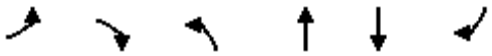
Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	10	0	0	15	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	11	0	0	16	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	27	27	16	27	27	11	16			11		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	27	27	16	27	27	11	16			11		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	983	866	1063	983	866	1070	1601			1608		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	11	16
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1601	1608
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	190	40	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	207	43	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	250	43	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	250	43	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	739	1027	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	207	43
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1565	1700
Volume to Capacity	0.00	0.00	0.03
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	100	50	20	80	50	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	54	22	87	54	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	201	65			109	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	201	65			109	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	95			96	
cM capacity (veh/h)	759	999			1482	

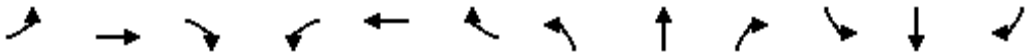
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	163	109	82
Volume Left	109	0	54
Volume Right	54	87	0
cSH	825	1700	1482
Volume to Capacity	0.20	0.06	0.04
Queue Length 95th (m)	5.6	0.0	0.9
Control Delay (s)	10.4	0.0	5.1
Lane LOS	B		A
Approach Delay (s)	10.4	0.0	5.1
Approach LOS	B		

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	65	130	45	65	90	90
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	71	141	49	71	98	98
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	378	84			120	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	378	84			120	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	86			93	
cM capacity (veh/h)	582	975			1468	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	212	120	196
Volume Left	71	0	98
Volume Right	141	71	0
cSH	796	1700	1468
Volume to Capacity	0.27	0.07	0.07
Queue Length 95th (m)	8.2	0.0	1.6
Control Delay (s)	11.2	0.0	4.1
Lane LOS	B		A
Approach Delay (s)	11.2	0.0	4.1
Approach LOS	B		

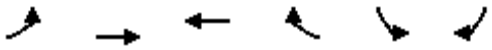
Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	45	25	15	40	15	15	60	15	25	105	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	49	27	16	43	16	16	65	16	27	114	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	87	76	98	158
Volume Left (vph)	11	16	16	27
Volume Right (vph)	27	16	16	16
Hadj (s)	-0.13	-0.05	-0.03	0.01
Departure Headway (s)	4.5	4.5	4.4	4.4
Degree Utilization, x	0.11	0.10	0.12	0.19
Capacity (veh/h)	750	737	771	777
Control Delay (s)	8.0	8.0	8.0	8.5
Approach Delay (s)	8.0	8.0	8.0	8.5
Approach LOS	A	A	A	A

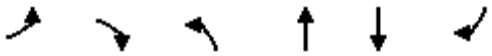
Intersection Summary				
Delay	8.2			
Level of Service	A			
Intersection Capacity Utilization	23.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	65	50	15	20	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	71	54	16	22	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	71				177	62
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	71				177	62
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	98
cM capacity (veh/h)	1530				802	1002

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	92	71	43
Volume Left	22	0	22
Volume Right	0	16	22
cSH	1530	1700	891
Volume to Capacity	0.01	0.04	0.05
Queue Length 95th (m)	0.3	0.0	1.2
Control Delay (s)	1.8	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	1.8	0.0	9.2
Approach LOS			A

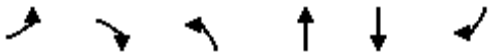
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	45	90	50	15	15	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	98	54	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	149	24	33			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	149	24	33			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	91	97			
cM capacity (veh/h)	814	1052	1579			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	147	71	33
Volume Left	49	54	0
Volume Right	98	0	16
cSH	958	1579	1700
Volume to Capacity	0.15	0.03	0.02
Queue Length 95th (m)	4.1	0.8	0.0
Control Delay (s)	9.4	5.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	5.7	0.0
Approach LOS	A		

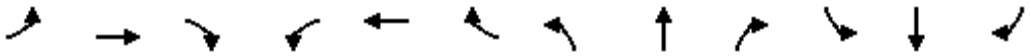
Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	45	50	25	70	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	49	54	27	76	92
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	258	122	168			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	258	122	168			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	95	96			
cM capacity (veh/h)	702	929	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	71	82	168
Volume Left	22	54	0
Volume Right	49	0	92
cSH	845	1409	1700
Volume to Capacity	0.08	0.04	0.10
Queue Length 95th (m)	2.1	0.9	0.0
Control Delay (s)	9.6	5.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	5.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	45	25	20	40	15	15	60	15	15	85	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	49	27	22	43	16	16	65	16	16	92	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	60			76			253	198	62	239	204	52
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	60			76			253	198	62	239	204	52
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	90	98	97	86	98
cM capacity (veh/h)	1544			1523			606	680	1002	640	675	1016

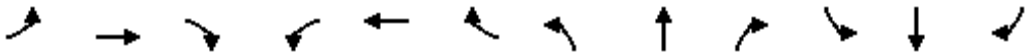
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	82	98	125
Volume Left	16	22	16	16
Volume Right	27	16	16	16
cSH	1544	1523	703	701
Volume to Capacity	0.01	0.01	0.14	0.18
Queue Length 95th (m)	0.2	0.3	3.7	4.9
Control Delay (s)	1.4	2.1	10.9	11.2
Lane LOS	A	A	B	B
Approach Delay (s)	1.4	2.1	10.9	11.2
Approach LOS			B	B

Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	85	0	0	145
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	92	0	0	158
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	250	92			92	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	250	92			92	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	739	965			1502	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	92	158
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1502
Volume to Capacity	0.19	0.05	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

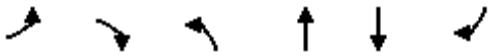
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	11.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	75	0	10	0	0	0	10	20	0	0	15	75
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	0	11	0	0	0	11	22	0	0	16	82
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	101	101	57	111	141	22	98			22		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	101	101	57	111	141	22	98			22		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	100	99	100	100	100	99			100		
cM capacity (veh/h)	876	784	1009	852	744	1055	1495			1594		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	0	33	98
Volume Left	82	0	11	0
Volume Right	11	0	0	82
cSH	890	1700	1495	1594
Volume to Capacity	0.10	0.00	0.01	0.00
Queue Length 95th (m)	2.6	0.0	0.2	0.0
Control Delay (s)	9.5	0.0	2.5	0.0
Lane LOS	A	A	A	
Approach Delay (s)	9.5	0.0	2.5	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	19.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	75	115	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	82	125	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	207	125	125			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207	125	125			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	782	926	1462			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	82	125
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1462	1700
Volume to Capacity	0.00	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	9.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	115	65	20	200	175	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	125	71	22	217	190	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	538	130			239	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	538	130			239	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	71	92			86	
cM capacity (veh/h)	432	919			1328	

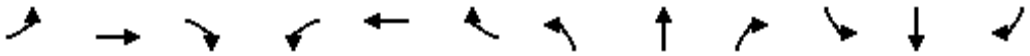
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	196	239	217
Volume Left	125	0	190
Volume Right	71	217	0
cSH	534	1700	1328
Volume to Capacity	0.37	0.14	0.14
Queue Length 95th (m)	12.7	0.0	3.8
Control Delay (s)	15.6	0.0	7.3
Lane LOS	C		A
Approach Delay (s)	15.6	0.0	7.3
Approach LOS	C		

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	335	20	55	95	90	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	364	22	60	103	98	348
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	655	111			163	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	655	111			163	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	9	98			93	
cM capacity (veh/h)	401	942			1416	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	386	163	446
Volume Left	364	0	98
Volume Right	22	103	0
cSH	415	1700	1416
Volume to Capacity	0.93	0.10	0.07
Queue Length 95th (m)	78.8	0.0	1.7
Control Delay (s)	60.4	0.0	2.2
Lane LOS	F		A
Approach Delay (s)	60.4	0.0	2.2
Approach LOS	F		

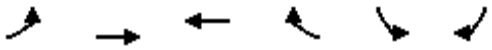
Intersection Summary			
Average Delay	24.4		
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	35	40	25	15	35	40	10	60	10	25	100	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	43	27	16	38	43	11	65	11	27	109	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	109	98	87	158
Volume Left (vph)	38	16	11	27
Volume Right (vph)	27	43	11	22
Hadj (s)	-0.05	-0.20	-0.02	-0.01
Departure Headway (s)	4.5	4.4	4.6	4.5
Degree Utilization, x	0.14	0.12	0.11	0.20
Capacity (veh/h)	738	760	744	759
Control Delay (s)	8.3	8.0	8.1	8.6
Approach Delay (s)	8.3	8.0	8.1	8.6
Approach LOS	A	A	A	A

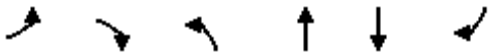
Intersection Summary				
Delay	8.3			
Level of Service	A			
Intersection Capacity Utilization	28.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	60	70	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	65	76	11	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	87				168	82
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	87				168	82
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	1509				816	978

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	76	87	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1509	1700	890
Volume to Capacity	0.01	0.05	0.02
Queue Length 95th (m)	0.2	0.0	0.6
Control Delay (s)	1.1	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.1
Approach LOS			A

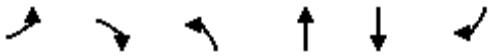
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	65	50	15	15	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	71	54	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	149	24	33			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	149	24	33			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	93	97			
cM capacity (veh/h)	814	1052	1579			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	92	71	33
Volume Left	22	54	0
Volume Right	71	0	16
cSH	984	1579	1700
Volume to Capacity	0.09	0.03	0.02
Queue Length 95th (m)	2.4	0.8	0.0
Control Delay (s)	9.0	5.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	5.7	0.0
Approach LOS	A		

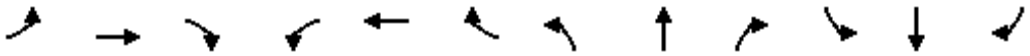
Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	45	50	20	65	35
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	49	54	22	71	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	220	90	109			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220	90	109			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	95	96			
cM capacity (veh/h)	740	968	1482			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	71	76	109
Volume Left	22	54	0
Volume Right	49	0	38
cSH	884	1482	1700
Volume to Capacity	0.08	0.04	0.06
Queue Length 95th (m)	2.0	0.9	0.0
Control Delay (s)	9.4	5.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	5.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	40	20	15	50	10	10	50	10	10	80	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	43	22	16	54	11	11	54	11	11	87	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	65			65			223	174	54	207	179	60
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	65			65			223	174	54	207	179	60
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	92	99	98	88	99
cM capacity (veh/h)	1537			1537			648	707	1013	690	702	1006

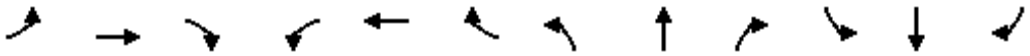
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	76	82	76	109
Volume Left	11	16	11	11
Volume Right	22	11	11	11
cSH	1537	1537	729	722
Volume to Capacity	0.01	0.01	0.10	0.15
Queue Length 95th (m)	0.2	0.2	2.6	4.0
Control Delay (s)	1.1	1.5	10.5	10.9
Lane LOS	A	A	B	B
Approach Delay (s)	1.1	1.5	10.5	10.9
Approach LOS			B	B

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	19.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	45	85	50	450	135
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	49	92	54	489	147
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	1245	120			147	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1245	120			147	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	95			66	
cM capacity (veh/h)	127	932			1435	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	54	147	636
Volume Left	5	0	489
Volume Right	49	54	0
cSH	570	1700	1435
Volume to Capacity	0.10	0.09	0.34
Queue Length 95th (m)	2.4	0.0	11.6
Control Delay (s)	12.0	0.0	7.5
Lane LOS	B		A
Approach Delay (s)	12.0	0.0	7.5
Approach LOS	B		

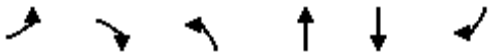
Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	20	0	0	10	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	22	0	0	11	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	33	33	11	33	33	22	11			22		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	33	33	11	33	33	22	11			22		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	975	860	1070	975	860	1055	1608			1594		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	22	11
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1608	1594
Volume to Capacity	0.10	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	6.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	70	110	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	76	120	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	196	120	120			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196	120	120			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	793	932	1468			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	76	120
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1468	1700
Volume to Capacity	0.00	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	9.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	250	200	20	65	40	25
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	272	217	22	71	43	27
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	171	57			92	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	171	57			92	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	66	78			97	
cM capacity (veh/h)	795	1009			1502	

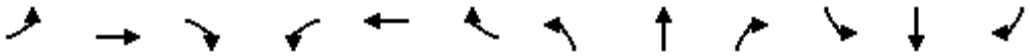
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	489	92	71
Volume Left	272	0	43
Volume Right	217	71	0
cSH	878	1700	1502
Volume to Capacity	0.56	0.05	0.03
Queue Length 95th (m)	26.7	0.0	0.7
Control Delay (s)	14.1	0.0	4.7
Lane LOS	B		A
Approach Delay (s)	14.1	0.0	4.7
Approach LOS	B		

Intersection Summary			
Average Delay	11.1		
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	85	20	190	365	90	185
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	92	22	207	397	98	201
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	802	405			603	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	802	405			603	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	71	97			90	
cM capacity (veh/h)	318	646			974	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	114	603	299
Volume Left	92	0	98
Volume Right	22	397	0
cSH	352	1700	974
Volume to Capacity	0.32	0.35	0.10
Queue Length 95th (m)	10.5	0.0	2.5
Control Delay (s)	20.1	0.0	3.7
Lane LOS	C		A
Approach Delay (s)	20.1	0.0	3.7
Approach LOS	C		

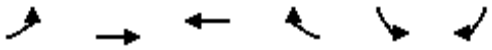
Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	40	25	15	35	20	10	60	10	45	100	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	43	27	16	38	22	11	65	11	49	109	43

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	87	76	87	201
Volume Left (vph)	16	16	11	49
Volume Right (vph)	27	22	11	43
Hadj (s)	-0.12	-0.09	-0.02	-0.05
Departure Headway (s)	4.5	4.6	4.5	4.3
Degree Utilization, x	0.11	0.10	0.11	0.24
Capacity (veh/h)	733	727	758	790
Control Delay (s)	8.1	8.1	8.0	8.7
Approach Delay (s)	8.1	8.1	8.0	8.7
Approach LOS	A	A	A	A

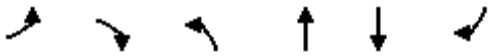
Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	29.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	80	50	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	87	54	11	11	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	65				168	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	65				168	60
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	1537				816	1006

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	98	65	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1537	1700	901
Volume to Capacity	0.01	0.04	0.02
Queue Length 95th (m)	0.2	0.0	0.6
Control Delay (s)	0.9	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	0.9	0.0	9.1
Approach LOS			A

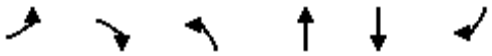
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	65	50	15	15	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	71	54	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	149	24	33			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	149	24	33			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	93	97			
cM capacity (veh/h)	814	1052	1579			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	92	71	33
Volume Left	22	54	0
Volume Right	71	0	16
cSH	984	1579	1700
Volume to Capacity	0.09	0.03	0.02
Queue Length 95th (m)	2.4	0.8	0.0
Control Delay (s)	9.0	5.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	5.7	0.0
Approach LOS	A		

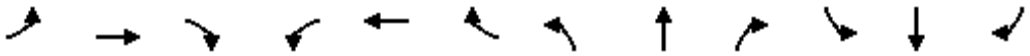
Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	45	50	20	65	35
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	49	54	22	71	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	220	90	109			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220	90	109			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	95	96			
cM capacity (veh/h)	740	968	1482			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	71	76	109
Volume Left	22	54	0
Volume Right	49	0	38
cSH	884	1482	1700
Volume to Capacity	0.08	0.04	0.06
Queue Length 95th (m)	2.0	0.9	0.0
Control Delay (s)	9.4	5.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.4	5.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	60	20	15	30	10	10	50	10	10	80	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	65	22	16	33	11	11	54	11	11	87	11
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	43			87			223	174	76	207	179	38
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	43			87			223	174	76	207	179	38
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	92	99	98	88	99
cM capacity (veh/h)	1565			1509			648	707	985	690	702	1034

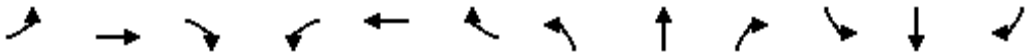
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	98	60	76	109
Volume Left	11	16	11	11
Volume Right	22	11	11	11
cSH	1565	1509	727	724
Volume to Capacity	0.01	0.01	0.10	0.15
Queue Length 95th (m)	0.2	0.2	2.7	4.0
Control Delay (s)	0.9	2.1	10.5	10.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.9	2.1	10.5	10.9
Approach LOS			B	B

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	450	85	5	45	135
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	489	92	5	49	147
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	340	95			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	340	95			98	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	49			97	
cM capacity (veh/h)	635	962			1495	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	543	98	196
Volume Left	54	0	49
Volume Right	489	5	0
cSH	914	1700	1495
Volume to Capacity	0.59	0.06	0.03
Queue Length 95th (m)	30.7	0.0	0.8
Control Delay (s)	14.5	0.0	2.1
Lane LOS	B		A
Approach Delay (s)	14.5	0.0	2.1
Approach LOS	B		

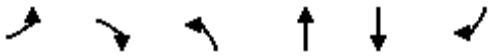
Intersection Summary			
Average Delay	9.9		
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	20	0	0	10	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	22	0	0	11	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	33	33	11	33	33	22	11			22		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	33	33	11	33	33	22	11			22		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			100		
cM capacity (veh/h)	975	860	1070	975	860	1055	1608			1594		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	22	11
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1608	1594
Volume to Capacity	0.10	0.00	0.00	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	0.0	0.0	0.0	0.0
Approach LOS	A	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	6.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	70	110	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	76	120	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	196	120	120			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196	120	120			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	793	932	1468			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	76	120
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1468	1700
Volume to Capacity	0.00	0.00	0.07
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	9.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	210	50	30	190	65	50
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	228	54	33	207	71	54
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	332	136			239	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332	136			239	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	64	94			95	
cM capacity (veh/h)	628	913			1328	

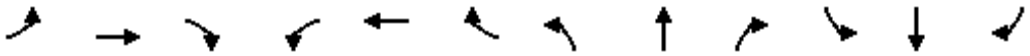
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	283	239	125
Volume Left	228	0	71
Volume Right	54	207	0
cSH	668	1700	1328
Volume to Capacity	0.42	0.14	0.05
Queue Length 95th (m)	16.0	0.0	1.3
Control Delay (s)	14.3	0.0	4.6
Lane LOS	B		A
Approach Delay (s)	14.3	0.0	4.6
Approach LOS	B		

Intersection Summary			
Average Delay	7.1		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	200	60	185	85	30
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	217	65	201	92	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	383	166			266	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	383	166			266	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	75			93	
cM capacity (veh/h)	575	879			1298	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	272	266	125
Volume Left	54	0	92
Volume Right	217	201	0
cSH	795	1700	1298
Volume to Capacity	0.34	0.16	0.07
Queue Length 95th (m)	11.6	0.0	1.7
Control Delay (s)	11.9	0.0	6.1
Lane LOS	B		A
Approach Delay (s)	11.9	0.0	6.1
Approach LOS	B		

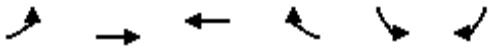
Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	15	25	10	35	30	30	160	15	15	30	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	16	27	11	38	33	33	174	16	16	33	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	60	82	223	65
Volume Left (vph)	16	11	33	16
Volume Right (vph)	27	33	16	16
Hadj (s)	-0.18	-0.18	0.02	-0.07
Departure Headway (s)	4.5	4.5	4.3	4.4
Degree Utilization, x	0.07	0.10	0.27	0.08
Capacity (veh/h)	741	749	803	770
Control Delay (s)	7.8	7.9	8.9	7.8
Approach Delay (s)	7.8	7.9	8.9	7.8
Approach LOS	A	A	A	A

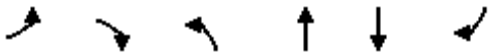
Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	25.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	25	60	15	15	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	27	65	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	82				133	73
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	82				133	73
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	98
cM capacity (veh/h)	1516				851	988

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	43	82	33
Volume Left	16	0	16
Volume Right	0	16	16
cSH	1516	1700	915
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.2	0.0	0.8
Control Delay (s)	2.8	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	2.8	0.0	9.1
Approach LOS			A

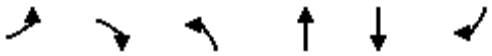
Intersection Summary			
Average Delay		2.7	
Intersection Capacity Utilization		18.8%	ICU Level of Service
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	50	310	25	10	35	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	337	27	11	38	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	111	46	54			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	111	46	54			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	67	98			
cM capacity (veh/h)	870	1023	1551			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	391	38	54
Volume Left	54	27	0
Volume Right	337	0	16
cSH	999	1551	1700
Volume to Capacity	0.39	0.02	0.03
Queue Length 95th (m)	14.3	0.4	0.0
Control Delay (s)	10.9	5.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	5.3	0.0
Approach LOS	B		

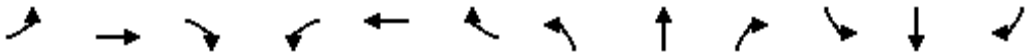
Intersection Summary			
Average Delay	9.2		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	25	135	60	25	360
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	27	147	65	27	391
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	582	223	418			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	582	223	418			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	87			
cM capacity (veh/h)	414	817	1141			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	43	212	418
Volume Left	16	147	0
Volume Right	27	0	391
cSH	599	1141	1700
Volume to Capacity	0.07	0.13	0.25
Queue Length 95th (m)	1.8	3.4	0.0
Control Delay (s)	11.5	6.3	0.0
Lane LOS	B	A	
Approach Delay (s)	11.5	6.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	15	20	10	35	25	25	160	15	15	25	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	16	22	11	38	27	27	174	16	16	27	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	65			38			163	147	27	236	144	52
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	65			38			163	147	27	236	144	52
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			96	76	98	97	96	98
cM capacity (veh/h)	1537			1572			757	732	1048	570	734	1016

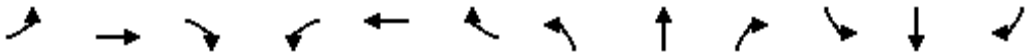
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	54	76	217	60
Volume Left	16	11	27	16
Volume Right	22	27	16	16
cSH	1537	1572	752	732
Volume to Capacity	0.01	0.01	0.29	0.08
Queue Length 95th (m)	0.2	0.2	9.1	2.0
Control Delay (s)	2.3	1.1	11.7	10.4
Lane LOS	A	A	B	B
Approach Delay (s)	2.3	1.1	11.7	10.4
Approach LOS			B	B

Intersection Summary			
Average Delay	8.3		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	190	0	0	60
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	207	0	0	65
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	272	207			207	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272	207			207	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	718	834			1365	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	207	65
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1365
Volume to Capacity	0.00	0.12	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

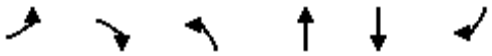
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	250	0	15	0	500	15	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	272	0	16	0	543	16	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1391	1120	16	1120	1120	16	16			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1391	1120	16	1120	1120	16	16			16		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	74	100			66		
cM capacity (veh/h)	65	136	1063	135	136	1063	1601			1601		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	272	16	560
Volume Left	0	0	0	543
Volume Right	0	272	0	0
cSH	1700	1063	1601	1601
Volume to Capacity	0.00	0.26	0.00	0.34
Queue Length 95th (m)	0.0	7.8	0.0	11.6
Control Delay (s)	0.0	9.5	0.0	8.2
Lane LOS	A	A		A
Approach Delay (s)	0.0	9.5	0.0	8.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	8.5			
Intersection Capacity Utilization	57.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	185	50	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	201	54	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	255	54	54			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	255	54	54			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	733	1013	1551			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	201	54
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1551	1700
Volume to Capacity	0.00	0.00	0.03
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	13.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	115	60	25	115	55	30
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	125	65	27	125	60	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	242	90			152	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	242	90			152	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	93			96	
cM capacity (veh/h)	715	968			1429	

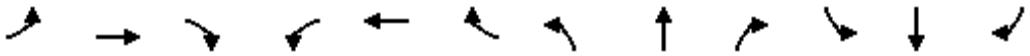
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	190	152	92
Volume Left	125	0	60
Volume Right	65	125	0
cSH	786	1700	1429
Volume to Capacity	0.24	0.09	0.04
Queue Length 95th (m)	7.2	0.0	1.0
Control Delay (s)	11.0	0.0	5.1
Lane LOS	B		A
Approach Delay (s)	11.0	0.0	5.1
Approach LOS	B		

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	95	45	75	100	95
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	103	49	82	109	103
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	410	90			130	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	410	90			130	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	89			93	
cM capacity (veh/h)	553	968			1455	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	179	130	212
Volume Left	76	0	109
Volume Right	103	82	0
cSH	734	1700	1455
Volume to Capacity	0.24	0.08	0.07
Queue Length 95th (m)	7.3	0.0	1.8
Control Delay (s)	11.5	0.0	4.2
Lane LOS	B		A
Approach Delay (s)	11.5	0.0	4.2
Approach LOS	B		

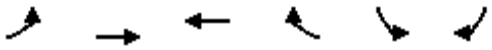
Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	40	30	20	35	20	15	70	15	25	125	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	43	33	22	38	22	16	76	16	27	136	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	92	82	109	185
Volume Left (vph)	16	22	16	27
Volume Right (vph)	33	22	16	22
Hadj (s)	-0.14	-0.07	-0.03	-0.01
Departure Headway (s)	4.5	4.6	4.5	4.4
Degree Utilization, x	0.12	0.10	0.14	0.23
Capacity (veh/h)	732	719	757	771
Control Delay (s)	8.1	8.2	8.2	8.7
Approach Delay (s)	8.1	8.2	8.2	8.7
Approach LOS	A	A	A	A

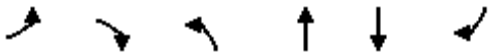
Intersection Summary				
Delay	8.4			
Level of Service	A			
Intersection Capacity Utilization	25.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	70	60	15	15	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	76	65	16	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	82				182	73
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	82				182	73
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	98
cM capacity (veh/h)	1516				799	988

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	92	82	33
Volume Left	16	0	16
Volume Right	0	16	16
cSH	1516	1700	883
Volume to Capacity	0.01	0.05	0.04
Queue Length 95th (m)	0.2	0.0	0.9
Control Delay (s)	1.4	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	1.4	0.0	9.2
Approach LOS			A

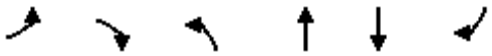
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	21.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	75	420	60	15	20	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	457	65	16	22	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	179	33	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	179	33	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	56	96			
cM capacity (veh/h)	776	1041	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	538	82	43
Volume Left	82	65	0
Volume Right	457	0	22
cSH	990	1565	1700
Volume to Capacity	0.54	0.04	0.03
Queue Length 95th (m)	25.6	1.0	0.0
Control Delay (s)	12.9	6.0	0.0
Lane LOS	B	A	
Approach Delay (s)	12.9	6.0	0.0
Approach LOS	B		

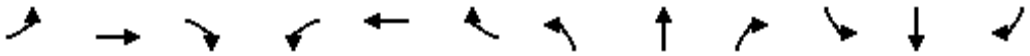
Intersection Summary			
Average Delay	11.2		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	50	60	25	375	495
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	54	65	27	408	538
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	834	677	946			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	834	677	946			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	88	91			
cM capacity (veh/h)	308	453	726			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	82	92	946
Volume Left	27	65	0
Volume Right	54	0	538
cSH	391	726	1700
Volume to Capacity	0.21	0.09	0.56
Queue Length 95th (m)	5.9	2.2	0.0
Control Delay (s)	16.6	7.7	0.0
Lane LOS	C	A	
Approach Delay (s)	16.6	7.7	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	40	25	20	35	15	15	65	15	15	100	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	43	27	22	38	16	16	71	16	16	109	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	54			71			250	188	57	231	193	46
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	54			71			250	188	57	231	193	46
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	90	98	97	84	98
cM capacity (veh/h)	1551			1530			597	690	1009	644	685	1023

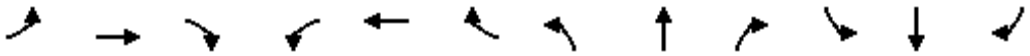
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	87	76	103	141
Volume Left	16	22	16	16
Volume Right	27	16	16	16
cSH	1551	1530	708	707
Volume to Capacity	0.01	0.01	0.15	0.20
Queue Length 95th (m)	0.2	0.3	3.9	5.6
Control Delay (s)	1.4	2.2	11.0	11.4
Lane LOS	A	A	B	B
Approach Delay (s)	1.4	2.2	11.0	11.4
Approach LOS			B	B

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	105	0	0	170
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	114	0	0	185
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	299	114			114	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	299	114			114	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	692	938			1475	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	114	185
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1475
Volume to Capacity	0.00	0.07	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

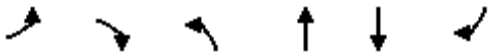
Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		12.3%	ICU Level of Service
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	500	0	20	0	250	15	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	543	0	22	0	272	16	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1125	582	16	582	582	22	16			22		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1125	582	16	582	582	22	16			22		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	49	100			83		
cM capacity (veh/h)	77	352	1063	369	352	1055	1601			1594		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	543	22	288
Volume Left	0	0	0	272
Volume Right	0	543	0	0
cSH	1700	1055	1601	1594
Volume to Capacity	0.00	0.51	0.00	0.17
Queue Length 95th (m)	0.0	23.1	0.0	4.7
Control Delay (s)	0.0	12.0	0.0	7.4
Lane LOS	A	B		A
Approach Delay (s)	0.0	12.0	0.0	7.4
Approach LOS	A	B		

Intersection Summary				
Average Delay	10.1			
Intersection Capacity Utilization	58.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	85	125	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	92	136	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	228	136	136			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228	136	136			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	760	913	1448			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	92	136
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1448	1700
Volume to Capacity	0.00	0.00	0.08
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	9.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	125	65	25	190	75	35
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	136	71	27	207	82	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	332	130			234	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332	130			234	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	92			94	
cM capacity (veh/h)	623	919			1334	

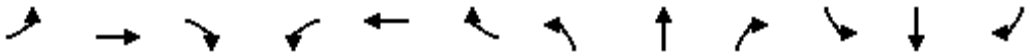
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	207	234	120
Volume Left	136	0	82
Volume Right	71	207	0
cSH	700	1700	1334
Volume to Capacity	0.30	0.14	0.06
Queue Length 95th (m)	9.4	0.0	1.5
Control Delay (s)	12.3	0.0	5.5
Lane LOS	B		A
Approach Delay (s)	12.3	0.0	5.5
Approach LOS	B		

Intersection Summary			
Average Delay	5.7		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	75	180	50	80	110	105
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	82	196	54	87	120	114
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	451	98			141	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	451	98			141	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	80			92	
cM capacity (veh/h)	519	958			1442	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	277	141	234
Volume Left	82	0	120
Volume Right	196	87	0
cSH	767	1700	1442
Volume to Capacity	0.36	0.08	0.08
Queue Length 95th (m)	12.6	0.0	2.1
Control Delay (s)	12.3	0.0	4.3
Lane LOS	B		A
Approach Delay (s)	12.3	0.0	4.3
Approach LOS	B		

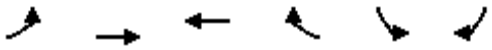
Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	65	35	20	40	20	15	75	15	25	130	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	71	38	22	43	22	16	82	16	27	141	22

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	125	87	114	190
Volume Left (vph)	16	22	16	27
Volume Right (vph)	38	22	16	22
Hadj (s)	-0.12	-0.07	-0.02	-0.01
Departure Headway (s)	4.6	4.7	4.6	4.5
Degree Utilization, x	0.16	0.11	0.15	0.24
Capacity (veh/h)	722	703	733	747
Control Delay (s)	8.5	8.3	8.4	9.0
Approach Delay (s)	8.5	8.3	8.4	9.0
Approach LOS	A	A	A	A

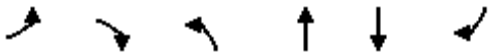
Intersection Summary				
Delay	8.6			
Level of Service	A			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	35	75	65	35	15	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	82	71	38	16	16
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	109				247	90
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	109				247	90
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				98	98
cM capacity (veh/h)	1482				722	968

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	120	109	33
Volume Left	38	0	16
Volume Right	0	38	16
cSH	1482	1700	827
Volume to Capacity	0.03	0.06	0.04
Queue Length 95th (m)	0.6	0.0	0.9
Control Delay (s)	2.5	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	2.5	0.0	9.5
Approach LOS			A

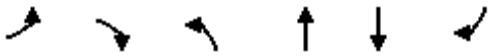
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	75	65	15	20	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	82	71	16	22	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	190	33	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	190	33	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	92	95			
cM capacity (veh/h)	763	1041	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	109	87	43
Volume Left	27	71	0
Volume Right	82	0	22
cSH	954	1565	1700
Volume to Capacity	0.11	0.05	0.03
Queue Length 95th (m)	2.9	1.1	0.0
Control Delay (s)	9.3	6.1	0.0
Lane LOS	A	A	
Approach Delay (s)	9.3	6.1	0.0
Approach LOS	A		

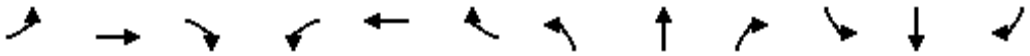
Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	55	65	25	80	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	60	71	27	87	43
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	277	109	130			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	277	109	130			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	94	95			
cM capacity (veh/h)	678	945	1455			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	87	98	130
Volume Left	27	71	0
Volume Right	60	0	43
cSH	841	1455	1700
Volume to Capacity	0.10	0.05	0.08
Queue Length 95th (m)	2.6	1.2	0.0
Control Delay (s)	9.8	5.6	0.0
Lane LOS	A	A	
Approach Delay (s)	9.8	5.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	45	25	20	60	15	15	70	15	15	100	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	49	27	22	65	16	16	76	16	16	109	16
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	82			76			283	220	62	266	226	73
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	82			76			283	220	62	266	226	73
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	88	98	97	83	98
cM capacity (veh/h)	1516			1523			564	661	1002	604	657	988

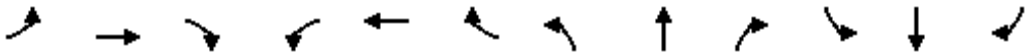
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	103	109	141
Volume Left	16	22	16	16
Volume Right	27	16	16	16
cSH	1516	1523	679	676
Volume to Capacity	0.01	0.01	0.16	0.21
Queue Length 95th (m)	0.2	0.3	4.3	6.0
Control Delay (s)	1.4	1.6	11.3	11.7
Lane LOS	A	A	B	B
Approach Delay (s)	1.4	1.6	11.3	11.7
Approach LOS			B	B

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	110	0	0	175
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	120	0	0	190
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	310	120			120	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310	120			120	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	683	932			1468	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	0	120	190
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1468
Volume to Capacity	0.00	0.07	0.00
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

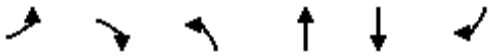
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	12.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	40	20	0	0	15	360
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	43	22	0	0	16	391
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	321	321	212	321	516	22	408			22		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	321	321	212	321	516	22	408			22		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	96			100		
cM capacity (veh/h)	614	574	828	614	445	1055	1151			1594		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	65	408
Volume Left	0	0	43	0
Volume Right	0	0	0	391
cSH	1700	1700	1151	1594
Volume to Capacity	0.00	0.51	0.04	0.00
Queue Length 95th (m)	0.0	0.0	0.9	0.0
Control Delay (s)	0.0	0.0	5.6	0.0
Lane LOS	A	A	A	
Approach Delay (s)	0.0	0.0	5.6	0.0
Approach LOS	A	A		

Intersection Summary				
Average Delay		0.8		
Intersection Capacity Utilization		33.1%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	90	135	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	98	147	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	245	147	147			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	245	147	147			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	744	900	1435			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	98	147
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1435	1700
Volume to Capacity	0.00	0.00	0.09
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	10.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	275	95	25	160	75	35
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	299	103	27	174	82	38
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	315	114			201	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	315	114			201	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	53	89			94	
cM capacity (veh/h)	637	938			1371	

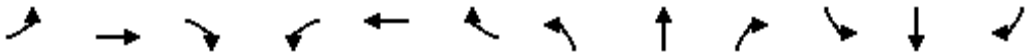
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	402	201	120
Volume Left	299	0	82
Volume Right	103	174	0
cSH	695	1700	1371
Volume to Capacity	0.58	0.12	0.06
Queue Length 95th (m)	28.4	0.0	1.4
Control Delay (s)	17.1	0.0	5.5
Lane LOS	C		A
Approach Delay (s)	17.1	0.0	5.5
Approach LOS	C		

Intersection Summary			
Average Delay	10.4		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	150	95	140	260	110	255
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	163	103	152	283	120	277
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	810	293			435	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	810	293			435	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	48	86			89	
cM capacity (veh/h)	312	746			1125	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	266	435	397
Volume Left	163	0	120
Volume Right	103	283	0
cSH	403	1700	1125
Volume to Capacity	0.66	0.26	0.11
Queue Length 95th (m)	35.0	0.0	2.7
Control Delay (s)	29.7	0.0	3.3
Lane LOS	D		A
Approach Delay (s)	29.7	0.0	3.3
Approach LOS	D		

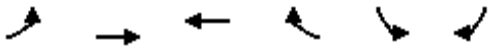
Intersection Summary			
Average Delay	8.4		
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	45	45	35	20	55	20	15	75	15	40	130	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	49	38	22	60	22	16	82	16	43	141	38

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	136	103	114	223
Volume Left (vph)	49	22	16	43
Volume Right (vph)	38	22	16	38
Hadj (s)	-0.06	-0.05	-0.02	-0.03
Departure Headway (s)	4.8	4.8	4.8	4.6
Degree Utilization, x	0.18	0.14	0.15	0.29
Capacity (veh/h)	693	682	708	736
Control Delay (s)	8.8	8.6	8.6	9.5
Approach Delay (s)	8.8	8.6	8.6	9.5
Approach LOS	A	A	A	A

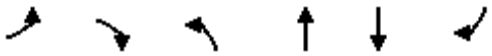
Intersection Summary				
Delay	9.0			
Level of Service	A			
Intersection Capacity Utilization	35.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	90	65	135	30	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	98	71	147	33	33
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	217				274	144
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	217				274	144
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	96
cM capacity (veh/h)	1352				707	903

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	114	217	65
Volume Left	16	0	33
Volume Right	0	147	33
cSH	1352	1700	793
Volume to Capacity	0.01	0.13	0.08
Queue Length 95th (m)	0.3	0.0	2.0
Control Delay (s)	1.2	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	1.2	0.0	9.9
Approach LOS			A

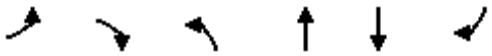
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	55	225	155	15	20	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	60	245	168	16	22	22
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	386	33	43			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	386	33	43			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	77	89			
cM capacity (veh/h)	551	1041	1565			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	304	185	43
Volume Left	60	168	0
Volume Right	245	0	22
cSH	886	1565	1700
Volume to Capacity	0.34	0.11	0.03
Queue Length 95th (m)	11.7	2.7	0.0
Control Delay (s)	11.2	7.0	0.0
Lane LOS	B	A	
Approach Delay (s)	11.2	7.0	0.0
Approach LOS	B		

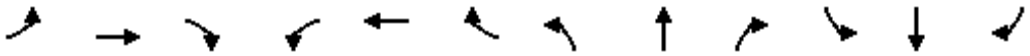
Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	25	145	65	25	80	220
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	158	71	27	87	239
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	375	207	326			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	375	207	326			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	81	94			
cM capacity (veh/h)	590	834	1234			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	185	98	326
Volume Left	27	71	0
Volume Right	158	0	239
cSH	786	1234	1700
Volume to Capacity	0.24	0.06	0.19
Queue Length 95th (m)	6.9	1.4	0.0
Control Delay (s)	11.0	6.0	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	6.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	75	25	20	70	15	15	70	15	15	105	105
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	82	27	22	76	16	16	76	16	16	114	114
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	92			109			427	264	95	310	269	84
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	92			109			427	264	95	310	269	84
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			96	88	98	97	82	88
cM capacity (veh/h)	1502			1482			400	625	962	562	621	975

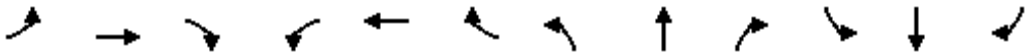
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	125	114	109	245
Volume Left	16	22	16	16
Volume Right	27	16	16	114
cSH	1502	1482	606	741
Volume to Capacity	0.01	0.01	0.18	0.33
Queue Length 95th (m)	0.3	0.3	4.9	11.0
Control Delay (s)	1.0	1.5	12.2	12.2
Lane LOS	A	A	B	B
Approach Delay (s)	1.0	1.5	12.2	12.2
Approach LOS			B	B

Intersection Summary			
Average Delay	7.8		
Intersection Capacity Utilization	29.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	30	270	110	30	225	175
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	293	120	33	245	190
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	815	136			152	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	815	136			152	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	89	68			83	
cM capacity (veh/h)	288	913			1429	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	326	152	435
Volume Left	33	0	245
Volume Right	293	33	0
cSH	750	1700	1429
Volume to Capacity	0.43	0.09	0.17
Queue Length 95th (m)	16.8	0.0	4.7
Control Delay (s)	13.4	0.0	5.2
Lane LOS	B		A
Approach Delay (s)	13.4	0.0	5.2
Approach LOS	B		

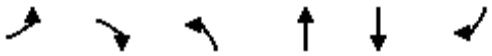
Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	20	120	225	15	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	22	130	245	16	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	592	658	16	592	592	87	16			152		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	592	658	16	592	592	87	16			152		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	100			83		
cM capacity (veh/h)	363	319	1063	363	347	972	1601			1429		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	0	152	261
Volume Left	0	0	0	245
Volume Right	0	0	130	0
cSH	1700	1700	1601	1429
Volume to Capacity	0.00	0.51	0.00	0.17
Queue Length 95th (m)	0.0	0.0	0.0	4.7
Control Delay (s)	0.0	0.0	0.0	7.6
Lane LOS	A	A		A
Approach Delay (s)	0.0	0.0	0.0	7.6
Approach LOS	A	A		

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	28.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	90	225	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	98	245	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	342	245	245			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	342	245	245			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	654	794	1322			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	98	245
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1322	1700
Volume to Capacity	0.00	0.00	0.14
Queue Length 95th (m)	0.0	0.0	0.0
Control Delay (s)	0.0	0.0	0.0
Lane LOS	A		
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		