Elm Place Mall
City of Greater Sudbury

Traffic Impact Study for
Vista Hospitality Co. (Canada) Ltd.

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Executive Summary

This report summarizes the traffic impact study prepared for the proposed distribution and warehousing redevelopment within the Elm Place Mall, in the City of Greater Sudbury [City]. The report assesses the impact of traffic related to the development on the adjacent roadway and provides recommendations to accommodate this traffic in a safe and efficient manner.

The proposed development includes the conversion of 7,018 m^2 of existing mall retail space to distribution and warehousing uses. The proposed development is divided into three areas. Area 1 includes 3,877 m^2 of warehousing or distribution centre space, Area 2 includes 2,258 m^2 of warehousing or self-storage space and Area 3 includes 882 m^2 of warehousing or self-storage space.

The scope of this analysis includes a review of the following intersections:

- Notre Dame Avenue / Ste Anne Road & Louis Street;
- Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street; and
- Elm Street / Durham Street.

Conclusions

1. The proposed development is expected to generate a total of 60 AM and 65 PM peak hour trips.
2. Detailed intersection counts were commissioned and obtained by JD Engineering at the study intersections.
3. An intersection operation analysis was completed at the study area intersections, using the existing and background (2028 and 2033) traffic volumes, with consideration for the projected adjacent development traffic growth and without the proposed development traffic. This enabled a review of existing and future traffic deficiencies that would be present without the influence of the proposed development. No improvements are recommended within the study area.
4. An estimate of the amount of traffic that would be generated by the Subject Site was prepared and assigned to the study area streets and intersections.
5. An intersection operation analysis was completed under total (2028 and 2033) traffic volumes with the proposed development operational at the study area intersections. No improvements are recommended within the study area.
6. In summary, the proposed development will not cause any operational issues and will not add significant delay or congestion to the local roadway network.

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1 Introduction

1.1 Background

Vista Hospitality Co. (Canada) Ltd. [the Owner] is proposing the conversion of 7,018 m^2 of existing retail space to distribution and warehousing uses within the Elm Place Mall, in the City of Greater Sudbury.

The proposed development is divided into three areas. Area 1 includes 3,877 m^2 of warehousing or distribution centre space, Area 2 includes 2,258 m^2 of warehousing or self-storage space and Area 3 includes 882 m^2 of warehousing or self-storage space.

It is anticipated that conversion will be complete and fully occupied by 2025.

The Owner has retained **JD Northcote Engineering Inc.** [JD Engineering] to prepare this traffic impact study in support of the proposed development.

1.2 Study Area

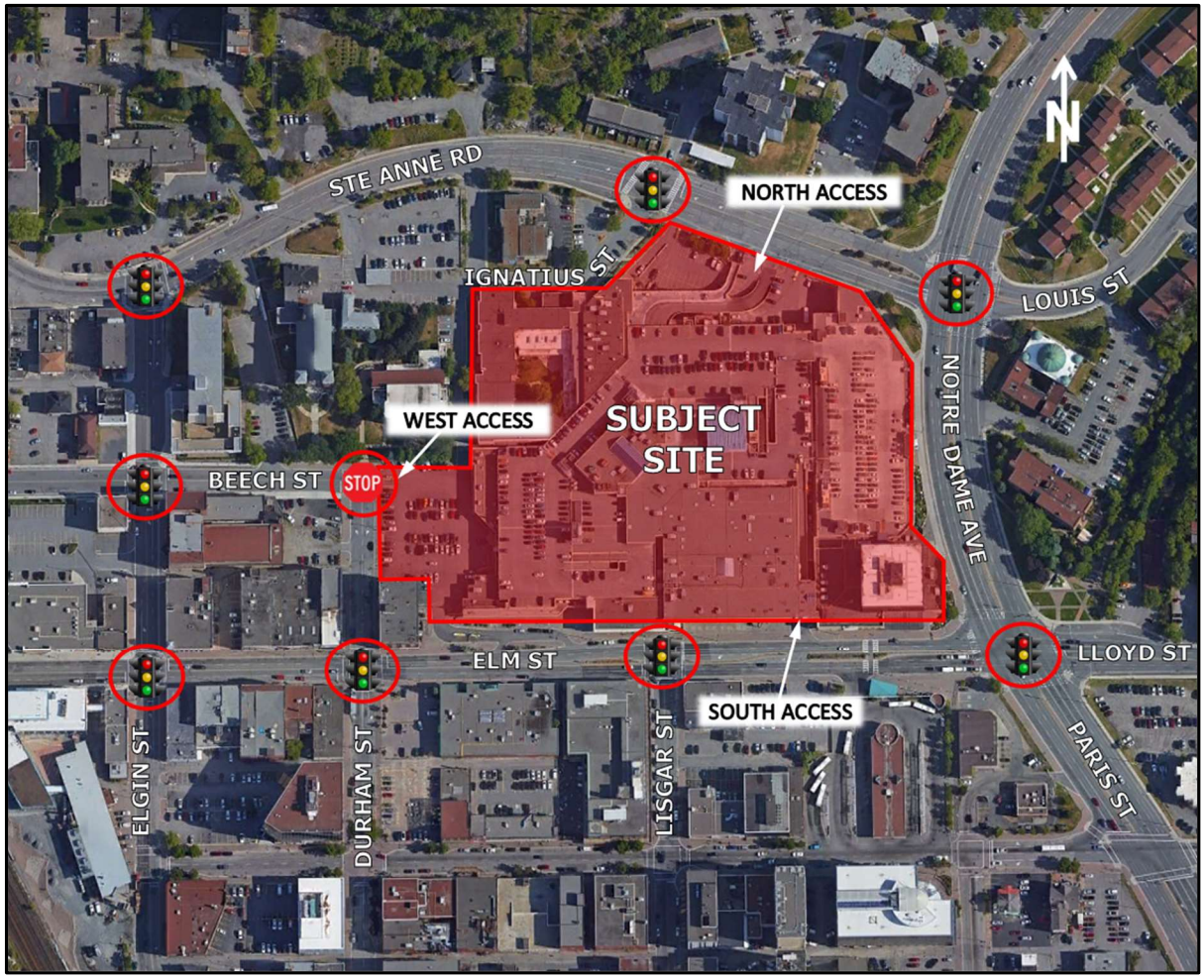
Figure 1 shows the location of the subject site and study area intersections in relation to the surrounding area. The Floor Plan-Level 1 by Luciw Boudreau Architecture is provided in **Appendix A**.

The subject site is bound by Ste Anne Road to the north, Notre Dame Avenue to the east, Elm Street to the south and Durham Street/Beech Street to the west.

Through consultation with the City, the following intersections are included in the traffic impact study:

- Notre Dame Avenue / Ste Anne Road & Louis Street;
- Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street; and
- Elm Street / Durham Street.

Figure 1 – Proposed Site Location and Study Area



1.3 Study Scope and Objectives

The purpose of this study is to identify the potential impacts to traffic flow at the site accesses and on the surrounding roadway network. The study analysis includes the following tasks:

Consult with the City to address any traffic-related issues or concerns they have with the proposed development;

- Determine existing traffic volumes and circulation patterns;
- Estimate future traffic volumes if the proposed development was not constructed, including the impact of additional proposed developments in the area;
- Complete level-of-service [LOS] analysis of horizon year (without the proposed development) traffic conditions and identify operational deficiencies;
- Estimate the amount of traffic that would be generated by the proposed development and assign to the roadway network;
- Complete LOS analysis of horizon year (with the proposed development) traffic conditions and identify additional operational deficiencies;
- Identify improvement options to address operational deficiencies;

- Complete a swept path analysis of the loading movements for the subject site using the AutoPATH software; and
- Document findings and recommendations in a final report.

1.4 Horizon Year and Analysis Periods

Traffic scenarios for the existing year (2023), 5-year horizon year (2028) and 10-year horizon year (2033) were selected for analysis of traffic operations in the study area. The weekday morning [AM] and weekday afternoon [PM] peak hours have been selected as the analysis periods for this study.

2 Information Gathering

2.1 Street and Intersection Characteristics

Notre Dame Avenue is a 6-lane, primary arterial road with an urban cross-section and sidewalk on both sides of the road. Notre Dame Avenue has an assumed (unposted) speed limit of 50 km/h and is under the jurisdiction of the City.

Paris Street is a 6-lane, primary arterial road with an urban cross-section and sidewalk on both sides of the road. Paris Street has an assumed (unposted) speed limit of 50 km/h and is under the jurisdiction of the City.

Ste Anne Road is a 4-lane, primary arterial road with an urban cross-section and sidewalk on both sides of the road. Ste Anne Road has an assumed (unposted) speed limit of 50 km/h and is under the jurisdiction of the City.

Elm Street is a 4-lane, secondary arterial road with an urban cross-section and sidewalk on both sides of the road. Elm Street has a posted speed limit of 50 km/h and is under the jurisdiction of the City.

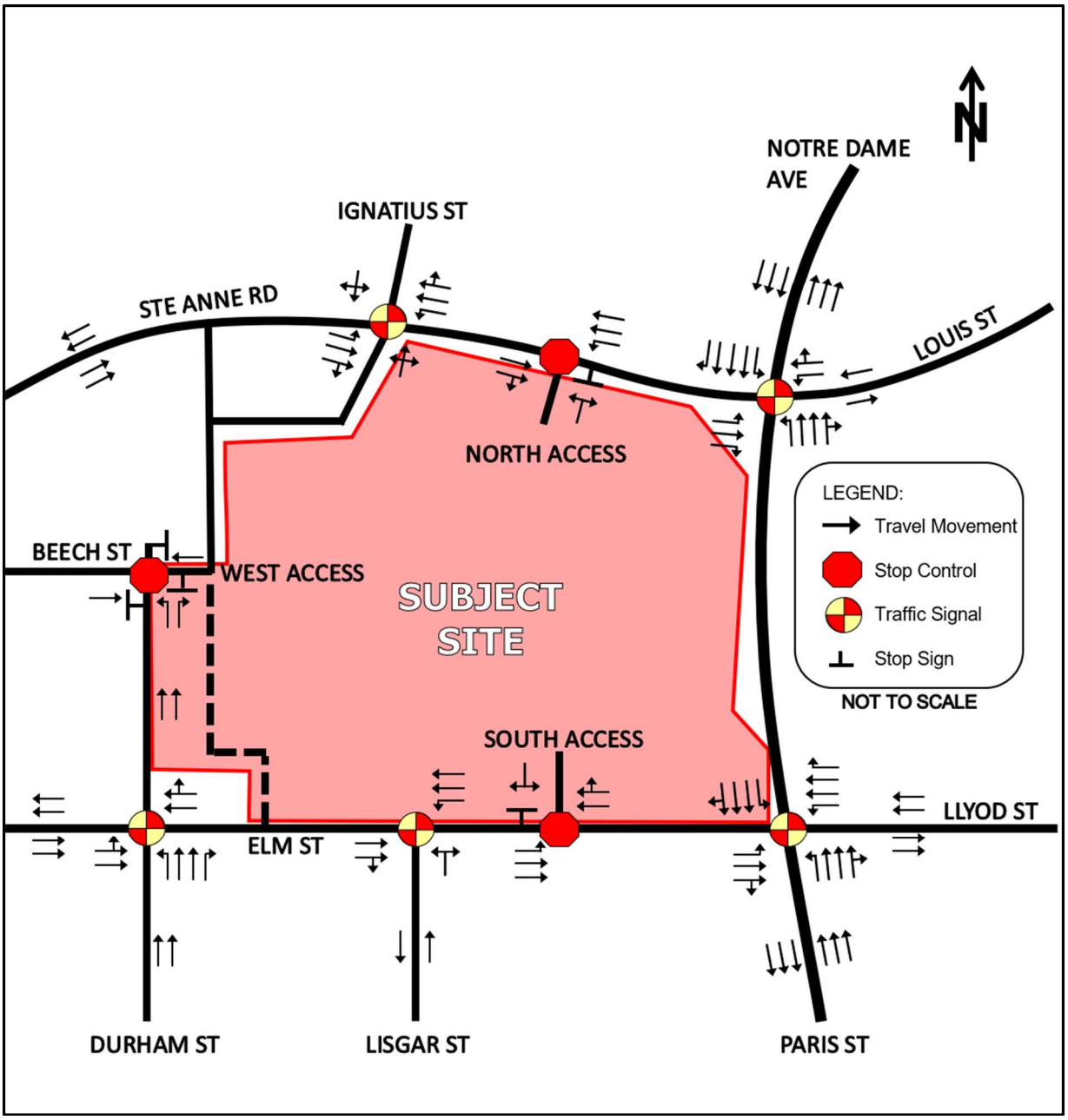
Lloyd Street is a 4-lane, secondary arterial road with an urban cross-section and sidewalk on both sides of the road. Llyod Street has a posted speed limit of 50 km/h and is under the jurisdiction of the City.

Louis Street is a 2-lane, collector road with an urban cross-section and sidewalk on both sides of the road. Louis Street has an assumed (unposted) speed limit of 50 km/h and is under the jurisdiction of the City.

Durham Street is a 2-lane (one-way northbound), local road with an urban cross-section and sidewalk on both sides of the road. Durham Street has an assumed (unposted) speed limit of 50 km/h and is under the jurisdiction of the City.

The existing intersection spacing and lane configuration within the study area is illustrated in **Figure 2**.

Figure 2 – Existing (2023) Intersection Spacing and Lane Configuration within Study Area



2.2 Local Transportation Infrastructure Improvements

Based on a review of the City's Transportation Master Plan (2016) [TMP] and 2023 Capital Budget, there are no planned road improvements in the study area.

2.3 Development Growth

In review of the City's development information and through discussions with City planning staff, the following developments have been noted for consideration with respect to impacts on the local traffic volumes / infrastructure capacity:

- Manitou Residential Development –
  - Two high-rise buildings with a total of 826 dwelling units;
  - 476 units dedicated to active older adults and 350 units at rental rates geared to income; and
- 700 Paris Street Development –
  - A 16-storey building with 198 units;
  - A 20-storey building with 250 units and 500m^2 GFA of ground floor restaurant; and
  - A 10-storey retirement home with 100 rooms.

Figure 3 illustrates the location of the above developments in relation to the subject site.

Figure 3 – Adjacent Development Location

2.3.1 Development Growth Traffic Generation and Assignment

Traffic volumes generated by the Manitou Residential Development have been determined based on the *Proposed Project Manitou Residential Development Traffic Impact Study* (Transplan Associates, May 2018) [Manitou TIS]. Excerpts provided in **Appendix B**.

Traffic volumes generated by the 700 Paris Street Development have been determined based on the *700 Paris Street Traffic Impact Study* (JD Northcote Engineering Inc., December 2022) [700 Paris TIS]. Excerpts provided in **Appendix B**.

The assignment of the adjacent development volumes through the study area road network is illustrated in **Figure 4** and **Figure 5**.

Build-out of the adjacent developments has been assumed for the 2028 horizon year.

2.4 Background Traffic Growth

Based on our correspondence with City Staff, a background growth rate of 1.5% per annum has been applied to traffic volumes in the study area.

2.5 Traffic Counts

Detailed turning movement traffic and pedestrian counts were commissioned and obtained by JD Engineering at the study intersections. **Table 1** summarizes the traffic count data collection information. Detailed traffic count data can be found in **Appendix C**.

Table 1 – Traffic Count Data

Intersection (N-S Street / E-W Street)	Count Date	AM Peak Hour	PM Peak Hour	Source
Notre Dame Avenue / Ste Anne Road & Louis Street	Thursday April 7, 2022	07:45 – 08:45	15:45 – 16:45	City
Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street	Thursday April 7, 2022	07:30 – 08:30	16:00 – 17:00	
Elm Street / Durham Street	Thursday June 22, 2023	09:00 – 10:00	16:30 – 17:30	JD Eng.*

*Traffic counts were completed by Ontario Traffic Inc. on behalf of JD Engineering.

2.6 Existing Traffic Volumes

The 2023 existing AM and PM peak hour traffic volumes at the study area intersections are illustrated in **Figure 6**, established based on the conducted traffic counts, in addition to the growth rate noted in Section 2.5.

2.7 Horizon Year Traffic Volumes

The background (2028 and 2033) horizon year traffic volumes are illustrated in **Figure 7** and **Figure 8.** The background volumes are based on the existing (2023) traffic volumes, adjusted to reflect the annual background growth rate of 1.5% in addition to the noted adjacent development traffic volumes (outlined in Section 2.3).

3 Intersection Operation without Proposed Development

3.1 Introduction

Existing and background horizon operational conditions were established to determine how the street network within the study area is currently functioning without the proposed development. This provides a base case scenario to compare with future development scenarios. Traffic operations within the study area were evaluated using the existing and future background traffic volumes with the existing road configuration and traffic control. The intersection performance was measured using the traffic analysis software, Synchro 11, a deterministic model that employs Highway Capacity Manual and Intersection Capacity Utilization methodologies for analyzing intersection operations. These procedures are accepted by provincial and municipal agencies throughout North America.

Synchro 11 enables the study area to be graphically defined in terms of streets and intersections, along with their geometric and traffic control characteristics. The user is able to evaluate both signalized and unsignalized intersections in relation to each other, thus not only providing level of service for the individual intersections, but also enabling an assessment of the impact the various intersections in a network have on each other in terms of spacing, traffic congestion, delay, and queuing.

The intersection operations were also evaluated in terms of the LOS. LOS is a common measure of the quality of performance at an intersection and is defined in terms of vehicular delay. This delay includes deceleration delay, queue move-up time, stopped delay, and acceleration delay. LOS is expressed on a scale of A through F, where LOS A represents very little delay (i.e. less than 10 seconds per vehicle) and LOS F represents very high delay (i.e. greater than 50 seconds per vehicle for a stop sign controlled intersection and greater than 80 seconds per vehicle for a signalized intersection).

The LOS criteria for signalized and stop sign-controlled intersections are shown in **Table 2**. A description of traffic performance characteristics is included for each LOS.

Table 2 – Level of Service Criteria for Intersections

LOS	LOS Description	Control Delay (seconds per vehicle)	
		Signalized Intersections	**Stop Controlled Intersections**
A	Very low delay; most vehicles do not stop (**Excellent**)	less than 10.0	less than 10.0
B	Higher delay; more vehicles stop (**Very Good**)	between 10.0 and 20.0	between 10.0 and 15.0
C	Higher level of congestion; number of vehicles stopping is significant, although many still pass through intersection without stopping **(Good**)	between 20.0 and 35.0	between 15.0 and 25.0
D	Congestion becomes noticeable; vehicles must sometimes wait through more than one red light; many vehicles stop (**Satisfactory**)	between 35.0 and 55.0	between 25.0 and 35.0
E	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of **acceptable** delay	between 55.0 and 80.0	between 35.0 and 50.0
F	This level is considered to be unacceptable to most drivers; occurs when arrival flow rates exceed the capacity of the intersection (**Unacceptable**)	greater than 80.0	greater than 50.0

Reference: Highway Capacity Manual 2010

3.2 Existing Intersection Operation

The results of the LOS analysis under existing (2023) traffic volumes during the AM and PM peak hour can be found below in **Table 3**. Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix D**.

Table 3 – Existing (2023) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour					Weekday PM Peak Hour				
	V/C	Delay (s)	LOS	95% Queue (m)		V/C	Delay (s)	LOS	95% Queue (m)	
				Storage	Model				Storage	Model
Notre Dame Avenue / Ste Anne Road & Louis Street (signalized)	0.31	12.3	B	-	-	0.41	12.4	B	-	-
EBL	0.16	24.8	C	135	13	0.38	26.7	C	135	30
EBT	0.03	23.9	C	-	5	0.05	24.0	C	-	8
EBR	0.07	24.1	C	135	9	0.11	24.4	C	135	14
WBL	0.11	24.4	C	50	10	0.14	24.6	C	50	13
WBTR	0.06	24.1	C	-	8	0.03	23.9	C	-	7
NBL	0.33	7.2	A	45	13	0.34	7.2	A	45	14
NBTR	0.21	6.8	A	-	19	0.39	7.9	A	-	38
SBL	0.03	11.5	B	90	3	0.07	12.3	B	90	4
SBT	0.38	14.0	B	-	42	0.38	14.1	B	-	1
SBR	0.08	11.9	B	90	9	0.06	11.7	B	90	6
Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street (signalized)	0.36	25.9	C	-	-	0.58	29.0	C	-	-
EBL	0.24	25.2	C	50	27	0.50	28.5	C	50	48
EBTR	0.18	25.1	C	-	27	0.35	27.4	C	-	50
WBL	0.10	32.2	C	25	13	0.09	32.5	C	25	11
WBT	0.23	33.5	C	-	34	0.27	34.3	C	-	39
WBR	0.07	31.9	C	35	8	0.08	32.3	C	35	12
NBL	0.23	19.8	B	90	13	0.23	22.3	C	90	14
NBTR	0.26	23.8	C	-	42	0.61	32.4	C	-	100
SBL	0.15	17.4	B	50	15	0.59	23.3	C	50	31
SBTR	0.46	25.6	C	-	74	0.40	24.7	C	-	64
Elm Street / Durham Street (signalized)	0.18	11.5	B	-	-	0.23	12.0	B	-	-
EBTL	0.26	11.4	B	-	23	0.35	12.0	B	-	29
WBTR	0.16	10.8	B	-	14	0.29	11.6	B	-	27
NBL	0.08	13.4	B	35	9	0.09	13.4	B	35	8
NBT	0.03	13.1	B	-	4	0.02	13.0	B	-	3
NBR	0.04	13.1	B	-	6	0.05	13.2	B	-	5

The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

The anticipated 95th percentile queues for all other movements at the study area intersections can be accommodated by the existing auxiliary lane storage lengths.

No additional improvements are recommended within the study area.

3.3 Background (2028) Intersection Operation

The results of the LOS analysis under background (2028) traffic volumes during the AM and PM peak hour can be found below in **Table 4**. Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix E**.

Table 4 – Background (2028) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour					Weekday PM Peak Hour				
	V/C	Delay (s)	LOS	95% Queue (m)		V/C	Delay (s)	LOS	95% Queue (m)	
				Storage	Model				Storage	Model
Notre Dame Avenue / Ste Anne Road & Louis Street (signalized)	0.35	12.5	B	-	-	0.45	12.8	B	-	-
EBL	0.17	24.9	C	135	14	0.42	27.0	C	135	32
EBT	0.04	23.9	C	-	6	0.06	24.0	C	-	9
EBR	0.08	24.2	C	135	9	0.12	24.5	C	135	15
WBL	0.12	24.5	C	50	10	0.16	24.8	C	50	14
WBTR	0.07	24.1	C	-	9	0.04	23.9	C	-	7
NBL	0.38	7.6	A	45	14	0.39	7.7	A	45	14
19ANBTR	0.24	6.9	A	-	22	0.43	8.2	A	-	43
SBL	0.04	11.7	B	90	4	0.09	12.8	B	90	5
SBT	0.42	14.6	B	-	48	0.42	14.6	B	-	46
SBR	0.09	12.0	B	90	9	0.06	11.8	B	90	7
Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street (signalized)	0.40	26.4	C	-	-	0.66	30.3	C	-	-
EBL	0.26	25.3	C	50	28	0.55	30.0	C	50	51
EBTR	0.20	25.3	C	-	29	0.38	27.8	C	-	54
WBL	0.11	32.3	C	25	14	0.10	32.7	C	25	11
WBT	0.25	33.7	C	-	36	0.29	34.6	C	-	42
WBR	0.08	31.9	C	35	9	0.09	32.5	C	35	14
NBL	0.30	20.6	C	90	15	0.30	23.1	C	90	16
NBTR	0.29	24.4	C	-	47	0.68	34.4	C	-	113
SBL	0.18	17.5	B	50	16	0.68	29.0	C	50	41
SBTR	0.51	26.5	C	-	84	0.44	25.4	C	-	72
Elm Street / Durham Street (signalized)	0.20	11.7	B	-	-	0.25	12.2	B	-	-
EBTL	0.29	11.6	B	-	25	0.38	12.2	B	-	32
WBTR	0.18	10.9	B	-	16	0.32	11.8	B	-	30
NBL	0.09	13.4	B	35	9	0.09	13.4	B	35	9
NBT	0.03	13.1	B	-	4	0.03	13.0	B	-	3
NBR	0.04	13.2	B	-	6	0.05	13.2	B	-	5

The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

The anticipated 95th percentile queue for the eastbound left turn movement for the Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street intersection extends beyond the eastbound left turn movement lane storage length during the PM peak hour; however, the eastbound left turn queue will clear at every cycle of the traffic light and the excess queue only occurs during the PM peak hour, at the end of the north / south traffic signal phase. The resulting excess queue will not extend into the

adjacent intersection, and it will not cause any operational or traffic safety issues. No infrastructure improvements are recommended as a result of the anticipated queue.

The anticipated 95th percentile queues for all other movements at the study area intersections can be accommodated by the existing auxiliary lane storage lengths.

No additional improvements are recommended within the study area.

3.4 Background (2033) Intersection Operation

The results of the LOS analysis under background (2033) traffic volumes during the AM and PM peak hour can be found below in
Table 5. Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix E**.

Table 5 – Background (2033) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour					Weekday PM Peak Hour				
	V/C	Delay (s)	LOS	95% Queue (m)		V/C	Delay (s)	LOS	95% Queue (m)	
				Storage	Model				Storage	Model
Notre Dame Avenue / Ste Anne Road & Louis Street (signalized)	0.38	12.8	B	-	-	0.48	13.1	B	-	-
EBL	0.18	25.0	C	135	15	0.45	27.4	C	135	34
EBT	0.04	23.9	C	-	6	0.06	24.0	C	-	9
EBR	0.08	24.2	C	135	10	0.13	24.6	C	135	15
WBL	0.13	24.6	C	50	11	0.17	24.8	C	50	14
WBTR	0.07	24.1	C	-	9	0.04	23.9	C	-	8
NBL	0.43	8.1	A	45	15	0.45	8.2	A	45	15
19ANBTR	0.26	7.0	A	-	23	0.46	8.5	A	-	47
SBL	0.04	11.9	B	90	4	0.10	13.4	B	90	5
SBT	0.45	15.1	B	-	52	0.46	15.2	B	-	50
SBR	0.10	12.2	B	90	9	0.07	12.0	B	90	8
Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street (signalized)	0.44	26.9	C	-	-	0.73	31.9	C	-	-
EBL	0.29	25.5	C	50	30	0.61	32.2	C	50	55
EBTR	0.22	25.5	C	-	31	0.42	28.3	C	-	59
WBL	0.12	32.5	C	25	15	0.11	32.8	C	25	12
WBT	0.27	34.0	C	-	39	0.32	34.9	C	-	45
WBR	0.08	32.1	C	35	12	0.09	32.6	C	35	15
NBL	0.36	21.3	C	90	16	0.35	23.8	C	90	17
NBTR	0.31	24.7	C	-	50	0.74	36.4	D	-	123
SBL	0.20	17.6	B	50	16	0.76	40.5	D	50	51
SBTR	0.55	27.2	C	-	92	0.48	25.9	C	-	79
Elm Street / Durham Street (signalized)	0.21	11.8	B	-	-	0.27	12.3	B	-	-
EBTL	0.31	11.7	B	-	28	0.41	12.4	B	-	34
WBTR	0.19	11.0	B	-	17	0.34	11.9	B	-	32
NBL	0.09	13.4	B	35	10	0.10	13.5	B	35	9
NBT	0.03	13.1	B	-	4	0.03	13.1	B	-	3
NBR	0.05	13.2	B	-	6	0.06	13.2	B	-	5

The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

The anticipated 95th percentile queue for the eastbound and southbound left turn movement for the Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street intersection extends beyond the eastbound left turn movement lane storage length during the PM peak hour; however, the eastbound left turn queue will clear at every cycle of the traffic light and the excess queue only occurs during the PM peak hour, at the end of the north / south traffic signal phase. The resulting excess queue will not extend into the adjacent intersection, and it will not cause any operational or traffic safety issues. No infrastructure improvements are recommended as a result of the anticipated queue.

The anticipated 95th percentile queues for all other movements at the study area intersections can be accommodated by the existing auxiliary lane storage lengths.

No additional improvements are recommended within the study area.

4 Proposed Development Traffic Generation and Assignment

4.1 Traffic Generation

The traffic generation for proposed development has been estimated based the type of land use, development size and data provided in the Institute of Transportation Engineers [ITE] *Trip Generation Manual* (11th Edition) [ITE Trip Generation Manual]. The following ITE land use has been applied to estimate the traffic for the proposed development:

- ITE land use 150 (Warehousing).

The utilized traffic rates and estimated trip generation of the proposed development is illustrated below in **Table 6**.

Table 6 – Estimated Trip Generation of the Proposed Development

Land Use	Trip Basis	AM Peak Hour			PM Peak Hour		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Warehousing ITE Land Use: 150	equation (1,000 ft² GFA)	T = 0.12 (X) + 23.62			T = 0.12 (X) + 26.48		
	distribution	77%	23%	100%	28%	72%	100%
Subject Site (Area 1&2)	*99,000 ft²	27	9	36	11	27	38
Subject Site (Area 3)	*5,700 ft²	19	5	24	8	19	27
Total Trips	***104,700 ft²**	**46**	**14**	**60**	**19**	**46**	**65**

* The above traffic generation is based on a previous iteration of the site plan with which proposed a greater GFA conversion than the current plan (7,018 m² or 75,535 ft²). Rather than update the analysis to consider the reduced traffic generation, no changes have been applied, creating a conservative estimate of future traffic projections.

As previously mentioned, the proposed development includes the conversion of existing retail spaces within the Elm Place Mall, to distribution and warehousing uses. In order to remain conservative, the ITE

Land Use: 150 has been applied and no trip reduction has been applied to consider the removal of the existing retail trips (i.e. it has been assumed that the existing retail spaces being converted are currently empty).
As identified in Section 1.1, Area 2 and Area 3 may be used for self-storage space. Since the traffic generation rate for Warehousing is higher than the traffic generation rate for self-storage space, the more conservative traffic generation rate has been applied to the entire space.

Furthermore, no transportation modal split reduction has been applied to the above-noted traffic generation calculation.

4.2 Traffic Assignment

For the purposes of this study, it has been assumed that all traffic generated by the proposed development will be new traffic and would not be in the study area if the development was not constructed.

The ITE data provides the anticipated percentage of new traffic entering and exiting during the peak hour. The distribution of traffic has been calculated based the existing traffic volumes within the study area.

Existing traffic volumes entering/exiting the road network at the extents of the study were totaled (ie. Notre Dame Avenue, Louis Street, Lloyd Street, Paris Street, Durham Street, Elm Street and Ste Anne Road). This value represents the total traffic volumes entering/existing the study area. Each individual direction was divided by this total to derive the corresponding distribution percentage for each direction/route.

Table 7 summarizes the overall trip distribution for the proposed development. Additional distribution calculations are provided in **Appendix H**.

Table 7 – Proposed Development Traffic Distribution

Travel Direction (to / from)	Percent of Total Traffic Generation			
	AM		PM	
	IN	OUT	IN	OUT
North via Notre Dame Ave	39%	27%	28%	38%
South via Paris St	23%	40%	33%	26%
South via Durham St	5%	0%	4%	0%
East via Lloyd St	13%	11%	12%	15%
West via Elm St	14%	11%	14%	14%
West via Ste Anne Rd	6%	11%	9%	7%
TOTAL	**100%**	**100%**	**100%**	**100%**

Using the above traffic distribution, trips were further distributed and assigned to each access location based on the logical route of travel for each movement. It was assumed that traffic generated by Area 1 & 2 would use the parking garage and traffic generated by Area 3 would use the surface parking lot on Beech Street. The route selection to access the above-noted parking lots was estimated assuming

Notre Dame Avenue (7 trips) and 6% will entre via Ste Anne Road (1 trip). The shortest route of travel for this traffic would be eastbound through movements from Beech Street into the West Access.

For Area 1 & 2, and additional distribution was estimated for the traffic entering the parking garage via the North Access and South Access. The assumptions for this distribution are provided in **Appendix H**.

The site traffic assignment for buildout of the proposed development for the AM and PM peak hour is illustrated in **Figure 9**.

4.3 Total Horizon Year Traffic Volumes with the Proposed Development

For the total (2028 and 2033) horizon year traffic volumes, the proposed development traffic was added to the background (2028 and 2033) traffic volumes. The resulting total (2028 and 2033) horizon year traffic volumes for the AM and PM peak hour are illustrated in **Figure 10** and **Figure 11**.

5 Intersection Operation with Proposed Development

5.1 Total (2028) Intersection Operation

The results of the LOS analysis under total (2028) traffic volumes during the AM and PM peak hour can be found below in **Table 8**. Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix F**.

Table 8 – Total (2028) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour					Weekday PM Peak Hour				
	V/C	Delay (s)	LOS	95% Queue (m)		V/C	Delay (s)	LOS	95% Queue (m)	
				Storage	Model				Storage	Model
Notre Dame Avenue / Ste Anne Road & Louis Street (signalized)	0.35	12.6	B	-	-	0.46	12.9	B	-	-
EBL	0.18	25.0	C	135	15	0.46	27.5	C	135	35
EBT	0.04	23.9	C	-	6	0.06	24.0	C	-	9
EBR	0.08	24.2	C	135	9	0.13	24.5	C	135	15
WBL	0.12	24.5	C	50	10	0.16	24.8	C	50	14
WBTR	0.07	24.1	C	-	9	0.04	23.9	C	-	7
NBL	0.39	7.7	A	45	14	0.40	7.7	A	45	15
19ANBTR	0.24	6.9	A	-	22	0.43	8.3	A	-	43
SBL	0.04	11.7	B	90	4	0.09	12.9	B	90	5
SBT	0.42	14.6	B	-	48	0.42	14.7	B	-	47
SBR	0.10	12.1	B	90	9	0.07	11.9	B	90	7
Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street (signalized)	0.41	26.5	C	-	-	0.67	30.4	C	-	-
EBL	0.27	25.3	C	50	29	0.57	30.4	C	50	53
EBTR	0.20	25.4	C	-	29	0.40	28.0	C	-	56
WBL	0.11	32.4	C	25	14	0.10	32.7	C	25	11
WBT	0.25	33.8	C	-	37	0.29	34.6	C	-	42
WBR	0.08	31.9	C	35	9	0.09	32.5	C	35	14
NBL	0.34	20.9	C	90	16	0.32	23.3	C	90	17
NBTR	0.29	24.4	C	-	47	0.68	34.5	D	-	113
SBL	0.18	17.5	B	50	16	0.68	29.0	D	50	42
SBTR	0.51	26.5	C	-	85	0.45	25.4	C	-	73
Elm Street / Durham Street (signalized)	0.20	11.7	B	-	-	0.25	12.2	B	-	-
EBTL	0.30	11.6	B	-	26	0.39	12.2	B	-	32
WBTR	0.19	10.9	B	-	16	0.32	11.8	B	-	30
NBL	0.09	13.4	B	35	9	0.09	13.4	B	35	9
NBT	0.03	13.1	B	-	4	0.03	13.0	B	-	3
NBR	0.04	13.2	B	-	6	0.05	13.2	B	-	5

The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

The anticipated 95th percentile queue for the eastbound left turn movement for the Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street intersection extends beyond the eastbound left turn movement lane storage length during the PM peak hour; however, the eastbound left turn queue will clear at every cycle of the traffic light and the excess queue only occurs during the PM peak hour, at the end of the north / south traffic signal phase. The resulting excess queue will not extend into the adjacent intersection and it will not cause any operational or traffic safety issues. No infrastructure improvements are recommended as a result of the anticipated queue.

The anticipated 95th percentile queues for all other movements at the study area intersections can be accommodated by the existing auxiliary lane storage lengths.

No additional improvements are recommended within the study area.

5.2 Total (2033) Intersection Operation

The results of the LOS analysis under total (2033) traffic volumes during the AM and PM peak hour can be found below in **Table 9**. Existing intersection geometry and traffic control have been utilized for this scenario. Detailed output of the Synchro analysis can be found in **Appendix F**.

Table 9 – Total (2033) LOS

Location (N-S Street / E-W Street)	Weekday AM Peak Hour					Weekday PM Peak Hour				
	V/C	Delay (s)	LOS	95% Queue (m)		V/C	Delay (s)	LOS	95% Queue (m)	
				Storage	Model				Storage	Model
Notre Dame Avenue / Ste Anne Road & Louis Street (signalized)	0.39	12.9	B	-	-	0.50	13.3	B	-	-
EBL	0.19	25.0	C	135	15	0.49	27.9	C	135	38
EBT	0.04	23.9	C	-	6	0.06	24.0	C	-	9
EBR	0.08	24.2	C	135	10	0.14	24.6	C	135	16
WBL	0.13	24.6	C	50	11	0.17	24.8	C	50	14
WBTR	0.07	24.1	C	-	9	0.04	23.9	C	-	8
NBL	0.44	8.2	A	45	15	0.45	8.2	A	45	16
19ANBTR	0.26	7.0	A	-	23	0.46	8.5	A	-	47
SBL	0.04	11.9	B	90	4	0.10	13.5	B	90	5
SBT	0.46	15.2	B	-	52	0.46	15.2	B	-	51
SBR	0.11	12.4	B	90	10	0.07	12.1	B	90	8
Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street (signalized)	0.44	26.9	C	-	-	0.75	32.2	C	-	-
EBL	0.29	25.5	C	50	31	0.63	33.2	C	50	56
EBTR	0.22	25.5	C	-	32	0.43	28.7	C	-	61
WBL	0.12	32.5	C	25	15	0.11	33.1	C	25	12
WBT	0.27	34.1	C	-	39	0.32	35.2	D	-	45
WBR	0.08	32.1	C	35	12	0.09	32.8	C	35	15
NBL	0.40	24.7	C	90	17	0.35	23.0	C	90	18
NBTR	0.31	24.4	C	-	51	0.73	36.2	D	-	124
SBL	0.20	17.6	B	50	16	0.76	41.7	D	50	51
SBTR	0.55	27.2	C	-	92	0.49	26.8	C	-	79
Elm Street / Durham Street (signalized)	0.22	11.8	B	-	-	0.27	12.4	B	-	-
EBTL	0.32	11.8	B	-	28	0.41	12.5	B	-	35
WBTR	0.20	11.0	B	-	17	0.35	12.0	B	-	32
NBL	0.09	13.4	B	35	10	0.10	13.5	B	35	9
NBT	0.03	13.1	B	-	4	0.03	13.1	B	-	3
NBR	0.05	13.2	B	-	6	0.06	13.2	B	-	5

The results of the LOS analysis indicate that all intersections are operating within the typical design limits noted in Section 3.1.

The anticipated 95th percentile queue for the eastbound left turn movement for the Notre Dame Avenue & Paris Street / Elm Street & Lloyd Street intersection extends beyond the eastbound left turn movement lane storage length during the PM peak hour; however, the eastbound left turn queue will

clear at every cycle of the traffic light and the excess queue only occurs during the PM peak hour, at the end of the north / south traffic signal phase. The resulting excess queue will not extend into the adjacent intersection, and it will not cause any operational or traffic safety issues. No infrastructure improvements are recommended as a result of the anticipated queue.

The anticipated 95th percentile queues for all other movements at the study area intersections can be accommodated by the existing auxiliary lane storage lengths.

No additional improvements are recommended within the study area.

5.3 Swept Path Analysis

A swept path analysis has been provided in **Appendix G** to illustrate that the following vehicles can access the site as intended:

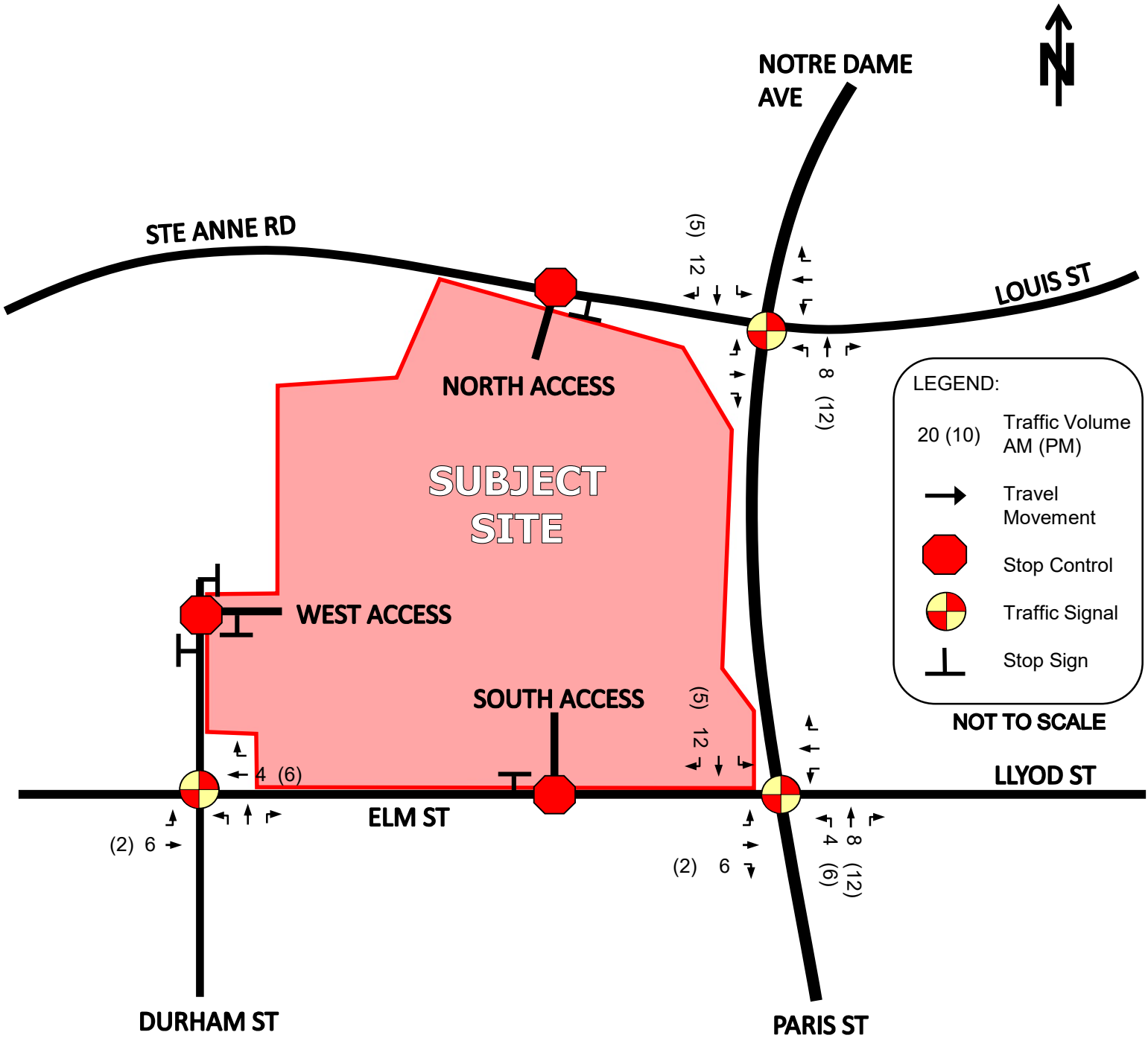
- TAC WB-20 Tractor-Semitrailer; and
- TAC Heavy Single Unit Truck.

6 Summary

Vista Hospitality Co. (Canada) Ltd. retained **JD Engineering** to prepare this traffic impact study in support of the proposed conversion of 7,018 m^2 of existing retail space to distribution and warehousing uses within the Elm Place Mall, in the City of Greater Sudbury. The proposed Floor Plan-Level 1 is shown in **Appendix A**. This chapter summarizes the conclusions and recommendations from the study.

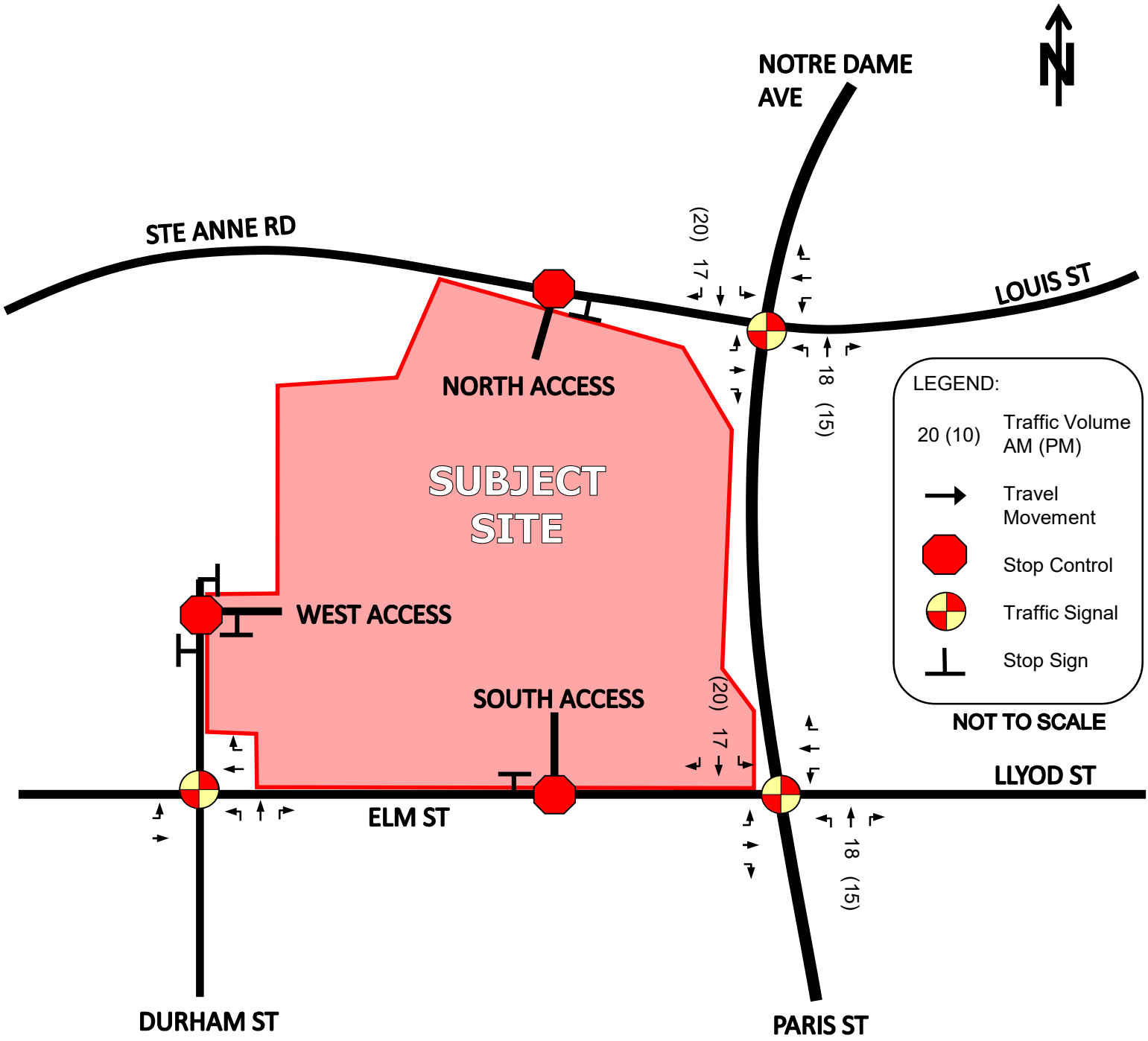
1. The proposed development is expected to generate a total of 60 AM and 65 PM peak hour trips.
2. Detailed intersection counts were commissioned and obtained by JD Engineering at the study intersections.
3. An intersection operation analysis was completed at the study area intersections, using the existing and background (2028 and 2033) traffic volumes, with consideration for the projected adjacent development traffic growth and without the proposed development traffic. This enabled a review of existing and future traffic deficiencies that would be present without the influence of the proposed development. No improvements are recommended within the study area.
4. An estimate of the amount of traffic that would be generated by the Proposed Development was prepared and assigned to the study area streets and intersections.
5. An intersection operation analysis was completed under total (2028 and 2033) traffic volumes with the proposed development operational at the study area intersections. No improvements are recommended within the study area.
6. In summary, the proposed development will not cause any operational issues and will not add significant delay or congestion to the local roadway network.

Figure 4: Adjacent Development Traffic Volumes – Manitou Residential Development



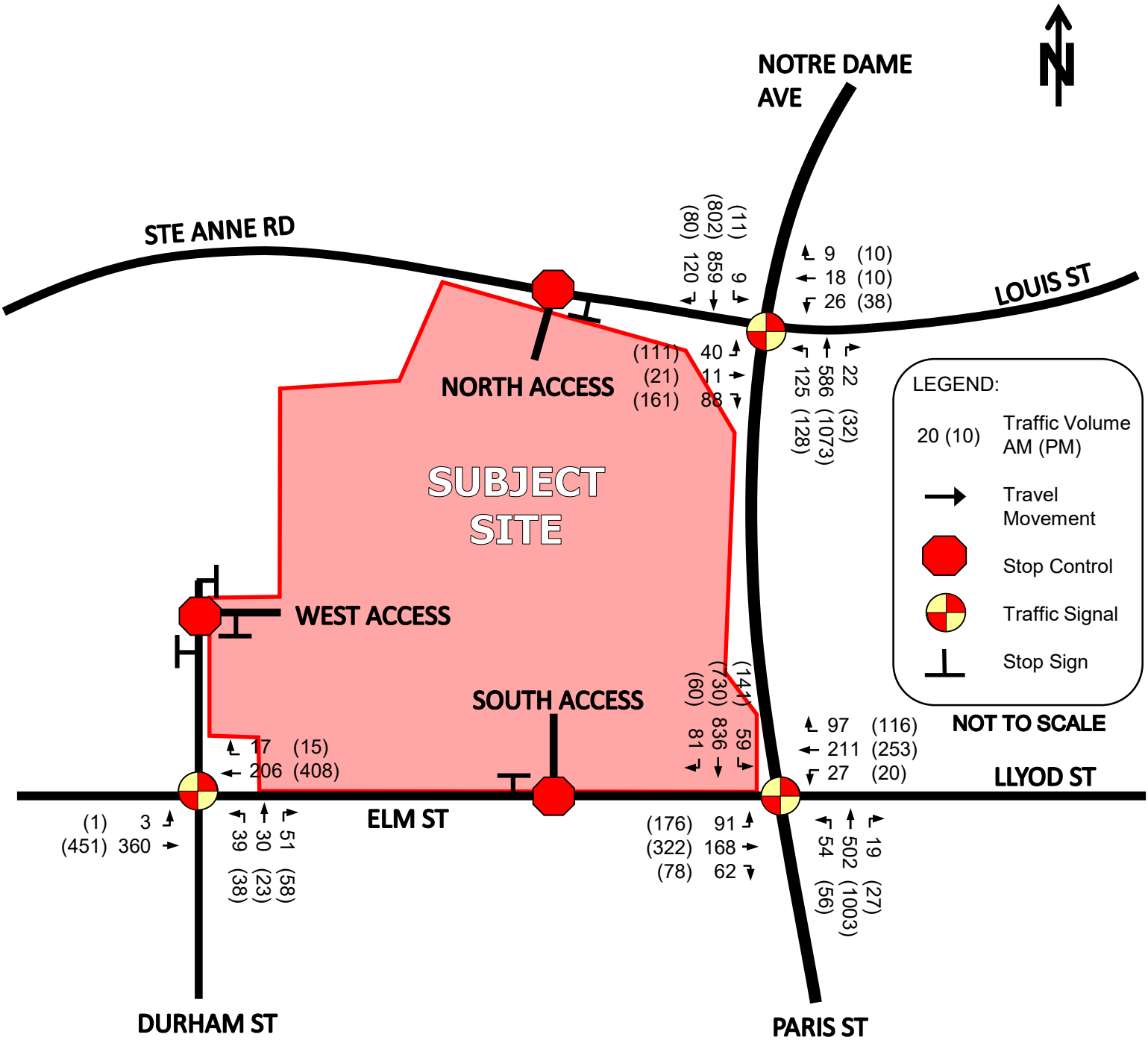
ENGINEERING

Figure 5: Adjacent Development Traffic Volumes – 700 Paris Street Development



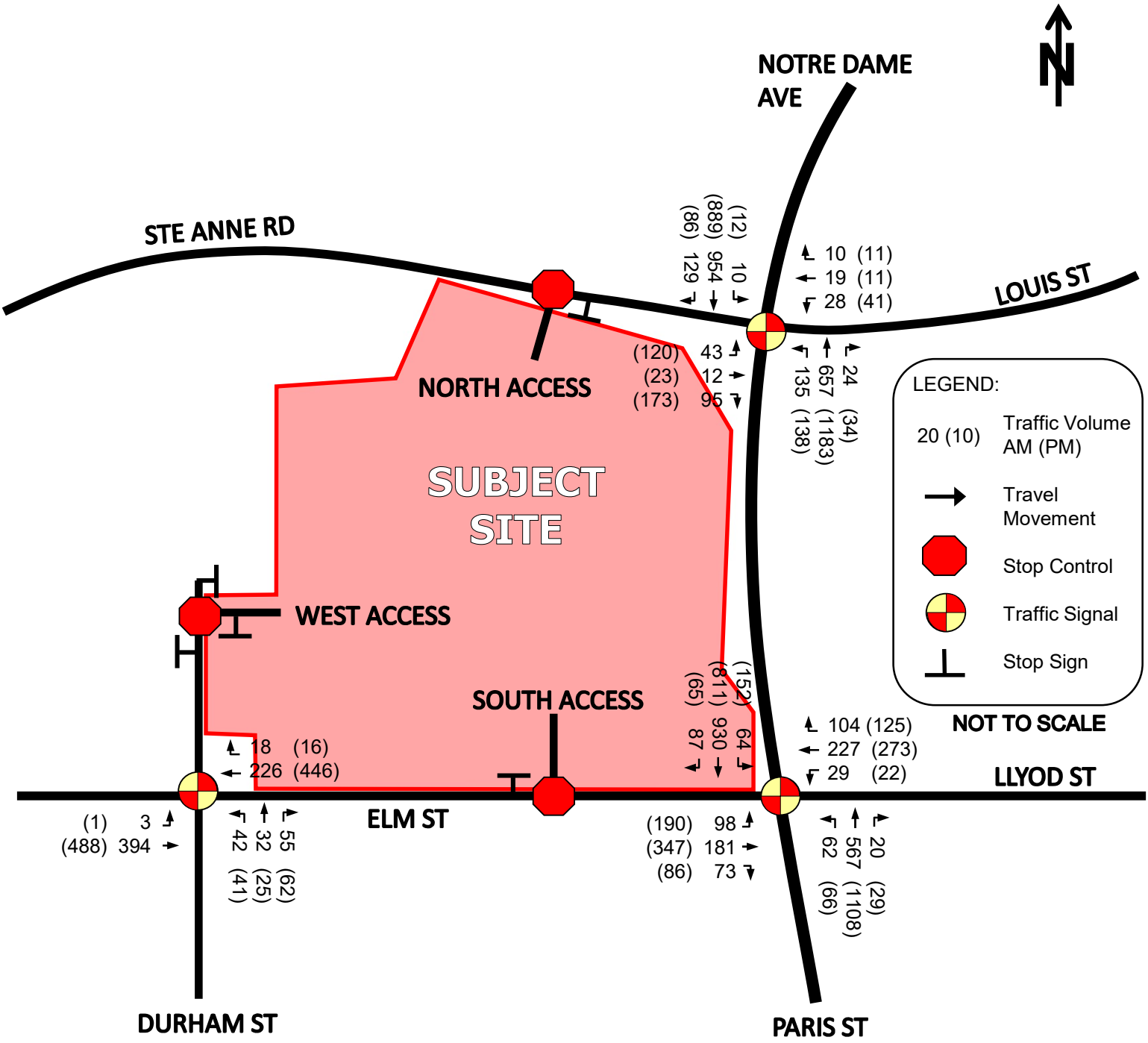
ENGINEERING

Figure 6: Existing (2023) Traffic Volumes



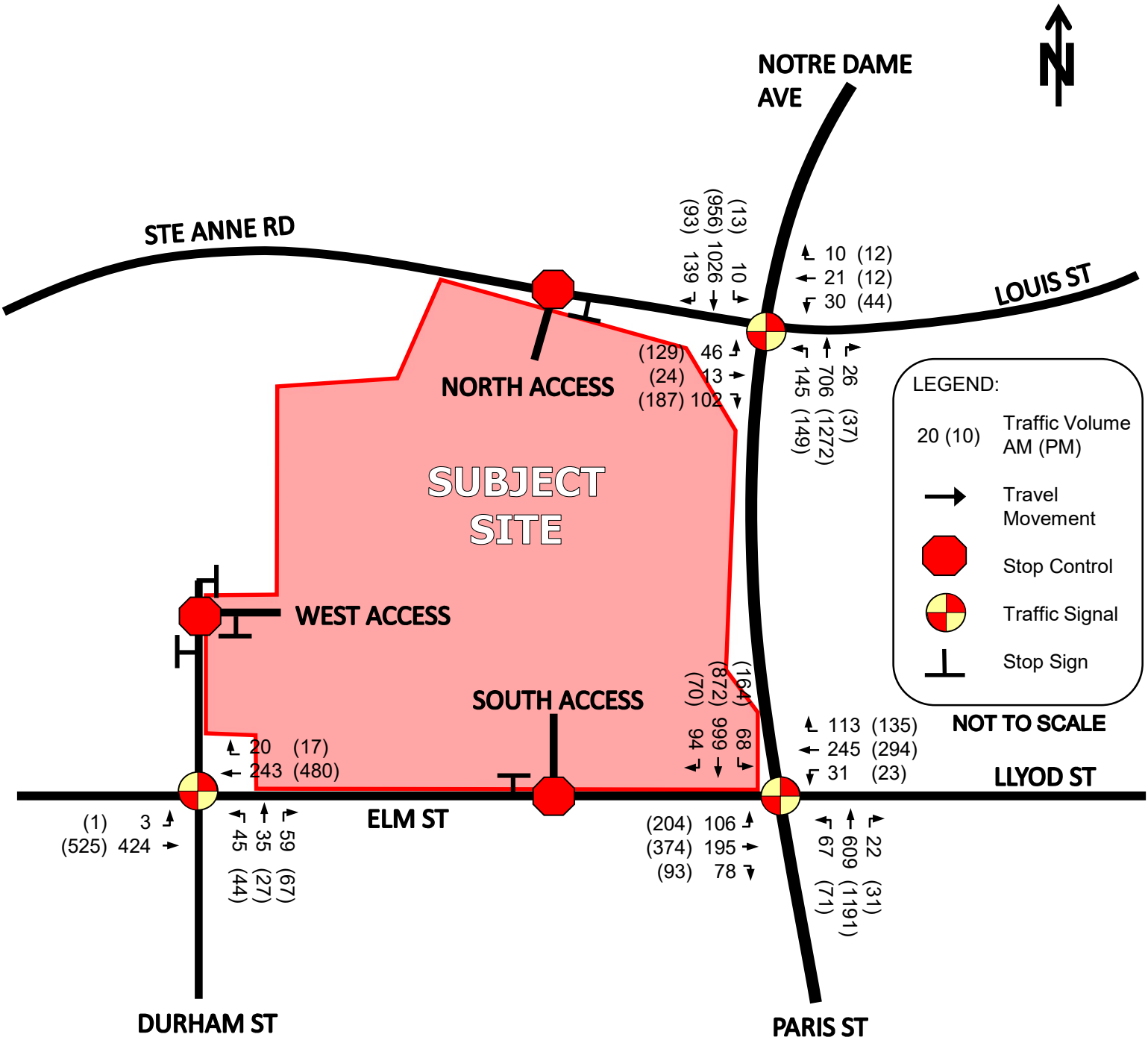
ENGINEERING

Figure 7: Background (2028) Traffic Volumes



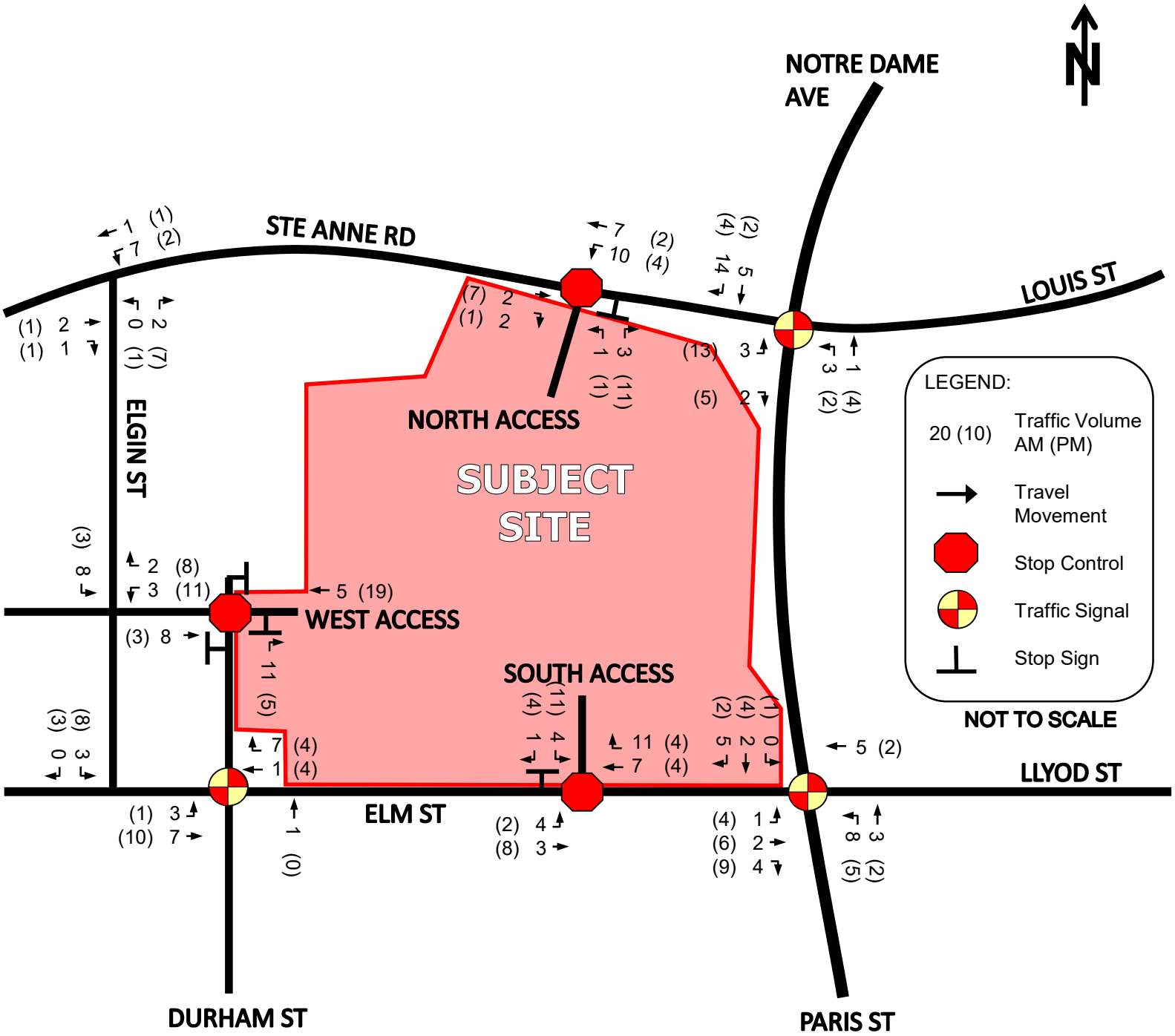
ENGINEERING

Figure 8: Background (2033) Traffic Volumes



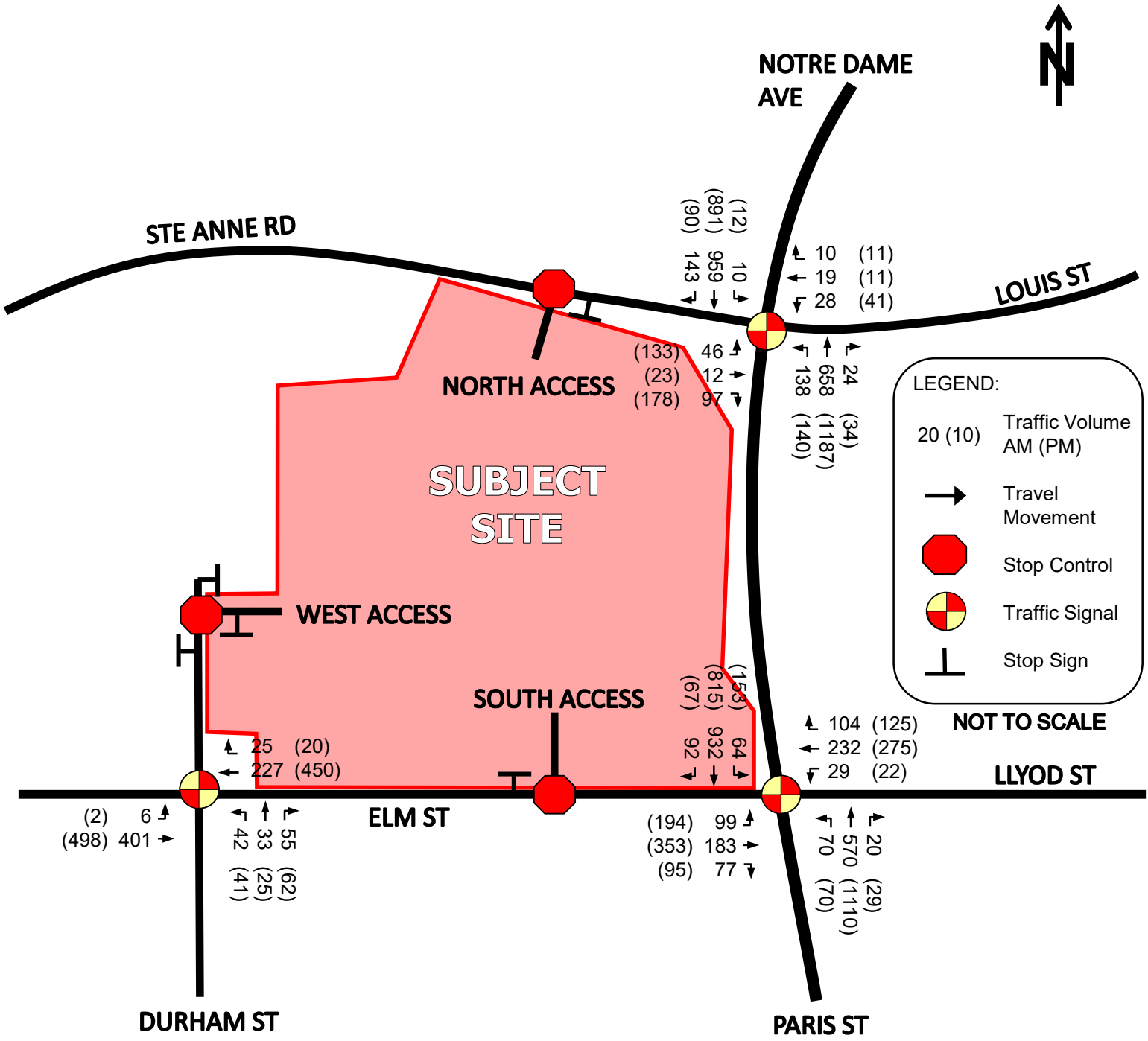
ENGINEERING

Figure 9: Site Traffic Assignment



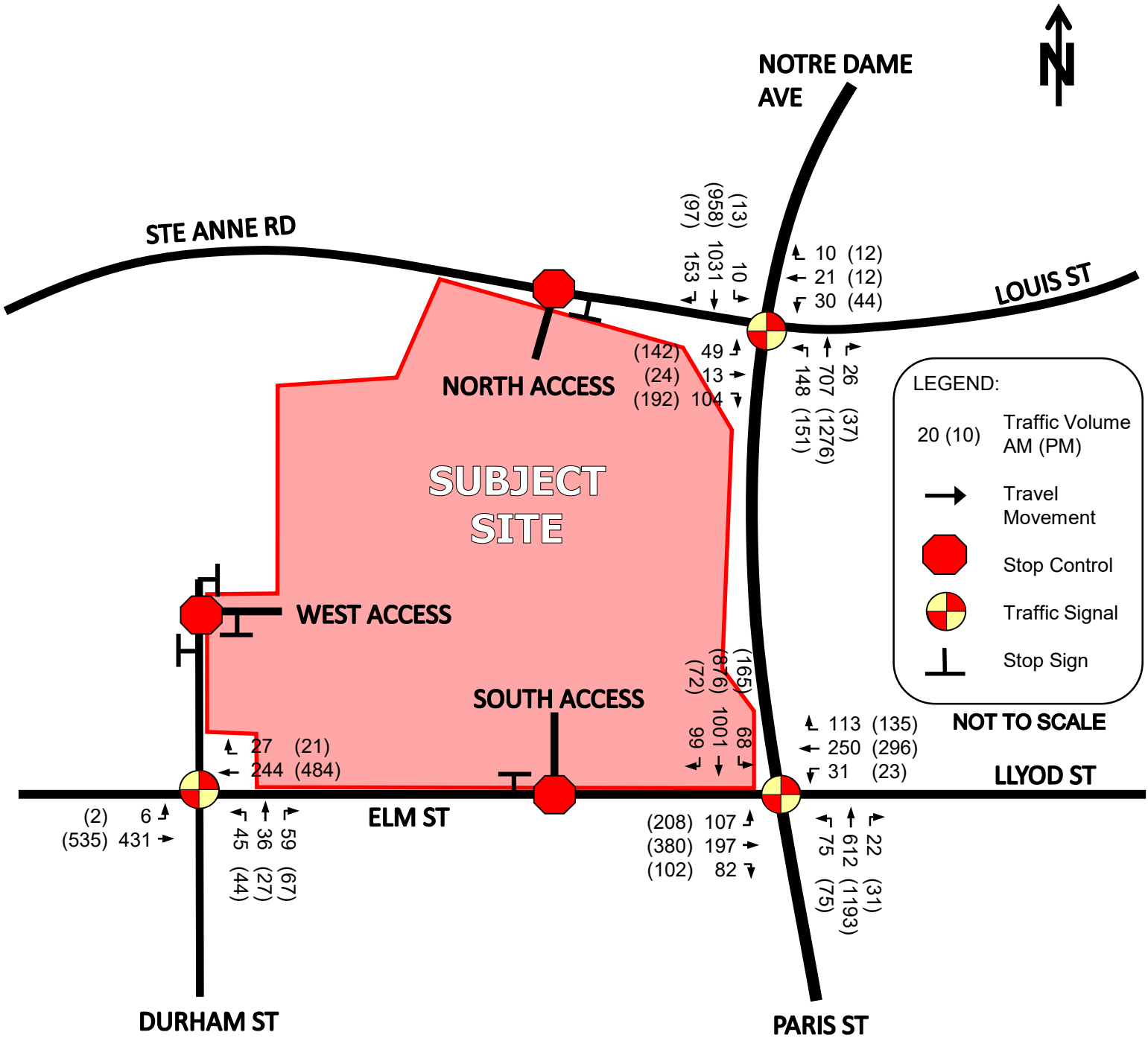
ENGINEERING

Figure 10: Total (2028) Traffic Volumes



ENGINEERING

Figure 11: Total (2033) Traffic Volumes



ENGINEERING

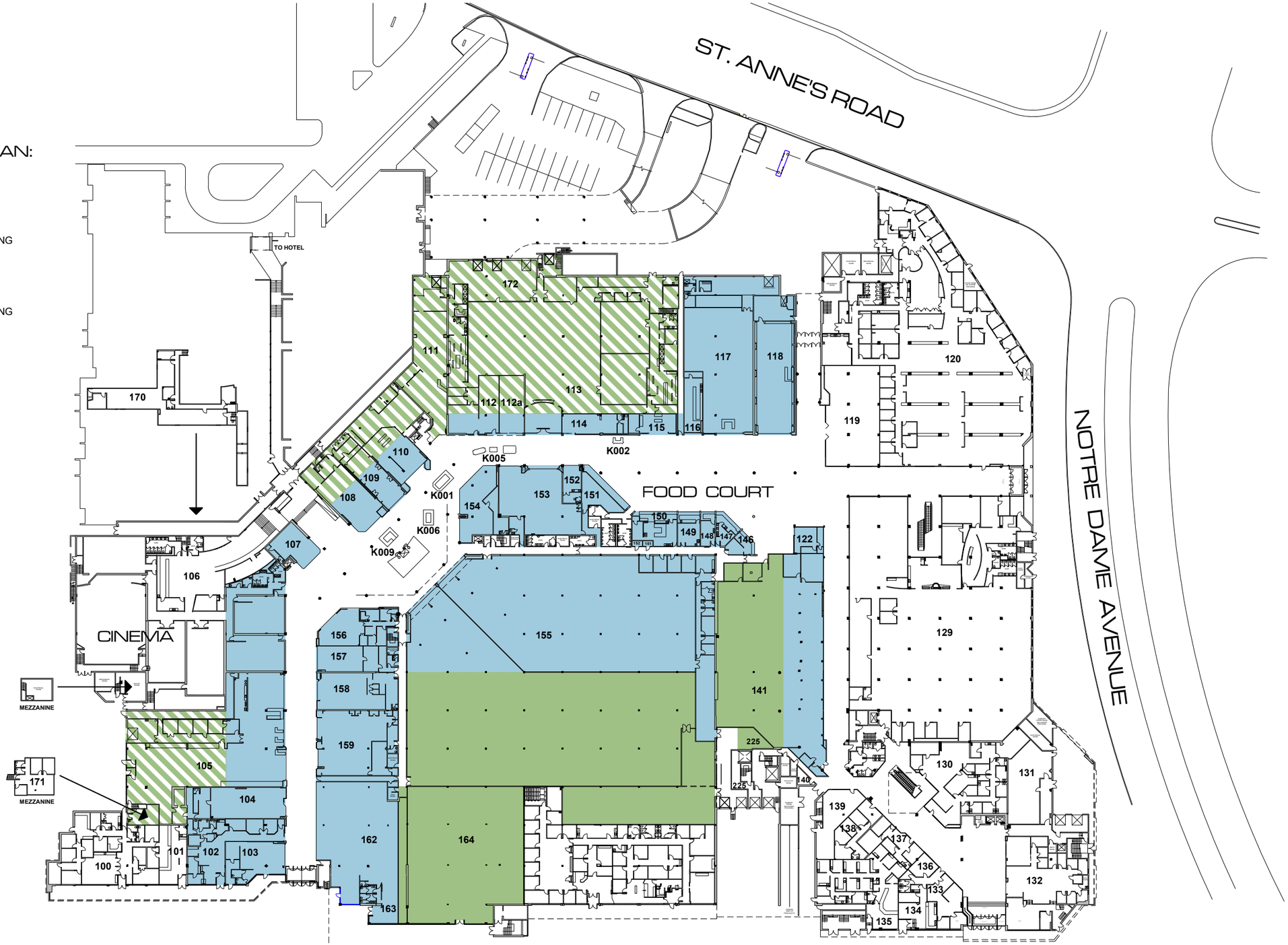
Appendix A – Site Plan

LEGEND TO FLOOR PLAN:

DENOTES EXISTING RETAIL
81,875 SQ.FT.

DENOTES PROPOSED WAREHOUSING
AND DISTRIBUTION CENTRE
41,735 SQ.FT.

DENOTES PROPOSED WAREHOUSING
AND DISTRIBUTION CENTRE
OR
SELF-STORAGE
33,800 SQ.FT.



Elm Place

Distribution
Centre

40 Elm Street
Sudbury, ON

LUCIW BOUDREAU
ARCHITECTURE

Floor Plan - Level 1 - Option 5
Scale = 1" = 80'-0"
March 22, 2024

SK-5

Appendix B –
Adjacent Development Excerpts

Proposed
Project Manitou
Residential Development
City of Greater Sudbury

Traffic Impact Study

Revised May 22, 2018

Prepared by:
Tranplan Associates
Sudbury 705-522-0272
Toronto 416-670-2005
Peterborough 705-874-3638
www.tranplan.com

Prepared for:
2356268 ONTARIO LIMITED
per
D.S. Dorland Limited
May 2018

NOTE: Not to scale

Exhibit 1.1
Key Plan

tranplan associates
TRAFFIC, TRANSIT, PARKING, TRANSPORTATION PLANNING
TORONTO 905-670-2005
SUDBURY 705-522-0272
PETERBOROUGH 705-874-3638
www.tranplan.com

Table 4.1: PROJECTED TRIP GENERATION BY PROPOSED PROJECT MANITOU RESIDENTIAL DEVELOPMENT

LAND USE		WEEKDAY AM PEAK HOUR				WEEKDAY PM PEAK HOUR			
		Trip Generation Rate (ITE Trip Generation Manual - 8th Edition)	Vehicle Trips			Trip Generation Rate (ITE Trip Generation Manual - 8th Edition)	Vehicle Trips		
			Total	In	Out		Total	In	Out
Senior Adult Units									
High-Rise Apartments (ITE L.U. 222)	**476** units	Ln(T) = 0.99Ln(X)-1.14 where T = vehicle trips X = no of dwelling units	**143**	25% **36**	75% **107**	T = 0.32(X) + 12.30	**165**	61% **100**	39% **64**
Senior Adult Housing (ITE L.U.252)	**476** units	T = 0.19(X) - 13.86 where T = vehicle trips X = no of dwelling units	**77**	36% **28**	64% **49**	T = 0.24(X) - 16.45 where T = vehicle trips X = no of dwelling units	**98**	60% **59**	40% **39**
Average of LU 222 & 252			**110**	**32**	**78**		**131**	**80**	**52**
Rent Geared to Income Units									
Modified Cherry Gardens Survey Trip Rates*	**350** units	T = 0.15 (X)	**53**	25% **13**	75% **39**	T = 0.20 (X)	**70**	60% **42**	40% **28**
TOTAL UNITS	**826** units		**162**	**45**	**118**		**201**	**122**	**80**

Note: Numbers do not add up exactly due to rounding.

Cherry Gardens survey trip rates increased by 25% to reflect slightly greater distance from Paris Street and potential higher parking supply.

- The new apartments may have more available parking.

Using the two trip rates as shown in **Table 4.1**, the proposed development is projected to generate approximately 200 vehicle trips during the afternoon peak hour (120 in, 80 out) and 160 vehicle trips during the morning peak hour (45 in, 115 out).

ITE trip rates for the active older people are considered to be conservative (higher volumes than likely) because of the downtown location of the proposed development. The proximity of the site to downtown will likely result in a higher proportion of walking and transit trips, with fewer auto trips than the ITE rates would project.

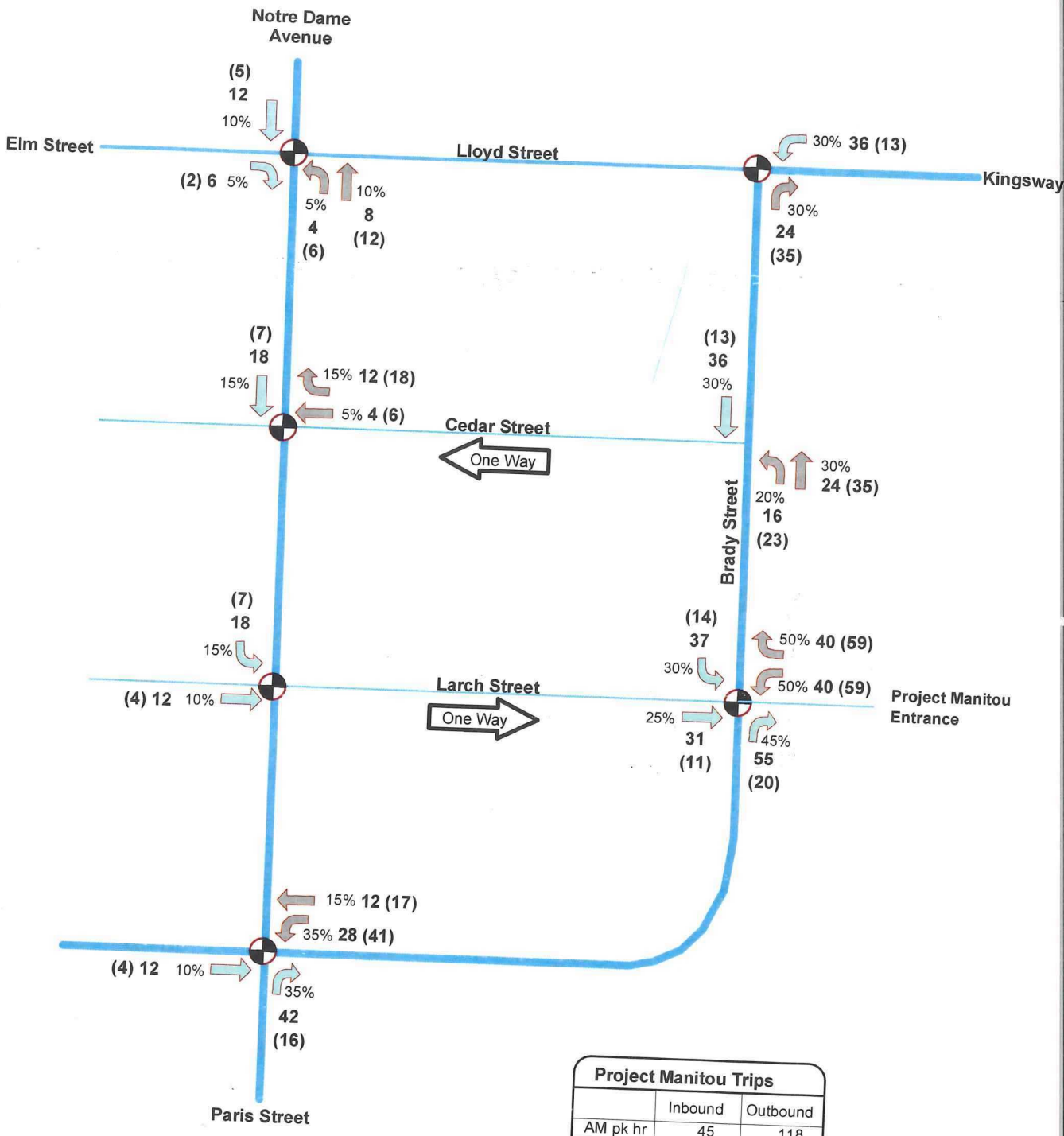
4.3 Orientation of the Site Traffic

As shown in **Exhibit 4.2** traffic is expected to leave the site:

i) split evenly between left turns and right turns onto Brady Street.
ii) 35% will go south on Paris Street
iii) 15% will continue west along Brady
iv) 30% will go out to the Kingsway
v) 20% will turn left into Cedar Street with 5% staying downtown, 10% going up Notre Dame and 5% going west on Elm.

Traffic is expected to approach the site

i) 30% from the north along Brady Street (from the Kingsway)
ii) 45% from the south along Brady Street (35% from Paris Street south and 10% from Brady Street west)
iii) 25% eastbound along Larch Street (10% from Notre Dame, 5% from Elm west and 10% from downtown)



Project Manitou Trips		
	Inbound	Outbound
AM pk hr	45	118
PM pk hr	122	80

N

NOTE: Not to scale

Exhibit 4.2
Site Traffic

Afternoon Peak Hour (Morning Peak Hour in Brackets)

tranplan associates
TRAFFIC, TRANSIT, PARKING, TRANSPORTATION PLANNING
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SUDBURY 705-522-0272
PETERBOROUGH 705-874-3638
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Figure 7 – Traffic Assignment for Proposed Development (Residential Trips)

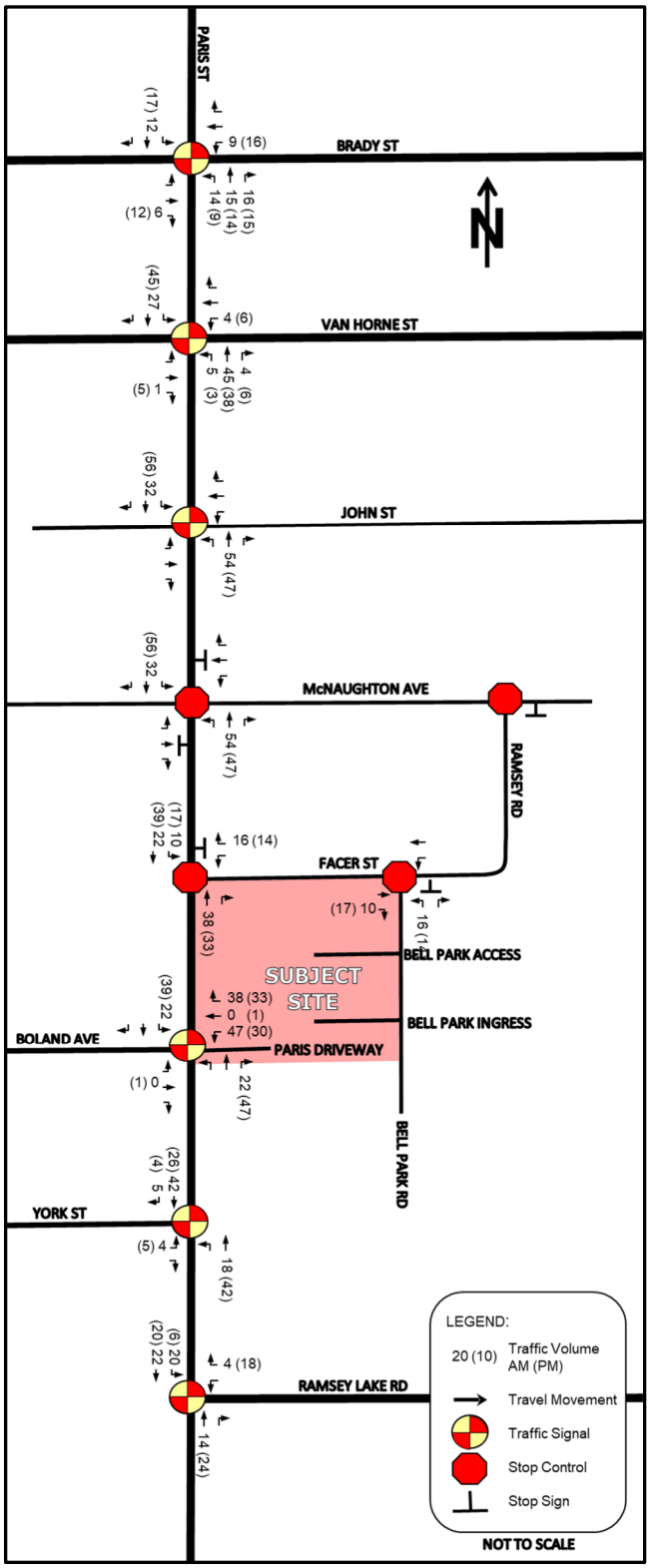


Figure 8 – Traffic Assignment for Proposed Development (Restaurant Primary Trips)

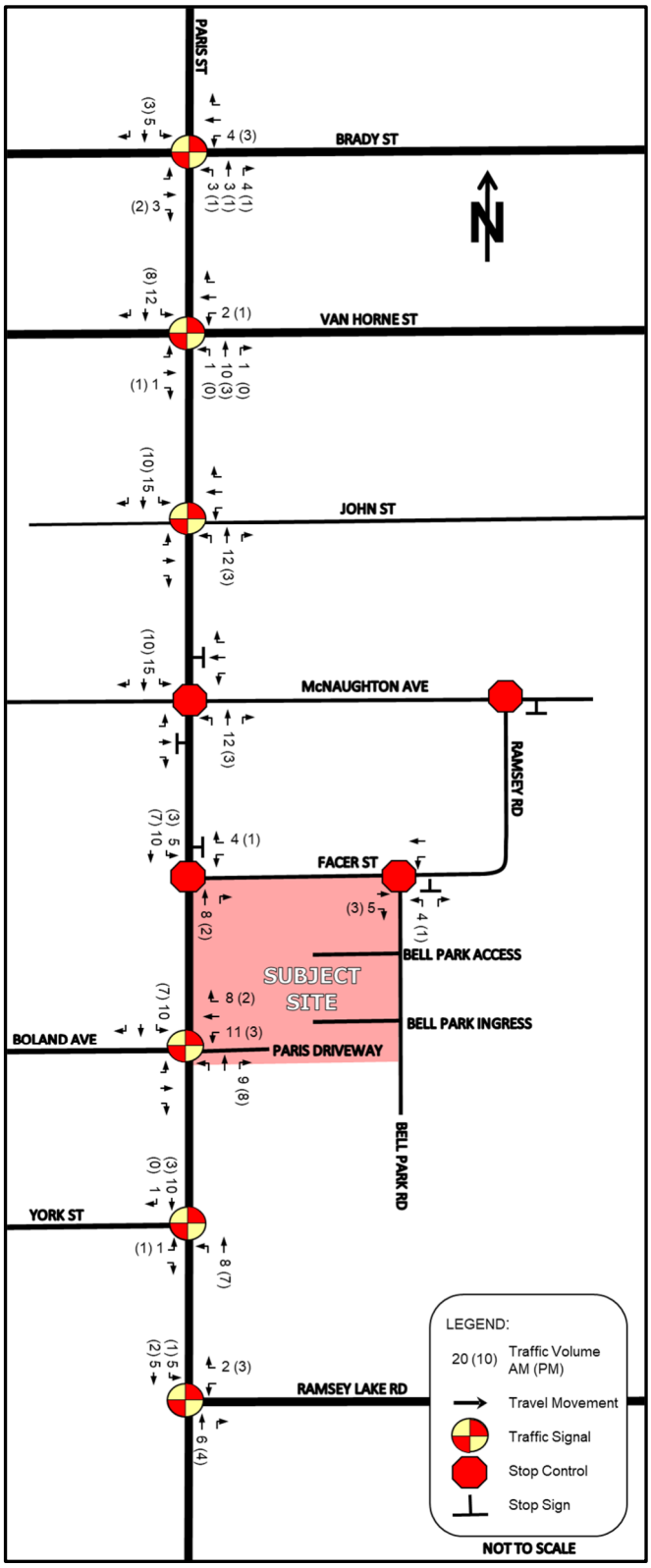
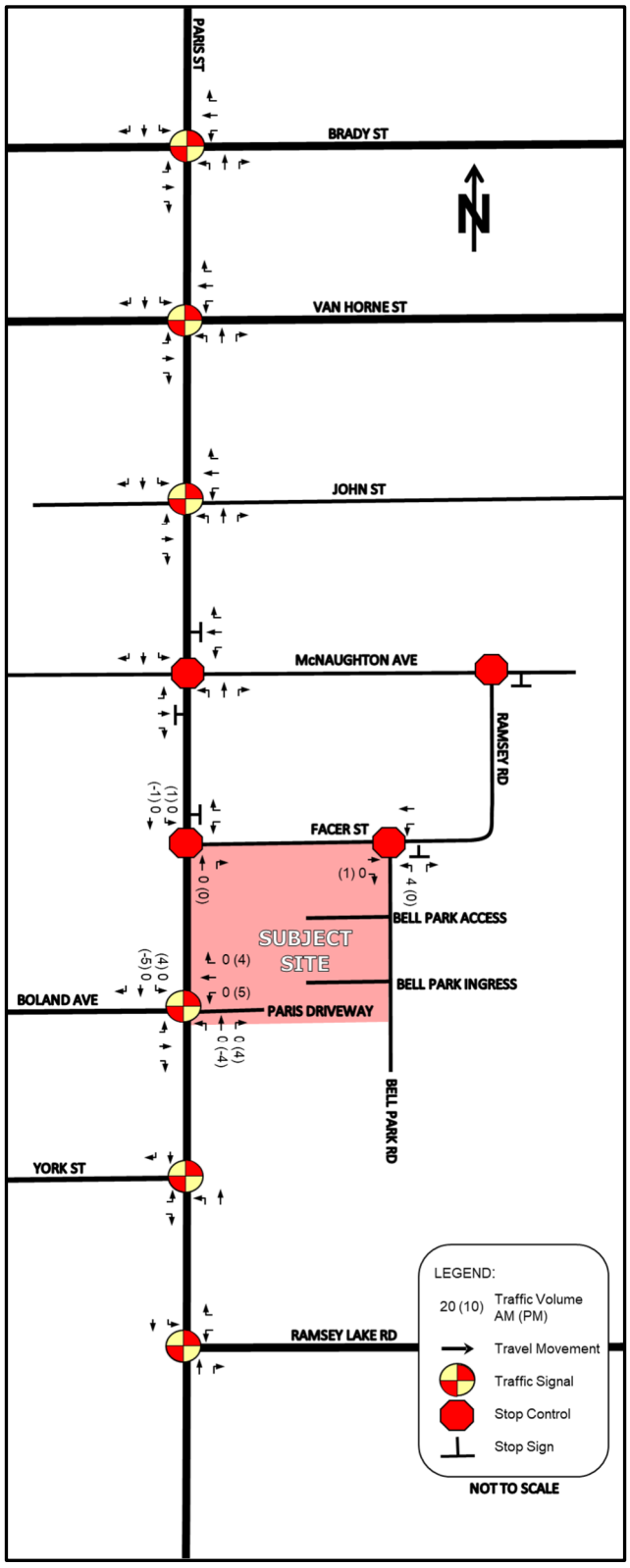


Figure 9 – Traffic Assignment for Proposed Development (Restaurant Pass-by Trips)



Appendix C –
Traffic Count Data

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Project #23-185 - JD Engineering Inc

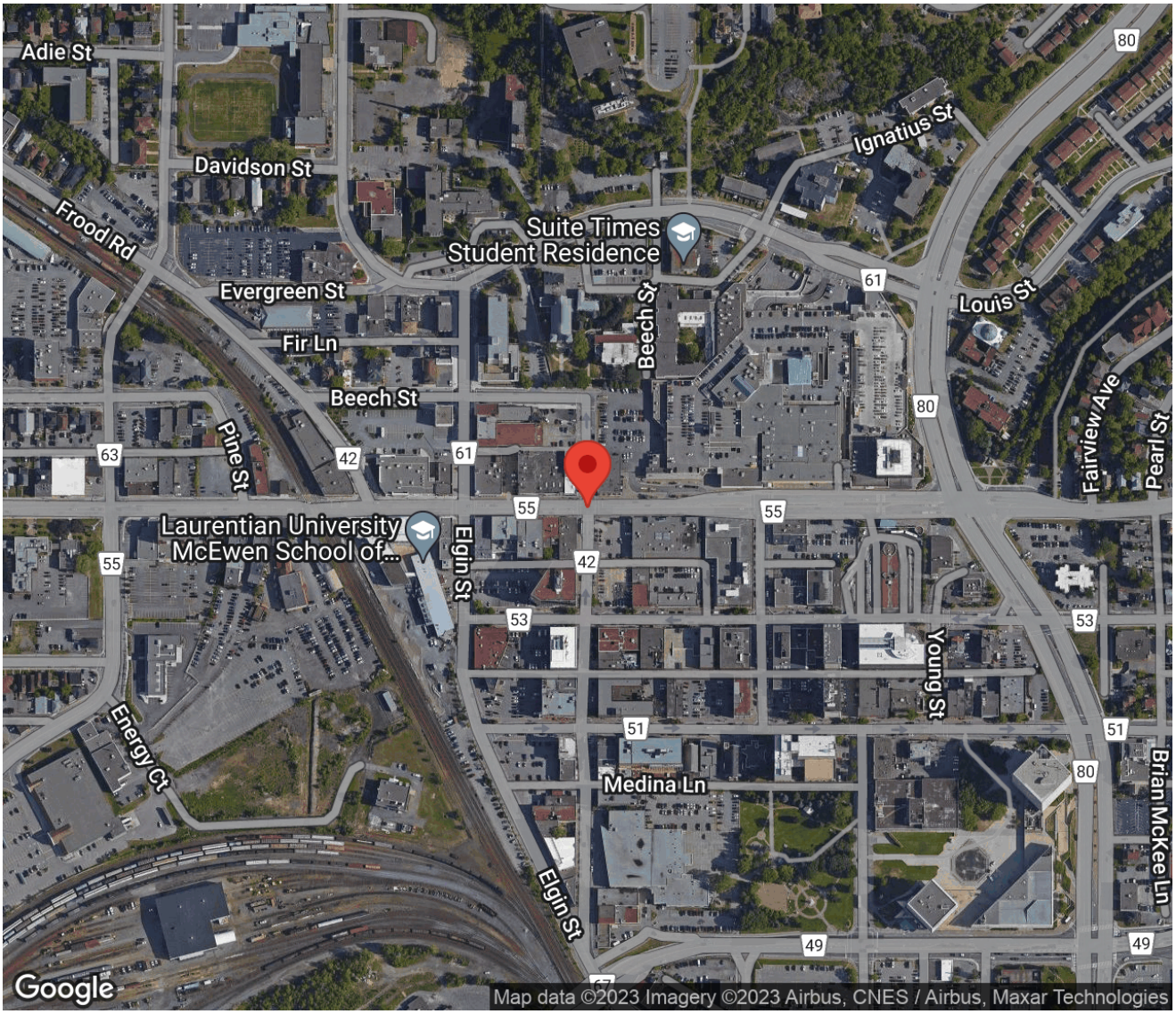
Intersection Count Report

Intersection:	Elm St & Durham St
Municipality:	Sudbury
Count Date:	Thursday, Jun 22, 2023
Site Code:	2318500001
Count Categories:	Cars, Trucks, Bicycles, Pedestrians
Count Period:	07:00-10:00, 16:00-19:00
Weather:	Clear
Comments:	

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Traffic Count Map

Intersection:	Elm St & Durham St
Site Code:	2318500001
Municipality:	Sudbury
Count Date:	Jun 22, 2023



Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Diagram

Specified Period		One Hour Peak	
From:	07:00:00	From:	09:00:00
To:	10:00:00	To:	10:00:00

Intersection: Elm St & Durham St
Site Code: 2318500001
Count Date: Jun 22, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Elm St runs E/W

North Approach

	Out	In	Total
Cars	0	44	44
Trucks	0	6	6
Bicycles	0	0	0
	0	**50**	**50**

Durham St

Bicycles	0	0	0	0
Trucks	0	0	0	0
Cars	0	0	0	0
Totals	**0**	**0**	**0**	**0**

East Approach

	Out	In	Total
Cars	204	388	592
Trucks	18	20	38
Bicycles	3	3	6
	225	**411**	**636**

Peds: 46

Elm St

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	1	2	**3**	
2	19	339	**360**	
0	1	0	**1**	

Peds: 36

Peds: 58

Elm St

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	17	16	1	0
	206	188	17	1
	2	0	0	2

Peds: 72

West Approach

	Out	In	Total
Cars	341	221	562
Trucks	21	23	44
Bicycles	2	1	3
	364	**245**	**609**

Durham St

Totals	**39**	**30**	**51**	**0**
Cars	33	26	49	0
Trucks	6	4	1	0
Bicycles	0	0	1	0

South Approach

	Out	In	Total
Cars	108	0	108
Trucks	11	1	12
Bicycles	1	2	3
	120	**3**	**123**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection:	Elm St & Durham St
Site Code:	2318500001
Count Date:	Jun 22, 2023
Period:	07:00 - 10:00

Peak Hour Data (09:00 - 10:00)

Start Time	North Approach Durham St						South Approach Durham St						East Approach Elm St						West Approach Elm St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
09:00	0	0	0	0	13	0	10	6	6	0	8	22	0	58	4	0	16	62	2	86	0	0	9	88	172
09:15	0	0	0	0	13	0	10	13	12	0	15	35	1	48	3	0	11	52	0	80	1	0	5	81	168
09:30	0	0	0	0	16	0	9	7	12	0	9	28	1	58	6	0	18	65	1	96	0	0	14	97	190
09:45	0	0	0	0	4	0	10	4	21	0	40	35	0	42	4	0	13	46	0	98	0	0	8	98	179
Grand Total	**0**	**0**	**0**	**0**	**46**	**0**	**39**	**30**	**51**	**0**	**72**	**120**	**2**	**206**	**17**	**0**	**58**	**225**	**3**	**360**	**1**	**0**	**36**	**364**	**709**
Approach %	0	0	0	0		-	32.5	25	42.5	0		-	0.9	91.6	7.6	0		-	0.8	98.9	0.3	0		-	
Totals %	0	0	0	0		0	5.5	4.2	7.2	0		16.9	0.3	29.1	2.4	0		31.7	0.4	50.8	0.1	0		51.3	
PHF	**0**	**0**	**0**	**0**		**0**	**0.98**	**0.58**	**0.61**	**0**		**0.86**	**0.5**	**0.89**	**0.71**	**0**		**0.87**	**0.38**	**0.92**	**0.25**	**0**		**0.93**	**0.93**
Cars	0	0	0	0		0	33	26	49	0		108	0	188	16	0		204	2	339	0	0		341	653
% Cars	0	0	0	0		0	84.6	86.7	96.1	0		90	0	91.3	94.1	0		90.7	66.7	94.2	0	0		93.7	92.1
Trucks	0	0	0	0		0	6	4	1	0		11	0	17	1	0		18	1	19	1	0		21	50
% Trucks	0	0	0	0		0	15.4	13.3	2	0		9.2	0	8.3	5.9	0		8	33.3	5.3	100	0		5.8	7.1
Bicycles	0	0	0	0		0	0	0	1	0		1	2	1	0	0		3	0	2	0	0		2	6
% Bicycles	0	0	0	0		0	0	0	2	0		0.8	100	0.5	0	0		1.3	0	0.6	0	0		0.5	0.8
Peds					46	-					72	-					58	-					36	-	212
% Peds					21.7	-					34	-					27.4	-					17	-	

Peak Hour Diagram

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

One Hour Peak
From: 16:30:00
To: 17:30:00

Intersection: Elm St & Durham St
Site Code: 2318500001
Count Date: Jun 22, 2023

Weather conditions: Clear

**** Signalized Intersection ****

Major Road: Elm St runs E/W

North Approach

	Out	In	Total
Cars	0	37	37
Trucks	0	2	2
Bicycles	0	0	0
	0	**39**	**39**

Durham St

Bicycles	0	0	0	0
Trucks	0	0	0	0
Cars	0	0	0	0
Totals	**0**	**0**	**0**	**0**

East Approach

	Out	In	Total
Cars	411	498	909
Trucks	10	8	18
Bicycles	2	3	5
	423	**509**	**932**

Elm St

Bicycles	Trucks	Cars	Totals	
0	0	0	**0**	
0	0	1	**1**	
2	8	441	**451**	
1	0	0	**1**	

Peds: 36
Peds: 10
Peds: 22
Peds: 54

Elm St

	Totals	Cars	Trucks	Bicycles
	0	0	0	0
	15	15	0	0
	408	396	10	2
	0	0	0	0

West Approach

	Out	In	Total
Cars	442	428	870
Trucks	8	15	23
Bicycles	3	3	6
	453	**446**	**899**

Totals	**38**	**23**	**58**	**0**
Cars	32	21	57	0
Trucks	5	2	0	0
Bicycles	1	0	1	0

Durham St

South Approach

	Out	In	Total
Cars	110	0	110
Trucks	7	0	7
Bicycles	2	1	3
	119	**1**	**120**

Cars - Trucks - Bicycles

Comments

Ontario Traffic Inc.
Traffic Monitoring • Services & Products

Peak Hour Summary

Intersection:	Elm St & Durham St
Site Code:	2318500001
Count Date:	Jun 22, 2023
Period:	16:00 - 19:00

Peak Hour Data (16:30 - 17:30)

Start Time	North Approach Durham St						South Approach Durham St						East Approach Elm St						West Approach Elm St						Total Vehicles
					Peds	Total					Peds	Total					Peds	Total					Peds	Total	
16:30	0	0	0	0	3	0	9	4	17	0	25	30	0	116	2	0	9	118	0	134	1	0	1	135	283
16:45	0	0	0	0	16	0	8	7	10	0	9	25	0	98	1	0	2	99	1	115	0	0	4	116	240
17:00	0	0	0	0	13	0	11	7	21	0	14	39	0	109	7	0	8	116	0	121	0	0	2	121	276
17:15	0	0	0	0	4	0	10	5	10	0	6	25	0	85	5	0	3	90	0	81	0	0	3	81	196
Grand Total	**0**	**0**	**0**	**0**	**36**	**0**	**38**	**23**	**58**	**0**	**54**	**119**	**0**	**408**	**15**	**0**	**22**	**423**	**1**	**451**	**1**	**0**	**10**	**453**	**995**
Approach %	0	0	0	0		-	31.9	19.3	48.7	0		-	0	96.5	3.5	0		-	0.2	99.6	0.2	0		-	
Totals %	0	0	0	0		0	3.8	2.3	5.8	0		12	0	41	1.5	0		42.5	0.1	45.3	0.1	0		45.5	
PHF	**0**	**0**	**0**	**0**		**0**	**0.86**	**0.82**	**0.69**	**0**		**0.76**	**0**	**0.88**	**0.54**	**0**		**0.9**	**0.25**	**0.84**	**0.25**	**0**		**0.84**	**0.88**
Cars	0	0	0	0		0	32	21	57	0		110	0	396	15	0		411	1	441	0	0		442	963
% Cars	0	0	0	0		0	84.2	91.3	98.3	0		92.4	0	97.1	100	0		97.2	100	97.8	0	0		97.6	96.8
Trucks	0	0	0	0		0	5	2	0	0		7	0	10	0	0		10	0	8	0	0		8	25
% Trucks	0	0	0	0		0	13.2	8.7	0	0		5.9	0	2.5	0	0		2.4	0	1.8	0	0		1.8	2.5
Bicycles	0	0	0	0		0	1	0	1	0		2	0	2	0	0		2	0	2	1	0		3	7
% Bicycles	0	0	0	0		0	2.6	0	1.7	0		1.7	0	0.5	0	0		0.5	0	0.4	100	0		0.7	0.7
Peds					36	-					54	-					22	-					10	-	122
% Peds					29.5	-					44.3	-					18	-					8.2	-	

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022

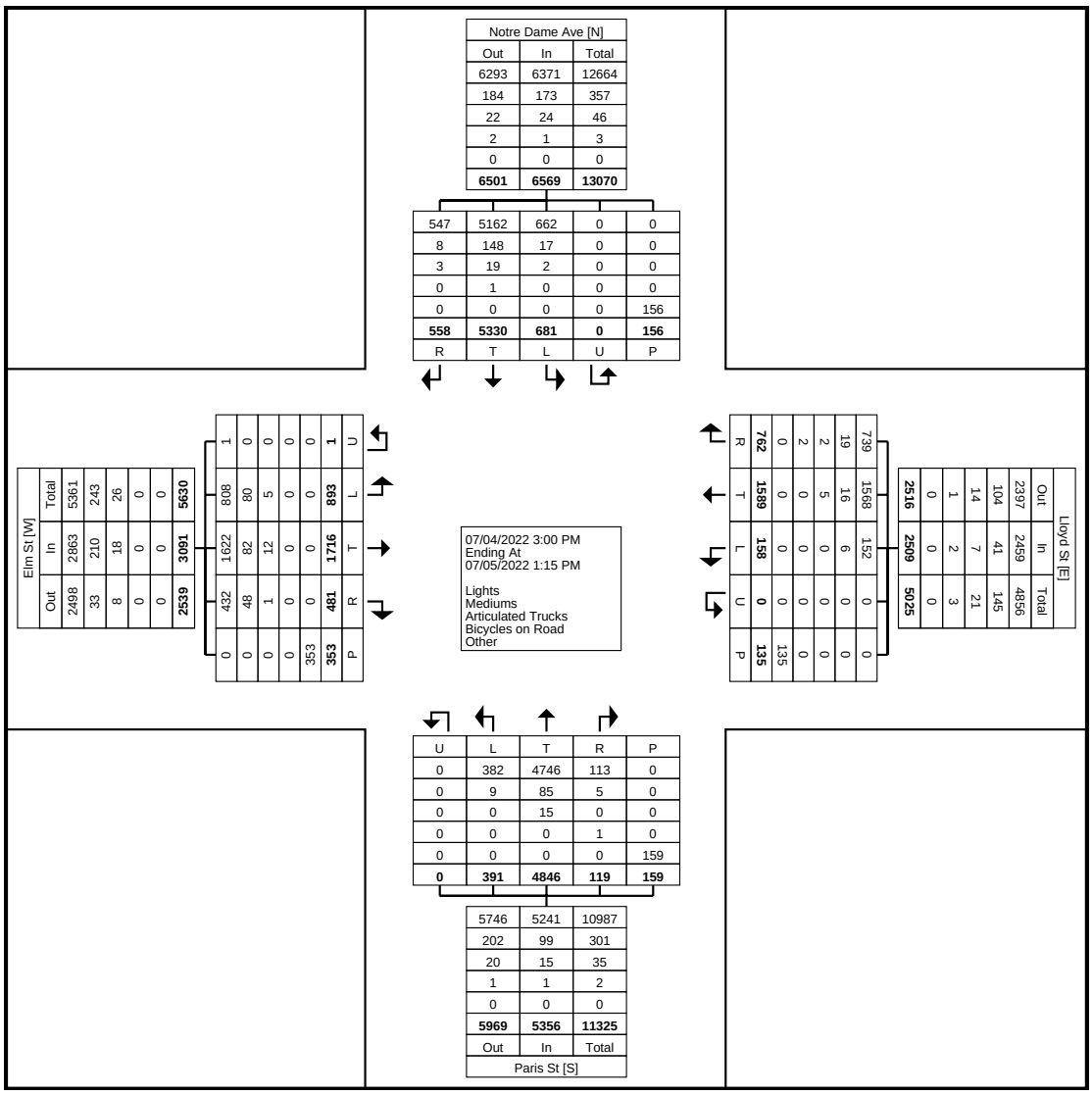
Turning Movement Data

Start Time	Notre Dame Ave Southbound						Lloyd St Westbound						Paris St Northbound						Elm St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
3:00 PM	27	181	24	0	6	232	27	66	3	0	7	96	5	189	13	0	12	207	24	79	36	0	18	139	674
3:15 PM	20	197	29	0	6	246	26	58	7	0	5	91	5	202	19	0	10	226	13	58	32	1	17	104	667
3:30 PM	28	178	24	0	8	230	40	61	6	0	3	107	2	190	22	0	7	214	22	67	40	0	15	129	680
3:45 PM	13	179	18	0	14	210	24	72	2	0	10	98	5	215	16	0	6	236	13	58	35	0	21	106	650
Hourly Total	88	735	95	0	34	918	117	257	18	0	25	392	17	796	70	0	35	883	72	262	143	1	71	478	2671
4:00 PM	14	172	32	0	10	218	21	59	4	0	5	84	9	248	16	0	7	273	23	88	52	0	18	163	738
4:15 PM	14	207	32	0	11	253	28	73	7	0	3	108	10	274	14	0	2	298	23	67	30	0	33	120	779
4:30 PM	17	188	41	0	15	246	31	66	4	0	5	101	4	226	14	0	6	244	13	97	46	0	17	156	747
4:45 PM	14	152	34	0	8	200	34	51	5	0	6	90	4	240	11	0	7	255	18	65	45	0	11	128	673
Hourly Total	59	719	139	0	44	917	114	249	20	0	19	383	27	988	55	0	22	1070	77	317	173	0	79	567	2937
5:00 PM	31	157	30	0	0	218	25	68	8	0	11	101	7	244	8	0	3	259	21	78	42	0	8	141	719
5:15 PM	18	185	27	0	12	230	41	67	6	0	8	114	6	192	8	0	6	206	12	65	26	0	16	103	653
5:30 PM	19	153	20	0	1	192	21	58	8	0	2	87	2	163	6	0	6	171	19	64	28	0	10	111	561
5:45 PM	15	158	21	0	1	194	20	50	5	0	8	75	3	166	12	0	9	181	11	61	23	0	15	95	545
Hourly Total	83	653	98	0	14	834	107	243	27	0	29	377	18	765	34	0	24	817	63	268	119	0	49	450	2478
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	6	47	5	0	0	58	4	25	2	0	0	31	0	26	2	0	3	28	5	12	8	0	9	25	142
6:15 AM	7	85	14	0	2	106	8	28	2	0	0	38	0	41	0	0	2	41	2	12	5	0	7	19	204
6:30 AM	11	136	13	0	0	160	13	32	2	0	1	47	0	63	5	0	3	68	6	32	15	0	3	53	328
6:45 AM	12	169	14	0	0	195	24	22	0	0	1	46	2	80	5	0	1	87	5	25	14	0	13	44	372
Hourly Total	36	437	46	0	2	519	49	107	6	0	2	162	2	210	12	0	9	224	18	81	42	0	32	141	1046
7:00 AM	7	152	9	0	2	168	20	23	2	0	4	45	0	57	5	0	4	62	7	27	14	0	2	48	323
7:15 AM	11	173	7	0	4	191	23	35	4	0	3	62	2	96	6	0	1	104	15	32	10	0	6	57	414
7:30 AM	15	199	13	0	2	227	16	59	9	0	3	84	5	113	13	0	5	131	20	50	25	0	8	95	537
7:45 AM	19	211	20	0	1	250	33	52	5	0	6	90	1	132	9	0	6	142	13	37	22	0	10	72	554
Hourly Total	52	735	49	0	9	836	92	169	20	0	16	281	8	398	33	0	16	439	55	146	71	0	26	272	1828
8:00 AM	22	186	10	0	5	218	16	55	7	0	3	78	5	114	11	0	2	130	17	42	17	0	3	76	502
8:15 AM	24	228	15	0	3	267	31	42	6	0	2	79	4	136	20	0	6	160	11	37	26	0	8	74	580
8:30 AM	12	196	16	0	2	224	22	42	8	0	4	72	1	125	18	0	2	144	17	36	21	0	5	74	514
8:45 AM	16	184	14	0	4	214	32	35	4	0	2	71	1	124	19	0	4	144	22	42	20	0	4	84	513
Hourly Total	74	794	55	0	14	923	101	174	25	0	11	300	11	499	68	0	14	578	67	157	84	0	20	308	2109
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	24	127	17	0	9	168	18	44	2	0	2	64	5	142	13	0	6	160	17	60	38	0	7	115	507
11:15 AM	21	167	19	0	4	207	19	40	4	0	5	63	4	134	15	0	6	153	15	71	32	0	10	118	541
11:30 AM	27	134	24	0	3	185	27	46	5	0	7	78	9	127	15	0	7	151	19	75	40	0	8	134	548
11:45 AM	18	158	27	0	3	203	22	46	5	0	5	73	0	146	18	0	6	164	11	52	35	0	5	98	538
Hourly Total	90	586	87	0	19	763	86	176	16	0	19	278	18	549	61	0	25	628	62	258	145	0	30	465	2134
12:00 PM	21	166	30	0	6	217	25	55	8	0	6	88	7	158	13	0	6	178	18	77	33	0	8	128	611
12:15 PM	20	149	29	0	5	198	18	41	5	0	3	64	4	162	6	0	1	172	14	46	27	0	17	87	521
12:30 PM	18	178	24	0	5	220	25	58	6	0	3	89	3	142	18	0	3	163	19	64	35	0	12	118	590
12:45 PM	17	178	29	0	4	224	28	60	7	0	2	95	4	179	21	0	4	204	16	40	21	0	9	77	600
Hourly Total	76	671	112	0	20	859	96	214	26	0	14	336	18	641	58	0	14	717	67	227	116	0	46	410	2322
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	558	5330	681	0	156	6569	762	1589	158	0	135	2509	119	4846	391	0	159	5356	481	1716	893	1	353	3091	17525
Approach %	8.5	81.1	10.4	0.0	-	-	30.4	63.3	6.3	0.0	-	-	2.2	90.5	7.3	0.0	-	-	15.6	55.5	28.9	0.0	-	-	-
Total %	3.2	30.4	3.9	0.0	-	37.5	4.3	9.1	0.9	0.0	-	14.3	0.7	27.7	2.2	0.0	-	30.6	2.7	9.8	5.1	0.0	-	17.6	-
Lights	547	5162	662	0	-	6371	739	1568	152	0	-	2459	113	4746	382	0	-	5241	432	1622	808	1	-	2863	16934
% Lights	98.0	96.8	97.2	-	-	97.0	97.0	98.7	96.2	-	-	98.0	95.0	97.9	97.7	-	-	97.9	89.8	94.5	90.5	100.0	-	92.6	96.6
Mediums	8	148	17	0	-	173	19	16	6	0	-	41	5	85	9	0	-	99	48	82	80	0	-	210	523
% Mediums	1.4	2.8	2.5	-	-	2.6	2.5	1.0	3.8	-	-	1.6	4.2	1.8	2.3	-	-	1.8	10.0	4.8	9.0	0.0	-	6.8	3.0
Articulated Trucks	3	19	2	0	-	24	2	5	0	0	-	7	0	15	0	0	-	15	1	12	5	0	-	18	64
% Articulated Trucks	0.5	0.4	0.3	-	-	0.4	0.3	0.3	0.0	-	-	0.3	0.0	0.3	0.0	-	-	0.3	0.2	0.7	0.6	0.0	-	0.6	0.4
Bicycles on Road	0	1	0	0	-	1	2	0	0	0	-	2	1	0	0	0	-	1	0	0	0	0	-	0	4

% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.3	0.0	0.0	-	-	0.1	0.8	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	4	-	-	-	-	-	13	-	-	-	-	-	8	-	-	-	-	-	19	-	-
% Bicycles on Crosswalk	-	-	-	-	2.6	-	-	-	-	-	9.6	-	-	-	-	-	5.0	-	-	-	-	-	5.4	-	-
Pedestrians	-	-	-	-	152	-	-	-	-	-	122	-	-	-	-	-	151	-	-	-	-	-	334	-	-
% Pedestrians	-	-	-	-	97.4	-	-	-	-	-	90.4	-	-	-	-	-	95.0	-	-	-	-	-	94.6	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022



Turning Movement Data Plot

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

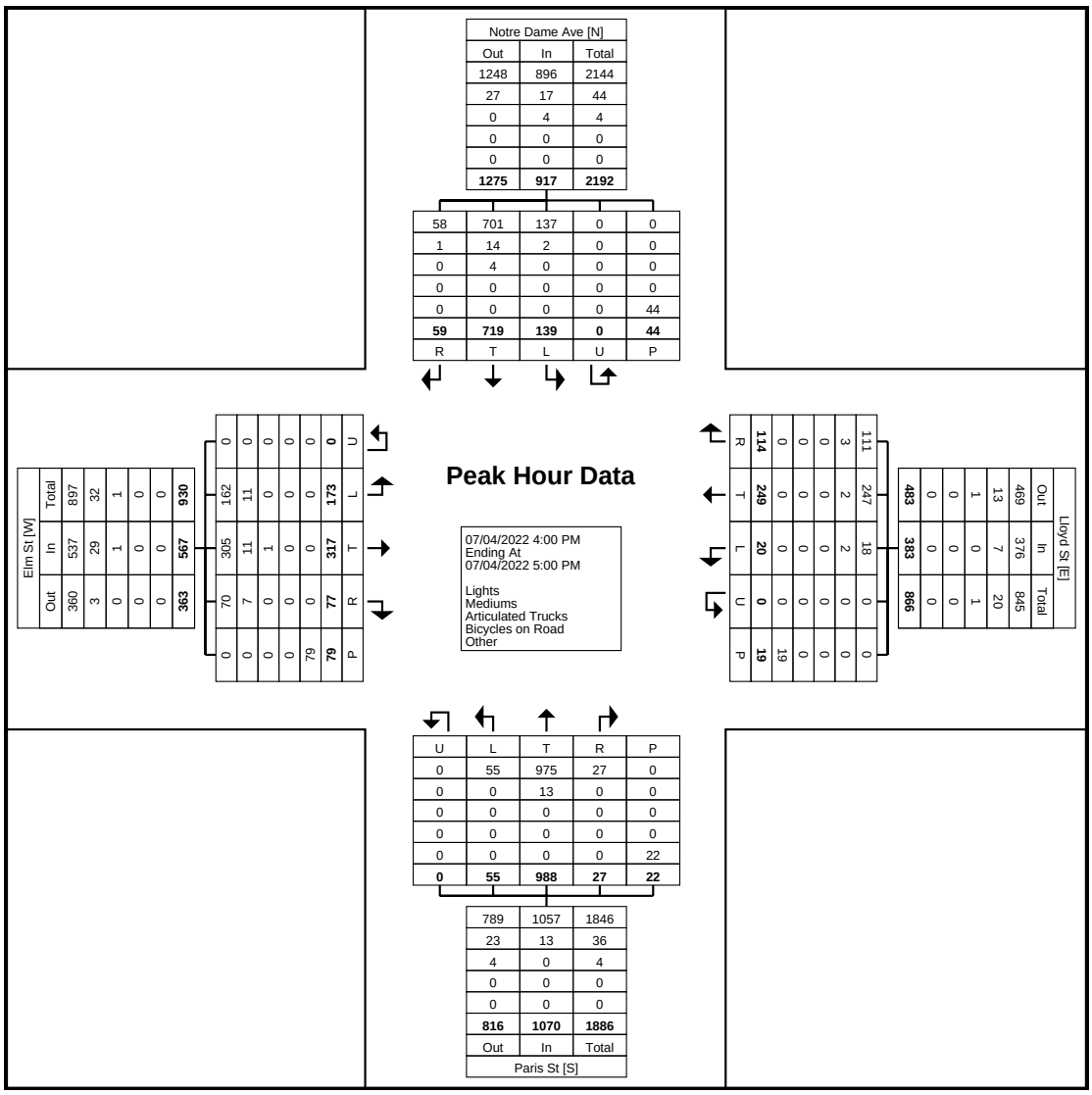
Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Notre Dame Ave Southbound						Lloyd St Westbound						Paris St Northbound						Elm St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
4:00 PM	14	172	32	0	10	218	21	59	4	0	5	84	9	248	16	0	7	273	23	88	52	0	18	163	738
4:15 PM	14	207	32	0	11	253	28	73	7	0	3	108	10	274	14	0	2	298	23	67	30	0	33	120	779
4:30 PM	17	188	41	0	15	246	31	66	4	0	5	101	4	226	14	0	6	244	13	97	46	0	17	156	747
4:45 PM	14	152	34	0	8	200	34	51	5	0	6	90	4	240	11	0	7	255	18	65	45	0	11	128	673
Total	59	719	139	0	44	917	114	249	20	0	19	383	27	988	55	0	22	1070	77	317	173	0	79	567	2937
Approach %	6.4	78.4	15.2	0.0	-	-	29.8	65.0	5.2	0.0	-	-	2.5	92.3	5.1	0.0	-	-	13.6	55.9	30.5	0.0	-	-	-
Total %	2.0	24.5	4.7	0.0	-	31.2	3.9	8.5	0.7	0.0	-	13.0	0.9	33.6	1.9	0.0	-	36.4	2.6	10.8	5.9	0.0	-	19.3	-
PHF	0.868	0.868	0.848	0.000	-	0.906	0.838	0.853	0.714	0.000	-	0.887	0.675	0.901	0.859	0.000	-	0.898	0.837	0.817	0.832	0.000	-	0.870	0.943
Lights	58	701	137	0	-	896	111	247	18	0	-	376	27	975	55	0	-	1057	70	305	162	0	-	537	2866
% Lights	98.3	97.5	98.6	-	-	97.7	97.4	99.2	90.0	-	-	98.2	100.0	98.7	100.0	-	-	98.8	90.9	96.2	93.6	-	-	94.7	97.6
Mediums	1	14	2	0	-	17	3	2	2	0	-	7	0	13	0	0	-	13	7	11	11	0	-	29	66
% Mediums	1.7	1.9	1.4	-	-	1.9	2.6	0.8	10.0	-	-	1.8	0.0	1.3	0.0	-	-	1.2	9.1	3.5	6.4	-	-	5.1	2.2
Articulated Trucks	0	4	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	1	5
% Articulated Trucks	0.0	0.6	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	-	0.2	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	5	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	10.5	-	-	-	-	-	4.5	-	-	-	-	-	6.3	-	-
Pedestrians	-	-	-	-	44	-	-	-	-	-	17	-	-	-	-	-	21	-	-	-	-	-	74	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	89.5	-	-	-	-	-	95.5	-	-	-	-	-	93.7	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (4:00 PM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Notre Dame Ave Southbound						Lloyd St Westbound						Paris St Northbound						Elm St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:30 AM	15	199	13	0	2	227	16	59	9	0	3	84	5	113	13	0	5	131	20	50	25	0	8	95	537
7:45 AM	19	211	20	0	1	250	33	52	5	0	6	90	1	132	9	0	6	142	13	37	22	0	10	72	554
8:00 AM	22	186	10	0	5	218	16	55	7	0	3	78	5	114	11	0	2	130	17	42	17	0	3	76	502
8:15 AM	24	228	15	0	3	267	31	42	6	0	2	79	4	136	20	0	6	160	11	37	26	0	8	74	580
Total	80	824	58	0	11	962	96	208	27	0	14	331	15	495	53	0	19	563	61	166	90	0	29	317	2173
Approach %	8.3	85.7	6.0	0.0	-	-	29.0	62.8	8.2	0.0	-	-	2.7	87.9	9.4	0.0	-	-	19.2	52.4	28.4	0.0	-	-	-
Total %	3.7	37.9	2.7	0.0	-	44.3	4.4	9.6	1.2	0.0	-	15.2	0.7	22.8	2.4	0.0	-	25.9	2.8	7.6	4.1	0.0	-	14.6	-
PHF	0.833	0.904	0.725	0.000	-	0.901	0.727	0.881	0.750	0.000	-	0.919	0.750	0.910	0.663	0.000	-	0.880	0.763	0.830	0.865	0.000	-	0.834	0.937
Lights	77	794	57	0	-	928	92	204	26	0	-	322	12	472	51	0	-	535	51	149	75	0	-	275	2060
% Lights	96.3	96.4	98.3	-	-	96.5	95.8	98.1	96.3	-	-	97.3	80.0	95.4	96.2	-	-	95.0	83.6	89.8	83.3	-	-	86.8	94.8
Mediums	2	25	1	0	-	28	4	3	1	0	-	8	3	18	2	0	-	23	9	14	13	0	-	36	95
% Mediums	2.5	3.0	1.7	-	-	2.9	4.2	1.4	3.7	-	-	2.4	20.0	3.6	3.8	-	-	4.1	14.8	8.4	14.4	-	-	11.4	4.4
Articulated Trucks	1	4	0	0	-	5	0	1	0	0	-	1	0	5	0	0	-	5	1	3	2	0	-	6	17
% Articulated Trucks	1.3	0.5	0.0	-	-	0.5	0.0	0.5	0.0	-	-	0.3	0.0	1.0	0.0	-	-	0.9	1.6	1.8	2.2	-	-	1.9	0.8
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	7.1	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	11	-	-	-	-	-	13	-	-	-	-	-	19	-	-	-	-	-	29	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	92.9	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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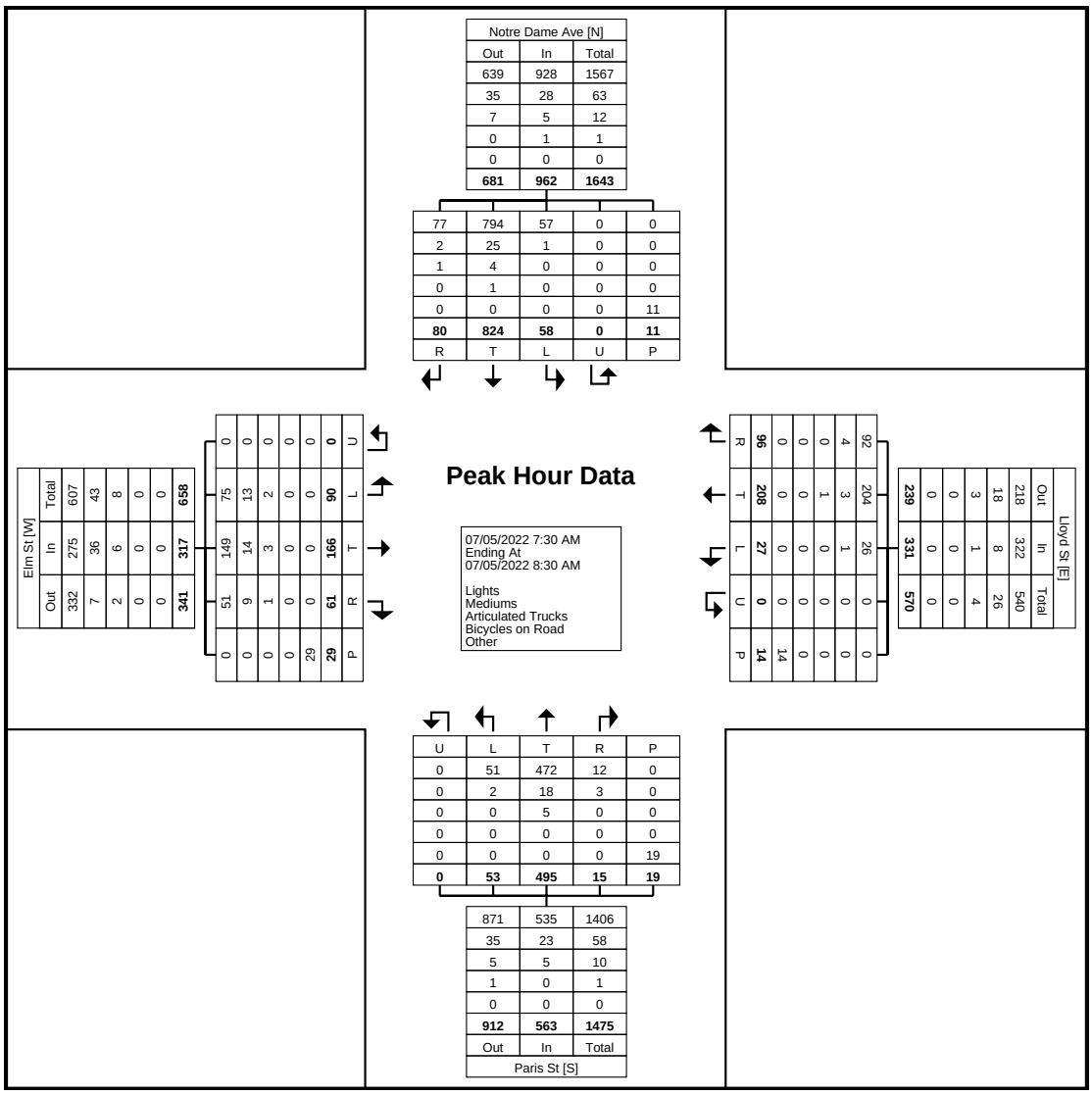
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (7:30 AM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Notre Dame Ave Southbound						Lloyd St Westbound						Paris St Northbound						Elm St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
11:00 AM	24	127	17	0	9	168	18	44	2	0	2	64	5	142	13	0	6	160	17	60	38	0	7	115	507
11:15 AM	21	167	19	0	4	207	19	40	4	0	5	63	4	134	15	0	6	153	15	71	32	0	10	118	541
11:30 AM	27	134	24	0	3	185	27	46	5	0	7	78	9	127	15	0	7	151	19	75	40	0	8	134	548
11:45 AM	18	158	27	0	3	203	22	46	5	0	5	73	0	146	18	0	6	164	11	52	35	0	5	98	538
Total	90	586	87	0	19	763	86	176	16	0	19	278	18	549	61	0	25	628	62	258	145	0	30	465	2134
Approach %	11.8	76.8	11.4	0.0	-	-	30.9	63.3	5.8	0.0	-	-	2.9	87.4	9.7	0.0	-	-	13.3	55.5	31.2	0.0	-	-	-
Total %	4.2	27.5	4.1	0.0	-	35.8	4.0	8.2	0.7	0.0	-	13.0	0.8	25.7	2.9	0.0	-	29.4	2.9	12.1	6.8	0.0	-	21.8	-
PHF	0.833	0.877	0.806	0.000	-	0.921	0.796	0.957	0.800	0.000	-	0.891	0.500	0.940	0.847	0.000	-	0.957	0.816	0.860	0.906	0.000	-	0.868	0.974
Lights	89	561	84	0	-	734	85	173	15	0	-	273	18	541	57	0	-	616	57	243	134	0	-	434	2057
% Lights	98.9	95.7	96.6	-	-	96.2	98.8	98.3	93.8	-	-	98.2	100.0	98.5	93.4	-	-	98.1	91.9	94.2	92.4	-	-	93.3	96.4
Mediums	1	23	3	0	-	27	1	2	1	0	-	4	0	6	4	0	-	10	5	13	10	0	-	28	69
% Mediums	1.1	3.9	3.4	-	-	3.5	1.2	1.1	6.3	-	-	1.4	0.0	1.1	6.6	-	-	1.6	8.1	5.0	6.9	-	-	6.0	3.2
Articulated Trucks	0	2	0	0	-	2	0	1	0	0	-	1	0	2	0	0	-	2	0	2	1	0	-	3	8
% Articulated Trucks	0.0	0.3	0.0	-	-	0.3	0.0	0.6	0.0	-	-	0.4	0.0	0.4	0.0	-	-	0.3	0.0	0.8	0.7	-	-	0.6	0.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	19	-	-	-	-	-	19	-	-	-	-	-	25	-	-	-	-	-	30	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Traffic and Transportation Engineering Services
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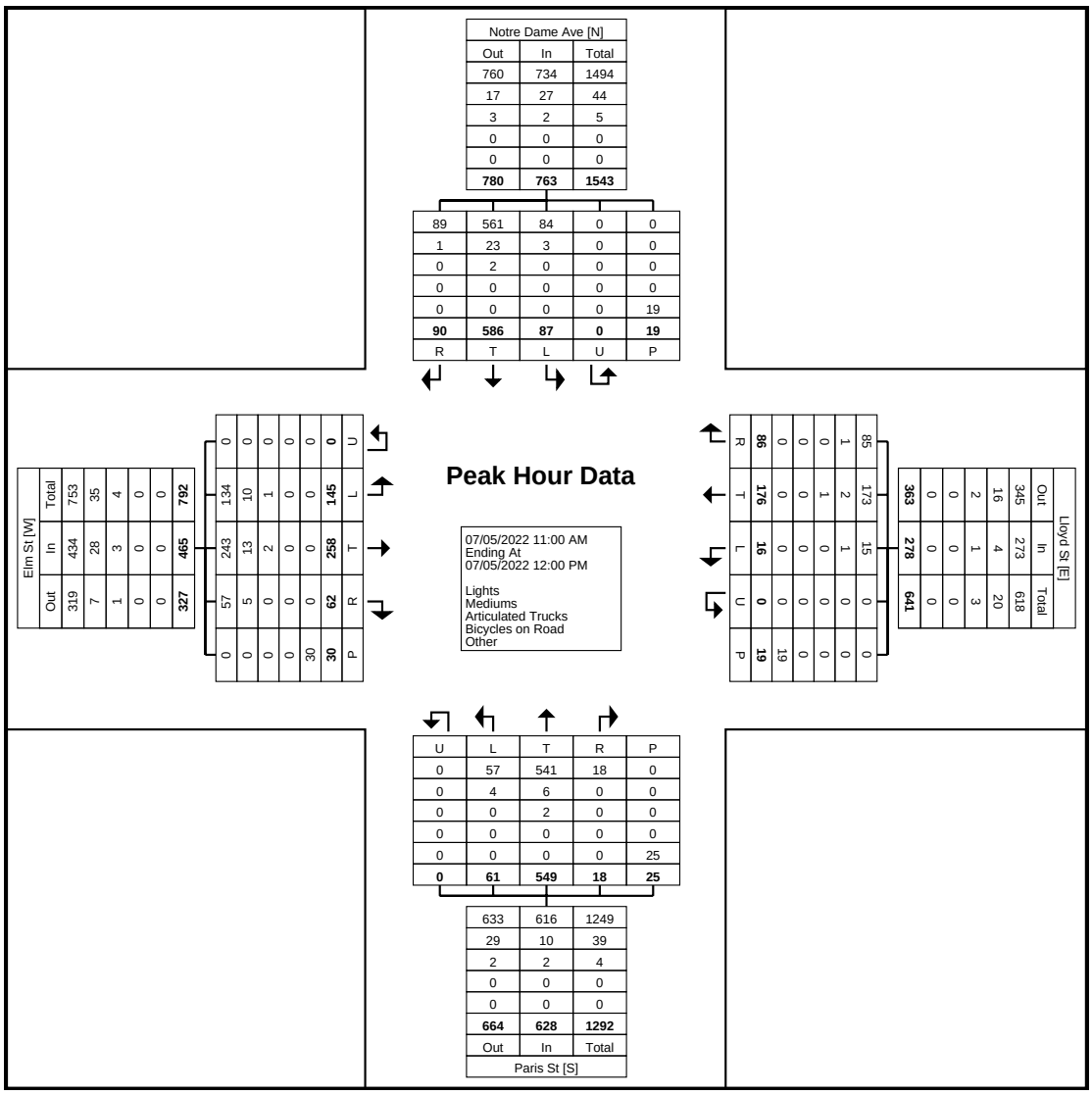
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (11:00 AM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Elm Street
Site Code: 01016103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Notre Dame Ave Southbound						Lloyd St Westbound						Paris St Northbound						Elm St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
12:00 PM	21	166	30	0	6	217	25	55	8	0	6	88	7	158	13	0	6	178	18	77	33	0	8	128	611
12:15 PM	20	149	29	0	5	198	18	41	5	0	3	64	4	162	6	0	1	172	14	46	27	0	17	87	521
12:30 PM	18	178	24	0	5	220	25	58	6	0	3	89	3	142	18	0	3	163	19	64	35	0	12	118	590
12:45 PM	17	178	29	0	4	224	28	60	7	0	2	95	4	179	21	0	4	204	16	40	21	0	9	77	600
Total	76	671	112	0	20	859	96	214	26	0	14	336	18	641	58	0	14	717	67	227	116	0	46	410	2322
Approach %	8.8	78.1	13.0	0.0	-	-	28.6	63.7	7.7	0.0	-	-	2.5	89.4	8.1	0.0	-	-	16.3	55.4	28.3	0.0	-	-	-
Total %	3.3	28.9	4.8	0.0	-	37.0	4.1	9.2	1.1	0.0	-	14.5	0.8	27.6	2.5	0.0	-	30.9	2.9	9.8	5.0	0.0	-	17.7	-
PHF	0.905	0.942	0.933	0.000	-	0.959	0.857	0.892	0.813	0.000	-	0.884	0.643	0.895	0.690	0.000	-	0.879	0.882	0.737	0.829	0.000	-	0.801	0.950
Lights	75	648	108	0	-	831	90	210	25	0	-	325	17	629	58	0	-	704	62	217	108	0	-	387	2247
% Lights	98.7	96.6	96.4	-	-	96.7	93.8	98.1	96.2	-	-	96.7	94.4	98.1	100.0	-	-	98.2	92.5	95.6	93.1	-	-	94.4	96.8
Mediums	1	20	4	0	-	25	5	3	1	0	-	9	1	11	0	0	-	12	5	10	8	0	-	23	69
% Mediums	1.3	3.0	3.6	-	-	2.9	5.2	1.4	3.8	-	-	2.7	5.6	1.7	0.0	-	-	1.7	7.5	4.4	6.9	-	-	5.6	3.0
Articulated Trucks	0	3	0	0	-	3	1	1	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	6
% Articulated Trucks	0.0	0.4	0.0	-	-	0.3	1.0	0.5	0.0	-	-	0.6	0.0	0.2	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	8.7	-	-
Pedestrians	-	-	-	-	20	-	-	-	-	-	14	-	-	-	-	-	14	-	-	-	-	-	42	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	91.3	-	-

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Count Name: Notre Dame @ Elm Street
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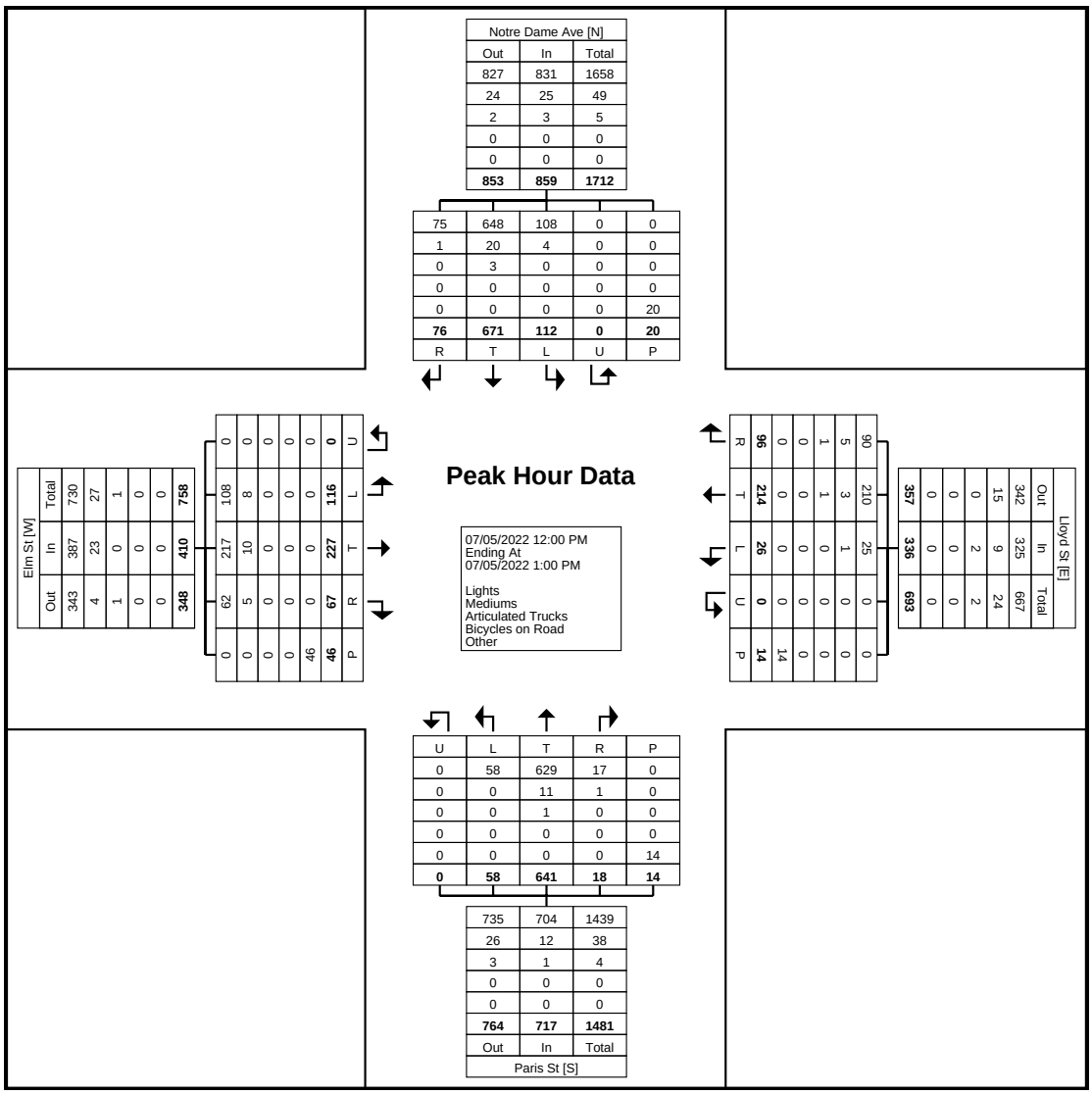
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (12:00 PM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022

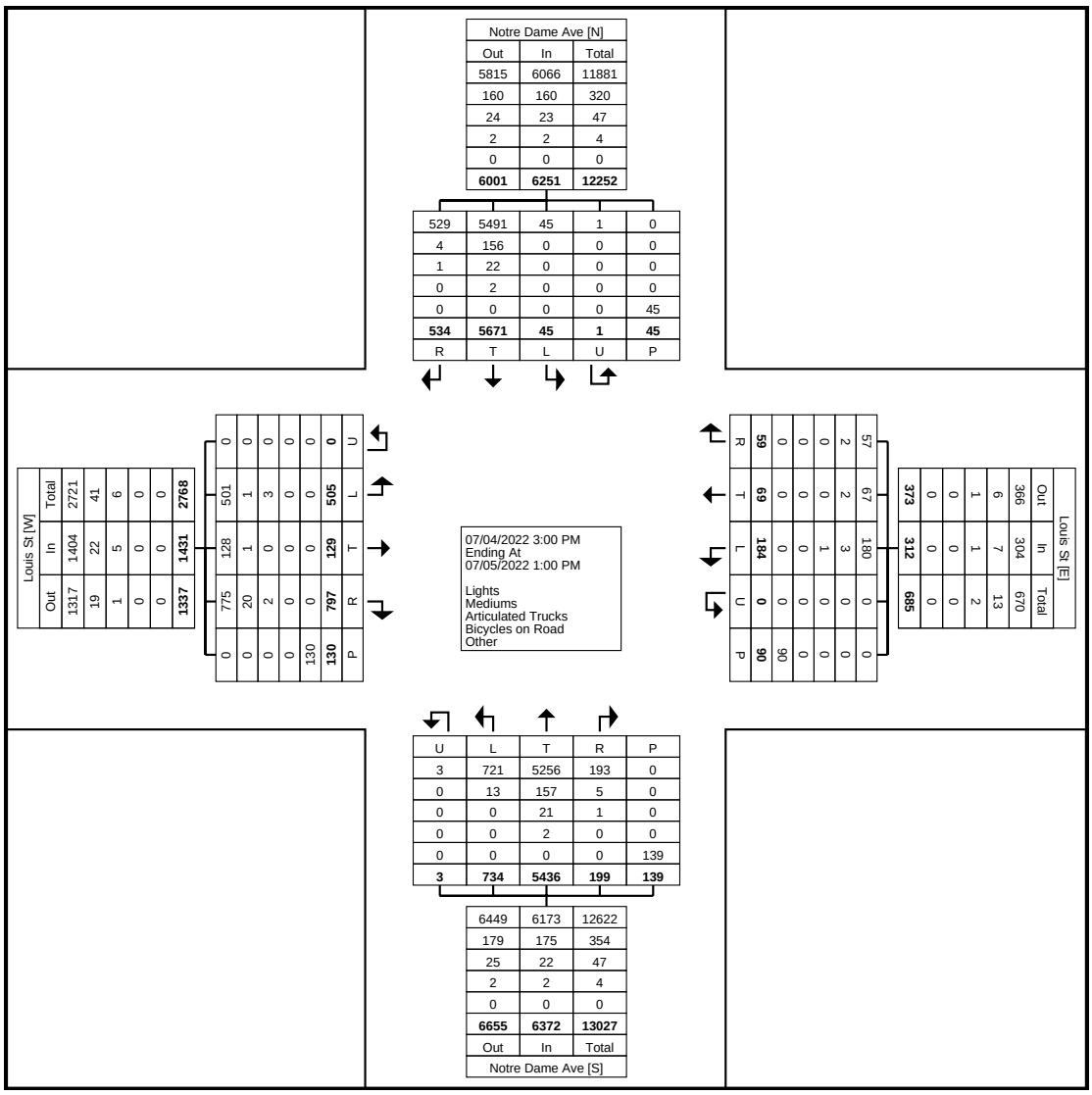
Turning Movement Data

Start Time	Notre Dame Ave Southbound						Louis St Westbound						Notre Dame Ave Northbound						Louis St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
3:00 PM	25	187	1	0	1	213	2	6	8	0	1	16	10	205	26	0	10	241	32	8	33	0	2	73	543
3:15 PM	12	234	3	0	3	249	3	1	8	0	8	12	9	218	27	0	7	254	22	5	16	0	4	43	558
3:30 PM	20	183	2	0	3	205	1	1	6	0	3	8	13	218	29	0	5	260	27	6	19	0	5	52	525
3:45 PM	19	202	7	0	0	228	2	3	6	0	6	11	8	279	30	0	10	317	21	3	20	0	3	44	600
Hourly Total	76	806	13	0	7	895	8	11	28	0	18	47	40	920	112	0	32	1072	102	22	88	0	14	212	2226
4:00 PM	21	181	1	0	3	203	2	4	11	0	4	17	2	257	36	0	3	295	40	2	39	0	4	81	596
4:15 PM	18	210	1	0	4	229	0	0	13	0	7	13	16	276	29	0	8	321	36	7	26	0	9	69	632
4:30 PM	21	197	2	0	2	220	6	3	7	0	3	16	6	245	31	0	7	282	59	9	24	0	11	92	610
4:45 PM	11	161	2	0	4	174	3	1	7	0	4	11	10	286	31	0	7	327	34	9	14	0	4	57	569
Hourly Total	71	749	6	0	13	826	11	8	38	0	18	57	34	1064	127	0	25	1225	169	27	103	0	28	299	2407
5:00 PM	18	182	1	0	4	201	1	6	9	0	2	16	13	237	25	0	7	275	32	15	37	0	7	84	576
5:15 PM	15	203	2	0	2	220	1	3	4	0	6	8	6	237	31	0	4	274	31	6	12	0	5	49	551
5:30 PM	12	154	0	0	5	166	0	3	5	0	5	8	6	154	28	0	10	188	32	3	19	0	6	54	416
5:45 PM	19	171	1	0	4	191	2	0	8	0	6	10	7	196	22	0	8	225	18	3	10	0	9	31	457
Hourly Total	64	710	4	0	15	778	4	12	26	0	19	42	32	824	106	0	29	962	113	27	78	0	27	218	2000
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	3	42	0	0	0	45	1	0	1	0	0	2	2	21	7	0	0	30	8	0	3	0	3	11	88
6:15 AM	7	79	1	0	0	87	0	0	5	0	0	5	3	50	8	0	0	61	14	2	3	0	0	19	172
6:30 AM	3	131	0	0	0	134	1	0	1	0	0	2	1	58	9	0	2	68	17	1	1	0	3	19	223
6:45 AM	8	162	0	0	0	170	2	0	3	0	2	5	5	115	15	0	2	135	25	1	7	0	1	33	343
Hourly Total	21	414	1	0	0	436	4	0	10	0	2	14	11	244	39	0	4	294	64	4	14	0	7	82	826
7:00 AM	4	159	0	0	0	163	0	3	3	0	2	6	2	67	14	0	4	83	12	1	5	0	1	18	270
7:15 AM	13	184	0	0	0	197	1	0	3	0	3	4	1	118	17	0	1	136	12	3	4	0	0	19	356
7:30 AM	13	198	0	1	0	212	1	1	6	0	0	8	6	109	20	0	5	135	18	1	5	0	3	24	379
7:45 AM	29	217	2	0	0	248	1	3	5	0	2	9	5	160	36	0	3	201	26	1	6	0	4	33	491
Hourly Total	59	758	2	1	0	820	3	7	17	0	7	27	14	454	87	0	13	555	68	6	20	0	8	94	1496
8:00 AM	21	196	0	0	2	217	3	4	8	0	1	15	6	127	19	0	7	152	19	3	12	0	1	34	418
8:15 AM	30	241	5	0	0	276	1	5	8	0	0	14	8	128	34	0	1	170	21	4	8	0	5	33	493
8:30 AM	38	192	2	0	1	232	4	6	5	0	3	15	3	162	34	0	2	199	21	3	13	0	2	37	483
8:45 AM	25	214	2	0	0	241	1	0	4	0	1	5	8	136	31	0	2	175	21	5	8	0	3	34	455
Hourly Total	114	843	9	0	3	966	9	15	25	0	5	49	25	553	118	0	12	696	82	15	41	0	11	138	1849
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
11:00 AM	11	167	2	0	3	180	3	3	5	0	5	11	5	159	15	0	2	179	13	3	18	0	3	34	404
11:15 AM	12	179	0	0	1	191	4	4	5	0	4	13	2	164	13	1	3	180	20	1	13	0	6	34	418
11:30 AM	15	164	1	0	0	180	4	0	7	0	2	11	8	171	15	1	3	195	29	0	20	0	8	49	435
11:45 AM	16	180	2	0	1	198	1	2	6	0	0	9	5	164	12	0	2	181	26	4	22	0	3	52	440
Hourly Total	54	690	5	0	5	749	12	9	23	0	11	44	20	658	55	2	10	735	88	8	73	0	20	169	1697
12:00 PM	13	176	1	0	2	190	2	2	6	0	3	10	3	165	27	0	4	195	31	4	33	0	3	68	463
12:15 PM	22	158	3	0	0	183	1	2	4	0	4	7	7	202	22	0	5	231	27	7	9	0	5	43	464
12:30 PM	17	184	1	0	0	202	1	1	5	0	2	7	6	160	24	0	4	190	24	4	25	0	5	53	452
12:45 PM	23	183	0	0	0	206	4	2	2	0	1	8	7	191	17	1	1	216	29	5	21	0	2	55	485
Hourly Total	75	701	5	0	2	781	8	7	17	0	10	32	23	718	90	1	14	832	111	20	88	0	15	219	1864
Grand Total	534	5671	45	1	45	6251	59	69	184	0	90	312	199	5436	734	3	139	6372	797	129	505	0	130	1431	14366
Approach %	8.5	90.7	0.7	0.0	-	-	18.9	22.1	59.0	0.0	-	-	3.1	85.3	11.5	0.0	-	-	55.7	9.0	35.3	0.0	-	-	-
Total %	3.7	39.5	0.3	0.0	-	43.5	0.4	0.5	1.3	0.0	-	2.2	1.4	37.8	5.1	0.0	-	44.4	5.5	0.9	3.5	0.0	-	10.0	-
Lights	529	5491	45	1	-	6066	57	67	180	0	-	304	193	5256	721	3	-	6173	775	128	501	0	-	1404	13947
% Lights	99.1	96.8	100.0	100.0	-	97.0	96.6	97.1	97.8	-	-	97.4	97.0	96.7	98.2	100.0	-	96.9	97.2	99.2	99.2	-	-	98.1	97.1
Mediums	4	156	0	0	-	160	2	2	3	0	-	7	5	157	13	0	-	175	20	1	1	0	-	22	364
% Mediums	0.7	2.8	0.0	0.0	-	2.6	3.4	2.9	1.6	-	-	2.2	2.5	2.9	1.8	0.0	-	2.7	2.5	0.8	0.2	-	-	1.5	2.5
Articulated Trucks	1	22	0	0	-	23	0	0	1	0	-	1	1	21	0	0	-	22	2	0	3	0	-	5	51
% Articulated Trucks	0.2	0.4	0.0	0.0	-	0.4	0.0	0.0	0.5	-	-	0.3	0.5	0.4	0.0	0.0	-	0.3	0.3	0.0	0.6	-	-	0.3	0.4
Bicycles on Road	0	2	0	0	-	2	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	4
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0

Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	12	-	-	-	-	-	18	-	-	-	-	-	27	-	-
% Bicycles on Crosswalk	-	-	-	-	6.7	-	-	-	-	-	13.3	-	-	-	-	-	12.9	-	-	-	-	-	20.8	-	-
Pedestrians	-	-	-	-	42	-	-	-	-	-	78	-	-	-	-	-	121	-	-	-	-	-	103	-	-
% Pedestrians	-	-	-	-	93.3	-	-	-	-	-	86.7	-	-	-	-	-	87.1	-	-	-	-	-	79.2	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022



Turning Movement Data Plot

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (3:45 PM)

Start Time	Notre Dame Ave Southbound						Louis St Westbound						Notre Dame Ave Northbound						Louis St Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
3:45 PM	19	202	7	0	0	228	2	3	6	0	6	11	8	279	30	0	10	317	21	3	20	0	3	44	600
4:00 PM	21	181	1	0	3	203	2	4	11	0	4	17	2	257	36	0	3	295	40	2	39	0	4	81	596
4:15 PM	18	210	1	0	4	229	0	0	13	0	7	13	16	276	29	0	8	321	36	7	26	0	9	69	632
4:30 PM	21	197	2	0	2	220	6	3	7	0	3	16	6	245	31	0	7	282	59	9	24	0	11	92	610
Total	79	790	11	0	9	880	10	10	37	0	20	57	32	1057	126	0	28	1215	156	21	109	0	27	286	2438
Approach %	9.0	89.8	1.3	0.0	-	-	17.5	17.5	64.9	0.0	-	-	2.6	87.0	10.4	0.0	-	-	54.5	7.3	38.1	0.0	-	-	-
Total %	3.2	32.4	0.5	0.0	-	36.1	0.4	0.4	1.5	0.0	-	2.3	1.3	43.4	5.2	0.0	-	49.8	6.4	0.9	4.5	0.0	-	11.7	-
PHF	0.940	0.940	0.393	0.000	-	0.961	0.417	0.625	0.712	0.000	-	0.838	0.500	0.947	0.875	0.000	-	0.946	0.661	0.583	0.699	0.000	-	0.777	0.964
Lights	78	765	11	0	-	854	10	10	37	0	-	57	32	1030	124	0	-	1186	155	21	108	0	-	284	2381
% Lights	98.7	96.8	100.0	-	-	97.0	100.0	100.0	100.0	-	-	100.0	100.0	97.4	98.4	-	-	97.6	99.4	100.0	99.1	-	-	99.3	97.7
Mediums	1	20	0	0	-	21	0	0	0	0	-	0	0	25	2	0	-	27	1	0	0	0	-	1	49
% Mediums	1.3	2.5	0.0	-	-	2.4	0.0	0.0	0.0	-	-	0.0	0.0	2.4	1.6	-	-	2.2	0.6	0.0	0.0	-	-	0.3	2.0
Articulated Trucks	0	4	0	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	5
% Articulated Trucks	0.0	0.5	0.0	-	-	0.5	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.9	-	-	0.3	0.2
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	2	0	0	-	2	0	0	0	0	-	0	3
% Bicycles on Road	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	-	0.2	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	7	-	-
% Bicycles on Crosswalk	-	-	-	-	11.1	-	-	-	-	-	10.0	-	-	-	-	-	7.1	-	-	-	-	-	25.9	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	18	-	-	-	-	-	26	-	-	-	-	-	20	-	-
% Pedestrians	-	-	-	-	88.9	-	-	-	-	-	90.0	-	-	-	-	-	92.9	-	-	-	-	-	74.1	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
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Count Name: Notre Dame @ Louis Street
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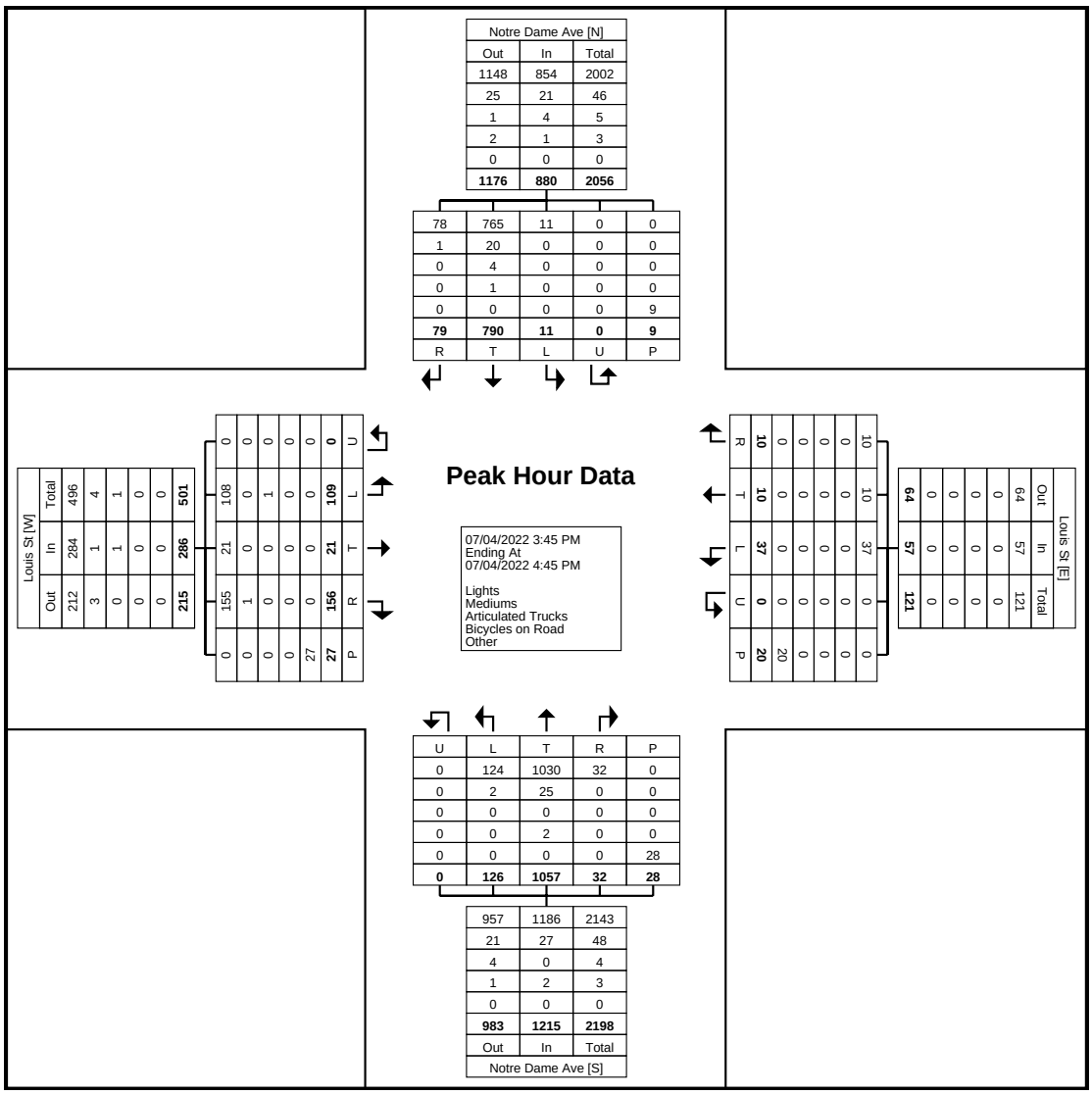
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (3:45 PM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Notre Dame Ave Southbound						Louis St Westbound						Notre Dame Ave Northbound						Louis St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
7:45 AM	29	217	2	0	0	248	1	3	5	0	2	9	5	160	36	0	3	201	26	1	6	0	4	33	491
8:00 AM	21	196	0	0	2	217	3	4	8	0	1	15	6	127	19	0	7	152	19	3	12	0	1	34	418
8:15 AM	30	241	5	0	0	276	1	5	8	0	0	14	8	128	34	0	1	170	21	4	8	0	5	33	493
8:30 AM	38	192	2	0	1	232	4	6	5	0	3	15	3	162	34	0	2	199	21	3	13	0	2	37	483
Total	118	846	9	0	3	973	9	18	26	0	6	53	22	577	123	0	13	722	87	11	39	0	12	137	1885
Approach %	12.1	86.9	0.9	0.0	-	-	17.0	34.0	49.1	0.0	-	-	3.0	79.9	17.0	0.0	-	-	63.5	8.0	28.5	0.0	-	-	-
Total %	6.3	44.9	0.5	0.0	-	51.6	0.5	1.0	1.4	0.0	-	2.8	1.2	30.6	6.5	0.0	-	38.3	4.6	0.6	2.1	0.0	-	7.3	-
PHF	0.776	0.878	0.450	0.000	-	0.881	0.563	0.750	0.813	0.000	-	0.883	0.688	0.890	0.854	0.000	-	0.898	0.837	0.688	0.750	0.000	-	0.926	0.956
Lights	118	812	9	0	-	939	7	18	25	0	-	50	20	545	121	0	-	686	84	10	39	0	-	133	1808
% Lights	100.0	96.0	100.0	-	-	96.5	77.8	100.0	96.2	-	-	94.3	90.9	94.5	98.4	-	-	95.0	96.6	90.9	100.0	-	-	97.1	95.9
Mediums	0	30	0	0	-	30	2	0	1	0	-	3	2	26	2	0	-	30	2	1	0	0	-	3	66
% Mediums	0.0	3.5	0.0	-	-	3.1	22.2	0.0	3.8	-	-	5.7	9.1	4.5	1.6	-	-	4.2	2.3	9.1	0.0	-	-	2.2	3.5
Articulated Trucks	0	4	0	0	-	4	0	0	0	0	-	0	0	6	0	0	-	6	1	0	0	0	-	1	11
% Articulated Trucks	0.0	0.5	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	1.0	0.0	-	-	0.8	1.1	0.0	0.0	-	-	0.7	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	16.7	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	13	-	-	-	-	-	10	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	83.3	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
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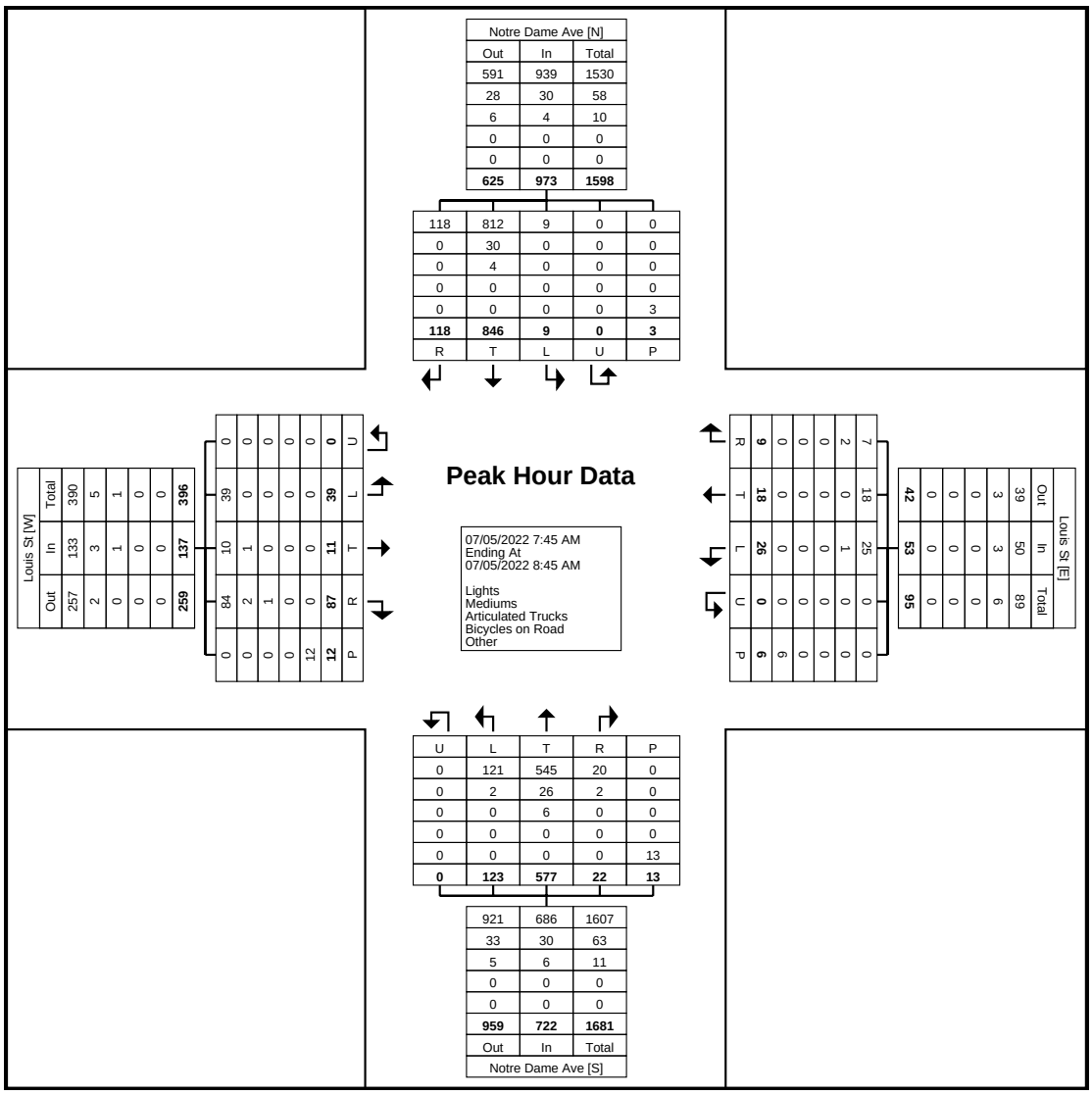
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (7:45 AM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Notre Dame Ave Southbound						Louis St Westbound						Notre Dame Ave Northbound						Louis St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
11:00 AM	11	167	2	0	3	180	3	3	5	0	5	11	5	159	15	0	2	179	13	3	18	0	3	34	404
11:15 AM	12	179	0	0	1	191	4	4	5	0	4	13	2	164	13	1	3	180	20	1	13	0	6	34	418
11:30 AM	15	164	1	0	0	180	4	0	7	0	2	11	8	171	15	1	3	195	29	0	20	0	8	49	435
11:45 AM	16	180	2	0	1	198	1	2	6	0	0	9	5	164	12	0	2	181	26	4	22	0	3	52	440
Total	54	690	5	0	5	749	12	9	23	0	11	44	20	658	55	2	10	735	88	8	73	0	20	169	1697
Approach %	7.2	92.1	0.7	0.0	-	-	27.3	20.5	52.3	0.0	-	-	2.7	89.5	7.5	0.3	-	-	52.1	4.7	43.2	0.0	-	-	-
Total %	3.2	40.7	0.3	0.0	-	44.1	0.7	0.5	1.4	0.0	-	2.6	1.2	38.8	3.2	0.1	-	43.3	5.2	0.5	4.3	0.0	-	10.0	-
PHF	0.844	0.958	0.625	0.000	-	0.946	0.750	0.563	0.821	0.000	-	0.846	0.625	0.962	0.917	0.500	-	0.942	0.759	0.500	0.830	0.000	-	0.813	0.964
Lights	53	663	5	0	-	721	12	9	22	0	-	43	19	642	54	2	-	717	84	8	71	0	-	163	1644
% Lights	98.1	96.1	100.0	-	-	96.3	100.0	100.0	95.7	-	-	97.7	95.0	97.6	98.2	100.0	-	97.6	95.5	100.0	97.3	-	-	96.4	96.9
Mediums	1	24	0	0	-	25	0	0	1	0	-	1	0	14	1	0	-	15	4	0	1	0	-	5	46
% Mediums	1.9	3.5	0.0	-	-	3.3	0.0	0.0	4.3	-	-	2.3	0.0	2.1	1.8	0.0	-	2.0	4.5	0.0	1.4	-	-	3.0	2.7
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	1	2	0	0	-	3	0	0	1	0	-	1	6
% Articulated Trucks	0.0	0.3	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	5.0	0.3	0.0	0.0	-	0.4	0.0	0.0	1.4	-	-	0.6	0.4
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	15.0	-	-
Pedestrians	-	-	-	-	5	-	-	-	-	-	11	-	-	-	-	-	10	-	-	-	-	-	17	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	85.0	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
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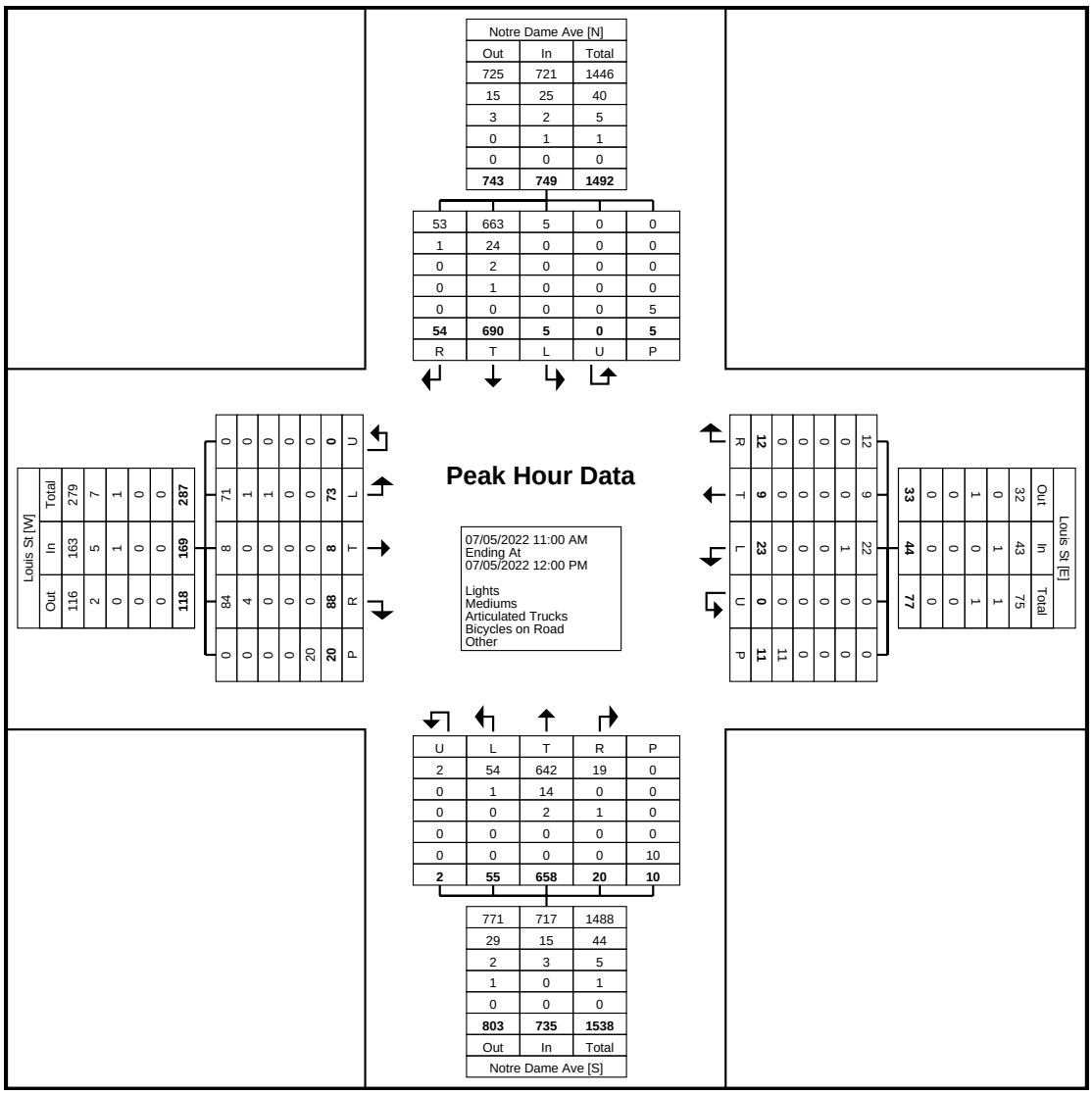
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (11:00 AM)

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

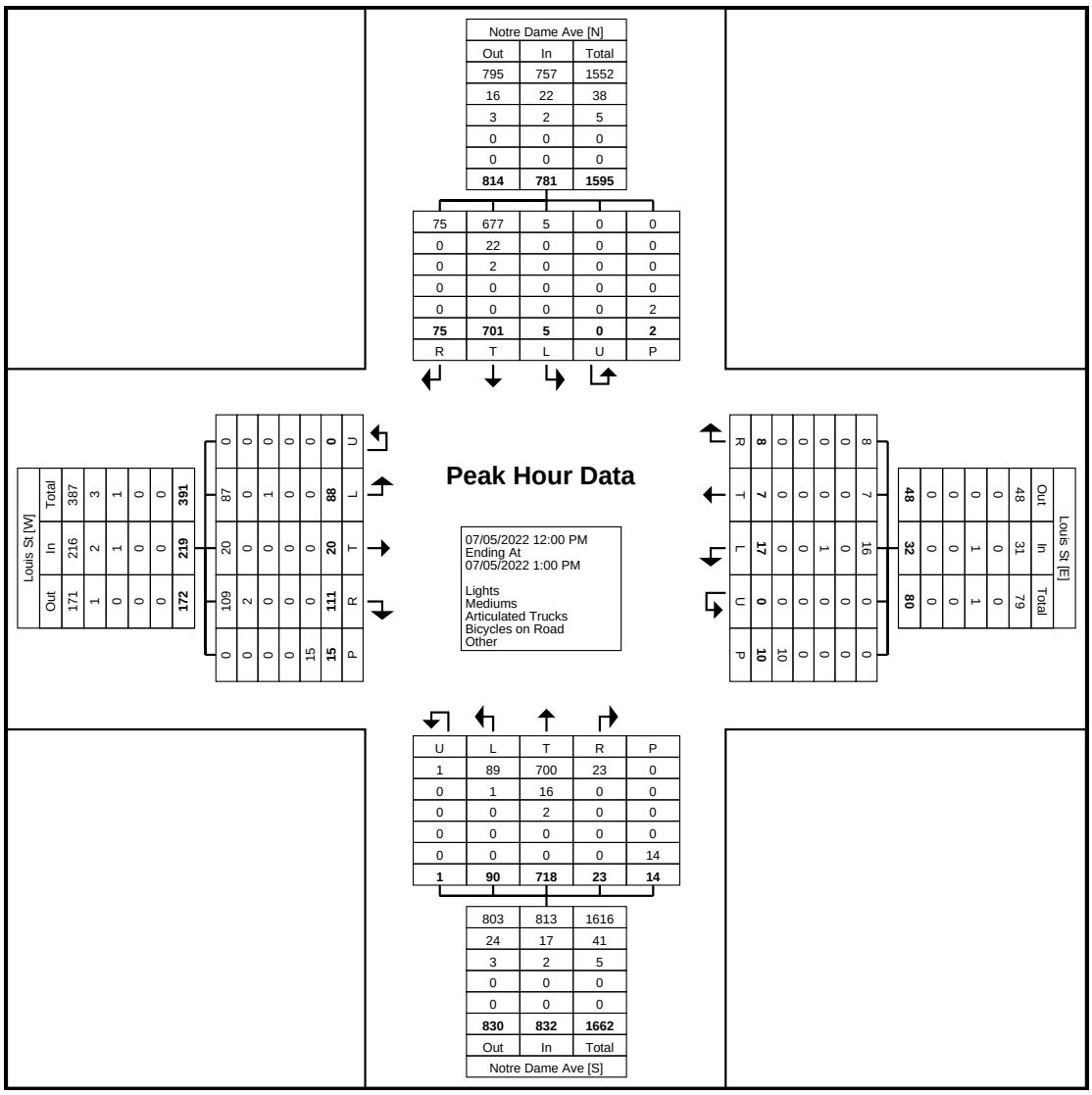
Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Notre Dame Ave Southbound						Louis St Westbound						Notre Dame Ave Northbound						Louis St Eastbound						
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Int. Total
12:00 PM	13	176	1	0	2	190	2	2	6	0	3	10	3	165	27	0	4	195	31	4	33	0	3	68	463
12:15 PM	22	158	3	0	0	183	1	2	4	0	4	7	7	202	22	0	5	231	27	7	9	0	5	43	464
12:30 PM	17	184	1	0	0	202	1	1	5	0	2	7	6	160	24	0	4	190	24	4	25	0	5	53	452
12:45 PM	23	183	0	0	0	206	4	2	2	0	1	8	7	191	17	1	1	216	29	5	21	0	2	55	485
Total	75	701	5	0	2	781	8	7	17	0	10	32	23	718	90	1	14	832	111	20	88	0	15	219	1864
Approach %	9.6	89.8	0.6	0.0	-	-	25.0	21.9	53.1	0.0	-	-	2.8	86.3	10.8	0.1	-	-	50.7	9.1	40.2	0.0	-	-	-
Total %	4.0	37.6	0.3	0.0	-	41.9	0.4	0.4	0.9	0.0	-	1.7	1.2	38.5	4.8	0.1	-	44.6	6.0	1.1	4.7	0.0	-	11.7	-
PHF	0.815	0.952	0.417	0.000	-	0.948	0.500	0.875	0.708	0.000	-	0.800	0.821	0.889	0.833	0.250	-	0.900	0.895	0.714	0.667	0.000	-	0.805	0.961
Lights	75	677	5	0	-	757	8	7	16	0	-	31	23	700	89	1	-	813	109	20	87	0	-	216	1817
% Lights	100.0	96.6	100.0	-	-	96.9	100.0	100.0	94.1	-	-	96.9	100.0	97.5	98.9	100.0	-	97.7	98.2	100.0	98.9	-	-	98.6	97.5
Mediums	0	22	0	0	-	22	0	0	0	0	-	0	0	16	1	0	-	17	2	0	0	0	-	2	41
% Mediums	0.0	3.1	0.0	-	-	2.8	0.0	0.0	0.0	-	-	0.0	0.0	2.2	1.1	0.0	-	2.0	1.8	0.0	0.0	-	-	0.9	2.2
Articulated Trucks	0	2	0	0	-	2	0	0	1	0	-	1	0	2	0	0	-	2	0	0	1	0	-	1	6
% Articulated Trucks	0.0	0.3	0.0	-	-	0.3	0.0	0.0	5.9	-	-	3.1	0.0	0.3	0.0	0.0	-	0.2	0.0	0.0	1.1	-	-	0.5	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	13.3	-	-
Pedestrians	-	-	-	-	2	-	-	-	-	-	10	-	-	-	-	-	14	-	-	-	-	-	13	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	86.7	-	-

Traffic and Transportation Engineering Services
1800 Frobisher Street
PO Box 5000, STN A
Sudbury, Ontario, Canada P3A 5P3
705-674-4455

Count Name: Notre Dame @ Louis Street
Site Code: 01014103
Start Date: 07/04/2022



Turning Movement Peak Hour Data Plot (12:00 PM)

Programmed EPAC Data

6/6/2014
1:27:26PM

Intersection Name: Elm & Durham **Intersection Alias: elmdurh**

Access Code: 9999 Channel: 3 Address: 2 Revision: 3.30“

Access Data

Port 2 Comm :19200 Baud
Port 3 Comm :1200 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
2	30	0.0	30	30	3.7	2.0
4	25	0.0	25	25	3.7	2.0

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	Min_Gap
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Ped Clear	Actuated Rest in Walk
2	7	10	No	0	No
4	7	11	No	0	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Yellow	NonActI	None	Ped	0
Inactive	NonActII	None	Ped	0

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	Yes	No	No	No
Yes	Yes	No	No	No

Special Sequence

Default Data

Vehical Detector Phase Assignment

Assigned Phase	Mode	Switched Phase	Extend	Delay

Default Data

Pedestrian Detector

Default Data

Special Detector Phase Assignment

Assign Phase	Mode	Switched Phase	Extend	Delay

:

Default Data

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec

Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0

ABC connector Input Modes: 0

ABC connector Output Modes: 0

D connector Input Modes: 0

D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

Overlaps

Overlaps

Phase(s)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
2	1	3
4	1	1

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Message 40

Default Data

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

Dial/Split	Cycle
1/1	90

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 2=Max 2
Correction Mode: 0=Dwell

Offset Mode: 0=Beg Grn
Force Mode: 0=Plan
Max Dwell Time: 0
Yield Period: 0

Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Split Times and Phase Mode

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
2	58	1=Coordinate	4	32	0=Actuated						

Traffic Plan Data

Plan: **1/1/1** Offset Time: 10 Alt. Sequence: 0 Mode: 0=Normal Rg 2 Lag Time: 0 Rg 3 Lag Time: 0 Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2
End of Daylight Saving Month: 11 Week: 1

Cycle Zero Reference Hours: 24 Min: 0

Source Day	Equate Days 1	2	3	4	5	6	7
1	2	3	4	5	6	7	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	1/1/1																	

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	5
2	5
3	5
4	5

Flash > Preempt 1 | Preempt 2 = Preempt 3 | Preempt 4 = Preempt 5
Preempt 1 > Preempt 2 | Preempt 3 = Preempt 4 | Preempt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select			Track				Dwell	Return		
								Ped Clear	Yel	Red	Grn	Ped	Yel	Red	Green	Ped Clear	Yel	Red
1	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	10	8	4.0	2.0	10	8	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
4	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	No	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	No	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 5

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 6

Vehical Phases

Ph.	Track	Dwell	Cycle

Default Data

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

System/Detectors Data

Local Critical Alarms

Revert to Backup: 1st Phone:

Local Free: Cycle Failure: Coord Failure: Conflict Flash: Remote Flash: 2nd Phone:

Local Fash: Cycle Fault: Coord Fault: Premption: Voltage Monitor:

Special Status 1: Special Status 2: Special Status 3: Special Status 4: Special Status 5: Special Status 6:

Traffic Responsive

System Detector	Detector Channel	Veh/Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data

Sample Interval:

Queue:

Default Data

Input Selection:

Detector Failed Level :

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - Diag 0 Values

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Default Data

Dial/Split/Offset

//

Default Data

Speed Trap Low Treshold	Speed Trap High Treshold

Programmed EPAC Data

6/6/2014
3:04:14PM

Intersection Name: Notre Dame & Ste-Anne's

Intersection Alias: Ste Anne's

Access Code: 9999 Channel: 1 Address: 9 Revision: 3.13

Access Data

Port 2 Comm :1200 Baud
Port 3 Comm :4800 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	5	3.0	15	15	3.0	1.0
2	15	3.0	40	40	3.7	2.3
4	8	2.5	20	20	3.7	2.5

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	Min_Gap
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Ped Clear	Actuated Rest in Walk
1	0	0	No	0	No
2	7	30	No	0	No
4	7	30	No	0	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Inactive	None	None	None	0
Yellow	NonActI	Max	None	0
Inactive	NonActII	None	None	0

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	No	No	No	No
No	No	No	No	No
No	No	No	No	No

Special Sequence
Default Data

Vehical Detector Phase Assignment

	Assigned Phase	Mode	Switched Phase	Extend	Delay
Vehical Detector Channel :3	4	Veh	0	0.0	0

Default Data

Pedestrian Detector
Default Data

Special Detector Phase Assignment

	Assign Phase	Mode	Switched Phase	Extend	Delay
:					

Default Data

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec
Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0
ABC connector Input Modes: 0
ABC connector Output Modes: 0
D connector Input Modes: 0
D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash
Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	1															
	2															

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring			Phase(s)														
Phase	Ring	Next Phase		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	Concurrent Phases	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
2	1	3		5	5	7	7	2	2	4	4								
4	1	1		6	6	8	8	5	6	7	8								

Alternate Sequences

Alternate Sequences

Phase Pair(s)

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Message 40

Default Data

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto
Coordination Mode: 0=Permissive
Maximun Mode: 0=Inhibit
Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn
Force Mode: 0=Plan
Max Dwell Time: 15
Yield Period: 0

Manual Dial: 1
Manual Split: 1
Manual Offset: 1

Dial/Split	Cycle
1/1	110
2/1	110
2/2	110
3/1	110
4/1	100

Split Times and Phase Mode

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	15	0=Actuated	2	50	1=Coordinate	4	45	0=Actuated			

Dial 2 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	53	1=Coordinate	4	45	4=Ped Recall			

Dial 2 / Split 2

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	53	1=Coordinate	4	45	4=Ped Recall			

Dial 3 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	12	0=Actuated	2	53	1=Coordinate	4	45	4=Ped Recall			

Dial 4 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	10	0=Actuated	2	45	1=Coordinate	4	45	0=Actuated			

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 95	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **2/1/1**	Offset Time: 53	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **2/2/1**	Offset Time: 53	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **4/1/1**	Offset Time: 53	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving	Month: 3	Week: 2	Cycle Zero Reference	Hours: 24	Min: 0
End of Daylight Saving	Month: 11	Week: 1			

Source Day	Equate Days 1	2	3	4	5	6	7
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	4/1/1																	
2	1	9:0	1/1/1																	
3	1	21:30	4/1/1																	
4	2	0:1	4/1/1																	
5	2	6:30	1/1/1																	
6	2	21:30	4/1/1																	
7	7	0:1	4/1/1																	
8	7	8:0	1/1/1																	
9	7	21:30	4/1/1																	

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	5
2	5
3	5
4	5

Flash > Preepmt 1	Preepmt 2 = Preempt 3	Preepmt 4 = Preempt 5
Preepmt 1 = Preempt 2	Preepmt 3 = Preempt 4	Preepmt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select: Ped Clear	Select: Yel	Select: Red	Track: Grn	Track: Ped	Track: Yel	Track: Red	Dwell Green	Return: Ped Clear	Return: Yel	Return: Red
1	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	2.0	5	0	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	2.0	5	0	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
4	Yes	No

Preempt 2

Phase	Exit Phase	Exit Calls
4	Yes	No
8	No	Yes

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle
A	Red	Green	No

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle
3	Green	Red	No
4	Red	Green	No
8	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
2	Red	Grn	No
3	Grn	Red	No
4	Grn	Grn	No

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Red	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
4	Red	Grn	No
1	Grn	Red	No
2	Grn	Grn	No

Preempt 5

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Red	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
4	Red	Grn	No
1	Grn	Red	No
2	Grn	Grn	No

Preempt 6

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Red	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
4	Red	Grn	No
1	Grn	Red	No
2	Grn	Grn	No

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15

1st Phone:

Local Free: No Cycle Failure: No Coord Failure: No Conflict Flash: No Remote Flash: No

2nd Phone:

Local Fash: No Cycle Fault: No Coord Fault: No Premption: No Voltage Monitor: No

Special Status 1: No Special Status 2: No Special Status 3: No Special Status 4: No Special Status 5: No Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Veh/Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data

Sample Interval:

Default Data

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count
1	60	0	0

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Speed Trap Data

Speed Trap:

Measurement:

Detector 1 Detector_2 Distance :

Default Data

Dial/Split/Offset

//

Default Data

Speed Trap Low Treshold	Speed Trap High Treshold

Programmed EPAC Data

6/6/2014
2:59:02PM

Intersection Name: Notre Dame & Elm

Intersection Alias: Elm

Access Code: 9999 Channel: 1 Address: 10 Revision: 3.13

Access Data

Port 2 Comm :1200 Baud
Port 3 Comm :4800 Baud

Phase Data

Vehical Basic Timings

Phase	Min_Grn	Passage	Max1	Max2	Yellow	All Red
1	5	2.5	19	19	3.0	1.0
2	30	5.0	50	50	4.1	2.6
4	8	3.5	30	30	4.1	3.7
5	5	2.5	10	10	3.0	1.0
6	30	5.0	50	50	4.1	2.6
7	5	2.5	12	12	3.0	1.0
8	8	3.5	30	30	4.1	3.7

Vehical Density Timings

Added Initial	Max_Initial	Time B4 Reduction	Cars Before	Time To Reduce	Min_Gap
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0
0.0	0	0	0	0	0.0

Pedestrian Timing

Phase	Walk	Ped Clear	Flashing Walk	Extended Ped Clear	Actuated Rest in Walk
1	0	0	No	0	No
2	7	20	No	0	No
4	7	27	No	0	No
5	0	0	No	0	No
6	7	28	No	0	No
7	0	0	No	0	No
8	7	28	No	0	No

General Control

Initialize	Non-Act Response	Veh Recall	Ped Recall	Recall Delay
Inactive	None	None	None	0
Yellow	NonActI	Min	None	0
Inactive	NonActII	None	None	0
Inactive	None	None	None	0
Yellow	NonActI	Min	None	0
Inactive	None	None	None	0
Inactive	NonActII	None	None	0

Miscellaneous

Non Lock	Dual Entry	Last Car Passage	Conditional Service	No Simultaneous Gap Out
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No
Yes	No	No	No	No
Yes	Yes	No	No	No

Special Sequence

Default Data

Vehical Detector Phase Assignment

Assigned Phase	Mode	Switched Phase	Extend	Delay

Default Data

Pedestrian Detector

Default Data

Special Detector Phase Assignment

Assign Phase	Mode	Switched Phase	Extend	Delay

:

Default Data

Unit Data

General Control

Startup Time: 5sec Startup State: Flash Red Revert: 4sec

Auto Ped Clear: No Stop Time Reset: No Alternate Sequence: 0

ABC connector Input Modes: 0

ABC connector Output Modes: 0

D connector Input Modes: 0

D connector Output Modes: 0

Ring	Input Respons	Output Selection
1	Ring 1	Ring 1
2	Ring 2	Ring 2
3	None	None
4	None	None

Remote Flash

Test A = Flash

Phase	Flash Entry Phase	Flash Exit Phase

Default Data - No Flash

Channel	Flash Color	Flash Alternat

Default Data - No Flash

Overlaps

Overlaps

Phase(s)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Trail Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trail Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Trail Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Plus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minus Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring

Phase	Ring	Next Phase
1	1	2
2	1	3
4	1	1
5	2	6
6	2	7
7	2	8
8	2	5

Phase(s)

Concurrent Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	1	2	3	4	1	1	3	3	9	10	11	12	13	14	15	16
	5	5	7	7	2	2	4	4								
	6	6	8	8	5	6	7	8								

Alternate Sequences

Alternate Sequences

Phase Pair(s)

No Alternate Sequences Programmed

Port 1 Data

BIU Addr	Port Status	Message
		40

Default Data

Channel Assignment

Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set		Control	Channel	Hardware Pin Set	
Ph.1 Veh	1	1 - Ph.1 RYG	1	Ph.2 Veh	2	2 - Ph.2 RYG	2	Ph.3 Veh	3	3 - Ph.3 RYG	3
Ph.4 Veh	4	4 - Ph.4 RYG	4	Ph.5 Veh	5	5 - Ph.5 RYG	5	Ph.6 Veh	6	6 - Ph.6 RYG	6
Ph.7 Veh	7	7 - Ph.7 RYG	7	Ph.8 Veh	8	8 - Ph.8 RYG	8	Ph.2 Ped	9	10 - Ph.2 DPW	10
Ph.4 Ped	10	12 - Ph.4 DPW	12	Ph.6 Ped	11	14 - Ph.6 DPW	14	Ph.8 Ped	12	16 - Ph.8 DPW	16
Ph.1 OLP	13	17 - Ph.1 RYG	17	Ph.2 OLP	14	18 - Ph.2 RYG	18	Ph.3 OLP	15	19 - Ph.3 RYG	19
Ph.4 OLP	16	20 - Ph.4 RYG	20	Ph.1 Ped	17	9 - Ph.1 DPW	9	Ph.3 Ped	18	11 - Ph.3 DPW	11
Ph.5 Ped	19	13 - Ph.5 DPW	13	Ph.7 Ped	20	15 - Ph.7 DPW	15				

Coordination Data

General Coordination Data

Operation Mode: 1=Auto

Coordination Mode: 0=Permissive

Maximun Mode: 0=Inhibit

Correction Mode: 2=Short Way

Offset Mode: 0=Beg Grn

Force Mode: 0=Plan

Max Dwell Time: 15

Yield Period: 0

Manual Dial: 1

Manual Split: 1

Manual Offset: 1

Dial/Split	Cycle
1/1	110
2/1	110
3/1	110
4/1	110

Split Times and Phase Mode

Dial 1 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	19	0=Actuated	2	48	1=Coordinate	4	43	0=Actuated	5	10	0=Actuated
6	44	1=Coordinate	7	12	0=Actuated	8	44	0=Actuated			

Dial 2 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	19	0=Actuated	2	48	1=Coordinate	4	43	0=Actuated	5	10	0=Actuated
6	44	1=Coordinate	7	12	0=Actuated	8	44	0=Actuated			

Dial 3 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	19	0=Actuated	2	48	1=Coordinate	4	43	0=Actuated	5	10	0=Actuated
6	44	1=Coordinate	7	12	0=Actuated	8	44	0=Actuated			

Dial 4 / Split 1

Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode	Ph.	Splits	Ph. Mode
1	19	0=Actuated	2	48	1=Coordinate	4	43	0=Actuated	5	10	0=Actuated
6	44	1=Coordinate	7	12	0=Actuated	8	44	0=Actuated			

Traffic Plan Data

Plan: **1/1/1**	Offset Time: 85	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **2/1/1**	Offset Time: 20	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **3/1/1**	Offset Time: 20	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0
Plan: **4/1/1**	Offset Time: 5	Alt. Sequence: 0	Mode: 0=Normal	Rg 2 Lag Time: 0	Rg 3 Lag Time: 0	Rg 4 Lag Time: 0

Local TBC Data

Start of Daylight Saving Month: 3 Week: 2 Cycle Zero Reference Hours: 24 Min: 0

End of Daylight Saving Month: 11 Week: 1

Source Day	Equate Days 1	2	3	4	5	6	7
2	3	4	5	6	0	0	0

Traffic Data

Event	Day	Time	D/S/O	flash	PHASE FUNCTION 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	0:1	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2	1	9:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3	1	21:30	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	0:1	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5	2	6:30	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6	2	21:30	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	7	0:1	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8	7	8:0	1/1/1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9	7	21:30	0/0/4		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

AUX. Events

Event	Program Day	Hour	Min.	Aux Ouputs 1	2	3	Det. Diag. D1	Det. Rpt. D2	Det. Mult100 D3	Dimming	Special Function Outputs 1	2	3	4	5	6	7	8
				☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Default Data - No Special Day(s) or Week(s) Programmed

Special Functions

Function	SF1	SF2	SF3	SF4	SF5	SF6	SF7	SF8
Special Function 1	X							
Special Function 2		X						
Special Function 3			X					
Special Function 4				X				
Special Function 5					X			
Special Function 6						X		
Special Function 7							X	
Special Function 8								X

Phase Function

Phase Function Map	PF1	PF2	PF3	PF4	PF5	PF6	PF7	PF8	PF9	PF10	PF11	PF12	PF13	PF14	PF15	PF16
Phase 1 Max2	X															
Phase 2 Max2		X														
Phase 3 Max2			X													
Phase 4 Max2				X												
Phase 5 Max2					X											
Phase 6 Max2						X										
Phase 7 Max2							X									
Phase 8 Max2								X								
Phase 1 Phase Omit									X							
Phase 2 Phase Omit										X						
Phase 3 Phase Omit											X					
Phase 4 Phase Omit												X				
Phase 5 Phase Omit													X			
Phase 6 Phase Omit														X		
Phase 7 Phase Omit															X	
Phase 8 Phase Omit																X

Dimming Data

Channel	Red	Yellow	Green	Alternate

Default Data - No Dimming Programmed

Preemption Data

General Preemption Data

Ring	Min Grn/Walk Time
1	5
2	5
3	5
4	5

Flash > Preepmt 1 | Preepmt 2 = Preempt 3 | Preepmt 4 = Preempt 5
Preepmt 1 = Preempt 2 | Preepmt 3 = Preempt 4 | Preepmt 5 = Preempt 6

Preempt Timers

Preempt	Non-Locking	Link to Preempt	Delay	Extend	Duration	MaxCall	Lock-Out	Select			Track				Dwell	Return		
								Ped Clear	Yel	Red	Grn	Ped	Yel	Red	Green	Ped Clear	Yel	Red
1	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	2.0	5	0	4.0	2.0
2	No	0	0	0	0	0	0	8	4.0	2.0	0	0	4.0	2.0	5	0	4.0	2.0
3	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0
4	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0
5	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0
6	No	0	0	0	0	0	0	8	4.0	2.0	5	0	4.0	2.0	5	0	4.0	2.0

Preempt 1

Phase	Exit Phase	Exit Calls
4	Yes	No
8	Yes	Yes

Preempt 2

Phase	Exit Phase	Exit Calls
2	Yes	No
6	Yes	No

Preempt 3

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 4

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 5

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Preempt 6

Phase	Exit Phase	Exit Calls
1	No	Yes
2	Yes	Yes
3	No	Yes
4	No	Yes
5	No	Yes
6	Yes	Yes
7	No	Yes
8	No	Yes

Priority Timers

Priority	Non-Locking	Delay	Extend	Duration	Dwell	Max_Call	Lock-Out	Skip Phases
1	No	0	0	0	0	0	0	0=Do not Skip Phases
2	No	0	0	0	0	0	0	0=Do not Skip Phases
3	No	0	0	0	0	0	0	0=Do not Skip Phases
4	No	0	0	0	0	0	0	0=Do not Skip Phases
5	No	0	0	0	0	0	0	0=Do not Skip Phases
6	No	0	0	0	0	0	0	0=Do not Skip Phases

Priority 1

Phase	Exit Phase	Exit Calls

Priority 2

Phase	Exit Phase	Exit Calls

Priority 3

Phase	Exit Phase	Exit Calls

Priority 4

Phase	Exit Phase	Exit Calls

Priority 5

Phase	Exit Phase	Exit Calls

Priority 6

Phase	Exit Phase	Exit Calls

Preempt 1

Vehical Phases

Ph.	Track	Dwell	Cycle
2	Red	Green	No
6	Red	Green	No

Pedestrian Phases

Ph	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp	Track	Dwell	Cycle

Default Data

Preempt 2

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Red	Green	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle

Default Data

Preempt 3

Vehical Phases

Ph.	Track	Dwell	Cycle
3	Green	Red	No
4	Red	Green	No
8	Green	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
2	Red	Grn	No
3	Grn	Red	No
4	Grn	Grn	No

Preempt 4

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Red	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
4	Red	Grn	No
1	Grn	Red	No
2	Grn	Grn	No

Preempt 5

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Red	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
4	Red	Grn	No
1	Grn	Red	No
2	Grn	Grn	No

Preempt 6

Vehical Phases

Ph.	Track	Dwell	Cycle
4	Green	Green	No
7	Green	Red	No
8	Red	Green	No

Pedestrian Phases

Ph.	Track	Dwell	Cycle

Default Data

Overlaps

Ovlp.	Track	Dwell	Cycle
4	Red	Grn	No
1	Grn	Red	No
2	Grn	Grn	No

System/Detectors Data

Local Critical Alarms

Revert to Backup: 15

1st Phone:

Local Free: No | Cycle Failure: No | Coord Failure: No | Conflict Flash: No | Remote Flash: No

2nd Phone:

Local Fash: No | Cycle Fault: No | Coord Fault: No | Premption: No

Voltage Monitor: No

Special Status 1: No | Special Status 2: No | Special Status 3: No | Special Status 4: No | Special Status 5: No | Special Status 6: No

Traffic Responsive

System Detector	Detector Channel	Veh/Hr	Average Time(mins)	Occupancy Correction/10	Min Volume %	Queue 1 Detectors	System Detectors	Weight Factor	Queue 2 Detectors	System Detectors	Weight Factor

Default Data

Sample Interval:

Default Data

Queue: 1 Input Selection: 0=Average

Detector Failed Level : 0

Queue: 2 Input Selection: 0=Average

Detector Failed Level : 0

Default Data

Queue:

Level	Enter	Leave	Dial / Split / Offset
			/ /

Default Data

Vehical Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count
1	60	0	0
3	60	0	0
5	60	0	0
8	60	0	0

Vehical Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 0

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 0 Values

Pedestrian Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

Default Data - No Diag 1 Values

Special Detector

Diagnostic Value 1

Detector	Max Presence	No Activity	Erratic Count

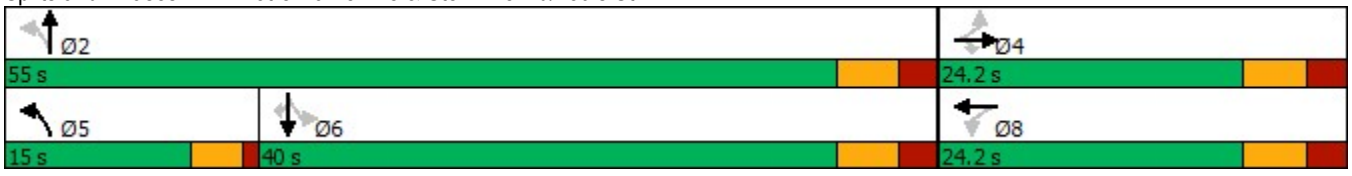
Default Data - No Diag 1 Values

Appendix D –
Synchro Analysis Output –
Existing Traffic Volumes

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	40	11	88	26	18	125	586	9	859	120
Future Volume (vph)	40	11	88	26	18	125	586	9	859	120
Lane Group Flow (vph)	49	14	109	33	34	139	675	9	904	126
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.16	0.03	0.25	0.11	0.08	0.32	0.21	0.03	0.37	0.16
Control Delay	26.2	24.2	7.2	25.5	19.0	7.6	6.7	12.4	14.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	24.2	7.2	25.5	19.0	7.6	6.7	12.4	14.3	3.2
Queue Length 50th (m)	5.9	1.6	0.0	4.0	2.7	7.1	14.2	0.7	30.5	0.0
Queue Length 95th (m)	13.0	5.4	9.0	9.7	8.3	13.2	19.1	3.2	41.7	8.5
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	310	427	429	296	412	482	3162	331	2411	779
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.03	0.25	0.11	0.08	0.29	0.21	0.03	0.37	0.16

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	11	88	26	18	9	125	586	22	9	859	120
Future Volume (vph)	40	11	88	26	18	9	125	586	22	9	859	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1767	1883	1520	1655	1778		1786	5101		1751	5142	1520
Flt Permitted	0.73	1.00	1.00	0.75	1.00		0.25	1.00		0.38	1.00	1.00
Satd. Flow (perm)	1367	1883	1520	1304	1778		466	5101		707	5142	1520
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95
Adj. Flow (vph)	49	14	109	32	22	11	139	651	24	9	904	126
RTOR Reduction (vph)	0	0	84	0	9	0	0	5	0	0	0	67
Lane Group Flow (vph)	49	14	25	33	26	0	139	670	0	9	904	59
Confl. Peds. (#/hr)	10		30	30		10	30		25	25		30
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		37.1	37.1	37.1
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		37.1	37.1	37.1
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.47	0.47	0.47
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	310	427	345	296	404		419	3155		331	2408	712
v/s Ratio Prot		0.01			0.01		c0.03	0.13			c0.18	
v/s Ratio Perm	c0.04		0.02	0.03			0.17			0.01		0.04
v/c Ratio	0.16	0.03	0.07	0.11	0.06		0.33	0.21		0.03	0.38	0.08
Uniform Delay, d1	24.5	23.8	24.0	24.3	24.0		6.7	6.6		11.3	13.6	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.1	0.2	0.1		0.5	0.2		0.2	0.4	0.2
Delay (s)	24.8	23.9	24.1	24.4	24.1		7.2	6.8		11.5	14.0	11.9
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		24.3			24.2			6.9			13.7	
Approach LOS		C			C			A			B	

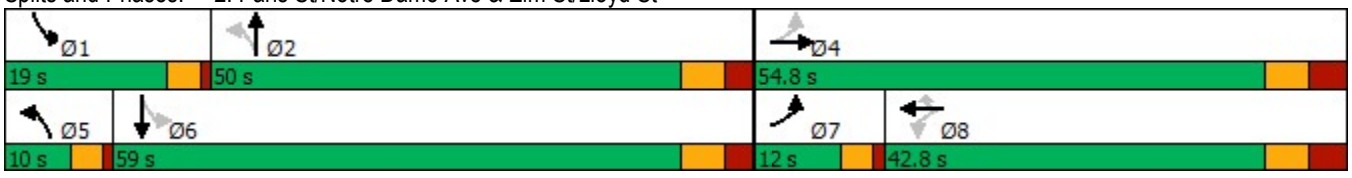
Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	91	168	27	211	97	54	502	59	836
Future Volume (vph)	91	168	27	211	97	54	502	59	836
Lane Group Flow (vph)	105	264	30	237	109	56	543	64	997
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.22	0.20	0.10	0.23	0.20	0.21	0.25	0.14	0.46
Control Delay	24.0	20.9	34.0	34.3	3.5	16.6	23.9	15.4	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	20.9	34.0	34.3	3.5	16.6	23.9	15.4	25.3
Queue Length 50th (m)	15.8	18.0	5.4	23.3	0.0	6.4	31.2	7.4	61.7
Queue Length 95th (m)	26.8	26.5	13.1	33.7	7.6	13.1	41.2	14.6	74.2
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	471	1346	313	1031	547	267	2131	519	2185
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.20	0.10	0.23	0.20	0.21	0.25	0.12	0.46

Intersection Summary
Cycle Length: 123.8
Actuated Cycle Length: 121.6
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



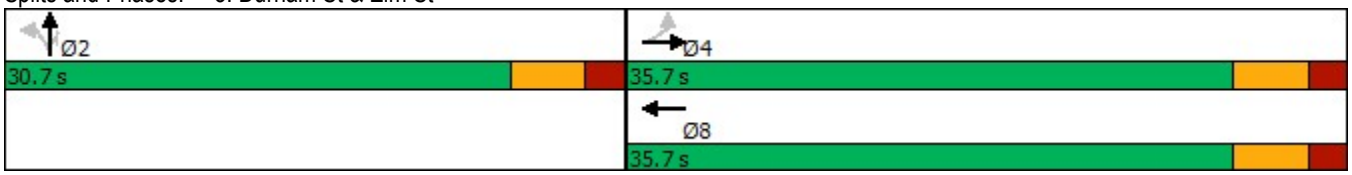
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	168	62	27	211	97	54	502	19	59	836	81
Future Volume (vph)	91	168	62	27	211	97	54	502	19	59	836	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1779	3399		1756	3579	1557	1787	5106		1781	5052	
Flt Permitted	0.54	1.00		0.59	1.00	1.00	0.22	1.00		0.41	1.00	
Satd. Flow (perm)	1016	3399		1088	3579	1557	421	5106		762	5052	
Peak-hour factor, PHF	0.87	0.87	0.87	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	105	193	71	30	237	109	56	523	20	64	909	88
RTOR Reduction (vph)	0	30	0	0	0	78	0	3	0	0	9	0
Lane Group Flow (vph)	105	234	0	30	237	31	56	540	0	64	988	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.8	46.8		35.0	35.0	35.0	55.4	50.7		58.8	52.4	
Effective Green, g (s)	46.8	46.8		35.0	35.0	35.0	55.4	50.7		58.8	52.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29	0.29	0.45	0.41		0.48	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	437	1299		311	1023	445	243	2114		419	2162	
v/s Ratio Prot	c0.02	0.07			0.07		c0.01	0.11		c0.01	c0.20	
v/s Ratio Perm	c0.08			0.03		0.02	0.10			0.07		
v/c Ratio	0.24	0.18		0.10	0.23	0.07	0.23	0.26		0.15	0.46	
Uniform Delay, d1	24.9	25.1		32.1	33.4	31.8	19.3	23.5		17.2	24.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.1	0.1	0.1	0.5	0.3		0.2	0.7	
Delay (s)	25.2	25.1		32.2	33.5	31.9	19.8	23.8		17.4	25.6	
Level of Service	C	C		C	C	C	B	C		B	C	
Approach Delay (s)		25.1			33.0			23.4			25.1	
Approach LOS		C			C			C			C	

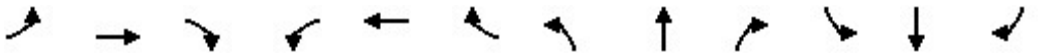
Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	122.4	Sum of lost time (s)	22.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	3	360	206	39	30	51
Future Volume (vph)	3	360	206	39	30	51
Lane Group Flow (vph)	0	394	257	46	35	60
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.26	0.17	0.08	0.03	0.10
Control Delay		11.9	10.4	13.9	13.2	4.8
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		11.9	10.4	13.9	13.2	4.8
Queue Length 50th (m)		15.1	8.7	3.5	1.3	0.0
Queue Length 95th (m)		23.3	14.2	8.8	3.6	5.6
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1493	1512	571	1216	587
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.26	0.17	0.08	0.03	0.10

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	360	0	0	206	17	39	30	51	0	0	0
Future Volume (vph)	3	360	0	0	206	17	39	30	51	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.91			
Flpb, ped/bikes		1.00			1.00		0.96	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3467			3327		1517	3230	1460			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3306			3327		1517	3230	1460			
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	3	391	0	0	237	20	46	35	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	37	0	0	0
Lane Group Flow (vph)	0	394	0	0	248	0	46	35	23	0	0	0
Confl. Peds. (#/hr)	50		80	80		50	40		70	70		40
Heavy Vehicles (%)	33%	5%	100%	0%	8%	6%	15%	13%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1493			1503		571	1216	549			
v/s Ratio Prot					0.07			0.01				
v/s Ratio Perm		c0.12					c0.03		0.02			
v/c Ratio		0.26			0.16		0.08	0.03	0.04			
Uniform Delay, d1		11.3			10.8		13.3	13.0	13.1			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.1			0.1		0.1	0.0	0.0			
Delay (s)		11.4			10.8		13.4	13.1	13.1			
Level of Service		B			B		B	B	B			
Approach Delay (s)		11.4			10.8			13.2			0.0	
Approach LOS		B			B			B			A	

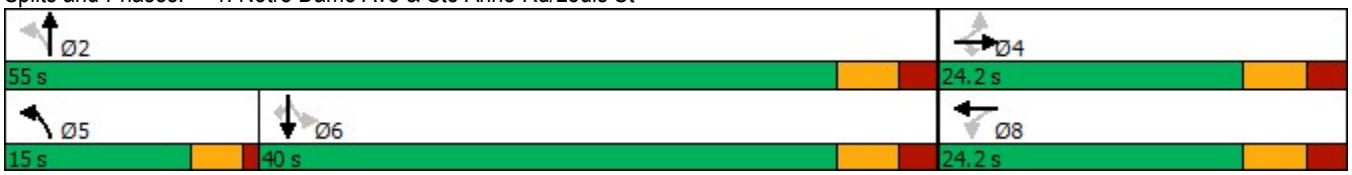
Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	111	21	161	38	10	128	1073	11	802	80
Future Volume (vph)	111	21	161	38	10	128	1073	11	802	80
Lane Group Flow (vph)	119	23	173	43	22	142	1228	13	911	91
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.38	0.05	0.36	0.14	0.06	0.33	0.39	0.07	0.38	0.12
Control Delay	30.2	24.5	6.9	26.0	17.3	7.7	7.9	13.7	14.4	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	24.5	6.9	26.0	17.3	7.7	7.9	13.7	14.4	3.1
Queue Length 50th (m)	15.2	2.7	0.0	5.2	1.3	7.2	29.9	1.0	30.8	0.0
Queue Length 95th (m)	29.9	8.2	14.4	12.9	6.5	13.5	37.7	4.3	41.0	6.3
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	312	427	476	303	398	479	3165	188	2405	758
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.05	0.36	0.14	0.06	0.30	0.39	0.07	0.38	0.12

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	21	161	38	10	10	128	1073	32	11	802	80
Future Volume (vph)	111	21	161	38	10	10	128	1073	32	11	802	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.96	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1883	1509	1709	1715		1785	5108		1771	5142	1509
Flt Permitted	0.74	1.00	1.00	0.74	1.00		0.25	1.00		0.22	1.00	1.00
Satd. Flow (perm)	1372	1883	1509	1336	1715		461	5108		403	5142	1509
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.88	0.88	0.88
Adj. Flow (vph)	119	23	173	43	11	11	142	1192	36	12	911	91
RTOR Reduction (vph)	0	0	134	0	9	0	0	4	0	0	0	48
Lane Group Flow (vph)	119	23	39	43	14	0	142	1224	0	13	911	43
Confl. Peds. (#/hr)	15		35	35		15	35		25	25		35
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		37.1	37.1	37.1
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		37.1	37.1	37.1
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.47	0.47	0.47
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	311	427	342	303	389		417	3160		188	2408	706
v/s Ratio Prot		0.01			0.01		0.03	c0.24			0.18	
v/s Ratio Perm	c0.09		0.03	0.03			0.18			0.03		0.03
v/c Ratio	0.38	0.05	0.11	0.14	0.03		0.34	0.39		0.07	0.38	0.06
Uniform Delay, d1	25.9	23.9	24.3	24.4	23.8		6.7	7.6		11.6	13.6	11.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.1	0.2	0.2	0.0		0.5	0.4		0.7	0.5	0.2
Delay (s)	26.7	24.0	24.4	24.6	23.9		7.2	7.9		12.3	14.1	11.7
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		25.2			24.4			7.9			13.8	
Approach LOS		C			C			A			B	

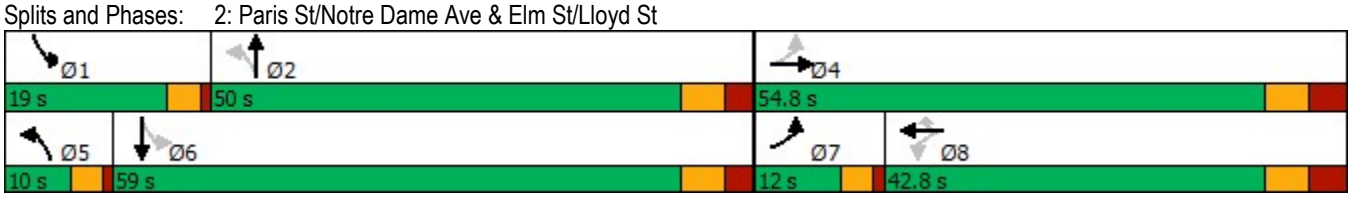
Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	176	322	20	253	116	56	1003	141	730
Future Volume (vph)	176	322	20	253	116	56	1003	141	730
Lane Group Flow (vph)	212	482	22	275	126	64	1171	157	878
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.46	0.36	0.09	0.27	0.23	0.21	0.61	0.58	0.40
Control Delay	28.4	26.4	34.0	35.0	5.5	16.8	33.1	24.4	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	26.4	34.0	35.0	5.5	16.8	33.1	24.4	24.5
Queue Length 50th (m)	34.0	41.3	3.9	27.4	0.0	7.4	82.6	19.2	52.9
Queue Length 95th (m)	47.6	50.0	10.9	39.1	11.9	14.2	100.0	31.1	64.3
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	458	1342	253	1024	544	306	1909	318	2198
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.36	0.09	0.27	0.23	0.21	0.61	0.49	0.40

Intersection Summary

Cycle Length: 123.8
Actuated Cycle Length: 122.4
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



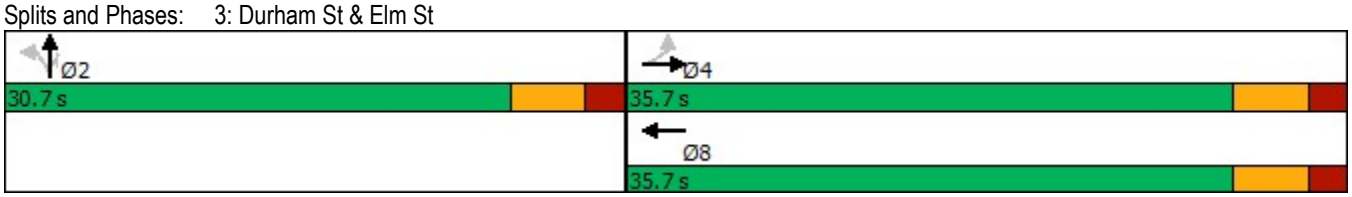
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	322	78	20	253	116	56	1003	27	141	730	60
Future Volume (vph)	176	322	78	20	253	116	56	1003	27	141	730	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1780	3448		1764	3579	1557	1784	5116		1789	5064	
Flt Permitted	0.52	1.00		0.48	1.00	1.00	0.30	1.00		0.13	1.00	
Satd. Flow (perm)	980	3448		886	3579	1557	559	5116		250	5064	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.88	0.88	0.88	0.90	0.90	0.90
Adj. Flow (vph)	212	388	94	22	275	126	64	1140	31	157	811	67
RTOR Reduction (vph)	0	17	0	0	0	90	0	2	0	0	7	0
Lane Group Flow (vph)	212	465	0	22	275	36	64	1169	0	157	871	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	47.0	47.0		35.0	35.0	35.0	51.1	46.4		61.6	52.9	
Effective Green, g (s)	47.0	47.0		35.0	35.0	35.0	51.1	46.4		61.6	52.9	
Actuated g/C Ratio	0.38	0.38		0.28	0.28	0.28	0.42	0.38		0.50	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	426	1316		251	1017	442	278	1928		265	2176	
v/s Ratio Prot	c0.03	0.13			0.08		0.01	0.23		c0.05	0.17	
v/s Ratio Perm	c0.16			0.02		0.02	0.09			c0.24		
v/c Ratio	0.50	0.35		0.09	0.27	0.08	0.23	0.61		0.59	0.40	
Uniform Delay, d1	27.6	27.2		32.3	34.2	32.3	21.9	31.0		19.7	24.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.2		0.2	0.1	0.1	0.4	1.4		3.5	0.6	
Delay (s)	28.5	27.4		32.5	34.3	32.3	22.3	32.4		23.3	24.7	
Level of Service	C	C		C	C	C	C	C		C	C	
Approach Delay (s)		27.7			33.6			31.9			24.5	
Approach LOS		C			C			C			C	

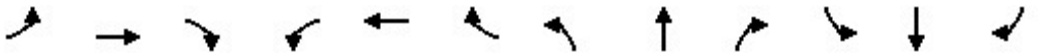
Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	123.1	Sum of lost time (s)	22.5
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	1	451	408	38	23	58
Future Volume (vph)	1	451	408	38	23	58
Lane Group Flow (vph)	0	538	470	51	31	77
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.35	0.29	0.09	0.02	0.12
Control Delay		12.7	11.9	13.9	13.2	4.4
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.7	11.9	13.9	13.2	4.4
Queue Length 50th (m)		21.6	18.0	3.9	1.2	0.0
Queue Length 95th (m)		29.1	27.1	8.3	3.0	4.7
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1542	1608	592	1260	624
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.35	0.29	0.09	0.02	0.12

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	451	0	0	408	15	38	23	58	0	0	0
Future Volume (vph)	1	451	0	0	408	15	38	23	58	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			1.00		1.00	1.00	0.96			
Flpb, ped/bikes		1.00			1.00		0.98	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3578			3551		1574	3349	1530			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3415			3551		1574	3349	1530			
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	1	537	0	0	453	17	51	31	77	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	48	0	0	0
Lane Group Flow (vph)	0	538	0	0	466	0	51	31	29	0	0	0
Confl. Peds. (#/hr)	45		60	60		45	15		30	30		15
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	14%	9%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1542			1604		592	1260	576			
v/s Ratio Prot					0.13			0.01				
v/s Ratio Perm		c0.16					c0.03		0.02			
v/c Ratio		0.35			0.29		0.09	0.02	0.05			
Uniform Delay, d1		11.8			11.5		13.3	13.0	13.2			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.1			0.1		0.1	0.0	0.0			
Delay (s)		12.0			11.6		13.4	13.0	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		12.0			11.6			13.2			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

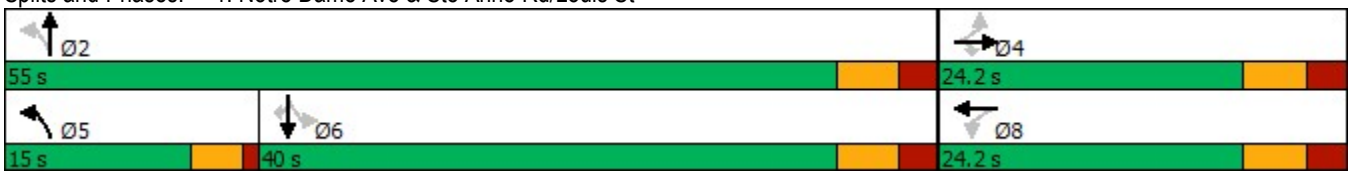
c Critical Lane Group

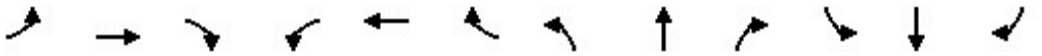
Appendix E –
Synchro Analysis Output –
Background Traffic Volumes

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	43	12	95	28	19	135	657	10	954	129
Future Volume (vph)	43	12	95	28	19	135	657	10	954	129
Lane Group Flow (vph)	53	15	117	35	37	150	757	11	1004	136
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.17	0.04	0.27	0.12	0.09	0.38	0.24	0.04	0.42	0.17
Control Delay	26.4	24.2	7.1	25.6	18.6	8.3	6.9	12.9	14.9	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	24.2	7.1	25.6	18.6	8.3	6.9	12.9	14.9	3.2
Queue Length 50th (m)	6.4	1.8	0.0	4.2	2.8	7.7	16.3	0.9	34.9	0.0
Queue Length 95th (m)	13.8	5.6	9.2	10.1	8.5	14.1	21.6	3.7	47.5	8.9
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	309	427	435	296	411	450	3162	303	2395	780
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.04	0.27	0.12	0.09	0.33	0.24	0.04	0.42	0.17

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	12	95	28	19	10	135	657	24	10	954	129
Future Volume (vph)	43	12	95	28	19	10	135	657	24	10	954	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1767	1883	1520	1655	1769		1787	5101		1755	5142	1520
Flt Permitted	0.73	1.00	1.00	0.75	1.00		0.21	1.00		0.35	1.00	1.00
Satd. Flow (perm)	1363	1883	1520	1303	1769		403	5101		652	5142	1520
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95
Adj. Flow (vph)	53	15	117	35	24	12	150	730	27	11	1004	136
RTOR Reduction (vph)	0	0	90	0	10	0	0	5	0	0	0	73
Lane Group Flow (vph)	53	15	27	35	27	0	150	752	0	11	1004	63
Confl. Peds. (#/hr)	10		30	30		10	30		25	25		30
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.9	36.9	36.9
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.9	36.9	36.9
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.47	0.47	0.47
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	309	427	345	296	402		390	3155		303	2395	708
v/s Ratio Prot		0.01			0.02		c0.04	0.15			c0.20	
v/s Ratio Perm	c0.04		0.02	0.03			0.20			0.02		0.04
v/c Ratio	0.17	0.04	0.08	0.12	0.07		0.38	0.24		0.04	0.42	0.09
Uniform Delay, d1	24.6	23.8	24.1	24.3	24.0		7.0	6.8		11.5	14.0	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.1	0.2	0.1		0.6	0.2		0.2	0.5	0.2
Delay (s)	24.9	23.9	24.2	24.5	24.1		7.6	6.9		11.7	14.6	12.0
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		24.3			24.3			7.0			14.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

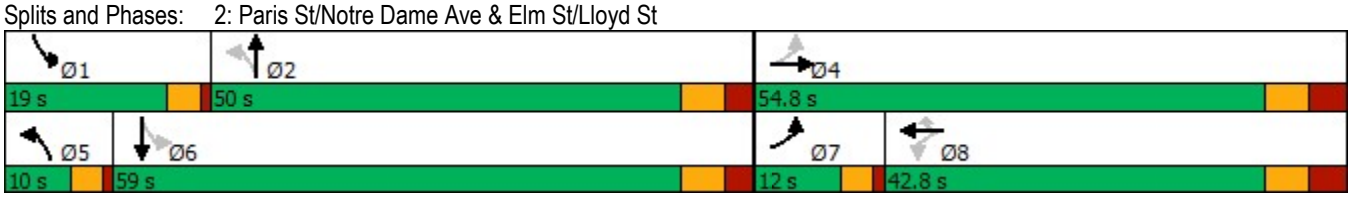
c Critical Lane Group

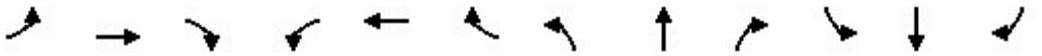
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	98	181	29	227	104	62	567	64	930
Future Volume (vph)	98	181	29	227	104	62	567	64	930
Lane Group Flow (vph)	113	292	33	255	117	65	612	70	1106
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.24	0.22	0.11	0.25	0.21	0.27	0.29	0.17	0.51
Control Delay	24.3	20.9	34.2	34.5	4.5	17.8	24.5	15.6	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	20.9	34.2	34.5	4.5	17.8	24.5	15.6	26.2
Queue Length 50th (m)	17.1	20.0	6.0	25.2	0.0	7.5	35.8	8.1	70.6
Queue Length 95th (m)	28.3	28.8	14.1	36.0	9.4	14.7	46.7	15.6	83.9
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	465	1344	305	1030	547	238	2124	490	2184
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.22	0.11	0.25	0.21	0.27	0.29	0.14	0.51

Intersection Summary

Cycle Length: 123.8
Actuated Cycle Length: 121.6
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St





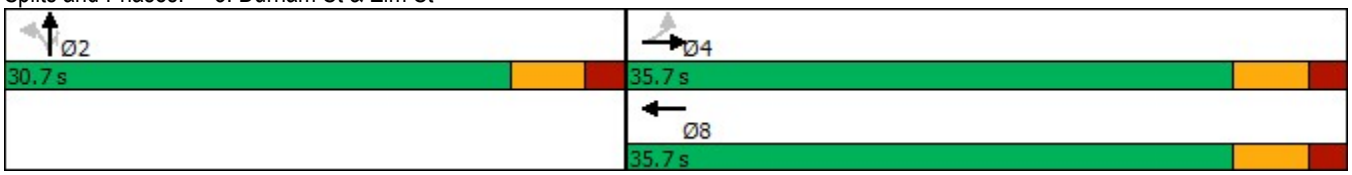
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	181	73	29	227	104	62	567	20	64	930	87
Future Volume (vph)	98	181	73	29	227	104	62	567	20	64	930	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1780	3386		1757	3579	1557	1788	5109		1783	5055	
Flt Permitted	0.53	1.00		0.57	1.00	1.00	0.19	1.00		0.37	1.00	
Satd. Flow (perm)	999	3386		1060	3579	1557	355	5109		688	5055	
Peak-hour factor, PHF	0.87	0.87	0.87	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	113	208	84	33	255	117	65	591	21	70	1011	95
RTOR Reduction (vph)	0	35	0	0	0	83	0	3	0	0	9	0
Lane Group Flow (vph)	113	257	0	33	255	34	65	609	0	70	1097	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.9	46.9		35.1	35.1	35.1	55.2	50.5		59.0	52.4	
Effective Green, g (s)	46.9	46.9		35.1	35.1	35.1	55.2	50.5		59.0	52.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29	0.29	0.45	0.41		0.48	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	432	1296		303	1025	446	214	2106		390	2162	
v/s Ratio Prot	c0.02	0.08			0.07		c0.01	0.12		c0.01	c0.22	
v/s Ratio Perm	c0.08			0.03		0.02	0.12			0.08		
v/c Ratio	0.26	0.20		0.11	0.25	0.08	0.30	0.29		0.18	0.51	
Uniform Delay, d1	25.0	25.2		32.2	33.6	31.9	19.8	24.0		17.3	25.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.2	0.1	0.1	0.8	0.3		0.2	0.9	
Delay (s)	25.3	25.3		32.3	33.7	31.9	20.6	24.4		17.5	26.5	
Level of Service	C	C		C	C	C	C	C		B	C	
Approach Delay (s)		25.3			33.1			24.0			25.9	
Approach LOS		C			C			C			C	

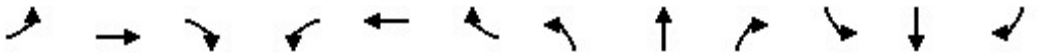
Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	122.5	Sum of lost time (s)	22.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	3	394	226	42	32	55
Future Volume (vph)	3	394	226	42	32	55
Lane Group Flow (vph)	0	431	281	49	38	65
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.29	0.19	0.09	0.03	0.11
Control Delay		12.1	10.7	13.9	13.2	4.7
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.1	10.7	13.9	13.2	4.7
Queue Length 50th (m)		16.7	9.7	3.8	1.5	0.0
Queue Length 95th (m)		25.4	15.5	9.2	3.8	5.9
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1493	1513	571	1216	590
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.29	0.19	0.09	0.03	0.11

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	394	0	0	226	18	42	32	55	0	0	0
Future Volume (vph)	3	394	0	0	226	18	42	32	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.91			
Flpb, ped/bikes		1.00			1.00		0.96	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3468			3329		1517	3230	1460			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3307			3329		1517	3230	1460			
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	3	428	0	0	260	21	49	38	65	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	41	0	0	0
Lane Group Flow (vph)	0	431	0	0	272	0	49	38	24	0	0	0
Confl. Peds. (#/hr)	50		80	80		50	40		70	70		40
Heavy Vehicles (%)	33%	5%	100%	0%	8%	6%	15%	13%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1494			1504		571	1216	549			
v/s Ratio Prot					0.08			0.01				
v/s Ratio Perm		c0.13					c0.03		0.02			
v/c Ratio		0.29			0.18		0.09	0.03	0.04			
Uniform Delay, d1		11.5			10.9		13.3	13.1	13.1			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.1			0.1		0.1	0.0	0.0			
Delay (s)		11.6			10.9		13.4	13.1	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		11.6			10.9			13.2			0.0	
Approach LOS		B			B			B			A	

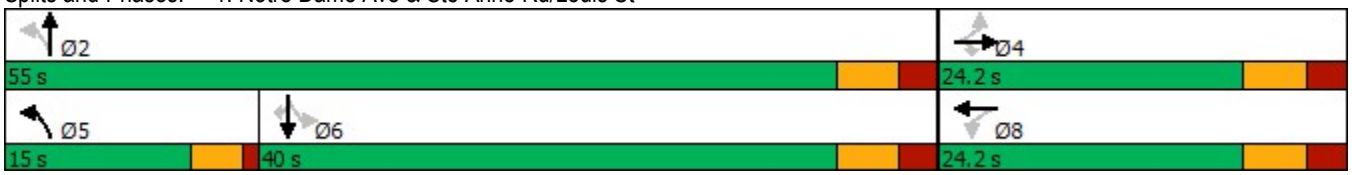
Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	120	23	173	41	11	138	1183	12	889	86
Future Volume (vph)	120	23	173	41	11	138	1183	12	889	86
Lane Group Flow (vph)	129	25	186	47	26	153	1352	14	1010	98
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.42	0.06	0.38	0.16	0.07	0.38	0.43	0.09	0.42	0.13
Control Delay	31.0	24.5	6.8	26.2	16.9	8.4	8.3	14.3	15.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	24.5	6.8	26.2	16.9	8.4	8.3	14.3	15.0	3.5
Queue Length 50th (m)	16.6	3.0	0.0	5.7	1.5	7.8	34.1	1.1	35.3	0.0
Queue Length 95th (m)	32.2	8.7	14.8	13.7	7.3	14.4	42.5	4.5	46.4	7.2
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	310	427	486	302	399	448	3165	164	2393	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.06	0.38	0.16	0.07	0.34	0.43	0.09	0.42	0.13

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



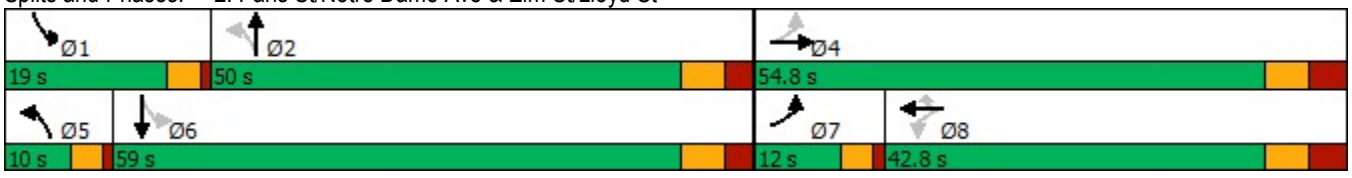
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	23	173	41	11	11	138	1183	34	12	889	86
Future Volume (vph)	120	23	173	41	11	11	138	1183	34	12	889	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.96	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1883	1509	1709	1715		1787	5109		1774	5142	1509
Flt Permitted	0.74	1.00	1.00	0.74	1.00		0.21	1.00		0.19	1.00	1.00
Satd. Flow (perm)	1368	1883	1509	1333	1715		399	5109		354	5142	1509
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.88	0.88	0.88
Adj. Flow (vph)	129	25	186	47	12	12	153	1314	38	14	1010	98
RTOR Reduction (vph)	0	0	144	0	10	0	0	4	0	0	0	52
Lane Group Flow (vph)	129	25	42	47	16	0	153	1348	0	14	1010	46
Confl. Peds. (#/hr)	15		35	35		15	35		25	25		35
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.9	36.9	36.9
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.9	36.9	36.9
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.47	0.47	0.47
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	310	427	342	302	389		388	3160		164	2395	703
v/s Ratio Prot		0.01			0.01		0.04	c0.26			0.20	
v/s Ratio Perm	c0.09		0.03	0.04			0.20			0.04		0.03
v/c Ratio	0.42	0.06	0.12	0.16	0.04		0.39	0.43		0.09	0.42	0.06
Uniform Delay, d1	26.1	24.0	24.3	24.5	23.9		7.0	7.8		11.8	14.1	11.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	0.1	0.2	0.2	0.0		0.7	0.4		1.0	0.5	0.2
Delay (s)	27.0	24.0	24.5	24.8	23.9		7.7	8.2		12.8	14.6	11.8
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		25.4			24.5			8.2			14.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	190	347	22	273	125	66	1108	152	811
Future Volume (vph)	190	347	22	273	125	66	1108	152	811
Lane Group Flow (vph)	229	522	24	297	136	75	1292	169	973
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.52	0.39	0.10	0.29	0.25	0.27	0.69	0.67	0.44
Control Delay	29.8	27.0	34.3	35.3	6.5	17.9	35.2	32.8	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	27.0	34.3	35.3	6.5	17.9	35.2	32.8	25.2
Queue Length 50th (m)	37.2	45.4	4.3	29.8	0.0	8.7	94.7	20.8	60.1
Queue Length 95th (m)	51.2	54.3	11.3	42.0	14.2	16.1	112.8	41.4	72.3
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	444	1340	244	1023	544	277	1886	294	2200
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.39	0.10	0.29	0.25	0.27	0.69	0.57	0.44

Intersection Summary
Cycle Length: 123.8
Actuated Cycle Length: 122.4
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



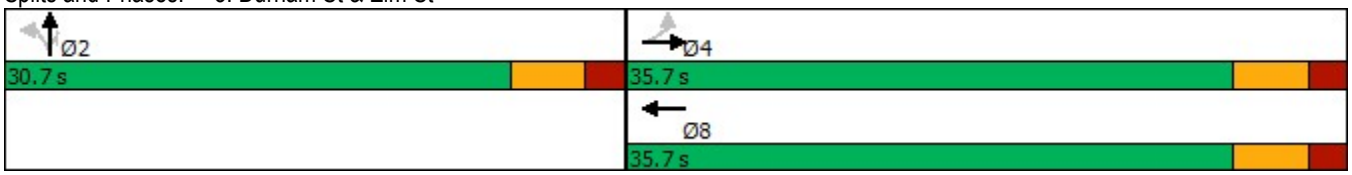
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	347	86	22	273	125	66	1108	29	152	811	65
Future Volume (vph)	190	347	86	22	273	125	66	1108	29	152	811	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1781	3445		1766	3579	1557	1786	5117		1789	5067	
Flt Permitted	0.50	1.00		0.46	1.00	1.00	0.26	1.00		0.10	1.00	
Satd. Flow (perm)	944	3445		853	3579	1557	490	5117		191	5067	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.88	0.88	0.88	0.90	0.90	0.90
Adj. Flow (vph)	229	418	104	24	297	136	75	1259	33	169	901	72
RTOR Reduction (vph)	0	18	0	0	0	97	0	2	0	0	7	0
Lane Group Flow (vph)	229	504	0	24	297	39	75	1290	0	169	966	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	47.0	47.0		35.0	35.0	35.0	50.6	45.9		61.7	53.0	
Effective Green, g (s)	47.0	47.0		35.0	35.0	35.0	50.6	45.9		61.7	53.0	
Actuated g/C Ratio	0.38	0.38		0.28	0.28	0.28	0.41	0.37		0.50	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	414	1314		242	1016	442	250	1906		248	2179	
v/s Ratio Prot	c0.04	0.15			0.08		0.01	0.25		c0.07	0.19	
v/s Ratio Perm	c0.17			0.03		0.02	0.11			c0.28		
v/c Ratio	0.55	0.38		0.10	0.29	0.09	0.30	0.68		0.68	0.44	
Uniform Delay, d1	28.4	27.6		32.5	34.4	32.4	22.4	32.4		21.5	24.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.2		0.2	0.2	0.1	0.7	2.0		7.5	0.7	
Delay (s)	30.0	27.8		32.7	34.6	32.5	23.1	34.4		29.0	25.4	
Level of Service	C	C		C	C	C	C	C		C	C	
Approach Delay (s)		28.5			33.9			33.8			25.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	123.2	Sum of lost time (s)	22.5
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	1	488	446	41	25	62
Future Volume (vph)	1	488	446	41	25	62
Lane Group Flow (vph)	0	582	514	55	33	83
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.38	0.32	0.09	0.03	0.13
Control Delay		12.9	12.2	14.0	13.2	4.4
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.9	12.2	14.0	13.2	4.4
Queue Length 50th (m)		23.6	20.0	4.3	1.3	0.0
Queue Length 95th (m)		31.5	29.6	8.8	3.1	4.8
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1542	1609	592	1260	627
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.38	0.32	0.09	0.03	0.13

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	488	0	0	446	16	41	25	62	0	0	0
Future Volume (vph)	1	488	0	0	446	16	41	25	62	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			1.00		1.00	1.00	0.96			
Flpb, ped/bikes		1.00			1.00		0.98	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3578			3552		1574	3349	1530			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3415			3552		1574	3349	1530			
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	1	581	0	0	496	18	55	33	83	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	52	0	0	0
Lane Group Flow (vph)	0	582	0	0	510	0	55	33	31	0	0	0
Confl. Peds. (#/hr)	45		60	60		45	15		30	30		15
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	14%	9%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1542			1604		592	1260	576			
v/s Ratio Prot					0.14			0.01				
v/s Ratio Perm		c0.17					c0.03		0.02			
v/c Ratio		0.38			0.32		0.09	0.03	0.05			
Uniform Delay, d1		12.0			11.7		13.4	13.0	13.2			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.2			0.1		0.1	0.0	0.0			
Delay (s)		12.2			11.8		13.4	13.0	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		12.2			11.8			13.3			0.0	
Approach LOS		B			B			B			A	

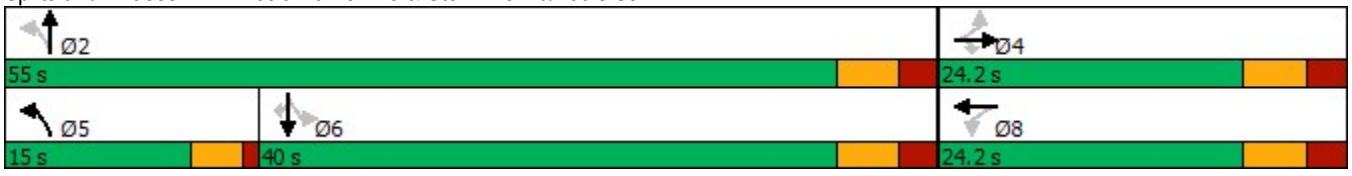
Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

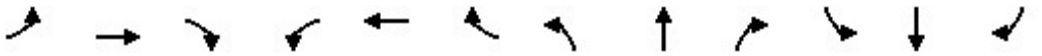
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	46	13	102	30	21	145	706	10	1026	139
Future Volume (vph)	46	13	102	30	21	145	706	10	1026	139
Lane Group Flow (vph)	57	16	126	38	39	161	813	11	1080	146
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.18	0.04	0.29	0.13	0.09	0.42	0.26	0.04	0.45	0.19
Control Delay	26.6	24.3	7.1	25.8	18.9	9.1	7.0	13.1	15.4	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	24.3	7.1	25.8	18.9	9.1	7.0	13.1	15.4	3.2
Queue Length 50th (m)	6.9	1.9	0.0	4.6	3.1	8.3	17.8	0.9	38.4	0.0
Queue Length 95th (m)	14.5	5.9	9.5	10.6	8.9	15.0	23.4	3.8	52.1	9.3
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	309	427	442	295	413	429	3162	285	2382	782
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.04	0.29	0.13	0.09	0.38	0.26	0.04	0.45	0.19

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	13	102	30	21	10	145	706	26	10	1026	139
Future Volume (vph)	46	13	102	30	21	10	145	706	26	10	1026	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1767	1883	1520	1655	1774		1788	5101		1757	5142	1520
Flt Permitted	0.73	1.00	1.00	0.75	1.00		0.19	1.00		0.33	1.00	1.00
Satd. Flow (perm)	1361	1883	1520	1301	1774		359	5101		616	5142	1520
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95
Adj. Flow (vph)	57	16	126	38	26	12	161	784	29	11	1080	146
RTOR Reduction (vph)	0	0	97	0	10	0	0	5	0	0	0	78
Lane Group Flow (vph)	57	16	29	38	29	0	161	808	0	11	1080	68
Confl. Peds. (#/hr)	10		30	30		10	30		25	25		30
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.7	36.7	36.7
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.7	36.7	36.7
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.46	0.46	0.46
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	309	427	345	295	403		371	3155		285	2382	704
v/s Ratio Prot		0.01			0.02		c0.05	0.16			0.21	
v/s Ratio Perm	c0.04		0.02	0.03			c0.22			0.02		0.04
v/c Ratio	0.18	0.04	0.08	0.13	0.07		0.43	0.26		0.04	0.45	0.10
Uniform Delay, d1	24.7	23.8	24.1	24.4	24.0		7.3	6.8		11.6	14.4	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.1	0.2	0.1		0.8	0.2		0.3	0.6	0.3
Delay (s)	25.0	23.9	24.2	24.6	24.1		8.1	7.0		11.9	15.1	12.2
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		24.4			24.3			7.2			14.7	
Approach LOS		C			C			A			B	

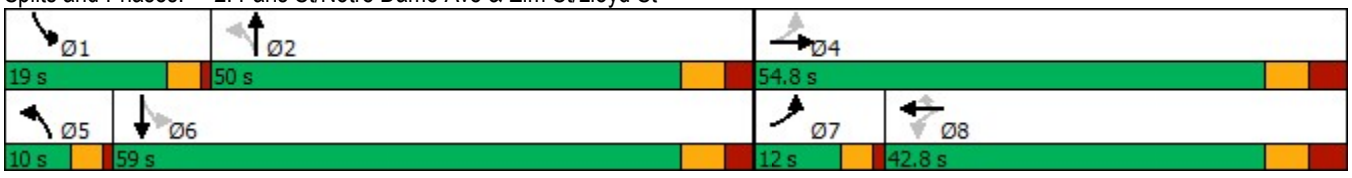
Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

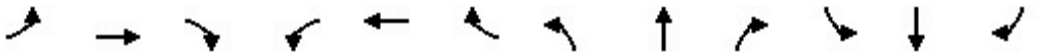
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	106	195	31	245	113	67	609	68	999
Future Volume (vph)	106	195	31	245	113	67	609	68	999
Lane Group Flow (vph)	122	314	35	275	127	70	657	74	1188
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.27	0.23	0.12	0.27	0.23	0.32	0.31	0.19	0.54
Control Delay	24.6	21.5	34.4	34.8	5.6	18.9	24.9	15.8	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	21.5	34.4	34.8	5.6	18.9	24.9	15.8	26.9
Queue Length 50th (m)	18.5	22.0	6.3	27.4	0.0	8.1	39.0	8.6	77.5
Queue Length 95th (m)	30.3	31.2	14.6	38.6	11.7	15.6	50.4	16.3	91.7
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	459	1344	298	1030	546	218	2117	473	2183
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.23	0.12	0.27	0.23	0.32	0.31	0.16	0.54

Intersection Summary
Cycle Length: 123.8
Actuated Cycle Length: 121.7
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St





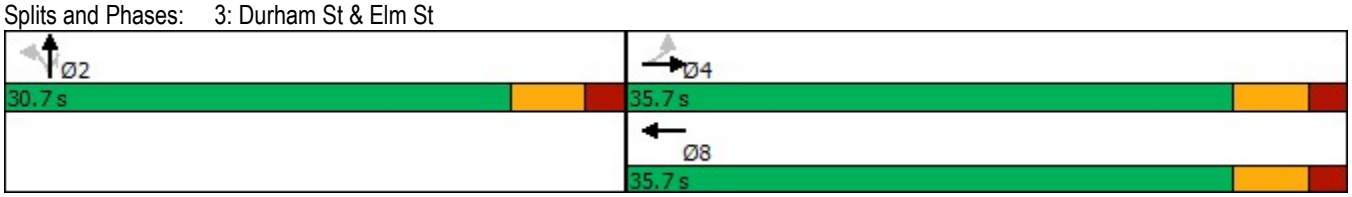
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	195	78	31	245	113	67	609	22	68	999	94
Future Volume (vph)	106	195	78	31	245	113	67	609	22	68	999	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1780	3387		1758	3579	1557	1788	5108		1784	5055	
Flt Permitted	0.52	1.00		0.56	1.00	1.00	0.16	1.00		0.34	1.00	
Satd. Flow (perm)	980	3387		1038	3579	1557	309	5108		644	5055	
Peak-hour factor, PHF	0.87	0.87	0.87	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	122	224	90	35	275	127	70	634	23	74	1086	102
RTOR Reduction (vph)	0	35	0	0	0	91	0	3	0	0	9	0
Lane Group Flow (vph)	122	279	0	35	275	36	70	654	0	74	1179	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.9	46.9		35.0	35.0	35.0	55.1	50.4		59.1	52.4	
Effective Green, g (s)	46.9	46.9		35.0	35.0	35.0	55.1	50.4		59.1	52.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29	0.29	0.45	0.41		0.48	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	426	1296		296	1022	444	195	2101		373	2162	
v/s Ratio Prot	c0.02	0.08			0.08		c0.01	0.13		c0.01	c0.23	
v/s Ratio Perm	c0.09			0.03		0.02	0.15			0.08		
v/c Ratio	0.29	0.22		0.12	0.27	0.08	0.36	0.31		0.20	0.55	
Uniform Delay, d1	25.1	25.4		32.3	33.9	32.0	20.2	24.3		17.3	26.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.2	0.1	0.1	1.1	0.4		0.3	1.0	
Delay (s)	25.5	25.5		32.5	34.0	32.1	21.3	24.7		17.6	27.2	
Level of Service	C	C		C	C	C	C	C		B	C	
Approach Delay (s)		25.5			33.3			24.4			26.6	
Approach LOS		C			C			C			C	

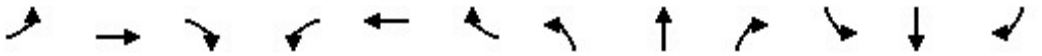
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	122.5	Sum of lost time (s)	22.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	3	424	243	45	35	59
Future Volume (vph)	3	424	243	45	35	59
Lane Group Flow (vph)	0	464	302	53	41	69
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.31	0.20	0.09	0.03	0.12
Control Delay		12.3	10.8	14.0	13.3	4.6
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.3	10.8	14.0	13.3	4.6
Queue Length 50th (m)		18.2	10.5	4.1	1.6	0.0
Queue Length 95th (m)		27.5	16.6	9.7	4.1	6.0
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1493	1513	571	1216	592
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.31	0.20	0.09	0.03	0.12

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	424	0	0	243	20	45	35	59	0	0	0
Future Volume (vph)	3	424	0	0	243	20	45	35	59	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.91			
Flpb, ped/bikes		1.00			1.00		0.96	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3468			3328		1517	3230	1460			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3307			3328		1517	3230	1460			
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	3	461	0	0	279	23	53	41	69	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	464	0	0	293	0	53	41	26	0	0	0
Confl. Peds. (#/hr)	50		80	80		50	40		70	70		40
Heavy Vehicles (%)	33%	5%	100%	0%	8%	6%	15%	13%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1494			1503		571	1216	549			
v/s Ratio Prot					0.09			0.01				
v/s Ratio Perm		c0.14					c0.03		0.02			
v/c Ratio		0.31			0.19		0.09	0.03	0.05			
Uniform Delay, d1		11.6			10.9		13.4	13.1	13.1			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.1			0.1		0.1	0.0	0.0			
Delay (s)		11.7			11.0		13.4	13.1	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		11.7			11.0			13.2			0.0	
Approach LOS		B			B			B			A	

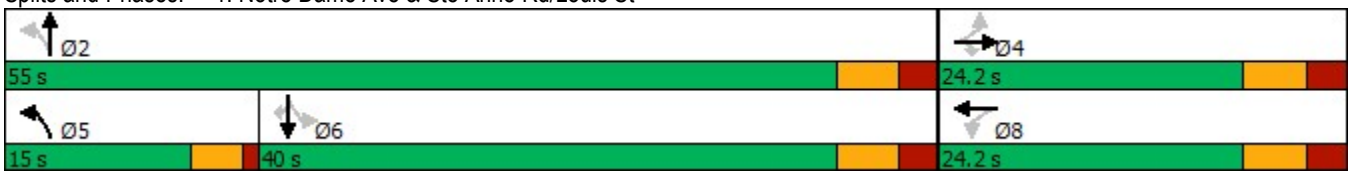
Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	129	24	187	44	12	149	1272	13	956	93
Future Volume (vph)	129	24	187	44	12	149	1272	13	956	93
Lane Group Flow (vph)	139	26	201	50	28	166	1454	15	1086	106
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.45	0.06	0.40	0.17	0.07	0.44	0.46	0.10	0.46	0.14
Control Delay	31.8	24.5	6.8	26.3	16.8	9.3	8.6	15.2	15.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	24.5	6.8	26.3	16.8	9.3	8.6	15.2	15.5	3.5
Queue Length 50th (m)	18.0	3.1	0.0	6.1	1.6	8.6	37.8	1.2	38.8	0.0
Queue Length 95th (m)	34.4	9.1	15.3	14.4	7.6	15.4	46.9	5.0	50.9	7.7
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	310	427	498	302	400	426	3165	147	2377	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.06	0.40	0.17	0.07	0.39	0.46	0.10	0.46	0.14

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



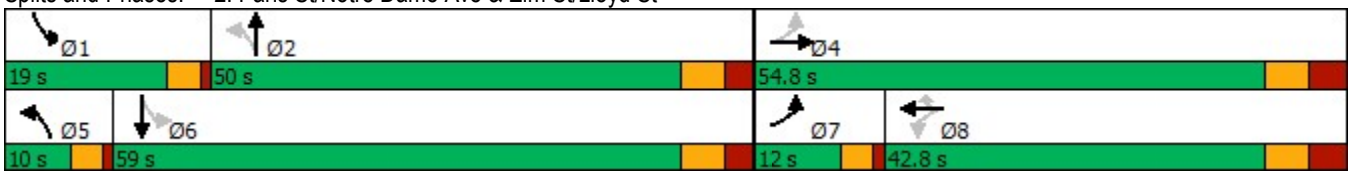
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	24	187	44	12	12	149	1272	37	13	956	93
Future Volume (vph)	129	24	187	44	12	12	149	1272	37	13	956	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.96	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1883	1509	1710	1715		1787	5109		1776	5142	1509
Flt Permitted	0.74	1.00	1.00	0.74	1.00		0.19	1.00		0.17	1.00	1.00
Satd. Flow (perm)	1365	1883	1509	1332	1715		355	5109		318	5142	1509
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.88	0.88	0.88
Adj. Flow (vph)	139	26	201	50	14	14	166	1413	41	15	1086	106
RTOR Reduction (vph)	0	0	155	0	11	0	0	4	0	0	0	57
Lane Group Flow (vph)	139	26	46	50	17	0	166	1450	0	15	1086	49
Confl. Peds. (#/hr)	15		35	35		15	35		25	25		35
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.6	36.6	36.6
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.6	36.6	36.6
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.46	0.46	0.46
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	310	427	342	302	389		371	3160		146	2376	697
v/s Ratio Prot		0.01			0.01		0.05	c0.28			0.21	
v/s Ratio Perm	c0.10		0.03	0.04			0.23			0.05		0.03
v/c Ratio	0.45	0.06	0.13	0.17	0.04		0.45	0.46		0.10	0.46	0.07
Uniform Delay, d1	26.3	24.0	24.4	24.6	23.9		7.3	8.0		12.0	14.5	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.1	0.2	0.3	0.0		0.9	0.5		1.4	0.6	0.2
Delay (s)	27.4	24.0	24.6	24.8	23.9		8.2	8.5		13.4	15.2	12.0
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		25.6			24.5			8.5			14.9	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	204	374	23	294	135	71	1191	164	872
Future Volume (vph)	204	374	23	294	135	71	1191	164	872
Lane Group Flow (vph)	246	563	25	320	147	81	1388	182	1047
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.57	0.42	0.11	0.31	0.27	0.32	0.74	0.75	0.48
Control Delay	31.6	27.6	34.6	35.6	6.6	18.8	37.2	43.7	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	27.6	34.6	35.6	6.6	18.8	37.2	43.7	25.7
Queue Length 50th (m)	40.4	50.0	4.5	32.3	0.0	9.5	106.4	26.1	65.9
Queue Length 95th (m)	55.2	59.0	11.7	45.1	15.3	17.2	123.4	50.6	78.7
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	431	1339	234	1022	549	257	1865	279	2202
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.42	0.11	0.31	0.27	0.32	0.74	0.65	0.48

Intersection Summary
Cycle Length: 123.8
Actuated Cycle Length: 122.5
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



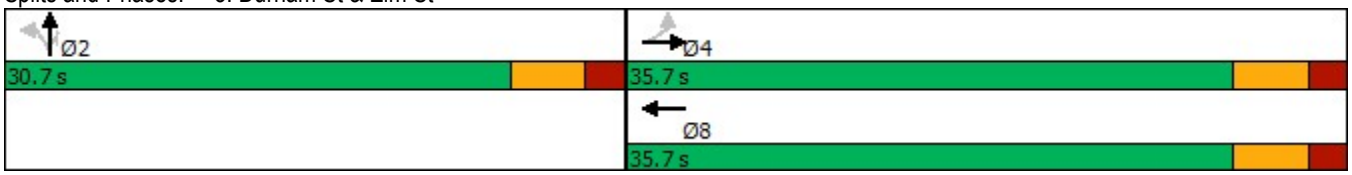
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	204	374	93	23	294	135	71	1191	31	164	872	70
Future Volume (vph)	204	374	93	23	294	135	71	1191	31	164	872	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1782	3445		1767	3579	1557	1786	5117		1789	5066	
Flt Permitted	0.48	1.00		0.44	1.00	1.00	0.23	1.00		0.08	1.00	
Satd. Flow (perm)	904	3445		820	3579	1557	441	5117		153	5066	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.88	0.88	0.88	0.90	0.90	0.90
Adj. Flow (vph)	246	451	112	25	320	147	81	1353	35	182	969	78
RTOR Reduction (vph)	0	18	0	0	0	105	0	2	0	0	7	0
Lane Group Flow (vph)	246	545	0	25	320	42	81	1386	0	182	1040	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	47.0	47.0		35.0	35.0	35.0	50.1	45.4		61.8	53.1	
Effective Green, g (s)	47.0	47.0		35.0	35.0	35.0	50.1	45.4		61.8	53.1	
Actuated g/C Ratio	0.38	0.38		0.28	0.28	0.28	0.41	0.37		0.50	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	401	1313		232	1015	441	230	1884		241	2181	
v/s Ratio Prot	c0.04	0.16			0.09		0.01	0.27		c0.08	0.21	
v/s Ratio Perm	c0.19			0.03		0.03	0.13			c0.30		
v/c Ratio	0.61	0.42		0.11	0.32	0.09	0.35	0.74		0.76	0.48	
Uniform Delay, d1	29.4	28.0		32.6	34.7	32.5	22.9	33.8		27.8	25.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.8	0.2		0.2	0.2	0.1	0.9	2.6		12.6	0.7	
Delay (s)	32.2	28.3		32.8	34.9	32.6	23.8	36.4		40.5	25.9	
Level of Service	C	C		C	C	C	C	D		D	C	
Approach Delay (s)		29.5			34.1			35.7			28.1	
Approach LOS		C			C			D			C	

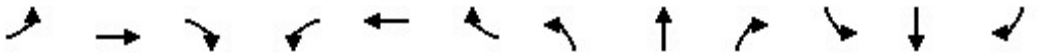
Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	123.3	Sum of lost time (s)	22.5
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	1	525	480	44	27	67
Future Volume (vph)	1	525	480	44	27	67
Lane Group Flow (vph)	0	626	552	59	36	89
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.41	0.34	0.10	0.03	0.14
Control Delay		13.2	12.4	14.1	13.2	4.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		13.2	12.4	14.1	13.2	4.3
Queue Length 50th (m)		25.8	21.7	4.6	1.4	0.0
Queue Length 95th (m)		34.2	31.8	9.2	3.3	4.9
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1542	1609	592	1260	631
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.41	0.34	0.10	0.03	0.14

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	525	0	0	480	17	44	27	67	0	0	0
Future Volume (vph)	1	525	0	0	480	17	44	27	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			1.00		1.00	1.00	0.96			
Flpb, ped/bikes		1.00			1.00		0.98	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3578			3552		1574	3349	1530			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3415			3552		1574	3349	1530			
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	1	625	0	0	533	19	59	36	89	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	55	0	0	0
Lane Group Flow (vph)	0	626	0	0	548	0	59	36	34	0	0	0
Confl. Peds. (#/hr)	45		60	60		45	15		30	30		15
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	14%	9%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1542			1604		592	1260	576			
v/s Ratio Prot					0.15			0.01				
v/s Ratio Perm		c0.18					c0.04		0.02			
v/c Ratio		0.41			0.34		0.10	0.03	0.06			
Uniform Delay, d1		12.2			11.8		13.4	13.0	13.2			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.2			0.1		0.1	0.0	0.0			
Delay (s)		12.4			11.9		13.5	13.1	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		12.4			11.9			13.3			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

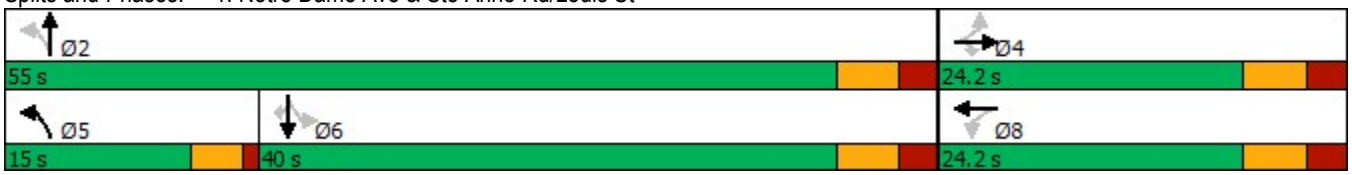
c Critical Lane Group

Appendix F –
Synchro Analysis Output –
Total Traffic Volumes

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	46	12	97	28	19	138	658	10	959	143
Future Volume (vph)	46	12	97	28	19	138	658	10	959	143
Lane Group Flow (vph)	57	15	120	35	37	153	758	11	1009	151
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.18	0.04	0.27	0.12	0.09	0.38	0.24	0.04	0.42	0.19
Control Delay	26.6	24.2	7.1	25.6	18.6	8.4	6.9	12.9	15.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	24.2	7.1	25.6	18.6	8.4	6.9	12.9	15.0	3.1
Queue Length 50th (m)	6.9	1.8	0.0	4.2	2.8	7.8	16.3	0.9	35.3	0.0
Queue Length 95th (m)	14.5	5.6	9.2	10.1	8.5	14.4	21.6	3.7	47.6	9.3
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	309	427	438	296	411	448	3162	302	2393	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.04	0.27	0.12	0.09	0.34	0.24	0.04	0.42	0.19

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	12	97	28	19	10	138	658	24	10	959	143
Future Volume (vph)	46	12	97	28	19	10	138	658	24	10	959	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1767	1883	1520	1655	1769		1787	5101		1755	5142	1520
Flt Permitted	0.73	1.00	1.00	0.75	1.00		0.21	1.00		0.35	1.00	1.00
Satd. Flow (perm)	1363	1883	1520	1303	1769		400	5101		651	5142	1520
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95
Adj. Flow (vph)	57	15	120	35	24	12	153	731	27	11	1009	151
RTOR Reduction (vph)	0	0	93	0	10	0	0	5	0	0	0	81
Lane Group Flow (vph)	57	15	27	35	27	0	153	753	0	11	1009	70
Confl. Peds. (#/hr)	10		30	30		10	30		25	25		30
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.9	36.9	36.9
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.9	36.9	36.9
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.47	0.47	0.47
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	309	427	345	296	402		389	3155		303	2395	708
v/s Ratio Prot		0.01			0.02		c0.04	0.15			c0.20	
v/s Ratio Perm	c0.04		0.02	0.03			0.20			0.02		0.05
v/c Ratio	0.18	0.04	0.08	0.12	0.07		0.39	0.24		0.04	0.42	0.10
Uniform Delay, d1	24.7	23.8	24.1	24.3	24.0		7.0	6.8		11.5	14.1	11.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.1	0.2	0.1		0.7	0.2		0.2	0.5	0.3
Delay (s)	25.0	23.9	24.2	24.5	24.1		7.7	6.9		11.7	14.6	12.1
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		24.4			24.3			7.1			14.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

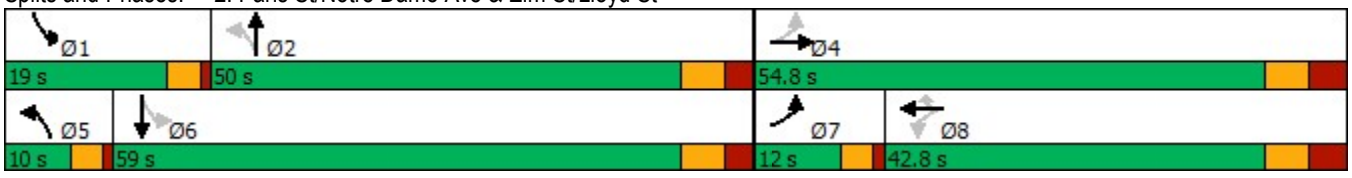
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	99	183	29	232	104	70	570	64	932
Future Volume (vph)	99	183	29	232	104	70	570	64	932
Lane Group Flow (vph)	114	299	33	261	117	73	615	70	1113
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.25	0.22	0.11	0.25	0.21	0.31	0.29	0.17	0.51
Control Delay	24.3	20.7	34.3	34.6	4.5	18.4	24.5	15.6	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	20.7	34.3	34.6	4.5	18.4	24.5	15.6	26.2
Queue Length 50th (m)	17.2	20.1	6.0	25.8	0.0	8.5	36.0	8.1	71.2
Queue Length 95th (m)	28.7	29.1	14.1	36.8	9.4	16.1	47.0	15.6	84.5
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	464	1344	303	1030	547	236	2124	488	2184
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.22	0.11	0.25	0.21	0.31	0.29	0.14	0.51

Intersection Summary

Cycle Length: 123.8
Actuated Cycle Length: 121.6
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



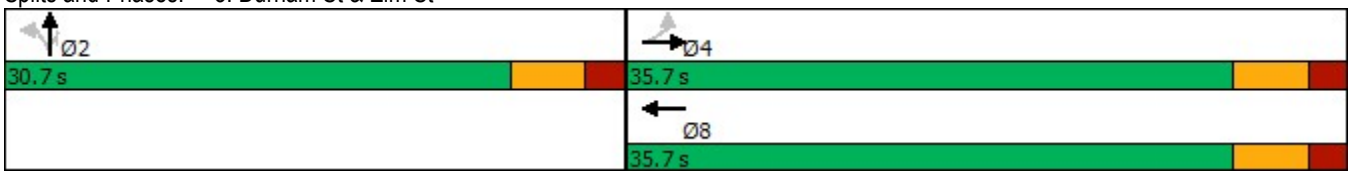
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	183	77	29	232	104	70	570	20	64	932	92
Future Volume (vph)	99	183	77	29	232	104	70	570	20	64	932	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1780	3380		1757	3579	1557	1788	5109		1783	5051	
Flt Permitted	0.53	1.00		0.57	1.00	1.00	0.19	1.00		0.37	1.00	
Satd. Flow (perm)	993	3380		1053	3579	1557	350	5109		685	5051	
Peak-hour factor, PHF	0.87	0.87	0.87	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	114	210	89	33	261	117	73	594	21	70	1013	100
RTOR Reduction (vph)	0	38	0	0	0	83	0	3	0	0	9	0
Lane Group Flow (vph)	114	261	0	33	261	34	73	612	0	70	1104	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.9	46.9		35.1	35.1	35.1	55.2	50.5		59.0	52.4	
Effective Green, g (s)	46.9	46.9		35.1	35.1	35.1	55.2	50.5		59.0	52.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29	0.29	0.45	0.41		0.48	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	430	1294		301	1025	446	212	2106		389	2160	
v/s Ratio Prot	c0.02	0.08			0.07		c0.01	0.12		c0.01	c0.22	
v/s Ratio Perm	c0.08			0.03		0.02	0.14			0.08		
v/c Ratio	0.27	0.20		0.11	0.25	0.08	0.34	0.29		0.18	0.51	
Uniform Delay, d1	25.0	25.3		32.2	33.6	31.9	20.0	24.0		17.3	25.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.2	0.1	0.1	1.0	0.3		0.2	0.9	
Delay (s)	25.3	25.4		32.4	33.8	31.9	20.9	24.4		17.5	26.5	
Level of Service	C	C		C	C	C	C	C		B	C	
Approach Delay (s)		25.4			33.1			24.0			26.0	
Approach LOS		C			C			C			C	

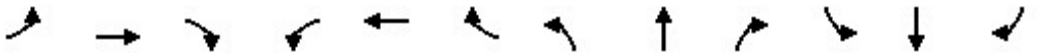
Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	122.5	Sum of lost time (s)	22.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	6	401	227	42	33	55
Future Volume (vph)	6	401	227	42	33	55
Lane Group Flow (vph)	0	443	290	49	39	65
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.30	0.19	0.09	0.03	0.11
Control Delay		12.2	10.4	13.9	13.2	4.7
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.2	10.4	13.9	13.2	4.7
Queue Length 50th (m)		17.3	9.8	3.8	1.5	0.0
Queue Length 95th (m)		26.2	15.7	9.2	3.9	5.9
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1485	1508	571	1216	590
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.30	0.19	0.09	0.03	0.11

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	401	0	0	227	25	42	33	55	0	0	0
Future Volume (vph)	6	401	0	0	227	25	42	33	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.91			
Flpb, ped/bikes		1.00			1.00		0.96	1.00	1.00			
Frt		1.00			0.98		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3457			3312		1517	3230	1460			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3286			3312		1517	3230	1460			
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	7	436	0	0	261	29	49	39	65	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	41	0	0	0
Lane Group Flow (vph)	0	443	0	0	277	0	49	39	24	0	0	0
Confl. Peds. (#/hr)	50		80	80		50	40		70	70		40
Heavy Vehicles (%)	33%	5%	100%	0%	8%	6%	15%	13%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1484			1496		571	1216	549			
v/s Ratio Prot					0.08			0.01				
v/s Ratio Perm		c0.13					c0.03		0.02			
v/c Ratio		0.30			0.19		0.09	0.03	0.04			
Uniform Delay, d1		11.5			10.9		13.3	13.1	13.1			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.1			0.1		0.1	0.0	0.0			
Delay (s)		11.6			10.9		13.4	13.1	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		11.6			10.9			13.2			0.0	
Approach LOS		B			B			B			A	

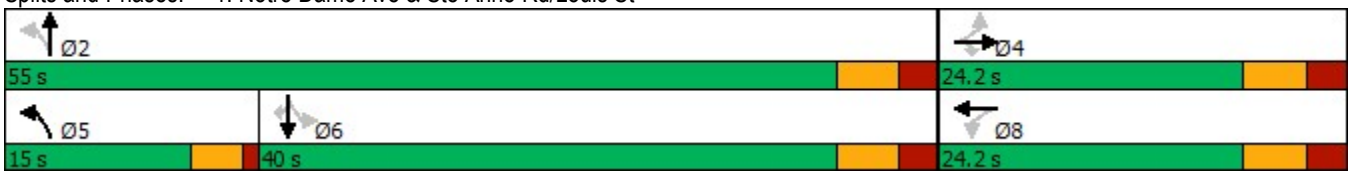
Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	133	23	178	41	11	140	1187	12	891	90
Future Volume (vph)	133	23	178	41	11	140	1187	12	891	90
Lane Group Flow (vph)	143	25	191	47	26	156	1357	14	1013	102
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.46	0.06	0.39	0.16	0.07	0.39	0.43	0.09	0.42	0.13
Control Delay	32.1	24.5	6.8	26.2	16.9	8.5	8.3	14.4	15.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	24.5	6.8	26.2	16.9	8.5	8.3	14.4	15.0	3.5
Queue Length 50th (m)	18.6	3.0	0.0	5.7	1.5	8.0	34.3	1.1	35.4	0.0
Queue Length 95th (m)	35.3	8.7	15.1	13.7	7.3	14.7	42.8	4.5	46.7	7.4
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	310	427	490	302	399	447	3165	164	2390	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.06	0.39	0.16	0.07	0.35	0.43	0.09	0.42	0.13

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



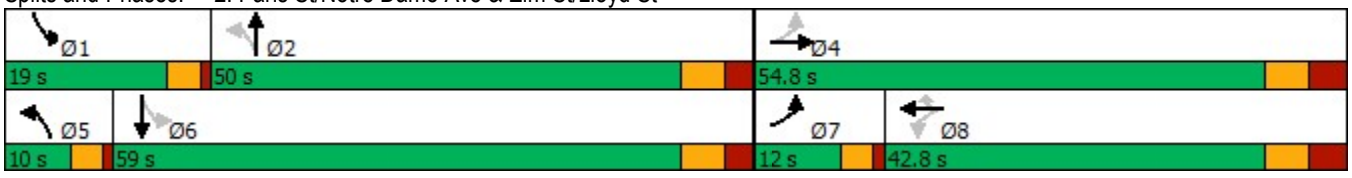
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	23	178	41	11	11	140	1187	34	12	891	90
Future Volume (vph)	133	23	178	41	11	11	140	1187	34	12	891	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.96	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1883	1509	1709	1715		1787	5110		1774	5142	1509
Flt Permitted	0.74	1.00	1.00	0.74	1.00		0.21	1.00		0.19	1.00	1.00
Satd. Flow (perm)	1368	1883	1509	1333	1715		397	5110		352	5142	1509
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.88	0.88	0.88
Adj. Flow (vph)	143	25	191	47	12	12	156	1319	38	14	1012	102
RTOR Reduction (vph)	0	0	148	0	10	0	0	4	0	0	0	55
Lane Group Flow (vph)	143	25	43	47	16	0	156	1353	0	14	1013	47
Confl. Peds. (#/hr)	15		35	35		15	35		25	25		35
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.8	36.8	36.8
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.8	36.8	36.8
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.46	0.46	0.46
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	310	427	342	302	389		389	3161		163	2389	701
v/s Ratio Prot		0.01			0.01		0.04	c0.26			0.20	
v/s Ratio Perm	c0.10		0.03	0.04			0.21			0.04		0.03
v/c Ratio	0.46	0.06	0.13	0.16	0.04		0.40	0.43		0.09	0.42	0.07
Uniform Delay, d1	26.4	24.0	24.3	24.5	23.9		7.0	7.8		11.8	14.1	11.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	0.1	0.2	0.2	0.0		0.7	0.4		1.0	0.6	0.2
Delay (s)	27.5	24.0	24.5	24.8	23.9		7.7	8.3		12.9	14.7	11.9
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		25.7			24.5			8.2			14.4	
Approach LOS		C			C			A			B	

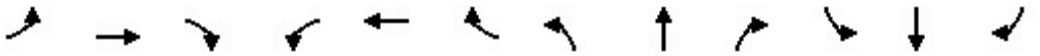
Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	194	353	22	275	125	70	1110	153	815
Future Volume (vph)	194	353	22	275	125	70	1110	153	815
Lane Group Flow (vph)	234	539	24	299	136	80	1294	170	980
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.53	0.40	0.10	0.29	0.25	0.29	0.69	0.67	0.45
Control Delay	30.2	27.1	34.4	35.3	6.5	18.2	35.3	33.0	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.2	27.1	34.4	35.3	6.5	18.2	35.3	33.0	25.2
Queue Length 50th (m)	38.1	47.1	4.3	30.0	0.0	9.3	95.1	20.9	60.6
Queue Length 95th (m)	52.5	56.0	11.3	42.2	14.2	16.9	112.8	41.7	72.9
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	443	1338	239	1023	544	275	1884	294	2200
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.40	0.10	0.29	0.25	0.29	0.69	0.58	0.45

Intersection Summary
Cycle Length: 123.8
Actuated Cycle Length: 122.4
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St





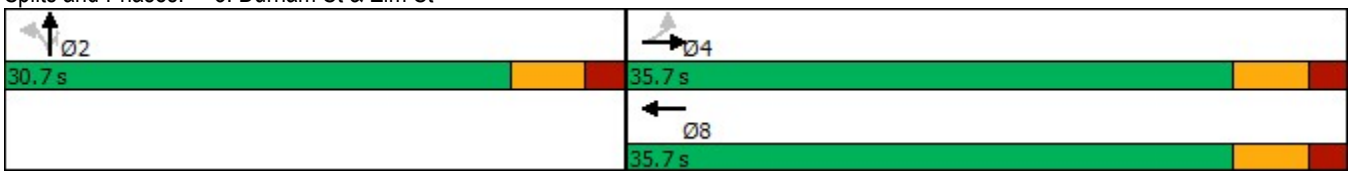
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	353	95	22	275	125	70	1110	29	153	815	67
Future Volume (vph)	194	353	95	22	275	125	70	1110	29	153	815	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1781	3437		1766	3579	1557	1786	5117		1789	5065	
Flt Permitted	0.50	1.00		0.45	1.00	1.00	0.26	1.00		0.10	1.00	
Satd. Flow (perm)	940	3437		839	3579	1557	485	5117		189	5065	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.88	0.88	0.88	0.90	0.90	0.90
Adj. Flow (vph)	234	425	114	24	299	136	80	1261	33	170	906	74
RTOR Reduction (vph)	0	19	0	0	0	97	0	2	0	0	7	0
Lane Group Flow (vph)	234	520	0	24	299	39	80	1292	0	170	973	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	47.0	47.0		35.0	35.0	35.0	50.5	45.8		61.7	53.0	
Effective Green, g (s)	47.0	47.0		35.0	35.0	35.0	50.5	45.8		61.7	53.0	
Actuated g/C Ratio	0.38	0.38		0.28	0.28	0.28	0.41	0.37		0.50	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	413	1311		238	1016	442	248	1902		249	2178	
v/s Ratio Prot	c0.04	0.15			0.08		0.01	0.25		c0.07	0.19	
v/s Ratio Perm	c0.18			0.03		0.02	0.12			c0.28		
v/c Ratio	0.57	0.40		0.10	0.29	0.09	0.32	0.68		0.68	0.45	
Uniform Delay, d1	28.7	27.8		32.5	34.5	32.4	22.5	32.5		21.5	24.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.8	0.2		0.2	0.2	0.1	0.8	2.0		7.5	0.7	
Delay (s)	30.4	28.0		32.7	34.6	32.5	23.3	34.5		29.0	25.4	
Level of Service	C	C		C	C	C	C	C		C	C	
Approach Delay (s)		28.7			33.9			33.9			26.0	
Approach LOS		C			C			C			C	

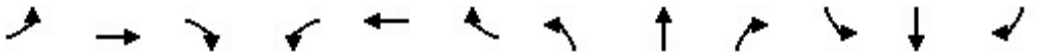
Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	123.2	Sum of lost time (s)	22.5
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	2	498	450	41	25	62
Future Volume (vph)	2	498	450	41	25	62
Lane Group Flow (vph)	0	595	522	55	33	83
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.39	0.32	0.09	0.03	0.13
Control Delay		13.0	12.2	14.0	13.2	4.4
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		13.0	12.2	14.0	13.2	4.4
Queue Length 50th (m)		24.3	20.2	4.3	1.3	0.0
Queue Length 95th (m)		32.3	30.0	8.8	3.1	4.8
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1542	1607	592	1260	627
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.39	0.32	0.09	0.03	0.13

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	498	0	0	450	20	41	25	62	0	0	0
Future Volume (vph)	2	498	0	0	450	20	41	25	62	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			1.00		1.00	1.00	0.96			
Flpb, ped/bikes		1.00			1.00		0.98	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3578			3546		1574	3349	1530			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3413			3546		1574	3349	1530			
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	2	593	0	0	500	22	55	33	83	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	52	0	0	0
Lane Group Flow (vph)	0	595	0	0	517	0	55	33	31	0	0	0
Confl. Peds. (#/hr)	45		60	60		45	15		30	30		15
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	14%	9%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1542			1602		592	1260	576			
v/s Ratio Prot					0.15			0.01				
v/s Ratio Perm		c0.17					c0.03		0.02			
v/c Ratio		0.39			0.32		0.09	0.03	0.05			
Uniform Delay, d1		12.1			11.7		13.4	13.0	13.2			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.2			0.1		0.1	0.0	0.0			
Delay (s)		12.2			11.8		13.4	13.0	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		12.2			11.8			13.3			0.0	
Approach LOS		B			B			B			A	

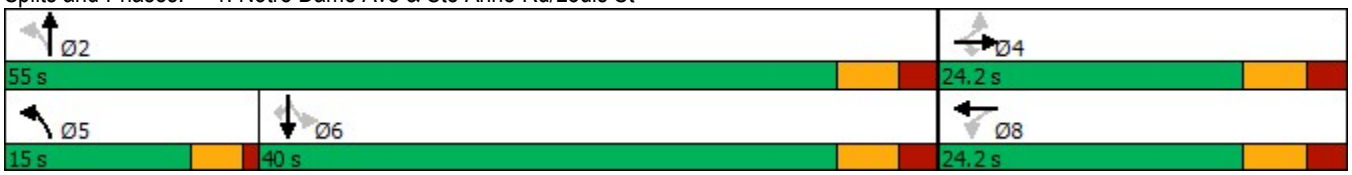
Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	49	13	104	30	21	148	707	10	1031	153
Future Volume (vph)	49	13	104	30	21	148	707	10	1031	153
Lane Group Flow (vph)	60	16	128	38	39	164	815	11	1085	161
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.19	0.04	0.29	0.13	0.09	0.43	0.26	0.04	0.46	0.20
Control Delay	26.8	24.3	7.0	25.8	18.9	9.2	7.0	13.1	15.5	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	24.3	7.0	25.8	18.9	9.2	7.0	13.1	15.5	3.2
Queue Length 50th (m)	7.3	1.9	0.0	4.6	3.1	8.5	17.8	0.9	38.7	0.0
Queue Length 95th (m)	15.1	5.9	9.5	10.6	8.9	15.3	23.4	3.8	52.5	9.8
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	309	427	444	295	413	426	3162	283	2377	789
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.04	0.29	0.13	0.09	0.38	0.26	0.04	0.46	0.20

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	13	104	30	21	10	148	707	26	10	1031	153
Future Volume (vph)	49	13	104	30	21	10	148	707	26	10	1031	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	0.99	1.00	1.00	0.96	1.00		1.00	1.00		0.98	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1767	1883	1520	1655	1774		1788	5101		1758	5142	1520
Flt Permitted	0.73	1.00	1.00	0.75	1.00		0.19	1.00		0.33	1.00	1.00
Satd. Flow (perm)	1361	1883	1520	1301	1774		355	5101		615	5142	1520
Peak-hour factor, PHF	0.81	0.81	0.81	0.80	0.80	0.80	0.90	0.90	0.90	0.95	0.95	0.95
Adj. Flow (vph)	60	16	128	38	26	12	164	786	29	11	1085	161
RTOR Reduction (vph)	0	0	99	0	10	0	0	5	0	0	0	87
Lane Group Flow (vph)	60	16	29	38	29	0	164	810	0	11	1085	74
Confl. Peds. (#/hr)	10		30	30		10	30		25	25		30
Heavy Vehicles (%)	2%	2%	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.6	36.6	36.6
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.6	36.6	36.6
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.46	0.46	0.46
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	309	427	345	295	403		371	3155		284	2376	702
v/s Ratio Prot		0.01			0.02		c0.05	0.16			0.21	
v/s Ratio Perm	c0.04		0.02	0.03			c0.23			0.02		0.05
v/c Ratio	0.19	0.04	0.08	0.13	0.07		0.44	0.26		0.04	0.46	0.11
Uniform Delay, d1	24.7	23.8	24.1	24.4	24.0		7.3	6.8		11.7	14.5	12.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.1	0.2	0.1		0.8	0.2		0.3	0.6	0.3
Delay (s)	25.0	23.9	24.2	24.6	24.1		8.2	7.0		11.9	15.2	12.4
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		24.4			24.3			7.2			14.8	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

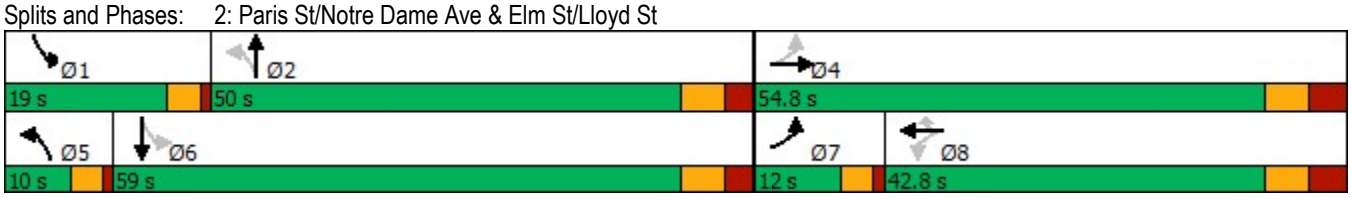
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	197	31	250	113	75	612	68	1001
Future Volume (vph)	107	197	31	250	113	75	612	68	1001
Lane Group Flow (vph)	123	320	35	281	127	78	661	74	1196
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.27	0.24	0.12	0.27	0.23	0.36	0.31	0.19	0.55
Control Delay	24.6	21.2	34.5	34.9	5.6	19.7	24.9	15.8	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	21.2	34.5	34.9	5.6	19.7	24.9	15.8	27.0
Queue Length 50th (m)	18.7	22.1	6.3	28.0	0.0	9.1	39.3	8.6	78.3
Queue Length 95th (m)	30.5	31.5	14.6	39.4	11.7	16.9	50.7	16.3	92.3
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	456	1345	297	1030	546	217	2117	471	2181
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.24	0.12	0.27	0.23	0.36	0.31	0.16	0.55

Intersection Summary

Cycle Length: 123.8
Actuated Cycle Length: 121.7
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



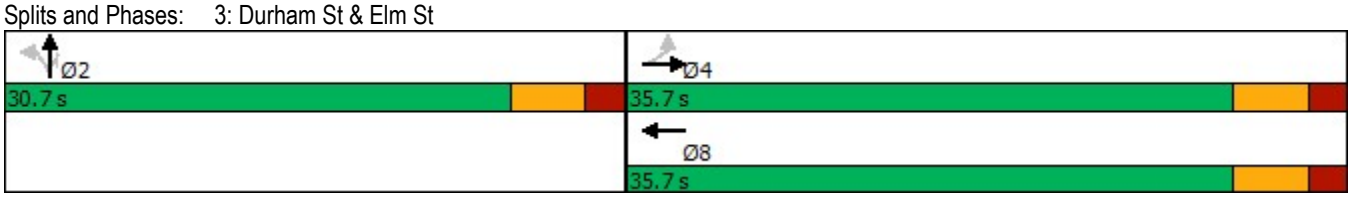
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	197	82	31	250	113	75	612	22	68	1001	99
Future Volume (vph)	107	197	82	31	250	113	75	612	22	68	1001	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.98	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1780	3382		1758	3579	1557	1788	5108		1784	5050	
Flt Permitted	0.52	1.00		0.56	1.00	1.00	0.16	1.00		0.34	1.00	
Satd. Flow (perm)	973	3382		1033	3579	1557	305	5108		640	5050	
Peak-hour factor, PHF	0.87	0.87	0.87	0.89	0.89	0.89	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	123	226	94	35	281	127	78	638	23	74	1088	108
RTOR Reduction (vph)	0	37	0	0	0	91	0	3	0	0	9	0
Lane Group Flow (vph)	123	283	0	35	281	36	78	658	0	74	1187	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	46.9	46.9		35.0	35.0	35.0	55.1	50.4		59.1	52.4	
Effective Green, g (s)	46.9	46.9		35.0	35.0	35.0	55.1	50.4		59.1	52.4	
Actuated g/C Ratio	0.38	0.38		0.29	0.29	0.29	0.45	0.41		0.48	0.43	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	424	1294		295	1022	444	194	2101		371	2160	
v/s Ratio Prot	c0.02	0.08			0.08		c0.02	0.13		c0.01	c0.24	
v/s Ratio Perm	c0.09			0.03		0.02	0.17			0.09		
v/c Ratio	0.29	0.22		0.12	0.27	0.08	0.40	0.31		0.20	0.55	
Uniform Delay, d1	25.1	25.5		32.3	33.9	32.0	20.3	24.4		17.3	26.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.2	0.1	0.1	1.4	0.4		0.3	1.0	
Delay (s)	25.5	25.5		32.5	34.1	32.1	21.7	24.7		17.6	27.2	
Level of Service	C	C		C	C	C	C	C		B	C	
Approach Delay (s)		25.5			33.4			24.4			26.7	
Approach LOS		C			C			C			C	

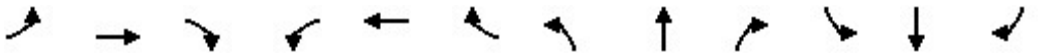
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	122.5	Sum of lost time (s)	22.5
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	6	431	244	45	36	59
Future Volume (vph)	6	431	244	45	36	59
Lane Group Flow (vph)	0	475	311	53	42	69
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.32	0.21	0.09	0.03	0.12
Control Delay		12.4	10.6	14.0	13.2	4.6
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		12.4	10.6	14.0	13.2	4.6
Queue Length 50th (m)		18.7	10.6	4.1	1.6	0.0
Queue Length 95th (m)		28.2	16.8	9.7	4.1	6.0
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1485	1508	571	1216	592
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.32	0.21	0.09	0.03	0.12

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	431	0	0	244	27	45	36	59	0	0	0
Future Volume (vph)	6	431	0	0	244	27	45	36	59	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			0.99		1.00	1.00	0.91			
Flpb, ped/bikes		1.00			1.00		0.96	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3458			3312		1517	3230	1460			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3287			3312		1517	3230	1460			
Peak-hour factor, PHF	0.92	0.92	0.92	0.87	0.87	0.87	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	7	468	0	0	280	31	53	42	69	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	475	0	0	298	0	53	42	26	0	0	0
Confl. Peds. (#/hr)	50		80	80		50	40		70	70		40
Heavy Vehicles (%)	33%	5%	100%	0%	8%	6%	15%	13%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1485			1496		571	1216	549			
v/s Ratio Prot					0.09			0.01				
v/s Ratio Perm		c0.14					c0.03		0.02			
v/c Ratio		0.32			0.20		0.09	0.03	0.05			
Uniform Delay, d1		11.7			11.0		13.4	13.1	13.1			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.1			0.1		0.1	0.0	0.0			
Delay (s)		11.8			11.0		13.4	13.1	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		11.8			11.0			13.2			0.0	
Approach LOS		B			B			B			A	

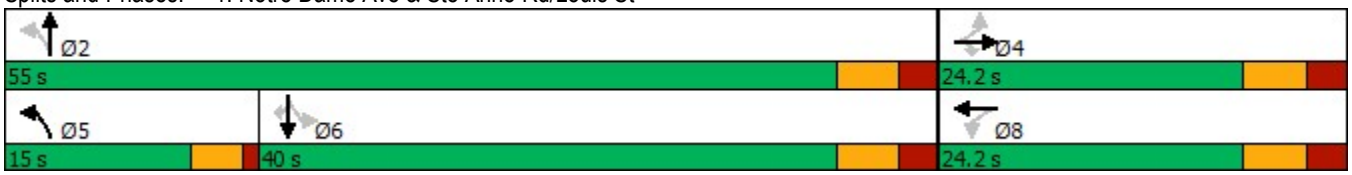
Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	142	24	192	44	12	151	1276	13	958	97
Future Volume (vph)	142	24	192	44	12	151	1276	13	958	97
Lane Group Flow (vph)	153	26	206	50	28	168	1459	15	1089	110
Turn Type	Perm	NA	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4			8	5	2		6	
Permitted Phases	4		4	8		2		6		6
Detector Phase	4	4	4	8	8	5	2	6	6	6
Switch Phase										
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.2	24.2	24.2	24.2	24.2	9.5	24.0	24.0	24.0	24.0
Total Split (s)	24.2	24.2	24.2	24.2	24.2	15.0	55.0	40.0	40.0	40.0
Total Split (%)	30.6%	30.6%	30.6%	30.6%	30.6%	18.9%	69.4%	50.5%	50.5%	50.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.0	3.7	3.7	3.7	3.7
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	1.0	2.3	2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2	6.2	6.2	6.2	4.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead		Lag	Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes	Yes
Recall Mode	Ped	Ped	Ped	Ped	Ped	None	Max	Max	Max	Max
v/c Ratio	0.49	0.06	0.41	0.17	0.07	0.44	0.46	0.10	0.46	0.15
Control Delay	33.0	24.5	6.8	26.3	16.8	9.4	8.6	15.3	15.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	24.5	6.8	26.3	16.8	9.4	8.6	15.3	15.6	3.5
Queue Length 50th (m)	20.1	3.1	0.0	6.1	1.6	8.7	37.9	1.2	39.1	0.0
Queue Length 95th (m)	37.6	9.1	15.6	14.4	7.6	15.6	47.1	5.0	51.3	7.8
Internal Link Dist (m)		132.2			181.4		171.1		156.9	
Turn Bay Length (m)	135.0		135.0	50.0		45.0		90.0		90.0
Base Capacity (vph)	310	427	502	302	400	425	3165	145	2372	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.06	0.41	0.17	0.07	0.40	0.46	0.10	0.46	0.15

Intersection Summary
Cycle Length: 79.2
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Notre Dame Ave & Ste Anne Rd/Louis St



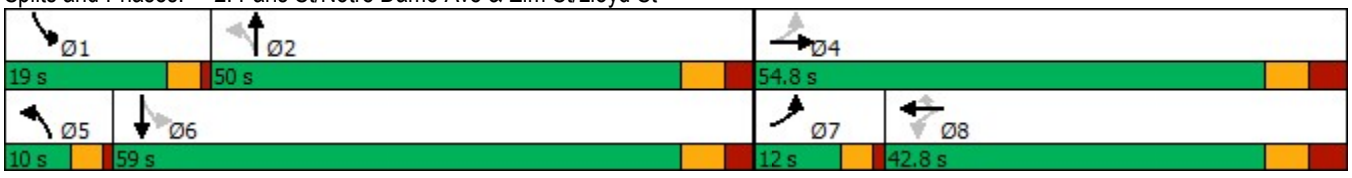
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	24	192	44	12	12	151	1276	37	13	958	97
Future Volume (vph)	142	24	192	44	12	12	151	1276	37	13	958	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00	0.94	1.00	0.98		1.00	1.00		1.00	1.00	0.94
Flpb, ped/bikes	0.98	1.00	1.00	0.96	1.00		1.00	1.00		0.99	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1755	1883	1509	1710	1715		1787	5109		1776	5142	1509
Flt Permitted	0.74	1.00	1.00	0.74	1.00		0.19	1.00		0.17	1.00	1.00
Satd. Flow (perm)	1365	1883	1509	1332	1715		352	5109		317	5142	1509
Peak-hour factor, PHF	0.93	0.93	0.93	0.88	0.88	0.88	0.90	0.90	0.90	0.88	0.88	0.88
Adj. Flow (vph)	153	26	206	50	14	14	168	1418	41	15	1089	110
RTOR Reduction (vph)	0	0	159	0	11	0	0	4	0	0	0	59
Lane Group Flow (vph)	153	26	47	50	17	0	168	1455	0	15	1089	51
Confl. Peds. (#/hr)	15		35	35		15	35		25	25		35
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.5	36.5	36.5
Effective Green, g (s)	18.0	18.0	18.0	18.0	18.0		49.0	49.0		36.5	36.5	36.5
Actuated g/C Ratio	0.23	0.23	0.23	0.23	0.23		0.62	0.62		0.46	0.46	0.46
Clearance Time (s)	6.2	6.2	6.2	6.2	6.2		4.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	310	427	342	302	389		371	3160		146	2369	695
v/s Ratio Prot		0.01			0.01		0.05	c0.28			0.21	
v/s Ratio Perm	c0.11		0.03	0.04			0.23			0.05		0.03
v/c Ratio	0.49	0.06	0.14	0.17	0.04		0.45	0.46		0.10	0.46	0.07
Uniform Delay, d1	26.6	24.0	24.4	24.6	23.9		7.4	8.1		12.1	14.6	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.1	0.2	0.3	0.0		0.9	0.5		1.4	0.6	0.2
Delay (s)	27.9	24.0	24.6	24.8	23.9		8.2	8.5		13.5	15.2	12.1
Level of Service	C	C	C	C	C		A	A		B	B	B
Approach Delay (s)		25.9			24.5			8.5			14.9	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	79.2	Sum of lost time (s)	16.2
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	208	380	23	296	135	75	1193	165	876
Future Volume (vph)	208	380	23	296	135	75	1193	165	876
Lane Group Flow (vph)	251	581	25	322	147	85	1391	183	1053
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	8.0	8.0	8.0	8.0	5.0	30.0	5.0	30.0
Minimum Split (s)	9.5	41.8	42.8	42.8	42.8	9.5	36.7	9.5	41.7
Total Split (s)	12.0	54.8	42.8	42.8	42.8	10.0	50.0	19.0	59.0
Total Split (%)	9.7%	44.3%	34.6%	34.6%	34.6%	8.1%	40.4%	15.3%	47.7%
Yellow Time (s)	3.0	4.1	4.1	4.1	4.1	3.0	4.1	3.0	4.1
All-Red Time (s)	1.0	3.7	3.7	3.7	3.7	1.0	2.6	1.0	2.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	7.8	7.8	7.8	7.8	4.0	6.7	4.0	6.7
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Ped	Ped	Ped	Ped	None	Max	None	Max
v/c Ratio	0.59	0.44	0.11	0.32	0.27	0.34	0.73	0.76	0.49
Control Delay	32.7	28.2	34.7	36.1	6.6	19.3	36.8	44.9	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	28.2	34.7	36.1	6.6	19.3	36.8	44.9	26.7
Queue Length 50th (m)	41.3	51.7	4.5	32.5	0.0	10.0	106.8	26.7	66.5
Queue Length 95th (m)	56.2	60.8	11.8	45.3	15.3	17.9	123.8	51.1	79.3
Internal Link Dist (m)		119.6		283.5			95.5		171.1
Turn Bay Length (m)	50.0		25.0		35.0	90.0		50.0	
Base Capacity (vph)	424	1324	227	1011	545	250	1898	277	2148
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.44	0.11	0.32	0.27	0.34	0.73	0.66	0.49

Intersection Summary
Cycle Length: 123.8
Actuated Cycle Length: 123.8
Natural Cycle: 105
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Paris St/Notre Dame Ave & Elm St/Lloyd St



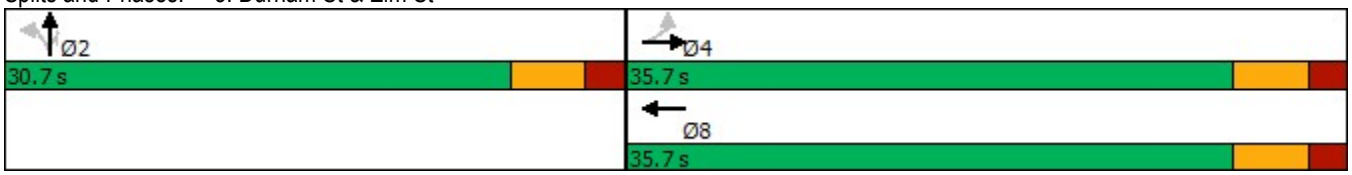
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	380	102	23	296	135	75	1193	31	165	876	72
Future Volume (vph)	208	380	102	23	296	135	75	1193	31	165	876	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1782	3436		1767	3579	1557	1787	5117		1789	5065	
Flt Permitted	0.48	1.00		0.43	1.00	1.00	0.22	1.00		0.08	1.00	
Satd. Flow (perm)	899	3436		806	3579	1557	420	5117		151	5065	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.88	0.88	0.88	0.90	0.90	0.90
Adj. Flow (vph)	251	458	123	25	322	147	85	1356	35	183	973	80
RTOR Reduction (vph)	0	20	0	0	0	105	0	2	0	0	8	0
Lane Group Flow (vph)	251	561	0	25	322	42	85	1389	0	183	1045	0
Confl. Peds. (#/hr)	15		25	25		15	35		20	20		35
Turn Type	pm+pt	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	47.0	47.0		35.0	35.0	35.0	51.9	45.9		62.3	52.3	
Effective Green, g (s)	47.0	47.0		35.0	35.0	35.0	51.9	45.9		62.3	52.3	
Actuated g/C Ratio	0.38	0.38		0.28	0.28	0.28	0.42	0.37		0.50	0.42	
Clearance Time (s)	4.0	7.8		7.8	7.8	7.8	4.0	6.7		4.0	6.7	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	398	1304		227	1011	440	242	1897		240	2139	
v/s Ratio Prot	c0.04	0.16			0.09		0.02	0.27		c0.08	0.21	
v/s Ratio Perm	c0.20			0.03		0.03	0.13			c0.31		
v/c Ratio	0.63	0.43		0.11	0.32	0.09	0.35	0.73		0.76	0.49	
Uniform Delay, d1	30.0	28.5		32.9	35.0	32.7	22.1	33.6		28.3	26.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	0.2		0.2	0.2	0.1	0.9	2.5		13.4	0.8	
Delay (s)	33.2	28.7		33.1	35.2	32.8	23.0	36.2		41.7	26.8	
Level of Service	C	C		C	D	C	C	D		D	C	
Approach Delay (s)		30.1			34.4			35.4			29.0	
Approach LOS		C			C			D			C	

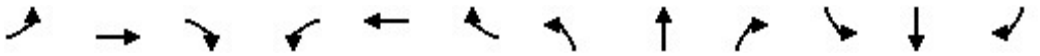
Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	123.8	Sum of lost time (s)	22.5
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Configurations						
Traffic Volume (vph)	2	535	484	44	27	67
Future Volume (vph)	2	535	484	44	27	67
Lane Group Flow (vph)	0	639	561	59	36	89
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		4	8		2	
Permitted Phases	4			2		2
Detector Phase	4	4	8	2	2	2
Switch Phase						
Minimum Initial (s)	30.0	30.0	30.0	25.0	25.0	25.0
Minimum Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (s)	35.7	35.7	35.7	30.7	30.7	30.7
Total Split (%)	53.8%	53.8%	53.8%	46.2%	46.2%	46.2%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		5.7	5.7	5.7	5.7	5.7
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Ped	Ped	Ped	Ped	Ped	Ped
v/c Ratio		0.41	0.35	0.10	0.03	0.14
Control Delay		13.3	12.4	14.1	13.2	4.3
Queue Delay		0.0	0.0	0.0	0.0	0.0
Total Delay		13.3	12.4	14.1	13.2	4.3
Queue Length 50th (m)		26.5	22.1	4.6	1.4	0.0
Queue Length 95th (m)		35.0	32.4	9.2	3.3	4.9
Internal Link Dist (m)		78.7	74.7		69.2	
Turn Bay Length (m)				20.0		35.0
Base Capacity (vph)		1542	1607	592	1260	631
Starvation Cap Reductn		0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0
Reduced v/c Ratio		0.41	0.35	0.10	0.03	0.14

Intersection Summary
Cycle Length: 66.4
Actuated Cycle Length: 66.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord

Splits and Phases: 3: Durham St & Elm St



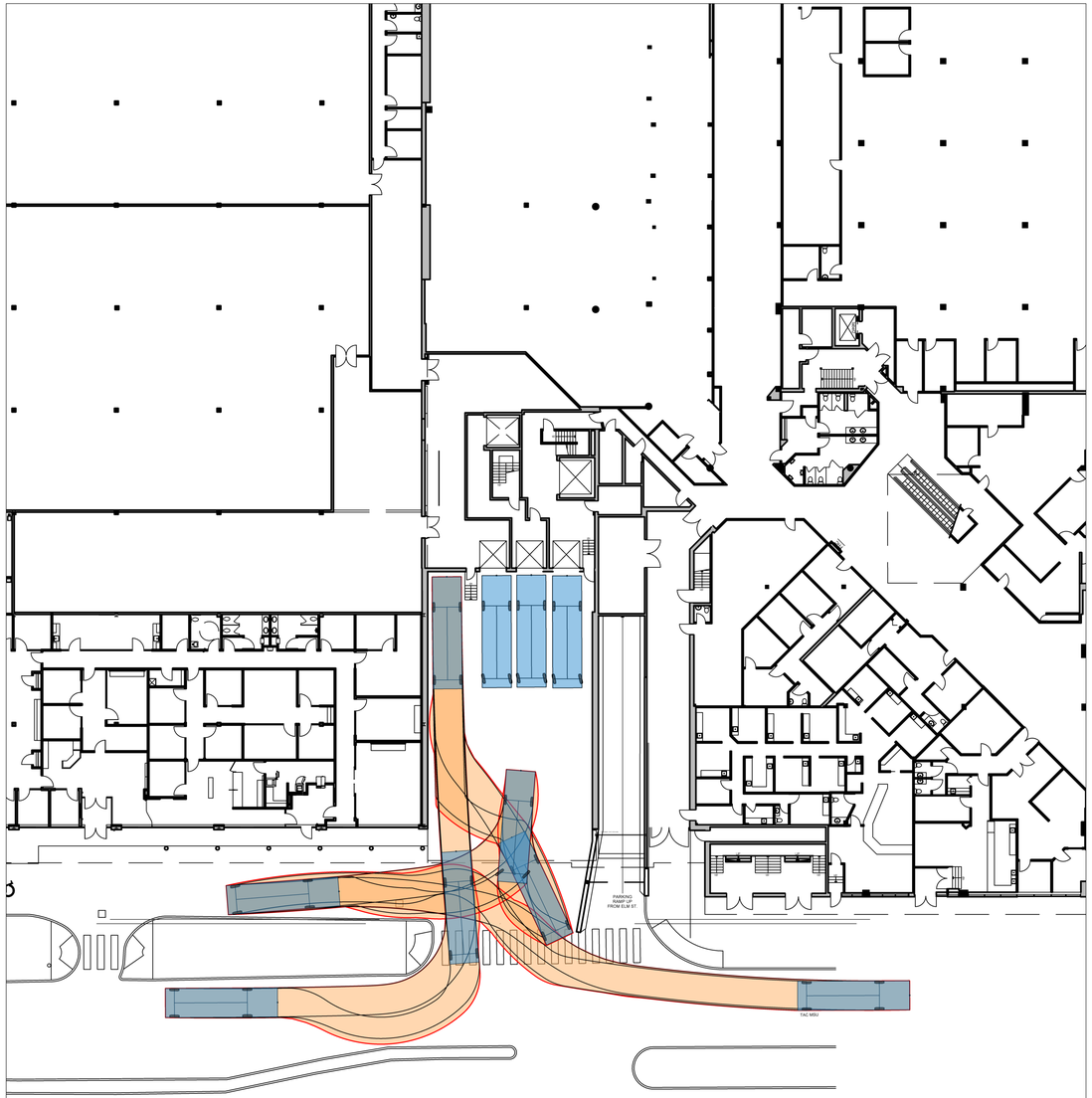


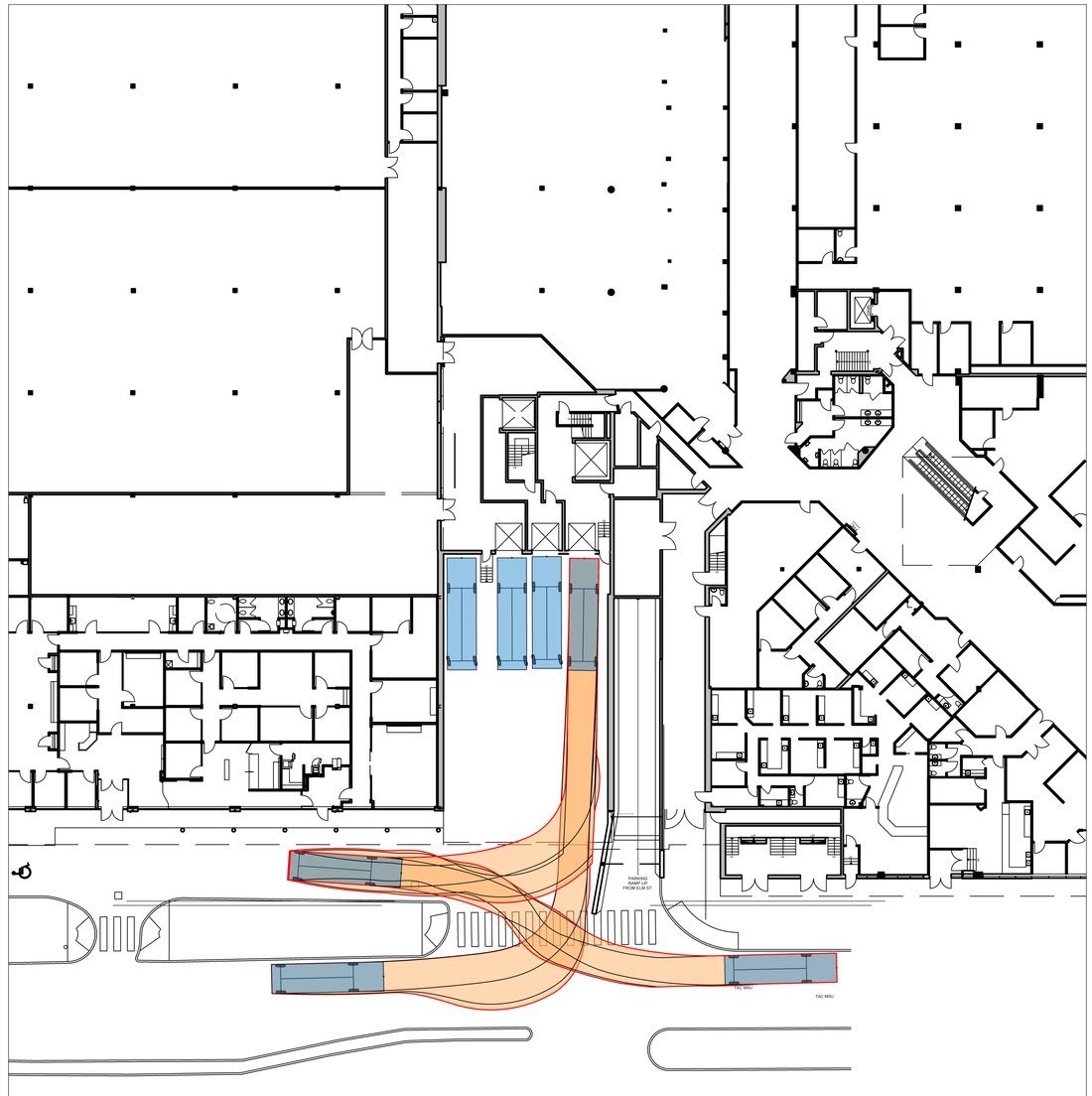
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	535	0	0	484	21	44	27	67	0	0	0
Future Volume (vph)	2	535	0	0	484	21	44	27	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.7			5.7		5.7	5.7	5.7			
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00			
Frpb, ped/bikes		1.00			1.00		1.00	1.00	0.96			
Flpb, ped/bikes		1.00			1.00		0.98	1.00	1.00			
Frt		1.00			0.99		1.00	1.00	0.85			
Flt Protected		1.00			1.00		0.95	1.00	1.00			
Satd. Flow (prot)		3578			3547		1574	3349	1530			
Flt Permitted		0.95			1.00		0.95	1.00	1.00			
Satd. Flow (perm)		3413			3547		1574	3349	1530			
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	2	637	0	0	538	23	59	36	89	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	55	0	0	0
Lane Group Flow (vph)	0	639	0	0	557	0	59	36	34	0	0	0
Confl. Peds. (#/hr)	45		60	60		45	15		30	30		15
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	14%	9%	2%	2%	2%	2%
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Actuated Green, G (s)		30.0			30.0		25.0	25.0	25.0			
Effective Green, g (s)		30.0			30.0		25.0	25.0	25.0			
Actuated g/C Ratio		0.45			0.45		0.38	0.38	0.38			
Clearance Time (s)		5.7			5.7		5.7	5.7	5.7			
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0			
Lane Grp Cap (vph)		1542			1602		592	1260	576			
v/s Ratio Prot					0.16			0.01				
v/s Ratio Perm		c0.19					c0.04		0.02			
v/c Ratio		0.41			0.35		0.10	0.03	0.06			
Uniform Delay, d1		12.3			11.8		13.4	13.0	13.2			
Progression Factor		1.00			1.00		1.00	1.00	1.00			
Incremental Delay, d2		0.2			0.1		0.1	0.0	0.0			
Delay (s)		12.5			12.0		13.5	13.1	13.2			
Level of Service		B			B		B	B	B			
Approach Delay (s)		12.5			12.0			13.3			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	11.4
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Appendix G –
Swept Path Analysis

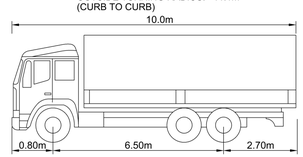




DESIGN VEHICLE

TAC MEDIUM SINGLE UNIT TRUCK

VEHICLE WIDTH: 2.60m
OUTSIDE TURNING RADIUS: 11.1m
(CURB TO CURB)



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JD Northcote Engineering Inc.
Phone: 705.725.4035
86 Cumberland Street
Barrie, ON L4N 2P6
www.JDEngineering.ca

PROJECT
ELM PLACE MALL

AREA MUNICIPALITY
CITY OF GREATER SUDBURY

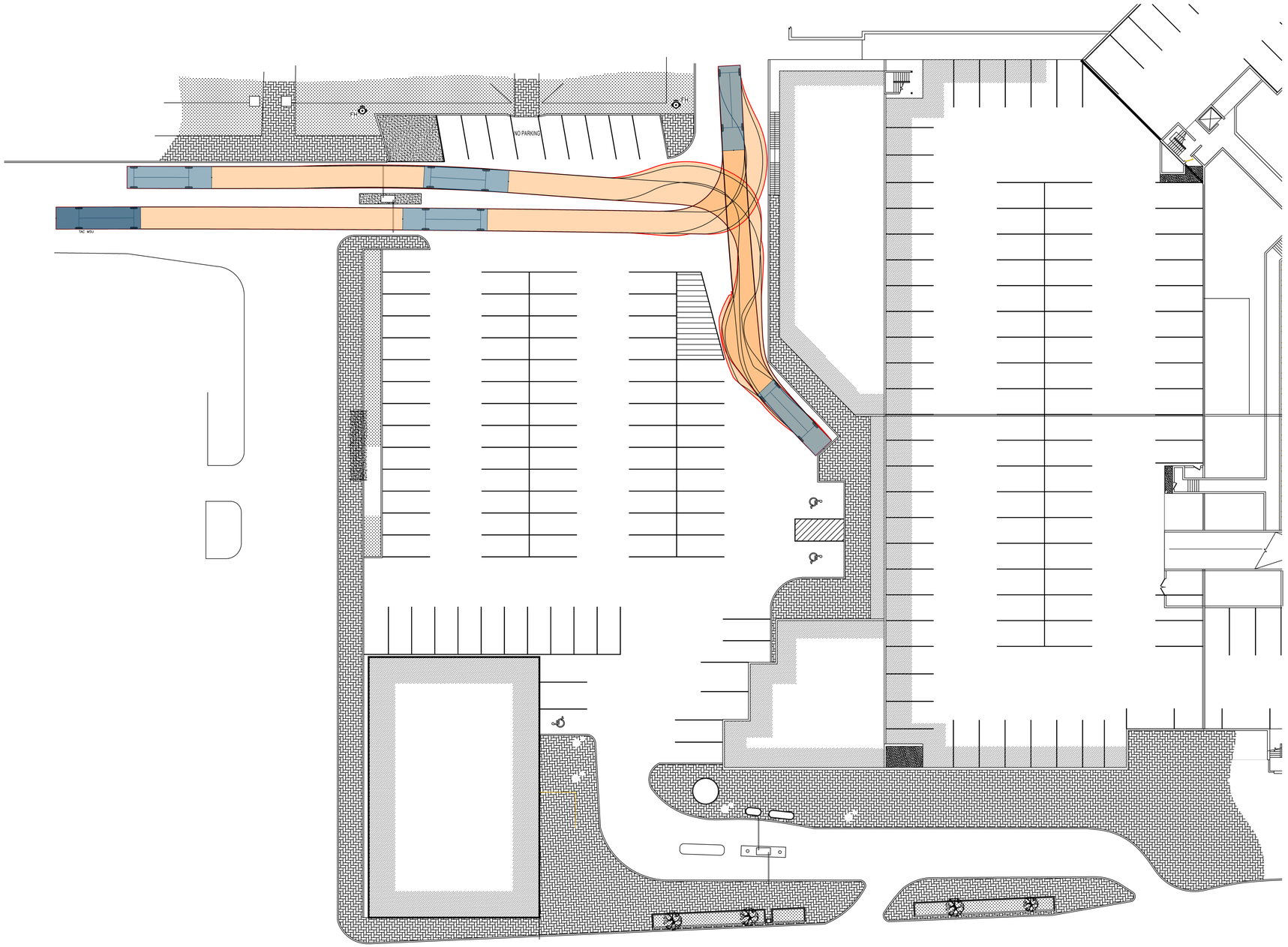
CLIENT
VISTA HOSPITALITY CO. CANADA INC.

DRAWING TITLE
VEHICLE TURNING MOVEMENT ANALYSIS
TAC MEDIUM SINGLE UNIT TRUCK (MSU)

SUBTITLE
ELM STREET PARKING LOT

DESIGN:	RH	DATE:	12/23
DRAWN:	RH	DATE:	12/23
REVIEWED:	JN	DATE:	12/23
SCALE HOR.	1:250	SCALE VERT.	N/A

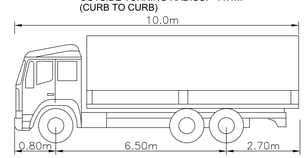
SHEET NO.
23027 - TURN A



DESIGN VEHICLE

TAC MEDIUM SINGLE UNIT TRUCK

VEHICLE WIDTH: 2.60m
OUTSIDE TURNING RADIUS: 11.1m
(CURB TO CURB)



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PROJECT
ELM PLACE MALL

AREA MUNICIPALITY
CITY OF GREATER SUDBURY

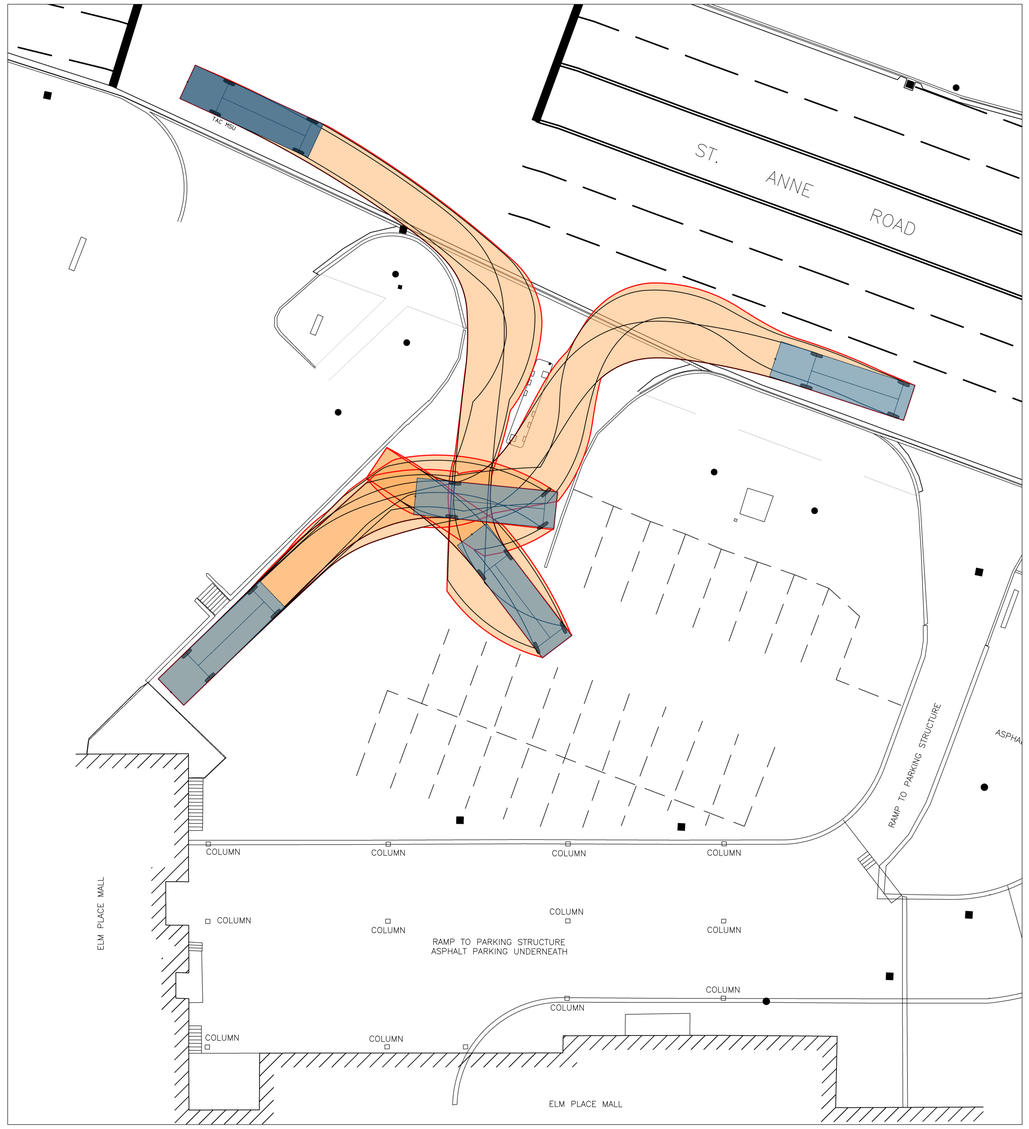
CLIENT
VISTA HOSPITALITY CO. CANADA INC.

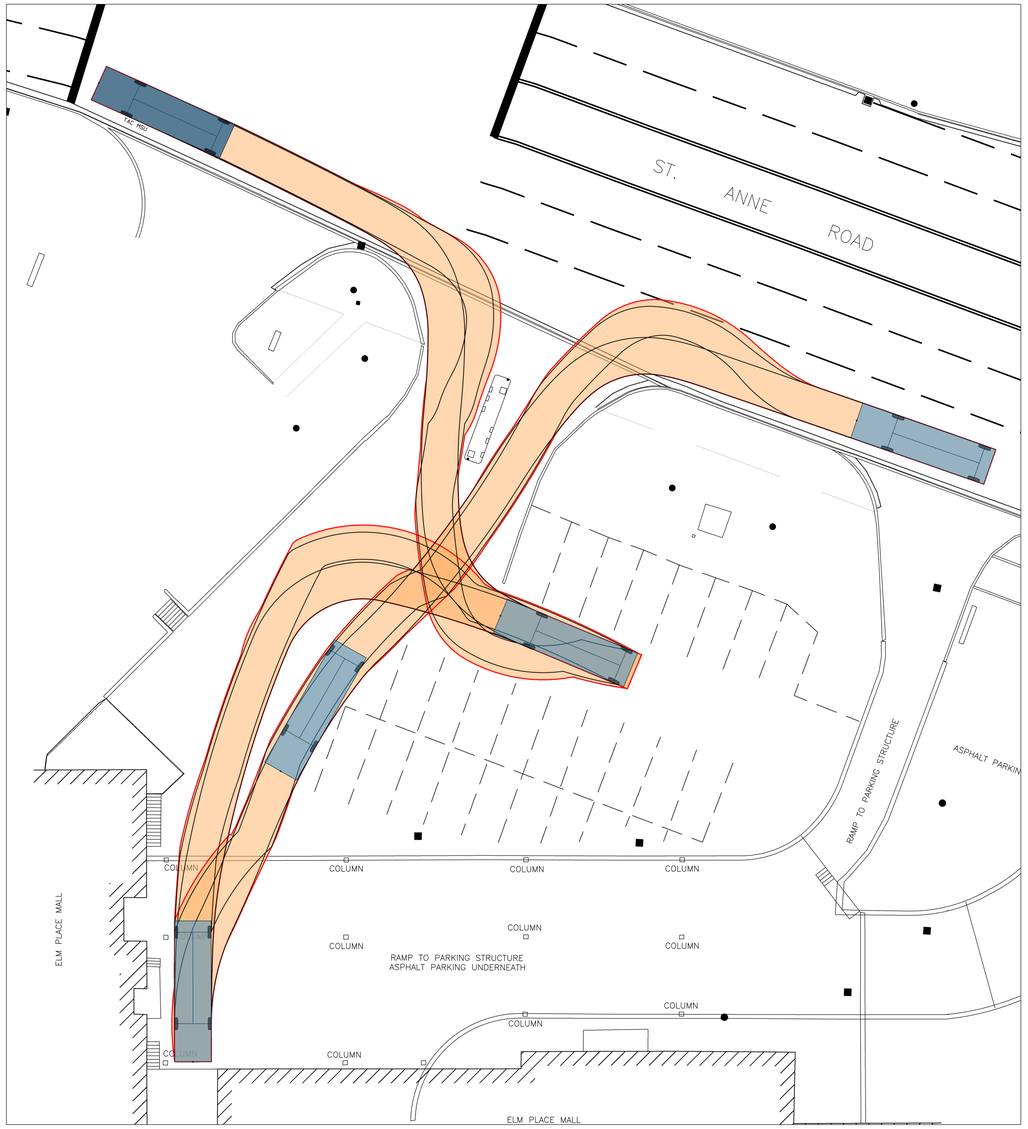
DRAWING TITLE
VEHICLE TURNING MOVEMENT ANALYSIS
TAC MEDIUM SINGLE UNIT TRUCK (MSU)

SUBTITLE
BEECH STREET PARKING LOT

DESIGN:	RH	DATE:	12/23
DRAWN:	RH	DATE:	12/23
REVIEWED:	JN	DATE:	12/23
SCALE HOR.	1:250	SCALE VERT.	N/A

SHEET NO.
23027 - TURN B

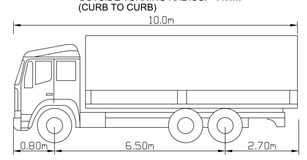




DESIGN VEHICLE

TAC MEDIUM SINGLE UNIT TRUCK

VEHICLE WIDTH: 2.60m
OUTSIDE TURNING RADIUS: 11.1m
(CURB TO CURB)



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PROJECT
ELM PLACE MALL

AREA MUNICIPALITY
CITY OF GREATER SUDBURY

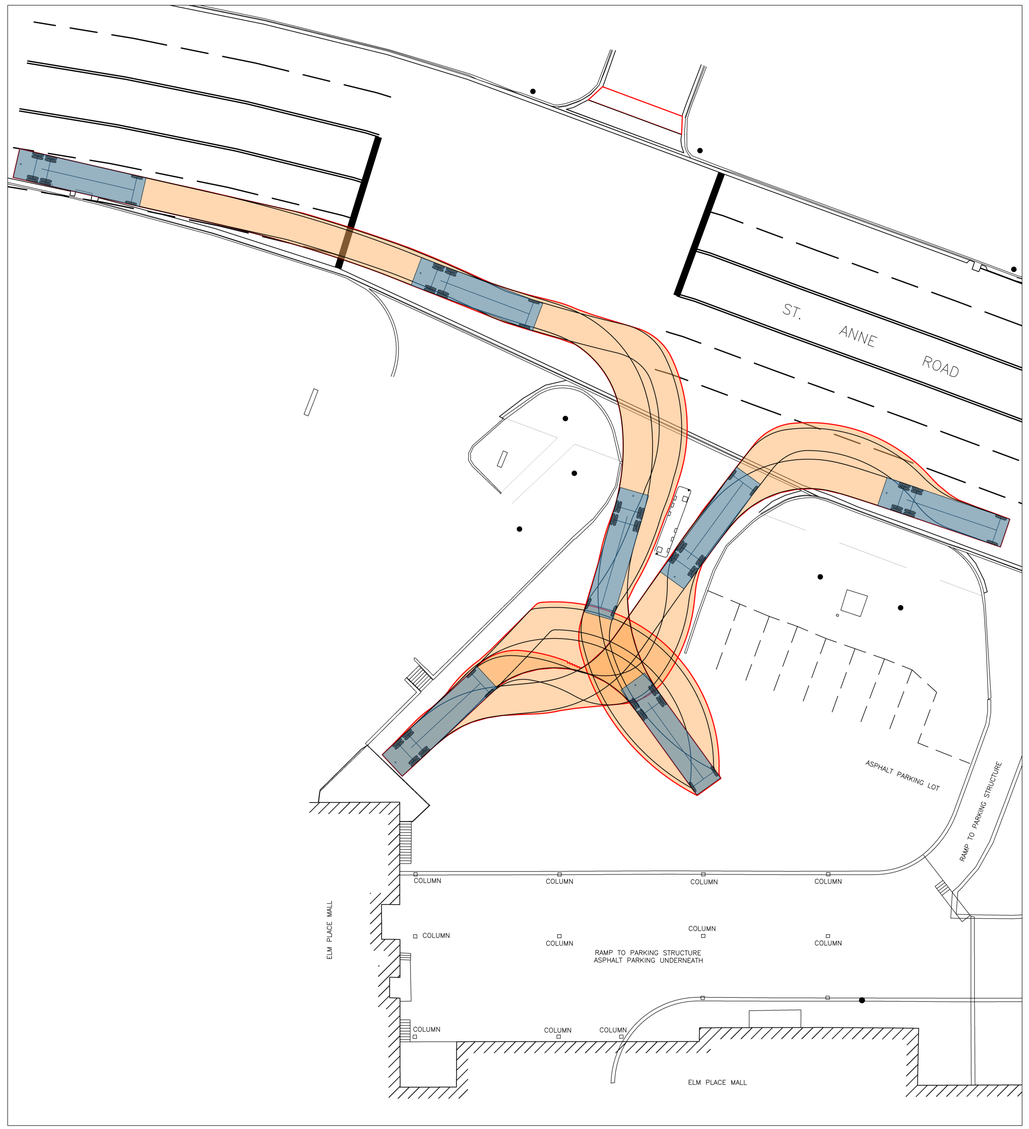
CLIENT
VISTA HOSPITALITY CO. CANADA INC.

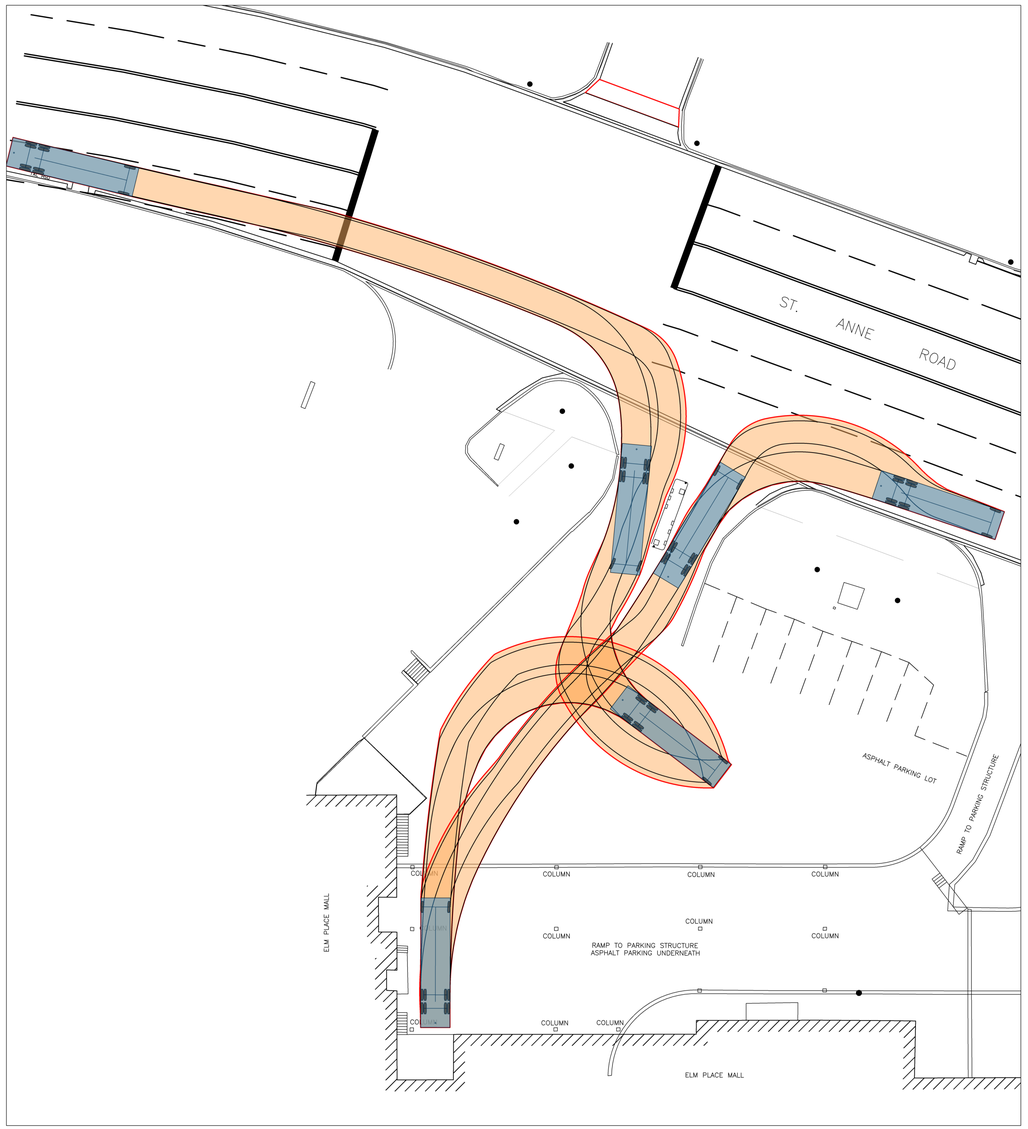
DRAWING TITLE
VEHICLE TURNING MOVEMENT ANALYSIS
TAC MEDIUM SINGLE UNIT TRUCK (MSU)

SUBTITLE
ANNE STREET PARKING LOT

DESIGN:	RH	DATE:	12/23
DRAWN:	RH	DATE:	12/23
REVIEWED:	JN	DATE:	12/23
SCALE HOR.	1:200	SCALE VERT.	N/A

SHEET NO.
23027 - TURN C

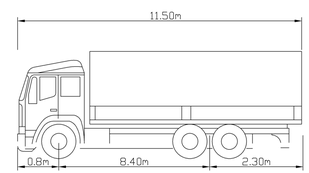




DESIGN VEHICLE

HEAVY SINGLE UNIT TRUCK (TAC HSU)

VEHICLE WIDTH: 2.60m
OUTSIDE TURNING RADIUS: 14.1m



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AREA MUNICIPALITY
CITY OF GREATER SUDBURY

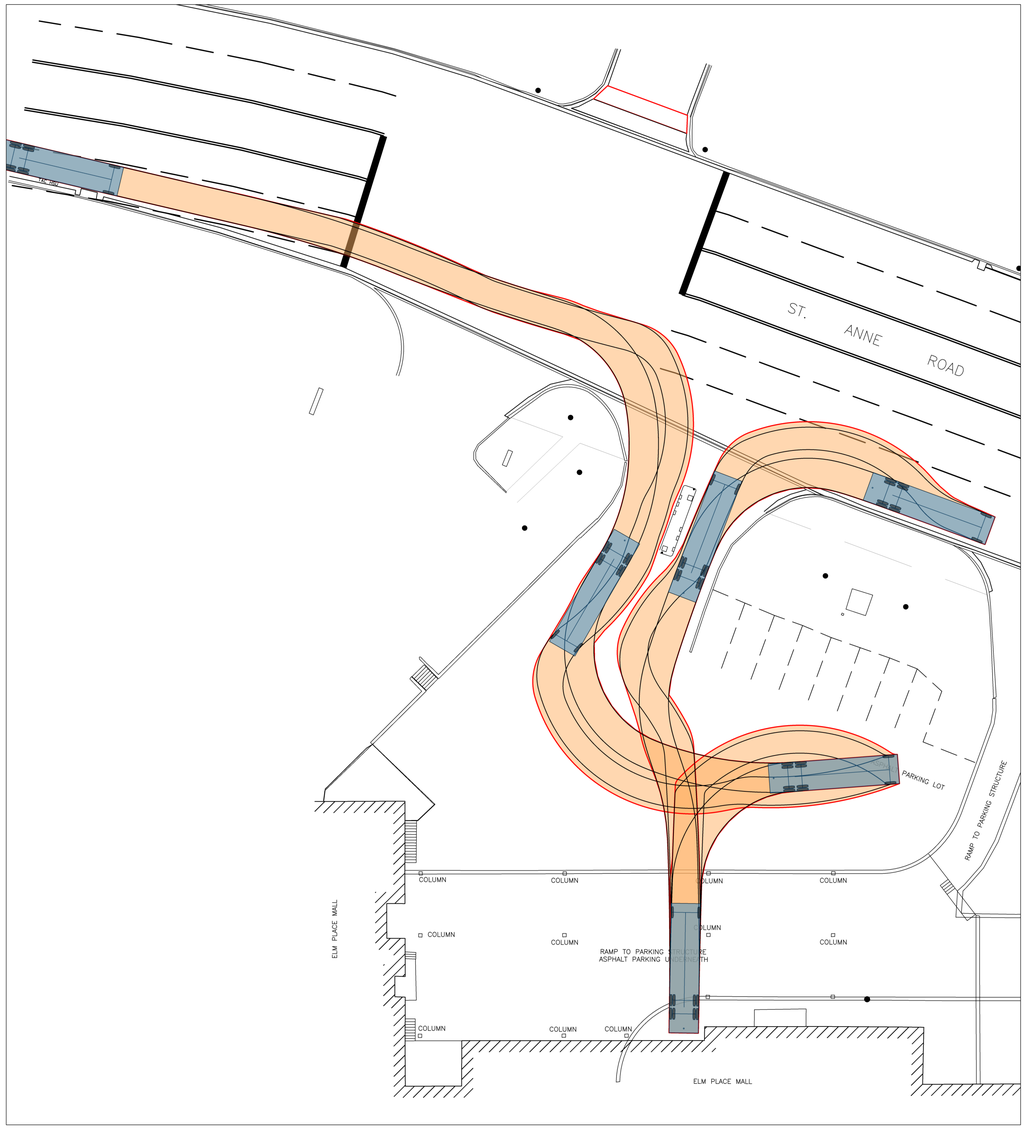
CLIENT
VISTA HOSPITALITY CO. CANADA INC.

DRAWING TITLE
VEHICLE TURNING MOVEMENT ANALYSIS
TAC HEAVY SINGLE UNIT TRUCK (HSU)

SUBTITLE
ANNE STREET PARKING LOT

DESIGN:	RH	DATE:	12/23
DRAWN:	RH	DATE:	12/23
REVIEWED:	JN	DATE:	12/23
SCALE HOR.	1:250	SCALE VERT.	N/A

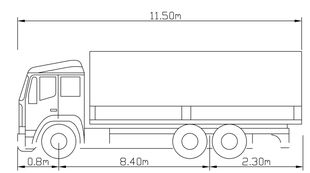
SHEET NO.
23027 - TURN D



DESIGN VEHICLE

HEAVY SINGLE UNIT TRUCK (TAC HSU)

VEHICLE WIDTH: 2.60m
OUTSIDE TURNING RADIUS: 14.1m



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CITY OF GREATER SUDBURY

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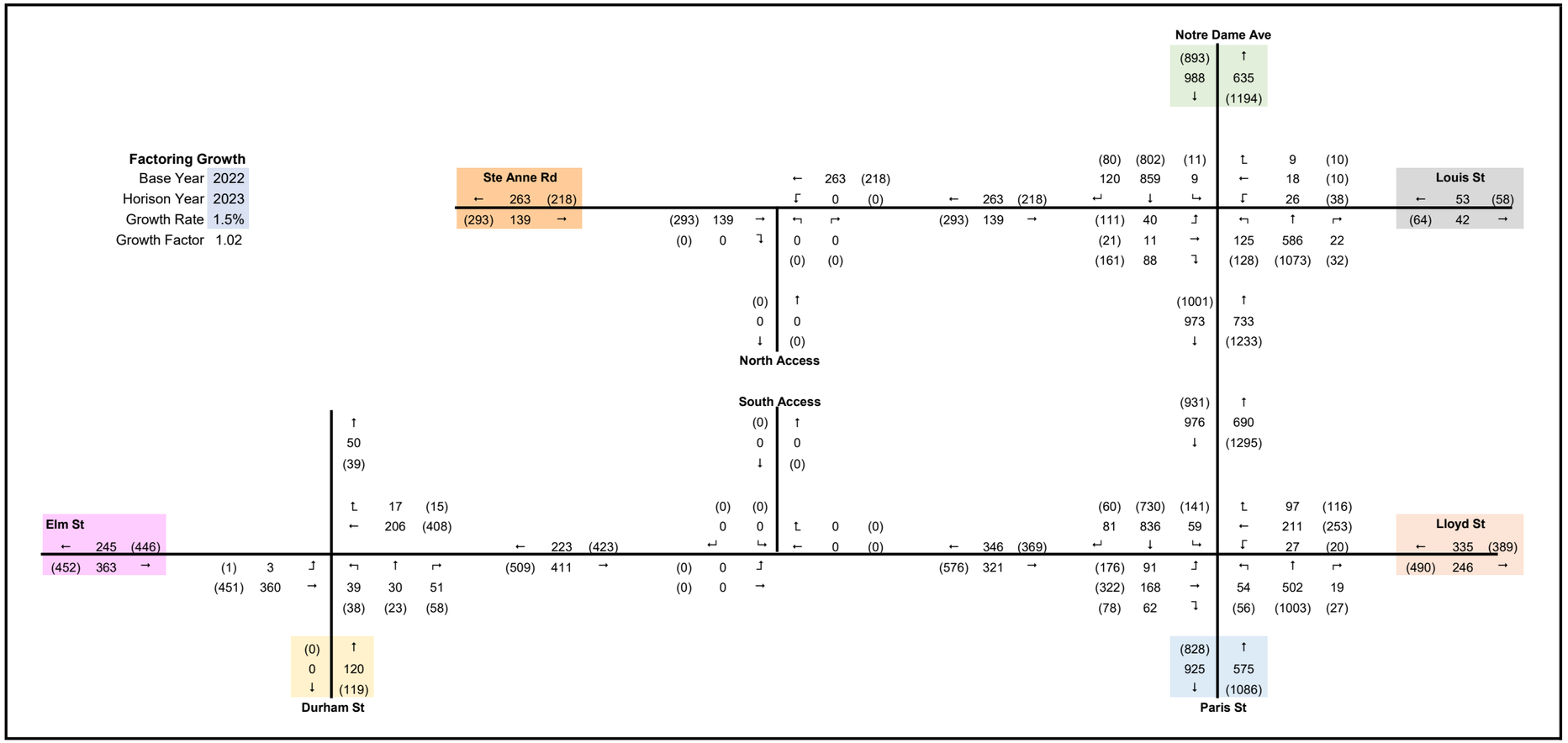
DRAWING TITLE
VEHICLE TURNING MOVEMENT ANALYSIS
TAC HEAVY SINGLE UNIT TRUCK (HSU)

SUBTITLE
ANNE STREET PARKING LOT

DESIGN:	RH	DATE:	12/23
DRAWN:	RH	DATE:	12/23
REVIEWED:	JN	DATE:	12/23
SCALE HOR.	1:250	SCALE VERT.	N/A

SHEET NO.
23027 - TURN E

Appendix H –
Traffic Distribution Calculations



Volumes

	AM			PM		
	IN	OUT	Total	IN	OUT	Total
N (Notre Dame)	988	635	1623	(893)	(1194)	(2087)
S (Paris)	575	925	1500	(1086)	(828)	(1914)
S (Durham)	120		120	(119)		(119)
E (Llyod)	335	246	581	(389)	(490)	(879)
W (Elm)	363	245	608	(452)	(446)	(898)
W (St Anne)	139	263	402	(293)	(218)	(511)
Louis St			Not considered			
	2520	2314	4834	3232	3176	6408

Observed Distrubution

	AM			PM		
	IN	OUT	Total	IN	OUT	Total
N (Notre Dame)	39%	27%		28%	38%	
S (Paris)	23%	40%		33%	26%	
S (Durham)	5%	0%		4%	0%	
E (Llyod)	13%	11%		12%	15%	
W (Elm)	14%	11%		14%	14%	
W (St Anne)	6%	11%		9%	7%	
Louis St			Not considered			
	100%	100%		100%	100%	

	Land Use	Code	sq.ft.		AM Peak Hour in	AM Peak Hour out	AM Peak Hour total	PM Peak Hour in	PM Peak Hour out	PM Peak Hour total
Area 1&2	Warehousing	150	99000	sq.ft	27	9	36	11	27	38
Area 3			5700	sq.ft	19	5	24	8	19	27
	Total				46	14	60	19	46	65

	Area 1&2	DISTRIBUTION AM IN	DISTRIBUTION AM OUT	DISTRIBUTION PM IN	DISTRIBUTION PM OUT	TRIPS AM IN	TRIPS AM OUT		TRIPS PM IN	TRIPS PM OUT	
Overall Dist	N (Notre Dame)	39%	27%	28%	38%	11.0	2.0		4.0	10.0	
	S (Paris)	23%	40%	33%	26%	6.0	4.0		3.0	8.0	
	S (Durham)	5%		4%		1.0	0.0		0.0	0.0	
	E (Llyod)	13%	11%	12%	15%	3.0	1.0		1.0	4.0	
	W (Elm)	14%	11%	14%	14%	4.0	1.0		2.0	4.0	
	W (St Anne)	6%	11%	9%	7%	2.0	1.0		1.0	1.0	
		100%	100%	100%	100%	27.0	9.0	36.0	11.0	27.0	38.0
North Access	N (Notre Dame)	60%	60%	60%	60%	7.0	1.0		2.0	6.0	
	S (Paris)	50%	50%	50%	50%	3.0	2.0		2.0	4.0	
	S (Durham)	0%		0%		0.0	0.0		0.0	0.0	
	E (Llyod)	10%	20%	10%	20%	0.0	0.0		0.0	1.0	
	W (Elm)	0%	0%	0%	0%	0.0	0.0		0.0	0.0	
	W (St Anne)	100%	100%	100%	100%	2.0	1.0		1.0	1.0	
						12.0	4.0	16.0	5.0	12.0	17.0
South Access	N (Notre Dame)	40%	40%	40%	40%	5.0	1.0		2.0	4.0	
	S (Paris)	50%	50%	50%	50%	3.0	2.0		1.0	4.0	
	S (Durham)	0%		0%		0.0	0.0		0.0	0.0	
	E (Llyod)	90%	80%	90%	80%	3.0	1.0		1.0	3.0	
	W (Elm)	100%	100%	100%	100%	4.0	1.0		2.0	4.0	
	W (St Anne)	0%	0%	0%	0%	0.0	0.0		0.0	0.0	
						15.0	5.0	20.0	6.0	15.0	21.0

	Area 3	DISTRIBUTION AM IN	DISTRIBUTION AM OUT	DISTRIBUTION PM IN	DISTRIBUTION PM OUT	TRIPS AM IN	TRIPS AM OUT		TRIPS PM IN	TRIPS PM OUT	
Overall Dist	N (Notre Dame)	39%	27%	28%	38%	7.0	2.0		2.0	7.0	
	S (Paris)	23%	40%	33%	26%	5.0	2.0		3.0	5.0	
	S (Durham)	5%		4%		1.0	0.0		0.0	0.0	
	E (Llyod)	13%	11%	12%	15%	2.0	1.0		1.0	3.0	
	W (Elm)	14%	11%	14%	14%	3.0	0.0		1.0	3.0	
	W (St Anne)	6%	11%	9%	7%	1.0	0.0		1.0	1.0	
		100%	100%	100%	100%	19.0	5.0	24.0	8.0	19.0	27.0
West Access	N (Notre Dame)	100%	100%	100%	100%	7.0	2.0		2.0	0.0	
	S (Paris)	100%	100%	100%	100%	5.0	2.0		3.0	0.0	
	S (Durham)	100%		100%		1.0	0.0		0.0	0.0	
	E (Llyod)	100%	100%	100%	100%	2.0	1.0		1.0	0.0	
	W (Elm)	100%	100%	100%	100%	3.0	0.0		1.0	0.0	Out of Study Area
	W (St Anne)	100%	100%	100%	100%	1.0	0.0		1.0	0.0	
						19.0	5.0	24.0	8.0	0.0	8.0

	TOTAL										
Total Check	N (Notre Dame)	100%	100%	100%	100%	19.0	4.0		6.0	17.0	
	S (Paris)	100%	100%	100%	100%	11.0	6.0		6.0	13.0	
	S (Durham)	0%	0%	0%	0%	1.0	0.0		0.0	0.0	
	E (Llyod)	100%	100%	100%	100%	5.0	2.0		2.0	7.0	
	W (Elm)	100%	100%	100%	100%	7.0	1.0		3.0	7.0	
	W (St Anne)	100%	100%	100%	100%	3.0	1.0		2.0	2.0	
						46.0	14.0	60.0	19.0	46.0	65.0