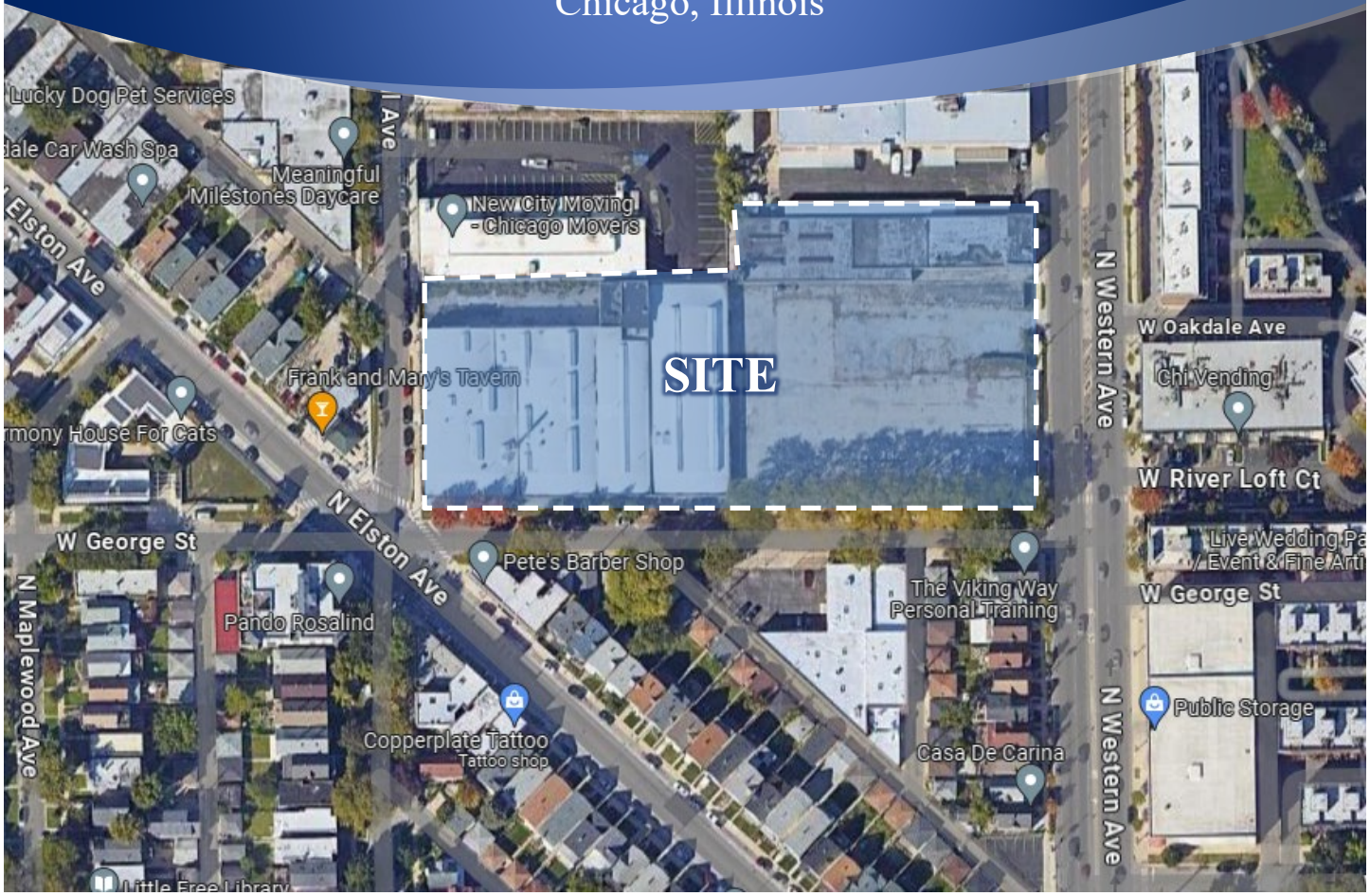
Traffic Impact Study
Proposed Industrial Development

Chicago, Illinois



Prepared For:

Interiors of Stone

Kenig, Lindgren, O'Hara, Aboona, Inc.

June 26, 2024

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I. Executive Summary

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed industrial development to be located at 2900 N. Western Avenue in Chicago, Illinois. The objectives of the traffic study are as follows:

- Determine the existing vehicular, pedestrian, bicycle, and public transportation conditions in the study area to establish a base condition.

- Assess the impact that the proposed development will have on transportation conditions in the area.

- Determine any street, access, bicycle, and pedestrian modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

Vehicle, pedestrian, and bicycle counts were conducted during the weekday morning and weekday evening peak periods at the intersections of Western Avenue with Diversey Avenue/Elston Avenue, Western Avenue with George Street, Geroge Street with Campbell Avenue/Elston Avenue, and Campbell Avenue with Diversey Avenue in order to determine the general peak hour of traffic activity during these time periods.

As proposed, the site will be developed with an approximately 209,000 square-foot, two-story building. The development will provide 48 passenger car parking spaces and 13 trailer loading bays. Access to the site for the passenger vehicles is proposed to be provided via a full movement access drive off George Street and a full movement access drive off Campbell Avenue and access for the trucks is proposed to be provided via a full movement access drive off Campbell Avenue.

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The proposed development will generate a low volume of truck trips.

- Area intersections have sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or traffic control modifications are required.

- The proposed access system will be adequate in accommodating the traffic estimated to be generated by the development.

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed industrial development to be located in Chicago, Illinois. The site, which is currently occupied by a vacant building, is located at 2900 N. Western Avenue. As proposed, the site will be developed with an approximately 209,000 square-foot two-story warehouse building. Access to the site for the passenger vehicles is proposed to be provided via a full movement access drive off George Street and a full movement access drive off Campbell Avenue and access for the trucks is proposed to be provided via a full movement access drive off Campbell Avenue.

The purpose of this study was to examine existing traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any determine if any improvements to the transportation system are required to accommodate the proposed development. **Figure 1** shows the location of the site in relation to the area street system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

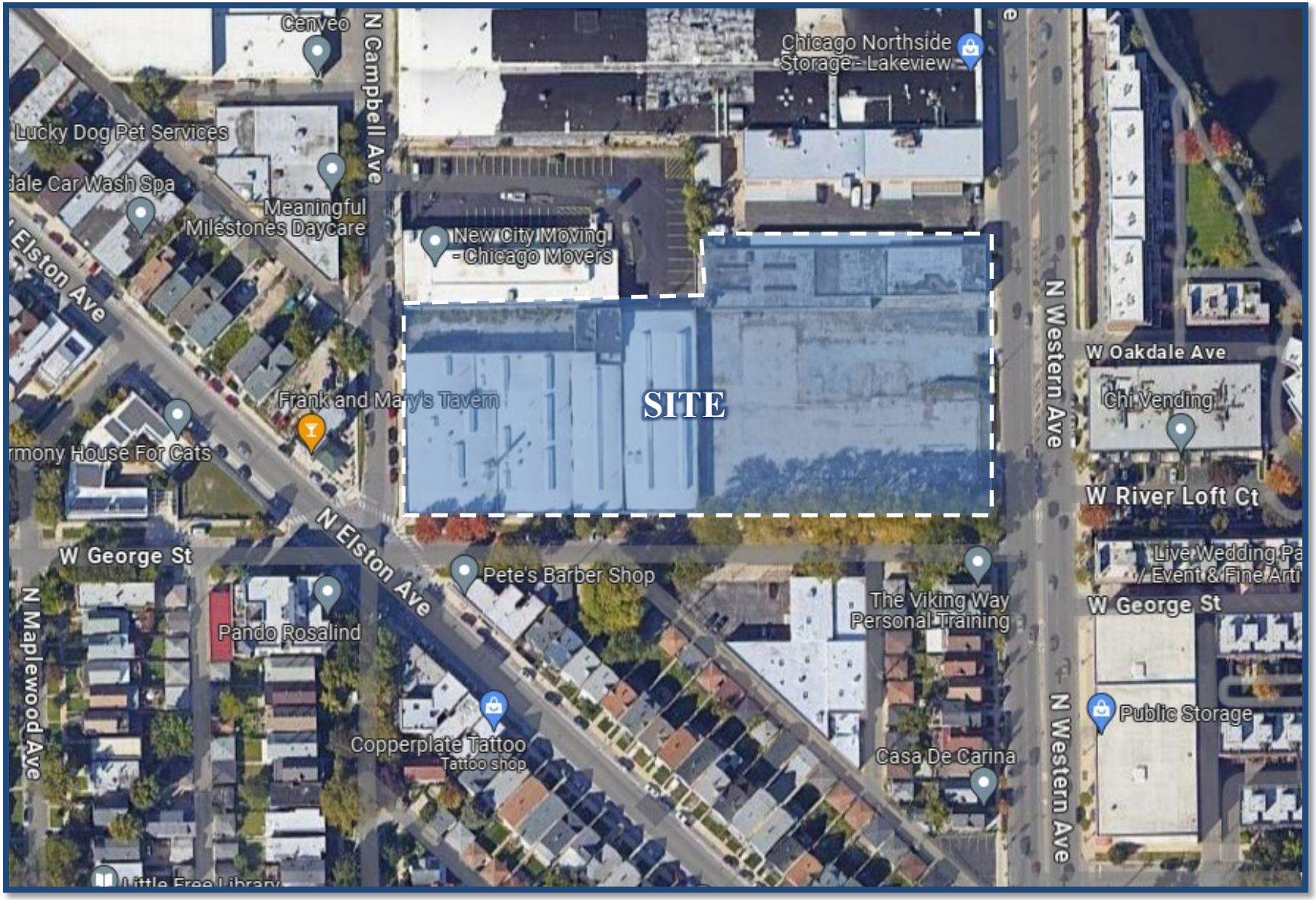
- Existing street conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Evaluation and recommendations with respect to adequacy of the site access and adjacent street system.

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing street system using peak hour traffic volumes from traffic counts conducted in 2023.

2. Year 2029 Total Projected Conditions – Analyzes the capacity of the future street system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the proposed development.

Site Location **Figure 1**



Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area street system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site is located at 2900 N. Western Avenue bounded by Western Avenue to the east, Campbell Avenue to the west, George Street to the south, and New City Moving Company to the north. The area offers a mixture of residential, commercial, and industrial uses. Pete`s Barber Shop is located to the south of the site, Frank and Mary`s Tavern is located to the west of the site, and Belly Acres Designs and Chicago Northside Storage are located to the north of the site.

Existing Street System Characteristics

The characteristics of the existing streets near the development are described below and illustrated in **Figure 3**.

Western Avenue is a north-south other principal arterial street that in the vicinity of the site provides two lanes in each direction. At its signalized intersection with Elston Avenue/Diversey Avenue, Western Avenue provides an exclusive left-turn lane, two through lanes, and a shared through/right-turn lane on the northbound and southbound approaches. High visibility crosswalks and pedestrian signals are provided on all the legs of this intersection. At its unsignalized intersection with George Street, Western Avenue provides an exclusive left-turn lane and two through lanes on the northbound approach and a shared left-turn/through lane and a through lane on the southbound approach. High visibility crosswalks are provided on the north and west legs of this intersection. Western Avenue is under the jurisdiction of the Cook County Department of Transportation and Highways (CCDOTH) and carries an Annual Average Daily Traffic (AADT) volume of 28,500 vehicles (Illinois Department of Transportation [IDOT], 2022) north of Diversey Avenue and 26,900 vehicles (IDOT 2022) south of Diversey Avenue.

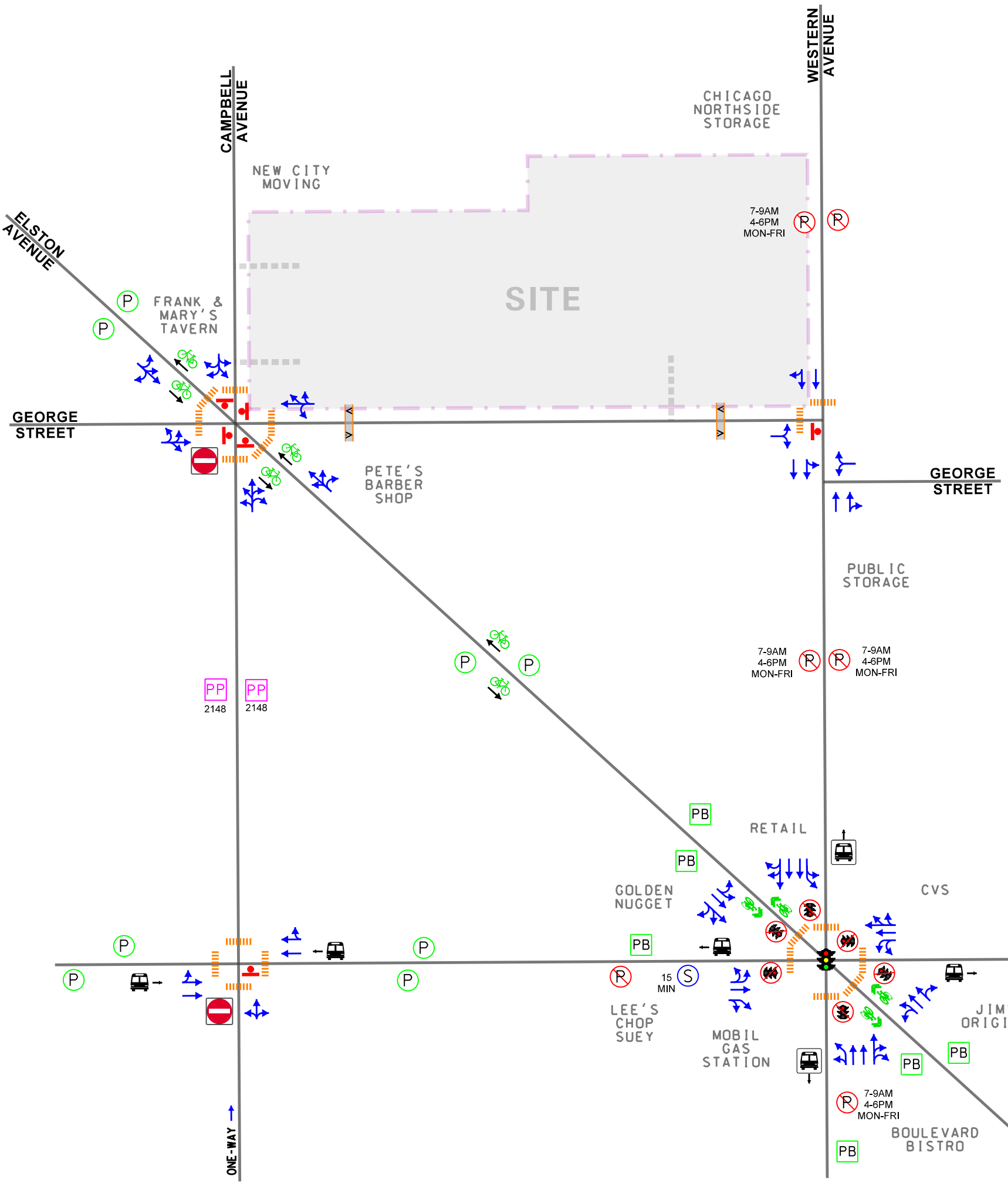
Elston Avenue is a generally a northwest-southeast major collector street that in the vicinity of the site provides one travel lane and one bicycle lane in each direction. At its signalized intersection with Western Avenue/Diversey Avenue, Elston Avenue provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. At its unsignalized intersection with George Street/Campbell Avenue, Elston Avenue provides a shared left-turn/through/right-turn lane on both approaches. High visibility crosswalks are provided on all the legs of this intersection. Elston Avenue is under the jurisdiction of IDOT and carries an AADT volume of 11,700 (IDOT 2022) vehicles west of Western Avenue and 19,700 vehicles east of Western Avenue (IDOT 2022).

LEGEND

- TRAVEL LANE
- TRAFFIC SIGNAL
- STOP SIGN
- SPEED LIMIT SIGN
- NO TURN ON RED SIGN
- ON-STREET PARKING
- NO PARKING
- PAYBOX PARKING
- PERMIT PARKING
- STANDING ZONE
- DO NOT ENTER SIGN
- BIKE LANE
- SHARROW
- BUS STOP
- BUS STOP WITH SHELTER
- HIGH VISIBILITY CROSSWALK
- SPEED BUMP

N

NOT TO SCALE



INDUSTRIAL DEVELOPMENT
CHICAGO, ILLINOIS

EXISTING STREET CHARACTERISTICS

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 23-272 Figure: 3

Diversey Avenue is an east-west, major collector street that generally provides one travel lane in each direction. At its signalized intersection with Western Avenue/Elston Avenue, Diversey Avenue provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. At its unsignalized intersection with Campbell Avenue, Diversey Avenue provides a shared left-turn/through lane and a through lane on the eastbound approach and a through lane and a shared through/right-turn lane on the westbound approach. High visibility crosswalks are provided on all four legs of this intersection. Diversey Avenue is under the jurisdiction of IDOT and carries an AADT volume of 13,200 vehicles (IDOT 2022) west of Western Avenue and 17,400 vehicles east of Western Avenue (IDOT 2022).

George Street is an east-west, local street that provides one travel lane in each direction. At its unsignalized intersection with Western Avenue, east leg and west leg of George Street are offset by approximately 50 feet and it provides a shared left-turn/right-turn lane on both approaches. At its unsignalized intersection with Campbell Avenue/Elston Avenue, George Street provides a shared left-turn/through/right-turn lane on both approaches. George Street is under the jurisdiction of the Chicago Department of Transportation (CDOT).

Campbell Avenue is a north-south, local street that provides one travel lane in each direction. Campbell Avenue is one-way towards north, south of George Street. At its unsignalized intersection with George Street/Elston Avenue, Campbell Avenue provides a shared left-turn/ right-turn lane on the southbound approach and a shared left-turn/through/right-turn lane on the northbound approach. At its unsignalized intersection with Diversey Avenue, Campbell Avenue provides a shared left-turn/through/right-turn lane on the northbound approach. Campbell Avenue is under the jurisdiction of CDOT.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units on Tuesday, October 28, 2023 during the weekday morning (6:00 A.M. to 9:00 A.M.) and weekday evening (3:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Western Avenue with Diversey Avenue/Elston Avenue
- Western Avenue with George Street
- George Street with Elston Avenue/Campbell Avenue
- Campbell Avenue with Diversey Avenue

The results of the traffic counts indicated that the weekday morning peak hour of traffic occurs from 8:00 A.M. to 9:00 A.M. and the weekday evening peak hour of traffic occurs from 5:00 P.M. to 6:00 P.M. Copies of the traffic count summary sheets are included in the Appendix.

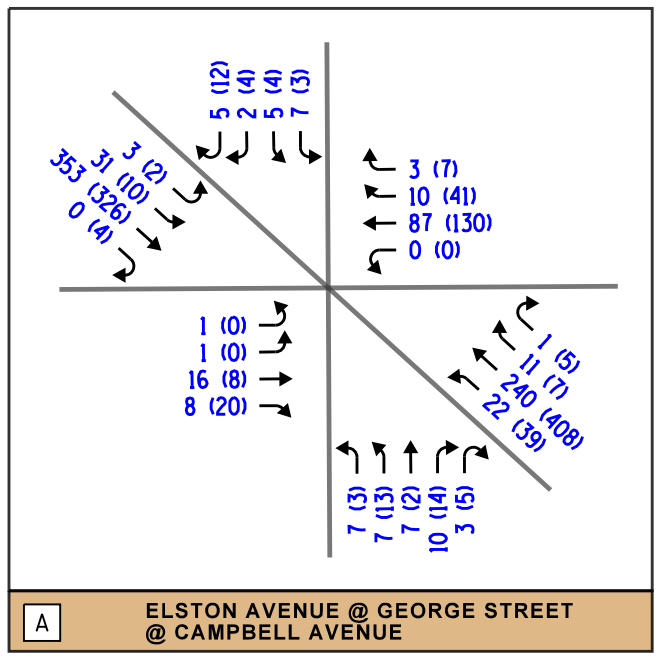
Figure 4 illustrates the existing peak hour vehicle traffic volumes, inclusive of heavy vehicles. **Figure 5** illustrates the existing truck peak hour traffic volumes. **Figure 6** illustrates the existing pedestrian and bicycle volumes, showing direction of travel.

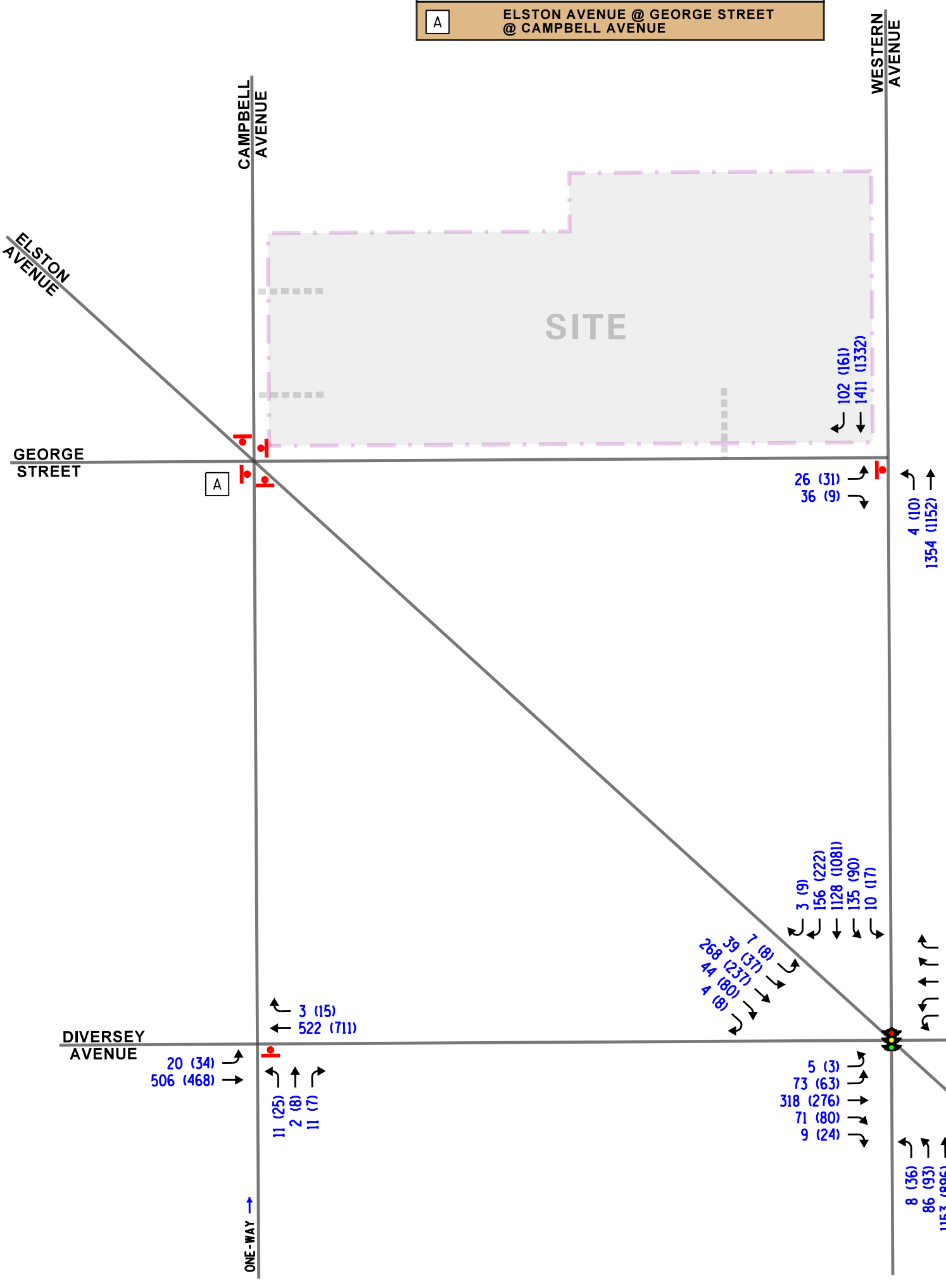
LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (5:00-6:00 PM)

NOT TO SCALE





INDUSTRIAL DEVELOPMENT
CHICAGO, ILLINOIS

EXISTING TRAFFIC VOLUMES

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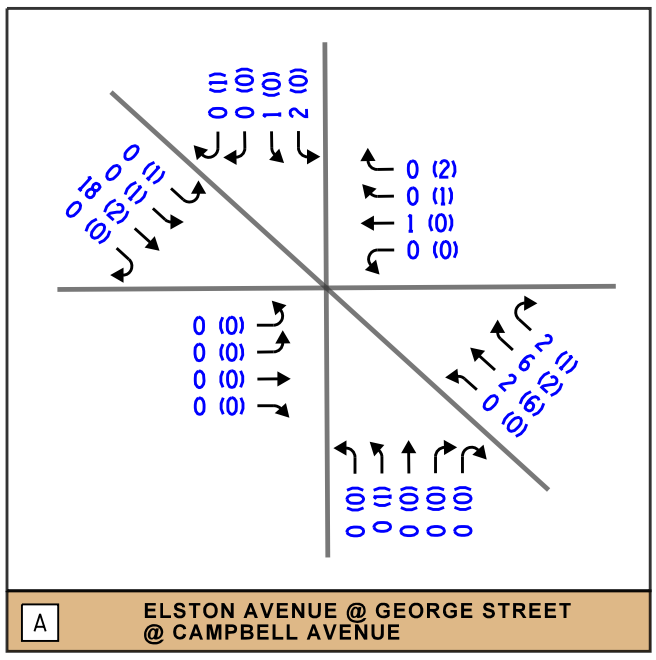
Job No: 23-272 Figure: 4

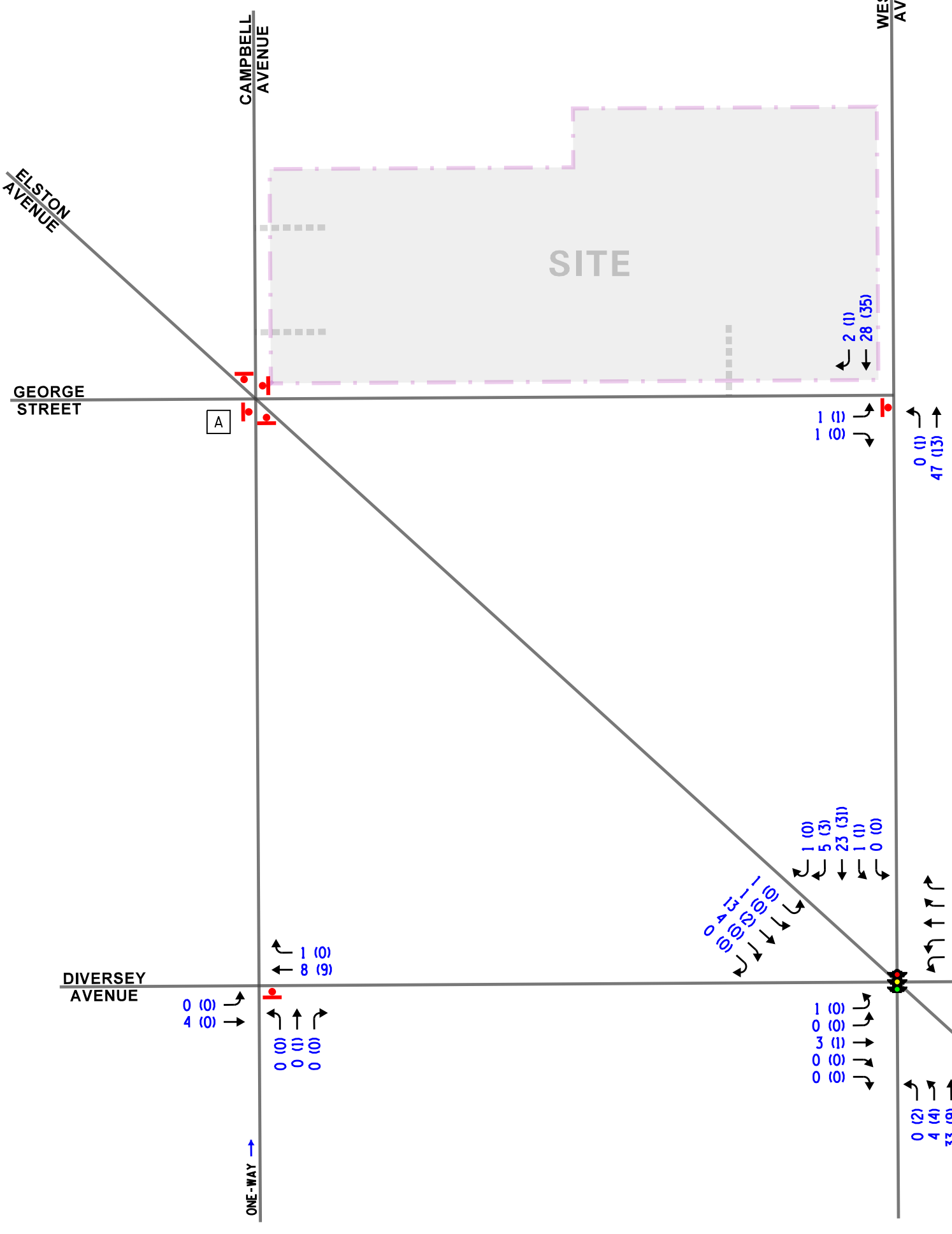
LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (5:00-6:00 PM)

NOT TO SCALE





INDUSTRIAL DEVELOPMENT
CHICAGO, ILLINOIS

EXISTING TRAFFIC VOLUMES
TRUCKS

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Job No: 23-272 Figure: 5

LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (5:00-6:00 PM)

00 (00) - PEDESTRIAN VOLUME

00 (00) - BICYCLE VOLUME

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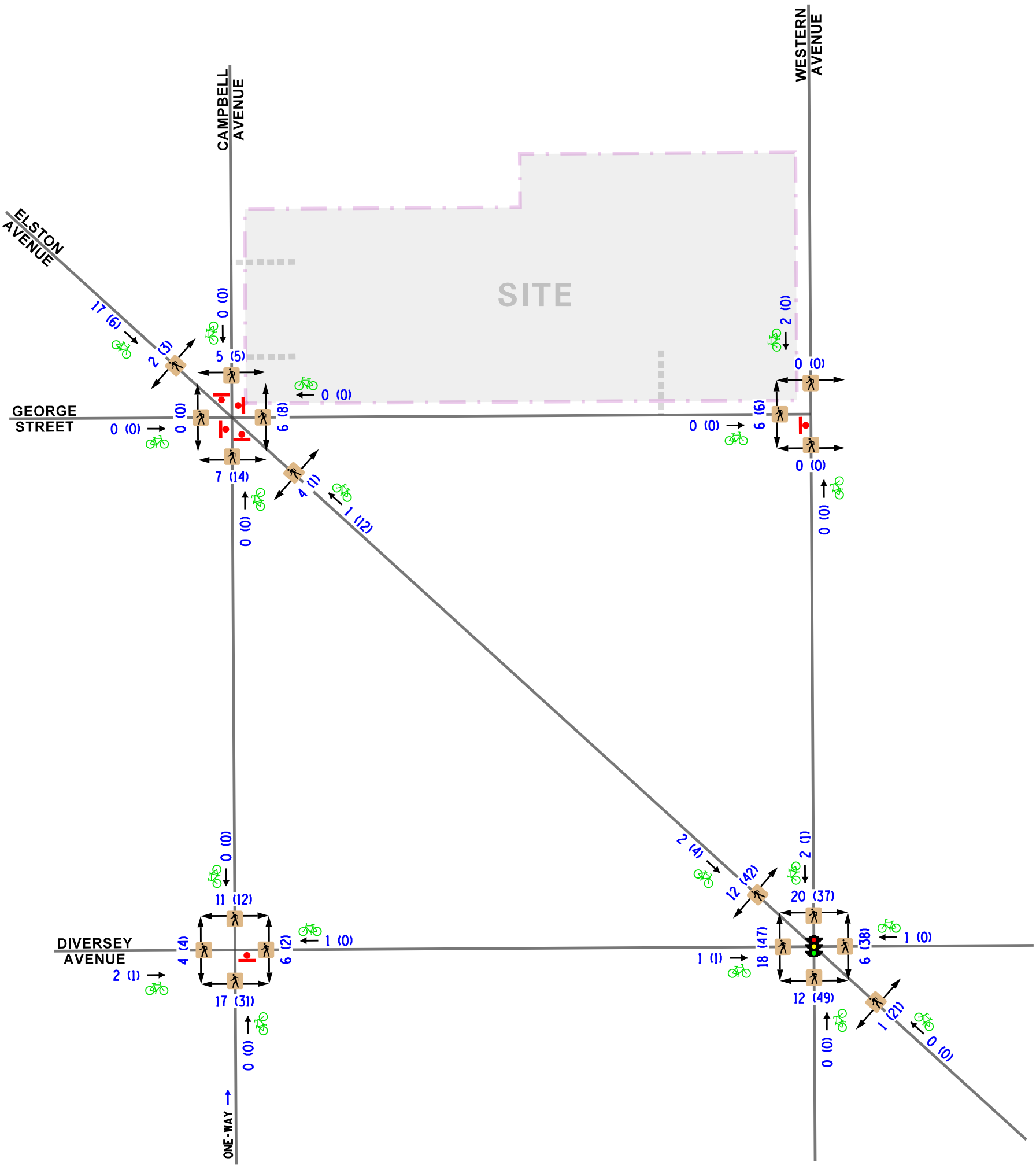

INDUSTRIAL DEVELOPMENT CHICAGO, ILLINOIS

EXISTING PEDESTRIAN AND BICYCLE TRAFFIC VOLUMES

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Job No: 23-272 Figure: 6

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Development Plan

As proposed, the site will be redeveloped with an approximately 209,00 square-foot two-story stone product warehouse building. The development will provide 48 passenger vehicle parking spaces in the southeast and southwest corners of the site and 13 truck loading bays, three of which will be accessed from George Street and the rest will be accessed via the access drive on Campbell Avenue. Access to the development is proposed to be provided as follows:

- A full movement access drive off George Street located approximately 195 feet west of Western Avenue. This access drive will accommodate passenger vehicles providing one inbound lane and one outbound lane with the outbound movements under stop sign control.

- A full movement access drive off Campbell Avenue located approximately 85 feet north of George Street. This access drive will accommodate passenger vehicles providing one inbound lane and one outbound lane with the outbound movements under stop sign control.

- A full movement access drive off Campbell Avenue located approximately 185 feet north of George Street. This access drive will accommodate trucks providing one inbound lane and one outbound lane with the outbound movements under stop sign control.

As part of the development plan, the two existing access drives to the site on Western Avenue will be removed, which will reduce the conflict points on Western Avenue and improve the traffic flow. In addition, the existing northern access drive on Campbell Avenue will be replaced with a wider access drive to accommodate the truck movements.

A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which traffic will approach and depart the site was estimated based on existing travel patterns, as determined from the traffic counts and the proposed access system of the development. **Figure 7** illustrates the directional distribution of traffic.

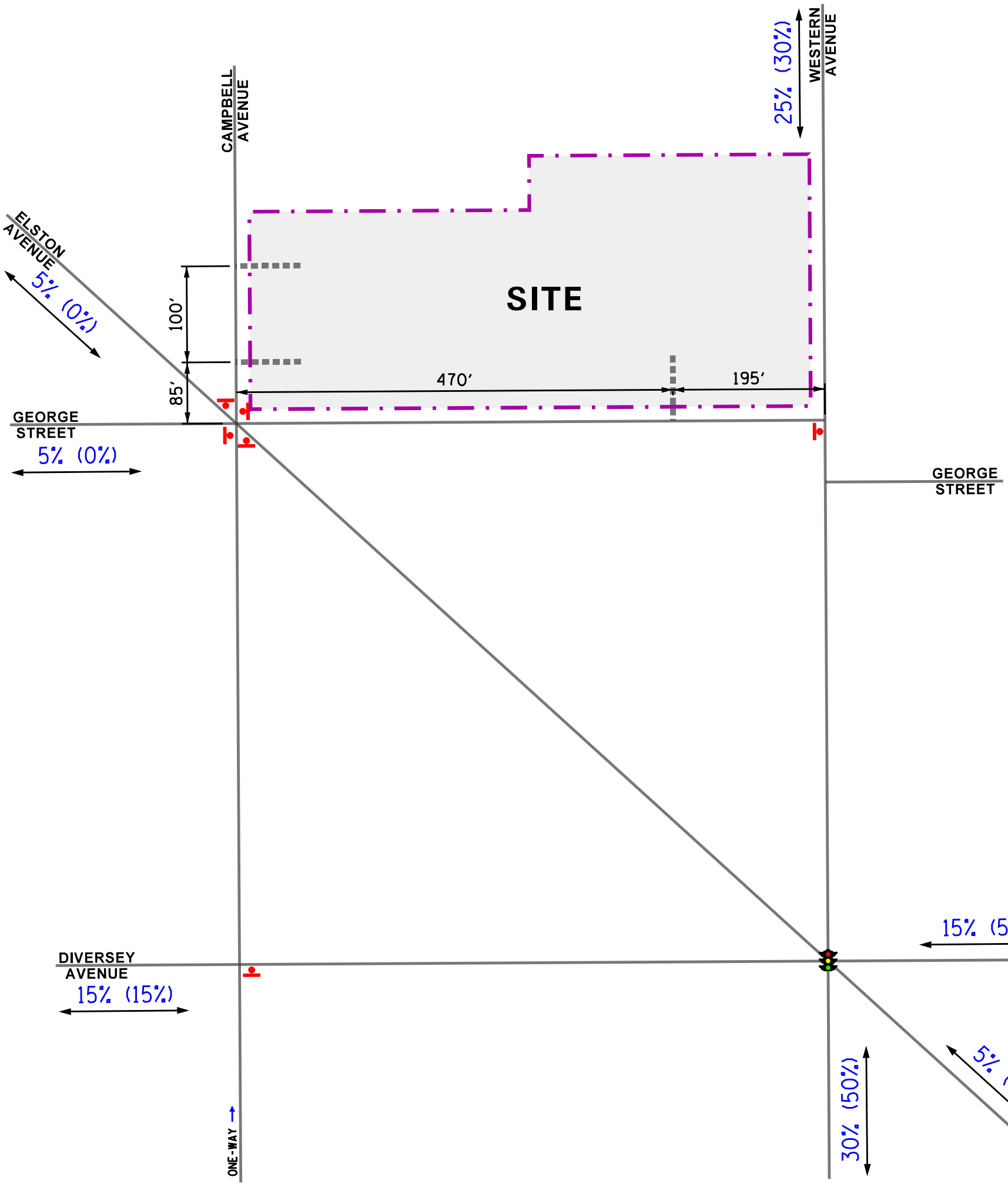
LEGEND

00% - PERCENT DISTRIBUTION - PASSENGER VEHICLES

(00%) - PERCENT DISTRIBUTION - TRUCKS

00' - DISTANCE IN FEET

NOT TO SCALE



INDUSTRIAL DEVELOPMENT CHICAGO, ILLINOIS

DIRECTIONAL DISTRIBUTION

KLOA Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 23-272 Figure: 7

Development-Generated Traffic Volumes

The total number of peak hour vehicle trips estimated to be generated by the proposed development was based on Warehousing (Land-Use Code 150) vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). **Table 1** summarizes the trips projected to be generated by the development during the peak hours and on a daily basis. **Table 2** summarizes the trips projected to be generated by the development throughout the day. Copies of the ITE trip generation rates are included in the Appendix.

Table 1
ESTIMATED DAILY AND PEAK HOUR SITE-GENERATED TRAFFIC

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
150	**Warehouse (209,000 s.f.)**	**37**	**12**	**49**	**14**	**38**	**52**	**185**	**185**	**370**
Truck Trips		3	4	7	5	4	9	63	63	126
Passenger Vehicle Trips		34	8	42	9	34	43	122	122	244

Table 2
ESTIMATED 24-HOUR SITE-GENERATED TRAFFIC

Hour	Warehousing (ITE LUC 150) –209,000 s.f.								
	Trucks			Passenger Vehicles			Total		
	In	Out	Total	In	Out	Total	In	Out	Total
0:00	0	0	0	0	1	1	0	1	1
1:00	0	0	0	0	1	1	0	1	1
2:00	1	1	2	0	0	0	1	1	2
3:00	1	0	1	0	1	1	1	1	2
4:00	1	2	3	1	0	1	2	2	4
5:00	2	2	4	4	2	6	6	4	10
6:00	3	2	5	11	2	13	14	4	18
7:00	2	5	7	11	2	13	13	7	20
8:00	3	4	7	34	8	42	37	12	49
9:00	8	5	13	5	4	9	13	9	22
10:00	5	8	13	4	1	5	9	9	18
11:00	7	7	14	4	5	9	11	12	23
12:00	5	3	8	10	9	19	15	12	27
13:00	5	5	10	5	4	9	10	9	19
14:00	4	4	8	8	6	14	12	10	22
15:00	7	5	12	3	13	16	10	18	28
16:00	5	4	9	9	34	43	14	38	52
17:00	2	3	5	5	11	16	7	14	21
18:00	1	1	2	2	8	10	3	9	12
19:00	0	0	0	2	2	4	2	2	4
10:00	1	1	2	0	0	0	1	1	2
21:00	0	1	1	1	5	6	1	6	7
22:00	0	0	0	2	1	3	2	1	3
23:00	0	0	0	1	2	3	1	2	3
Total	63	63	126	122	122	244	185	185	370

Based on daily trips (Table 1) and ITE's Hourly Distribution of Entering and Exiting Truck Trips and Vehicle Trips tables.

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed development.

Development Traffic Assignment

The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed development were assigned to the street system in accordance with the previously described directional distribution (Figure 7).

Figure 8 illustrates the traffic assignment of the new passenger vehicle trips for the development. **Figure 9** illustrates the traffic assignment of the new truck trips for the development.

Ambient Traffic Growth

To account for any additional increase in traffic due to other factors or developments not previously discussed, an ambient growth factor of 0.5 percent per year was applied to the study area over a six-year period to represent Year 2029 conditions. Furthermore, in order to account for the increase in population in the study area, bicycle and pedestrian volumes were increased by 10 percent at each intersection.

Total Projected Traffic Volumes

The existing traffic volumes increased by the ambient growth factor were combined with the new peak hour traffic volumes generated by the proposed development to determine the Year 2029 total traffic volumes, shown in **Figure 10**.

LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (5:00-6:00 PM)

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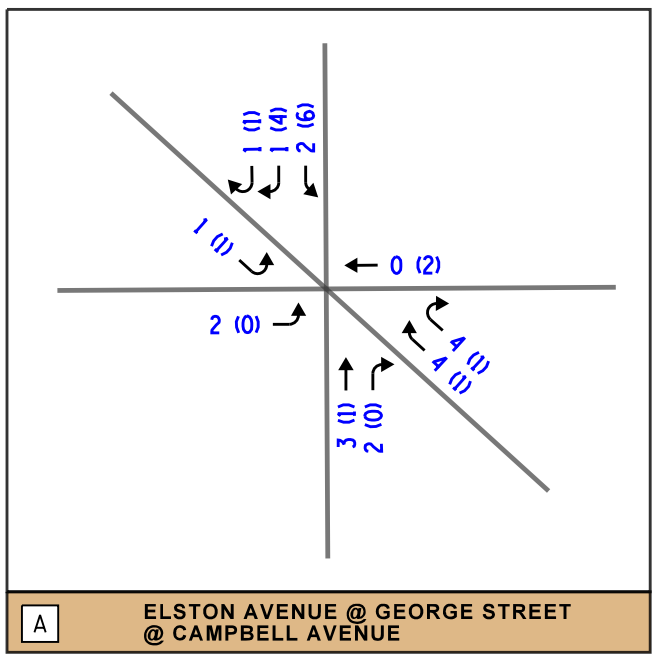
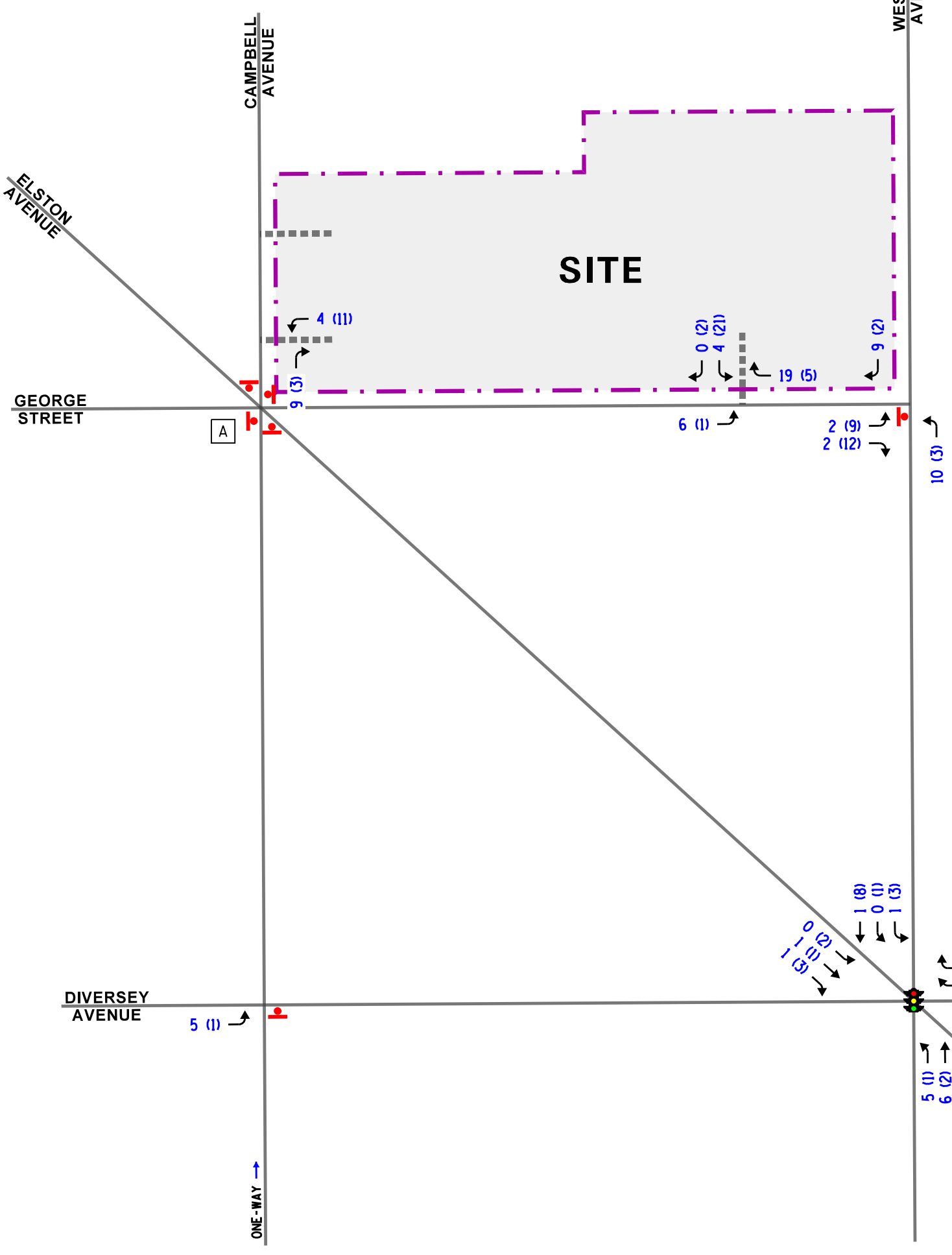




INDUSTRIAL DEVELOPMENT
CHICAGO, ILLINOIS

SITE-GENERATED TRAFFIC VOLUMES
PASSENGER VEHICLES

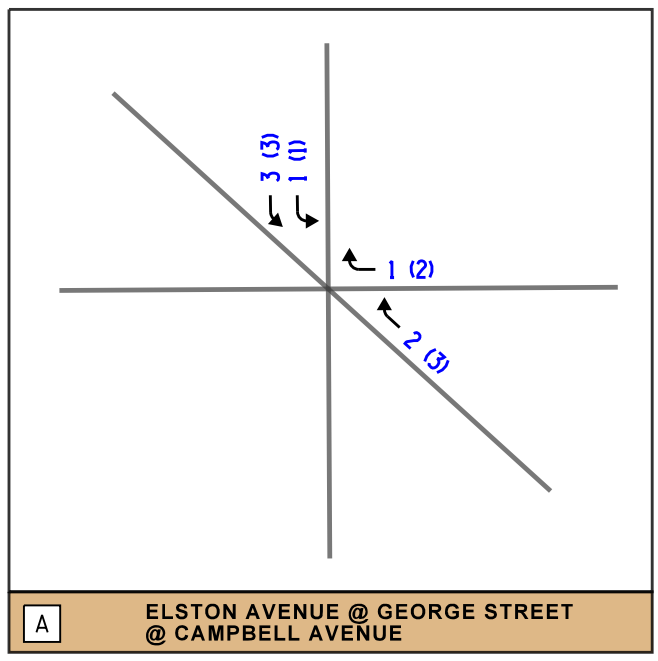
KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 23-272 Figure: 8

LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (5:00-6:00 PM)



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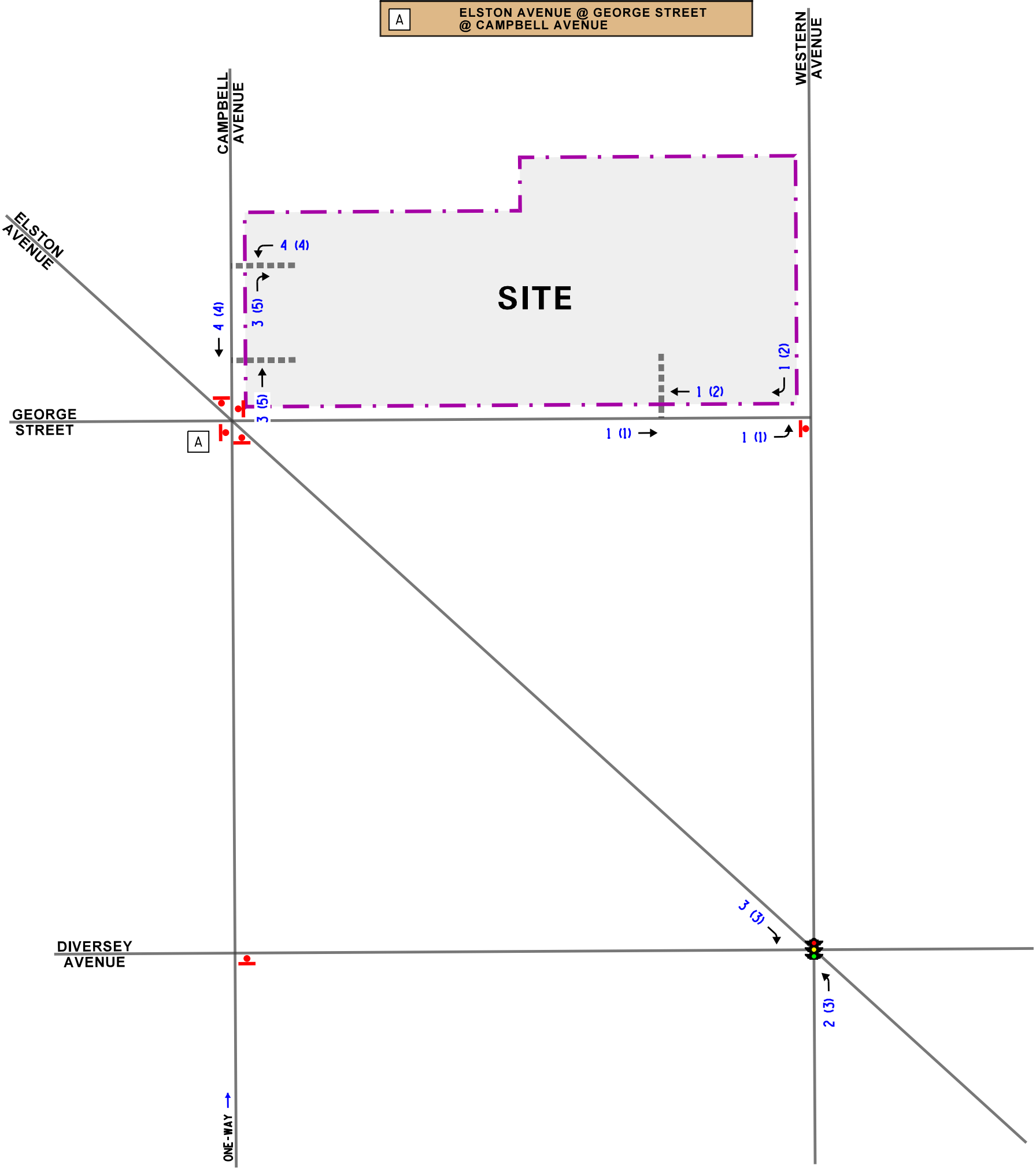

INDUSTRIAL DEVELOPMENT
CHICAGO, ILLINOIS

SITE-GENERATED TRAFFIC VOLUMES
TRUCKS

KLOA
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Job No: 23-272 Figure: 9

LEGEND

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(00) - PM PEAK HOUR (5:00-6:00 PM)

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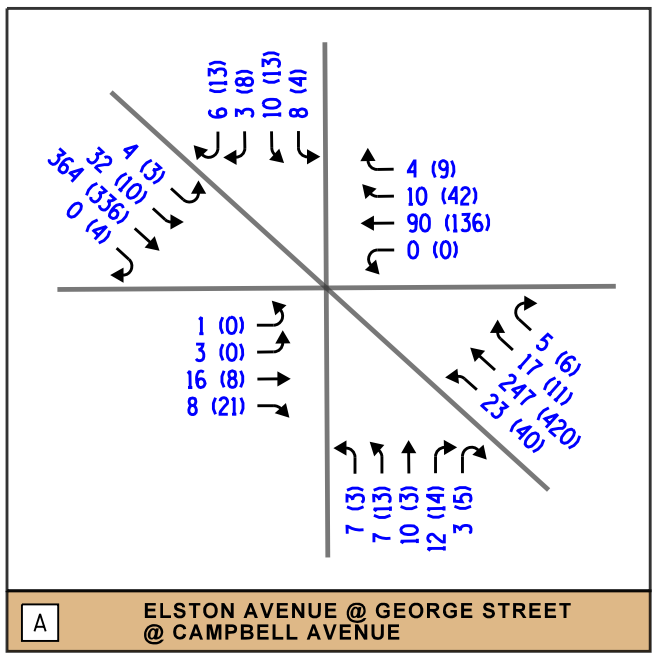

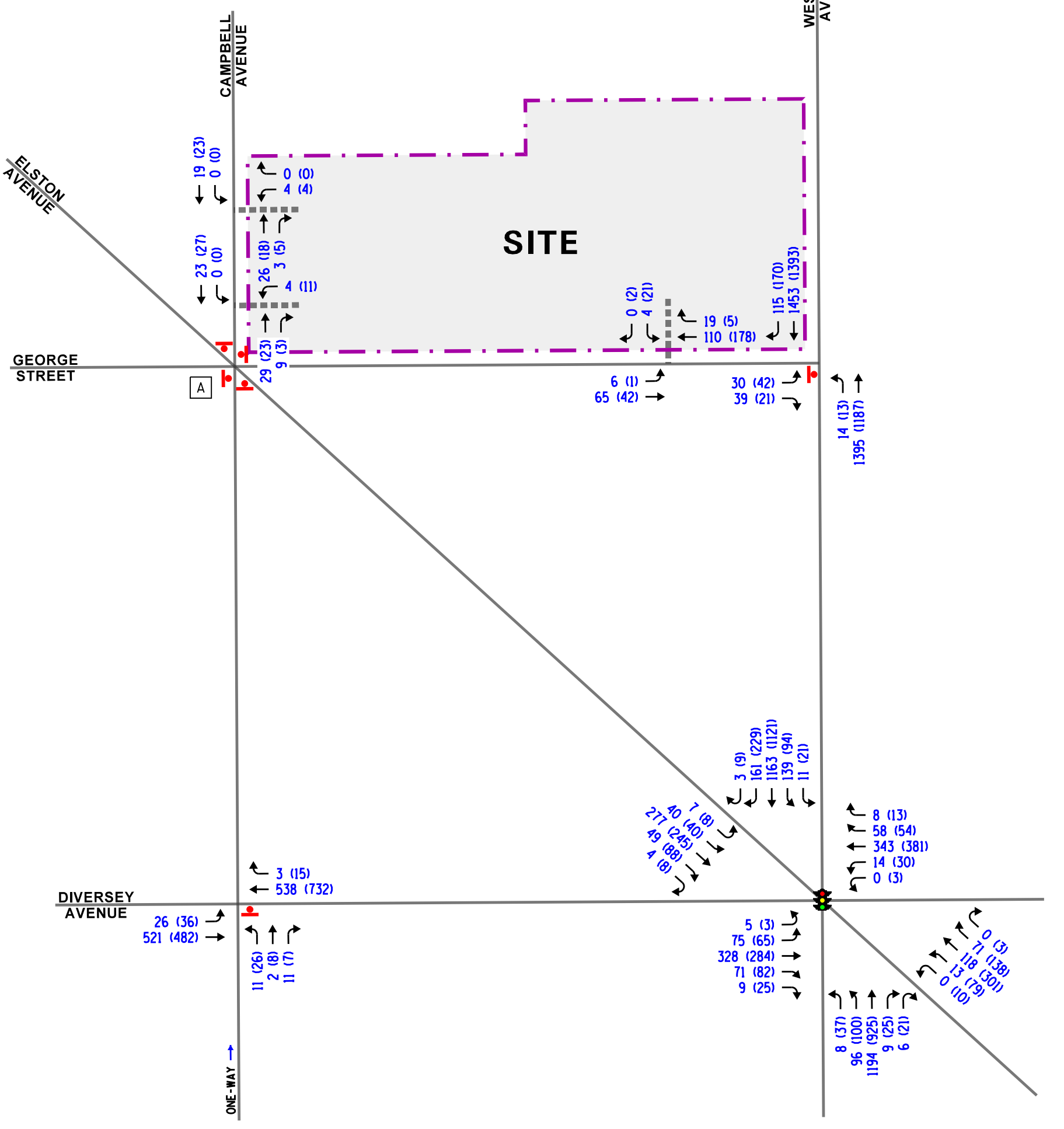

INDUSTRIAL DEVELOPMENT
CHICAGO, ILLINOIS

YEAR 2029 TOTAL TRAFFIC VOLUMES

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 23-272 Figure: 10

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the street system and access drives are projected to operate and whether any street improvements or modifications are required.

Traffic Analyses

Intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing and Year 2029 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 6th Edition* and analyzed using Synchro/SimTraffic 11 software. The analysis for the signalized intersections were conducted utilizing actual cycle lengths, phasings, and offsets.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing and Year 2029 total projected conditions are presented in **Tables 3** through **6**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3
CAPACITY ANALYSIS RESULTS – ELSTON AVENUE WITH WESTERN AVENUE/DIVERSEY AVENUE

	Peak Hour	Eastbound		Westbound		Northbound		Southbound		Northwest-bound		Southeast-bound		Overall
		L	T/R	L	T/R	L	T/R	L	T/R	L	T/R	L	T/R	
Existing Conditions	Weekday Morning	F 80.0	D 53.4	D 46.6	D 53.1	D 43.6	C 34.6	E 68.0	D 36.8	D 42.4	D 43.9	D 44.6	D 47.1	D 42.6
		D – 57.8		D – 52.9		C – 35.3		D – 40.0		D – 43.8		D – 46.7		
	Weekday Evening	E 62.5	D 49.0	D 46.7	D 50.4	F 83.5	C 34.2	C 29.3	D 42.1	E 58.7	D 50.9	D 51.4	D 47.4	D 44.8
		D – 51.0		D – 50.2		D – 40.1		D – 41.1		E – 52.2		D – 47.9		
Projected Conditions	Weekday Morning	F 90.0	D 54.0	D 47.0	D 53.9	E 57.7	D 35.2	F 84.8	D 37.5	D 42.5	D 44.1	D 44.7	D 47.6	D 44.3
		D – 59.9		D – 53.7		D – 37.0		D – 42.3		D – 44.0		D – 47.3		
	Weekday Evening	E 66.5	D 49.4	D 47.4	D 51.1	F 99+	C 34.5	C 31.9	D 43.8	E 62.1	D 51.6	D 53.5	D 48.2	D 46.4
		D – 52.0		D – 50.8		D – 42.7		D – 42.8		D – 53.3		D – 48.9		

Letter denotes Level of Service
Delay is measured in seconds.
L – Left Turn
T – Through
R – Right Turn

Table 4
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Western Avenue with George Street[1]				
• Eastbound Approach	D	34.6	D	34.3
• Northbound Left Turn	B	14.1	B	14.6
Diversey Avenue with Campbell Avenue[1]				
• Northbound Approach	C	15.3	C	19.4
• Eastbound Left Turn	A	8.8	A	9.4

LOS = Level of Service
Delay is measured in seconds.

1- One-way stop control

Table 5
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – YEAR 2029 TOTAL PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Western Avenue with George Street[1]				
• Eastbound Approach	E	43.5	E	41.1
• Northbound Left Turn	B	14.9	B	15.0
Diversey Avenue with Campbell Avenue[1]				
• Northbound Approach	C	18.8	D	28.2
• Eastbound Left Turn	A	8.9	A	9.6
George Street with Proposed Car Access Drive[1]				
• Southbound Approach	A	9.6	A	9.9
• Eastbound Left Turn	A	7.5	A	7.6
Campbell Avenue with Proposed Car Access Drive[1]				
• Westbound Approach	A	8.8	A	8.8
• Southbound Left Turn	A	0.1	A	0.1
Campbell Avenue with Proposed Truck Access Drive[1]				
• Westbound Approach	A	9.8	A	9.7
• Southbound Left Turn	A	0.1	A	0.1

LOS = Level of Service
Delay is measured in seconds.
1- One-way stop control

Table 6
CAPACITY ANALYSIS RESULTS
GEORGE STREET WITH CAMPBELL AVENUE/ELSTON AVENUE - UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• ICU Level of Service	A	49.2%	C	65.2%
Year 2029 Total Projected Traffic Volumes				
• ICU Level of Service	A	51.1%	C	66.6%

LOS = Level of Service
Note: The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation also known as the Intersection Capacity Utilization (ICU) method.

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any street and traffic control improvements necessary to accommodate the development-generated traffic.

Western Avenue with Elston Avenue/Diversey Avenue

The results of the capacity analysis indicate that overall, this intersection currently operates at Level of Service (LOS) D during the weekday morning and weekday evening peak hours. All the approaches operate at LOS D or better during the peak hours except for the northwest-bound approach that operates at LOS E during the weekday evening peak hour which is the result of the long cycle length (130 seconds) required for the abnormal intersection geometry and operations.

Under Year 2029 total projected conditions, this intersection is projected to continue operating at LOS D during the weekday morning and weekday evening peak hours with increases in delay of less than two seconds. All the approaches are projected to continue operating at LOS D during the peak hours with increases in delay of less than three seconds. It should be noted that the southbound left-turn movement is projected to operate at LOS F during the weekday morning peak hour. The proposed development is projected to increase the volume of traffic traversing this intersection by less than one percent. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or traffic signal modifications will be required.

Western Avenue with George Street

The results of the capacity analysis indicate that the eastbound approach currently operates at LOS D during the weekday morning and weekday evening peak hour while the northbound left-turn movement operates at LOS B during both peak hours.

Under Year 2029 total projected conditions, the eastbound approach is projected to operate at LOS E during the weekday morning and evening peak hours with increases in delay of less than nine seconds. The northbound left-turn movement is projected to continue operating at LOS B during the peak hours with increases in delay of less than one second. The 95th percentile queue for the northbound left-turn movement is projected to be one to two vehicles that can be accommodated within the existing left-turn lane. In addition, the 95th percentile queue for the eastbound approach is projected to be approximately two to three vehicles during both peak hour which will not extend back to the location of the proposed access drive on Geroge Street. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or traffic signal modifications will be required.

Diversey Ave-nue with Campbell Avenue

The results of the capacity analysis indicate that the northbound approach currently operates at LOS C during the weekday morning and evening peak hours while the eastbound left-turn movement operates at LOS A during the peak hours.

Under Year 2029 total projected conditions, the northbound approach is projected to operate at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour with increases in delay of less than nine seconds. The 95th percentile queue for the eastbound left-turn movement is projected to be one to two vehicles which will not interrupt the traffic flow on Diversey Avenue. This was confirmed by reviewing the traffic simulation which indicated that eastbound left-turn movement will operate efficiently without interrupting the traffic flow on Diversey Avenue. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or traffic control adjustments will be required.

George Avenue with Campbell Avenue/Elston Avenue

Because of the traffic control configuration of this intersection where the northwest-southeast traffic is free flow and the other four approaches are under stop sign control, the intersection could not be analyzed using HCM procedures. Given this traffic control configuration and the limitations of the HCM procedures, the intersection was analyzed using the intersection capacity utilization (ICU) level of service. The ICU indicates how much reserve capacity is available or how much an intersection is over capacity.

Based on the ICU analysis, the intersection currently utilizes approximately 50 percent of the capacity of the intersection during the weekday morning peak hour and approximately 66 percent of its capacity during the weekday evening peak hour. Under future conditions it is projected that the intersection will utilize approximately 52 percent of its capacity during the weekday morning peak hour and 67 percent of its capacity during the weekday evening peak hour. As a result, the intersection will continue to operate efficiently and with minimal delays.

George Street with Proposed Access Drive

The results of the capacity analysis indicate that the southbound approach and the eastbound left-turn movements are projected to operate at LOS A during both peak hours. The total projected traffic volumes were compared to the right-turn lane warrant criteria summarized in Chapter 36 of the IDOT *Bureau of Design and Environment* (BDE) manual. The comparison revealed that an exclusive right-turn lane will not be warranted at this intersection during the peak hours. As such, this access drive will be adequate to accommodate the traffic estimated to be generated by the proposed development and will provide efficient and flexible access to the site.

Campbell Avenue with Proposed Access Drives

The results of the capacity analysis indicate that outbound movements from these access drives are projected to operate at LOS A during the weekday morning and weekday evening peak hours. Further, the southbound left-turn movements are projected to operate at LOS A during both peak hours. The total projected traffic volumes were compared to the right-turn lane warrant criteria summarized in Chapter 36 of the IDOT *Bureau of Design and Environment* (BDE) manual. The comparison revealed that an exclusive right-turn lane will not be warranted at these intersections during the peak hours. As such, these access drives will be adequate to accommodate the traffic estimated to be generated by the proposed development and will provide efficient and flexible access to the site.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- As proposed, the site will be developed with an approximately 209,000 square-foot warehouse building.
- The proposed development will generate a low volume of truck trips.
- Area intersections have sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or traffic control modifications are required.
- Access to the development is proposed to be provided as follows:
    - A full movement access drive off George Street located approximately 195 feet west of Western Avenue. This access drive will accommodate passenger car vehicles providing one inbound lane and one outbound lane with the outbound movements under stop sign control.
    - A full movement access drive off Campbell Avenue located approximately 85 feet north of George Street. This access drive will accommodate passenger car vehicles providing one inbound lane and one outbound lane with the outbound movements under stop sign control.
    - A full movement access drive off Campbell Avenue located approximately 185 feet north of George Street. This access drive will accommodate trucks providing one inbound lane and one outbound lane with the outbound movements under stop sign control.
- The proposed access system will be adequate in accommodating the traffic estimated to be generated by the development.

Appendix

Traffic Count Summary Sheets
Site Plan
ITE Trip Generation Summary Sheets
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Diversey Avenue and Campbell Avenue TMC
Site Code:
Start Date: 11/28/2023

Turning Movement Data

Start Time	Diversey Avenue Eastbound						Diversey Avenue Westbound						Campbell Avenue Northbound						Campbell Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	2	56	0	0	58	0	0	45	0	0	45	0	1	0	1	3	2	0	0	0	0	0	0	105
7:15 AM	1	3	62	0	0	66	0	0	51	0	0	51	0	2	0	1	1	3	0	0	0	0	0	0	120
7:30 AM	0	2	84	1	2	87	0	0	68	4	0	72	0	4	1	1	7	6	0	0	0	0	1	0	165
7:45 AM	0	7	123	0	5	130	0	0	98	0	0	98	0	4	0	0	4	4	0	0	0	0	4	0	232
Hourly Total	1	14	325	1	7	341	0	0	262	4	0	266	0	11	1	3	15	15	0	0	0	0	5	0	622
8:00 AM	1	6	121	0	0	128	0	0	115	0	0	115	0	1	0	3	5	4	0	0	0	0	1	0	247
8:15 AM	0	4	122	0	1	126	0	0	117	2	1	119	0	1	0	4	2	5	0	0	0	0	2	0	250
8:30 AM	0	6	145	0	1	151	0	0	153	0	3	153	0	3	0	3	6	6	0	0	0	0	6	0	310
8:45 AM	0	3	118	0	2	121	0	0	137	1	2	138	0	6	2	1	4	9	0	0	0	0	2	0	268
Hourly Total	1	19	506	0	4	526	0	0	522	3	6	525	0	11	2	11	17	24	0	0	0	0	11	0	1075
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	2	94	0	0	96	0	0	139	3	1	142	0	5	2	2	2	9	0	0	0	0	3	0	247
4:15 PM	0	6	119	0	0	125	0	0	165	2	0	167	0	2	1	1	2	4	0	0	0	0	1	0	296
4:30 PM	0	6	113	0	1	119	0	0	167	6	0	173	0	4	1	2	7	7	0	0	0	0	2	0	299
4:45 PM	0	7	132	0	2	139	0	0	149	1	0	150	0	9	4	3	4	16	0	0	0	0	2	0	305
Hourly Total	0	21	458	0	3	479	0	0	620	12	1	632	0	20	8	8	15	36	0	0	0	0	8	0	1147
5:00 PM	1	6	100	0	2	107	0	0	175	5	2	180	0	8	1	1	11	10	0	0	0	0	6	0	297
5:15 PM	0	8	130	0	1	138	0	0	187	1	0	188	0	4	3	0	5	7	0	0	0	0	3	0	333
5:30 PM	0	10	129	0	1	139	0	0	170	5	0	175	0	7	1	3	7	11	0	0	0	0	1	0	325
5:45 PM	2	7	109	0	0	118	0	0	179	4	0	183	0	6	3	3	8	12	0	0	0	1	2	1	314
Hourly Total	3	31	468	0	4	502	0	0	711	15	2	726	0	25	8	7	31	40	0	0	0	1	12	1	1269
Grand Total	5	85	1757	1	18	1848	0	0	2115	34	9	2149	0	67	19	29	78	115	0	0	0	1	36	1	4113
Approach %	0.3	4.6	95.1	0.1	-	-	0.0	0.0	98.4	1.6	-	-	0.0	58.3	16.5	25.2	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.1	2.1	42.7	0.0	-	44.9	0.0	0.0	51.4	0.8	-	52.2	0.0	1.6	0.5	0.7	-	2.8	0.0	0.0	0.0	0.0	-	0.0	-
Lights	5	84	1713	1	-	1803	0	0	2051	33	-	2084	0	66	18	28	-	112	0	0	0	1	-	1	4000
% Lights	100.0	98.8	97.5	100.0	-	97.6	-	-	97.0	97.1	-	97.0	-	98.5	94.7	96.6	-	97.4	-	-	-	100.0	-	100.0	97.3
Buses	0	0	28	0	-	28	0	0	33	0	-	33	0	0	0	1	-	1	0	0	0	0	-	0	62
% Buses	0.0	0.0	1.6	0.0	-	1.5	-	-	1.6	0.0	-	1.5	-	0.0	0.0	3.4	-	0.9	-	-	-	0.0	-	0.0	1.5
Single-Unit Trucks	0	1	10	0	-	11	0	0	25	1	-	26	0	1	1	0	-	2	0	0	0	0	-	0	39
% Single-Unit Trucks	0.0	1.2	0.6	0.0	-	0.6	-	-	1.2	2.9	-	1.2	-	1.5	5.3	0.0	-	1.7	-	-	-	0.0	-	0.0	0.9
Articulated Trucks	0	0	2	0	-	2	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	6
% Articulated Trucks	0.0	0.0	0.1	0.0	-	0.1	-	-	0.2	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	0.1
Bicycles on Road	0	0	4	0	-	4	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	6

% Bicycles on Road	0.0	0.0	0.2	0.0	-	0.2	-	-	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	18	-	-	-	-	-	9	-	-	-	-	-	78	-	-	-	-	-	36	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: Diversey Avenue and Campbell Avenue TMC
Site Code:
Start Date: 11/28/2023

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Diversey Avenue Eastbound						Diversey Avenue Westbound						Campbell Avenue Northbound						Campbell Avenue Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	1	6	121	0	0	128	0	0	115	0	0	115	0	1	0	3	5	4	0	0	0	0	1	0	247
8:15 AM	0	4	122	0	1	126	0	0	117	2	1	119	0	1	0	4	2	5	0	0	0	0	2	0	250
8:30 AM	0	6	145	0	1	151	0	0	153	0	3	153	0	3	0	3	6	6	0	0	0	0	6	0	310
8:45 AM	0	3	118	0	2	121	0	0	137	1	2	138	0	6	2	1	4	9	0	0	0	0	2	0	268
Total	1	19	506	0	4	526	0	0	522	3	6	525	0	11	2	11	17	24	0	0	0	0	11	0	1075
Approach %	0.2	3.6	96.2	0.0	-	-	0.0	0.0	99.4	0.6	-	-	0.0	45.8	8.3	45.8	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	0.1	1.8	47.1	0.0	-	48.9	0.0	0.0	48.6	0.3	-	48.8	0.0	1.0	0.2	1.0	-	2.2	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.250	0.792	0.872	0.000	-	0.871	0.000	0.000	0.853	0.375	-	0.858	0.000	0.458	0.250	0.688	-	0.667	0.000	0.000	0.000	0.000	-	0.000	0.867
Lights	1	19	491	0	-	511	0	0	505	2	-	507	0	11	2	11	-	24	0	0	0	0	-	0	1042
% Lights	100.0	100.0	97.0	-	-	97.1	-	-	96.7	66.7	-	96.6	-	100.0	100.0	100.0	-	100.0	-	-	-	-	-	-	96.9
Buses	0	0	9	0	-	9	0	0	8	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	17
% Buses	0.0	0.0	1.8	-	-	1.7	-	-	1.5	0.0	-	1.5	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	1.6
Single-Unit Trucks	0	0	3	0	-	3	0	0	8	1	-	9	0	0	0	0	-	0	0	0	0	0	-	0	12
% Single-Unit Trucks	0.0	0.0	0.6	-	-	0.6	-	-	1.5	33.3	-	1.7	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	1.1
Articulated Trucks	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	0.2	-	-	0.2	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	0.1
Bicycles on Road	0	0	2	0	-	2	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	3
% Bicycles on Road	0.0	0.0	0.4	-	-	0.4	-	-	0.2	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	0.3
Pedestrians	-	-	-	-	4	-	-	-	-	-	6	-	-	-	-	-	17	-	-	-	-	-	11	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: Diversey Avenue and Campbell Avenue TMC
Site Code:
Start Date: 11/28/2023

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Diversey Avenue Eastbound						Diversey Avenue Westbound						Campbell Avenue Northbound						Campbell Avenue Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	1	6	100	0	2	107	0	0	175	5	2	180	0	8	1	1	11	10	0	0	0	0	6	0	297
5:15 PM	0	8	130	0	1	138	0	0	187	1	0	188	0	4	3	0	5	7	0	0	0	0	3	0	333
5:30 PM	0	10	129	0	1	139	0	0	170	5	0	175	0	7	1	3	7	11	0	0	0	0	1	0	325
5:45 PM	2	7	109	0	0	118	0	0	179	4	0	183	0	6	3	3	8	12	0	0	0	1	2	1	314
Total	3	31	468	0	4	502	0	0	711	15	2	726	0	25	8	7	31	40	0	0	0	1	12	1	1269
Approach %	0.6	6.2	93.2	0.0	-	-	0.0	0.0	97.9	2.1	-	-	0.0	62.5	20.0	17.5	-	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.2	2.4	36.9	0.0	-	39.6	0.0	0.0	56.0	1.2	-	57.2	0.0	2.0	0.6	0.6	-	3.2	0.0	0.0	0.0	0.1	-	0.1	-
PHF	0.375	0.775	0.900	0.000	-	0.903	0.000	0.000	0.951	0.750	-	0.965	0.000	0.781	0.667	0.583	-	0.833	0.000	0.000	0.000	0.250	-	0.250	0.953
Lights	3	31	462	0	-	496	0	0	691	15	-	706	0	25	7	7	-	39	0	0	0	1	-	1	1242
% Lights	100.0	100.0	98.7	-	-	98.8	-	-	97.2	100.0	-	97.2	-	100.0	87.5	100.0	-	97.5	-	-	-	100.0	-	100.0	97.9
Buses	0	0	5	0	-	5	0	0	11	0	-	11	0	0	0	0	-	0	0	0	0	0	-	0	16
% Buses	0.0	0.0	1.1	-	-	1.0	-	-	1.5	0.0	-	1.5	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	1.3
Single-Unit Trucks	0	0	0	0	-	0	0	0	7	0	-	7	0	0	1	0	-	1	0	0	0	0	-	0	8
% Single-Unit Trucks	0.0	0.0	0.0	-	-	0.0	-	-	1.0	0.0	-	1.0	-	0.0	12.5	0.0	-	2.5	-	-	-	0.0	-	0.0	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Articulated Trucks	0.0	0.0	0.0	-	-	0.0	-	-	0.3	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	0.2
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.2	-	-	0.2	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	31	-	-	-	-	-	12	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Study Name Diversey Avenue with Western Avenue/Elston Avenue TMC
Start Date Tuesday, November 28, 2023 7:00 AM
End Date Tuesday, November 28, 2023 6:00 PM
Site Code

Report Summary

		Eastbound								Westbound								Northbound								Southbound								Southeastbound								Northwestbound								Crosswalk	
Time Period	**Class.**	**U**	**HL**	**L**	**T**	**BR**	**R**	**I**	**O**	**U**	**HL**	**L**	**T**	**BR**	**R**	**I**	**O**	**U**	**L**	**BL**	**T**	**R**	**HR**	**I**	**O**	**U**	**L**	**BL**	**T**	**R**	**HR**	**I**	**O**	**U**	**HL**	**BL**	**T**	**BR**	**HR**	**I**	**O**	**U**	**HL**	**BL**	**T**	**BR**	**HR**	**I**	**O**	**Total**		**destria**	**Total**
Peak 1	Lights	0	4	72	306	69	9	460	497	0	0	14	324	53	6	397	361	0	8	82	1052	7	6	1155	1154	0	10	134	1091	149	3	1387	1199	0	6	38	253	40	4	341	252	0	0	12	110	63	0	185	462	3925	EB	18	18
Specified Period	%	0%	100%	99%	96%	100%	100%	97%	97%	0%	0%	100%	97%	98%	100%	98%	96%	0%	100%	95%	95%	78%	100%	95%	97%	0%	100%	99%	97%	96%	60%	97%	95%	0%	86%	97%	94%	91%	100%	94%	96%	0%	0%	92%	96%	93%	0%	95%	97%	96%		100%	
7:00 AM - 9:00 AM	Buses	0	0	1	8	0	0	9	7	0	0	0	5	0	0	5	8	0	0	0	18	0	0	18	13	0	0	0	13	2	0	15	20	0	0	0	0	0	0	0	1	0	0	0	1	1	0	2	0	49	WB	6	6
One Hour Peak	%	0%	0%	1%	3%	0%	0%	2%	1%	0%	0%	0%	2%	0%	0%	1%	2%	0%	0%	0%	2%	0%	0%	1%	1%	0%	0%	0%	1%	1%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%	0%	1%		100%	
8:00 AM - 9:00 AM	ngle-Unit Truc	1	0	0	3	0	0	4	10	0	0	0	3	1	0	4	5	0	0	2	24	1	0	27	14	0	0	1	11	5	1	18	28	0	0	1	12	3	0	16	6	0	0	1	2	4	0	7	13	76	NB	12	12
	%	100%	0%	0%	1%	0%	0%	1%	2%	0%	0%	0%	1%	2%	0%	1%	1%	0%	0%	2%	2%	11%	0%	2%	1%	0%	0%	1%	1%	3%	20%	1%	2%	0%	0%	3%	4%	7%	0%	4%	2%	0%	0%	8%	2%	6%	0%	4%	3%	2%		100%	
	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	9	1	0	12	13	0	0	0	12	0	0	12	10	0	1	0	1	1	0	3	3	0	0	0	1	0	0	1	1	28	SB	20	20
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	11%	0%	1%	1%	0%	0%	0%	1%	0%	0%	1%	1%	0%	14%	0%	0%	2%	0%	1%	1%	0%	0%	0%	1%	0%	0%	1%	0%	1%		100%	
	cycles on Roa	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1	2	0	0	0	0	2	0	0	2	1	0	0	0	0	0	0	0	2	6	SEB	12	12
	%	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%	20%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Total	**1**	**4**	**73**	**318**	**69**	**9**	**474**	**515**	**0**	**0**	**14**	**333**	**54**	**6**	**407**	**376**	**0**	**8**	**86**	**1103**	**9**	**6**	**1212**	**1195**	**0**	**10**	**135**	**1128**	**156**	**5**	**1434**	**1257**	**0**	**7**	**39**	**268**	**44**	**4**	**362**	**263**	**0**	**0**	**13**	**114**	**68**	**0**	**195**	**478**	**4084**	NWB	1	1
	PHF	0.25	0.5	0.76	0.85	0.59	0.45	0.86	0.85	0	0	0.5	0.9	0.71	0.5	0.91	0.85	0	0.5	0.86	0.86	0.75	0.5	0.88	0.85	0	0.5	0.87	0.86	0.78	0.62	0.85	0.87	0	0.58	0.75	0.88	0.65	0.5	0.92	0.81	0	0	0.54	0.7	0.85	0	0.84	0.87	0.95		100%	
	Approach %							12%	13%							10%	9%							30%	29%							35%	31%							9%	6%							5%	12%			**69**	**69**
Peak 2	Lights	0	3	63	268	80	24	438	697	1	2	27	361	51	12	454	350	0	34	89	876	24	20	1043	1172	0	17	88	1032	218	9	1364	1091	0	8	37	232	79	8	364	440	0	10	76	288	132	3	509	422	4172	EB	47	47
Specified Period	%	0%	100%	100%	97%	100%	100%	98%	98%	100%	100%	93%	98%	98%	100%	97%	98%	0%	94%	96%	98%	100%	100%	98%	96%	0%	100%	98%	95%	98%	100%	96%	98%	0%	100%	100%	98%	99%	100%	98%	98%	0%	100%	99%	99%	99%	100%	99%	98%	97%		100%	
4:00 PM - 6:00 PM	Buses	0	0	0	6	0	0	6	8	0	0	0	7	0	0	7	6	0	0	0	11	0	0	11	18	0	0	0	18	1	0	19	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	WB	38	38
One Hour Peak	%	0%	0%	0%	2%	0%	0%	1%	1%	0%	0%	0%	2%	0%	0%	2%	2%	0%	0%	0%	1%	0%	0%	1%	1%	0%	0%	0%	2%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
5:00 PM - 6:00 PM	ngle-Unit Truc	0	0	0	1	0	0	1	7	0	0	1	2	1	0	4	1	0	2	3	5	0	0	10	23	0	0	1	22	3	0	26	7	0	0	0	2	0	0	2	7	0	0	0	3	2	0	5	3	48	NB	49	49
	%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	3%	1%	2%	0%	1%	0%	0%	6%	3%	1%	0%	0%	1%	2%	0%	0%	1%	2%	1%	0%	2%	1%	0%	0%	0%	1%	0%	0%	1%	2%	0%	0%	0%	1%	1%	0%	1%	1%	1%		100%	
	ticulated Truc	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	4	0	0	5	10	0	0	0	9	0	0	9	4	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	16	SB	37	37
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%		100%	
	cycles on Roa	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	3	1	0	4	0	0	0	0	0	0	0	0	4	6	SEB	42	42
	%	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%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%		100%	
	Total	**0**	**3**	**63**	**276**	**80**	**24**	**446**	**713**	**1**	**2**	**29**	**370**	**52**	**12**	**466**	**358**	**0**	**36**	**93**	**896**	**24**	**20**	**1069**	**1224**	**0**	**17**	**90**	**1081**	**222**	**9**	**1419**	**1113**	**0**	**8**	**37**	**237**	**80**	**8**	**370**	**448**	**0**	**10**	**77**	**291**	**134**	**3**	**515**	**429**	**4285**	NWB	21	21
	PHF	0	0.25	0.79	0.92	0.67	0.6	0.94	0.97	0.25	0.5	0.66	0.94	0.87	0.75	0.95	0.9	0	0.75	0.83	0.95	0.75	0.62	0.94	0.94	0	0.71	0.87	0.94	0.96	0.56	0.95	0.97	0	0.5	0.71	0.86	0.83	0.5	0.95	0.94	0	0.5	0.77	0.86	0.78	0.75	0.96	0.92	0.97		100%	
	Approach %							10%	17%							11%	8%							25%	29%							33%	26%							9%	10%							12%	10%			**234**	**234**

Study Name George Street with Campbell Avenue/Elston Avenue TMC
Start Date Tuesday, November 28, 2023 7:00 AM
End Date Tuesday, November 28, 2023 6:00 PM
Site Code

Report Summary

		Eastbound								Westbound								Northbound								Southbound								Southeastbound								Northwestbound								Crosswalk	
Time Period	Class.	U	HL	L	T	BR	R	I	O	U	HL	L	T	BR	R	I	O	U	L	BL	T	R	HR	I	O	U	L	BL	T	R	HR	I	O	U	HL	BL	T	BR	HR	I	O	U	HL	BL	T	BR	HR	I	O	Total		destria	Total
Peak 1	Lights	0	1	1	16	8	0	26	115	0	0	0	86	10	3	99	62	0	7	7	7	10	3	34	0	0	5	4	0	2	5	16	23	0	3	30	319	0	0	352	255	0	0	20	232	9	1	262	334	789	EB	0	0
Specified Period	%	0%	100%	100%	100%	100%	0%	100%	97%	0%	0%	0%	99%	100%	100%	99%	95%	0%	100%	100%	100%	100%	100%	100%	0%	0%	71%	80%	0%	100%	100%	84%	92%	0%	100%	97%	90%	0%	0%	91%	97%	0%	0%	91%	97%	82%	100%	96%	91%	94%		0%	
7:00 AM - 9:00 AM	Buses	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	1	0	0	0	1	0	0	1	0	1	WB	6	6
One Hour Peak	%	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%		100%	
8:00 AM - 9:00 AM	ıgle-Unit Truc	0	0	0	0	0	0	0	3	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	1	0	0	0	15	0	0	15	4	0	0	2	4	1	0	7	16	26	NB	7	7
	%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	1%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	20%	0%	0%	0%	16%	4%	0%	0%	0%	4%	0%	0%	4%	2%	0%	0%	9%	2%	9%	0%	3%	4%	3%		100%	
	ticulated Truc	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	1	0	0	0	3	0	0	3	2	0	0	0	2	1	0	3	3	6	SB	5	5
	%	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%	4%	0%	0%	0%	1%	0%	0%	1%	1%	0%	0%	0%	1%	9%	0%	1%	1%	1%		100%	
	cycles on Roa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16	0	0	17	1	0	0	0	1	0	0	1	16	18	SEB	2	2
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	5%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	4%	2%		100%	
	Total	**0**	**1**	**1**	**16**	**8**	**0**	**26**	**118**	**0**	**0**	**0**	**87**	**10**	**3**	**100**	**65**	**0**	**7**	**7**	**7**	**10**	**3**	**34**	**0**	**0**	**7**	**5**	**0**	**2**	**5**	**19**	**25**	**0**	**3**	**31**	**353**	**0**	**0**	**387**	**263**	**0**	**0**	**22**	**240**	**11**	**1**	**274**	**369**	**840**	NWB	4	4
	PHF	0	0.25	0.25	0.57	1	0	0.65	0.89	0	0	0	0.84	0.5	0.75	0.81	0.74	0	0.88	0.58	0.58	0.83	0.38	0.85	0	0	0.44	0.62	0	0.25	0.62	0.59	0.89	0	0.38	0.78	0.95	0	0	0.98	0.74	0	0	0.92	0.73	0.55	0.25	0.77	0.96	0.91		100%	
	Approach %							3%	14%							12%	8%							4%	0%							2%	3%							46%	31%							33%	44%			**24**	**24**
Peak 2	Lights	0	0	0	8	20	0	28	176	0	0	0	129	39	6	174	38	0	3	12	2	14	5	36	0	0	3	4	0	4	11	22	14	0	1	9	318	0	4	332	452	3	0	36	390	5	4	438	350	1030	EB	0	0
Specified Period	%	0%	0%	0%	100%	100%	0%	100%	99%	0%	0%	0%	99%	95%	86%	98%	95%	0%	100%	92%	100%	100%	100%	97%	0%	0%	100%	100%	0%	100%	92%	96%	78%	0%	50%	90%	98%	0%	100%	97%	95%	100%	0%	100%	96%	71%	80%	95%	98%	97%		0%	
4:00 PM - 6:00 PM	Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	WB	8	8
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	14%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
5:00 PM - 6:00 PM	ıgle-Unit Truc	0	0	0	0	0	0	0	1	0	0	0	1	1	0	2	2	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	3	0	1	1	2	0	0	4	8	0	0	0	5	2	1	8	2	16	NB	14	14
	%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	2%	0%	1%	5%	0%	0%	8%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	8%	4%	17%	0%	50%	10%	1%	0%	0%	1%	2%	0%	0%	0%	1%	29%	20%	2%	1%	1%		100%	
	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	1	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	2	0	0	0	1	0	0	1	0	2	SB	5	5
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	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%	0%	0%	0%	0%	0%	0%	0%		100%	
	cycles on Roa	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	6	0	0	6	12	0	0	0	12	0	0	12	6	18	SEB	3	3
	%	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%	2%	0%	0%	2%	3%	0%	0%	0%	3%	0%	0%	3%	2%	2%		100%	
	Total	**0**	**0**	**0**	**8**	**20**	**0**	**28**	**177**	**0**	**0**	**0**	**130**	**41**	**7**	**178**	**40**	**0**	**3**	**13**	**2**	**14**	**5**	**37**	**0**	**0**	**3**	**4**	**0**	**4**	**12**	**23**	**18**	**0**	**2**	**10**	**326**	**0**	**4**	**342**	**474**	**3**	**0**	**36**	**408**	**7**	**5**	**459**	**358**	**1067**	NWB	1	1
	PHF	0	0	0	0.4	0.71	0	0.58	0.96	0	0	0	0.86	0.68	0.58	0.91	0.71	0	0.38	0.81	0.5	0.58	0.42	0.92	0	0	0.38	0.5	0	0.33	0.75	0.57	0.56	0	0.5	0.36	0.92	0	0.25	0.9	0.94	0.38	0	0.69	0.91	0.58	0.62	0.92	0.93	0.97		100%	
	Approach %							3%	17%							17%	4%							3%	0%							2%	2%							32%	44%							43%	34%			**31**	**31**

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Western Avenue with George Street TMC
Site Code:
Start Date: 11/28/2023

Turning Movement Data

Start Time	George Street Eastbound					Western Avenue Northbound					Western Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	2	80	0	82	0	125	10	0	135	217
7:15 AM	0	2	2	0	4	0	1	152	0	153	0	134	10	0	144	301
7:30 AM	0	0	2	1	2	0	1	186	0	187	0	199	12	1	211	400
7:45 AM	0	1	4	0	5	0	2	250	0	252	0	225	29	0	254	511
Hourly Total	0	3	8	1	11	0	6	668	0	674	0	683	61	1	744	1429
8:00 AM	0	3	3	2	6	0	1	339	0	340	0	302	28	0	330	676
8:15 AM	0	9	12	1	21	0	0	381	0	381	0	313	23	0	336	738
8:30 AM	0	9	12	3	21	0	2	360	0	362	0	385	21	0	406	789
8:45 AM	0	5	9	0	14	0	1	274	0	275	0	411	30	0	441	730
Hourly Total	0	26	36	6	62	0	4	1354	0	1358	0	1411	102	0	1513	2933
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	6	3	4	9	0	3	318	0	321	1	277	29	0	307	637
4:15 PM	0	2	1	4	3	0	2	268	0	270	0	305	21	0	326	599
4:30 PM	0	3	1	3	4	0	0	230	0	230	3	404	53	1	460	694
4:45 PM	0	1	1	2	2	0	1	257	0	258	0	314	39	0	353	613
Hourly Total	0	12	6	13	18	0	6	1073	0	1079	4	1300	142	1	1446	2543
5:00 PM	0	9	4	1	13	0	2	274	0	276	1	318	34	0	353	642
5:15 PM	0	9	1	4	10	1	2	286	0	289	0	341	45	0	386	685
5:30 PM	0	8	3	0	11	0	1	276	0	277	0	352	38	0	390	678
5:45 PM	0	5	1	1	6	0	4	316	0	320	0	320	44	0	364	690
Hourly Total	0	31	9	6	40	1	9	1152	0	1162	1	1331	161	0	1493	2695
Grand Total	0	72	59	26	131	1	25	4247	0	4273	5	4725	466	2	5196	9600
Approach %	0.0	55.0	45.0	-	-	0.0	0.6	99.4	-	-	0.1	90.9	9.0	-	-	-
Total %	0.0	0.8	0.6	-	1.4	0.0	0.3	44.2	-	44.5	0.1	49.2	4.9	-	54.1	-
Lights	0	69	55	-	124	1	22	4084	-	4107	5	4528	459	-	4992	9223
% Lights	-	95.8	93.2	-	94.7	100.0	88.0	96.2	-	96.1	100.0	95.8	98.5	-	96.1	96.1
Buses	0	0	0	-	0	0	0	65	-	65	0	73	0	-	73	138
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	1.5	-	1.5	0.0	1.5	0.0	-	1.4	1.4
Single-Unit Trucks	0	3	3	-	6	0	1	54	-	55	0	80	5	-	85	146
% Single-Unit Trucks	-	4.2	5.1	-	4.6	0.0	4.0	1.3	-	1.3	0.0	1.7	1.1	-	1.6	1.5
Articulated Trucks	0	0	1	-	1	0	2	43	-	45	0	42	2	-	44	90
% Articulated Trucks	-	0.0	1.7	-	0.8	0.0	8.0	1.0	-	1.1	0.0	0.9	0.4	-	0.8	0.9
Bicycles on Road	0	0	0	-	0	0	0	1	-	1	0	2	0	-	2	3
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	26	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Western Avenue with George Street TMC
Site Code:
Start Date: 11/28/2023

Turning Movement Peak Hour Data (8:00 AM)

Start Time	George Street Eastbound					Western Avenue Northbound					Western Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
8:00 AM	0	3	3	2	6	0	1	339	0	340	0	302	28	0	330	676
8:15 AM	0	9	12	1	21	0	0	381	0	381	0	313	23	0	336	738
8:30 AM	0	9	12	3	21	0	2	360	0	362	0	385	21	0	406	789
8:45 AM	0	5	9	0	14	0	1	274	0	275	0	411	30	0	441	730
Total	0	26	36	6	62	0	4	1354	0	1358	0	1411	102	0	1513	2933
Approach %	0.0	41.9	58.1	-	-	0.0	0.3	99.7	-	-	0.0	93.3	6.7	-	-	-
Total %	0.0	0.9	1.2	-	2.1	0.0	0.1	46.2	-	46.3	0.0	48.1	3.5	-	51.6	-
PHF	0.000	0.722	0.750	-	0.738	0.000	0.500	0.888	-	0.891	0.000	0.858	0.850	-	0.858	0.929
Lights	0	25	35	-	60	0	4	1286	-	1290	0	1366	100	-	1466	2816
% Lights	-	96.2	97.2	-	96.8	-	100.0	95.0	-	95.0	-	96.8	98.0	-	96.9	96.0
Buses	0	0	0	-	0	0	0	21	-	21	0	15	0	-	15	36
% Buses	-	0.0	0.0	-	0.0	-	0.0	1.6	-	1.5	-	1.1	0.0	-	1.0	1.2
Single-Unit Trucks	0	1	1	-	2	0	0	28	-	28	0	19	2	-	21	51
% Single-Unit Trucks	-	3.8	2.8	-	3.2	-	0.0	2.1	-	2.1	-	1.3	2.0	-	1.4	1.7
Articulated Trucks	0	0	0	-	0	0	0	19	-	19	0	9	0	-	9	28
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	1.4	-	1.4	-	0.6	0.0	-	0.6	1.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	2	0	-	2	2
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.1	0.0	-	0.1	0.1
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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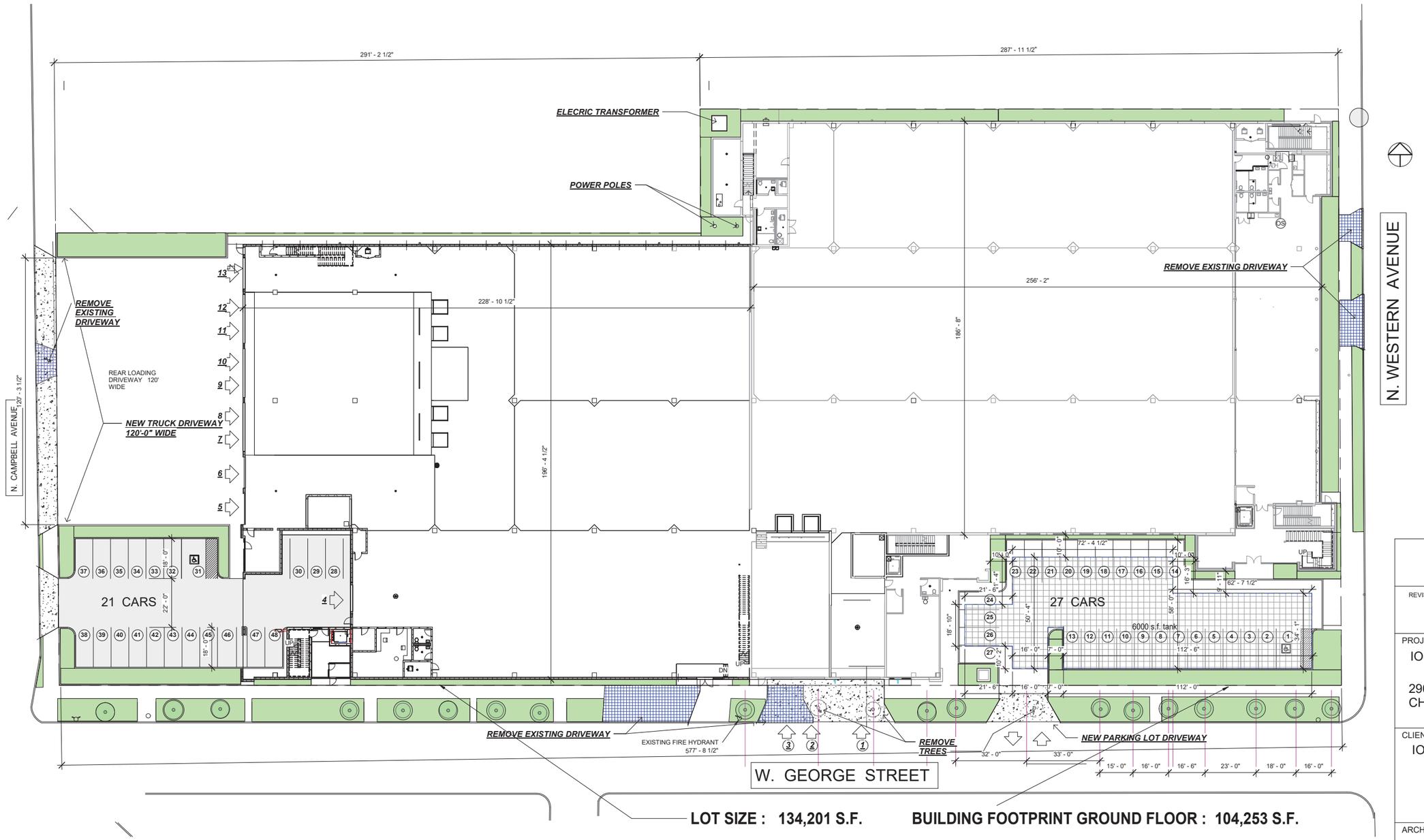
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Western Avenue with George Street TMC
Site Code:
Start Date: 11/28/2023

Turning Movement Peak Hour Data (5:00 PM)

Start Time	George Street Eastbound					Western Avenue Northbound					Western Avenue Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	9	4	1	13	0	2	274	0	276	1	318	34	0	353	642
5:15 PM	0	9	1	4	10	1	2	286	0	289	0	341	45	0	386	685
5:30 PM	0	8	3	0	11	0	1	276	0	277	0	352	38	0	390	678
5:45 PM	0	5	1	1	6	0	4	316	0	320	0	320	44	0	364	690
Total	0	31	9	6	40	1	9	1152	0	1162	1	1331	161	0	1493	2695
Approach %	0.0	77.5	22.5	-	-	0.1	0.8	99.1	-	-	0.1	89.1	10.8	-	-	-
Total %	0.0	1.2	0.3	-	1.5	0.0	0.3	42.7	-	43.1	0.0	49.4	6.0	-	55.4	-
PHF	0.000	0.861	0.563	-	0.769	0.250	0.563	0.911	-	0.908	0.250	0.945	0.894	-	0.957	0.976
Lights	0	30	9	-	39	1	8	1128	-	1137	1	1277	160	-	1438	2614
% Lights	-	96.8	100.0	-	97.5	100.0	88.9	97.9	-	97.8	100.0	95.9	99.4	-	96.3	97.0
Buses	0	0	0	-	0	0	0	11	-	11	0	19	0	-	19	30
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	1.0	-	0.9	0.0	1.4	0.0	-	1.3	1.1
Single-Unit Trucks	0	1	0	-	1	0	0	9	-	9	0	26	1	-	27	37
% Single-Unit Trucks	-	3.2	0.0	-	2.5	0.0	0.0	0.8	-	0.8	0.0	2.0	0.6	-	1.8	1.4
Articulated Trucks	0	0	0	-	0	0	1	4	-	5	0	9	0	-	9	14
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	11.1	0.3	-	0.4	0.0	0.7	0.0	-	0.6	0.5
Bicycles on Road	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
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

Site Plan



1 L1.0 OVERALL GROUND FLOOR, SITE, PARKING Copy 1 - Dependent 1
3/64" = 1'-0"

INTERIORS OF STONE

2900 N. WESTERN
CHICAGO IL.

REVISION:

PROJECT:
IOS

2900 N WESTERN AVE
CHICAGO IL

CLIENT:
IOS

ARCHITECT:
LIPO STRUCTURES INC.
ARCHITECT ANDREW LIPOWSKI

TITLE:
SITE PLAN & LANDSCAPE PLAN

SCALE: 3/64" = 1'-0"

DATE: 6/26/23

PROJECT NO: 3157

DRAWING NO: SP-L1.0

ITE Trip Generation Summary Sheets

Warehousing
(150)

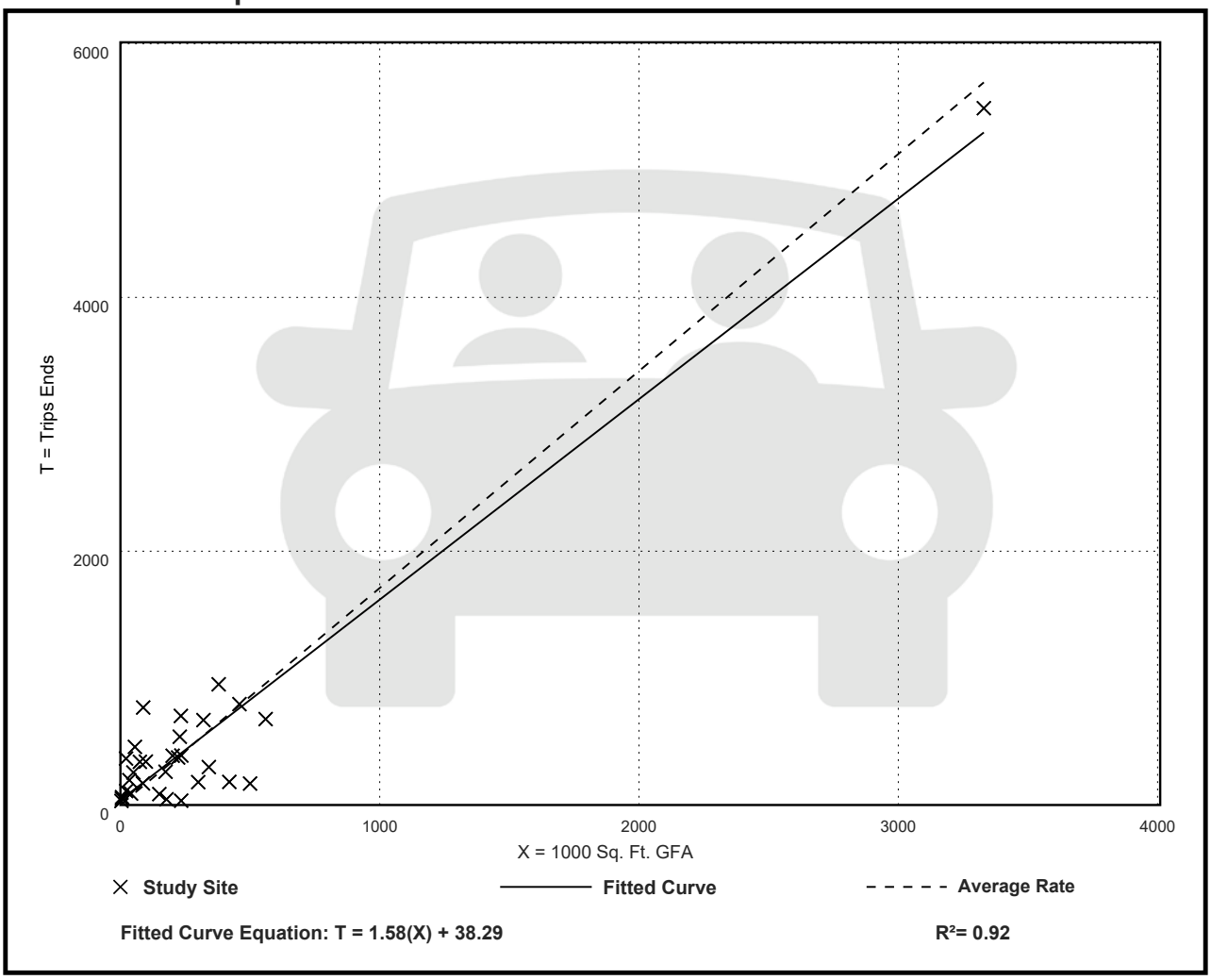
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. 1000 Sq. Ft. GFA: 292
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.71	0.15 - 16.93	1.48

Data Plot and Equation



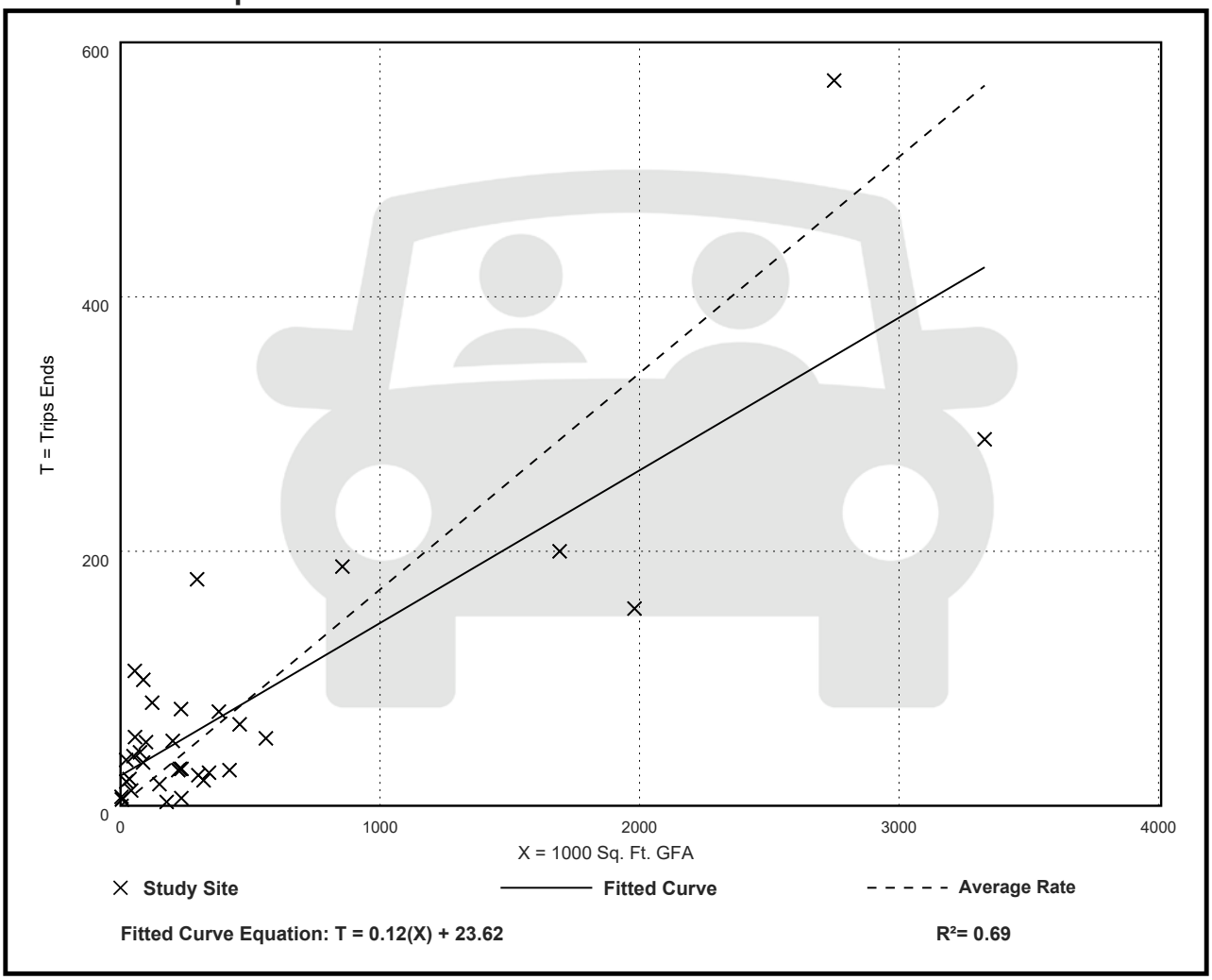
Warehousing
(150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 36
Avg. 1000 Sq. Ft. GFA: 448
Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.19

Data Plot and Equation



Fitted Curve Equation: T = 0.12(X) + 23.62

R^2= 0.69

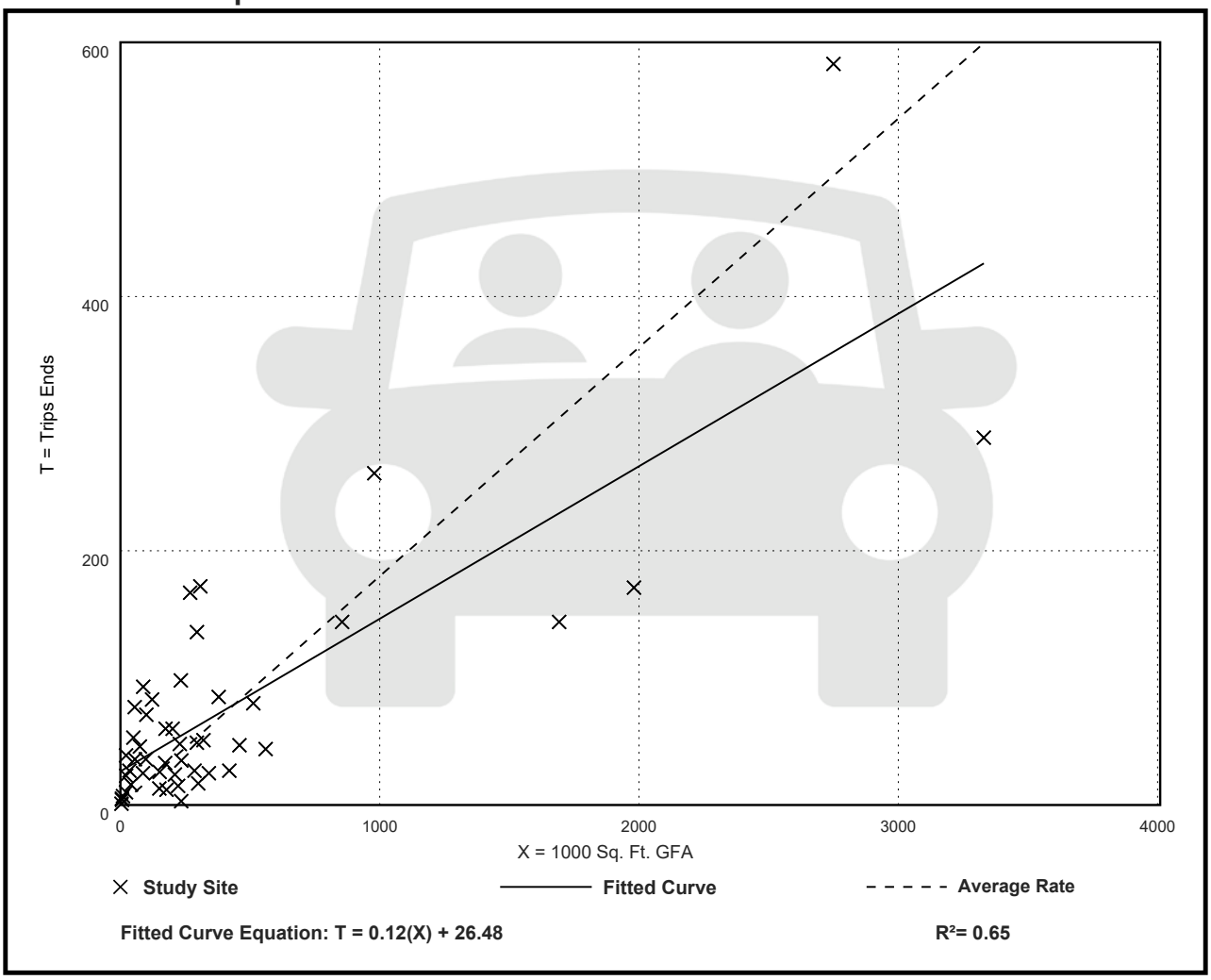
Warehousing
(150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 49
Avg. 1000 Sq. Ft. GFA: 400
Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.01 - 1.80	0.18

Data Plot and Equation



Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	**Interpretation**	**Average Control Delay (seconds per vehicle)**
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	> 10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	> 20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	> 35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	> 55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80

Unsignalized Intersections	
Level of Service	**Average Total Delay (sec/veh)**
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Lane Configurations												
Traffic Volume (vph)	5	73	318	69	9	14	333	54	6	8	86	1153
Future Volume (vph)	5	73	318	69	9	14	333	54	6	8	86	1153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		130		0		135		0			125	
Storage Lanes		1		0		1		0			1	
Taper Length (ft)		100				90					165	
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.91	1.00	0.91
Ped Bike Factor		0.98	0.99			0.99	0.99					1.00
Frt			0.971				0.977					0.998
Flt Protected		0.950				0.950					0.950	
Satd. Flow (prot)	0	1767	3398	0	0	1805	3427	0	0	0	1726	4971
Flt Permitted		0.337				0.334					0.093	
Satd. Flow (perm)	0	612	3398	0	0	629	3427	0	0	0	169	4971
Right Turn on Red					No				No			
Satd. Flow (RTOR)												
Link Speed (mph)			30				30					30
Link Distance (ft)			515				621					519
Travel Time (s)			11.7				14.1					11.8
Confl. Peds. (#/hr)	12	20		1	12	12		12	20	18	12	
Confl. Bikes (#/hr)				2	2							
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	20%	1%	3%	0%	0%	0%	2%	2%	0%	0%	5%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	82	417	0	0	15	414	0	0	0	99	1229
Turn Type	Perm	Perm	NA			Perm	NA			pm+pt	pm+pt	NA
Protected Phases			4				8			5	5	2
Permitted Phases	4	4				8				2	2	
Detector Phase	4	4	4			8	8			5	5	2
Switch Phase												
Minimum Initial (s)	24.0	24.0	24.0			25.0	25.0			6.0	6.0	24.0
Minimum Split (s)	31.0	31.0	31.0			31.0	31.0			9.0	9.0	31.0
Total Split (s)	31.0	31.0	31.0			31.0	31.0			9.0	9.0	55.0
Total Split (%)	23.8%	23.8%	23.8%			23.8%	23.8%			6.9%	6.9%	42.3%
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0			3.0	3.0			0.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0			0.0	0.0				0.0	0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0				3.0	5.0
Lead/Lag										Lead	Lead	Lag
Lead-Lag Optimize?										Yes	Yes	Yes
Recall Mode	Max	Max	Max			Max	Max			None	None	C-Max
Act Effct Green (s)		25.0	25.0			25.0	25.0				58.0	50.0
Actuated g/C Ratio		0.19	0.19			0.19	0.19				0.45	0.38
v/c Ratio		0.70	0.64			0.12	0.63				0.67	0.64
Control Delay		80.3	53.4			46.6	53.1				43.6	34.6
Queue Delay		0.0	0.0			0.0	0.0				0.0	0.0
Total Delay		80.3	53.4			46.6	53.1				43.6	34.6
LOS		F	D			D	D				D	C
Approach Delay			57.8				52.9					35.3

Lane Group	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER	SER2
Lane Configurations												
Traffic Volume (vph)	9	6	10	135	1128	156	3	7	39	268	44	4
Future Volume (vph)	9	6	10	135	1128	156	3	7	39	268	44	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			120		0			85		0	
Storage Lanes	0			1		0			1		0	
Taper Length (ft)				95					115			
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	0.91	0.95	1.00	0.95	0.95	0.95
Ped Bike Factor				1.00	0.99				0.97	0.99		
Frt					0.981					0.977		
Flt Protected				0.950					0.950			
Satd. Flow (prot)	0	0	0	1788	4872	0	0	0	1726	3296	0	0
Flt Permitted				0.122					0.631			
Satd. Flow (perm)	0	0	0	229	4872	0	0	0	1111	3296	0	0
Right Turn on Red		No					No					No
Satd. Flow (RTOR)												
Link Speed (mph)					30					30		
Link Distance (ft)					649					913		
Travel Time (s)					14.8					20.8		
Confl. Peds. (#/hr)	6	1	6	1		18	12	20	6		12	18
Confl. Bikes (#/hr)	2	1					1				2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	22%	0%	0%	1%	3%	4%	33%	14%	3%	5%	9%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	153	1354	0	0	0	48	332	0	0
Turn Type			pm+pt	pm+pt	NA			Perm	Perm	NA		
Protected Phases			1	1	6					10		
Permitted Phases			6	6				10	10			
Detector Phase			1	1	6			10	10	10		
Switch Phase												
Minimum Initial (s)			5.0	5.0	29.0			24.0	24.0	24.0		
Minimum Split (s)			9.0	9.0	35.0			35.0	35.0	35.0		
Total Split (s)			9.0	9.0	55.0			35.0	35.0	35.0		
Total Split (%)			6.9%	6.9%	42.3%			26.9%	26.9%	26.9%		
Yellow Time (s)			3.0	3.0	3.0			3.0	3.0	3.0		
All-Red Time (s)			0.0	0.0	2.0			4.0	4.0	4.0		
Lost Time Adjust (s)				0.0	0.0				0.0	0.0		
Total Lost Time (s)				3.0	5.0				7.0	7.0		
Lead/Lag			Lead	Lead	Lag							
Lead-Lag Optimize?			Yes	Yes	Yes							
Recall Mode			None	None	C-Max			Max	Max	Max		
Act Effct Green (s)				58.0	50.0				28.0	28.0		
Actuated g/C Ratio				0.45	0.38				0.22	0.22		
v/c Ratio				0.88	0.72				0.20	0.47		
Control Delay				68.0	36.8				44.6	47.1		
Queue Delay				0.0	0.0				0.0	0.0		
Total Delay				68.0	36.8				44.6	47.1		
LOS				E	D				D	D		
Approach Delay					40.0					46.7		

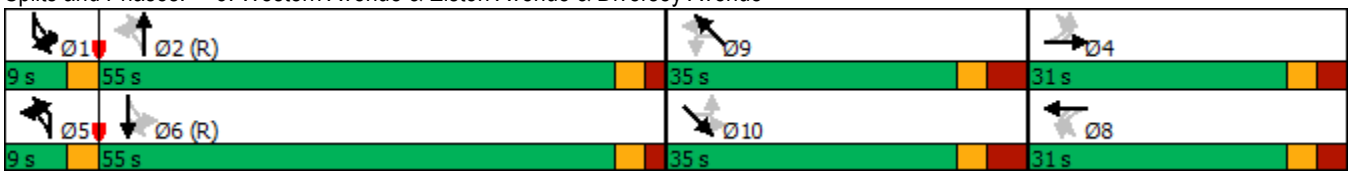
Lane Group	NWL	NWT	NWR
Lane Configurations			
Traffic Volume (vph)	13	114	68
Future Volume (vph)	13	114	68
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	55		0
Storage Lanes	1		0
Taper Length (ft)	100		
Lane Util. Factor	1.00	0.95	0.95
Ped Bike Factor	0.98	0.98	
Frt		0.944	
Flt Protected	0.950		
Satd. Flow (prot)	1671	3190	0
Flt Permitted	0.473		
Satd. Flow (perm)	812	3190	0
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)		30	
Link Distance (ft)		472	
Travel Time (s)		10.7	
Confl. Peds. (#/hr)	18		20
Confl. Bikes (#/hr)			
Peak Hour Factor	0.95	0.95	0.95
Heavy Vehicles (%)	8%	4%	7%
Shared Lane Traffic (%)			
Lane Group Flow (vph)	14	192	0
Turn Type	Perm	NA	
Protected Phases		9	
Permitted Phases	9		
Detector Phase	9	9	
Switch Phase			
Minimum Initial (s)	28.0	28.0	
Minimum Split (s)	35.0	35.0	
Total Split (s)	35.0	35.0	
Total Split (%)	26.9%	26.9%	
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	7.0	7.0	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	Max	Max	
Act Effct Green (s)	28.0	28.0	
Actuated g/C Ratio	0.22	0.22	
v/c Ratio	0.08	0.28	
Control Delay	42.4	43.9	
Queue Delay	0.0	0.0	
Total Delay	42.4	43.9	
LOS	D	D	
Approach Delay		43.8	

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Approach LOS			E				D					D
Queue Length 50th (ft)		65	172			11	170				46	307
Queue Length 95th (ft)		#149	230			33	227				#102	359
Internal Link Dist (ft)			435				541					439
Turn Bay Length (ft)		130				135					125	
Base Capacity (vph)		117	653			120	659				147	1911
Starvation Cap Reductn		0	0			0	0				0	0
Spillback Cap Reductn		0	0			0	0				0	0
Storage Cap Reductn		0	0			0	0				0	0
Reduced v/c Ratio		0.70	0.64			0.13	0.63				0.67	0.64

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 42.6		Intersection LOS: D	
Intersection Capacity Utilization 134.0%		ICU Level of Service H	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Western Avenue & Elston Avenue & Diversey Avenue



Lane Group	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER	SER2
Approach LOS					D					D		
Queue Length 50th (ft)				73	352				34	129		
Queue Length 95th (ft)				#175	410				71	178		
Internal Link Dist (ft)					569					833		
Turn Bay Length (ft)				120					85			
Base Capacity (vph)				174	1873				239	709		
Starvation Cap Reductn				0	0				0	0		
Spillback Cap Reductn				0	0				0	0		
Storage Cap Reductn				0	0				0	0		
Reduced v/c Ratio				0.88	0.72				0.20	0.47		

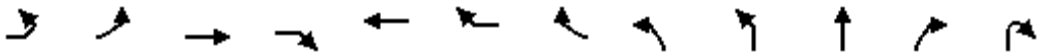
Intersection Summary

Lane Group	NWL	NWT	NWR
Approach LOS		D	
Queue Length 50th (ft)	10	71	
Queue Length 95th (ft)	29	107	
Internal Link Dist (ft)		392	
Turn Bay Length (ft)	55		
Base Capacity (vph)	174	687	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.08	0.28	

Intersection Summary

Intersection Capacity Utilization
9: Campbell Avenue & Elston Avenue & George Street

11/30/2023



Movement	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	1	1	16	8	87	10	3	7	7	7	10	3
Pedestrians	2	5		4		2	5		2		6	4
Ped Button			Yes		Yes					Yes		
Pedestrian Timing (s)			16.0		16.0					16.0		
Free Right				No		No	No				No	No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	26	0	100	0	0	0	0	34	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.95	0.85	0.98	0.85	0.85	0.95	0.95	0.92	0.85	0.85
Saturated Flow (vph)	0	0	1805	0	1863	0	0	0	0	1754	0	0
Ped Intf Time (s)	0.0	0.0	0.3	0.5	0.1	0.3	0.6	0.0	0.0	0.3	0.8	0.5
Pedestrian Frequency (%)			0.21		0.15					0.18		
Protected Option Allowed			No		No					No		
Reference Time (s)				0.0		0.0	0.0				0.0	0.0
Adj Reference Time (s)				0.0		0.0	0.0				0.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	0	851		1863			0	0	1654		
Reference Time A (s)	0.0	0.0	3.9		6.5			0.0	0.0	2.8		
Adj Saturation B (vph	0	0	0		1863			0	0	0		
Reference Time B (s)	8.1	8.1	10.0		6.5			8.5	8.5	10.6		
Reference Time (s)			3.9		6.5					2.8		
Adj Reference Time (s)			10.5		12.0					10.2		
Split Option												
Ref Time Combined (s)	0.0	0.0	2.0		6.5			0.0	0.0	2.6		
Ref Time Seperate (s)	0.1	0.1	1.3		5.7			0.5	0.5	0.8		
Reference Time (s)	2.0	2.0	2.0		6.5			2.6	2.6	2.6		
Adj Reference Time (s)	10.5	10.5	10.5		12.0			10.2	10.2	10.2		

Summary	EB WB	NB SB	NW SE	Combined
Protected Option (s)	NA	NA	NA	
Permitted Option (s)	12.0	10.2	36.9	
Split Option (s)	22.5	18.9	50.1	
Minimum (s)	12.0	10.2	36.9	59.1

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	49.2%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	NWL	NWT	NWR	NWR2
Lane Configurations												
Volume (vph)	7	5	0	2	5	3	31	353	22	240	11	1
Pedestrians	6	4			2	5	6				5	6
Ped Button			Yes					Yes		Yes		
Pedestrian Timing (s)			16.0					16.0		16.0		
Free Right				No	No						No	No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	19	0	0	0	0	387	0	274	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.91	0.85	0.85	0.95	0.95	1.00	0.95	0.99	0.85	0.85
Saturated Flow (vph)	0	0	1738	0	0	0	0	1892	0	1880	0	0
Ped Intf Time (s)	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.6	0.8
Pedestrian Frequency (%)			0.06					0.21		0.18		
Protected Option Allowed			No					No		No		
Reference Time (s)				0.0	0.0						0.0	0.0
Adj Reference Time (s)				0.0	0.0						0.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	0	1108			0	0	1411	0	1464		
Reference Time A (s)	0.0	0.0	2.2			0.0	0.0	32.9	0.0	22.5		
Adj Saturation B (vph	0	0	0			NA	NA	NA	NA	NA		
Reference Time B (s)	8.5	8.3	9.4			NA	NA	NA	NA	NA		
Reference Time (s)			2.2					32.9		22.5		
Adj Reference Time (s)			8.8					36.9		26.5		
Split Option												
Ref Time Combined (s)	0.0	0.0	1.4			0.0	0.0	24.5	0.0	17.5		
Ref Time Seperate (s)	0.5	0.3	0.1			0.2	2.1	22.3	1.5	15.3		
Reference Time (s)	1.4	1.4	1.4			24.5	24.5	24.5	17.5	17.5		
Adj Reference Time (s)	8.8	8.8	8.8			28.5	28.5	28.5	21.5	21.5		
Summary												

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	506	0	0	522	3	11	2	11	0	0	0
Future Vol, veh/h	20	506	0	0	522	3	11	2	11	0	0	0
Conflicting Peds, #/hr	11	0	17	17	0	11	4	0	6	6	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	0	0	3	33	0	0	0	0	0	0
Mvmt Flow	23	582	0	0	600	3	13	2	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	614	0	-	-	-	0	932	1242	297	957	1241	317
Stage 1	-	-	-	-	-	-	628	628	-	613	613	-
Stage 2	-	-	-	-	-	-	304	614	-	344	628	-
Critical Hdwy	4.1	-	-	-	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	975	-	0	0	-	-	224	176	705	215	176	685
Stage 1	-	-	0	0	-	-	442	479	-	451	486	-
Stage 2	-	-	0	0	-	-	686	486	-	650	479	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	965	-	-	-	-	-	217	168	701	200	168	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	168	-	200	168	-
Stage 1	-	-	-	-	-	-	427	462	-	431	481	-
Stage 2	-	-	-	-	-	-	683	481	-	609	462	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	17.9	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	307	965	-	-	-	-
HCM Lane V/C Ratio	0.09	0.024	-	-	-	-
HCM Control Delay (s)	17.9	8.8	0.1	-	-	0
HCM Lane LOS	C	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	38	4	1354	1411	102
Future Vol, veh/h	26	38	4	1354	1411	102
Conflicting Peds, #/hr	0	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	3	0	5	3	2
Mvmt Flow	28	41	4	1456	1517	110

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2314	820	1633	0	-	0
Stage 1	1578	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Critical Hdwy	6.88	6.96	4.1	-	-	-
Critical Hdwy Stg 1	5.88	-	-	-	-	-
Critical Hdwy Stg 2	5.88	-	-	-	-	-
Follow-up Hdwy	3.54	3.33	2.2	-	-	-
Pot Cap-1 Maneuver	*47	316	403	-	-	-
Stage 1	*152	-	-	-	-	-
Stage 2	*491	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*46	314	401	-	-	-
Mov Cap-2 Maneuver	*119	-	-	-	-	-
Stage 1	*150	-	-	-	-	-
Stage 2	*488	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.6	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	401	-	189	-	-
HCM Lane V/C Ratio	0.011	-	0.364	-	-
HCM Control Delay (s)	14.1	-	34.6	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0	-	1.6	-	-

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

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Lane Configurations												
Traffic Volume (vph)	3	63	276	80	24	3	29	370	52	12	36	93
Future Volume (vph)	3	63	276	80	24	3	29	370	52	12	36	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		130		0			135		0			125
Storage Lanes		1		0			1		0			1
Taper Length (ft)		100					90					165
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.91	1.00
Ped Bike Factor		0.95	0.97				0.95	0.98				
Frt			0.959					0.978				
Flt Protected		0.950					0.950					0.950
Satd. Flow (prot)	0	1805	3274	0	0	0	1805	3364	0	0	0	1726
Flt Permitted		0.329					0.386					0.084
Satd. Flow (perm)	0	591	3274	0	0	0	694	3364	0	0	0	153
Right Turn on Red					No					No		
Satd. Flow (RTOR)												
Link Speed (mph)			30					30				
Link Distance (ft)			515					621				
Travel Time (s)			11.7					14.1				
Confl. Peds. (#/hr)	42	37		21	49	21	49		42	37	47	42
Confl. Bikes (#/hr)				4	1							
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	17%	0%	6%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	392	0	0	0	33	447	0	0	0	133
Turn Type	Perm	Perm	NA			Perm	Perm	NA			pm+pt	pm+pt
Protected Phases			4					8			5	5
Permitted Phases	4	4				8	8				2	2
Detector Phase	4	4	4			8	8	8			5	5
Switch Phase												
Minimum Initial (s)	24.0	24.0	24.0			25.0	25.0	25.0			6.0	6.0
Minimum Split (s)	31.0	31.0	31.0			31.0	31.0	31.0			9.0	9.0
Total Split (s)	34.0	34.0	34.0			34.0	34.0	34.0			9.0	9.0
Total Split (%)	26.2%	26.2%	26.2%			26.2%	26.2%	26.2%			6.9%	6.9%
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0	3.0			3.0	3.0
All-Red Time (s)	3.0	3.0	3.0			3.0	3.0	3.0			0.0	0.0
Lost Time Adjust (s)		0.0	0.0				0.0	0.0				-0.5
Total Lost Time (s)		6.0	6.0				6.0	6.0				2.5
Lead/Lag											Lead	Lead
Lead-Lag Optimize?											Yes	Yes
Recall Mode	Max	Max	Max			Max	Max	Max			None	None
Act Effct Green (s)		28.0	28.0				28.0	28.0				56.0
Actuated g/C Ratio		0.22	0.22				0.22	0.22				0.43
v/c Ratio		0.54	0.56				0.22	0.62				0.92
Control Delay		62.5	49.0				46.7	50.4				83.5
Queue Delay		0.0	0.0				0.0	0.0				0.0
Total Delay		62.5	49.0				46.7	50.4				83.5
LOS		E	D				D	D				F
Approach Delay			51.0					50.2				

Lane Group	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER
Lane Configurations												
Traffic Volume (vph)	896	24	20	17	90	1081	222	9	8	37	237	80
Future Volume (vph)	896	24	20	17	90	1081	222	9	8	37	237	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0			120		0			85		0
Storage Lanes		0			1		0			1		0
Taper Length (ft)					95					115		
Lane Util. Factor	0.91	0.91	0.91	0.91	1.00	0.91	0.91	0.91	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00				0.98	0.96				0.95	0.94	
Frt	0.993					0.974					0.960	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	5029	0	0	0	1790	4626	0	0	0	1805	3218	0
Flt Permitted					0.191					0.353		
Satd. Flow (perm)	5029	0	0	0	354	4626	0	0	0	635	3218	0
Right Turn on Red			No					No				
Satd. Flow (RTOR)												
Link Speed (mph)	30					30					30	
Link Distance (ft)	519					649					913	
Travel Time (s)	11.8					14.8					20.8	
Confl. Peds. (#/hr)		38	21	38	21		47	42	37	38		49
Confl. Bikes (#/hr)		1	4									1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	0%	1%	5%	2%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	970	0	0	0	111	1352	0	0	0	46	334	0
Turn Type	NA			pm+pt	pm+pt	NA			Perm	Perm	NA	
Protected Phases	2			1	1	6					10	
Permitted Phases				6	6				10	10		
Detector Phase	2			1	1	6			10	10	10	
Switch Phase												
Minimum Initial (s)	24.0			5.0	5.0	29.0			24.0	24.0	24.0	
Minimum Split (s)	31.0			9.0	9.0	35.0			35.0	35.0	35.0	
Total Split (s)	52.0			9.0	9.0	52.0			35.0	35.0	35.0	
Total Split (%)	40.0%			6.9%	6.9%	40.0%			26.9%	26.9%	26.9%	
Yellow Time (s)	3.0			3.0	3.0	3.0			3.0	3.0	3.0	
All-Red Time (s)	2.0			0.0	0.0	2.0			4.0	4.0	4.0	
Lost Time Adjust (s)	0.0				-0.5	0.0				0.0	0.0	
Total Lost Time (s)	5.0				2.5	5.0				7.0	7.0	
Lead/Lag	Lag			Lead	Lead	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	C-Max			None	None	C-Max			Max	Max	Max	
Act Effct Green (s)	47.0				56.0	47.0				28.0	28.0	
Actuated g/C Ratio	0.36				0.43	0.36				0.22	0.22	
v/c Ratio	0.53				0.50	0.81				0.34	0.48	
Control Delay	34.2				29.3	42.1				51.4	47.4	
Queue Delay	0.0				0.0	0.0				0.0	0.0	
Total Delay	34.2				29.3	42.1				51.4	47.4	
LOS	C				C	D				D	D	
Approach Delay	40.1					41.1					47.9	

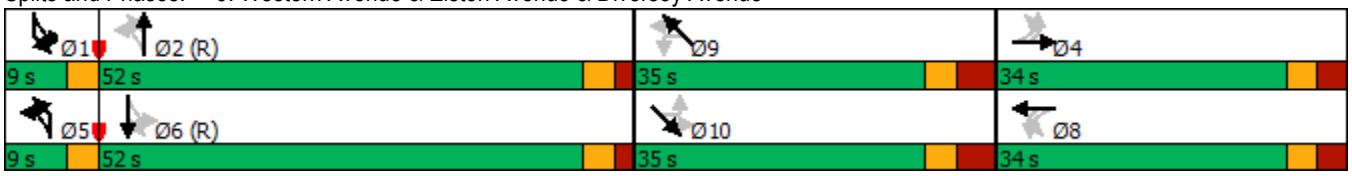
Lane Group	SER2	NWL2	NWL	NWT	NWR	NWR2
Lane Configurations						
Traffic Volume (vph)	8	10	77	291	134	3
Future Volume (vph)	8	10	77	291	134	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)			55		0	
Storage Lanes			1		0	
Taper Length (ft)			100			
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95
Ped Bike Factor			0.87	0.96		
Frt				0.952		
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1789	3264	0	0
Flt Permitted			0.471			
Satd. Flow (perm)	0	0	772	3264	0	0
Right Turn on Red	No					No
Satd. Flow (RTOR)						
Link Speed (mph)				30		
Link Distance (ft)				472		
Travel Time (s)				10.7		
Confl. Peds. (#/hr)	47	49	47		37	38
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	89	441	0	0
Turn Type		Perm	Perm	NA		
Protected Phases				9		
Permitted Phases		9	9			
Detector Phase		9	9	9		
Switch Phase						
Minimum Initial (s)		28.0	28.0	28.0		
Minimum Split (s)		35.0	35.0	35.0		
Total Split (s)		35.0	35.0	35.0		
Total Split (%)		26.9%	26.9%	26.9%		
Yellow Time (s)		3.0	3.0	3.0		
All-Red Time (s)		4.0	4.0	4.0		
Lost Time Adjust (s)			0.0	0.0		
Total Lost Time (s)			7.0	7.0		
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		Max	Max	Max		
Act Effct Green (s)			28.0	28.0		
Actuated g/C Ratio			0.22	0.22		
v/c Ratio			0.54	0.63		
Control Delay			58.7	50.9		
Queue Delay			0.0	0.0		
Total Delay			58.7	50.9		
LOS			E	D		
Approach Delay				52.2		

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Approach LOS			D					D				
Queue Length 50th (ft)		51	156				23	181				66
Queue Length 95th (ft)		106	210				56	239				#190
Internal Link Dist (ft)			435					541				
Turn Bay Length (ft)		130					135					125
Base Capacity (vph)		127	705				149	724				144
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		0.54	0.56				0.22	0.62				0.92

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 44.8		Intersection LOS: D	
Intersection Capacity Utilization 151.4%		ICU Level of Service H	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Western Avenue & Elston Avenue & Diversey Avenue



Lane Group	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER
Approach LOS	D					D					D	
Queue Length 50th (ft)	235				54	373				33	131	
Queue Length 95th (ft)	280				92	435				75	180	
Internal Link Dist (ft)	439					569					833	
Turn Bay Length (ft)					120					85		
Base Capacity (vph)	1818				224	1672				136	693	
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	0.53				0.50	0.81				0.34	0.48	

Intersection Summary

Lane Group	SER2	NWL2	NWL	NWT	NWR	NWR2
Approach LOS				D		
Queue Length 50th (ft)			67	178		
Queue Length 95th (ft)			128	237		
Internal Link Dist (ft)				392		
Turn Bay Length (ft)			55			
Base Capacity (vph)			166	703		
Starvation Cap Reductn			0	0		
Spillback Cap Reductn			0	0		
Storage Cap Reductn			0	0		
Reduced v/c Ratio			0.54	0.63		

Intersection Summary

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	468	0	0	711	15	25	8	7	0	0	0
Future Vol, veh/h	34	468	0	0	711	15	25	8	7	0	0	0
Conflicting Peds, #/hr	12	0	31	31	0	12	4	0	2	2	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	3	0	0	13	0	0	0	0
Mvmt Flow	36	493	0	0	748	16	26	8	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	776	0	-	-	-	0	943	1341	249	1093	1333	398
Stage 1	-	-	-	-	-	-	565	565	-	768	768	-
Stage 2	-	-	-	-	-	-	378	776	-	325	565	-
Critical Hdwy	4.1	-	-	-	-	-	7.5	6.76	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.76	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.76	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4.13	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	849	-	0	0	-	-	220	138	757	171	155	607
Stage 1	-	-	0	0	-	-	482	480	-	365	414	-
Stage 2	-	-	0	0	-	-	621	380	-	667	511	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	839	-	-	-	-	-	209	128	756	152	144	598
Mov Cap-2 Maneuver	-	-	-	-	-	-	209	128	-	152	144	-
Stage 1	-	-	-	-	-	-	454	452	-	339	409	-
Stage 2	-	-	-	-	-	-	619	376	-	609	481	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	26.5	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	209	839	-	-	-	-
HCM Lane V/C Ratio	0.201	0.043	-	-	-	-
HCM Control Delay (s)	26.5	9.5	0.2	-	-	0
HCM Lane LOS	D	A	A	-	-	A
HCM 95th %tile Q(veh)	0.7	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	9	10	1152	1352	161
Future Vol, veh/h	31	9	10	1152	1352	161
Conflicting Peds, #/hr	0	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	0	10	2	4	1
Mvmt Flow	32	9	10	1176	1380	164

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2076	778	1550	0	-	0
Stage 1	1468	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.86	6.9	4.3	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.3	2.3	-	-	-
Pot Cap-1 Maneuver	*81	343	387	-	-	-
Stage 1	*176	-	-	-	-	-
Stage 2	*560	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*78	341	385	-	-	-
Mov Cap-2 Maneuver	*142	-	-	-	-	-
Stage 1	*170	-	-	-	-	-
Stage 2	*557	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.3	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	385	-	163	-	-
HCM Lane V/C Ratio	0.027	-	0.25	-	-
HCM Control Delay (s)	14.6	-	34.3	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

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

Intersection Capacity Utilization
9: Campbell Avenue & Elston Avenue & George Street

06/26/2024

Movement	EBT	EBR	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	8	21	136	42	9	3	13	3	14	5	4	13
Pedestrians		1		3	6		3		9	1	9	1
Ped Button	Yes		Yes					Yes				
Pedestrian Timing (s)	16.0		16.0					16.0				
Free Right		No		No	No				No	No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	29	0	187	0	0	0	0	38	0	0	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.89	0.85	0.96	0.85	0.85	0.95	0.95	0.91	0.85	0.85	0.95	0.95
Saturated Flow (vph)	1694	0	1822	0	0	0	0	1721	0	0	0	0
Ped Intf Time (s)	1.3	0.1	0.2	0.4	0.8	0.0	0.0	0.6	1.1	0.1	0.0	0.0
Pedestrian Frequency (%)	0.39		0.18					0.26				
Protected Option Allowed	No		No					No				
Reference Time (s)		0.0		0.0	0.0				0.0	0.0		
Adj Reference Time (s)		0.0		0.0	0.0				0.0	0.0		
Permitted Option												
Adj Saturation A (vph)	1694		1822			0	0	1381			0	0
Reference Time A (s)	3.4		12.5			0.0	0.0	3.9			0.0	0.0
Adj Saturation B (vph	NA		1822			0	0	0			0	0
Reference Time B (s)	NA		12.5			8.2	8.9	11.2			8.3	8.9
Reference Time (s)	3.4		12.5					3.9				
Adj Reference Time (s)	12.7		17.2					11.1				
Split Option												
Ref Time Combined (s)	3.4		12.5			0.0	0.0	3.2			0.0	0.0
Ref Time Seperate (s)	1.9		9.2			0.2	0.9	0.8			0.3	0.9
Reference Time (s)	3.4		12.5			3.2	3.2	3.2			2.9	2.9
Adj Reference Time (s)	12.7		17.2			11.1	11.1	11.1			9.1	9.1

Summary	EB WB	NB SB	NW SE	Combined
Protected Option (s)	NA	NA	NA	
Permitted Option (s)	17.2	11.1	51.7	
Split Option (s)	29.9	20.3	60.9	
Minimum (s)	17.2	11.1	51.7	79.9

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

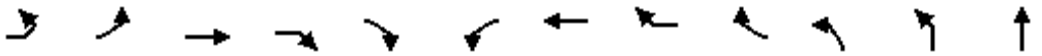
Intersection Summary			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR	SBR2	SEL2	SEL	SET	SER2	NWL	NWT	NWR	NWR2
Lane Configurations											
Volume (vph)	0	8	13	3	10	336	4	40	420	11	6
Pedestrians			3	5	9					5	9
Ped Button	Yes					Yes			Yes		
Pedestrian Timing (s)	16.0					16.0			16.0		
Free Right		No	No				No			No	No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	38	0	0	0	0	353	0	0	477	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.90	0.85	0.85	0.95	0.95	1.00	0.85	0.95	0.99	0.85	0.85
Saturated Flow (vph)	1704	0	0	0	0	1893	0	0	1882	0	0
Ped Intf Time (s)	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1
Pedestrian Frequency (%)	0.10					0.39			0.26		
Protected Option Allowed	No					No			No		
Reference Time (s)		0.0	0.0				0.0			0.0	0.0
Adj Reference Time (s)		0.0	0.0				0.0			0.0	0.0
Permitted Option											
Adj Saturation A (vph)	1297			0	0	1679		0	1202		
Reference Time A (s)	3.7			0.0	0.0	25.3		0.0	47.7		
Adj Saturation B (vph	0			NA	NA	NA		NA	NA		
Reference Time B (s)	10.9			NA	NA	NA		NA	NA		
Reference Time (s)	3.7					25.3			47.7		
Adj Reference Time (s)	9.1					29.3			51.7		
Split Option											
Ref Time Combined (s)	2.9			0.0	0.0	22.4		0.0	30.5		
Ref Time Seperate (s)	0.2			0.2	0.7	21.3		2.7	26.7		
Reference Time (s)	2.9			22.4	22.4	22.4		30.5	30.5		
Adj Reference Time (s)	9.1			26.4	26.4	26.4		34.5	34.5		
Summary											

Capacity Analysis Summary Sheets

Year 2029 Total Projected Weekday Morning Peak Hour



Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Lane Configurations												
Traffic Volume (vph)	5	75	328	71	9	14	343	58	9	8	96	1194
Future Volume (vph)	5	75	328	71	9	14	343	58	9	8	96	1194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		130		0		135		0			125	
Storage Lanes		1		0		1		0			1	
Taper Length (ft)		100				90					165	
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.91	1.00	0.91
Ped Bike Factor		0.98	0.99			0.99	0.99					1.00
Frt			0.971				0.976					0.998
Flt Protected		0.950				0.950					0.950	
Satd. Flow (prot)	0	1767	3397	0	0	1805	3419	0	0	0	1710	4971
Flt Permitted		0.318				0.320					0.084	
Satd. Flow (perm)	0	577	3397	0	0	602	3419	0	0	0	151	4971
Right Turn on Red					No				No			
Satd. Flow (RTOR)												
Link Speed (mph)			30				30					30
Link Distance (ft)			515				621					519
Travel Time (s)			11.7				14.1					11.8
Confl. Peds. (#/hr)	13	22		1	13	13		13	22	20	13	
Confl. Bikes (#/hr)				2	2							
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	20%	1%	3%	0%	0%	0%	2%	2%	0%	0%	6%	4%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	429	0	0	15	431	0	0	0	109	1272
Turn Type	Perm	Perm	NA			Perm	NA			pm+pt	pm+pt	NA
Protected Phases			4				8			5	5	2
Permitted Phases	4	4				8				2	2	
Detector Phase	4	4	4			8	8			5	5	2
Switch Phase												
Minimum Initial (s)	24.0	24.0	24.0			25.0	25.0			6.0	6.0	24.0
Minimum Split (s)	31.0	31.0	31.0			31.0	31.0			9.0	9.0	31.0
Total Split (s)	31.0	31.0	31.0			31.0	31.0			9.0	9.0	55.0
Total Split (%)	23.8%	23.8%	23.8%			23.8%	23.8%			6.9%	6.9%	42.3%
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0			3.0	3.0			0.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0			0.0	0.0				0.0	0.0
Total Lost Time (s)		6.0	6.0			6.0	6.0				3.0	5.0
Lead/Lag										Lead	Lead	Lag
Lead-Lag Optimize?										Yes	Yes	Yes
Recall Mode	Max	Max	Max			Max	Max			None	None	C-Max
Act Effct Green (s)		25.0	25.0			25.0	25.0				58.0	50.0
Actuated g/C Ratio		0.19	0.19			0.19	0.19				0.45	0.38
v/c Ratio		0.76	0.66			0.13	0.66				0.78	0.67
Control Delay		90.0	54.0			47.0	53.9				57.7	35.2
Queue Delay		0.0	0.0			0.0	0.0				0.0	0.0
Total Delay		90.0	54.0			47.0	53.9				57.7	35.2
LOS		F	D			D	D				E	D
Approach Delay			59.9				53.7					37.0

Lane Group	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER	SER2
Lane Configurations												
Traffic Volume (vph)	9	6	11	139	1163	161	3	7	40	277	49	4
Future Volume (vph)	9	6	11	139	1163	161	3	7	40	277	49	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			120		0			85		0	
Storage Lanes	0			1		0			1		0	
Taper Length (ft)				95					115			
Lane Util. Factor	0.91	0.91	0.91	1.00	0.91	0.91	0.91	0.95	1.00	0.95	0.95	0.95
Ped Bike Factor				1.00	0.99				0.97	0.98		
Frt					0.982					0.976		
Flt Protected				0.950					0.950			
Satd. Flow (prot)	0	0	0	1788	4873	0	0	0	1726	3262	0	0
Flt Permitted				0.112					0.627			
Satd. Flow (perm)	0	0	0	211	4873	0	0	0	1100	3262	0	0
Right Turn on Red		No					No					No
Satd. Flow (RTOR)												
Link Speed (mph)					30					30		
Link Distance (ft)					649					913		
Travel Time (s)					14.8					20.8		
Confl. Peds. (#/hr)	7	1	7	1		20	13	22	7		13	20
Confl. Bikes (#/hr)	2	1					1				2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	22%	0%	0%	1%	3%	4%	33%	14%	3%	5%	14%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	158	1396	0	0	0	49	348	0	0
Turn Type			pm+pt	pm+pt	NA			Perm	Perm	NA		
Protected Phases			1	1	6					10		
Permitted Phases			6	6				10	10			
Detector Phase			1	1	6			10	10	10		
Switch Phase												
Minimum Initial (s)			5.0	5.0	29.0			24.0	24.0	24.0		
Minimum Split (s)			9.0	9.0	35.0			35.0	35.0	35.0		
Total Split (s)			9.0	9.0	55.0			35.0	35.0	35.0		
Total Split (%)			6.9%	6.9%	42.3%			26.9%	26.9%	26.9%		
Yellow Time (s)			3.0	3.0	3.0			3.0	3.0	3.0		
All-Red Time (s)			0.0	0.0	2.0			4.0	4.0	4.0		
Lost Time Adjust (s)				0.0	0.0				0.0	0.0		
Total Lost Time (s)				3.0	5.0				7.0	7.0		
Lead/Lag			Lead	Lead	Lag							
Lead-Lag Optimize?			Yes	Yes	Yes							
Recall Mode			None	None	C-Max			Max	Max	Max		
Act Effct Green (s)				58.0	50.0				28.0	28.0		
Actuated g/C Ratio				0.45	0.38				0.22	0.22		
v/c Ratio				0.95	0.74				0.21	0.50		
Control Delay				84.8	37.5				44.7	47.6		
Queue Delay				0.0	0.0				0.0	0.0		
Total Delay				84.8	37.5				44.7	47.6		
LOS				F	D				D	D		
Approach Delay					42.3					47.3		

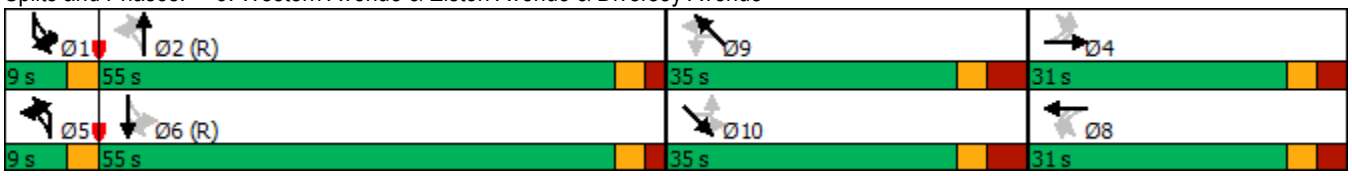
Lane Group	NWL	NWT	NWR
Lane Configurations			
Traffic Volume (vph)	13	118	71
Future Volume (vph)	13	118	71
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	55		0
Storage Lanes	1		0
Taper Length (ft)	100		
Lane Util. Factor	1.00	0.95	0.95
Ped Bike Factor	0.97	0.98	
Frt		0.943	
Flt Protected	0.950		
Satd. Flow (prot)	1671	3182	0
Flt Permitted	0.455		
Satd. Flow (perm)	779	3182	0
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)		30	
Link Distance (ft)		472	
Travel Time (s)		10.7	
Confl. Peds. (#/hr)	20		22
Confl. Bikes (#/hr)			
Peak Hour Factor	0.95	0.95	0.95
Heavy Vehicles (%)	8%	4%	7%
Shared Lane Traffic (%)			
Lane Group Flow (vph)	14	199	0
Turn Type	Perm	NA	
Protected Phases		9	
Permitted Phases	9		
Detector Phase	9	9	
Switch Phase			
Minimum Initial (s)	28.0	28.0	
Minimum Split (s)	35.0	35.0	
Total Split (s)	35.0	35.0	
Total Split (%)	26.9%	26.9%	
Yellow Time (s)	3.0	3.0	
All-Red Time (s)	4.0	4.0	
Lost Time Adjust (s)	0.0	0.0	
Total Lost Time (s)	7.0	7.0	
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	Max	Max	
Act Effct Green (s)	28.0	28.0	
Actuated g/C Ratio	0.22	0.22	
v/c Ratio	0.08	0.29	
Control Delay	42.5	44.1	
Queue Delay	0.0	0.0	
Total Delay	42.5	44.1	
LOS	D	D	
Approach Delay		44.0	

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT
Approach LOS			E				D					D
Queue Length 50th (ft)		68	177			11	178				51	321
Queue Length 95th (ft)		#160	235			33	237				#138	375
Internal Link Dist (ft)			435				541					439
Turn Bay Length (ft)		130				135					125	
Base Capacity (vph)		110	653			115	657				139	1911
Starvation Cap Reductn		0	0			0	0				0	0
Spillback Cap Reductn		0	0			0	0				0	0
Storage Cap Reductn		0	0			0	0				0	0
Reduced v/c Ratio		0.76	0.66			0.13	0.66				0.78	0.67

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 44.3		Intersection LOS: D	
Intersection Capacity Utilization 136.2%		ICU Level of Service H	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Western Avenue & Elston Avenue & Diversey Avenue



Lane Group	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER	SER2
Approach LOS					D					D		
Queue Length 50th (ft)				76	368				34	136		
Queue Length 95th (ft)				#191	427				73	186		
Internal Link Dist (ft)					569					833		
Turn Bay Length (ft)				120					85			
Base Capacity (vph)				166	1874				236	702		
Starvation Cap Reductn				0	0				0	0		
Spillback Cap Reductn				0	0				0	0		
Storage Cap Reductn				0	0				0	0		
Reduced v/c Ratio				0.95	0.74				0.21	0.50		

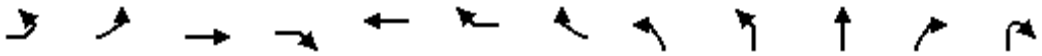
Intersection Summary

Lane Group	NWL	NWT	NWR
Approach LOS		D	
Queue Length 50th (ft)	10	74	
Queue Length 95th (ft)	29	111	
Internal Link Dist (ft)		392	
Turn Bay Length (ft)	55		
Base Capacity (vph)	167	685	
Starvation Cap Reductn	0	0	
Spillback Cap Reductn	0	0	
Storage Cap Reductn	0	0	
Reduced v/c Ratio	0.08	0.29	

Intersection Summary

Intersection Capacity Utilization
9: Campbell Avenue & Elston Avenue & George Street

06/26/2024



Movement	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	NBR2
Lane Configurations												
Volume (vph)	1	3	16	8	90	10	4	7	7	10	12	3
Pedestrians	2	6		5		2	6		2		7	5
Ped Button			Yes		Yes					Yes		
Pedestrian Timing (s)			16.0		16.0					16.0		
Free Right				No		No	No				No	No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	28	0	104	0	0	0	0	39	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.95	0.85	0.98	0.85	0.85	0.95	0.95	0.93	0.85	0.85
Saturated Flow (vph)	0	0	1806	0	1862	0	0	0	0	1758	0	0
Ped Intf Time (s)	0.0	0.0	0.3	0.6	0.1	0.3	0.8	0.0	0.0	0.3	0.9	0.6
Pedestrian Frequency (%)			0.23		0.18					0.21		
Protected Option Allowed			No		No					No		
Reference Time (s)				0.0		0.0	0.0				0.0	0.0
Adj Reference Time (s)				0.0		0.0	0.0				0.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	0	575		1862			0	0	1726		
Reference Time A (s)	0.0	0.0	6.1		6.8			0.0	0.0	3.1		
Adj Saturation B (vph	0	0	0		1862			0	0	0		
Reference Time B (s)	8.1	8.2	10.1		6.8			8.5	8.5	11.0		
Reference Time (s)			6.1		6.8					3.1		
Adj Reference Time (s)			12.4		12.5					10.5		
Split Option												
Ref Time Combined (s)	0.0	0.0	2.1		6.8			0.0	0.0	3.0		
Ref Time Seperate (s)	0.1	0.2	1.4		5.9			0.5	0.5	1.0		
Reference Time (s)	2.1	2.1	2.1		6.8			3.0	3.0	3.0		
Adj Reference Time (s)	10.8	10.8	10.8		12.5			10.5	10.5	10.5		

Summary	EB WB	NB SB	NW SE	Combined
Protected Option (s)	NA	NA	NA	
Permitted Option (s)	12.5	10.5	38.4	
Split Option (s)	23.3	19.3	52.2	
Minimum (s)	12.5	10.5	38.4	61.4

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	51.1%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	NWL	NWT	NWR	NWR2
Lane Configurations												
Volume (vph)	8	10	0	3	6	4	32	364	23	247	17	5
Pedestrians	7	5			2	6	7				6	7
Ped Button			Yes					Yes		Yes		
Pedestrian Timing (s)			16.0					16.0		16.0		
Free Right				No	No						No	No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	27	0	0	0	0	400	0	292	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.92	0.85	0.85	0.95	0.95	1.00	0.95	0.98	0.85	0.85
Saturated Flow (vph)	0	0	1745	0	0	0	0	1891	0	1871	0	0
Ped Intf Time (s)	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.1	0.8	0.9
Pedestrian Frequency (%)			0.06					0.23		0.21		
Protected Option Allowed			No					No		No		
Reference Time (s)				0.0	0.0						0.0	0.0
Adj Reference Time (s)				0.0	0.0						0.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	0	980			0	0	1396	0	1471		
Reference Time A (s)	0.0	0.0	3.4			0.0	0.0	34.4	0.0	23.9		
Adj Saturation B (vph	0	0	0			NA	NA	NA	NA	NA		
Reference Time B (s)	8.5	8.7	9.9			NA	NA	NA	NA	NA		
Reference Time (s)			3.4					34.4		23.9		
Adj Reference Time (s)			8.8					38.4		27.9		
Split Option												
Ref Time Combined (s)	0.0	0.0	1.9			0.0	0.0	25.4	0.0	18.8		
Ref Time Seperate (s)	0.5	0.7	0.1			0.3	2.1	23.0	1.5	15.9		
Reference Time (s)	1.9	1.9	1.9			25.4	25.4	25.4	18.8	18.8		
Adj Reference Time (s)	8.8	8.8	8.8			29.4	29.4	29.4	22.8	22.8		
Summary												

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	521	0	0	538	3	11	2	11	0	0	0
Future Vol, veh/h	26	521	0	0	538	3	11	2	11	0	0	0
Conflicting Peds, #/hr	12	0	19	19	0	12	5	0	7	7	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	0	0	3	33	0	0	0	0	0	0
Mvmt Flow	30	599	0	0	618	3	13	2	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	633	0	-	-	-	0	973	1292	307	1000	1291	328
Stage 1	-	-	-	-	-	-	659	659	-	632	632	-
Stage 2	-	-	-	-	-	-	314	633	-	368	659	-
Critical Hdwy	4.1	-	-	-	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	960	-	0	0	-	-	210	165	695	200	165	674
Stage 1	-	-	0	0	-	-	424	464	-	440	477	-
Stage 2	-	-	0	0	-	-	677	476	-	630	464	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	949	-	-	-	-	-	202	156	690	184	156	663
Mov Cap-2 Maneuver	-	-	-	-	-	-	202	156	-	184	156	-
Stage 1	-	-	-	-	-	-	404	442	-	414	472	-
Stage 2	-	-	-	-	-	-	674	471	-	582	442	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	18.8	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	288	949	-	-	-	-
HCM Lane V/C Ratio	0.096	0.031	-	-	-	-
HCM Control Delay (s)	18.8	8.9	0.2	-	-	0
HCM Lane LOS	C	A	A	-	-	A
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	39	14	1395	1453	115
Future Vol, veh/h	30	39	14	1395	1453	115
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	3	0	5	3	3
Mvmt Flow	32	42	15	1500	1562	124

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2411	850	1693	0	-	0
Stage 1	1631	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	6.94	6.96	4.1	-	-	-
Critical Hdwy Stg 1	5.94	-	-	-	-	-
Critical Hdwy Stg 2	5.94	-	-	-	-	-
Follow-up Hdwy	3.57	3.33	2.2	-	-	-
Pot Cap-1 Maneuver	*35	302	382	-	-	-
Stage 1	*138	-	-	-	-	-
Stage 2	*464	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*33	300	379	-	-	-
Mov Cap-2 Maneuver	*104	-	-	-	-	-
Stage 1	*132	-	-	-	-	-
Stage 2	*461	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43.5	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	379	-	165	-	-
HCM Lane V/C Ratio	0.04	-	0.45	-	-
HCM Control Delay (s)	14.9	-	43.5	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	26	3	0	19
Future Vol, veh/h	4	0	26	3	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	100	2	2	100	2	2
Mvmt Flow	4	0	27	3	0	20

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	49	29	0	0	30	0
Stage 1	29	-	-	-	-	-
Stage 2	20	-	-	-	-	-
Critical Hdwy	7.4	6.22	-	-	4.12	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	762	1046	-	-	1583	-
Stage 1	791	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	762	1046	-	-	1583	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	799	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	762	-	1583	-
HCM Lane V/C Ratio	-	-	0.006	-	-	-
HCM Control Delay (s)	-	-	9.8	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	29	9	0	23
Future Vol, veh/h	4	0	29	9	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	4	0	31	9	0	24

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	60	36	0	0	40	0
Stage 1	36	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	952	1042	-	-	1583	-
Stage 1	992	-	-	-	-	-
Stage 2	1004	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	952	1042	-	-	1583	-
Mov Cap-2 Maneuver	952	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	1004	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	952	1583	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	-	-	8.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	65	110	19	4	0
Future Vol, veh/h	6	65	110	19	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	6	68	116	20	4	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	136	0	-	0	206	126
Stage 1	-	-	-	-	126	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1461	-	-	-	787	930
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1461	-	-	-	784	930
Mov Cap-2 Maneuver	-	-	-	-	784	-
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	948	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1461	-	-	-	784
HCM Lane V/C Ratio	0.004	-	-	-	0.005
HCM Control Delay (s)	7.5	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Capacity Analysis Summary Sheets

Year 2029 Total Projected Weekday Evening Peak Hour

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Lane Configurations												
Traffic Volume (vph)	3	65	284	82	25	3	30	381	54	13	37	100
Future Volume (vph)	3	65	284	82	25	3	30	381	54	13	37	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		130		0			135		0			125
Storage Lanes		1		0			1		0			1
Taper Length (ft)		100					90					165
Lane Util. Factor	0.95	1.00	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.91	1.00
Ped Bike Factor		0.94	0.96				0.94	0.98				
Frt			0.959					0.978				
Flt Protected		0.950					0.950					0.950
Satd. Flow (prot)	0	1805	3264	0	0	0	1805	3356	0	0	0	1703
Flt Permitted		0.314					0.374					0.084
Satd. Flow (perm)	0	562	3264	0	0	0	668	3356	0	0	0	151
Right Turn on Red					No					No		
Satd. Flow (RTOR)												
Link Speed (mph)			30					30				
Link Distance (ft)			515					621				
Travel Time (s)			11.7					14.1				
Confl. Peds. (#/hr)	46	41		23	54	23	56		46	41	52	46
Confl. Bikes (#/hr)				4	1							
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	1%	17%	0%	6%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	70	404	0	0	0	34	462	0	0	0	141
Turn Type	Perm	Perm	NA			Perm	Perm	NA			pm+pt	pm+pt
Protected Phases			4					8			5	5
Permitted Phases	4	4				8	8				2	2
Detector Phase	4	4	4			8	8	8			5	5
Switch Phase												
Minimum Initial (s)	24.0	24.0	24.0			25.0	25.0	25.0			6.0	6.0
Minimum Split (s)	31.0	31.0	31.0			31.0	31.0	31.0			9.0	9.0
Total Split (s)	34.0	34.0	34.0			34.0	34.0	34.0			9.0	9.0
Total Split (%)	26.2%	26.2%	26.2%			26.2%	26.2%	26.2%			6.9%	6.9%
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0	3.0			3.0	3.0
All-Red Time (s)	3.0	3.0	3.0			3.0	3.0	3.0			0.0	0.0
Lost Time Adjust (s)		0.0	0.0				0.0	0.0				-0.5
Total Lost Time (s)		6.0	6.0				6.0	6.0				2.5
Lead/Lag											Lead	Lead
Lead-Lag Optimize?											Yes	Yes
Recall Mode	Max	Max	Max			Max	Max	Max			None	None
Act Effct Green (s)		28.0	28.0				28.0	28.0				56.0
Actuated g/C Ratio		0.22	0.22				0.22	0.22				0.43
v/c Ratio		0.58	0.57				0.24	0.64				0.99
Control Delay		66.5	49.4				47.4	51.1				101.3
Queue Delay		0.0	0.0				0.0	0.0				0.0
Total Delay		66.5	49.4				47.4	51.1				101.3
LOS		E	D				D	D				F
Approach Delay			52.0					50.8				

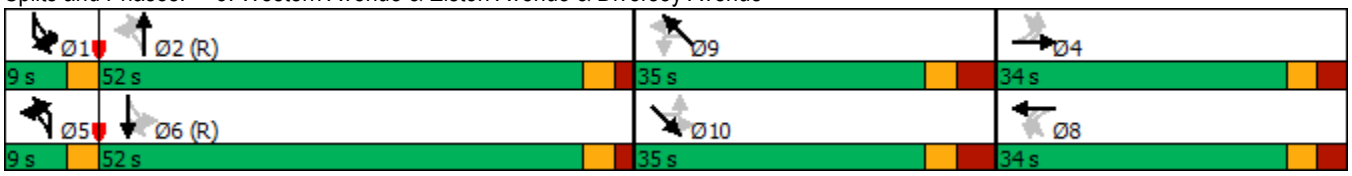
Lane Group	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER
Lane Configurations												
Traffic Volume (vph)	925	25	21	21	94	1121	229	9	8	40	245	88
Future Volume (vph)	925	25	21	21	94	1121	229	9	8	40	245	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0			120		0			85		0
Storage Lanes		0			1		0			1		0
Taper Length (ft)					95					115		
Lane Util. Factor	0.91	0.91	0.91	0.91	1.00	0.91	0.91	0.91	0.95	1.00	0.95	0.95
Ped Bike Factor	0.99				0.98	0.95				0.94	0.93	
Frt	0.993					0.974					0.958	
Flt Protected					0.950					0.950		
Satd. Flow (prot)	5027	0	0	0	1790	4608	0	0	0	1805	3156	0
Flt Permitted					0.180					0.338		
Satd. Flow (perm)	5027	0	0	0	333	4608	0	0	0	606	3156	0
Right Turn on Red			No					No				
Satd. Flow (RTOR)												
Link Speed (mph)	30					30					30	
Link Distance (ft)	519					649					913	
Travel Time (s)	11.8					14.8					20.8	
Confl. Peds. (#/hr)		42	23	42	23		52	46	41	42		54
Confl. Bikes (#/hr)		1	4									1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	0%	0%	0%	1%	5%	2%	0%	0%	0%	1%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1002	0	0	0	119	1401	0	0	0	49	352	0
Turn Type	NA			pm+pt	pm+pt	NA			Perm	Perm	NA	
Protected Phases	2			1	1	6					10	
Permitted Phases				6	6				10	10		
Detector Phase	2			1	1	6			10	10	10	
Switch Phase												
Minimum Initial (s)	24.0			5.0	5.0	29.0			24.0	24.0	24.0	
Minimum Split (s)	31.0			9.0	9.0	35.0			35.0	35.0	35.0	
Total Split (s)	52.0			9.0	9.0	52.0			35.0	35.0	35.0	
Total Split (%)	40.0%			6.9%	6.9%	40.0%			26.9%	26.9%	26.9%	
Yellow Time (s)	3.0			3.0	3.0	3.0			3.0	3.0	3.0	
All-Red Time (s)	2.0			0.0	0.0	2.0			4.0	4.0	4.0	
Lost Time Adjust (s)	0.0				-0.5	0.0				0.0	0.0	
Total Lost Time (s)	5.0				2.5	5.0				7.0	7.0	
Lead/Lag	Lag			Lead	Lead	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Recall Mode	C-Max			None	None	C-Max			Max	Max	Max	
Act Effct Green (s)	47.0				56.0	47.0				28.0	28.0	
Actuated g/C Ratio	0.36				0.43	0.36				0.22	0.22	
v/c Ratio	0.55				0.55	0.84				0.38	0.52	
Control Delay	34.5				31.9	43.8				53.5	48.2	
Queue Delay	0.0				0.0	0.0				0.0	0.0	
Total Delay	34.5				31.9	43.8				53.5	48.2	
LOS	C				C	D				D	D	
Approach Delay	42.7					42.8					48.9	

Lane Group	SER2	NWL2	NWL	NWT	NWR	NWR2
Lane Configurations						
Traffic Volume (vph)	8	10	79	301	138	3
Future Volume (vph)	8	10	79	301	138	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)			55		0	
Storage Lanes			1		0	
Taper Length (ft)			100			
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95
Ped Bike Factor			0.86	0.96		
Frt				0.952		
Flt Protected			0.950			
Satd. Flow (prot)	0	0	1789	3251	0	0
Flt Permitted			0.450			
Satd. Flow (perm)	0	0	730	3251	0	0
Right Turn on Red	No					No
Satd. Flow (RTOR)						
Link Speed (mph)				30		
Link Distance (ft)				472		
Travel Time (s)				10.7		
Confl. Peds. (#/hr)	52	54	52		41	42
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	91	455	0	0
Turn Type		Perm	Perm	NA		
Protected Phases				9		
Permitted Phases		9	9			
Detector Phase		9	9	9		
Switch Phase						
Minimum Initial (s)		28.0	28.0	28.0		
Minimum Split (s)		35.0	35.0	35.0		
Total Split (s)		35.0	35.0	35.0		
Total Split (%)		26.9%	26.9%	26.9%		
Yellow Time (s)		3.0	3.0	3.0		
All-Red Time (s)		4.0	4.0	4.0		
Lost Time Adjust (s)			0.0	0.0		
Total Lost Time (s)			7.0	7.0		
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		Max	Max	Max		
Act Effct Green (s)			28.0	28.0		
Actuated g/C Ratio			0.22	0.22		
v/c Ratio			0.58	0.65		
Control Delay			62.1	51.6		
Queue Delay			0.0	0.0		
Total Delay			62.1	51.6		
LOS			E	D		
Approach Delay				53.3		

Lane Group	EBL2	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	WBR2	NBL2	NBL
Approach LOS			D					D				
Queue Length 50th (ft)		53	162				24	187				70
Queue Length 95th (ft)		#118	217				57	247				#211
Internal Link Dist (ft)			435					541				
Turn Bay Length (ft)		130					135					125
Base Capacity (vph)		121	703				143	722				142
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		0.58	0.57				0.24	0.64				0.99

Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 64 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 46.4		Intersection LOS: D	
Intersection Capacity Utilization 152.8%		ICU Level of Service H	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Western Avenue & Elston Avenue & Diversey Avenue



Lane Group	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	SBR2	SEL2	SEL	SET	SER
Approach LOS	D					D					D	
Queue Length 50th (ft)	245				58	394				36	138	
Queue Length 95th (ft)	291				98	458				79	190	
Internal Link Dist (ft)	439					569					833	
Turn Bay Length (ft)					120					85		
Base Capacity (vph)	1817				216	1665				130	679	
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	0.55				0.55	0.84				0.38	0.52	

Intersection Summary

Lane Group	SER2	NWL2	NWL	NWT	NWR	NWR2
Approach LOS				D		
Queue Length 50th (ft)			69	185		
Queue Length 95th (ft)			133	245		
Internal Link Dist (ft)				392		
Turn Bay Length (ft)			55			
Base Capacity (vph)			157	700		
Starvation Cap Reductn			0	0		
Spillback Cap Reductn			0	0		
Storage Cap Reductn			0	0		
Reduced v/c Ratio			0.58	0.65		

Intersection Summary

Intersection Capacity Utilization
9: Campbell Avenue & Elston Avenue & George Street

06/26/2024

Movement	EBT	EBR	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	8	21	136	42	9	3	13	3	14	5	4	13
Pedestrians		1		3	6		3		9	1	9	1
Ped Button	Yes		Yes					Yes				
Pedestrian Timing (s)	16.0		16.0					16.0				
Free Right		No		No	No				No	No		
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	29	0	187	0	0	0	0	38	0	0	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.89	0.85	0.96	0.85	0.85	0.95	0.95	0.91	0.85	0.85	0.95	0.95
Saturated Flow (vph)	1694	0	1822	0	0	0	0	1721	0	0	0	0
Ped Intf Time (s)	1.3	0.1	0.2	0.4	0.8	0.0	0.0	0.6	1.1	0.1	0.0	0.0
Pedestrian Frequency (%)	0.39		0.18					0.26				
Protected Option Allowed	No		No					No				
Reference Time (s)		0.0		0.0	0.0				0.0	0.0		
Adj Reference Time (s)		0.0		0.0	0.0				0.0	0.0		
Permitted Option												
Adj Saturation A (vph)	1694		1822			0	0	1381			0	0
Reference Time A (s)	3.4		12.5			0.0	0.0	3.9			0.0	0.0
Adj Saturation B (vph	NA		1822			0	0	0			0	0
Reference Time B (s)	NA		12.5			8.2	8.9	11.2			8.3	8.9
Reference Time (s)	3.4		12.5					3.9				
Adj Reference Time (s)	12.7		17.2					11.1				
Split Option												
Ref Time Combined (s)	3.4		12.5			0.0	0.0	3.2			0.0	0.0
Ref Time Seperate (s)	1.9		9.2			0.2	0.9	0.8			0.3	0.9
Reference Time (s)	3.4		12.5			3.2	3.2	3.2			2.9	2.9
Adj Reference Time (s)	12.7		17.2			11.1	11.1	11.1			9.1	9.1

Summary	EB WB	NB SB	NW SE	Combined
Protected Option (s)	NA	NA	NA	
Permitted Option (s)	17.2	11.1	51.7	
Split Option (s)	29.9	20.3	60.9	
Minimum (s)	17.2	11.1	51.7	79.9

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR	SBR2	SEL2	SEL	SET	SER2	NWL	NWT	NWR	NWR2
Lane Configurations											
Volume (vph)	0	8	13	3	10	336	4	40	420	11	6
Pedestrians			3	5	9					5	9
Ped Button	Yes					Yes			Yes		
Pedestrian Timing (s)	16.0					16.0			16.0		
Free Right		No	No				No			No	No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	38	0	0	0	0	353	0	0	477	0	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.90	0.85	0.85	0.95	0.95	1.00	0.85	0.95	0.99	0.85	0.85
Saturated Flow (vph)	1704	0	0	0	0	1893	0	0	1882	0	0
Ped Intf Time (s)	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.1
Pedestrian Frequency (%)	0.10					0.39			0.26		
Protected Option Allowed	No					No			No		
Reference Time (s)		0.0	0.0				0.0			0.0	0.0
Adj Reference Time (s)		0.0	0.0				0.0			0.0	0.0
Permitted Option											
Adj Saturation A (vph)	1297			0	0	1679		0	1202		
Reference Time A (s)	3.7			0.0	0.0	25.3		0.0	47.7		
Adj Saturation B (vph	0			NA	NA	NA		NA	NA		
Reference Time B (s)	10.9			NA	NA	NA		NA	NA		
Reference Time (s)	3.7					25.3			47.7		
Adj Reference Time (s)	9.1					29.3			51.7		
Split Option											
Ref Time Combined (s)	2.9			0.0	0.0	22.4		0.0	30.5		
Ref Time Seperate (s)	0.2			0.2	0.7	21.3		2.7	26.7		
Reference Time (s)	2.9			22.4	22.4	22.4		30.5	30.5		
Adj Reference Time (s)	9.1			26.4	26.4	26.4		34.5	34.5		
Summary											

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	482	0	0	732	15	26	8	7	0	0	0
Future Vol, veh/h	36	482	0	0	732	15	26	8	7	0	0	0
Conflicting Peds, #/hr	13	0	34	34	0	13	5	0	3	3	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	1	0	0	3	0	0	13	0	0	0	0
Mvmt Flow	38	507	0	0	771	16	27	8	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	800	0	-	-	-	0	974	1383	257	1129	1375	412
Stage 1	-	-	-	-	-	-	583	583	-	792	792	-
Stage 2	-	-	-	-	-	-	391	800	-	337	583	-
Critical Hdwy	4.1	-	-	-	-	-	7.5	6.76	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.76	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.76	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	-	-	-	3.5	4.13	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	832	-	0	0	-	-	209	130	748	161	147	595
Stage 1	-	-	0	0	-	-	470	470	-	353	404	-
Stage 2	-	-	0	0	-	-	610	370	-	656	502	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	822	-	-	-	-	-	198	120	746	141	136	585
Mov Cap-2 Maneuver	-	-	-	-	-	-	198	120	-	141	136	-
Stage 1	-	-	-	-	-	-	440	440	-	326	399	-
Stage 2	-	-	-	-	-	-	607	366	-	595	470	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	28.2	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	198	822	-	-	-	-
HCM Lane V/C Ratio	0.218	0.046	-	-	-	-
HCM Control Delay (s)	28.2	9.6	0.3	-	-	0
HCM Lane LOS	D	A	A	-	-	A
HCM 95th %tile Q(veh)	0.8	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	21	13	1187	1393	170
Future Vol, veh/h	42	21	13	1187	1393	170
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	5	0	8	2	4	1
Mvmt Flow	43	21	13	1211	1421	173

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2147	804	1601	0	-	0
Stage 1	1515	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Critical Hdwy	6.9	6.9	4.26	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.3	2.28	-	-	-
Pot Cap-1 Maneuver	*65	330	378	-	-	-
Stage 1	*163	-	-	-	-	-
Stage 2	*557	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*62	328	375	-	-	-
Mov Cap-2 Maneuver	*129	-	-	-	-	-
Stage 1	*156	-	-	-	-	-
Stage 2	*553	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	41.1	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	375	-	162	-	-
HCM Lane V/C Ratio	0.035	-	0.397	-	-
HCM Control Delay (s)	15	-	41.1	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.1	-	1.7	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	18	5	0	23
Future Vol, veh/h	4	0	18	5	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	100	2	2	100	2	2
Mvmt Flow	4	0	19	5	0	24

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	46	22	0	0	24	0
Stage 1	22	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	7.4	6.22	-	-	4.12	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	765	1055	-	-	1591	-
Stage 1	797	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	765	1055	-	-	1591	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	796	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	765	-	1591	-
HCM Lane V/C Ratio	-	-	0.006	-	-	-
HCM Control Delay (s)	-	-	9.7	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	0	23	3	0	27
Future Vol, veh/h	11	0	23	3	0	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	12	0	24	3	0	28

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	54	26	0	0	27	0
Stage 1	26	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	959	1056	-	-	1600	-
Stage 1	1002	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	959	1056	-	-	1600	-
Mov Cap-2 Maneuver	959	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1600	-
HCM Lane V/C Ratio	-	-	0.012	-	-
HCM Control Delay (s)	-	-	8.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	42	178	5	21	2
Future Vol, veh/h	1	42	178	5	21	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	2	2	0	0	2
Mvmt Flow	1	44	187	5	22	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	192	0	-	0	236	190
Stage 1	-	-	-	-	190	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.1	-	-	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.318
Pot Cap-1 Maneuver	1394	-	-	-	757	852
Stage 1	-	-	-	-	847	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1394	-	-	-	756	852
Mov Cap-2 Maneuver	-	-	-	-	756	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1394	-	-	-	763
HCM Lane V/C Ratio	0.001	-	-	-	0.032
HCM Control Delay (s)	7.6	0	-	-	9.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1