

Traffic Impact Study 1621-31 Chicago Avenue

Evanston, Illinois



Prepared for:



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Executive Summary

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed mixed-use development to be located at 1621-31 Chicago Avenue in Evanston, Illinois. The site is located on the east side of Chicago Avenue between Davis Street and Church Street and is currently occupied by several one-story retail buildings.

The objective of the traffic study was 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 roadway, access, bicycle, and pedestrian modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

Accessibility to and from the area is enhanced by the public transportation and various alternative modes of transportation. The Metra Union Pacific North Line (UP-N) and Chicago Transit Authority (CTA) Rapid Transit Purple Line have stations within a half-mile of the site and several CTA bus routes have stops in the area. In addition, pedestrian facilities including sidewalks and crosswalks are generally provided on all roadways within the area. Barrier-protected bike lanes are provided on Chicago Avenue, Davis Street, and Church Street. Car-sharing vehicles are also located within the area.

Vehicle, pedestrian, and bicycle counts were conducted during the weekday morning and evening peak periods in order to determine the general transportation conditions during these time periods. The following intersections were analyzed as part of this study:

- Chicago Avenue with Davis Street
- Chicago Avenue with Church Street
- Hinman Avenue with Davis Street
- Hinman Avenue with Church Street
- Davis Street with the north-south alley
- Church Street with the north-south alley

The proposed development will be an 11-story mixed-use development containing approximately 110 apartment units with 34 studios, 44 one-bedroom units, and 32 two-bedroom units, approximately 7,000 square feet of retail space, and 48 parking spaces. Access to the parking garage and the two loading docks will be via the north-south public alley that extends along the east side of the site.

Based on the following analyses and recommendations, the following conclusions were made:

- The existing roadway system has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development. All the intersections within the study area are projected to continue to operate at a good level of service assuming the additional traffic to be generated by the proposed development and the other area growth. Overall, the proposed development will have a limited impact on the operation of the roadway system. As such, no roadway improvements and/or traffic control modifications are required.
- Given the location of the site within the central business district and its proximity to public transportation and alternative modes of transportation, the number of vehicle trips generated by the development will be reduced. A review of the U.S. Census data in the area showed that only approximately 50 percent of residents in the area drive a car to work. Further, the development is proposing a total of approximately 7,000 square feet of new commercial space which will replace approximately 15,000 square feet of existing commercial space. As such, the net increase in new traffic and parking to the area will be reduced.
- Access to the parking garage and the two loading docks will be via the north-south public alley that extends along the east side of the site. The access drive will provide one inbound lane and one outbound lane. Vehicles to the parking garage and trucks to the loading docks will be able to access the alley from either Church Street or Davis Street, which will help to distribute the traffic along the roadway system.
- The following measure and improvements are proposed as part of the development to enhance the operation of the public alley and to reduce the impact of the proposed development:
 - The commercial deliveries/waste collection generated by the site will be reduced, as the proposed development will significantly reduce the square footage and amount of commercial spaces and commercial users compared to existing conditions which include seven (7) separate commercial spaces and potential users.
 - The proposed development will include two loading docks for deliveries and waste collection, which is a significant improvement over existing conditions as the current site does not provide any loading docks. Deliveries and waste collection to the existing site currently occur in the public alley.
 - All waste containers for the proposed development will be stored within the proposed development eliminating many of the waste containers currently stored in the public alley.

- As part of the development, the developer has committed to the following improvements concerning the operation of the public alley:
 - The establishment of an alley management plan that will be implemented during the construction of the development and the operation of the development. A copy of the alley management plan is included in the Appendix. The alley management plan includes a reservation based system of loading dock usage and the installation of communication and notification devices alerting to vehicles in the alley.
 - The repaving of the portion of the alley along the frontage of the development as well as a financial contribution of up to \$200,000 towards the city's financial responsibility for improvements to the rest of the alley.
- In addition, a loading zone for passenger vehicles only is proposed along the east side of Chicago Avenue which will require the elimination of three parallel parking spaces. The loading zone will be used for short term drop-off/pick-up of residents, guests, and commercial patrons via private vehicles, taxis, and ride share companies as well as for food deliveries. Loading for all truck deliveries will occur in the loading docks. The three-space loading zone should be sufficient to accommodate the peak demand of the development and is similar to what is provided at other residential developments.
- The following summarizes measures to be implemented by the development and/or recommendations to further minimize the impact of the development, foster alternative modes of transportation other than the automobile, and to enhance pedestrian/bicycle safety:
 - The development will provide covered parking for approximately 110 bicycles.
 - Parking within the building will be an additional cost and is not included in the base unit lease. Charging for parking or unbundling parking costs from unit leases is an effective method to reduce traffic to and from the development as well as reduce the demand for on-site parking.
 - The parking garage will include five electrical vehicle (EV) charging stations, another ten parking spaces that will be ready/equipped for additional EV charging stations, and the rest of the parking spaces will be EV capable.
 - Consideration should be given to making transit information available to residents by providing an information kiosk in the leasing office with information on the CTA Purple line, the Metra Pacific North Line, and local bus routes.

1. Introduction

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O’Hara, Aboona, Inc. (KLOA, Inc.) for a proposed mixed-use development to be located at 1621-31 Chicago Avenue in Evanston, Illinois. The site is located on the east side of Chicago Avenue between Davis Street and Church Street and is currently occupied by several one-story retail buildings. As proposed, the proposed development will be a mixed-use development containing approximately 110 apartment units with 34 studios, 44 one-bedroom units, and 32 two-bedroom units, approximately 7,000 square feet of retail space, and 48 parking spaces. Access to the parking garage and the two loading docks will be via the north-south public alley that extends along the east side of the site. Given its proximity to the area public transportation and alternative modes of transportation, the development qualifies as a transit-oriented development (TOD).

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway 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 evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

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

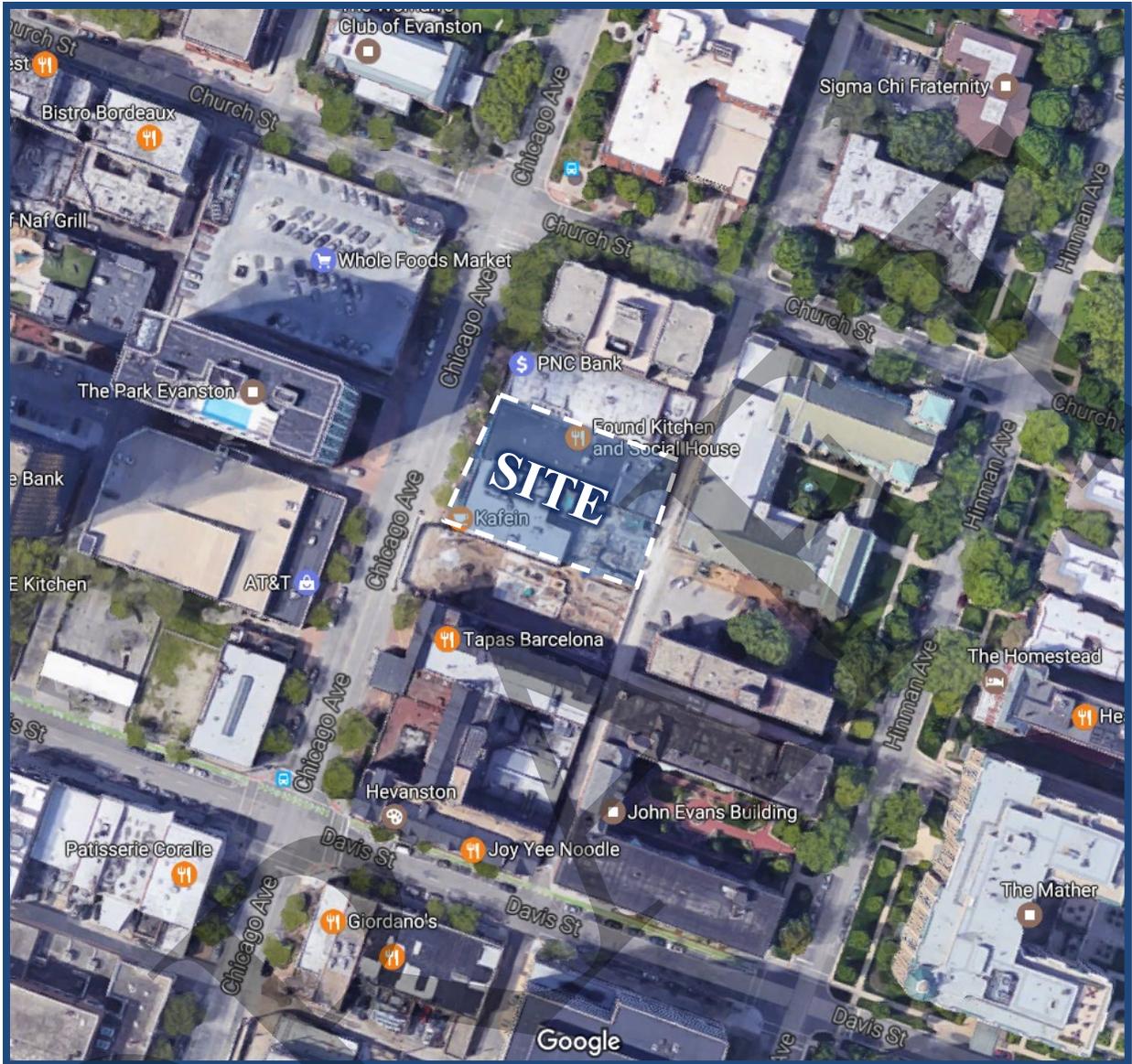
1. Existing Conditions - Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area adjusted to reflect normal conditions.
2. Year 2030 No-Build Conditions – Analyzes the capacity of the existing roadway system using the base traffic volumes increased by a regional growth factor and including the traffic to be generated by other proposed and/or approved area developments.
3. Year 2030 Total Project Conditions – Analyzes the capacity of the projected roadway system assuming projected traffic volumes which include the existing traffic volumes, ambient area growth not attributable to any particular development, the traffic to be generated by other proposed/approved area developments, and the traffic estimated to be generated by the proposed subject development.



Site Location

Figure 1

1621-31 Chicago Avenue
Evanston, Illinois



Aerial View of Site

Figure 2

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on a field visit 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 roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

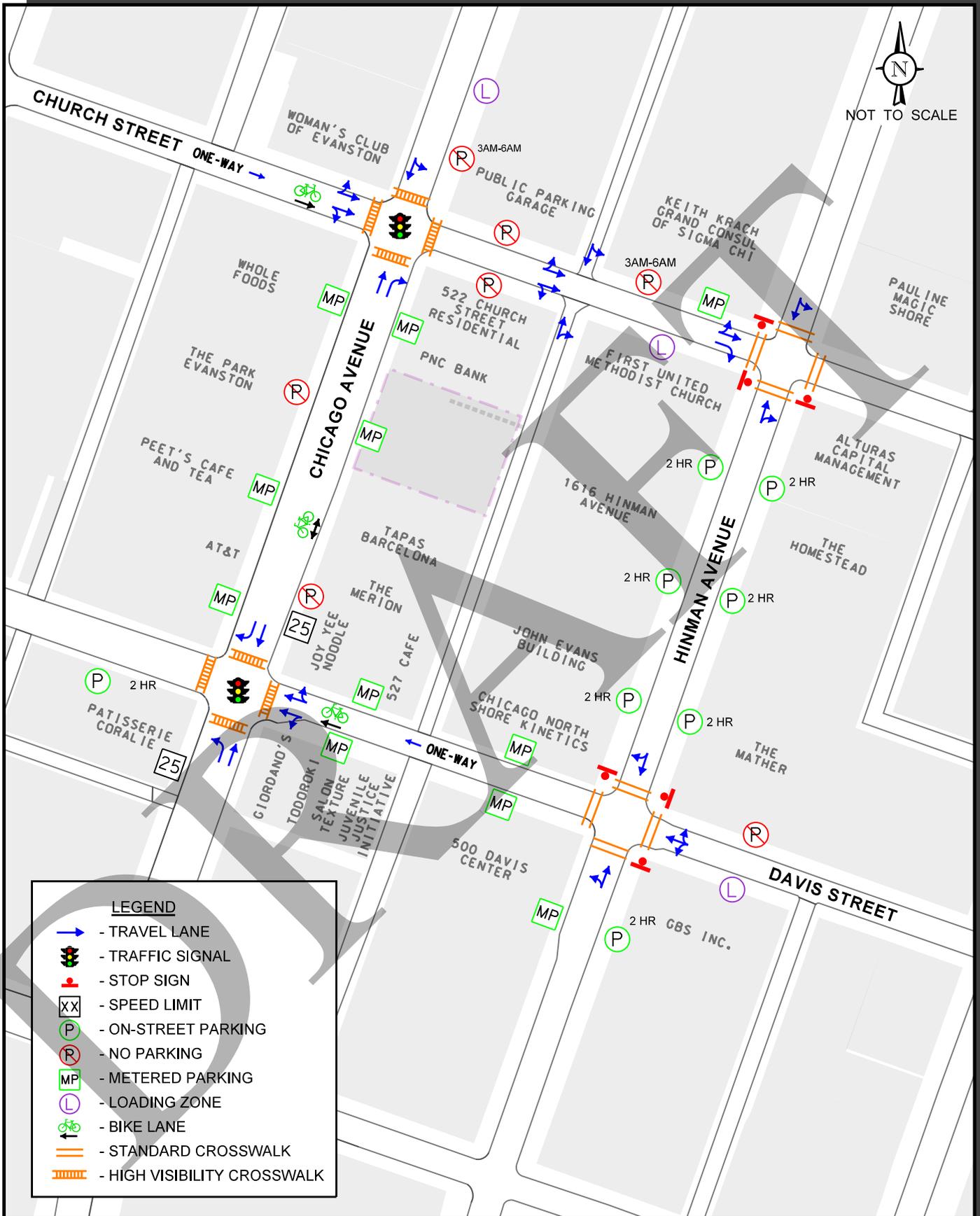
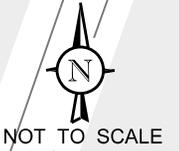
The site is bounded by Chicago Avenue on the west and the north-south alley on the east, approximately halfway between Davis Street and Church Street. Located within Evanston's central business district, the land uses surrounding the site generally consist of commercial, office, and multi-story residential developments. The site is currently occupied by several one-story retail buildings.

Existing Roadway System Characteristics

The characteristics of the existing roadways within the study area are illustrated in **Figure 3** and described below. All roadways are under the jurisdiction of the City of Evanston.

Chicago Avenue is generally a north-south, two-way roadway. Near the site, Chicago Avenue has a single lane in each direction with a two-way, protected bike lane located on the east side of the road north of Davis Street. Parallel metered parking is generally permitted on both sides of the road between Davis Street and Church Street. At its signalized intersection with Davis Street, Chicago Avenue has an exclusive left-turn lane and a through lane on the northbound approach and a through lane and an exclusive right-turn lane on the southbound approach. Both approaches provide high-visibility, ladder style crosswalks. At its signalized intersection with Church Street, Chicago Avenue has a through lane and an exclusive right-turn lane on the northbound approach and a shared left-turn/through lane on the southbound approach. Both approaches provide high-visibility, ladder style crosswalks. Chicago Avenue has a posted speed limit of 25 miles per hour.

Davis Street is generally a one-way westbound roadway that has two westbound lanes with metered parallel parking generally permitted on both sides of the road and a barrier-protected bike lane for westbound travel located on the north side of the road. Between Chicago Avenue and Hinman Avenue, parallel parking is permitted on the north side of the road east of the public alley. At its signalized intersection with Chicago Avenue, the westbound approach of Davis Street has a shared left-turn/through lane and a shared through/right-turn lane on the westbound approach. Both the east and west legs of the intersection provide high-visibility, ladder style crosswalks. At its unsignalized intersection with the north-south alley, Davis Street has a shared left-turn/through lane and a shared through/right-turn lane on the westbound approach. At its all-way stop sign controlled intersection with Hinman Avenue, the westbound approach of Davis Street provides a single lane approach. Both the east and west legs of the intersection provide standard style crosswalks.



LEGEND	
	- TRAVEL LANE
	- TRAFFIC SIGNAL
	- STOP SIGN
	- SPEED LIMIT
	- ON-STREET PARKING
	- NO PARKING
	- METERED PARKING
	- LOADING ZONE
	- BIKE LANE
	- STANDARD CROSSWALK
	- HIGH VISIBILITY CROSSWALK

1621-31 Chicago Ave
Evanston, Illinois

Existing Roadway Characteristics



Job No: 17-039

Figure: 3

Church Street is generally a one-way eastbound roadway that has two eastbound lanes with metered parallel parking generally permitted on the north side of the roadway. Church Street also has a barrier-protected bike lane for eastbound travel west of Chicago Avenue. Between Hinman Avenue and Chicago Avenue, metered parallel parking is generally permitted on the both sides of the road. At its signalized intersection with Chicago Avenue, Church Street has a shared left-turn/through lane and a shared through/right-turn lane on the eastbound approach. Both the east and west legs of the intersection provide high-visibility, ladder style crosswalks. At its unsignalized intersection with the north-south alley, Church Street has a shared left-turn/through lane and a shared through/right-turn lane on the eastbound approach. At its all-way stop sign controlled intersection with Hinman Avenue, the eastbound approach of Church Street has a shared left-turn/through lane and a separate right-turn lane. Both the east and west legs of the intersection provide standard style crosswalks.

Hinman Avenue is generally a north-south, two-way roadway. Near the site, Hinman Avenue has a single lane in each direction with parallel parking generally permitted on both sides of the road. At its all-way stop sign controlled intersections with Davis Street and Chicago Avenue, Hinman Avenue provides a single lane approach on both legs. Both approaches at both intersections provide standard style crosswalks.

In addition to these roadways, a two-way, 20-foot wide north-south alley is located midblock between Chicago Avenue and Hinman Avenue, which intersects both Davis Street and Church Street and extends from Sheridan Road to Grove Street. The alley has access to parking spaces for First United Methodist Church and the 1616 Hinman Avenue residential building and loading for the residential buildings on the east side of the alley and the commercial uses, including several restaurants, on the west side of the alley.

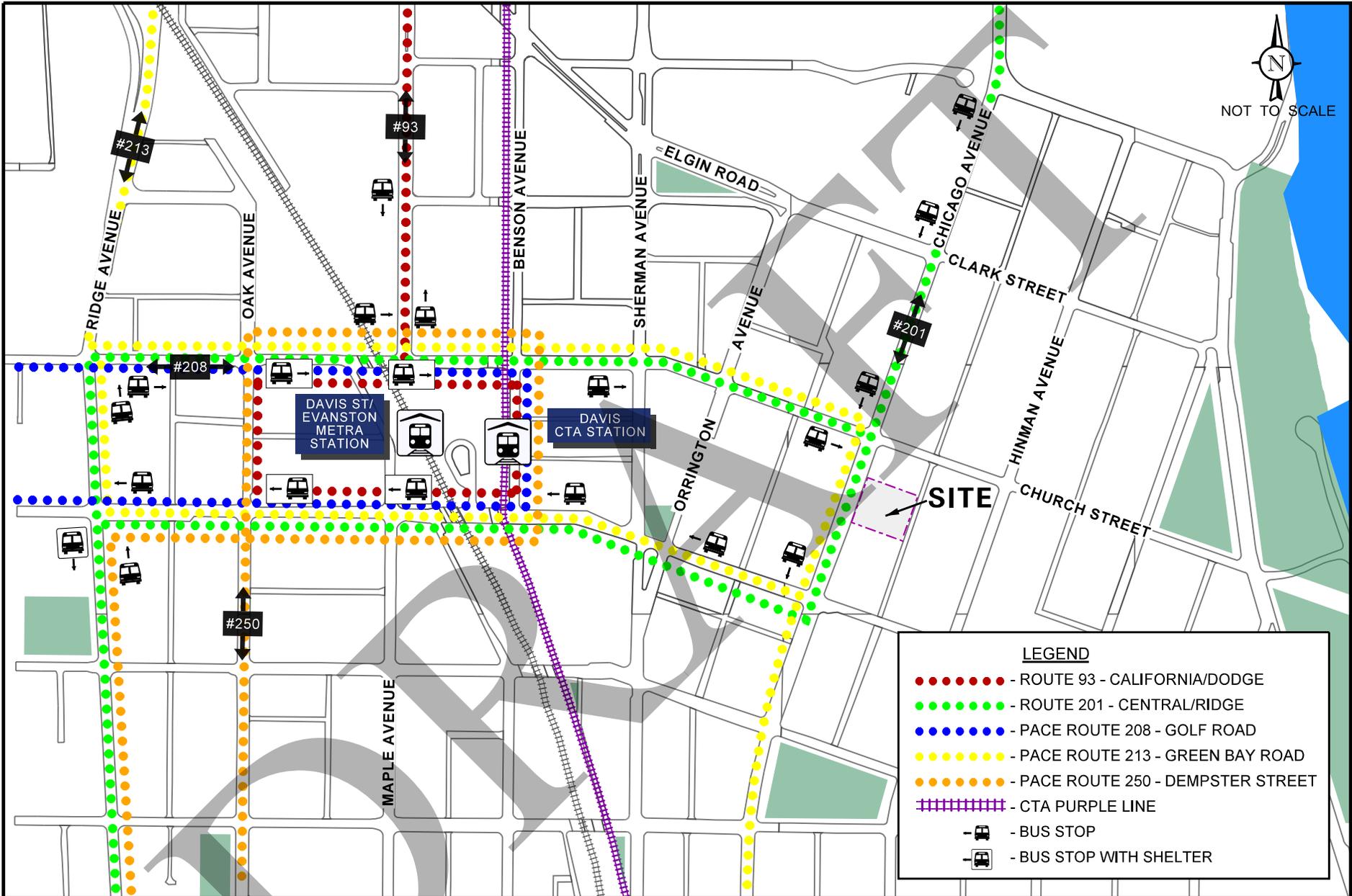
Alternative Modes of Transportation

Accessibility to and from the Evanston central business district is enhanced by the alternative modes of transportation serving the area as summarized below and illustrated in **Figure 4**.

Public Transportation. The area is served by several modes of public transportation including Metra commuter rail, CTA rapid transit service, and two bus lines.

The following summarizes the rail lines providing service to the area:

- The *Metra Union Pacific/North Line (UP-N)* has a local stop at Benson Avenue just north of Davis Street, which is located approximately 0.3 miles or a seven- to eight-minute walk west of the site. This line provides daily service between Ogilvie Transportation Center in Chicago and Kenosha, Wisconsin.
- The *CTA Purple Transit Line* has a local stop at Benson Avenue, which is located approximately 0.3 miles or a seven- to eight-minute walk west of the site. This line provides daily service between the Linden station in Wilmette and the Howard station on the border of Chicago and Evanston. In addition, weekday peak period express service is provided between the Howard station and downtown Chicago.



LEGEND

- - ROUTE 93 - CALIFORNIA/DODGE
- - ROUTE 201 - CENTRAL/RIDGE
- - PACE ROUTE 208 - GOLF ROAD
- - PACE ROUTE 213 - GREEN BAY ROAD
- - PACE ROUTE 250 - DEMPSTER STREET
- ||||| - CTA PURPLE LINE
- 🚌 - BUS STOP
- 🏠🚌 - BUS STOP WITH SHELTER

1621-31 Chicago Ave
Evanston, Illinois

Public Transportation



Job No: 17-039 Figure: 4

The following bus routes serve the immediate area with bus stops located between 0.1 to 0.3 miles or a one- to eight-minute walk from the site:

- *Route 201 (Central/Ridge)* generally runs along Ridge Avenue, Sheridan Road, and Central Street between the Howard Street CTA station and Old Orchard Mall. Service is provided on weekdays and Saturdays.
- *Route 208 (Golf)* generally runs along Golf Road between the Davis Street CTA station and Woodfield Mall. Service is provided seven days a week.
- *Route 213 (Green Bay Road)* generally runs along Chicago Avenue and Green Bay Road between the Howard Street CTA station and downtown Highland Park. Service is provided on weekdays and Saturdays.

Non-Motorized Transportation Systems. All the roadways within the immediate area have sidewalks on both sides of the roadway. Crosswalks are generally provided on all approaches of the signalized intersections. Pedestrian signals are also provided at all signalized intersections within the study area.

According to the City of Evanston's Area Bike Map, Chicago Avenue and Davis Street are designated bike routes. In addition, Chicago Avenue, Davis Street, and Church Street provide barrier-protected bike lanes within the vicinity of the site.

Mode Sharing Transportation Availability. A Divvy bike sharing station with 14 docks is located on Chicago Avenue just north of Clark Street or approximately 0.2 miles or a five- to six-minute walk north of the site. In addition, multiple car-sharing vehicles are located within walking distance of the site with the closest vehicle located approximately 0.2 miles or a five- to six-minute walk north and west of the site.

Existing Traffic Volumes

In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, KLOA, Inc. performed peak period transportation counts at the following intersections:

- Chicago Avenue with Davis Street
- Chicago Avenue with Church Street
- Hinman Avenue with Davis Street
- Hinman Avenue with Church Street
- Davis Street with the north-south alley
- Church Street with the north-south alley

All the traffic counts were conducted during the weekday morning (7:00 A.M. to 9:00 A.M.) and evening (4:00 P.M. to 6:00 P.M.) peak periods on Thursday, September 16, 2021 except at the intersection of Church Street with the public alley, which was conducted in 2017. The results of the traffic counts showed 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.

It should be noted that due to the Covid 19 pandemic, traffic volumes in the area generally do not reflect normal or typical conditions. As such, the 2021 traffic counts were compared to previous traffic counts conducted in the area by KLOA, Inc. in 2018. Based on the comparison of the traffic volumes, the 2021 traffic volumes were increased as follows:

- The Davis Street westbound through volumes were increased by 50 percent during the morning peak hour and 25 percent during the evening peak hour.
- The Church Street eastbound through volumes were increased by 150 percent during the morning and evening peak hours.
- The Chicago Avenue southbound through volumes were increased by 10 percent during the morning peak hour and 25 percent during the evening peak hour and the northbound through volumes were increased by 30 percent during the morning peak hour and were not increased during the evening peak hour.

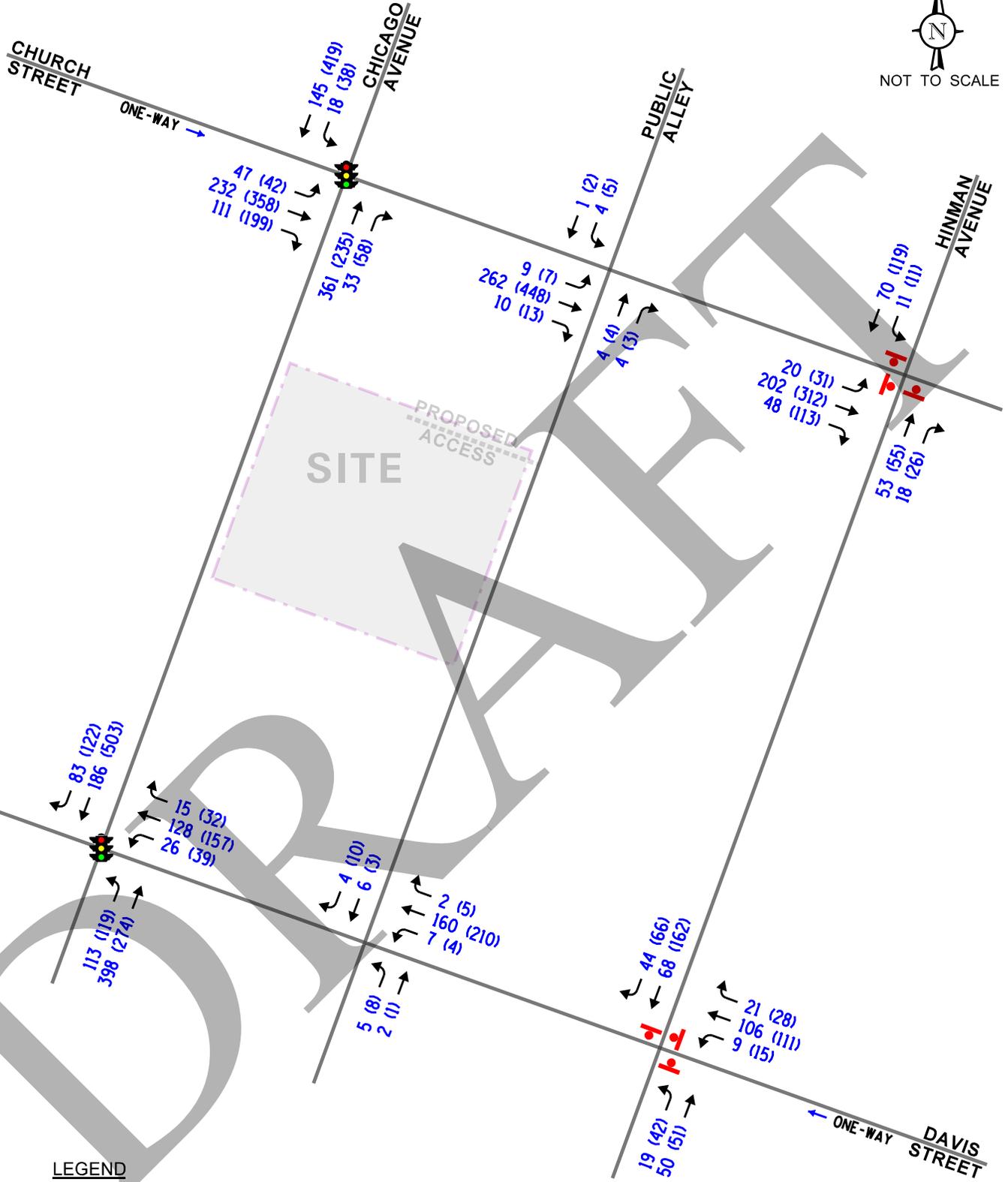
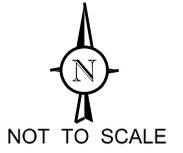
In addition, updated vehicle, pedestrian, and bicycle counts were performed at all six intersections on Thursday, July 11, 2024. To provide a worst case analyses the Year 2024 updated vehicle, pedestrian, and bicycle volumes were compared to the Year 2021 base vehicle, pedestrian, and bicycle volumes, which included the increase in traffic to account for the Covid 19 pandemic, and the highest vehicle, pedestrian, and bicycle volumes for each movement and each peak hour was used at each intersection. It should be noted that the Year 2021 base traffic volumes were used for most of the movements at the various intersections which included a significant increase in the existing observed traffic volume to account for Covid 19. As such, the existing traffic volumes are likely higher than what is currently experienced at the various intersections. Copies of the traffic counts are included in the Appendix.

Figures 5 and **6** illustrate the existing vehicle, pedestrian, and bicycle peak hour volumes.

Crash Data Summary

KLOA, Inc. obtained crash data from IDOT¹ for the most recent past five years available (2019 to 2023) for the existing public roadway intersections included in the study area. **Tables 1** and **2** summarize the crash data for the intersections of Chicago Avenue/Church Street and Chicago Avenue/Davis Street. The intersection of Hinman Avenue/Church Street had one reported crash in 2023 and the Hinman Avenue/Davis Street has no report crashes. A review of the crash data showed that no fatalities occurred at the intersections during the review period.

¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).



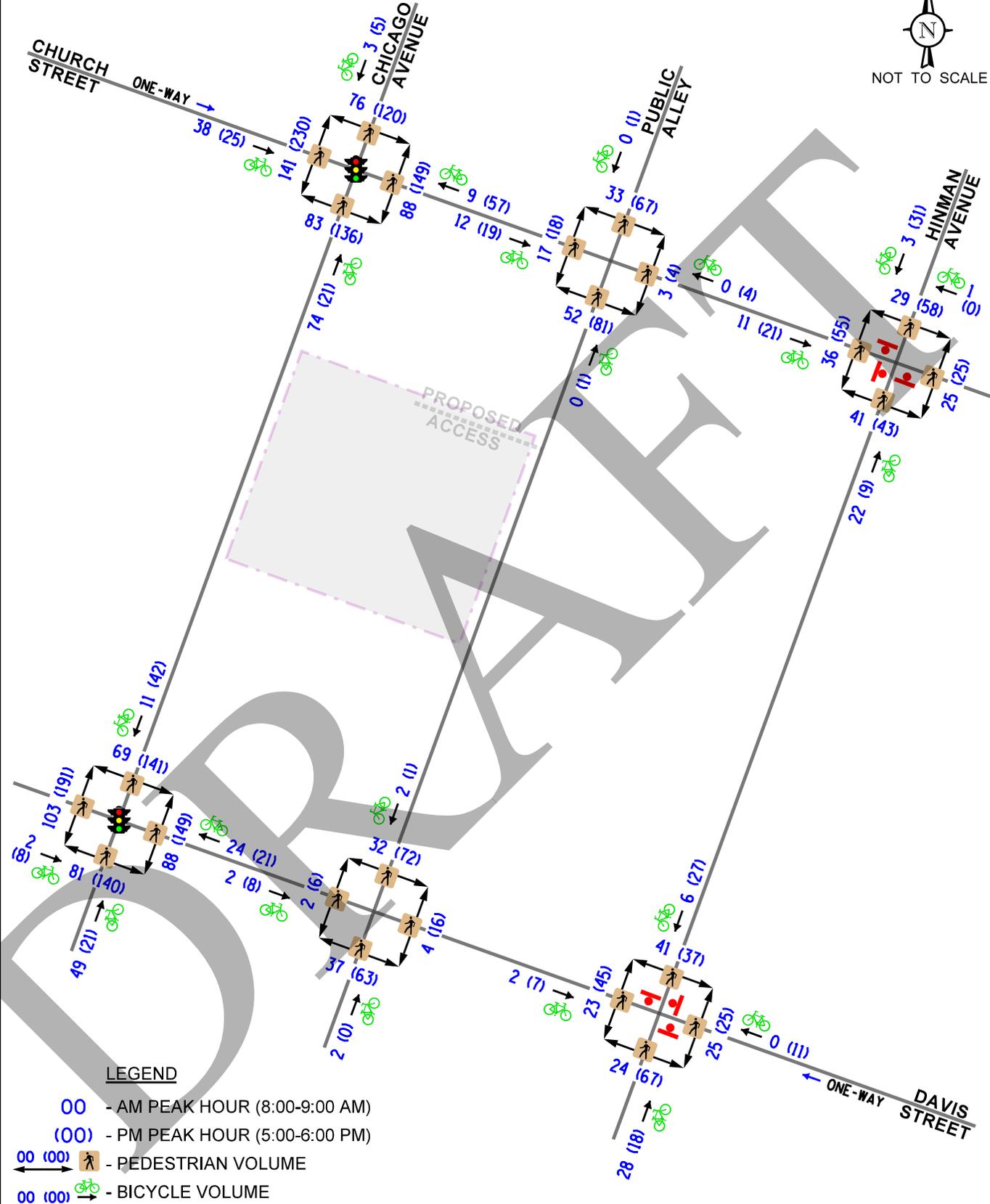
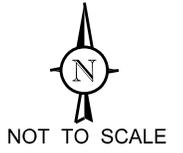
1621-31 Chicago Ave
Evanston, Illinois

Existing Traffic Volumes



Job No: 17-039

Figure: 5



1621-31 Chicago Ave
Evanston, Illinois

Existing Pedestrian and Bicycle
Traffic Volumes



Job No: 17-039 Figure: 6

Table 1
CHICAGO AVENUE WITH CHURCH STREET – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	0	0	2	1	3
2020	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	2	2
2022	0	0	0	1	2	0	0	3
2023	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>2</u>
Total	0	0	0	2	2	3	3	10
Average	0	0	0	<1.0	<1.0	<1.0	<1.0	2.0

Table 2
CHICAGO AVENUE WITH DAVIS STREET – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	1	0	0	0	1
2020	0	1	0	1	0	0	0	2
2021	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	1	1
2023	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	0	1	0	3	0	0	1	5
Average	0	<1.0	0	<1.0	0	0	<1.0	1.0

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

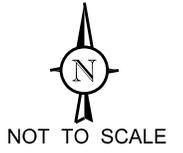
As proposed, the development will be a mixed-use development containing 110 apartment units with 34 studios, 44 one-bedroom units, and 32 two-bedroom units, approximately 7,000 square feet of retail space, and 48 parking spaces. Access to the parking garage and the two loading docks will be provided via the north-south public alley that extends along the east side of the site. The access drive to the parking garage will be located on the north side of the site and the two loading docks will be located on the south side of the site. The access drive will provide one inbound lane and one outbound lane. Vehicles to the parking garage and trucks to the loading docks will be able to access the alley from either Church Street or Davis Street, which will help to distribute the traffic along the roadway system. Further, passenger vehicles and single unit trucks will be able to enter/exit the parking garage and the loading docks in one maneuver.

In addition, a loading zone for passenger vehicles only is proposed along the east side Chicago Avenue which will require the elimination of three parallel parking spaces. The loading zone will be used for short term drop-off/pick-up of residents, guests, and commercial patrons via private vehicles, taxis, and ride share companies as well as for food deliveries. Loading for all truck deliveries will occur in the loading docks. All pedestrian access to the residential and commercial portions of the development will be provided via Chicago Avenue.

A copy of the site plan is located in the Appendix

Directional Distribution

The directions from which site-generated traffic will approach and depart the development were estimated based on existing travel patterns, as determined from the traffic counts, and the operation of the existing roadway system. **Figure 7** illustrates the directional distribution of the development-generated traffic.



CHURCH STREET
35% →
ONE-WAY →

← 25%
CHICAGO AVENUE
10% →

PUBLIC ALLEY

15% →
HINMAN AVENUE

10% →

PROPOSED ACCESS

← 35%

25%

← 10%
DAVIS STREET
← ONE-WAY

5%

LEGEND

00% - PERCENT DISTRIBUTION

1621-31 Chicago Ave
Evanston, Illinois

Directional Distribution



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Figure: 7

Development Traffic Generation

The number of peak hour vehicle trips estimated to be generated by the proposed development was based on Multifamily Housing (Land-Use Code 220) and Strip Center Plaza (Land-Use Code 822) vehicle trip generation rates contained in the *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). It should be noted that the ITE trip rates are based on suburban rates where the primary mode of transportation is the automobile. Given the location of the proposed site within the central business district and its proximity to alternative modes of transportation, the number of additional vehicle trips generated by the development will be reduced. A review of the U.S. Census data in the area showed that only approximately 50 percent of residents in the area drive a car to work. In addition, it was assumed that five percent of the trips will be made via taxi or ride share. **Table 3** summarizes the estimated gross trips and the projected vehicle trips anticipated with the development during the weekday morning and weekday evening peak hours. Copies of the ITE trip generation sheets and the census data used are included in the Appendix.

Table 3
DEVELOPMENT-GENERATED TRAFFIC VOLUMES

Land Use/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	In	Out	Total	In	Out	Total
Gross Trips						
Apartments – 110 units	14	43	57	43	25	68
Retail – 7,000 s.f.	14	9	23	30	30	60
Total Gross Trips:	28	52	80	73	55	128
Vehicle Trips						
Vehicle Trips (50 Percent):	14	26	40	36	28	64
Ride-share, taxi, etc. (5 Percent)	4	4	8	6	6	12
Total Vehicle Trips	18	30	48	42	34	76

It is important to note that the site contains 15,000 square feet of commercial space, including several popular restaurants that were generating traffic. **Table 4** shows the estimated traffic to be generated by the proposed development and the estimated traffic generated by the existing uses. From the table, it can be seen that the increase in traffic from the proposed development over existing conditions will be limited.

Table 4
NET INCREASE IN SITE-GENERATED TRAFFIC

Land Use/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	In	Out	Total	In	Out	Total
Proposed Development	18	30	48	42	34	76
Existing Commercial Space	12	7	19	26	26	52
Net Increase in Traffic	6	23	29	16	8	24

Note: The traffic generated by the existing commercial space was based on rates provided in the ITE *Trip Generation Manual*, 11th Edition and reduced by 50 percent to account for alternative modes of transportation.

4. Projected Traffic Conditions

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

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 7) and are illustrated in **Figure 8**. It should be noted that the parking for the development is for the residents only. As such, the traffic to be generated by the commercial portion of the development will park on-street or in one of the are public parking facilities. In addition, the taxi and ride-share trips were assigned to the front of the building along Chicago Avenue.

Other Area Growth

The existing traffic volumes (Figure 5) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on ADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes in the study area increased by a compounded growth rate of 0.27 percent per year for six years for a total of 1.6 percent. A copy of the CMAP 2050 projections letter is included in the Appendix.

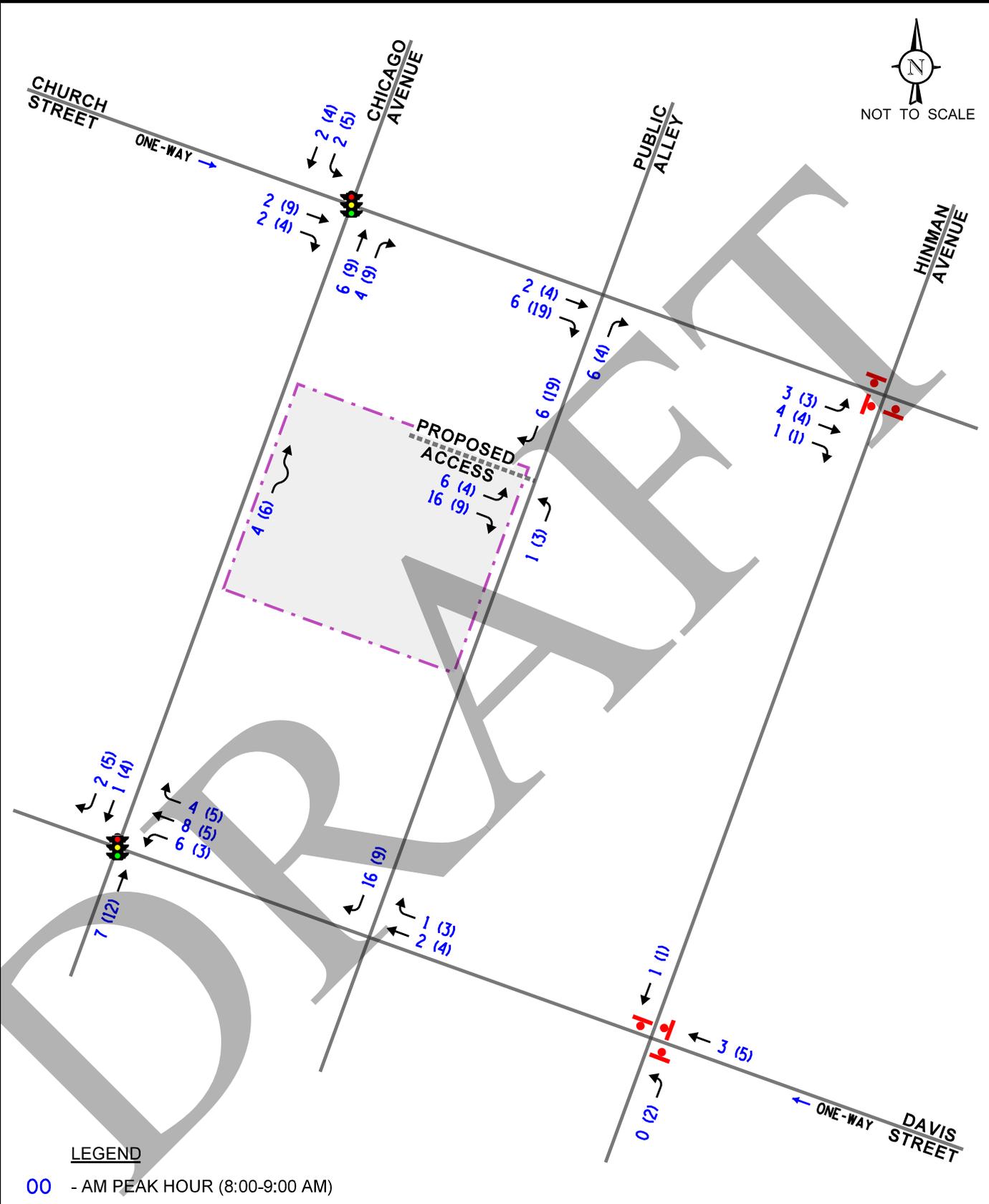
In addition, the traffic study included the buildout of the following proposed and/or approved area developments:

- An office development approved to be located at 605 Davis Street that is to contain approximately 200,000 square feet of office space.
- An office development approved to be located at 710 Clark Street that is to contain approximately 123,00 square feet of office/laboratory space and 5,200 square feet of ground floor retail space.
- The Emerson development approved to be located at 1900 Sherman Avenue that is to contain approximately 168 age-restricted units.
- A residential development proposed to be located at 1012-1034 Chicago Avenue that is to contain 116 units and approximately 5,000 square feet of ground floor retail space.
- The redevelopment of the Varsity Theater located at 1706 Sherman Avenue that is to contain 35 units and approximately 10,000 square feet of ground floor retail space.

Figure 9 illustrates the Year 2030 no-build traffic volumes.



NOT TO SCALE



LEGEND

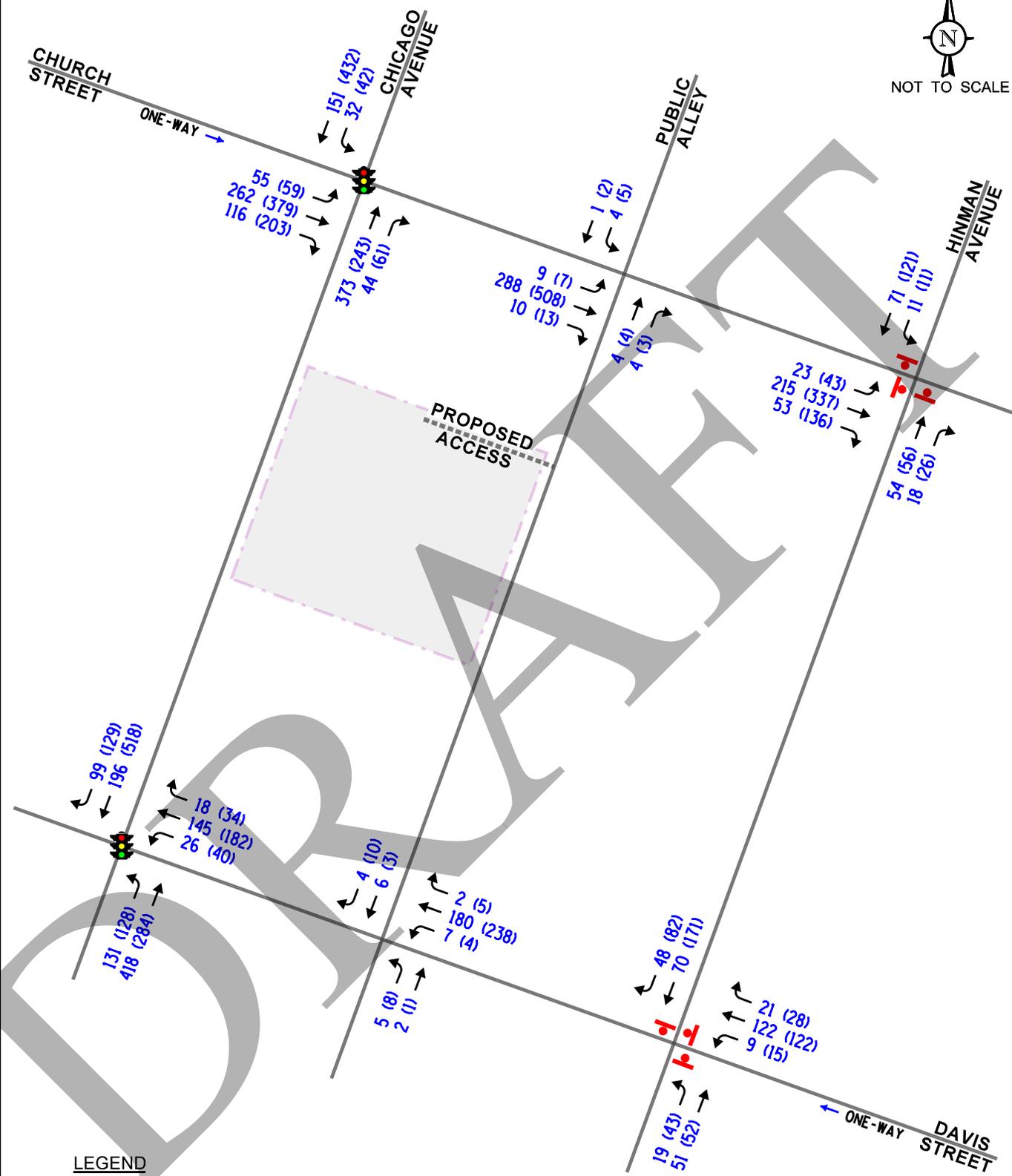
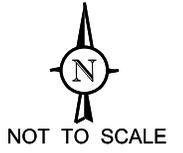
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1621-31 Chicago Ave
Evanston, Illinois

Site-Generated Traffic Volumes



Job No: 17-039 Figure: 8



1621-31 Chicago Ave
Evanston, Illinois

Year 2030 No-Build Traffic Volumes



Job No: 17-039 Figure: 9

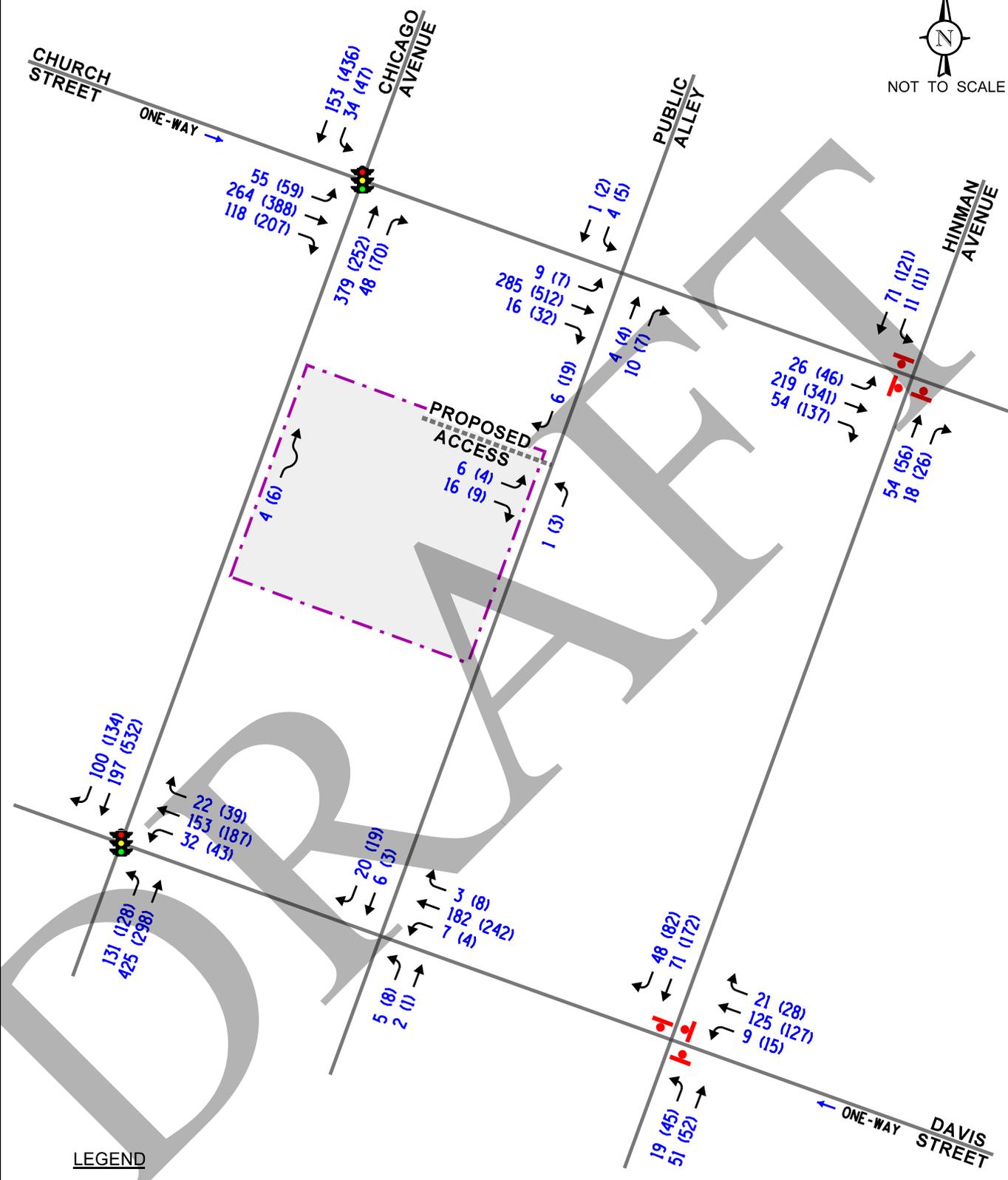
Total Projected Traffic Volumes

The development-generated traffic was added to the existing traffic volumes accounting for background growth to determine the Year 2030 total projected traffic volumes, shown in **Figure 10**. To provide a conservative (worst-case) analysis, no reductions were assumed for the traffic currently generated by the commercial space located on the site.

DRAFT



NOT TO SCALE



1621-31 Chicago Ave
Evanston, Illinois

Year 2030 Total Projected Traffic Volumes



Job No: 17-039 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 roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, no-build (Year 2030), and future projected (Year 2030) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010* and analyzed using Synchro/SimTraffic computer software. The analyses for signalized intersections were done using actual cycle lengths and phasings.

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, Year 2030 no-build, and Year 2030 total projected conditions for the study area intersections are presented in **Tables 5** through **11**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
 CAPACITY ANALYSIS RESULTS
 CHICAGO AVENUE WITH DAVIS STREET – SIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Overall	C	20.7	C	27.0
• Northbound Through	B	19.4	B	15.9
• Northbound Left	B	16.5	C	25.7
• Southbound Through	B	18.1	C	31.7
• Southbound Right	B	17.2	C	21.5
• Westbound Approach	C	31.1	C	33.6
Year 2030 No-Build Conditions				
• Overall	C	20.9	C	28.0
• Northbound Through	B	19.5	B	16.0
• Northbound Left	B	16.9	C	28.3
• Southbound Through	B	17.8	C	32.9
• Southbound Right	B	17.2	C	22.2
• Westbound Approach	C	31.8	C	34.3
Year 2030 Total Conditions				
• Overall	C	21.2	C	28.7
• Northbound Through	B	19.6	B	16.0
• Northbound Left	B	16.9	C	29.4
• Southbound Through	B	17.8	C	34.3
• Southbound Right	B	17.1	C	22.7
• Westbound Approach	C	32.2	C	34.5
LOS = Level of Service Delay is measured in seconds.				

Table 6
 CAPACITY ANALYSIS RESULTS
 CHICAGO AVENUE WITH CHURCH STREET – SIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Overall	B	18.2	C	24.2
• Northbound Through	A	5.1	A	4.6
• Northbound Right	B	15.0	C	20.1
• Southbound Approach	A	9.5	B	13.4
• Eastbound Approach	C	34.1	D	40.4
Year 2030 No-Build Conditions				
• Overall	B	19.8	C	26.6
• Northbound Through	A	5.6	A	4.9
• Northbound Right	B	17.6	C	20.4
• Southbound Approach	A	10.0	B	13.9
• Eastbound Approach	D	36.4	D	44.8
Year 2030 Total Conditions				
• Overall	B	19.9	C	27.2
• Northbound Through	A	5.7	A	5.1
• Northbound Right	B	18.0	C	21.2
• Southbound Approach	B	10.1	B	14.2
• Eastbound Approach	D	36.5	D	46.0
LOS = Level of Service Delay is measured in seconds.				

Table 7
 CAPACITY ANALYSIS RESULTS
 DAVIS STREET WITH HINMAN AVENUE – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Overall	A	8.1	A	8.8
• Westbound Approach	A	8.3	A	8.6
• Northbound Approach	A	8.0	A	8.4
• Southbound Approach	A	8.0	A	9.1
Year 2030 No-Build Conditions				
• Overall	A	8.2	A	9.0
• Westbound Approach	A	8.4	A	8.8
• Northbound Approach	A	8.0	A	8.5
• Southbound Approach	A	8.1	A	9.4
Year 2030 Total Conditions				
• Overall	A	8.2	A	9.1
• Westbound Approach	A	8.4	A	8.8
• Northbound Approach	A	8.0	A	8.6
• Southbound Approach	A	8.1	A	9.5
LOS = Level of Service Delay is measured in seconds.				

Table 8
 CAPACITY ANALYSIS RESULTS
 CHURCH STREET WITH HINMAN AVENUE – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Overall	A	8.6	A	9.8
• Eastbound Approach	A	8.8	B	10.2
• Northbound Approach	A	8.0	A	8.7
• Southbound Approach	A	8.3	A	9.3
Year 2030 No-Build Conditions				
• Overall	A	8.7	B	10.4
• Eastbound Approach	A	8.9	B	10.8
• Northbound Approach	A	8.1	A	8.9
• Southbound Approach	A	8.4	A	9.6
Year 2030 Total Conditions				
• Overall	A	8.7	B	10.4
• Eastbound Approach	A	8.9	B	10.9
• Northbound Approach	A	8.1	A	8.9
• Southbound Approach	A	8.4	A	9.6
LOS = Level of Service Delay is measured in seconds.				

Table 9
 CAPACITY ANALYSIS RESULTS
 DAVIS STREET WITH ALLEY – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Northbound Approach	B	11.0	B	10.2
• Westbound Left	A	7.6	A	7.4
• Southbound Approach	B	10.3	A	9.8
Year 2030 No-Build Conditions				
• Northbound Approach	B	11.2	B	10.5
• Westbound Left	A	7.6	A	7.4
• Southbound Approach	B	10.5	A	10.0
Year 2030 Total Conditions				
• Northbound Approach	B	11.4	B	10.5
• Westbound Left	A	7.6	A	7.4
• Southbound Approach	A	10.0	A	9.8
LOS = Level of Service Delay is measured in seconds.				

Table 10
 CAPACITY ANALYSIS RESULTS
 CHURCH STREET WITH ALLEY – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Northbound Approach	B	10.6	B	12.4
• Eastbound Left	A	7.4	A	7.3
• Southbound Approach	B	10.5	B	11.8
Year 2030 No-Build Conditions				
• Northbound Approach	B	10.8	B	13.1
• Eastbound Left	A	7.4	A	7.3
• Southbound Approach	B	10.6	B	12.4
Year 2030 Total Conditions				
• Northbound Approach	B	10.3	B	12.4
• Eastbound Left	A	7.4	A	7.3
• Southbound Approach	B	10.7	B	12.5
LOS = Level of Service Delay is measured in seconds.				

Table 11
 CAPACITY ANALYSIS RESULTS
 PROPOSED ACCESS WITH ALLEY – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Year 2030 Total Conditions				
• Eastbound Approach	A	8.5	A	8.5
• Northbound Left	A	7.2	A	7.3
LOS = Level of Service Delay is measured in seconds.				

Discussion and Recommendations

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

Chicago Avenue with Davis Street

The results of the capacity analysis indicate that this signalized intersection currently operates at an overall Level of Service (LOS) B during the weekday morning and weekday evening peak hours. Assuming Year 2030 no-build traffic volumes, this intersection is projected to continue operating at an overall LOS B during the morning peak hour and on the threshold between LOS B/C during the evening peak hour. Assuming Year 2030 total traffic volumes, this intersection is projected to continue operating at an overall LOS B during the morning peak hour and on the threshold between LOS B/C during the evening peak hour with limited increases in delay over existing conditions. In addition, all the intersection approaches and movements are projected to continue to operate at LOS C or better during both peak hours. Some queueing currently occurs along Chicago Avenue during the peak periods, particularly in the northbound direction. However, the queue typically clears the intersection in one traffic signal cycle. As such, the intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development.

Chicago Avenue with Church Street

The results of the capacity analysis indicate that this signalized intersection currently operates at an overall LOS B during the morning peak hour and LOS C during the weekday evening peak hours. Assuming Year 2030 no-build traffic volumes, this intersection is projected to continue operating at an overall LOS B during the morning peak hour and LOS C. Assuming Year 2030 total traffic volumes, this intersection is projected to continue operating at an overall LOS B during the morning peak hour and LOS C with limited increase in delays. Additionally, all the intersection approaches and movements are projected to continue to operate at LOS D or better during the peak hours. Some queueing currently occurs along Chicago Avenue and Church Street during the peak periods. However, the queues typically clear within one traffic signal cycle. As such, the intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development.

Hinman Avenue with Davis Street

The results of the capacity analysis indicate that this all-way stop sign controlled intersection currently operates at an overall LOS A during the weekday morning and weekday evening peak hours. Assuming Year 2030 no-build and total traffic volumes, this intersection is projected to continue operating at an overall LOS A with limited increase in delays during the weekday morning and weekday evening peak hours. Additionally, all the intersection approaches are projected to continue to operate at LOS A during the peak hours. As such, the intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development.

Hinman Avenue with Church Street

The results of the capacity analysis indicate that this all-way stop sign controlled intersection currently operates at an overall LOS A during the weekday morning and weekday evening peak hours. Assuming Year 2030 no-build and total traffic volumes, this intersection is projected to continue operating at an overall LOS A during the weekday morning peak hour and on the threshold between LOS A/B during the weekday evening peak hour with limited increase in delays. Additionally, all the intersection approaches are projected to continue to operate at LOS B or better during the peak hours. As such, the intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development.

Davis Street with the North-South Alley

The results of the capacity analysis indicate that the northbound and southbound approaches at this intersection currently operate at LOS B during both peak hours and are projected to continue operating at existing levels of service with limited increases in delay under projected conditions. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development.

Church Street with the North-South Alley

The results of the capacity analysis indicate that the northbound and southbound approaches at this intersection currently operate at LOS B during both peak hours and are projected to continue operating at existing levels of service with limited increases in delay under projected conditions. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development.

Operation of the Public Alley

As discussed previously, access to the parking garage and the two loading docks will be provided via the north-south public alley that extends along the east side of the site. Passenger vehicles and single unit trucks will be able to enter/exit the parking garage and the loading docks in one maneuver. The north dock will be able to accommodate a 30-foot single unit truck and the south loading dock will be able to accommodate a 22.6-foot single-unit truck (see Auto-Turn exhibits provided in the Appendix). It is important to note that the City of Evanston prefers that garage access and deliveries/waste collection be provided via public alleys in the downtown area to minimize the impact on the flow of vehicles, pedestrians, and bicyclists traversing the public roads and sidewalks. Further, given the two-way bike lane along Chicago Avenue, the City of Evanston will not permit access to the parking garage via Chicago Avenue.

Given the current operation of the public alley, the characteristics of the proposed development, and the improvements proposed as part of the development, the proposed development will have a limited, if not a positive, impact on the public alley:

- The commercial deliveries/waste collection generated by the site will be reduced as the proposed development will significantly reduce the square footage and number of commercial spaces and commercial users compared to existing conditions which include seven (7) separate commercial spaces and potential users.

- The proposed development will include two loading docks for deliveries and waste collection, which is a significant improvement over existing conditions as the current site does not provide any loading docks. Deliveries and waste collection to the existing site currently occur in the public alley.
- All waste containers for the proposed development will be stored within the proposed development, eliminating many of the waste containers currently stored in the public alley.
- As part of the development, the developer has committed to the following improvements concerning the operation of the public alley:
 - The establishment of an alley management plan that will be implemented during the construction of the development and the operation of the development. A copy of the alley management plan is included in the Appendix. The alley management plan includes a reservation based system of loading dock usage and the installation of communication and notification devices alerting to vehicles in the alley.
 - The repaving of the portion of the alley along the frontage of the development as well as a financial contribution of up to \$200,000 towards the city's financial responsibility for improvements to the rest of the alley.
- The impact of the development will further be reduced given that the public alley provides two-way traffic flow and provides inbound and outbound access to both Davis Street and Church Street, which better distributes the traffic along the public alley. In addition, the two-way traffic flow provides greater access flexibility for users of the public alley as they can access the alley via two different roads.
- The impact of the development will further be reduced given that the public alley currently carries a low volume of traffic which is similar to other two-way, public alleys in the City of Evanston. Further, the intersections of the public alley/Davis Street and the public alley/Church Street have sufficient reserve capacity to accommodate the limited additional traffic to be generated by the development.

Operation of Chicago Avenue Loading Zone

A loading zone for passenger vehicles only is proposed along the east side of Chicago Avenue which will require the elimination of three parallel parking spaces². The loading zone will be used for short term drop-off/pick-up of residents, guests, and commercial patrons via private vehicles, taxis, and ride share companies as well as for food deliveries. Loading for all truck deliveries and/or longer term deliveries will occur in the loading docks. It is important to note the residential portion of the development will have a doorman that will manage the loading zone. In addition, all food deliveries will be dropped off at the doorman, reducing the time that the food delivery vehicles will be in the loading zone. As such, the loading zone should be sufficient to accommodate the peak development demand and is similar to what is provided at other residential developments.

² This proposal was arrived at based upon communications and suggestions made by the staff of public works.

Transportation Sustainability Recommendations

The following summarizes suggested measures to be implemented by the development and/or recommendations to further minimize the impact of the development, foster alternative modes of transportation other than the automobile, and to enhance pedestrian/bicycle safety.

- The development will provide covered parking for approximately 110 bicycles.
- Parking within the building will be an additional cost and is not included in the base unit lease. Charging for parking or unbundling parking costs from unit leases is an effective method to reduce traffic to and from the development as well as reduce the demand for on-site parking.
- The parking garage will include five electrical vehicle (EV) charging stations, another ten parking spaces that will be ready/equipped for additional EV charging stations, and the rest of the parking spaces will be EV capable.
- Consideration should be given to making transit information available to residents by providing an information kiosk in the leasing office with information on the CTA Purple line, the Metra Pacific North Line, and local bus routes.

Parking Analysis

As indicated previously, the development is to consist of 110 units with approximately 71 percent of the units to consist of studios (34) units and one-bedroom (44) units with approximately 29 percent of the units to consist of two-bedroom (32) units. Further, given the location of the development within downtown Evanston and its proximity to public transportation and alternative modes of transportation, the development is considered a Transit Oriented Development (TOD). With a total of 48 parking spaces, which will be reserved for residents, the development is to have a parking ratio of 0.436 parking spaces per unit. Based on the City of Evanston zoning ordinance, the development is required to provide a total of 91 parking spaces. However, the peak parking demand of the development is projected to be considerably lower than the City's parking requirements based on the following:

- Numerous studies have shown that TODs have a lower parking demand than typical developments. For example, *Empty Parking Spaces: Real Parking Needs at Five TODs*, published by Smart Growth America, found that the parking demand of the five TODs were 55 to 80 percent lower than what would be estimated based on parking generation rates published by ITE. The lower parking demand of TODs is due in part to the proximity of TODs to public transportation and alternative modes of transportation. As indicated previously, the area is served by several modes of transportation, and it is anticipated that a minimum of 50 percent of the residents will commute to work via alternative modes of transportation.

- The majority of the units within the development will be studio and one-bedroom units with some two-bedroom units. *Stalled Out: How Empty Parking Spaces Diminish Neighborhood Affordability*, published by the Center for Neighborhood Technology (CNT), is a study that summarizes the results and findings of parking surveys performed at 41 TODs in the City of Chicago. The study showed that parking demand for buildings comprised entirely of studio and one-bedroom units was approximately one-half the parking demand of buildings comprised entirely of two- and three-bedroom units.
- Eight of the units within the development will be reserved as affordable units. The vehicle ownership of affordable units is typically lower than vehicle ownership for market rate units.
- Similar to the other apartment buildings in the area, parking for visitors will be accommodated via on-street parking or the City of Evanston Church Street parking garage which is located less than 0.1 mile or a two- to three-minute walk north of the site.
- Further, reducing the car ownership at TODs is the growth of ride hailing and car sharing services over the past decade. The reliability and affordability of these services as well as rental car services has greatly reduced the need to own a vehicle, particularly considering the costs of the vehicle, gas, maintenance, and parking. Several car sharing vehicles are located within walking distance of the site. It is important to note that the costs for parking in the TOD will be extra and not included in the base rent for the unit.

6. Conclusion

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) to assess the impact of the mixed-use development at 1621-31 Chicago Avenue in Evanston, Illinois. As proposed, the development will be a mixed-use development containing 110 apartment units, approximately 7,000 square feet of retail space, and 48 parking spaces. Based on the preceding analyses and recommendations, the following conclusions were made:

- The existing roadway system has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development. All the intersections within the study area are projected to continue to operate at a good level of service assuming the additional traffic to be generated by the proposed development and the other area growth. Overall, the proposed development will have a limited impact on the operation of the roadway system. As such, no roadway improvements and/or traffic control modifications are required.
- Given the location of the site within the central business district and its proximity to alternative modes of transportation, the number of vehicle trips generated by the development will be reduced. A review of the U.S. Census data in the area showed that only approximately 50 percent of residents in the area drive a car to work. Further, the development is proposing a total of approximately 7,000 square feet of new commercial space which will replace the approximately 15,000 square feet of commercial space. As such, the net increase in new traffic and parking to the area will be reduced.
- Access to the parking garage and the two loading docks will be via the north-south public alley that extends along the east side of the site. The access drive to the parking garage will be located on the north side of the site and the two loading docks will be located on the south side of the site. The access drive will provide one inbound lane and one outbound lane. Vehicles to the parking garage and trucks to the loading docks will be able to access the alley from either Church Street or Davis Street, which will help to distribute the traffic along the roadway system.
- The following measure and improvements are proposed as part of the development to enhance the operation of the public alley and to reduce the impact of the proposed development:
 - The commercial deliveries/waste collection generated by the site will be reduced, as the proposed development will significantly reduce the square footage and amount of commercial spaces and commercial users compared to existing conditions, which include seven (7) separate commercial spaces and potential users.
 - The proposed development will include two loading docks for deliveries and waste collection, which is a significant improvement over existing conditions as the current site does not provide any loading docks. Deliveries and waste collection to the existing site currently occur in the public alley.

- All waste containers for the proposed development will be stored within the proposed development, eliminating many of the waste containers currently stored in the public alley.
- As part of the development, the developer has committed to the following improvements concerning the operation of the public alley:
 - The establishment of an alley management plan that will be implemented during the construction of the development and the operation of the development. A copy of the alley management plan is included in the Appendix. The alley management plan includes a reservation based system of loading dock usage and the installation of communication and notification devices alerting to vehicles in the alley.
 - The repaving of the portion of the alley along the frontage of the development as well as a financial contribution of up to \$200,000 towards the city's financial responsibility for improvements to the rest of the alley.
- In addition, a loading zone for passenger vehicles only is proposed along the east side of Chicago Avenue which will require the elimination of three parallel parking spaces. The loading zone will be used for short term drop-off/pick-up of residents, guests, and commercial patrons via private vehicles, taxis, and ride share companies as well as for food deliveries. Loading for all truck deliveries will occur in the loading docks. The three-space loading zone should be sufficient to accommodate the peak demand of the development and is similar to what is provided at other residential developments.
- The following summarizes measures to be implemented by the development and/or recommendations to further minimize the impact of the development, foster alternative modes of transportation other than the automobile, and to enhance pedestrian/bicycle safety:
 - The development will provide covered parking for approximately 110 bicycles.
 - Parking within the building will be an additional cost and is not included in the base unit lease. Charging for parking or unbundling parking costs from unit leases is an effective method to reduce traffic to and from the development as well as reduce the demand for on-site parking.
 - The parking garage will include five electrical vehicle (EV) charging stations, another ten parking spaces that will be ready/equipped for additional EV charging stations, and the rest of the parking spaces will be EV capable.
 - Consideration should be given to making transit information available to residents by providing an information kiosk in the leasing office with information on the CTA Purple line, the Metra Pacific North Line, and local bus routes.

Appendix

Traffic Count Summary Sheets

Preliminary Site Plan

ITE Trip Generation Sheets and Census Data

CMAP Projections Letter

Level of Service Criteria

Capacity Analysis Summary Sheets

Passenger Vehicle and Truck Maneuvering Exhibits

Alley Management Plan

DRAFT

Traffic Count Summary Sheets



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Rosemont, Illinois, United States 60018
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Count Name: Church St with Chicago Ave
Site Code:
Start Date: 09/16/2021
Page No: 1

Turning Movement Data

Start Time	Church St Eastbound						Church St Westbound					Chicago Ave Northbound						Chicago Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	5	7	14	3	26	0	0	0	0	0	0	0	32	2	3	34	0	3	28	0	4	31	91
7:15 AM	0	2	14	14	18	30	0	0	0	0	0	0	0	35	4	12	39	0	2	13	0	4	15	84
7:30 AM	0	6	25	15	12	46	0	0	0	0	0	0	0	51	3	12	54	0	1	25	0	12	26	126
7:45 AM	0	9	16	18	15	43	0	0	0	0	0	0	0	55	9	8	64	0	0	27	0	11	27	134
Hourly Total	0	22	62	61	48	145	0	0	0	0	0	0	0	173	18	35	191	0	6	93	0	31	99	435
8:00 AM	0	9	22	28	36	59	0	0	0	0	0	0	0	77	10	19	87	0	0	33	0	9	33	179
8:15 AM	0	10	28	27	30	65	0	0	0	0	0	0	0	106	10	18	116	1	1	40	0	21	42	223
8:30 AM	0	11	24	20	46	55	0	0	0	0	0	0	0	82	10	23	92	0	1	26	0	26	27	174
8:45 AM	0	20	19	32	29	71	0	0	0	0	0	0	0	87	3	21	90	0	2	33	0	20	35	196
Hourly Total	0	50	93	107	141	250	0	0	0	0	0	0	0	352	33	81	385	1	4	132	0	76	137	772
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	7	35	60	53	102	0	0	0	0	0	0	0	58	11	22	69	0	1	88	0	23	89	260
4:15 PM	0	13	31	51	69	95	0	0	0	0	0	0	0	45	9	30	54	0	3	86	0	23	89	238
4:30 PM	0	7	41	43	57	91	0	0	0	0	0	0	0	70	13	31	83	0	2	90	0	26	92	266
4:45 PM	0	11	36	50	104	97	0	0	0	0	0	0	0	47	12	35	59	0	2	100	0	39	102	258
Hourly Total	0	38	143	204	283	385	0	0	0	0	0	0	0	220	45	118	265	0	8	364	0	111	372	1022
5:00 PM	0	8	40	34	42	82	0	0	0	1	1	0	0	59	10	21	69	0	4	82	0	21	86	238
5:15 PM	0	8	38	55	37	101	0	0	0	4	4	0	0	65	13	23	78	0	8	85	0	39	93	276
5:30 PM	0	11	29	45	32	85	0	0	0	0	0	0	0	73	16	42	89	0	11	96	0	28	107	281
5:45 PM	0	18	52	44	38	114	0	0	0	1	1	0	0	58	5	39	63	0	5	72	0	32	77	255
Hourly Total	0	45	159	178	149	382	0	0	0	6	6	0	0	255	44	125	299	0	28	335	0	120	363	1050
Grand Total	0	155	457	550	621	1162	0	0	0	6	6	0	0	1000	140	359	1140	1	46	924	0	338	971	3279
Approach %	0.0	13.3	39.3	47.3	-	-	0.0	0.0	0.0	100.0	-	0.0	0.0	87.7	12.3	-	-	0.1	4.7	95.2	0.0	-	-	-
Total %	0.0	4.7	13.9	16.8	-	35.4	0.0	0.0	0.0	0.2	0.2	0.0	0.0	30.5	4.3	-	34.8	0.0	1.4	28.2	0.0	-	29.6	-
Lights	0	128	408	519	-	1055	0	0	0	1	1	0	0	843	133	-	976	1	38	792	0	-	831	2863
% Lights	-	82.6	89.3	94.4	-	90.8	-	-	-	16.7	16.7	-	-	84.3	95.0	-	85.6	100.0	82.6	85.7	-	-	85.6	87.3
Buses	0	14	1	17	-	32	0	0	0	0	0	0	0	13	1	-	14	0	0	22	0	-	22	68
% Buses	-	9.0	0.2	3.1	-	2.8	-	-	-	0.0	0.0	-	-	1.3	0.7	-	1.2	0.0	0.0	2.4	-	-	2.3	2.1
Single-Unit Trucks	0	2	7	7	-	16	0	0	0	0	0	0	0	28	3	-	31	0	1	18	0	-	19	66
% Single-Unit Trucks	-	1.3	1.5	1.3	-	1.4	-	-	-	0.0	0.0	-	-	2.8	2.1	-	2.7	0.0	2.2	1.9	-	-	2.0	2.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	4	0	-	4	0	0	5	0	-	5	9
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	0.0	-	-	0.4	0.0	-	0.4	0.0	0.0	0.5	-	-	0.5	0.3
Bicycles on Road	0	11	41	7	-	59	0	0	0	5	5	0	0	112	3	-	115	0	7	87	0	-	94	273
% Bicycles on Road	-	7.1	9.0	1.3	-	5.1	-	-	-	83.3	83.3	-	-	11.2	2.1	-	10.1	0.0	15.2	9.4	-	-	9.7	8.3
Pedestrians	-	-	-	-	621	-	-	-	-	-	-	-	-	-	-	359	-	-	-	-	-	338	-	-

% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-
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9575 W. Higgins Rd., Suite 400

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Count Name: Church St with Chicago Ave
Site Code:
Start Date: 09/16/2021
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Church St Eastbound						Church St Westbound					Chicago Ave Northbound						Chicago Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	9	22	28	36	59	0	0	0	0	0	0	0	77	10	19	87	0	0	33	0	9	33	179
8:15 AM	0	10	28	27	30	65	0	0	0	0	0	0	0	106	10	18	116	1	1	40	0	21	42	223
8:30 AM	0	11	24	20	46	55	0	0	0	0	0	0	0	82	10	23	92	0	1	26	0	26	27	174
8:45 AM	0	20	19	32	29	71	0	0	0	0	0	0	0	87	3	21	90	0	2	33	0	20	35	196
Total	0	50	93	107	141	250	0	0	0	0	0	0	0	352	33	81	385	1	4	132	0	76	137	772
Approach %	0.0	20.0	37.2	42.8	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	91.4	8.6	-	-	0.7	2.9	96.4	0.0	-	-	-
Total %	0.0	6.5	12.0	13.9	-	32.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.6	4.3	-	49.9	0.1	0.5	17.1	0.0	-	17.7	-
PHF	0.000	0.625	0.830	0.836	-	0.880	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.830	0.825	-	0.830	0.250	0.500	0.825	0.000	-	0.815	0.865
Lights	0	41	81	101	-	223	0	0	0	0	0	0	0	255	31	-	286	1	4	121	0	-	126	635
% Lights	-	82.0	87.1	94.4	-	89.2	-	-	-	-	-	-	-	72.4	93.9	-	74.3	100.0	100.0	91.7	-	-	92.0	82.3
Buses	0	5	0	4	-	9	0	0	0	0	0	0	0	4	0	-	4	0	0	4	0	-	4	17
% Buses	-	10.0	0.0	3.7	-	3.6	-	-	-	-	-	-	-	1.1	0.0	-	1.0	0.0	0.0	3.0	-	-	2.9	2.2
Single-Unit Trucks	0	1	4	1	-	6	0	0	0	0	0	0	0	16	2	-	18	0	0	6	0	-	6	30
% Single-Unit Trucks	-	2.0	4.3	0.9	-	2.4	-	-	-	-	-	-	-	4.5	6.1	-	4.7	0.0	0.0	4.5	-	-	4.4	3.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	3	0	-	3	0	0	1	0	-	1	4
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	-	0.9	0.0	-	0.8	0.0	0.0	0.8	-	-	0.7	0.5
Bicycles on Road	0	3	8	1	-	12	0	0	0	0	0	0	0	74	0	-	74	0	0	0	0	-	0	86
% Bicycles on Road	-	6.0	8.6	0.9	-	4.8	-	-	-	-	-	-	-	21.0	0.0	-	19.2	0.0	0.0	0.0	-	-	0.0	11.1
Pedestrians	-	-	-	-	141	-	-	-	-	-	-	-	-	-	-	81	-	-	-	-	-	76	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Church St with Chicago Ave
Site Code:
Start Date: 09/16/2021
Page No: 4

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Church St Eastbound						Church St Westbound					Chicago Ave Northbound						Chicago Ave Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	8	40	34	42	82	0	0	0	1	1	0	0	59	10	21	69	0	4	82	0	21	86	238
5:15 PM	0	8	38	55	37	101	0	0	0	4	4	0	0	65	13	23	78	0	8	85	0	39	93	276
5:30 PM	0	11	29	45	32	85	0	0	0	0	0	0	0	73	16	42	89	0	11	96	0	28	107	281
5:45 PM	0	18	52	44	38	114	0	0	0	1	1	0	0	58	5	39	63	0	5	72	0	32	77	255
Total	0	45	159	178	149	382	0	0	0	6	6	0	0	255	44	125	299	0	28	335	0	120	363	1050
Approach %	0.0	11.8	41.6	46.6	-	-	0.0	0.0	0.0	100.0	-	0.0	0.0	85.3	14.7	-	-	0.0	7.7	92.3	0.0	-	-	-
Total %	0.0	4.3	15.1	17.0	-	36.4	0.0	0.0	0.0	0.6	0.6	0.0	0.0	24.3	4.2	-	28.5	0.0	2.7	31.9	0.0	-	34.6	-
PHF	0.000	0.625	0.764	0.809	-	0.838	0.000	0.000	0.000	0.375	0.375	0.000	0.000	0.873	0.688	-	0.840	0.000	0.636	0.872	0.000	-	0.848	0.934
Lights	0	39	140	173	-	352	0	0	0	1	1	0	0	227	43	-	270	0	22	327	0	-	349	972
% Lights	-	86.7	88.1	97.2	-	92.1	-	-	-	16.7	16.7	-	-	89.0	97.7	-	90.3	-	78.6	97.6	-	-	96.1	92.6
Buses	0	3	0	3	-	6	0	0	0	0	0	0	0	4	0	-	4	0	0	5	0	-	5	15
% Buses	-	6.7	0.0	1.7	-	1.6	-	-	-	0.0	0.0	-	-	1.6	0.0	-	1.3	-	0.0	1.5	-	-	1.4	1.4
Single-Unit Trucks	0	0	3	2	-	5	0	0	0	0	0	0	0	4	0	-	4	0	1	1	0	-	2	11
% Single-Unit Trucks	-	0.0	1.9	1.1	-	1.3	-	-	-	0.0	0.0	-	-	1.6	0.0	-	1.3	-	3.6	0.3	-	-	0.6	1.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	0	2	0	-	2	2
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.6	-	-	0.6	0.2
Bicycles on Road	0	3	16	0	-	19	0	0	0	5	5	0	0	20	1	-	21	0	5	0	0	-	5	50
% Bicycles on Road	-	6.7	10.1	0.0	-	5.0	-	-	-	83.3	83.3	-	-	7.8	2.3	-	7.0	-	17.9	0.0	-	-	1.4	4.8
Pedestrians	-	-	-	-	149	-	-	-	-	-	-	-	-	-	-	125	-	-	-	-	-	120	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Church St with Hinman St
Site Code:
Start Date: 09/16/2021
Page No: 1

Turning Movement Data

Start Time	Church St Eastbound						Church St Westbound						Hinman Ave Northbound						Hinman Ave 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	6	5	4	13	0	0	0	0	2	0	0	0	4	2	8	6	0	1	7	0	3	8	27	
7:15 AM	0	2	2	5	3	9	0	0	0	0	4	0	0	0	4	4	3	8	0	1	10	0	3	11	28	
7:30 AM	0	2	13	4	3	19	0	0	0	0	7	0	0	0	8	1	9	9	0	0	6	0	5	6	34	
7:45 AM	0	2	8	4	4	14	0	0	0	0	4	0	0	0	8	1	16	9	0	0	12	0	5	12	35	
Hourly Total	0	8	29	18	14	55	0	0	0	0	17	0	0	0	24	8	36	32	0	2	35	0	16	37	124	
8:00 AM	0	3	14	12	7	29	0	0	0	0	7	0	0	0	16	2	10	18	0	1	5	0	7	6	53	
8:15 AM	0	8	13	9	8	30	0	0	0	0	8	0	0	0	17	4	9	21	0	1	6	0	8	7	58	
8:30 AM	0	5	10	8	10	23	0	0	0	0	4	0	0	0	20	5	15	25	0	0	7	0	5	7	55	
8:45 AM	0	6	12	7	11	25	0	0	0	0	6	0	0	0	17	7	7	24	0	2	2	0	9	4	53	
Hourly Total	0	22	49	36	36	107	0	0	0	0	25	0	0	0	70	18	41	88	0	4	20	0	29	24	219	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	5	26	19	5	50	0	0	0	0	5	0	1	0	13	5	13	19	0	4	26	0	7	30	99	
4:15 PM	0	3	24	19	10	46	0	0	2	0	9	2	0	0	15	11	23	26	0	5	30	1	10	36	110	
4:30 PM	0	6	28	22	6	56	0	0	1	0	8	1	0	0	14	2	16	16	0	2	20	0	8	22	95	
4:45 PM	0	3	27	17	9	47	0	0	2	0	9	2	0	0	17	6	16	23	0	2	23	0	9	25	97	
Hourly Total	0	17	105	77	30	199	0	0	5	0	31	5	1	0	59	24	68	84	0	13	99	1	34	113	401	
5:00 PM	0	4	30	17	14	51	0	0	1	0	6	1	0	0	17	7	6	24	0	2	45	0	7	47	123	
5:15 PM	0	5	34	25	12	64	0	0	0	0	5	0	0	0	18	6	8	24	0	3	22	0	13	25	113	
5:30 PM	0	5	24	25	18	54	0	0	1	0	5	1	0	0	11	8	17	19	0	3	34	0	22	37	111	
5:45 PM	0	5	32	28	11	65	0	0	0	0	9	0	0	0	15	5	12	20	0	4	29	0	16	33	118	
Hourly Total	0	19	120	95	55	234	0	0	2	0	25	2	0	0	61	26	43	87	0	12	130	0	58	142	465	
Grand Total	0	66	303	226	135	595	0	0	7	0	98	7	1	0	214	76	188	291	0	31	284	1	137	316	1209	
Approach %	0.0	11.1	50.9	38.0	-	-	0.0	0.0	100.0	0.0	-	-	0.3	0.0	73.5	26.1	-	-	0.0	9.8	89.9	0.3	-	-	-	
Total %	0.0	5.5	25.1	18.7	-	49.2	0.0	0.0	0.6	0.0	-	0.6	0.1	0.0	17.7	6.3	-	24.1	0.0	2.6	23.5	0.1	-	26.1	-	
Lights	0	62	263	203	-	528	0	0	1	0	-	1	1	0	175	65	-	241	0	30	233	1	-	264	1034	
% Lights	-	93.9	86.8	89.8	-	88.7	-	-	14.3	-	-	14.3	100.0	-	81.8	85.5	-	82.8	-	96.8	82.0	100.0	-	-	83.5	85.5
Buses	0	0	1	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	2	
% Buses	-	0.0	0.3	0.4	-	0.3	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	-	0.2	
Single-Unit Trucks	0	1	2	7	-	10	0	0	0	0	-	0	0	0	1	2	-	3	0	0	2	0	-	2	15	
% Single-Unit Trucks	-	1.5	0.7	3.1	-	1.7	-	-	0.0	-	-	0.0	0.0	-	0.5	2.6	-	1.0	-	0.0	0.7	0.0	-	0.6	1.2	
Articulated Trucks	0	0	0	2	-	2	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	3	
% Articulated Trucks	-	0.0	0.0	0.9	-	0.3	-	-	0.0	-	-	0.0	0.0	-	0.0	1.3	-	0.3	-	0.0	0.0	0.0	-	-	0.2	
Bicycles on Road	0	3	37	13	-	53	0	0	6	0	-	6	0	0	38	8	-	46	0	1	49	0	-	50	155	

% Bicycles on Road	-	4.5	12.2	5.8	-	8.9	-	-	85.7	-	-	85.7	0.0	-	17.8	10.5	-	15.8	-	3.2	17.3	0.0	-	15.8	12.8
Pedestrians	-	-	-	-	135	-	-	-	-	98	-	-	-	-	-	-	188	-	-	-	-	-	137	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: Church St with Hinman St
Site Code:
Start Date: 09/16/2021
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Church St Eastbound						Church St Westbound						Hinman Ave Northbound						Hinman Ave 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	0	3	14	12	7	29	0	0	0	0	7	0	0	0	16	2	10	18	0	1	5	0	7	6	53
8:15 AM	0	8	13	9	8	30	0	0	0	0	8	0	0	0	17	4	9	21	0	1	6	0	8	7	58
8:30 AM	0	5	10	8	10	23	0	0	0	0	4	0	0	0	20	5	15	25	0	0	7	0	5	7	55
8:45 AM	0	6	12	7	11	25	0	0	0	0	6	0	0	0	17	7	7	24	0	2	2	0	9	4	53
Total	0	22	49	36	36	107	0	0	0	0	25	0	0	0	70	18	41	88	0	4	20	0	29	24	219
Approach %	0.0	20.6	45.8	33.6	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	79.5	20.5	-	-	0.0	16.7	83.3	0.0	-	-	-
Total %	0.0	10.0	22.4	16.4	-	48.9	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	32.0	8.2	-	40.2	0.0	1.8	9.1	0.0	-	11.0	-
PHF	0.000	0.688	0.875	0.750	-	0.892	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.875	0.643	-	0.880	0.000	0.500	0.714	0.000	-	0.857	0.944
Lights	0	19	43	28	-	90	0	0	0	0	-	0	0	0	51	17	-	68	0	4	16	0	-	20	178
% Lights	-	86.4	87.8	77.8	-	84.1	-	-	-	-	-	-	-	-	72.9	94.4	-	77.3	-	100.0	80.0	-	-	83.3	81.3
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	2.0	0.0	-	0.9	-	-	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.5
Single-Unit Trucks	0	1	1	5	-	7	0	0	0	0	-	0	0	0	0	1	-	1	0	0	1	0	-	1	9
% Single-Unit Trucks	-	4.5	2.0	13.9	-	6.5	-	-	-	-	-	-	-	-	0.0	5.6	-	1.1	-	0.0	5.0	-	-	4.2	4.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	2	4	3	-	9	0	0	0	0	-	0	0	0	19	0	-	19	0	0	3	0	-	3	31
% Bicycles on Road	-	9.1	8.2	8.3	-	8.4	-	-	-	-	-	-	-	-	27.1	0.0	-	21.6	-	0.0	15.0	-	-	12.5	14.2
Pedestrians	-	-	-	-	36	-	-	-	-	-	25	-	-	-	-	-	41	-	-	-	-	-	29	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

Rosemont, Illinois, United States 60018
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Count Name: Church St with Hinman St
Site Code:
Start Date: 09/16/2021
Page No: 4

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Church St Eastbound						Church St Westbound						Hinman Ave Northbound						Hinman Ave 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	
5:00 PM	0	4	30	17	14	51	0	0	1	0	6	1	0	0	17	7	6	24	0	2	45	0	7	47	123
5:15 PM	0	5	34	25	12	64	0	0	0	0	5	0	0	0	18	6	8	24	0	3	22	0	13	25	113
5:30 PM	0	5	24	25	18	54	0	0	1	0	5	1	0	0	11	8	17	19	0	3	34	0	22	37	111
5:45 PM	0	5	32	28	11	65	0	0	0	0	9	0	0	0	15	5	12	20	0	4	29	0	16	33	118
Total	0	19	120	95	55	234	0	0	2	0	25	2	0	0	61	26	43	87	0	12	130	0	58	142	465
Approach %	0.0	8.1	51.3	40.6	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	70.1	29.9	-	-	0.0	8.5	91.5	0.0	-	-	-
Total %	0.0	4.1	25.8	20.4	-	50.3	0.0	0.0	0.4	0.0	-	0.4	0.0	0.0	13.1	5.6	-	18.7	0.0	2.6	28.0	0.0	-	30.5	-
PHF	0.000	0.950	0.882	0.848	-	0.900	0.000	0.000	0.500	0.000	-	0.500	0.000	0.000	0.847	0.813	-	0.906	0.000	0.750	0.722	0.000	-	0.755	0.945
Lights	0	19	104	88	-	211	0	0	0	0	-	0	0	0	52	25	-	77	0	11	100	0	-	111	399
% Lights	-	100.0	86.7	92.6	-	90.2	-	-	0.0	-	-	0.0	-	-	85.2	96.2	-	88.5	-	91.7	76.9	-	-	78.2	85.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% 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
Single-Unit Trucks	0	0	1	1	-	2	0	0	0	0	-	0	0	0	1	1	-	2	0	0	0	0	-	0	4
% Single-Unit Trucks	-	0.0	0.8	1.1	-	0.9	-	-	0.0	-	-	0.0	-	-	1.6	3.8	-	2.3	-	0.0	0.0	-	-	0.0	0.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	15	6	-	21	0	0	2	0	-	2	0	0	8	0	-	8	0	1	30	0	-	31	62
% Bicycles on Road	-	0.0	12.5	6.3	-	9.0	-	-	100.0	-	-	100.0	-	-	13.1	0.0	-	9.2	-	8.3	23.1	-	-	21.8	13.3
Pedestrians	-	-	-	-	55	-	-	-	-	-	25	-	-	-	-	-	43	-	-	-	-	-	58	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

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Count Name: Davis St with Chicago Ave
Site Code:
Start Date: 09/16/2021
Page No: 1

Turning Movement Data

Start Time	Davis St Eastbound						Davis St Westbound						Chicago Ave Northbound						Chicago Ave 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	0	0	0	6	0	0	6	9	0	10	15	0	9	29	0	10	38	0	0	27	10	6	37	90
7:15 AM	0	0	0	0	14	0	0	2	13	5	5	20	0	13	35	0	11	48	0	0	30	6	6	36	104
7:30 AM	0	0	0	0	18	0	0	0	14	4	9	18	0	18	41	0	11	59	0	1	29	7	10	37	114
7:45 AM	0	0	0	0	9	0	0	2	10	3	13	15	0	31	66	0	9	97	0	0	33	9	7	42	154
Hourly Total	0	0	0	0	47	0	0	10	46	12	37	68	0	71	171	0	41	242	0	1	119	32	29	152	462
8:00 AM	0	0	0	0	23	0	0	2	22	7	26	31	0	26	73	1	20	100	0	0	49	14	8	63	194
8:15 AM	0	1	0	0	19	1	0	1	14	4	18	19	0	22	107	1	12	130	0	2	40	20	13	62	212
8:30 AM	0	0	0	0	36	0	0	2	21	5	17	28	0	33	87	0	14	120	0	1	40	11	22	52	200
8:45 AM	0	2	0	0	25	2	0	2	27	4	27	33	0	35	83	0	35	118	0	0	46	22	15	68	221
Hourly Total	0	3	0	0	103	3	0	7	84	20	88	111	0	116	350	2	81	468	0	3	175	67	58	245	827
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	36	0	0	8	36	5	17	49	0	28	57	0	31	85	0	0	93	34	55	127	261
4:15 PM	0	0	0	0	32	0	0	7	33	4	32	44	0	26	68	0	20	94	0	0	99	32	37	131	269
4:30 PM	0	0	0	0	44	0	0	9	35	6	35	50	0	34	67	0	36	101	0	1	85	29	40	115	266
4:45 PM	0	0	0	0	46	0	0	6	34	10	47	50	0	26	70	0	26	96	0	0	98	45	28	143	289
Hourly Total	0	0	0	0	158	0	0	30	138	25	131	193	0	114	262	0	113	376	0	1	375	140	160	516	1085
5:00 PM	0	0	0	2	36	2	0	7	31	5	38	43	0	29	60	0	51	89	0	0	92	38	39	130	264
5:15 PM	0	0	0	0	56	0	0	9	22	9	30	40	0	29	77	0	19	106	0	1	105	36	30	142	288
5:30 PM	0	0	0	0	53	0	0	5	40	7	37	52	0	30	90	0	32	120	0	0	103	40	36	143	315
5:45 PM	0	0	0	0	46	0	0	9	31	9	44	49	0	26	55	0	24	81	0	0	107	40	36	147	277
Hourly Total	0	0	0	2	191	2	0	30	124	30	149	184	0	114	282	0	126	396	0	1	407	154	141	562	1144
Grand Total	0	3	0	2	499	5	0	77	392	87	405	556	0	415	1065	2	361	1482	0	6	1076	393	388	1475	3518
Approach %	0.0	60.0	0.0	40.0	-	-	0.0	13.8	70.5	15.6	-	-	0.0	28.0	71.9	0.1	-	-	0.0	0.4	72.9	26.6	-	-	-
Total %	0.0	0.1	0.0	0.1	-	0.1	0.0	2.2	11.1	2.5	-	15.8	0.0	11.8	30.3	0.1	-	42.1	0.0	0.2	30.6	11.2	-	41.9	-
Lights	0	0	0	0	-	0	0	72	348	75	-	495	0	389	937	0	-	1326	0	1	996	324	-	1321	3142
% Lights	-	0.0	-	0.0	-	0.0	-	93.5	88.8	86.2	-	89.0	-	93.7	88.0	0.0	-	89.5	-	16.7	92.6	82.4	-	89.6	89.3
Buses	0	0	0	0	-	0	0	1	1	1	-	3	0	18	14	0	-	32	0	0	28	11	-	39	74
% Buses	-	0.0	-	0.0	-	0.0	-	1.3	0.3	1.1	-	0.5	-	4.3	1.3	0.0	-	2.2	-	0.0	2.6	2.8	-	2.6	2.1
Single-Unit Trucks	0	0	0	0	-	0	0	2	0	3	-	5	0	3	23	0	-	26	0	0	20	3	-	23	54
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	2.6	0.0	3.4	-	0.9	-	0.7	2.2	0.0	-	1.8	-	0.0	1.9	0.8	-	1.6	1.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	0	-	4	0	0	7	0	-	7	11
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.3	-	0.0	0.7	0.0	-	0.5	0.3
Bicycles on Road	0	3	0	2	-	5	0	2	43	8	-	53	0	5	87	2	-	94	0	5	25	55	-	85	237

% Bicycles on Road	-	100.0	-	100.0	-	100.0	-	2.6	11.0	9.2	-	9.5	-	1.2	8.2	100.0	-	6.3	-	83.3	2.3	14.0	-	5.8	6.7	
Pedestrians	-	-	-	-	499	-	-	-	-	-	405	-	-	-	-	-	361	-	-	-	-	-	-	388	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

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

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

Count Name: Davis St with Chicago Ave
Site Code:
Start Date: 09/16/2021
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Davis St Eastbound						Davis St Westbound						Chicago Ave Northbound						Chicago Ave 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	0	0	0	0	23	0	0	2	22	7	26	31	0	26	73	1	20	100	0	0	49	14	8	63	194
8:15 AM	0	1	0	0	19	1	0	1	14	4	18	19	0	22	107	1	12	130	0	2	40	20	13	62	212
8:30 AM	0	0	0	0	36	0	0	2	21	5	17	28	0	33	87	0	14	120	0	1	40	11	22	52	200
8:45 AM	0	2	0	0	25	2	0	2	27	4	27	33	0	35	83	0	35	118	0	0	46	22	15	68	221
Total	0	3	0	0	103	3	0	7	84	20	88	111	0	116	350	2	81	468	0	3	175	67	58	245	827
Approach %	0.0	100.0	0.0	0.0	-	-	0.0	6.3	75.7	18.0	-	-	0.0	24.8	74.8	0.4	-	-	0.0	1.2	71.4	27.3	-	-	-
Total %	0.0	0.4	0.0	0.0	-	0.4	0.0	0.8	10.2	2.4	-	13.4	0.0	14.0	42.3	0.2	-	56.6	0.0	0.4	21.2	8.1	-	29.6	-
PHF	0.000	0.375	0.000	0.000	-	0.375	0.000	0.875	0.778	0.714	-	0.841	0.000	0.829	0.818	0.500	-	0.900	0.000	0.375	0.893	0.761	-	0.901	0.936
Lights	0	0	0	0	-	0	0	5	73	12	-	90	0	107	291	0	-	398	0	0	158	62	-	220	708
% Lights	-	0.0	-	-	-	0.0	-	71.4	86.9	60.0	-	81.1	-	92.2	83.1	0.0	-	85.0	-	0.0	90.3	92.5	-	89.8	85.6
Buses	0	0	0	0	-	0	0	1	0	1	-	2	0	4	3	0	-	7	0	0	4	3	-	7	16
% Buses	-	0.0	-	-	-	0.0	-	14.3	0.0	5.0	-	1.8	-	3.4	0.9	0.0	-	1.5	-	0.0	2.3	4.5	-	2.9	1.9
Single-Unit Trucks	0	0	0	0	-	0	0	1	0	2	-	3	0	2	10	0	-	12	0	0	6	0	-	6	21
% Single-Unit Trucks	-	0.0	-	-	-	0.0	-	14.3	0.0	10.0	-	2.7	-	1.7	2.9	0.0	-	2.6	-	0.0	3.4	0.0	-	2.4	2.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	0	0	1	0	-	1	3
% Articulated Trucks	-	0.0	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.6	0.0	-	0.4	-	0.0	0.6	0.0	-	0.4	0.4
Bicycles on Road	0	3	0	0	-	3	0	0	11	5	-	16	0	3	44	2	-	49	0	3	6	2	-	11	79
% Bicycles on Road	-	100.0	-	-	-	100.0	-	0.0	13.1	25.0	-	14.4	-	2.6	12.6	100.0	-	10.5	-	100.0	3.4	3.0	-	4.5	9.6
Pedestrians	-	-	-	-	103	-	-	-	-	-	88	-	-	-	-	-	81	-	-	-	-	-	58	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Davis St with Chicago Ave
Site Code:
Start Date: 09/16/2021
Page No: 4

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Davis St Eastbound						Davis St Westbound						Chicago Ave Northbound						Chicago Ave 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	
5:00 PM	0	0	0	2	36	2	0	7	31	5	38	43	0	29	60	0	51	89	0	0	92	38	39	130	264
5:15 PM	0	0	0	0	56	0	0	9	22	9	30	40	0	29	77	0	19	106	0	1	105	36	30	142	288
5:30 PM	0	0	0	0	53	0	0	5	40	7	37	52	0	30	90	0	32	120	0	0	103	40	36	143	315
5:45 PM	0	0	0	0	46	0	0	9	31	9	44	49	0	26	55	0	24	81	0	0	107	40	36	147	277
Total	0	0	0	2	191	2	0	30	124	30	149	184	0	114	282	0	126	396	0	1	407	154	141	562	1144
Approach %	0.0	0.0	0.0	100.0	-	-	0.0	16.3	67.4	16.3	-	-	0.0	28.8	71.2	0.0	-	-	0.0	0.2	72.4	27.4	-	-	-
Total %	0.0	0.0	0.0	0.2	-	0.2	0.0	2.6	10.8	2.6	-	16.1	0.0	10.0	24.7	0.0	-	34.6	0.0	0.1	35.6	13.5	-	49.1	-
PHF	0.000	0.000	0.000	0.250	-	0.250	0.000	0.833	0.775	0.833	-	0.885	0.000	0.950	0.783	0.000	-	0.825	0.000	0.250	0.951	0.963	-	0.956	0.908
Lights	0	0	0	0	-	0	0	28	112	30	-	170	0	110	252	0	-	362	0	0	393	120	-	513	1045
% Lights	-	-	-	0.0	-	0.0	-	93.3	90.3	100.0	-	92.4	-	96.5	89.4	-	-	91.4	-	0.0	96.6	77.9	-	91.3	91.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	4	4	0	-	8	0	0	6	2	-	8	16
% Buses	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	3.5	1.4	-	-	2.0	-	0.0	1.5	1.3	-	1.4	1.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	5	0	-	5	0	0	1	0	-	1	6
% Single-Unit Trucks	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	1.8	-	-	1.3	-	0.0	0.2	0.0	-	0.2	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	2
% Articulated Trucks	-	-	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.5	0.0	-	0.4	0.2
Bicycles on Road	0	0	0	2	-	2	0	2	12	0	-	14	0	0	21	0	-	21	0	1	5	32	-	38	75
% Bicycles on Road	-	-	-	100.0	-	100.0	-	6.7	9.7	0.0	-	7.6	-	0.0	7.4	-	-	5.3	-	100.0	1.2	20.8	-	6.8	6.6
Pedestrians	-	-	-	-	191	-	-	-	-	-	149	-	-	-	-	-	126	-	-	-	-	-	141	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Davis St with Hinman Ave
Site Code:
Start Date: 09/16/2021
Page No: 1

Turning Movement Data

Start Time	Davis St Eastbound						Davis St Westbound					Hinman St Northbound						Hinman St Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	3	0	0	3	9	1	13	0	3	3	0	7	6	0	0	9	9	7	18	37
7:15 AM	0	0	0	0	4	0	0	1	10	1	12	0	5	5	0	3	10	0	0	13	2	5	15	37
7:30 AM	0	0	0	0	4	0	0	1	14	3	18	0	4	6	0	2	10	0	0	10	3	3	13	41
7:45 AM	0	0	0	0	3	0	0	1	13	2	16	0	6	9	0	4	15	0	0	13	3	8	16	47
Hourly Total	0	0	0	0	14	0	0	6	46	7	59	0	18	23	0	16	41	0	0	45	17	23	62	162
8:00 AM	0	0	0	0	5	0	0	1	14	4	19	0	7	19	0	7	26	0	0	11	5	4	16	61
8:15 AM	0	1	1	0	8	2	0	1	12	5	18	0	3	14	0	9	17	0	0	8	7	11	15	52
8:30 AM	0	0	0	0	6	0	0	4	18	5	27	0	7	15	0	2	22	0	0	10	5	11	15	64
8:45 AM	0	0	0	0	4	0	0	3	25	7	35	0	7	18	0	6	25	0	0	9	0	15	9	69
Hourly Total	0	1	1	0	23	2	0	9	69	21	99	0	24	66	0	24	90	0	0	38	17	41	55	246
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	1	5	1	0	0	23	5	28	0	11	13	0	9	24	1	0	26	13	17	40	93
4:15 PM	0	7	0	0	12	7	0	0	15	1	16	0	8	18	0	3	26	0	0	27	22	18	49	98
4:30 PM	0	0	0	0	5	0	0	2	29	7	38	0	5	11	0	13	16	0	0	28	14	12	42	96
4:45 PM	0	0	0	0	14	0	0	5	21	5	31	0	12	17	0	9	29	0	0	29	12	16	41	101
Hourly Total	0	7	0	1	36	8	0	7	88	18	113	0	36	59	0	34	95	1	0	110	61	63	172	388
5:00 PM	0	0	0	0	8	0	0	0	24	10	34	0	6	14	0	5	20	0	1	46	14	2	61	115
5:15 PM	0	0	0	0	19	0	0	2	18	6	26	0	7	16	0	12	23	0	0	34	11	11	45	94
5:30 PM	0	0	0	0	9	0	0	3	25	5	33	0	12	12	0	9	24	0	1	35	20	14	56	113
5:45 PM	0	0	0	0	9	0	0	4	14	7	25	0	13	9	0	6	22	0	0	31	22	10	53	100
Hourly Total	0	0	0	0	45	0	0	9	81	28	118	0	38	51	0	32	89	0	2	146	67	37	215	422
Grand Total	0	8	1	1	118	10	0	31	284	74	389	0	116	199	0	106	315	1	2	339	162	164	504	1218
Approach %	0.0	80.0	10.0	10.0	-	-	0.0	8.0	73.0	19.0	-	0.0	36.8	63.2	0.0	-	-	0.2	0.4	67.3	32.1	-	-	-
Total %	0.0	0.7	0.1	0.1	-	0.8	0.0	2.5	23.3	6.1	31.9	0.0	9.5	16.3	0.0	-	25.9	0.1	0.2	27.8	13.3	-	41.4	-
Lights	0	0	0	0	-	0	0	26	260	69	355	0	81	163	0	-	244	1	1	285	150	-	437	1036
% Lights	-	0.0	0.0	0.0	-	0.0	-	83.9	91.5	93.2	91.3	-	69.8	81.9	-	-	77.5	100.0	50.0	84.1	92.6	-	86.7	85.1
Buses	0	0	0	0	-	0	0	1	2	0	3	0	1	0	0	-	1	0	0	1	0	-	1	5
% Buses	-	0.0	0.0	0.0	-	0.0	-	3.2	0.7	0.0	0.8	-	0.9	0.0	-	-	0.3	0.0	0.0	0.3	0.0	-	0.2	0.4
Single-Unit Trucks	0	0	0	0	-	0	0	1	1	3	5	0	2	1	0	-	3	0	0	4	5	-	9	17
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	3.2	0.4	4.1	1.3	-	1.7	0.5	-	-	1.0	0.0	0.0	1.2	3.1	-	1.8	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	8	1	1	-	10	0	3	21	2	26	0	32	35	0	-	67	0	1	49	7	-	57	160
% Bicycles on Road	-	100.0	100.0	100.0	-	100.0	-	9.7	7.4	2.7	6.7	-	27.6	17.6	-	-	21.3	0.0	50.0	14.5	4.3	-	11.3	13.1
Pedestrians	-	-	-	-	118	-	-	-	-	-	-	-	-	-	-	106	-	-	-	-	-	164	-	-

% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-
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DRAFT



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

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

Count Name: Davis St with Hinman Ave
Site Code:
Start Date: 09/16/2021
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Davis St Eastbound						Davis St Westbound					Hinman St Northbound						Hinman St Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	0	0	0	5	0	0	1	14	4	19	0	7	19	0	7	26	0	0	11	5	4	16	61
8:15 AM	0	1	1	0	8	2	0	1	12	5	18	0	3	14	0	9	17	0	0	8	7	11	15	52
8:30 AM	0	0	0	0	6	0	0	4	18	5	27	0	7	15	0	2	22	0	0	10	5	11	15	64
8:45 AM	0	0	0	0	4	0	0	3	25	7	35	0	7	18	0	6	25	0	0	9	0	15	9	69
Total	0	1	1	0	23	2	0	9	69	21	99	0	24	66	0	24	90	0	0	38	17	41	55	246
Approach %	0.0	50.0	50.0	0.0	-	-	0.0	9.1	69.7	21.2	-	0.0	26.7	73.3	0.0	-	-	0.0	0.0	69.1	30.9	-	-	-
Total %	0.0	0.4	0.4	0.0	-	0.8	0.0	3.7	28.0	8.5	40.2	0.0	9.8	26.8	0.0	-	36.6	0.0	0.0	15.4	6.9	-	22.4	-
PHF	0.000	0.250	0.250	0.000	-	0.250	0.000	0.563	0.690	0.750	0.707	0.000	0.857	0.868	0.000	-	0.865	0.000	0.000	0.864	0.607	-	0.859	0.891
Lights	0	0	0	0	-	0	0	8	63	20	91	0	12	50	0	-	62	0	0	30	13	-	43	196
% Lights	-	0.0	0.0	-	-	0.0	-	88.9	91.3	95.2	91.9	-	50.0	75.8	-	-	68.9	-	-	78.9	76.5	-	78.2	79.7
Buses	0	0	0	0	-	0	0	0	2	0	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.0	-	-	0.0	-	0.0	2.9	0.0	2.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.8
Single-Unit Trucks	0	0	0	0	-	0	0	1	0	1	2	0	0	0	0	-	0	0	0	2	4	-	6	8
% Single-Unit Trucks	-	0.0	0.0	-	-	0.0	-	11.1	0.0	4.8	2.0	-	0.0	0.0	-	-	0.0	-	-	5.3	23.5	-	10.9	3.3
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	1	1	0	-	2	0	0	4	0	4	0	12	16	0	-	28	0	0	6	0	-	6	40
% Bicycles on Road	-	100.0	100.0	-	-	100.0	-	0.0	5.8	0.0	4.0	-	50.0	24.2	-	-	31.1	-	-	15.8	0.0	-	10.9	16.3
Pedestrians	-	-	-	-	23	-	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	41	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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Count Name: Davis St with Hinman Ave
Site Code:
Start Date: 09/16/2021
Page No: 4

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Davis St Eastbound						Davis St Westbound					Hinman St Northbound						Hinman St Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	0	0	0	8	0	0	0	24	10	34	0	6	14	0	5	20	0	1	46	14	2	61	115
5:15 PM	0	0	0	0	19	0	0	2	18	6	26	0	7	16	0	12	23	0	0	34	11	11	45	94
5:30 PM	0	0	0	0	9	0	0	3	25	5	33	0	12	12	0	9	24	0	1	35	20	14	56	113
5:45 PM	0	0	0	0	9	0	0	4	14	7	25	0	13	9	0	6	22	0	0	31	22	10	53	100
Total	0	0	0	0	45	0	0	9	81	28	118	0	38	51	0	32	89	0	2	146	67	37	215	422
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	7.6	68.6	23.7	-	0.0	42.7	57.3	0.0	-	-	0.0	0.9	67.9	31.2	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	2.1	19.2	6.6	28.0	0.0	9.0	12.1	0.0	-	21.1	0.0	0.5	34.6	15.9	-	50.9	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.563	0.810	0.700	0.868	0.000	0.731	0.797	0.000	-	0.927	0.000	0.500	0.793	0.761	-	0.881	0.917
Lights	0	0	0	0	-	0	0	6	73	27	106	0	29	46	0	-	75	0	1	123	63	-	187	368
% Lights	-	-	-	-	-	-	-	66.7	90.1	96.4	89.8	-	76.3	90.2	-	-	84.3	-	50.0	84.2	94.0	-	87.0	87.2
Buses	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% 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
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	1	1	0	0	1	0	-	1	0	0	1	0	-	1	3
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	0.0	3.6	0.8	-	0.0	2.0	-	-	1.1	-	0.0	0.7	0.0	-	0.5	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	3	8	0	11	0	9	4	0	-	13	0	1	22	4	-	27	51
% Bicycles on Road	-	-	-	-	-	-	-	33.3	9.9	0.0	9.3	-	23.7	7.8	-	-	14.6	-	50.0	15.1	6.0	-	12.6	12.1
Pedestrians	-	-	-	-	45	-	-	-	-	-	-	-	-	-	-	32	-	-	-	-	-	37	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Davis St with Public Alley
Site Code:
Start Date: 09/16/2021
Page No: 1

Turning Movement Data

Start Time	Davis St Eastbound						Davis St Westbound						Public Alley Northbound						Public Alley 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	0	0	0	0	0	0	0	16	1	0	17	0	0	0	0	5	0	0	0	0	0	0	17	
7:15 AM	0	0	0	0	0	0	0	2	12	0	0	14	0	0	0	0	5	0	0	0	1	0	1	15	
7:30 AM	0	0	1	0	0	1	0	0	18	0	0	18	0	2	1	0	5	3	0	0	0	0	1	22	
7:45 AM	0	0	0	0	1	0	0	1	18	1	1	20	0	2	0	0	8	2	0	0	0	0	2	22	
Hourly Total	0	0	1	0	1	1	0	3	64	2	1	69	0	4	1	0	23	5	0	0	0	1	3	1	76
8:00 AM	0	0	0	0	0	0	0	1	17	1	0	19	0	3	0	0	12	3	0	0	0	1	0	1	23
8:15 AM	0	0	1	0	0	1	0	2	19	1	1	22	0	0	0	0	6	0	0	0	0	0	2	0	23
8:30 AM	0	0	0	0	0	0	0	0	21	0	3	21	0	1	0	0	5	1	0	0	1	1	2	2	24
8:45 AM	0	0	0	0	0	0	0	1	29	0	0	30	0	1	2	0	12	3	0	0	0	2	0	2	35
Hourly Total	0	0	1	0	0	1	0	4	86	2	4	92	0	5	2	0	35	7	0	0	1	4	4	5	105
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	1	1	0	2	0	0	42	1	0	43	0	2	0	0	22	2	0	0	0	2	8	2	49
4:15 PM	0	0	0	0	3	0	0	0	41	1	1	42	0	1	0	0	8	1	0	0	0	2	10	2	45
4:30 PM	1	0	0	0	2	1	0	0	45	1	0	46	0	2	0	0	15	2	0	0	0	2	10	2	51
4:45 PM	0	0	0	0	0	0	0	1	43	0	1	44	0	3	0	0	11	3	0	0	1	1	7	2	49
Hourly Total	1	0	1	1	5	3	0	1	171	3	2	175	0	8	0	0	56	8	0	0	1	7	35	8	194
5:00 PM	0	0	0	0	1	0	0	0	41	1	1	42	0	0	0	0	9	0	0	0	0	1	4	1	43
5:15 PM	0	0	0	1	0	1	0	0	33	1	0	34	0	0	0	0	11	0	0	0	0	1	5	1	36
5:30 PM	0	0	0	0	0	0	0	0	46	1	4	47	0	1	1	0	13	2	0	0	1	1	10	2	51
5:45 PM	0	0	1	0	0	1	0	0	38	2	0	40	0	1	0	0	14	1	0	0	0	1	4	1	43
Hourly Total	0	0	1	1	1	2	0	0	158	5	5	163	0	2	1	0	47	3	0	0	1	4	23	5	173
Grand Total	1	0	4	2	7	7	0	8	479	12	12	499	0	19	4	0	161	23	0	0	3	16	65	19	548
Approach %	14.3	0.0	57.1	28.6	-	-	0.0	1.6	96.0	2.4	-	-	0.0	82.6	17.4	0.0	-	-	0.0	0.0	15.8	84.2	-	-	-
Total %	0.2	0.0	0.7	0.4	-	1.3	0.0	1.5	87.4	2.2	-	91.1	0.0	3.5	0.7	0.0	-	4.2	0.0	0.0	0.5	2.9	-	3.5	-
Lights	1	0	0	0	-	1	0	7	471	7	-	485	0	17	3	0	-	20	0	0	3	13	-	16	522
% Lights	100.0	-	0.0	0.0	-	14.3	-	87.5	98.3	58.3	-	97.2	-	89.5	75.0	-	-	87.0	-	-	100.0	81.3	-	84.2	95.3
Buses	0	0	0	0	-	0	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	0.0	-	0.0	0.0	-	0.0	-	0.0	0.6	0.0	-	0.6	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.5
Single-Unit Trucks	0	0	0	0	-	0	0	1	2	4	-	7	0	2	1	0	-	3	0	0	0	2	-	2	12
% Single-Unit Trucks	0.0	-	0.0	0.0	-	0.0	-	12.5	0.4	33.3	-	1.4	-	10.5	25.0	-	-	13.0	-	-	0.0	12.5	-	10.5	2.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	4	2	-	6	0	0	3	1	-	4	0	0	0	0	-	0	0	0	0	1	-	1	11

% Bicycles on Road	0.0	-	100.0	100.0	-	85.7	-	0.0	0.6	8.3	-	0.8	-	0.0	0.0	-	-	0.0	-	-	0.0	6.3	-	5.3	2.0
Pedestrians	-	-	-	-	7	-	-	-	-	-	12	-	-	-	-	-	161	-	-	-	-	-	65	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: Davis St with Public Alley
Site Code:
Start Date: 09/16/2021
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Davis St Eastbound						Davis St Westbound						Public Alley Northbound						Public Alley 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	0	0	0	0	0	0	0	1	17	1	0	19	0	3	0	0	12	3	0	0	0	1	0	1	23
8:15 AM	0	0	1	0	0	1	0	2	19	1	1	22	0	0	0	0	6	0	0	0	0	0	2	0	23
8:30 AM	0	0	0	0	0	0	0	0	21	0	3	21	0	1	0	0	5	1	0	0	1	1	2	2	24
8:45 AM	0	0	0	0	0	0	0	1	29	0	0	30	0	1	2	0	12	3	0	0	0	2	0	2	35
Total	0	0	1	0	0	1	0	4	86	2	4	92	0	5	2	0	35	7	0	0	1	4	4	5	105
Approach %	0.0	0.0	100.0	0.0	-	-	0.0	4.3	93.5	2.2	-	-	0.0	71.4	28.6	0.0	-	-	0.0	0.0	20.0	80.0	-	-	-
Total %	0.0	0.0	1.0	0.0	-	1.0	0.0	3.8	81.9	1.9	-	87.6	0.0	4.8	1.9	0.0	-	6.7	0.0	0.0	1.0	3.8	-	4.8	-
PHF	0.000	0.000	0.250	0.000	-	0.250	0.000	0.500	0.741	0.500	-	0.767	0.000	0.417	0.250	0.000	-	0.583	0.000	0.000	0.250	0.500	-	0.625	0.750
Lights	0	0	0	0	-	0	0	3	83	0	-	86	0	3	1	0	-	4	0	0	1	3	-	4	94
% Lights	-	-	0.0	-	-	0.0	-	75.0	96.5	0.0	-	93.5	-	60.0	50.0	-	-	57.1	-	-	100.0	75.0	-	80.0	89.5
Buses	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	-	0.0	-	-	0.0	-	0.0	2.3	0.0	-	2.2	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	1.9
Single-Unit Trucks	0	0	0	0	-	0	0	1	1	2	-	4	0	2	1	0	-	3	0	0	0	1	-	1	8
% Single-Unit Trucks	-	-	0.0	-	-	0.0	-	25.0	1.2	100.0	-	4.3	-	40.0	50.0	-	-	42.9	-	-	0.0	25.0	-	20.0	7.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Bicycles on 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	-	-	100.0	-	-	100.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	1.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	35	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
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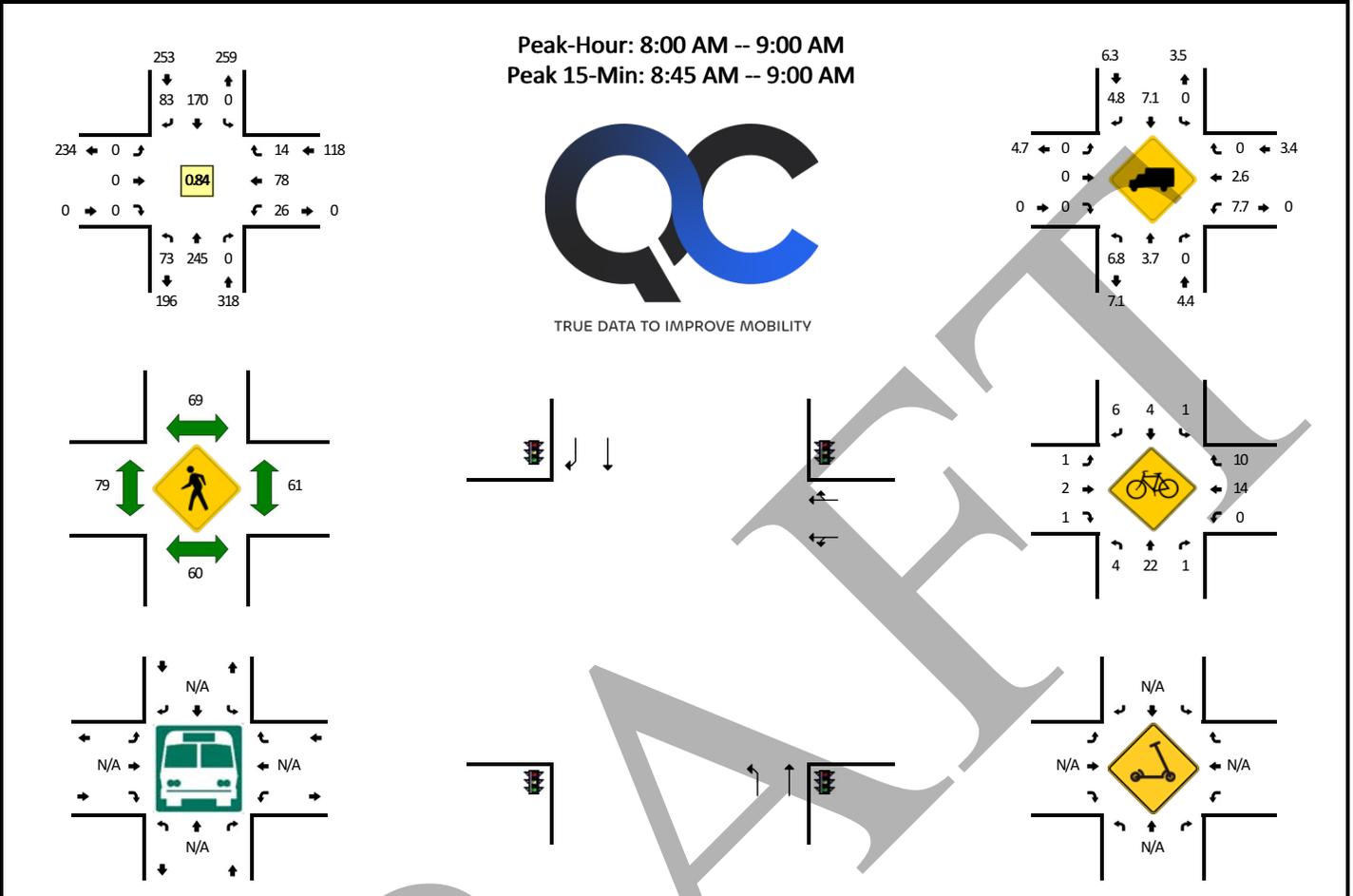
Count Name: Davis St with Public Alley
Site Code:
Start Date: 09/16/2021
Page No: 4

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Davis St Eastbound						Davis St Westbound						Public Alley Northbound						Public Alley 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	
5:00 PM	0	0	0	0	1	0	0	0	41	1	1	42	0	0	0	0	9	0	0	0	0	1	4	1	43
5:15 PM	0	0	0	1	0	1	0	0	33	1	0	34	0	0	0	0	11	0	0	0	0	1	5	1	36
5:30 PM	0	0	0	0	0	0	0	0	46	1	4	47	0	1	1	0	13	2	0	0	1	1	10	2	51
5:45 PM	0	0	1	0	0	1	0	0	38	2	0	40	0	1	0	0	14	1	0	0	0	1	4	1	43
Total	0	0	1	1	1	2	0	0	158	5	5	163	0	2	1	0	47	3	0	0	1	4	23	5	173
Approach %	0.0	0.0	50.0	50.0	-	-	0.0	0.0	96.9	3.1	-	-	0.0	66.7	33.3	0.0	-	-	0.0	0.0	20.0	80.0	-	-	-
Total %	0.0	0.0	0.6	0.6	-	1.2	0.0	0.0	91.3	2.9	-	94.2	0.0	1.2	0.6	0.0	-	1.7	0.0	0.0	0.6	2.3	-	2.9	-
PHF	0.000	0.000	0.250	0.250	-	0.500	0.000	0.000	0.859	0.625	-	0.867	0.000	0.500	0.250	0.000	-	0.375	0.000	0.000	0.250	1.000	-	0.625	0.848
Lights	0	0	0	0	-	0	0	0	158	5	-	163	0	2	1	0	-	3	0	0	1	3	-	4	170
% Lights	-	-	0.0	0.0	-	0.0	-	-	100.0	100.0	-	100.0	-	100.0	100.0	-	-	100.0	-	-	100.0	75.0	-	80.0	98.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% 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
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Single-Unit Trucks	-	-	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
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	1	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	3
% Bicycles on Road	-	-	100.0	100.0	-	100.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	-	0.0	25.0	-	20.0	1.7
Pedestrians	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	47	-	-	-	-	-	23	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

LOCATION: Chicago Ave -- Davis St
CITY/STATE: Evanston, IL

QC JOB #: 16670501
DATE: Thu, Jul 11 2024

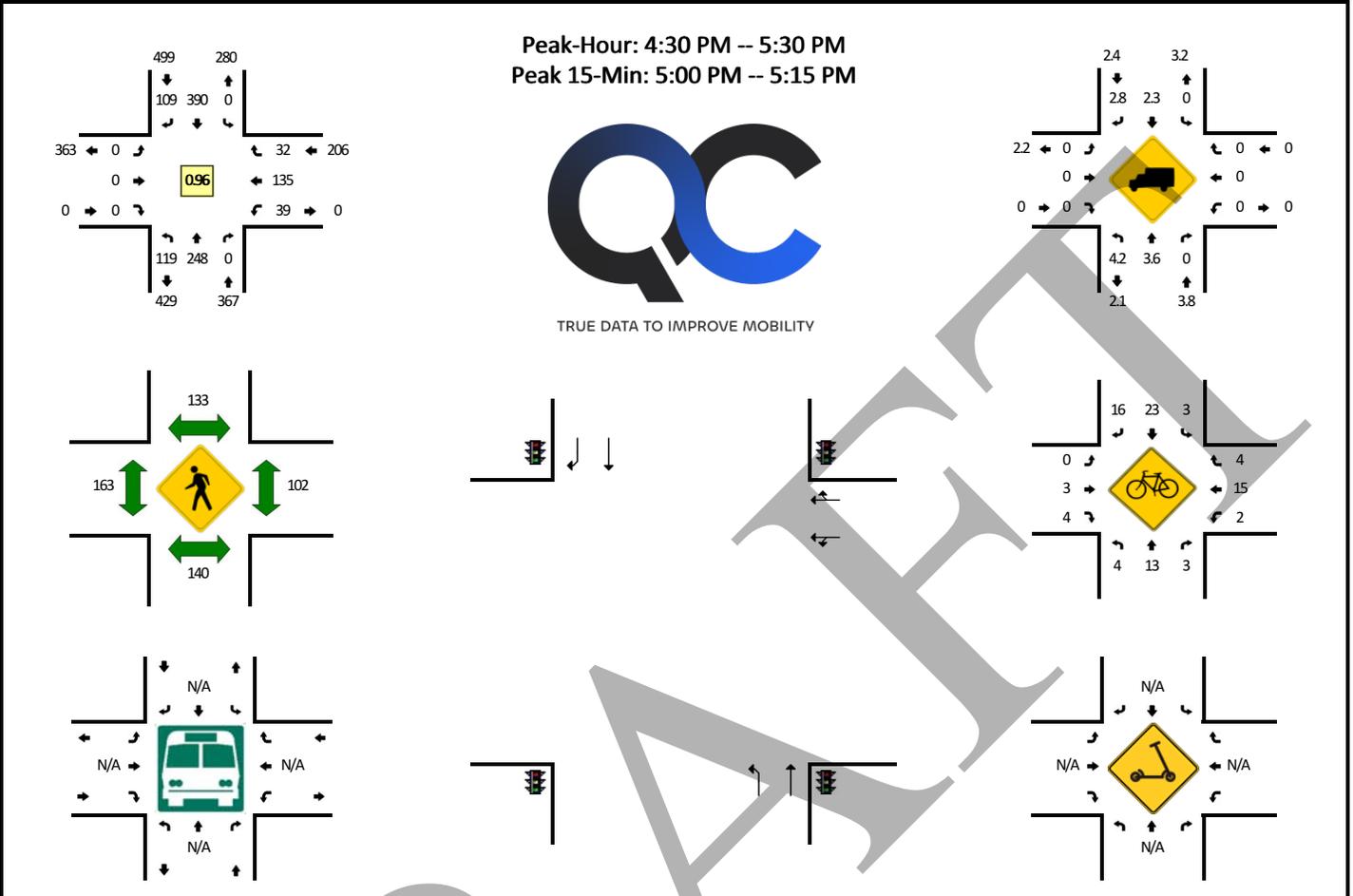


15-Min Count Period Beginning At	Chicago Ave (Northbound)				Chicago Ave (Southbound)				Davis St (Eastbound)				Davis St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	6	17	0	0	0	21	2	0	0	0	0	0	0	3	1	0	50	
6:15 AM	8	24	0	0	0	8	2	0	0	0	0	0	0	4	2	0	48	
6:30 AM	9	17	0	0	0	23	5	0	0	0	0	0	2	3	1	0	60	
6:45 AM	13	18	0	0	0	22	10	0	0	0	0	0	1	13	2	0	79	237
7:00 AM	16	31	0	0	0	33	7	0	0	0	0	0	4	10	3	0	104	291
7:15 AM	10	47	0	0	0	37	9	0	0	0	0	0	1	8	3	0	115	358
7:30 AM	15	28	0	0	0	29	11	0	0	0	0	0	4	19	9	0	115	413
7:45 AM	26	41	0	0	0	43	12	0	0	0	0	0	6	17	2	0	147	481
8:00 AM	19	52	0	0	0	30	22	0	0	0	0	0	8	12	2	0	145	522
8:15 AM	11	46	0	0	0	35	20	0	0	0	0	0	2	17	4	0	135	542
8:30 AM	22	77	0	0	0	50	16	0	0	0	0	0	7	29	3	0	204	631
8:45 AM	21	70	0	0	0	55	25	0	0	0	0	0	9	20	5	0	205	689
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	84	280	0	0	0	220	100	0	0	0	0	0	36	80	20	0	820	
Heavy Trucks	4	8	0	0	0	4	4	0	0	0	0	0	4	0	0	0	24	
Buses																		
Pedestrians		76				104				64				76			320	
Bicycles	12	20	0		0	0	0		0	0	0		0	16	8		56	
Scoters																		

Comments:

LOCATION: Chicago Ave -- Davis St
CITY/STATE: Evanston, IL

QC JOB #: 16670502
DATE: Thu, Jul 11 2024

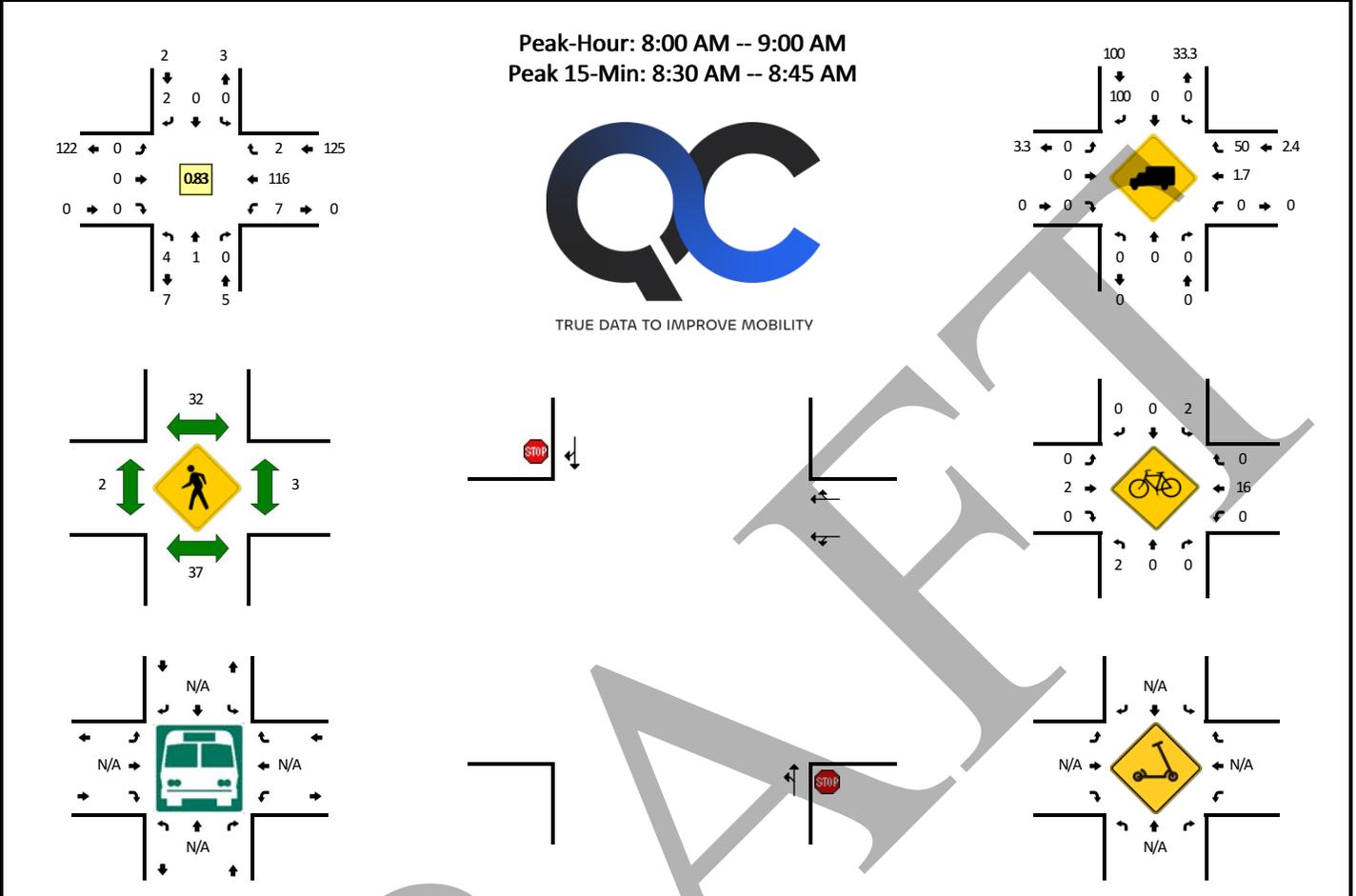


15-Min Count Period Beginning At	Chicago Ave (Northbound)				Chicago Ave (Southbound)				Davis St (Eastbound)				Davis St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	27	46	0	0	0	94	29	0	0	0	0	0	9	27	11	0	243	
4:15 PM	32	62	0	0	0	96	27	0	0	0	0	0	10	35	7	0	269	
4:30 PM	32	57	0	0	0	103	27	0	0	0	0	0	12	34	10	0	275	
4:45 PM	26	57	0	0	0	90	28	0	0	0	0	0	6	31	7	0	245	1032
5:00 PM	34	63	0	0	0	105	24	0	0	0	0	0	12	34	7	0	279	1068
5:15 PM	27	71	0	0	0	92	30	0	0	0	0	0	9	36	8	0	273	1072
5:30 PM	30	57	0	0	0	102	17	0	0	0	0	0	9	30	11	0	256	1053
5:45 PM	32	57	0	0	0	79	32	0	0	0	0	0	11	26	10	0	247	1055
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	136	252	0	0	0	420	96	0	0	0	0	0	48	136	28	0	1116	
Heavy Trucks	4	8	0	0	0	12	0	0	0	0	0	0	0	0	0	0	24	
Buses																		
Pedestrians		120				148				108				76			452	
Bicycles	8	12	0		4	20	28		0	4	0		0	28	0		104	
Scooters																		

Comments:

LOCATION: NB/SB Alley -- Davis St
CITY/STATE: Evanston, IL

QC JOB #: 16670503
DATE: Thu, Jul 11 2024

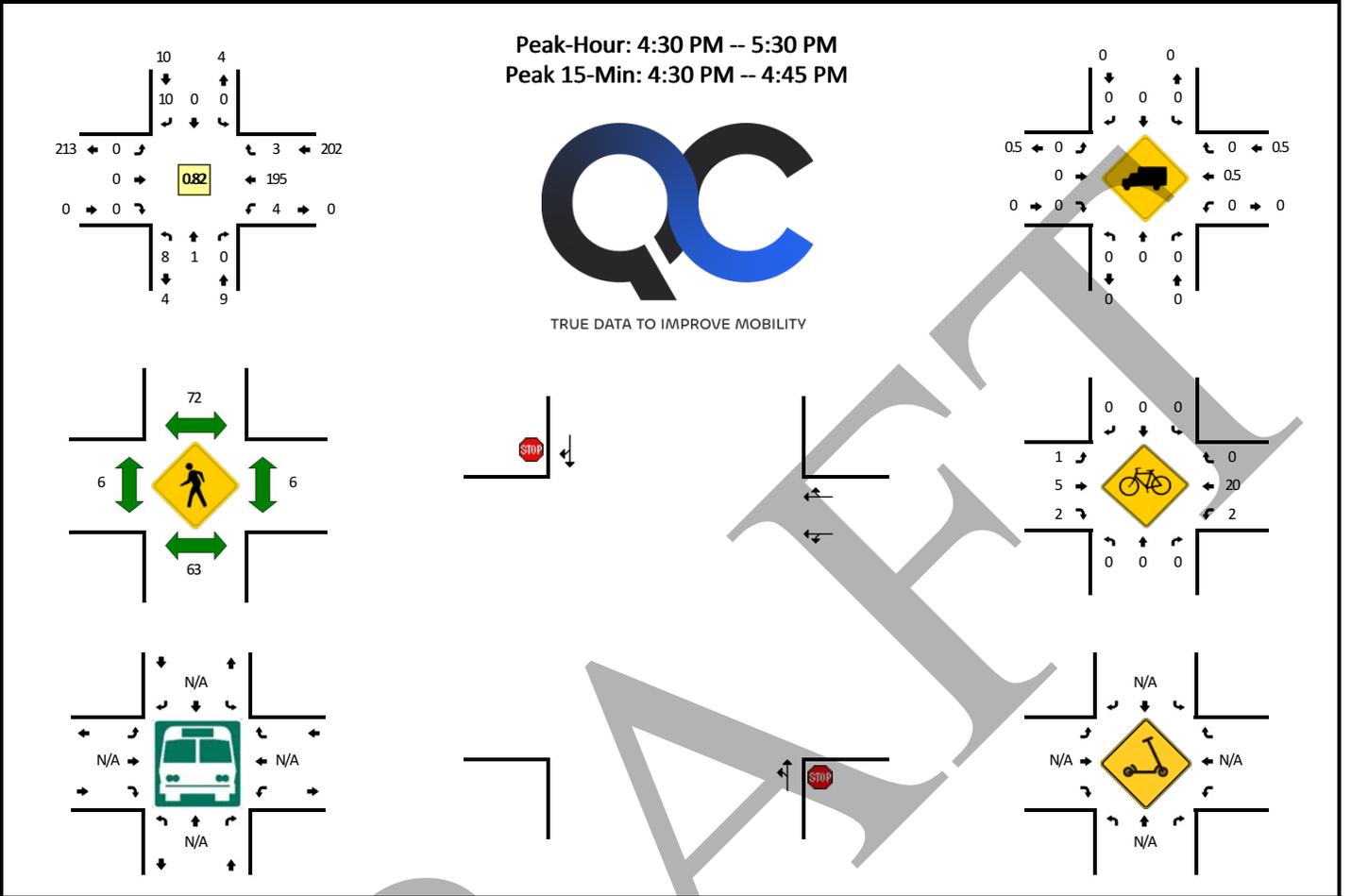


15-Min Count Period Beginning At	NB/SB Alley (Northbound)				NB/SB Alley (Southbound)				Davis St (Eastbound)				Davis St (Westbound)				Total	Hourly Totals		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U				
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4		
6:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	5	0	0	0	7	
6:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	5	0	0	0	7	
6:45 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	18	36
7:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	1	15	0	0	0	18	50
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	55
7:30 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	2	30	0	0	0	34	82
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	24	0	0	0	25	89
8:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	1	22	1	0	0	26	97
8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1	24	0	0	0	26	111
8:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	2	37	0	0	0	40	117
8:45 AM	1	1	0	0	0	0	1	0	0	0	0	0	0	3	33	1	0	0	40	132
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total			
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U				
All Vehicles	4	0	0	0	0	0	0	0	0	0	0	0	8	148	0	0	160			
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4			
Buses																				
Pedestrians		44				36				0				0			80			
Bicycles	8	0	0		4	0	0			0	0			20	0		32			
Scoters																				

Comments:

LOCATION: NB/SB Alley -- Davis St
CITY/STATE: Evanston, IL

QC JOB #: 16670504
DATE: Thu, Jul 11 2024

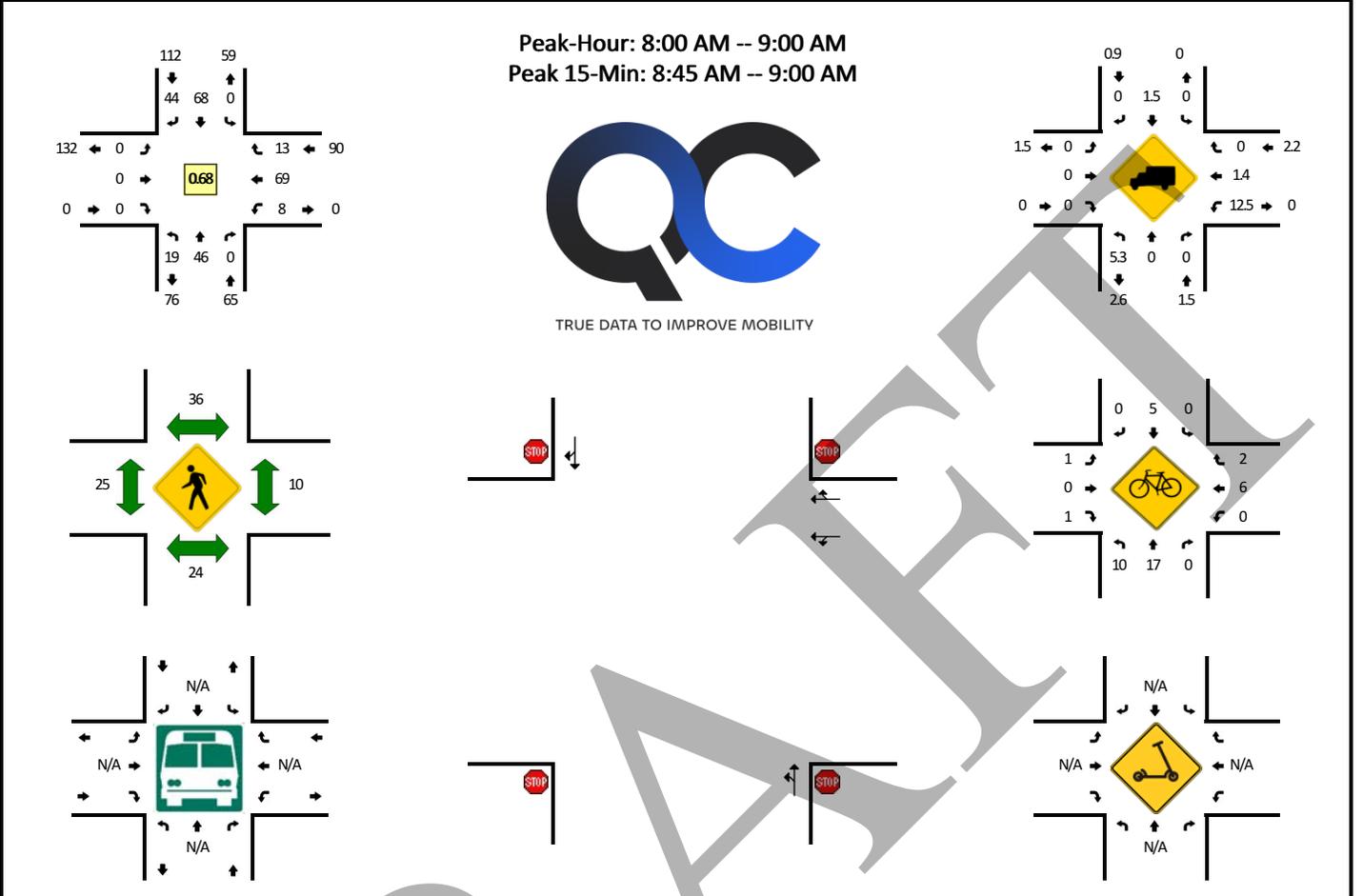


15-Min Count Period Beginning At	NB/SB Alley (Northbound)				NB/SB Alley (Southbound)				Davis St (Eastbound)				Davis St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	0	0	0	0	0	2	0	0	0	0	0	0	45	0	0	51	
4:15 PM	2	0	0	0	0	0	1	0	0	0	0	0	1	41	1	0	46	
4:30 PM	1	0	0	0	0	0	1	0	0	0	0	0	1	63	1	0	67	
4:45 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	39	0	0	41	205
5:00 PM	4	0	0	0	0	0	4	0	0	0	0	0	3	46	1	0	58	212
5:15 PM	2	1	0	0	0	0	4	0	0	0	0	0	0	47	1	0	55	221
5:30 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	50	0	0	52	206
5:45 PM	4	0	0	0	0	0	1	0	0	0	0	0	2	44	1	0	52	217
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	0	0	0	0	0	4	0	0	0	0	0	4	252	4	0	268	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
Buses																		
Pedestrians		48				72				4				0			124	
Bicycles	0	0	0		0	0	0		0	0	4		4	12	0		20	
Scooters																		

Comments:

LOCATION: Hinman Ave -- Davis St
CITY/STATE: Evanston, IL

QC JOB #: 16670505
DATE: Thu, Jul 11 2024

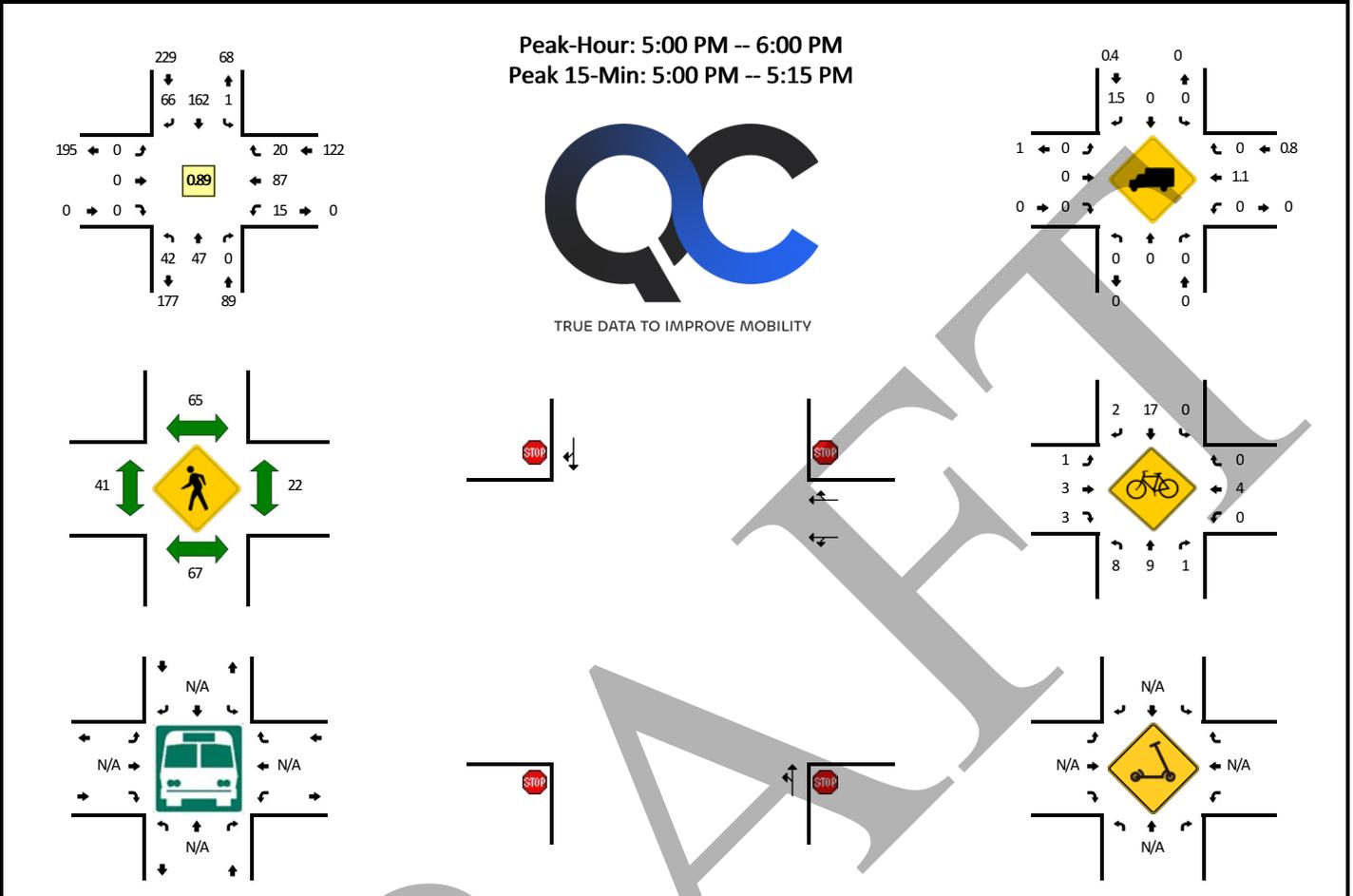


15-Min Count Period Beginning At	Hinman Ave (Northbound)				Hinman Ave (Southbound)				Davis St (Eastbound)				Davis St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	2	0	0	0	4	1	0	0	0	0	0	0	3	1	0	11	
6:15 AM	1	4	0	0	0	4	0	0	0	0	0	0	0	4	1	0	14	
6:30 AM	0	2	0	0	0	5	1	0	0	0	0	0	0	5	0	0	13	
6:45 AM	3	4	0	0	0	4	3	0	0	0	0	0	1	10	1	0	26	64
7:00 AM	0	8	0	0	0	5	5	0	0	0	0	0	3	11	2	0	34	87
7:15 AM	0	2	0	0	0	12	4	0	0	0	0	0	1	10	5	0	34	107
7:30 AM	2	5	0	0	0	9	10	0	0	0	0	0	2	21	5	0	54	148
7:45 AM	8	8	0	0	0	14	5	0	0	0	0	0	3	13	2	0	53	175
8:00 AM	2	5	0	0	0	10	10	0	0	0	0	0	1	11	0	0	39	180
8:15 AM	4	12	0	0	0	11	7	0	0	0	0	0	2	14	1	0	51	197
8:30 AM	9	10	0	0	0	22	9	0	0	0	0	0	2	23	4	0	79	222
8:45 AM	4	19	0	0	0	25	18	0	0	0	0	0	3	21	8	0	98	267
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	16	76	0	0	0	100	72	0	0	0	0	0	12	84	32	0	392	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses																		
Pedestrians		20				36				40				8			104	
Bicycles		24	0			0	0			0	0			12	4		48	
Scoters																		

Comments:

LOCATION: Hinman Ave -- Davis St
CITY/STATE: Evanston, IL

QC JOB #: 16670506
DATE: Thu, Jul 11 2024

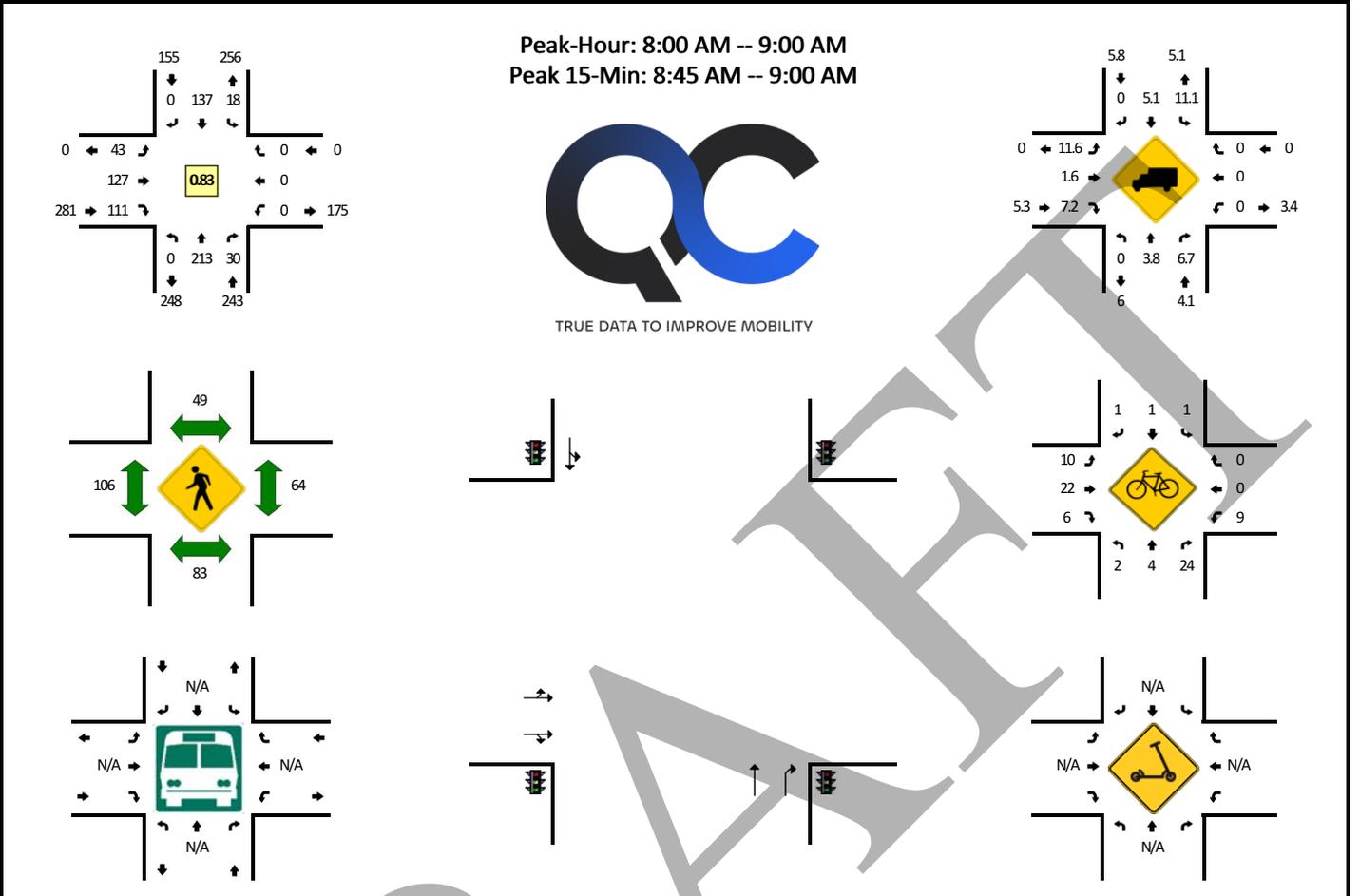


15-Min Count Period Beginning At	Hinman Ave (Northbound)				Hinman Ave (Southbound)				Davis St (Eastbound)				Davis St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	15	0	0	0	38	14	0	0	0	0	0	3	23	7	0	106	
4:15 PM	6	12	0	0	0	25	14	0	0	0	0	0	4	23	7	0	91	
4:30 PM	11	8	0	0	0	43	26	0	0	0	0	0	2	26	5	0	121	
4:45 PM	8	8	0	0	0	19	17	0	0	0	0	0	3	14	6	0	75	393
5:00 PM	9	16	0	0	0	53	15	1	0	0	0	0	3	25	2	0	124	411
5:15 PM	10	9	0	0	0	35	22	0	0	0	0	0	8	17	7	0	108	428
5:30 PM	10	9	0	0	0	38	12	0	0	0	0	0	2	27	7	0	105	412
5:45 PM	13	13	0	0	0	36	17	0	0	0	0	0	2	18	4	0	103	440
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	36	64	0	0	0	212	60	4	0	0	0	0	12	100	8	0	496	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses																		
Pedestrians		48				52				36				20			156	
Bicycles	12	12	0		0	24	0		0	4	0		0	8	0		60	
Scooters																		

Comments:

LOCATION: Chicago Ave -- Church St
CITY/STATE: Evanston, IL

QC JOB #: 16670507
DATE: Thu, Jul 11 2024

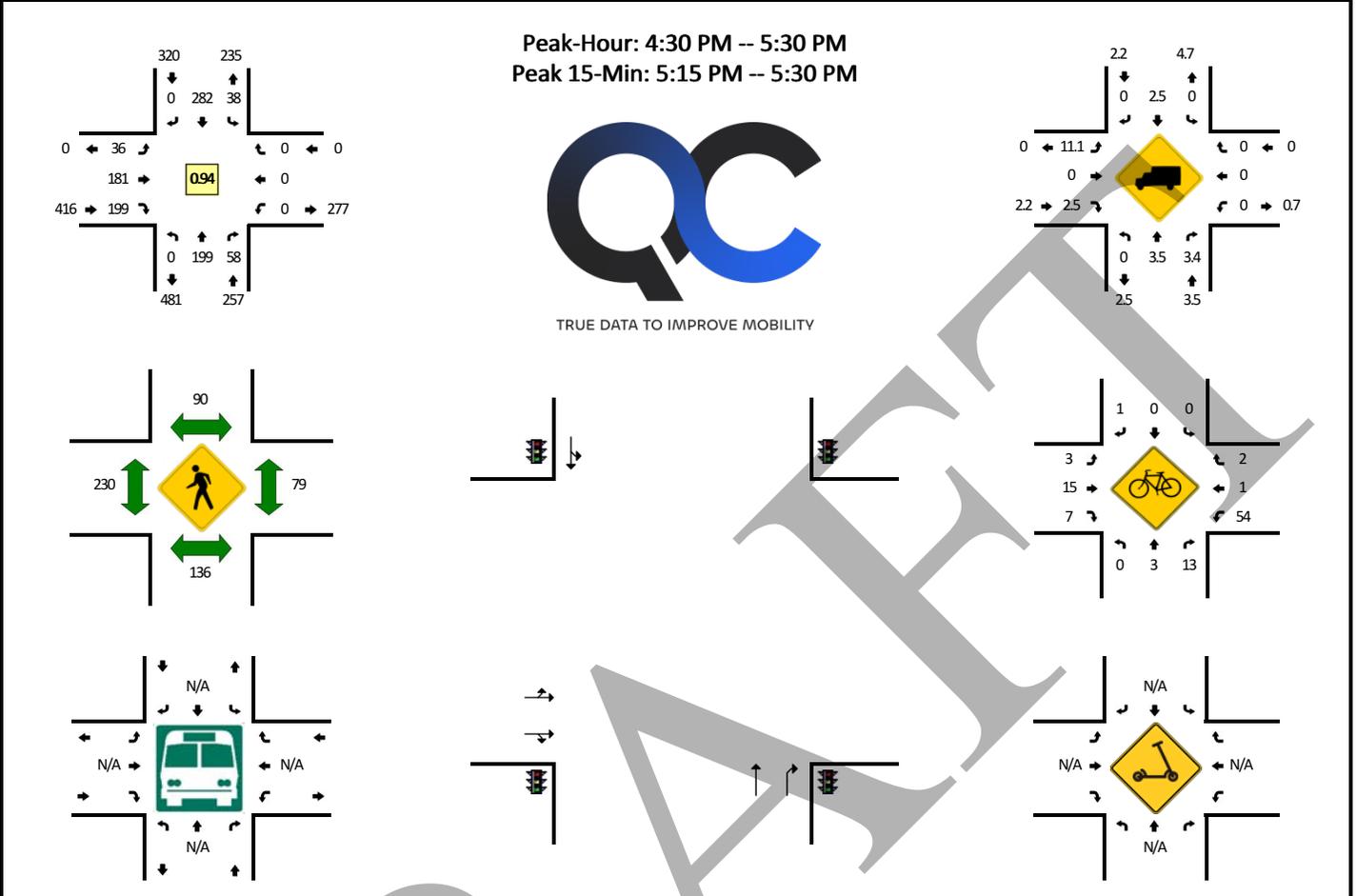


15-Min Count Period Beginning At	Chicago Ave (Northbound)				Chicago Ave (Southbound)				Church St (Eastbound)				Church St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	10	2	0	0	14	0	0	4	5	8	0	0	0	0	0	43	
6:15 AM	0	20	2	0	1	8	0	0	2	1	5	0	0	0	0	0	39	
6:30 AM	0	18	4	0	2	21	0	0	5	8	7	0	0	0	0	0	65	
6:45 AM	0	12	5	0	0	9	0	0	3	11	21	0	0	0	0	0	61	208
7:00 AM	0	31	1	0	1	21	0	0	4	9	20	0	0	0	0	0	87	252
7:15 AM	0	39	8	0	2	26	0	0	3	20	17	0	0	0	0	0	115	328
7:30 AM	0	24	11	0	0	21	0	0	6	26	18	0	0	0	0	0	106	369
7:45 AM	0	34	6	0	2	34	1	0	9	27	27	0	0	0	0	0	140	448
8:00 AM	0	39	9	0	0	19	0	0	9	18	26	0	0	0	0	0	120	481
8:15 AM	0	45	4	0	2	25	0	0	14	31	34	0	0	0	0	0	155	521
8:30 AM	0	67	7	0	8	53	0	0	8	37	19	0	0	0	0	0	199	614
8:45 AM	0	62	10	0	8	40	0	0	12	41	32	0	0	0	0	0	205	679
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	248	40	0	32	160	0	0	48	164	128	0	0	0	0	0	820	
Heavy Trucks	0	8	0	0	4	8	0	0	0	0	0	0	0	0	0	0	20	
Buses																		
Pedestrians		84				60				76				84			304	
Bicycles	0	8	16		0	0	0		16	12	0		4	0	0		56	
Scoters																		

Comments:

LOCATION: Chicago Ave -- Church St
CITY/STATE: Evanston, IL

QC JOB #: 16670508
DATE: Thu, Jul 11 2024

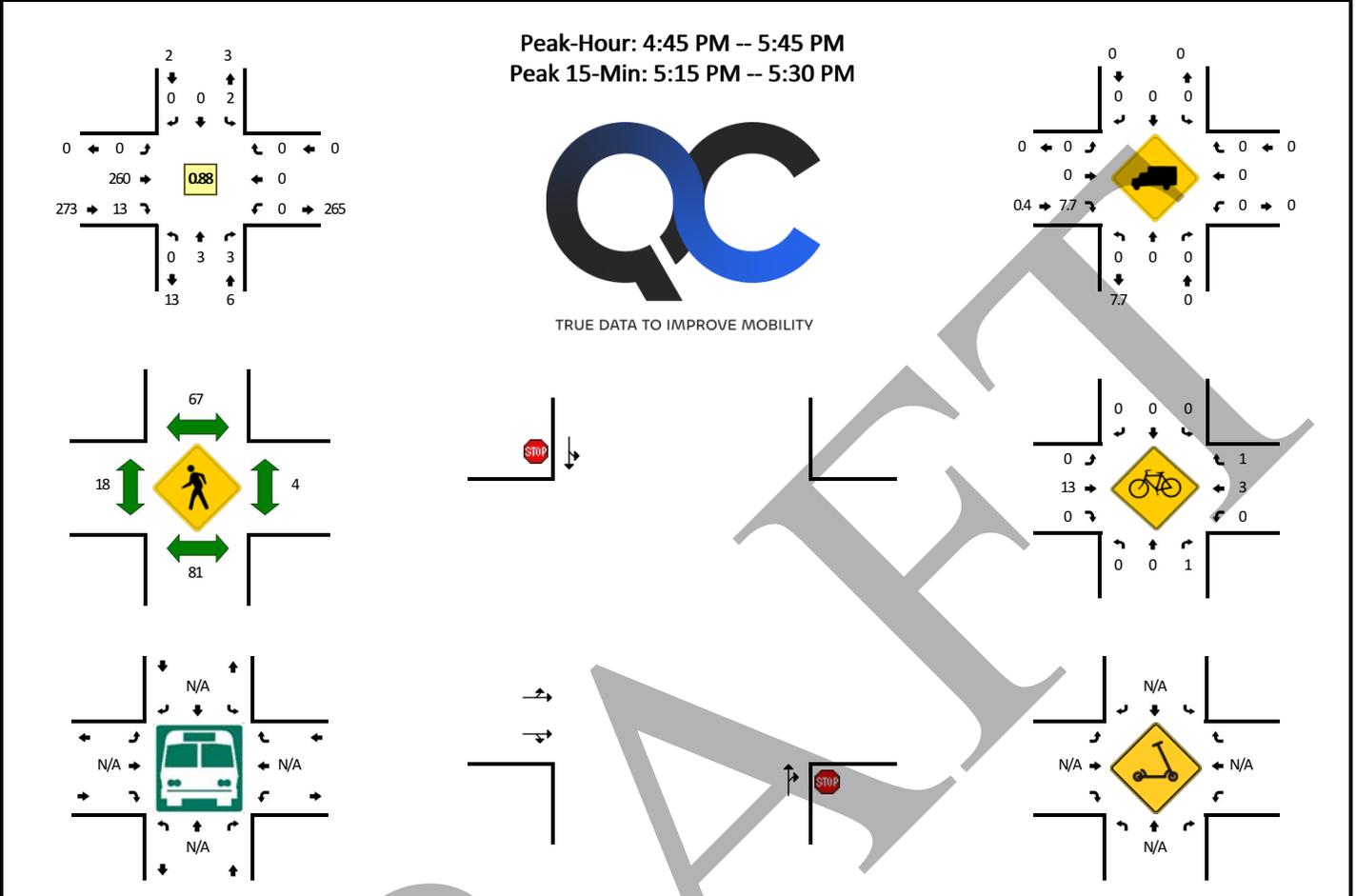


15-Min Count Period Beginning At	Chicago Ave (Northbound)				Chicago Ave (Southbound)				Church St (Eastbound)				Church St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	43	7	0	4	60	0	0	11	24	49	0	0	0	0	0	198	
4:15 PM	0	56	6	0	8	71	0	0	17	28	46	0	0	0	0	0	232	
4:30 PM	0	47	17	0	5	83	0	0	8	35	45	0	0	0	0	0	240	
4:45 PM	0	52	8	0	9	65	0	0	10	44	46	0	0	0	0	0	234	904
5:00 PM	0	43	16	0	9	72	0	0	7	53	56	0	0	0	0	0	256	962
5:15 PM	0	57	17	0	15	62	0	0	11	49	52	0	0	0	0	0	263	993
5:30 PM	0	48	16	1	5	60	0	0	18	42	47	0	0	0	0	0	237	990
5:45 PM	0	47	15	0	8	63	0	0	14	37	40	0	0	0	0	0	224	980
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	228	68	0	60	248	0	0	44	196	208	0	0	0	0	0	1052	
Heavy Trucks	0	4	0		0	8	0		4	0	4		0	0	0		20	
Buses																		
Pedestrians		144				88				248				84			564	
Bicycles	0	8	12		0	0	4		8	8	8		56	4	0		108	
Scooters																		

Comments:

LOCATION: NB/SB Alley -- Church St
CITY/STATE: Evanston, IL

QC JOB #: 16670510
DATE: Thu, Jul 11 2024



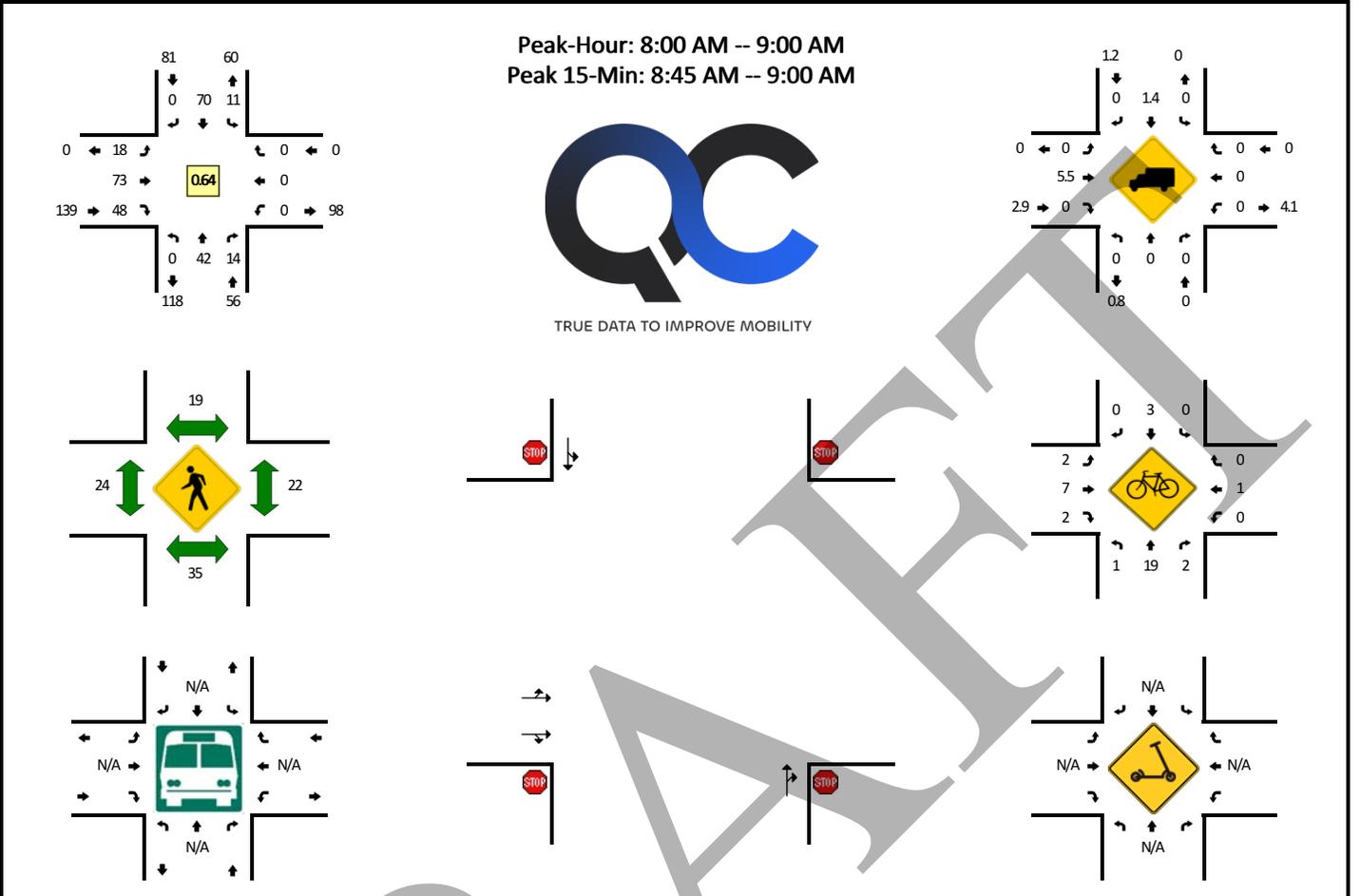
15-Min Count Period Beginning At	NB/SB Alley (Northbound)				NB/SB Alley (Southbound)				Church St (Eastbound)				Church St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	3	0	0	0	0	0	2	37	0	0	0	0	0	0	43	
4:15 PM	0	0	1	0	3	0	0	0	1	43	1	0	0	0	0	0	49	
4:30 PM	0	0	1	0	3	0	0	0	1	51	2	0	0	0	0	0	58	
4:45 PM	0	0	1	0	1	0	0	0	0	54	5	0	0	0	0	0	61	211
5:00 PM	0	0	0	0	0	0	0	0	0	74	3	0	0	0	0	0	77	245
5:15 PM	0	2	1	0	1	0	0	0	0	73	3	0	0	0	0	0	80	276
5:30 PM	0	1	1	0	0	0	0	0	0	59	2	0	0	0	0	0	63	281
5:45 PM	0	0	0	0	0	0	0	0	2	55	2	0	0	0	0	0	59	279

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	8	4	0	4	0	0	0	0	292	12	0	0	0	0	0	320
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses																	
Pedestrians		80				100				16				0			196
Bicycles	0	0	0		0	0	0		0	12	0		0	0	0		12
Scooters																	

Comments:

LOCATION: Hinman Ave -- Church St
CITY/STATE: Evanston, IL

QC JOB #: 16670511
DATE: Thu, Jul 11 2024

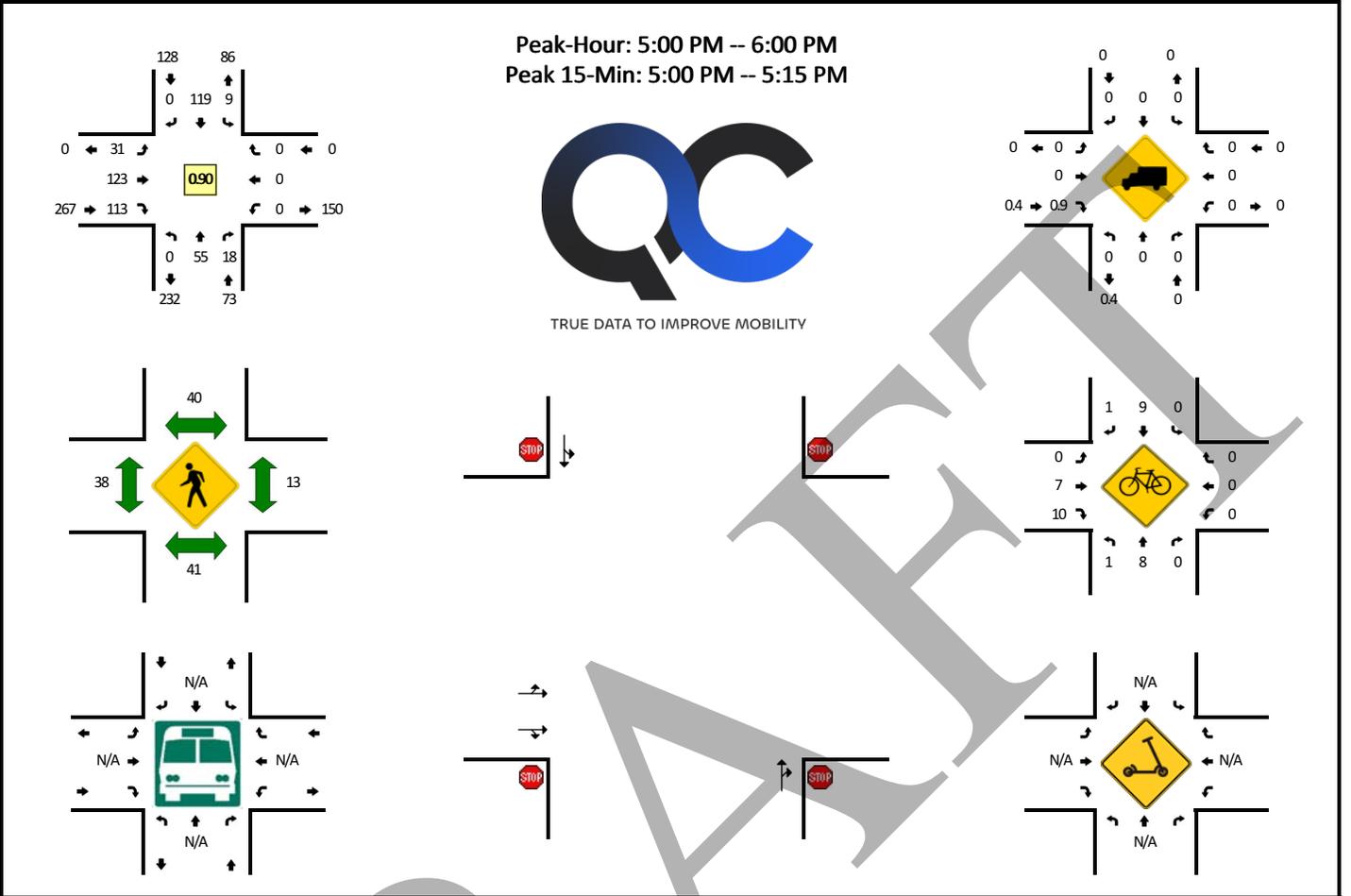


15-Min Count Period Beginning At	Hinman Ave (Northbound)				Hinman Ave (Southbound)				Church St (Eastbound)				Church St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	3	0	0	1	3	0	0	1	2	2	0	0	0	0	0	12	
6:15 AM	0	5	2	0	0	3	0	0	1	0	1	0	0	0	0	0	12	
6:30 AM	0	2	0	0	1	2	0	0	3	5	4	0	0	0	0	0	17	
6:45 AM	0	3	1	0	0	2	0	0	1	5	1	0	0	0	0	0	13	54
7:00 AM	0	7	1	0	2	4	0	0	1	4	2	0	0	0	0	0	21	63
7:15 AM	0	3	2	0	0	6	0	0	1	8	8	0	0	0	0	0	28	79
7:30 AM	0	6	4	0	0	7	0	0	8	7	10	0	0	0	0	0	42	104
7:45 AM	0	6	3	0	0	10	0	0	5	17	9	0	0	0	0	0	50	141
8:00 AM	0	2	3	0	1	11	0	0	1	9	10	0	0	0	0	0	37	157
8:15 AM	0	8	1	0	5	12	0	0	3	15	10	0	0	0	0	0	54	183
8:30 AM	0	13	3	0	3	19	0	0	6	21	12	0	0	0	0	0	77	218
8:45 AM	0	19	7	0	2	28	0	0	8	28	16	0	0	0	0	0	108	276
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	76	28	0	8	112	0	0	32	112	64	0	0	0	0	0	432	
Heavy Trucks	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	
Buses																		
Pedestrians		28				16				32				20			96	
Bicycles		28	4			0	0			0	0			0	0		32	
Scoters																		

Comments:

LOCATION: Hinman Ave -- Church St
CITY/STATE: Evanston, IL

QC JOB #: 16670512
DATE: Thu, Jul 11 2024



15-Min Count Period Beginning At	Hinman Ave (Northbound)				Hinman Ave (Southbound)				Church St (Eastbound)				Church St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	15	9	0	1	31	0	0	5	20	13	0	0	0	0	0	94	
4:15 PM	0	11	6	0	1	27	0	0	4	26	16	0	0	0	0	0	91	
4:30 PM	0	6	4	1	3	39	0	0	2	18	32	0	0	0	0	0	105	
4:45 PM	0	9	3	0	1	15	0	0	7	33	15	0	0	0	0	0	83	373
5:00 PM	0	17	5	0	2	33	0	0	7	29	37	0	0	0	0	0	130	409
5:15 PM	0	13	5	0	1	29	0	0	11	36	27	0	0	0	0	0	122	440
5:30 PM	0	17	4	0	4	28	0	0	7	31	24	0	0	0	0	0	115	450
5:45 PM	0	8	4	0	2	29	0	0	6	27	25	0	0	0	0	0	101	468

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	68	20	0	8	132	0	0	28	116	148	0	0	0	0	0	520
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		64				36				32				8			140
Bicycles	4	8	0		0	4	0		0	4	16		0	0	0		36
Scoters																	

Comments:

DRAFT

Preliminary Site Plan

ITE Trip Generation Sheets and Census Data

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

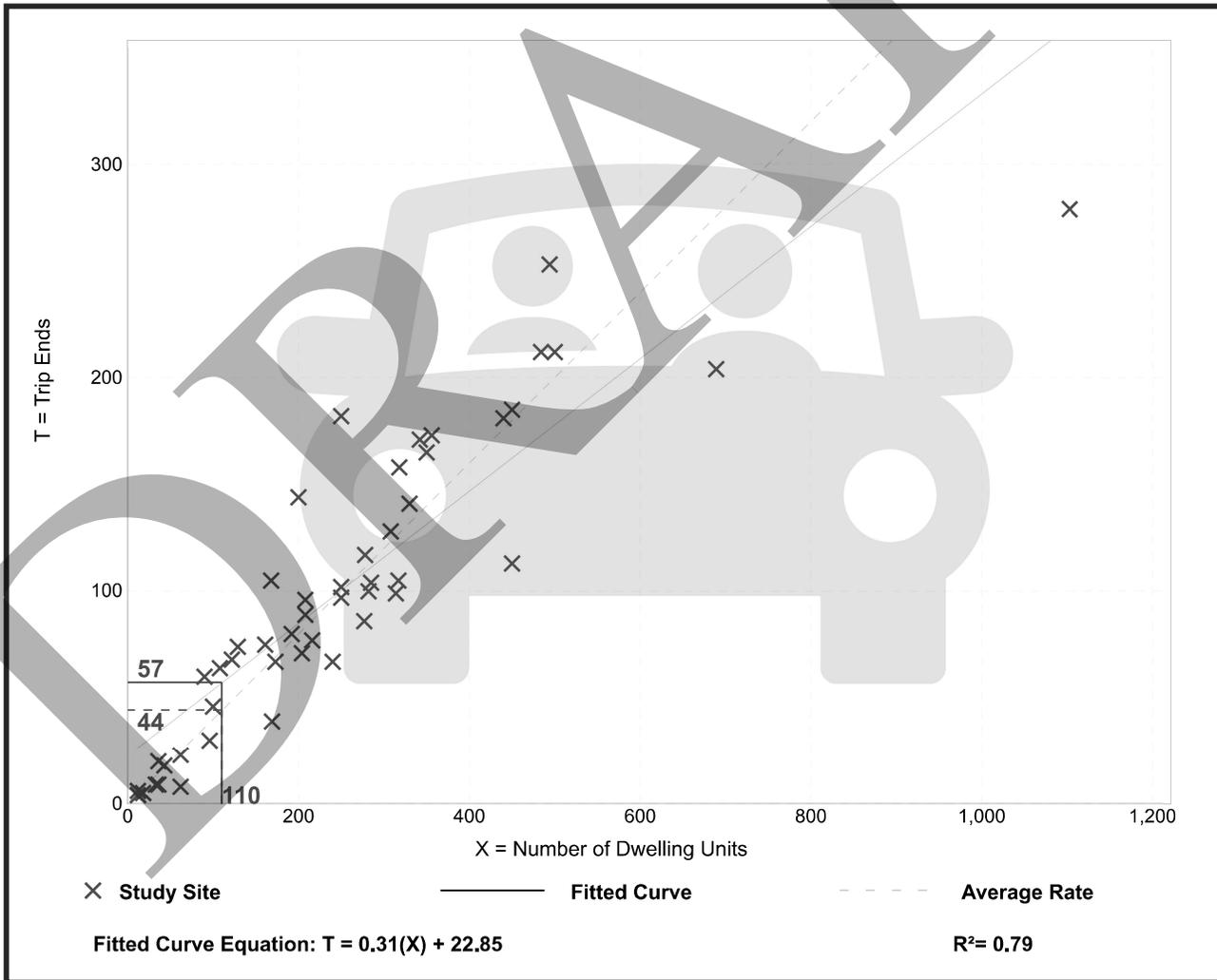
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

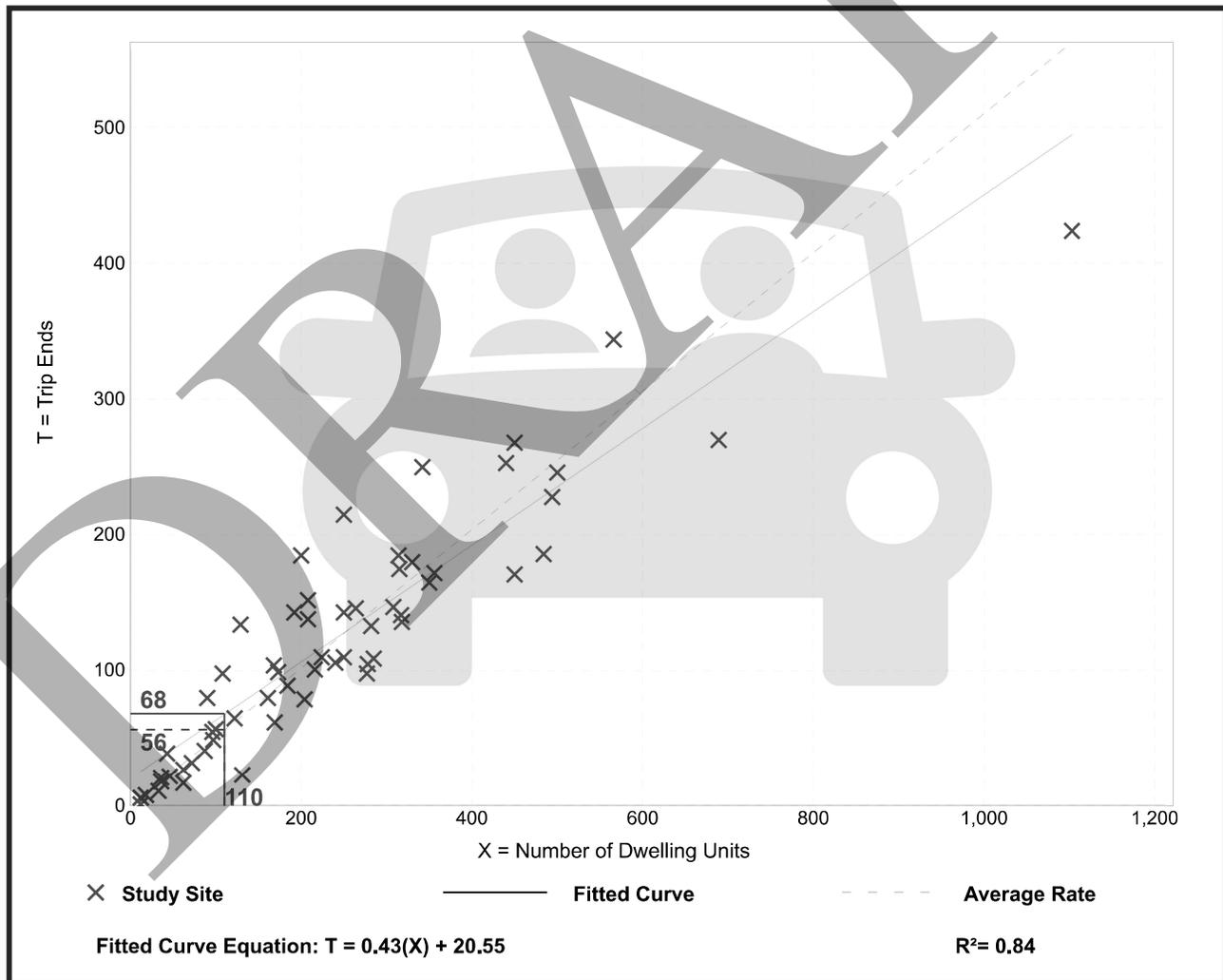
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

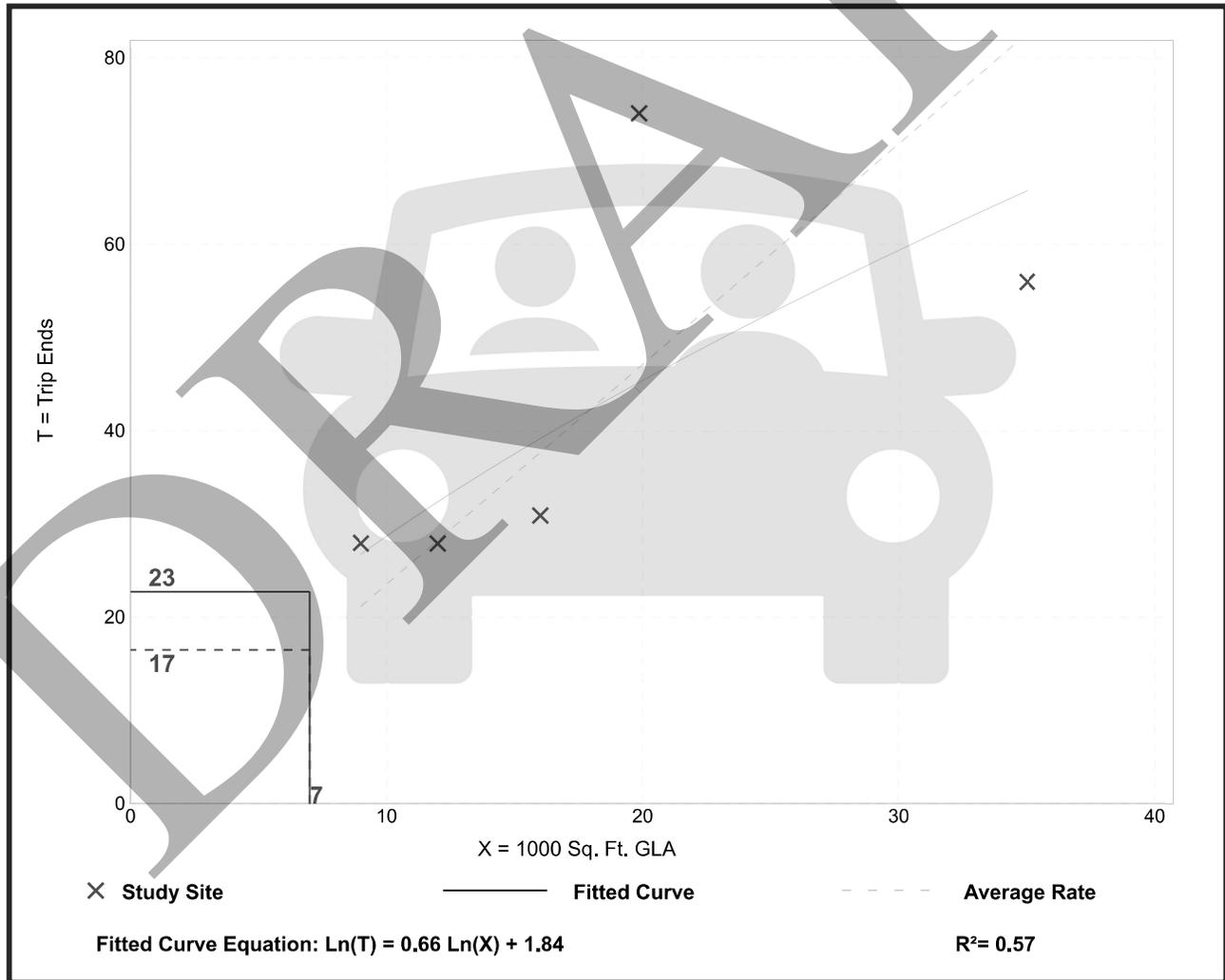
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
 Number of Studies: 5
 Avg. 1000 Sq. Ft. GLA: 18
 Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation

Caution – Small Sample Size



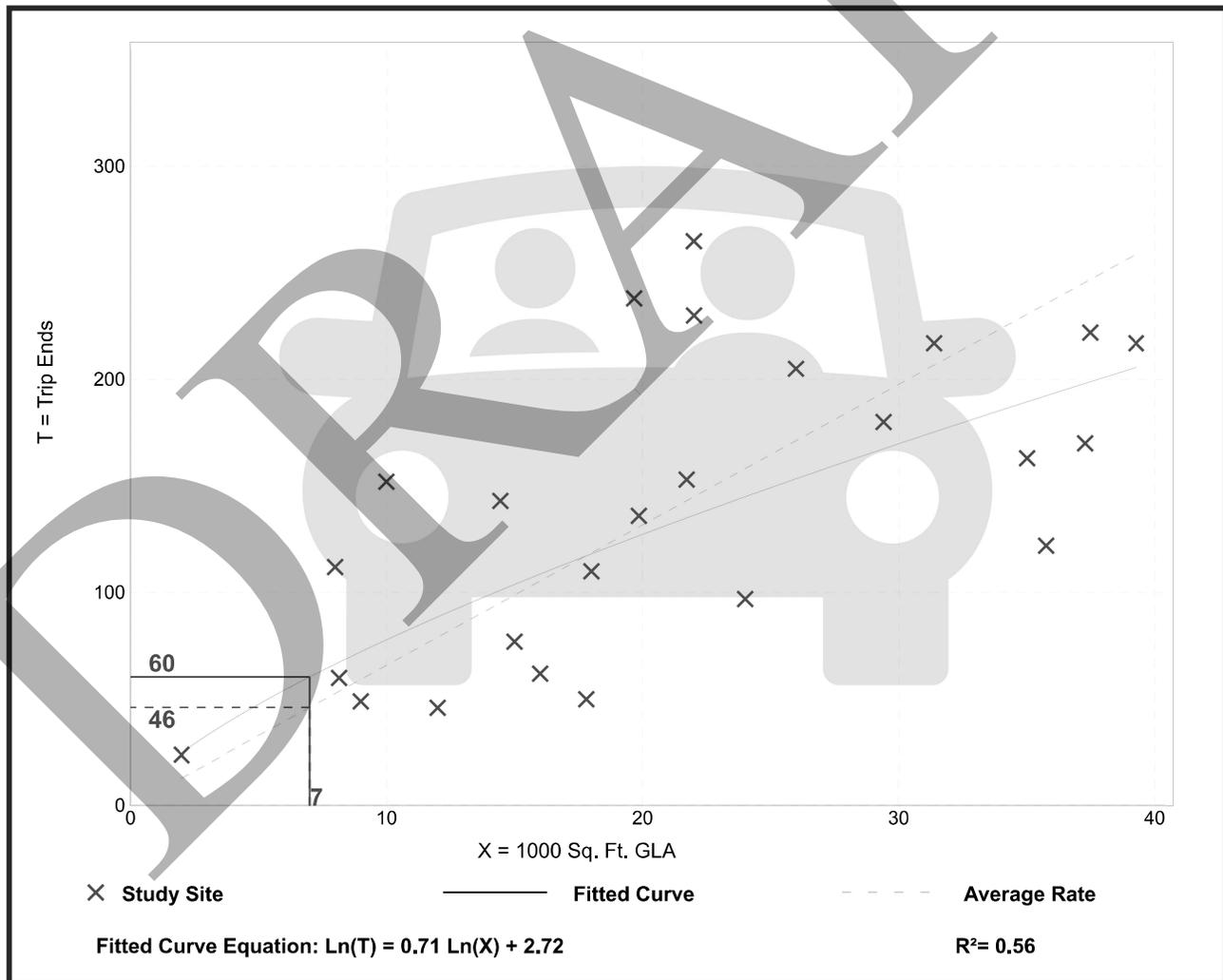
Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
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: 25
 Avg. 1000 Sq. Ft. GLA: 21
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



DRAFT

CMAP Projections Letter



August 5, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Chicago Ave South of Church St
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated July 31, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Chicago Ave south of Church St	9,750	10,300

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
2024_TrafficForecasts\Evanston\ck-88-24\ck-88-24.docx

DRAFT

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
Weekday Morning Peak Hour – Existing Conditions

Lanes, Volumes, Timings
1: Chicago Avenue & Davis Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↗	↖			↖	↗
Traffic Volume (vph)	0	0	0	26	128	15	113	398	0	0	186	83
Future Volume (vph)	0	0	0	26	128	15	113	398	0	0	186	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		70
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.94		0.87					0.79
Frt					0.987							0.850
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	3008	0	1662	1589	0	0	1559	1501
Flt Permitted					0.992		0.595					
Satd. Flow (perm)	0	0	0	0	2888	0	904	1589	0	0	1559	1188
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		636			240			245				582
Travel Time (s)		14.5			5.5			5.6				13.2
Confl. Peds. (#/hr)	58		81	81		58	103		88	88		103
Confl. Bikes (#/hr)						16			49			11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	29%	0%	15%	5%	4%	0%	0%	6%	4%
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	180	0	120	423	0	0	198	88
Turn Type				Perm	NA		custom	NA			NA	Perm
Protected Phases					8		1	1 2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		1	1 2			6	6
Switch Phase												
Minimum Initial (s)				7.0	7.0		4.0				15.0	15.0
Minimum Split (s)				25.0	25.0		8.5				25.0	25.0
Total Split (s)				40.0	40.0		17.0				42.0	42.0
Total Split (%)				33.3%	33.3%		14.2%				35.0%	35.0%
Yellow Time (s)				4.5	4.5		3.5				4.5	4.5
All-Red Time (s)				1.5	1.5		1.0				1.5	1.5
Lost Time Adjust (s)					0.0		0.0				0.0	0.0
Total Lost Time (s)					6.0		4.5				6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				Max	Max		None			C-Max	C-Max	
Act Effct Green (s)					38.1		62.7	67.2		52.8	52.8	
Actuated g/C Ratio					0.32		0.52	0.56		0.44	0.44	
v/c Ratio					0.20		0.23	0.48		0.29	0.17	
Control Delay (s/veh)					31.1		16.5	19.4		18.1	17.2	
Queue Delay					0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)					31.1		16.5	19.4		18.1	17.2	
LOS					C		B	B		B	B	

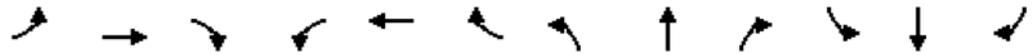
Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	Ø2	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	4.0
Minimum Split (s)	25.0	21.0
Total Split (s)	42.0	21.0
Total Split (%)	35%	18%
Yellow Time (s)	4.5	6.0
All-Red Time (s)	1.5	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



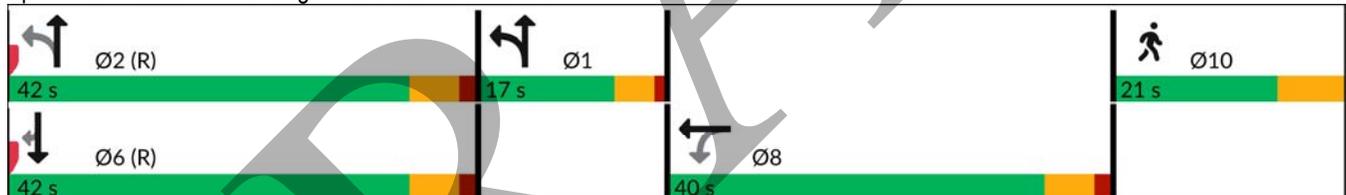
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)					31.1			18.7			17.8	
Approach LOS					C			B			B	
Queue Length 50th (ft)					53		39	172			74	27
Queue Length 95th (ft)					86		94	351			167	88
Internal Link Dist (ft)		556			160			165			502	
Turn Bay Length (ft)												70
Base Capacity (vph)					916		581	943			685	522
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					0.20		0.21	0.45			0.29	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay (s/veh): 20.7
 Intersection Capacity Utilization 51.7%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 1: Chicago Avenue & Davis Street

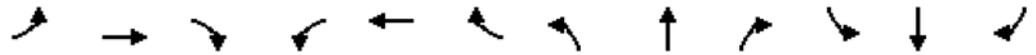


Lane Group	Ø2	Ø10
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

DRAFT

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗		↖	
Traffic Volume (vph)	47	232	111	0	0	0	0	361	33	18	145	0
Future Volume (vph)	47	232	111	0	0	0	0	361	33	18	145	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94									1.00	
Frt		0.957							0.850			
Flt Protected		0.994									0.995	
Satd. Flow (prot)	0	2852	0	0	0	0	0	1545	1473	0	1535	0
Flt Permitted		0.994									0.942	
Satd. Flow (perm)	0	2807	0	0	0	0	0	1545	1473	0	1450	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50							45			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		542			228			582			542	
Travel Time (s)		12.3			5.2			13.2			12.3	
Confl. Peds. (#/hr)	76		81	81		76	141		88	88		141
Confl. Bikes (#/hr)			12						74			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	12%	4%	5%	0%	0%	0%	0%	7%	6%	0%	8%	0%
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	454	0	0	0	0	0	420	38	0	190	0
Turn Type	Perm	NA						NA	custom	Perm	NA	
Protected Phases		10						2 6	6		2 6	
Permitted Phases	10									2 6		
Detector Phase	10	10						2 6	6	2 6	2 6	
Switch Phase												
Minimum Initial (s)	30.0	30.0							24.0			
Minimum Split (s)	36.0	36.0							30.0			
Total Split (s)	41.0	41.0							30.0			
Total Split (%)	34.2%	34.2%							25.0%			
Yellow Time (s)	4.5	4.5							4.5			
All-Red Time (s)	1.5	1.5							1.5			
Lost Time Adjust (s)		0.0							0.0			
Total Lost Time (s)		6.0							6.0			
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max							None			
Act Effct Green (s)		35.0						77.0	24.0		77.0	
Actuated g/C Ratio		0.29						0.64	0.20		0.64	
v/c Ratio		0.53						0.42	0.12		0.20	
Control Delay (s/veh)		34.1						5.1	15.0		9.5	
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay (s/veh)		34.1						5.1	15.0		9.5	
LOS		C						A	B		A	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	42.0
Minimum Split (s)	44.0
Total Split (s)	49.0
Total Split (%)	41%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		34.1						6.0				9.5
Approach LOS		C						A				A
Queue Length 50th (ft)		137						196	8			56
Queue Length 95th (ft)		181						13	39			85
Internal Link Dist (ft)		462			148			502				462
Turn Bay Length (ft)									50			
Base Capacity (vph)		854						991	330			930
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		0.53						0.42	0.12			0.20

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay (s/veh): 18.2
 Intersection Capacity Utilization 93.3%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service F

Splits and Phases: 2: Chicago Avenue & Church Street



Lane Group	Ø2
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

DRAFT

HCM 7th AWSC
 3: Davis Street & Hinman Avenue

08/09/2024

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Vol, veh/h	0	0	0	9	106	21	19	50	0	0	68	44
Future Vol, veh/h	0	0	0	9	106	21	19	50	0	0	68	44
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	11	3	5	0	0	0	0	5	24
Mvmt Flow	0	0	0	10	119	24	21	56	0	0	76	49
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.3	8	8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	28%	15%	0%	0%
Vol Thru, %	72%	85%	72%	61%
Vol Right, %	0%	0%	28%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	62	74	112
LT Vol	19	9	0	0
Through Vol	50	53	53	68
RT Vol	0	0	21	44
Lane Flow Rate	78	70	83	126
Geometry Grp	2	5	5	2
Degree of Util (X)	0.096	0.101	0.111	0.147
Departure Headway (Hd)	4.47	5.213	4.804	4.218
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	690	748	853
Service Time	2.482	2.928	2.519	2.228
HCM Lane V/C Ratio	0.097	0.101	0.111	0.148
HCM Control Delay, s/veh	8	8.5	8.1	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.4	0.5

HCM 7th AWSC
4: Hinman Avenue & Church Street

08/09/2024

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔						↔			↔	
Traffic Vol, veh/h	20	202	48	0	0	0	0	53	18	11	70	0
Future Vol, veh/h	20	202	48	0	0	0	0	53	18	11	70	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	4	4	14	0	0	0	0	0	6	0	5	0
Mvmt Flow	21	215	51	0	0	0	0	56	19	12	74	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	8.8	8	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	17%	0%	14%
Vol Thru, %	75%	83%	68%	86%
Vol Right, %	25%	0%	32%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	121	149	81
LT Vol	0	20	0	11
Through Vol	53	101	101	70
RT Vol	18	0	48	0
Lane Flow Rate	76	129	159	86
Geometry Grp	2	5	5	2
Degree of Util (X)	0.095	0.18	0.208	0.112
Departure Headway (Hd)	4.521	5.031	4.722	4.685
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	794	714	762	767
Service Time	2.541	2.75	2.441	2.704
HCM Lane V/C Ratio	0.096	0.181	0.209	0.112
HCM Control Delay, s/veh	8	8.9	8.7	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.7	0.8	0.4

HCM 7th TWSC
6: Davis Street & East Alley

08/09/2024

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	7	160	2	5	2	0	0	6	4
Future Vol, veh/h	0	0	0	7	160	2	5	2	0	0	6	4
Conflicting Peds, #/hr	4	0	35	35	0	4	0	0	4	4	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	25	4	0	40	50	0	0	0	25
Mvmt Flow	0	0	0	9	213	3	7	3	0	0	8	5

Major/Minor

	Major2	Minor1	Minor2
Conflicting Flow All	35	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.6	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.45	-	-
Pot Cap-1 Maneuver	1422	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1384	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	WB	NB	SB
HCM Control Delay, s/v	0.36	11.02	10.32
HCM LOS		B	B

Minor Lane/Major Mvmt

	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	607	147	-	-	691
HCM Lane V/C Ratio	0.015	0.007	-	-	0.019
HCM Control Delay (s/veh)	11	7.6	0.1	-	10.3
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0.1

HCM 7th TWSC
7: East Alley & Church Street

08/09/2024

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	9	262	10	0	0	0	0	4	4	4	1	0
Future Vol, veh/h	9	262	10	0	0	0	0	4	4	4	1	0
Conflicting Peds, #/hr	33	0	20	20	0	33	17	0	1	1	0	17
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	285	11	0	0	0	0	4	4	4	1	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	33	0	0	-	363	169	198	368	-
Stage 1	-	-	-	-	330	-	33	33	-
Stage 2	-	-	-	-	33	-	165	335	-
Critical Hdwy	4.14	-	-	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	1577	-	-	0	563	846	743	559	0
Stage 1	-	-	-	0	644	-	-	-	0
Stage 2	-	-	-	0	-	-	820	641	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1537	-	-	-	537	833	710	533	-
Mov Cap-2 Maneuver	-	-	-	-	537	-	710	533	-
Stage 1	-	-	-	-	630	-	-	-	-
Stage 2	-	-	-	-	-	-	805	627	-

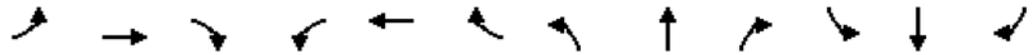
Approach	EB	NB	SB
HCM Control Delay, s/v	0.28	10.59	10.45
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	653	110	-	-	666
HCM Lane V/C Ratio	0.013	0.006	-	-	0.008
HCM Control Delay (s/veh)	10.6	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0

Capacity Analysis Summary Sheets
Weekday Evening Peak Hour – Existing Conditions

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↗	↖			↖	↗
Traffic Volume (vph)	0	0	0	39	157	32	119	274	0	0	503	122
Future Volume (vph)	0	0	0	39	157	32	119	274	0	0	503	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		70
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.87							0.67
Frt					0.979							0.850
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	3010	0	1678	1605	0	0	1621	1531
Flt Permitted					0.992		0.210					
Satd. Flow (perm)	0	0	0	0	2805	0	371	1605	0	0	1621	1023
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		636			240			245				582
Travel Time (s)		14.5			5.5			5.6				13.2
Confl. Peds. (#/hr)	141		126	126		141	191		149	149		191
Confl. Bikes (#/hr)						14			21			38
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	3%	0%	0%	2%	2%
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	251	0	131	301	0	0	553	134
Turn Type				Perm	NA		custom	NA			NA	Perm
Protected Phases					8		1	1 2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		1	1 2			6	6
Switch Phase												
Minimum Initial (s)				7.0	7.0		4.0				15.0	15.0
Minimum Split (s)				25.0	25.0		8.5				25.0	25.0
Total Split (s)				40.0	40.0		17.0				42.0	42.0
Total Split (%)				33.3%	33.3%		14.2%				35.0%	35.0%
Yellow Time (s)				4.5	4.5		3.5				4.5	4.5
All-Red Time (s)				1.5	1.5		1.0				1.5	1.5
Lost Time Adjust (s)					0.0		0.0				0.0	0.0
Total Lost Time (s)					6.0		4.5				6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				Max	Max		None				C-Max	C-Max
Act Effct Green (s)					36.7		64.1	68.6			52.8	52.8
Actuated g/C Ratio					0.31		0.53	0.57			0.44	0.44
v/c Ratio					0.29		0.43	0.33			0.78	0.30
Control Delay (s/veh)					33.6		25.7	15.9			31.7	21.5
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay (s/veh)					33.6		25.7	15.9			31.7	21.5
LOS					C		C	B			C	C

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	Ø2	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	4.0
Minimum Split (s)	25.0	21.0
Total Split (s)	42.0	21.0
Total Split (%)	35%	18%
Yellow Time (s)	4.5	6.0
All-Red Time (s)	1.5	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



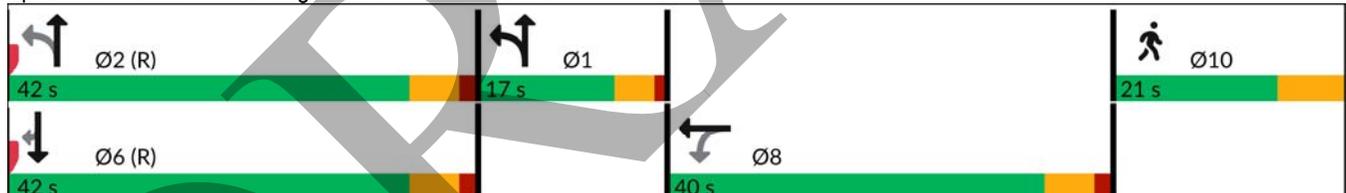
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)					33.6			18.9			29.7	
Approach LOS					C			B			C	
Queue Length 50th (ft)					78		40	105			275	46
Queue Length 95th (ft)					118		100	228			#713	m116
Internal Link Dist (ft)		556			160			165			502	
Turn Bay Length (ft)												70
Base Capacity (vph)					857		342	953			712	449
Starvation Cap Reductn					0		0	0			0	0
Spillback Cap Reductn					0		0	0			0	0
Storage Cap Reductn					0		0	0			0	0
Reduced v/c Ratio					0.29		0.38	0.32			0.78	0.30

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay (s/veh): 27.0
 Intersection Capacity Utilization 62.6%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Chicago Avenue & Davis Street



Lane Group	Ø2	Ø10
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

DRAFT

Lanes, Volumes, Timings
2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗		↖	
Traffic Volume (vph)	42	358	199	0	0	0	0	235	58	38	419	0
Future Volume (vph)	42	358	199	0	0	0	0	235	58	38	419	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.90									1.00	
Frt		0.950							0.850			
Flt Protected		0.997									0.996	
Satd. Flow (prot)	0	2805	0	0	0	0	0	1605	1561	0	1611	0
Flt Permitted		0.997									0.958	
Satd. Flow (perm)	0	2765	0	0	0	0	0	1605	1561	0	1544	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		73							45			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		542			228			582			542	
Travel Time (s)		12.3			5.2			13.2			12.3	
Confl. Peds. (#/hr)	120		125	125		120	149		149	149		149
Confl. Bikes (#/hr)			19						21			5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	7%	2%	3%	0%	0%	0%	0%	3%	0%	4%	2%	0%
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	644	0	0	0	0	0	253	62	0	492	0
Turn Type	Perm	NA						NA	custom	Perm	NA	
Protected Phases		10						2 6	6		2 6	
Permitted Phases	10									2 6		
Detector Phase	10	10						2 6	6	2 6	2 6	
Switch Phase												
Minimum Initial (s)	30.0	30.0								24.0		
Minimum Split (s)	36.0	36.0								30.0		
Total Split (s)	41.0	41.0								30.0		
Total Split (%)	34.2%	34.2%								25.0%		
Yellow Time (s)	4.5	4.5								4.5		
All-Red Time (s)	1.5	1.5								1.5		
Lost Time Adjust (s)		0.0								0.0		
Total Lost Time (s)		6.0								6.0		
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max								None		
Act Effct Green (s)		35.0						77.0	24.0		77.0	
Actuated g/C Ratio		0.29						0.64	0.20		0.64	
v/c Ratio		0.75						0.25	0.18		0.50	
Control Delay (s/veh)		40.4						4.6	20.1		13.4	
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay (s/veh)		40.4						4.6	20.1		13.4	
LOS		D						A	C		B	

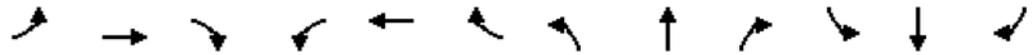
Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	44.0
Total Split (s)	49.0
Total Split (%)	41%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		40.4						7.7				13.4
Approach LOS		D						A				B
Queue Length 50th (ft)		212						92	22			186
Queue Length 95th (ft)		285						21	65			269
Internal Link Dist (ft)		462			148			502				462
Turn Bay Length (ft)									50			
Base Capacity (vph)		858						1029	348			990
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		0.75						0.25	0.18			0.50

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay (s/veh): 24.2
 Intersection Capacity Utilization 82.5%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 2: Chicago Avenue & Church Street



Lane Group	Ø2
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

DRAFT

HCM 7th AWSC
 3: Davis Street & Hinman Avenue

08/09/2024

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔↔			↔			↔	
Traffic Vol, veh/h	0	0	0	15	111	28	42	51	0	0	162	66
Future Vol, veh/h	0	0	0	15	111	28	42	51	0	0	162	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	1	0	2	0	0	1	0
Mvmt Flow	0	0	0	16	121	30	46	55	0	0	176	72
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.6	8.4	9.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	45%	21%	0%	0%
Vol Thru, %	55%	79%	66%	71%
Vol Right, %	0%	0%	34%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	71	84	228
LT Vol	42	15	0	0
Through Vol	51	56	56	162
RT Vol	0	0	28	66
Lane Flow Rate	101	77	91	248
Geometry Grp	2	5	5	2
Degree of Util (X)	0.131	0.115	0.127	0.295
Departure Headway (Hd)	4.683	5.382	5.038	4.288
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	666	711	840
Service Time	2.71	3.117	2.773	2.308
HCM Lane V/C Ratio	0.132	0.116	0.128	0.295
HCM Control Delay, s/veh	8.4	8.8	8.5	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.4	0.4	1.2

HCM 7th AWSC
4: Hinman Avenue & Church Street

08/09/2024

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↔			↕	
Traffic Vol, veh/h	31	312	113	0	0	0	0	55	26	9	119	0
Future Vol, veh/h	31	312	113	0	0	0	0	55	26	9	119	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	1	0	0	0	0	2	4	0	0	0
Mvmt Flow	33	332	120	0	0	0	0	59	28	10	127	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	10.2	8.7	9.3
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	17%	0%	7%
Vol Thru, %	68%	83%	58%	93%
Vol Right, %	32%	0%	42%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	187	269	128
LT Vol	0	31	0	9
Through Vol	55	156	156	119
RT Vol	26	0	113	0
Lane Flow Rate	86	199	286	136
Geometry Grp	2	5	5	2
Degree of Util (X)	0.119	0.284	0.38	0.192
Departure Headway (Hd)	4.984	5.137	4.775	5.084
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	698	753	704
Service Time	3.031	2.878	2.516	3.126
HCM Lane V/C Ratio	0.12	0.285	0.38	0.193
HCM Control Delay, s/veh	8.7	9.9	10.4	9.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.4	1.2	1.8	0.7

HCM 7th TWSC
6: Davis Street & East Alley

08/09/2024

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Vol, veh/h	0	0	0	4	210	5	8	1	0	0	3	10
Future Vol, veh/h	0	0	0	4	210	5	8	1	0	0	3	10
Conflicting Peds, #/hr	23	0	47	47	0	24	1	0	5	5	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	5	247	6	9	1	0	0	4	12

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	47	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1573	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1517	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0.16	10.23	9.81
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	64	-	-	764
HCM Lane V/C Ratio	0.015	0.003	-	-	0.02
HCM Control Delay (s/veh)	10.2	7.4	0	-	9.8
HCM Lane LOS	B	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1

HCM 7th TWSC
7: East Alley & Church Street

08/09/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔						↔			↔	
Traffic Vol, veh/h	7	448	13	0	0	0	0	4	3	5	2	0
Future Vol, veh/h	7	448	13	0	0	0	0	4	3	5	2	0
Conflicting Peds, #/hr	26	0	35	35	0	26	5	0	3	3	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	487	14	0	0	0	0	4	3	5	2	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	26	0	0	-	570	289	290	577	-
Stage 1	-	-	-	-	544	-	26	26	-
Stage 2	-	-	-	-	26	-	264	551	-
Critical Hdwy	4.14	-	-	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	1587	-	-	0	430	708	640	426	0
Stage 1	-	-	-	0	517	-	-	-	0
Stage 2	-	-	-	0	-	-	718	513	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1555	-	-	-	408	689	614	404	-
Mov Cap-2 Maneuver	-	-	-	-	408	-	614	404	-
Stage 1	-	-	-	-	500	-	-	-	-
Stage 2	-	-	-	-	-	-	705	497	-

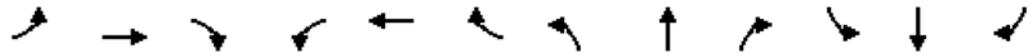
Approach	EB	NB	SB
HCM Control Delay, s/v	0.15	12.4	11.83
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	494	52	-	-	535
HCM Lane V/C Ratio	0.015	0.005	-	-	0.014
HCM Control Delay (s/veh)	12.4	7.3	0	-	11.8
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0

Capacity Analysis Summary Sheets
Weekday Morning Peak Hour – No-Build Conditions

Lanes, Volumes, Timings
1: Chicago Avenue & Davis Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↗	↕			↕	↗
Traffic Volume (vph)	0	0	0	26	145	18	131	418	0	0	196	99
Future Volume (vph)	0	0	0	26	145	18	131	418	0	0	196	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		70
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.94		0.86					0.77
Frt					0.986							0.850
Flt Protected					0.993		0.950					
Satd. Flow (prot)	0	0	0	0	3009	0	1662	1589	0	0	1559	1501
Flt Permitted					0.993		0.582					
Satd. Flow (perm)	0	0	0	0	2891	0	877	1589	0	0	1559	1160
Right Turn on Red			No			No		No		No		No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		636			240			245				582
Travel Time (s)		14.5			5.5			5.6				13.2
Confl. Peds. (#/hr)	64		89	89		64	113		97	97		113
Confl. Bikes (#/hr)						18			54			12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	29%	0%	15%	5%	4%	0%	0%	6%	4%
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	201	0	139	445	0	0	209	105
Turn Type				Perm	NA		custom	NA			NA	Perm
Protected Phases					8		1	1 2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		1	1 2			6	6
Switch Phase												
Minimum Initial (s)				7.0	7.0		4.0				15.0	15.0
Minimum Split (s)				25.0	25.0		8.5				25.0	25.0
Total Split (s)				40.0	40.0		17.0				42.0	42.0
Total Split (%)				33.3%	33.3%		14.2%				35.0%	35.0%
Yellow Time (s)				4.5	4.5		3.5				4.5	4.5
All-Red Time (s)				1.5	1.5		1.0				1.5	1.5
Lost Time Adjust (s)					0.0		0.0				0.0	0.0
Total Lost Time (s)					6.0		4.5				6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				Max	Max		None			C-Max	C-Max	
Act Effct Green (s)					37.6		63.2	67.7			52.8	52.8
Actuated g/C Ratio					0.31		0.53	0.56			0.44	0.44
v/c Ratio					0.22		0.27	0.50			0.31	0.21
Control Delay (s/veh)					31.8		16.9	19.5			17.8	17.2
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay (s/veh)					31.8		16.9	19.5			17.8	17.2
LOS					C		B	B			B	B

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	Ø2	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	4.0
Minimum Split (s)	25.0	25.0
Total Split (s)	42.0	21.0
Total Split (%)	35%	18%
Yellow Time (s)	4.5	6.0
All-Red Time (s)	1.5	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



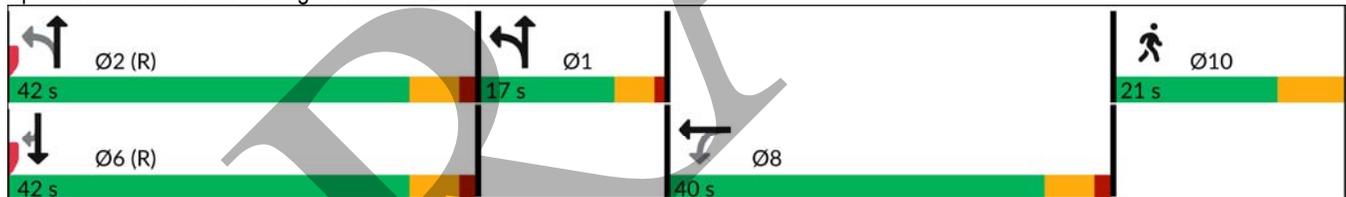
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)					31.8			18.8			17.6	
Approach LOS					C			B			B	
Queue Length 50th (ft)					60		45	184			76	33
Queue Length 95th (ft)					96		105	370			174	m101
Internal Link Dist (ft)		556			160			165			502	
Turn Bay Length (ft)												70
Base Capacity (vph)					904		569	943			685	510
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					0.22		0.24	0.47			0.31	0.21

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay (s/veh): 20.9
 Intersection Capacity Utilization 52.7%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 1: Chicago Avenue & Davis Street



Lane Group	Ø2	Ø10
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

DRAFT

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗		↖	
Traffic Volume (vph)	55	262	116	0	0	0	0	373	44	32	151	0
Future Volume (vph)	55	262	116	0	0	0	0	373	44	32	151	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93									1.00	
Frt		0.960							0.850			
Flt Protected		0.994									0.991	
Satd. Flow (prot)	0	2857	0	0	0	0	0	1545	1473	0	1537	0
Flt Permitted		0.994									0.891	
Satd. Flow (perm)	0	2805	0	0	0	0	0	1545	1473	0	1376	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44							45			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		542			228			582				542
Travel Time (s)		12.3			5.2			13.2				12.3
Confl. Peds. (#/hr)	84		89	89		84	155		97	97		155
Confl. Bikes (#/hr)			13						81			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	12%	4%	5%	0%	0%	0%	0%	7%	6%	0%	8%	0%
Parking (#/hr)		0						0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	504	0	0	0	0	0	434	51	0	213	0
Turn Type	Perm	NA						NA	custom	Perm	NA	
Protected Phases		10						2 6	6		2 6	
Permitted Phases	10									2 6		
Detector Phase	10	10						2 6	6	2 6	2 6	
Switch Phase												
Minimum Initial (s)	30.0	30.0								24.0		
Minimum Split (s)	36.0	36.0								30.0		
Total Split (s)	41.0	41.0								30.0		
Total Split (%)	34.2%	34.2%								25.0%		
Yellow Time (s)	4.5	4.5								4.5		
All-Red Time (s)	1.5	1.5								1.5		
Lost Time Adjust (s)		0.0								0.0		
Total Lost Time (s)		6.0								6.0		
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max								None		
Act Effct Green (s)		35.0						77.0	24.0		77.0	
Actuated g/C Ratio		0.29						0.64	0.20		0.64	
v/c Ratio		0.59						0.44	0.15		0.24	
Control Delay (s/veh)		36.4						5.3	17.6		10.0	
Queue Delay		0.0						0.3	0.0		0.0	
Total Delay (s/veh)		36.4						5.6	17.6		10.0	
LOS		D						A	B		A	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	42.0
Minimum Split (s)	44.0
Total Split (s)	49.0
Total Split (%)	41%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		36.4						6.8			10.0	
Approach LOS		D						A			A	
Queue Length 50th (ft)		160						203	17		65	
Queue Length 95th (ft)		206						17	49		97	
Internal Link Dist (ft)		462			148			502			462	
Turn Bay Length (ft)									50			
Base Capacity (vph)		849						991	330		882	
Starvation Cap Reductn		0						170	0		0	
Spillback Cap Reductn		0						0	0		0	
Storage Cap Reductn		0						0	0		0	
Reduced v/c Ratio		0.59						0.53	0.15		0.24	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay (s/veh): 19.8
 Intersection Capacity Utilization 93.3%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service F

Splits and Phases: 2: Chicago Avenue & Church Street



Lane Group	Ø2
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

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HCM 7th AWSC
3: Davis Street & Hinman Avenue

08/09/2024

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					⇄			⇄			⇄	
Traffic Vol, veh/h	0	0	0	9	122	21	19	51	0	0	70	48
Future Vol, veh/h	0	0	0	9	122	21	19	51	0	0	70	48
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	11	3	5	0	0	0	0	5	24
Mvmt Flow	0	0	0	10	137	24	21	57	0	0	79	54
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.4	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	27%	13%	0%	0%
Vol Thru, %	73%	87%	74%	59%
Vol Right, %	0%	0%	26%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	70	82	118
LT Vol	19	9	0	0
Through Vol	51	61	61	70
RT Vol	0	0	21	48
Lane Flow Rate	79	79	92	133
Geometry Grp	2	5	5	2
Degree of Util (X)	0.099	0.114	0.124	0.157
Departure Headway (Hd)	4.523	5.225	4.844	4.256
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	794	687	742	846
Service Time	2.537	2.944	2.563	2.269
HCM Lane V/C Ratio	0.099	0.115	0.124	0.157
HCM Control Delay, s/veh	8	8.6	8.3	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	0.4	0.6

HCM 7th AWSC
 4: Hinman Avenue & Church Street

08/09/2024

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↔			↕	
Traffic Vol, veh/h	23	215	53	0	0	0	0	54	18	11	71	0
Future Vol, veh/h	23	215	53	0	0	0	0	54	18	11	71	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	4	4	14	0	0	0	0	0	6	0	5	0
Mvmt Flow	24	229	56	0	0	0	0	57	19	12	76	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	8.9	8.1	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	18%	0%	13%
Vol Thru, %	75%	82%	67%	87%
Vol Right, %	25%	0%	33%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	131	161	82
LT Vol	0	23	0	11
Through Vol	54	108	108	71
RT Vol	18	0	53	0
Lane Flow Rate	77	139	171	87
Geometry Grp	2	5	5	2
Degree of Util (X)	0.097	0.195	0.224	0.115
Departure Headway (Hd)	4.573	5.044	4.724	4.734
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	784	712	762	758
Service Time	2.595	2.765	2.445	2.755
HCM Lane V/C Ratio	0.098	0.195	0.224	0.115
HCM Control Delay, s/veh	8.1	9	8.8	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.7	0.9	0.4

HCM 7th TWSC
6: Davis Street & East Alley

08/09/2024

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Vol, veh/h	0	0	0	4	180	2	5	2	0	0	6	4
Future Vol, veh/h	0	0	0	4	180	2	5	2	0	0	6	4
Conflicting Peds, #/hr	4	0	39	39	0	4	0	0	4	4	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	25	4	0	40	50	0	0	0	25
Mvmt Flow	0	0	0	5	240	3	7	3	0	0	8	5
Major/Minor	Major2			Minor1			Minor2					
Conflicting Flow All	39			0			174			296		
Stage 1	-			-			39			39		
Stage 2	-			-			135			257		
Critical Hdwy	4.6			-			8.3			7.5		
Critical Hdwy Stg 1	-			-			-			5.5		
Critical Hdwy Stg 2	-			-			7.3			6.5		
Follow-up Hdwy	2.45			-			3.9			4.5		
Pot Cap-1 Maneuver	1417			-			679			516		
Stage 1	-			-			-			0		
Stage 2	-			-			755			588		
Platoon blocked, %	-			-			-			-		
Mov Cap-1 Maneuver	1374			-			643			497		
Mov Cap-2 Maneuver	-			-			643			497		
Stage 1	-			-			-			694		
Stage 2	-			-			738			584		
Approach	WB			NB			SB					
HCM Control Delay, s/v	0.19			11.17			10.46					
HCM LOS				B			B					
Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1							
Capacity (veh/h)	593	76	-	-	673							
HCM Lane V/C Ratio	0.016	0.004	-	-	0.02							
HCM Control Delay (s/veh)	11.2	7.6	0	-	10.5							
HCM Lane LOS	B	A	A	-	B							
HCM 95th %tile Q(veh)	0	0	-	-	0.1							

HCM 7th TWSC
7: East Alley & Church Street

08/09/2024

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	9	288	10	0	0	0	0	4	4	4	1	0
Future Vol, veh/h	9	288	10	0	0	0	0	4	4	4	1	0
Conflicting Peds, #/hr	36	0	22	22	0	36	19	0	1	1	0	19
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	313	11	0	0	0	0	4	4	4	1	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	36	0	0	-	396	185	215	401	-
Stage 1	-	-	-	-	360	-	36	36	-
Stage 2	-	-	-	-	36	-	179	365	-
Critical Hdwy	4.14	-	-	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	1573	-	-	0	540	826	723	536	0
Stage 1	-	-	-	0	625	-	-	-	0
Stage 2	-	-	-	0	-	-	805	621	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1530	-	-	-	512	812	688	509	-
Mov Cap-2 Maneuver	-	-	-	-	512	-	688	509	-
Stage 1	-	-	-	-	610	-	-	-	-
Stage 2	-	-	-	-	-	-	789	607	-

Approach	EB	NB	SB
HCM Control Delay, s/v	0.26	10.81	10.65
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	628	101	-	-	643
HCM Lane V/C Ratio	0.014	0.006	-	-	0.008
HCM Control Delay (s/veh)	10.8	7.4	0	-	10.6
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0

Capacity Analysis Summary Sheets
Weekday Evening Peak Hour – No-Build Conditions

Lanes, Volumes, Timings
1: Chicago Avenue & Davis Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↗	↖			↖	↗
Traffic Volume (vph)	0	0	0	40	182	34	128	284	0	0	519	129
Future Volume (vph)	0	0	0	40	182	34	128	284	0	0	519	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		70
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.87							0.66
Frt					0.980							0.850
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	3007	0	1678	1605	0	0	1621	1531
Flt Permitted					0.992		0.193					
Satd. Flow (perm)	0	0	0	0	2800	0	341	1605	0	0	1621	1011
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		636			240			245				582
Travel Time (s)		14.5			5.5			5.6				13.2
Confl. Peds. (#/hr)	155		139	139		155	210		164	164		210
Confl. Bikes (#/hr)						15			23			42
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	3%	0%	0%	2%	2%
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	281	0	141	312	0	0	570	142
Turn Type				Perm	NA		custom	NA			NA	Perm
Protected Phases					8		1	1 2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		1	1 2			6	6
Switch Phase												
Minimum Initial (s)				7.0	7.0		4.0				15.0	15.0
Minimum Split (s)				25.0	25.0		8.5				25.0	25.0
Total Split (s)				40.0	40.0		17.0				42.0	42.0
Total Split (%)				33.3%	33.3%		14.2%				35.0%	35.0%
Yellow Time (s)				4.5	4.5		3.5				4.5	4.5
All-Red Time (s)				1.5	1.5		1.0				1.5	1.5
Lost Time Adjust (s)					0.0		0.0				0.0	0.0
Total Lost Time (s)					6.0		4.5				6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				Max	Max		None			C-Max	C-Max	
Act Effct Green (s)					36.4		64.4	68.9			52.8	52.8
Actuated g/C Ratio					0.30		0.54	0.57			0.44	0.44
v/c Ratio					0.33		0.48	0.34			0.80	0.32
Control Delay (s/veh)					34.3		28.3	16.0			32.9	22.2
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay (s/veh)					34.3		28.3	16.0			32.9	22.2
LOS					C		C	B			C	C

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	Ø2	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	4.0
Minimum Split (s)	25.0	21.0
Total Split (s)	42.0	21.0
Total Split (%)	35%	18%
Yellow Time (s)	4.5	6.0
All-Red Time (s)	1.5	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



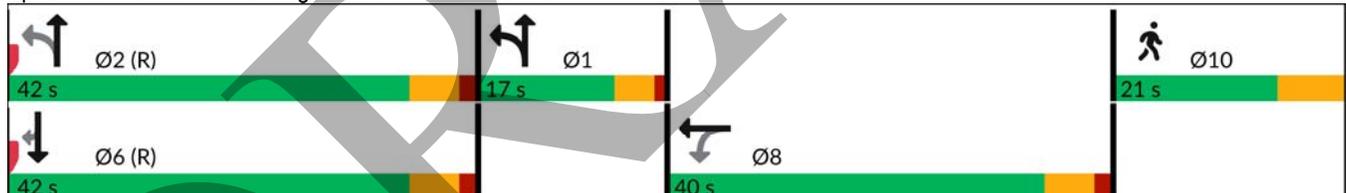
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)					34.3			19.8			30.8	
Approach LOS					C			B			C	
Queue Length 50th (ft)					89		43	108			285	48
Queue Length 95th (ft)					132		106	238			m#740	m122
Internal Link Dist (ft)		556			160			165			502	
Turn Bay Length (ft)												70
Base Capacity (vph)					849		329	953			712	445
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					0.33		0.43	0.33			0.80	0.32

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay (s/veh): 28.0
 Intersection Capacity Utilization 64.0%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Chicago Avenue & Davis Street

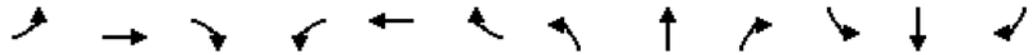


Lane Group	Ø2	Ø10
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

DRAFT

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗		↖	
Traffic Volume (vph)	59	379	203	0	0	0	0	243	61	42	432	0
Future Volume (vph)	59	379	203	0	0	0	0	243	61	42	432	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.89									1.00	
Frt		0.953							0.850			
Flt Protected		0.995									0.996	
Satd. Flow (prot)	0	2795	0	0	0	0	0	1605	1561	0	1611	0
Flt Permitted		0.995									0.954	
Satd. Flow (perm)	0	2737	0	0	0	0	0	1605	1561	0	1536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64							45			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		542			228			582			542	
Travel Time (s)		12.3			5.2			13.2			12.3	
Confl. Peds. (#/hr)	132		138	138		132	164		164	164		164
Confl. Bikes (#/hr)			21						23			6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	7%	2%	3%	0%	0%	0%	0%	3%	0%	4%	2%	0%
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	689	0	0	0	0	0	261	66	0	510	0
Turn Type	Perm	NA						NA	custom	Perm	NA	
Protected Phases		10						2 6	6		2 6	
Permitted Phases	10									2 6		
Detector Phase	10	10						2 6	6	2 6	2 6	
Switch Phase												
Minimum Initial (s)	30.0	30.0								24.0		
Minimum Split (s)	36.0	36.0								30.0		
Total Split (s)	41.0	41.0								30.0		
Total Split (%)	34.2%	34.2%								25.0%		
Yellow Time (s)	4.5	4.5								4.5		
All-Red Time (s)	1.5	1.5								1.5		
Lost Time Adjust (s)		0.0								0.0		
Total Lost Time (s)		6.0								6.0		
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max								None		
Act Effct Green (s)		35.0						77.0	24.0		77.0	
Actuated g/C Ratio		0.29						0.64	0.20		0.64	
v/c Ratio		0.82						0.25	0.19		0.52	
Control Delay (s/veh)		44.8						4.9	20.4		13.9	
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay (s/veh)		44.8						4.9	20.4		13.9	
LOS		D						A	C		B	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	44.0
Total Split (s)	49.0
Total Split (%)	41%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		44.8						8.0				13.9
Approach LOS		D						A				B
Queue Length 50th (ft)		239						104	24			196
Queue Length 95th (ft)		317						23	68			283
Internal Link Dist (ft)		462			148			502				462
Turn Bay Length (ft)									50			
Base Capacity (vph)		843						1029	348			985
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		0.82						0.25	0.19			0.52

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay (s/veh): 26.6
 Intersection Capacity Utilization 83.4%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 2: Chicago Avenue & Church Street



Lane Group	Ø2
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

DRAFT

HCM 7th AWSC
 3: Davis Street & Hinman Avenue

08/09/2024

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					⇄			⇄			⇄	
Traffic Vol, veh/h	0	0	0	15	122	28	43	52	0	0	171	82
Future Vol, veh/h	0	0	0	15	122	28	43	52	0	0	171	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	1	0	2	0	0	1	0
Mvmt Flow	0	0	0	16	133	30	47	57	0	0	186	89
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.8	8.5	9.4
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	45%	20%	0%	0%
Vol Thru, %	55%	80%	69%	68%
Vol Right, %	0%	0%	31%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	76	89	253
LT Vol	43	15	0	0
Through Vol	52	61	61	171
RT Vol	0	0	28	82
Lane Flow Rate	103	83	97	275
Geometry Grp	2	5	5	2
Degree of Util (X)	0.136	0.125	0.138	0.329
Departure Headway (Hd)	4.745	5.439	5.118	4.303
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	755	658	699	836
Service Time	2.78	3.181	2.86	2.329
HCM Lane V/C Ratio	0.136	0.126	0.139	0.329
HCM Control Delay, s/veh	8.5	9	8.7	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.5	1.4

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↔			↕	
Traffic Vol, veh/h	43	337	136	0	0	0	0	56	26	11	121	0
Future Vol, veh/h	43	337	136	0	0	0	0	56	26	11	121	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	1	0	0	0	0	2	4	0	0	0
Mvmt Flow	46	359	145	0	0	0	0	60	28	12	129	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	10.8	8.9	9.6
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	20%	0%	8%
Vol Thru, %	68%	80%	55%	92%
Vol Right, %	32%	0%	45%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	212	305	132
LT Vol	0	43	0	11
Through Vol	56	169	169	121
RT Vol	26	0	136	0
Lane Flow Rate	87	225	324	140
Geometry Grp	2	5	5	2
Degree of Util (X)	0.124	0.324	0.43	0.203
Departure Headway (Hd)	5.111	5.182	4.783	5.204
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	698	693	752	688
Service Time	3.165	2.927	2.527	3.252
HCM Lane V/C Ratio	0.125	0.325	0.431	0.203
HCM Control Delay, s/veh	8.9	10.4	11.1	9.6
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.2	0.8

HCM 7th TWSC
6: Davis Street & East Alley

08/09/2024

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Vol, veh/h	0	0	0	4	238	5	8	1	0	0	3	10
Future Vol, veh/h	0	0	0	4	238	5	8	1	0	0	3	10
Conflicting Peds, #/hr	25	0	52	52	0	25	1	0	6	6	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	5	280	6	9	1	0	0	4	12

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	52	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1567	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1505	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0.14	10.45	9.99
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	671	57	-	-	737
HCM Lane V/C Ratio	0.016	0.003	-	-	0.021
HCM Control Delay (s/veh)	10.5	7.4	0	-	10
HCM Lane LOS	B	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1

HCM 7th TWSC
7: East Alley & Church Street

08/09/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔						↔			↔	
Traffic Vol, veh/h	7	508	13	0	0	0	0	4	3	5	2	0
Future Vol, veh/h	7	508	13	0	0	0	0	4	3	5	2	0
Conflicting Peds, #/hr	29	0	39	39	0	29	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	552	14	0	0	0	0	4	3	5	2	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	29	0	0	-	642	325	325	650	-
Stage 1	-	-	-	-	613	-	29	29	-
Stage 2	-	-	-	-	29	-	296	621	-
Critical Hdwy	4.14	-	-	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	1582	-	-	0	391	671	604	387	0
Stage 1	-	-	-	0	481	-	-	-	0
Stage 2	-	-	-	0	-	-	688	478	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1547	-	-	-	368	651	577	365	-
Mov Cap-2 Maneuver	-	-	-	-	368	-	577	365	-
Stage 1	-	-	-	-	464	-	-	-	-
Stage 2	-	-	-	-	-	-	674	461	-

Approach	EB	NB	SB
HCM Control Delay, s/v	0.14	13.09	12.39
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	453	46	-	-	495
HCM Lane V/C Ratio	0.017	0.005	-	-	0.015
HCM Control Delay (s/veh)	13.1	7.3	0	-	12.4
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0

Capacity Analysis Summary Sheets
Weekday Morning Peak Hour – Projected Conditions

Lanes, Volumes, Timings
1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	32	153	22	131	425	0	0	197	101
Future Volume (vph)	0	0	0	32	153	22	131	425	0	0	197	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		70
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.93		0.86					0.77
Frt					0.984							0.850
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	2976	0	1662	1589	0	0	1559	1501
Flt Permitted					0.992		0.581					
Satd. Flow (perm)	0	0	0	0	2847	0	876	1589	0	0	1559	1160
Right Turn on Red			No			No		No		No		No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		636			240			245				582
Travel Time (s)		14.5			5.5			5.6				13.2
Confl. Peds. (#/hr)	64		89	89		64	113		97	97		113
Confl. Bikes (#/hr)						18			54			12
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	29%	0%	15%	5%	4%	0%	0%	6%	4%
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	220	0	139	452	0	0	210	107
Turn Type				Perm	NA		custom	NA			NA	Perm
Protected Phases					8		1	1 2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		1	1 2			6	6
Switch Phase												
Minimum Initial (s)				7.0	7.0		4.0				15.0	15.0
Minimum Split (s)				25.0	25.0		8.5				25.0	25.0
Total Split (s)				40.0	40.0		17.0				42.0	42.0
Total Split (%)				33.3%	33.3%		14.2%				35.0%	35.0%
Yellow Time (s)				4.5	4.5		3.5				4.5	4.5
All-Red Time (s)				1.5	1.5		1.0				1.5	1.5
Lost Time Adjust (s)					0.0		0.0				0.0	0.0
Total Lost Time (s)					6.0		4.5				6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				Max	Max		None			C-Max	C-Max	
Act Effct Green (s)					37.6		63.2	67.7		52.8	52.8	
Actuated g/C Ratio					0.31		0.53	0.56		0.44	0.44	
v/c Ratio					0.25		0.27	0.50		0.31	0.21	
Control Delay (s/veh)					32.2		16.9	19.6		17.8	17.1	
Queue Delay					0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)					32.2		16.9	19.6		17.8	17.1	
LOS					C		B	B		B	B	

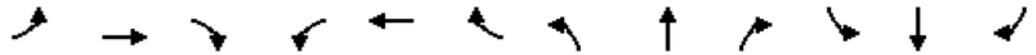
Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	Ø2	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	4.0
Minimum Split (s)	25.0	21.0
Total Split (s)	42.0	21.0
Total Split (%)	35%	18%
Yellow Time (s)	4.5	6.0
All-Red Time (s)	1.5	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



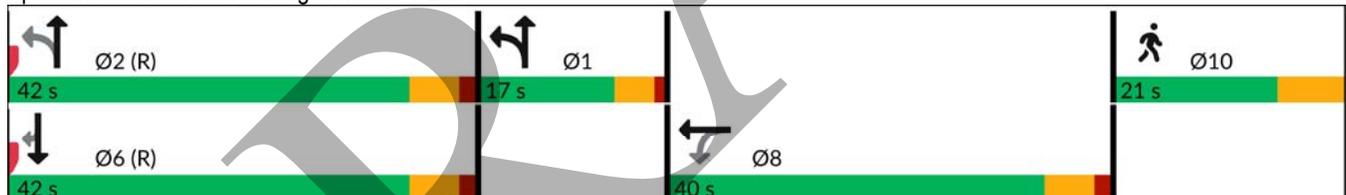
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)					32.2			19.0			17.6	
Approach LOS					C			B			B	
Queue Length 50th (ft)					65		45	188			75	33
Queue Length 95th (ft)					105		105	378			175	m102
Internal Link Dist (ft)		556			160			165			502	
Turn Bay Length (ft)												70
Base Capacity (vph)					891		569	943			685	510
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					0.25		0.24	0.48			0.31	0.21

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay (s/veh): 21.2
 Intersection Capacity Utilization 52.7%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: C
 ICU Level of Service A

Splits and Phases: 1: Chicago Avenue & Davis Street

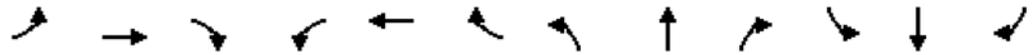


Lane Group	Ø2	Ø10
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

DRAFT

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗		↖	
Traffic Volume (vph)	55	264	118	0	0	0	0	379	48	34	153	0
Future Volume (vph)	55	264	118	0	0	0	0	379	48	34	153	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93									1.00	
Frt		0.960							0.850			
Flt Protected		0.994									0.991	
Satd. Flow (prot)	0	2856	0	0	0	0	0	1545	1473	0	1538	0
Flt Permitted		0.994									0.882	
Satd. Flow (perm)	0	2804	0	0	0	0	0	1545	1473	0	1363	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45							45			
Link Speed (mph)		30			30			30				30
Link Distance (ft)		542			228			582				542
Travel Time (s)		12.3			5.2			13.2				12.3
Confl. Peds. (#/hr)	84		89	89		84	155		97	97		155
Confl. Bikes (#/hr)			13						81			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	12%	4%	5%	0%	0%	0%	0%	7%	6%	0%	8%	0%
Parking (#/hr)		0						0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	508	0	0	0	0	0	441	56	0	218	0
Turn Type	Perm	NA						NA	custom	Perm	NA	
Protected Phases		10						2 6	6		2 6	
Permitted Phases	10									2 6		
Detector Phase	10	10						2 6	6	2 6	2 6	
Switch Phase												
Minimum Initial (s)	30.0	30.0								24.0		
Minimum Split (s)	36.0	36.0								30.0		
Total Split (s)	41.0	41.0								30.0		
Total Split (%)	34.2%	34.2%								25.0%		
Yellow Time (s)	4.5	4.5								4.5		
All-Red Time (s)	1.5	1.5								1.5		
Lost Time Adjust (s)		0.0								0.0		
Total Lost Time (s)		6.0								6.0		
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max								None		
Act Effct Green (s)		35.0						77.0	24.0		77.0	
Actuated g/C Ratio		0.29						0.64	0.20		0.64	
v/c Ratio		0.60						0.45	0.17		0.25	
Control Delay (s/veh)		36.5						5.4	18.0		10.1	
Queue Delay		0.0						0.3	0.0		0.0	
Total Delay (s/veh)		36.5						5.7	18.0		10.1	
LOS		D						A	B		B	

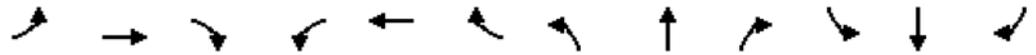
Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	42.0
Minimum Split (s)	44.0
Total Split (s)	49.0
Total Split (%)	41%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		36.5						7.1				10.1
Approach LOS		D						A				B
Queue Length 50th (ft)		162						206	20			67
Queue Length 95th (ft)		207						20	52			100
Internal Link Dist (ft)		462			148			502				462
Turn Bay Length (ft)									50			
Base Capacity (vph)		849						991	330			874
Starvation Cap Reductn		0						168	0			0
Spillback Cap Reductn		0						0	0			0
Storage Cap Reductn		0						0	0			0
Reduced v/c Ratio		0.60						0.54	0.17			0.25

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay (s/veh): 19.9
 Intersection Capacity Utilization 93.3%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service F

Splits and Phases: 2: Chicago Avenue & Church Street



Lane Group	Ø2
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

DRAFT

HCM 7th AWSC
 3: Davis Street & Hinman Avenue

08/09/2024

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					⇄			⇄			⇄	
Traffic Vol, veh/h	0	0	0	9	125	21	19	51	0	0	71	48
Future Vol, veh/h	0	0	0	9	125	21	19	51	0	0	71	48
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	11	3	5	0	0	0	0	5	24
Mvmt Flow	0	0	0	10	140	24	21	57	0	0	80	54
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.4	8	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	27%	13%	0%	0%
Vol Thru, %	73%	87%	75%	60%
Vol Right, %	0%	0%	25%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	72	84	119
LT Vol	19	9	0	0
Through Vol	51	63	63	71
RT Vol	0	0	21	48
Lane Flow Rate	79	80	94	134
Geometry Grp	2	5	5	2
Degree of Util (X)	0.099	0.117	0.126	0.158
Departure Headway (Hd)	4.532	5.226	4.849	4.267
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	793	688	741	844
Service Time	2.547	2.945	2.568	2.279
HCM Lane V/C Ratio	0.1	0.116	0.127	0.159
HCM Control Delay, s/veh	8	8.6	8.3	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	0.4	0.6

HCM 7th AWSC
 4: Hinman Avenue & Church Street

08/09/2024

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↔			↕	
Traffic Vol, veh/h	26	219	54	0	0	0	0	54	18	11	71	0
Future Vol, veh/h	26	219	54	0	0	0	0	54	18	11	71	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	4	4	14	0	0	0	0	0	6	0	5	0
Mvmt Flow	28	233	57	0	0	0	0	57	19	12	76	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	8.9	8.1	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	19%	0%	13%
Vol Thru, %	75%	81%	67%	87%
Vol Right, %	25%	0%	33%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	72	136	164	82
LT Vol	0	26	0	11
Through Vol	54	110	110	71
RT Vol	18	0	54	0
Lane Flow Rate	77	144	174	87
Geometry Grp	2	5	5	2
Degree of Util (X)	0.098	0.202	0.228	0.115
Departure Headway (Hd)	4.592	5.052	4.724	4.753
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	782	712	762	755
Service Time	2.612	2.775	2.447	2.773
HCM Lane V/C Ratio	0.098	0.202	0.228	0.115
HCM Control Delay, s/veh	8.1	9.1	8.8	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.8	0.9	0.4

HCM 7th TWSC
6: Davis Street & East Alley

08/09/2024

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔			↔	
Traffic Vol, veh/h	0	0	0	7	182	3	5	2	0	0	6	20
Future Vol, veh/h	0	0	0	7	182	3	5	2	0	0	6	20
Conflicting Peds, #/hr	4	0	39	39	0	4	0	0	4	4	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	25	4	0	40	50	0	0	0	25
Mvmt Flow	0	0	0	9	243	4	7	3	0	0	8	27
Major/Minor	Major2			Minor1			Minor2					
Conflicting Flow All	39			0			183			308		
Stage 1	-			-			39			39		
Stage 2	-			-			144			269		
Critical Hdwy	4.6			-			8.3			7.5		
Critical Hdwy Stg 1	-			-			-			5.5		
Critical Hdwy Stg 2	-			-			7.3			6.5		
Follow-up Hdwy	2.45			-			3.9			4.5		
Pot Cap-1 Maneuver	1417			-			667			507		
Stage 1	-			-			-			0		
Stage 2	-			-			744			579		
Platoon blocked, %	-			-			-			-		
Mov Cap-1 Maneuver	1374			-			614			487		
Mov Cap-2 Maneuver	-			-			614			487		
Stage 1	-			-			-			684		
Stage 2	-			-			707			573		
Approach	WB			NB			SB					
HCM Control Delay, s/v	0.33			11.41			9.99					
HCM LOS				B			A					
Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1							
Capacity (veh/h)	571	128	-	-	756							
HCM Lane V/C Ratio	0.016	0.007	-	-	0.046							
HCM Control Delay (s/veh)	11.4	7.6	0.1	-	10							
HCM Lane LOS	B	A	A	-	A							
HCM 95th %tile Q(veh)	0	0	-	-	0.1							

HCM 7th TWSC
7: East Alley & Church Street

08/09/2024

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔						↔			↔	
Traffic Vol, veh/h	9	285	16	0	0	0	0	4	10	4	1	0
Future Vol, veh/h	9	285	16	0	0	0	0	4	10	4	1	0
Conflicting Peds, #/hr	36	0	22	22	0	36	19	0	1	1	0	19
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	310	17	0	0	0	0	4	11	4	1	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	36	0	0	-	396	187	214	405	-
Stage 1	-	-	-	-	360	-	36	36	-
Stage 2	-	-	-	-	36	-	178	369	-
Critical Hdwy	4.14	-	-	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	1573	-	-	0	540	824	724	534	0
Stage 1	-	-	-	0	625	-	-	-	0
Stage 2	-	-	-	0	-	-	807	619	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1530	-	-	-	512	810	684	507	-
Mov Cap-2 Maneuver	-	-	-	-	512	-	684	507	-
Stage 1	-	-	-	-	610	-	-	-	-
Stage 2	-	-	-	-	-	-	785	605	-

Approach	EB	NB	SB
HCM Control Delay, s/v	0.26	10.3	10.68
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	695	97	-	-	639
HCM Lane V/C Ratio	0.022	0.006	-	-	0.008
HCM Control Delay (s/veh)	10.3	7.4	0	-	10.7
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	TT			TT	TT	
Traffic Vol, veh/h	6	16	1	4	10	6
Future Vol, veh/h	6	16	1	4	10	6
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	0	0	0	0
Mvmt Flow	6	17	1	4	11	6

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	20	14	17	0	-
Stage 1	14	-	-	-	-
Stage 2	6	-	-	-	-
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	1002	1072	1614	-	-
Stage 1	1014	-	-	-	-
Stage 2	1022	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1002	1072	1614	-	-
Mov Cap-2 Maneuver	1002	-	-	-	-
Stage 1	1014	-	-	-	-
Stage 2	1022	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	8.5	1.45	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	360	-	1052	-	-
HCM Lane V/C Ratio	0.001	-	0.022	-	-
HCM Control Delay (s/veh)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Capacity Analysis Summary Sheets
Weekday Evening Peak Hour – Projected Conditions

Lanes, Volumes, Timings
1: Chicago Avenue & Davis Street

08/09/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	43	187	39	128	296	0	0	532	134
Future Volume (vph)	0	0	0	43	187	39	128	296	0	0	532	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	0		70
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.86							0.66
Frt					0.978							0.850
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	2977	0	1678	1605	0	0	1621	1531
Flt Permitted					0.992		0.179					
Satd. Flow (perm)	0	0	0	0	2769	0	316	1605	0	0	1621	1011
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30				30
Link Distance (ft)		636			240			245				582
Travel Time (s)		14.5			5.5			5.6				13.2
Confl. Peds. (#/hr)	155		139	139		155	210		164	164		210
Confl. Bikes (#/hr)						15			23			42
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	3%	0%	0%	2%	2%
Parking (#/hr)		0			0			0				0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	295	0	141	325	0	0	585	147
Turn Type				Perm	NA		custom	NA			NA	Perm
Protected Phases					8		1	1 2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		1	1 2			6	6
Switch Phase												
Minimum Initial (s)				7.0	7.0		4.0				15.0	15.0
Minimum Split (s)				25.0	25.0		8.0				25.0	25.0
Total Split (s)				40.0	40.0		17.0				42.0	42.0
Total Split (%)				33.3%	33.3%		14.2%				35.0%	35.0%
Yellow Time (s)				4.5	4.5		3.5				4.5	4.5
All-Red Time (s)				1.5	1.5		0.5				1.5	1.5
Lost Time Adjust (s)					0.0		0.0				0.0	0.0
Total Lost Time (s)					6.0		4.0				6.0	6.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				Max	Max		None				C-Max	C-Max
Act Effct Green (s)					36.7		65.1	69.1			52.8	52.8
Actuated g/C Ratio					0.31		0.54	0.58			0.44	0.44
v/c Ratio					0.35		0.49	0.35			0.82	0.33
Control Delay (s/veh)					34.5		29.4	16.0			34.3	22.7
Queue Delay					0.0		0.0	0.0			0.0	0.0
Total Delay (s/veh)					34.5		29.4	16.0			34.3	22.7
LOS					C		C	B			C	C

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024

Lane Group	Ø2	Ø10
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	10
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	15.0	4.0
Minimum Split (s)	25.0	21.0
Total Split (s)	42.0	21.0
Total Split (%)	35%	18%
Yellow Time (s)	4.5	6.0
All-Red Time (s)	1.5	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	C-Max	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay (s/veh)		
Queue Delay		
Total Delay (s/veh)		
LOS		

Lanes, Volumes, Timings
 1: Chicago Avenue & Davis Street

08/09/2024



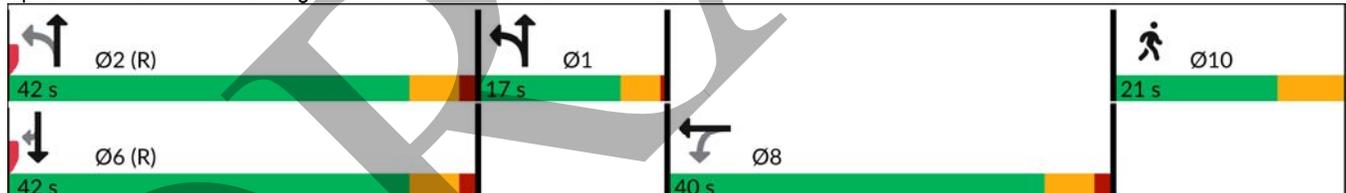
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)					34.5			20.1			32.0	
Approach LOS					C			C			C	
Queue Length 50th (ft)					94		43	114			295	50
Queue Length 95th (ft)					138		105	247			m#760	m127
Internal Link Dist (ft)		556			160			165			502	
Turn Bay Length (ft)												70
Base Capacity (vph)					847		326	960			712	445
Starvation Cap Reductn					0		0	0			0	0
Spillback Cap Reductn					0		0	0			0	0
Storage Cap Reductn					0		0	0			0	0
Reduced v/c Ratio					0.35		0.43	0.34			0.82	0.33

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay (s/veh): 28.7
 Intersection Capacity Utilization 64.3%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 1: Chicago Avenue & Davis Street



Lane Group	Ø2	Ø10
Approach Delay (s/veh)		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

DRAFT

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗		↖	
Traffic Volume (vph)	59	388	207	0	0	0	0	252	70	47	436	0
Future Volume (vph)	59	388	207	0	0	0	0	252	70	47	436	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		50	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.90									0.99	
Frt		0.952							0.850			
Flt Protected		0.996									0.995	
Satd. Flow (prot)	0	2795	0	0	0	0	0	1605	1561	0	1609	0
Flt Permitted		0.996									0.946	
Satd. Flow (perm)	0	2738	0	0	0	0	0	1605	1561	0	1522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64							45			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		542			228			582			542	
Travel Time (s)		12.3			5.2			13.2			12.3	
Confl. Peds. (#/hr)	132		138	138		132	164		164	164		164
Confl. Bikes (#/hr)			21						23			6
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	7%	2%	3%	0%	0%	0%	0%	3%	0%	4%	2%	0%
Parking (#/hr)		0						0			0	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	703	0	0	0	0	0	271	75	0	520	0
Turn Type	Perm	NA						NA	custom	Perm	NA	
Protected Phases		10						2 6	6		2 6	
Permitted Phases	10									2 6		
Detector Phase	10	10						2 6	6	2 6	2 6	
Switch Phase												
Minimum Initial (s)	30.0	30.0								24.0		
Minimum Split (s)	36.0	36.0								30.0		
Total Split (s)	41.0	41.0								30.0		
Total Split (%)	34.2%	34.2%								25.0%		
Yellow Time (s)	4.5	4.5								4.5		
All-Red Time (s)	1.5	1.5								1.5		
Lost Time Adjust (s)		0.0								0.0		
Total Lost Time (s)		6.0								6.0		
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max								None		
Act Effct Green (s)		35.0						77.0	24.0		77.0	
Actuated g/C Ratio		0.29						0.64	0.20		0.64	
v/c Ratio		0.83						0.26	0.22		0.53	
Control Delay (s/veh)		46.0						5.1	21.2		14.2	
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay (s/veh)		46.0						5.1	21.2		14.2	
LOS		D						A	C		B	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	44.0
Total Split (s)	49.0
Total Split (%)	41%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	C-Max
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay (s/veh)	
Queue Delay	
Total Delay (s/veh)	
LOS	

Lanes, Volumes, Timings
 2: Chicago Avenue & Church Street

08/09/2024



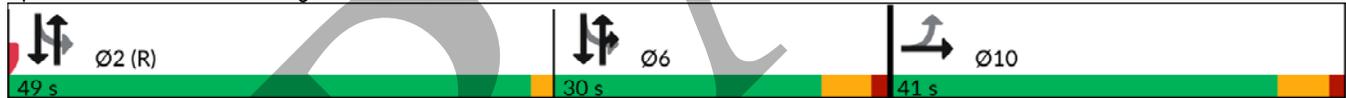
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		46.0						8.6				14.2
Approach LOS		D						A				B
Queue Length 50th (ft)		246						103	29			203
Queue Length 95th (ft)		#328						27	75			294
Internal Link Dist (ft)		462			148			502				462
Turn Bay Length (ft)									50			
Base Capacity (vph)		843						1029	348			976
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		0.83						0.26	0.22			0.53

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay (s/veh): 27.2
 Intersection Capacity Utilization 83.9%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 2: Chicago Avenue & Church Street



Lane Group	Ø2
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

DRAFT

HCM 7th AWSC
 3: Davis Street & Hinman Avenue

08/09/2024

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					⇄			⇄			⇄	
Traffic Vol, veh/h	0	0	0	15	127	28	45	52	0	0	172	82
Future Vol, veh/h	0	0	0	15	127	28	45	52	0	0	172	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	1	0	2	0	0	1	0
Mvmt Flow	0	0	0	16	138	30	49	57	0	0	187	89
Number of Lanes	0	0	0	0	2	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay, s/veh	8.8	8.6	9.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	46%	19%	0%	0%
Vol Thru, %	54%	81%	69%	68%
Vol Right, %	0%	0%	31%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	79	92	254
LT Vol	45	15	0	0
Through Vol	52	64	64	172
RT Vol	0	0	28	82
Lane Flow Rate	105	85	99	276
Geometry Grp	2	5	5	2
Degree of Util (X)	0.14	0.129	0.142	0.331
Departure Headway (Hd)	4.765	5.447	5.135	4.32
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	752	657	697	831
Service Time	2.799	3.189	2.877	2.347
HCM Lane V/C Ratio	0.14	0.129	0.142	0.332
HCM Control Delay, s/veh	8.6	9	8.7	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.5	1.5

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔						↔			↔	
Traffic Vol, veh/h	46	341	137	0	0	0	0	56	26	9	121	0
Future Vol, veh/h	46	341	137	0	0	0	0	56	26	9	121	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	1	1	0	0	0	0	2	4	0	0	0
Mvmt Flow	49	363	146	0	0	0	0	60	28	10	129	0
Number of Lanes	0	2	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	2
HCM Control Delay, s/veh	10.9	8.9	9.6
HCM LOS	B	A	A

Lane	NBLn1	EBLn1	EBLn2	SBLn1
Vol Left, %	0%	21%	0%	7%
Vol Thru, %	68%	79%	55%	93%
Vol Right, %	32%	0%	45%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	217	308	130
LT Vol	0	46	0	9
Through Vol	56	171	171	121
RT Vol	26	0	137	0
Lane Flow Rate	87	230	327	138
Geometry Grp	2	5	5	2
Degree of Util (X)	0.124	0.331	0.434	0.2
Departure Headway (Hd)	5.123	5.181	4.778	5.216
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	697	693	752	686
Service Time	3.175	2.926	2.523	3.262
HCM Lane V/C Ratio	0.125	0.332	0.435	0.201
HCM Control Delay, s/veh	8.9	10.5	11.2	9.6
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.4	1.4	2.2	0.7

HCM 7th TWSC
6: Davis Street & East Alley

08/09/2024

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	0	0	0	4	242	8	8	1	0	0	3	19
Future Vol, veh/h	0	0	0	4	242	8	8	1	0	0	3	19
Conflicting Peds, #/hr	25	0	52	52	0	25	1	0	6	6	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	5	285	9	9	1	0	0	4	22

Major/Minor	Major2	Minor1	Minor2
Conflicting Flow All	52	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1567	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1505	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0.14	10.54	9.84
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	660	54	-	-	769
HCM Lane V/C Ratio	0.016	0.003	-	-	0.034
HCM Control Delay (s/veh)	10.5	7.4	0	-	9.8
HCM Lane LOS	B	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0.1

HCM 7th TWSC
7: East Alley & Church Street

08/09/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔						↔			↔	
Traffic Vol, veh/h	7	512	32	0	0	0	0	4	7	5	2	0
Future Vol, veh/h	7	512	32	0	0	0	0	4	7	5	2	0
Conflicting Peds, #/hr	29	0	39	39	0	29	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	3	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	557	35	0	0	0	0	4	8	5	2	0

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	29	0	0	-	657	338	328	675	-
Stage 1	-	-	-	-	628	-	29	29	-
Stage 2	-	-	-	-	29	-	299	646	-
Critical Hdwy	4.14	-	-	-	6.54	6.94	7.54	6.54	-
Critical Hdwy Stg 1	-	-	-	-	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	-	4.02	3.32	3.52	4.02	-
Pot Cap-1 Maneuver	1582	-	-	0	383	658	602	374	0
Stage 1	-	-	-	0	474	-	-	-	0
Stage 2	-	-	-	0	-	-	685	465	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1547	-	-	-	361	639	571	353	-
Mov Cap-2 Maneuver	-	-	-	-	361	-	571	353	-
Stage 1	-	-	-	-	457	-	-	-	-
Stage 2	-	-	-	-	-	-	667	449	-

Approach	EB	NB	SB
HCM Control Delay, s/v	0.13	12.39	12.53
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	SBLn1
Capacity (veh/h)	499	42	-	-	485
HCM Lane V/C Ratio	0.024	0.005	-	-	0.016
HCM Control Delay (s/veh)	12.4	7.3	0	-	12.5
HCM Lane LOS	B	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0

Intersection

Int Delay, s/veh 2.8

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	4	9	3	6	6	19
Future Vol, veh/h	4	9	3	6	6	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	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	9	3	6	6	20

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	29	16	26	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	13	-	-	-	-	-
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	991	1069	1601	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1015	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	989	1069	1601	-	-	-
Mov Cap-2 Maneuver	989	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	1015	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s/v 8.5 2.42 0
HCM LOS A

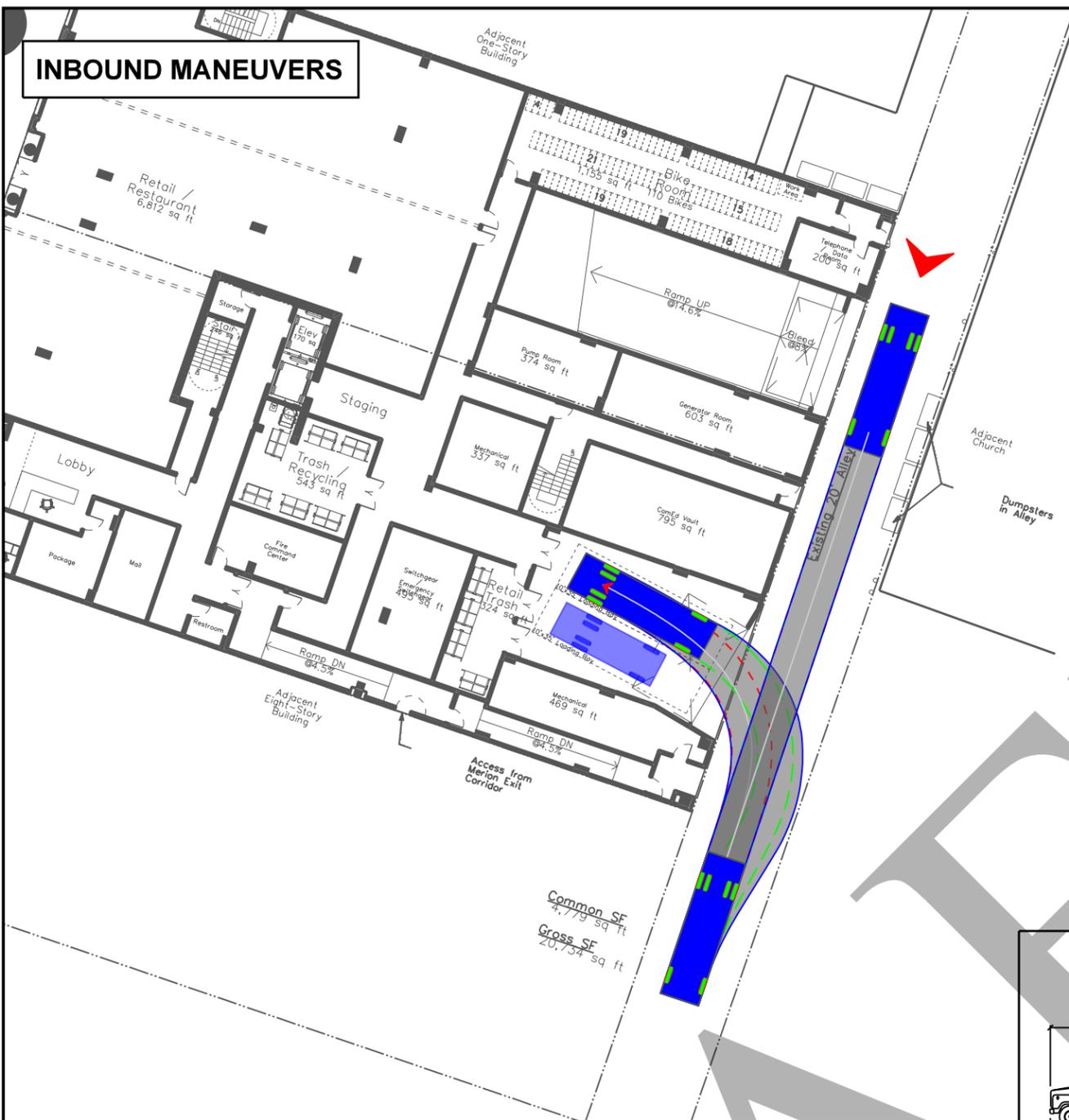
Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	600	-	1043	-	-
HCM Lane V/C Ratio	0.002	-	0.013	-	-
HCM Control Delay (s/veh)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Passenger Vehicle and Truck Maneuvering
Exhibits

INBOUND MANEUVERS

SCALE: 1" = 30'

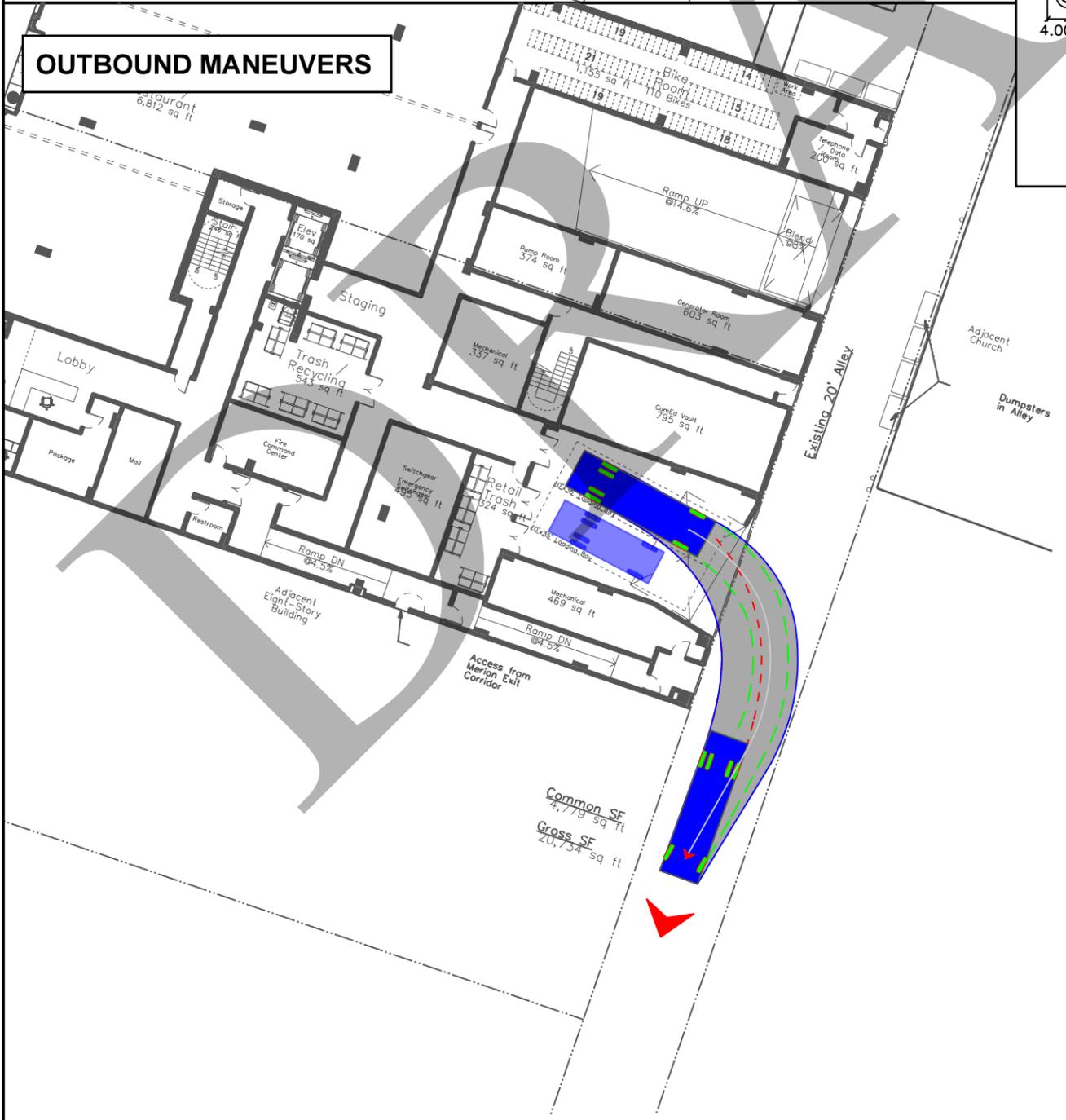


SINGLE-UNIT TRUCK

	FEET
WIDTH	: 8.00
TRACK	: 8.00
LOCK TO LOCK TIME	: 6.00
STEERING ANGLE	: 31.8

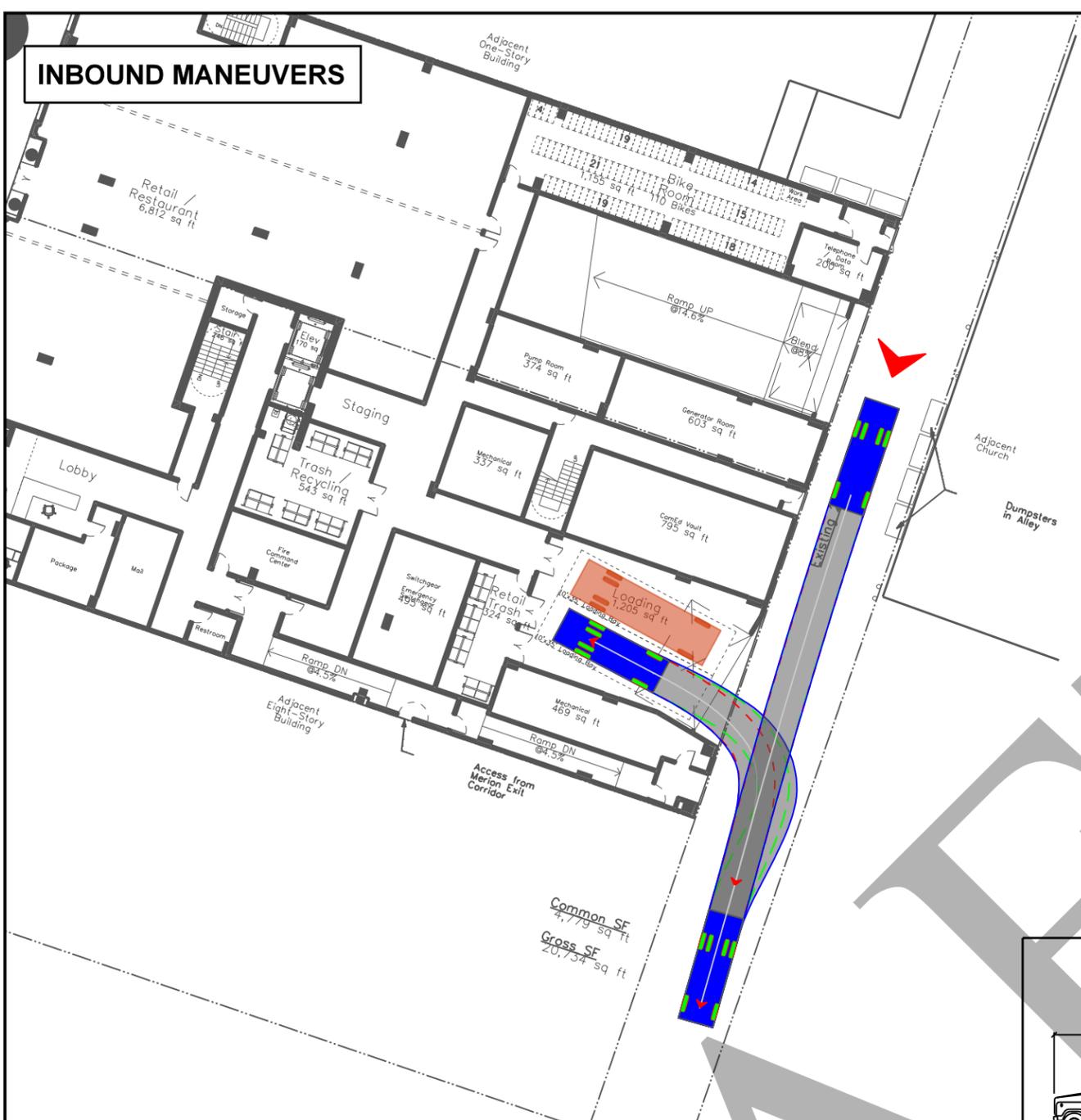
BODY OF VEHICLE - ———
 FRONT TIRES PATH - - - - -
 REAR TIRES PATH - - - - -

OUTBOUND MANEUVERS



INBOUND MANEUVERS

SCALE: 1" = 30'

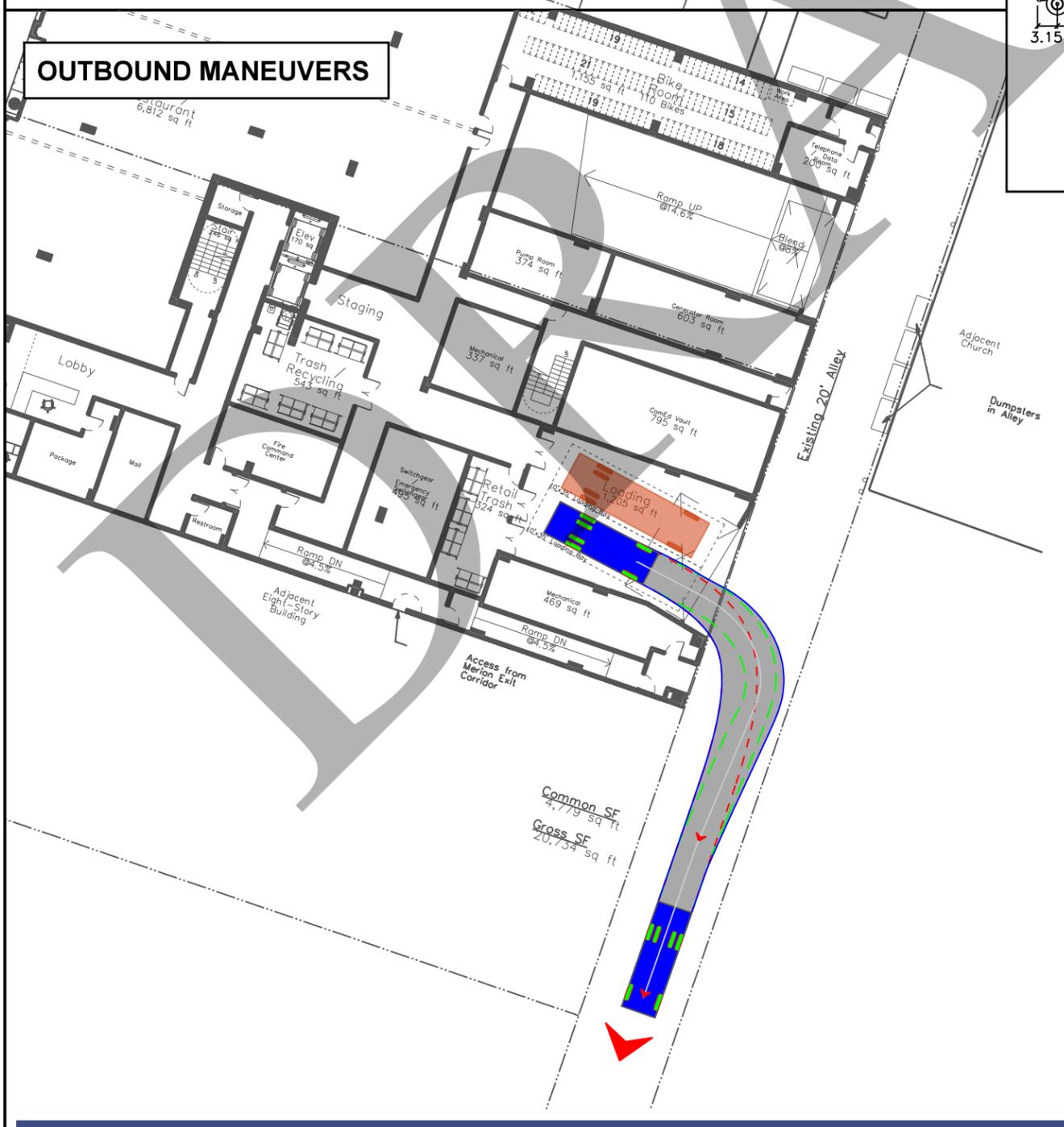


CUSTOM MEDIUM TRUCK

	FEET
WIDTH	: 7.12
TRACK	: 7.12
LOCK TO LOCK TIME	: 6.00
STEERING ANGLE	: 40.0

BODY OF VEHICLE - ———
 FRONT TIRES PATH - - - - -
 REAR TIRES PATH - - - - -

OUTBOUND MANEUVERS



1621-29 CHICAGO AVENUE
 APARTMENT DEVELOPMENT
 EVANSTON, ILLINOIS

**TRUCK MANEUVERS
 SOUTH LOADING DOCK**

DRAWN: MD CHECKED: MW
 DATE: 06-22-20 REV: 08-02-24
 PROJECT # 17-039
 FIGURE: A2





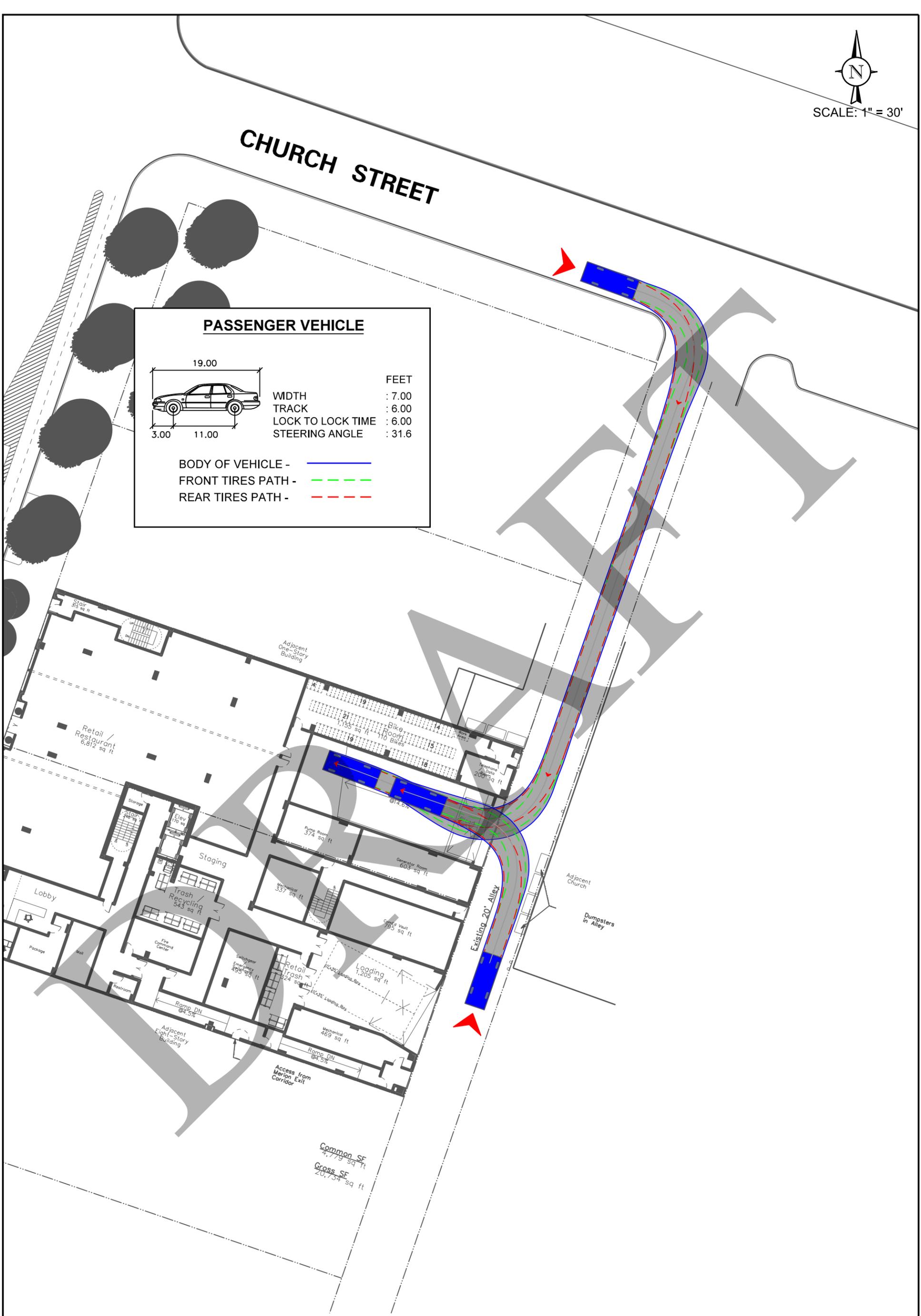
SCALE: 1" = 30'

CHURCH STREET

PASSENGER VEHICLE

	FEET
WIDTH	: 7.00
TRACK	: 6.00
LOCK TO LOCK TIME	: 6.00
STEERING ANGLE	: 31.6

BODY OF VEHICLE - —
 FRONT TIRES PATH - - - -
 REAR TIRES PATH - - - -





SCALE: 1" = 30'

CHURCH STREET

PASSENGER VEHICLE

	FEET
WIDTH	: 7.00
TRACK	: 6.00
LOCK TO LOCK TIME	: 6.00
STEERING ANGLE	: 31.6

BODY OF VEHICLE - —
 FRONT TIRES PATH - - - -
 REAR TIRES PATH - - - -

