

Traffic Impact Study 40 West Oak Street

Chicago, Illinois



Prepared For:

Nahla Capital

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

October 23, 2019

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed residential development to be located at 40 West Oak Street in Chicago, Illinois. The site, which is currently occupied by a parking garage, is located in the northwest quadrant of the intersection of Oak Street with Dearborn Street. As proposed, the site will be redeveloped with 90 condominium units and a parking garage with 160 parking spaces. Access to the parking garage will be provided via a porte-cochere that will have inbound access off Dearborn Street and outbound access off Oak Street.

The purpose of this study was to examine existing traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine recommendations to mitigate any impacts and enhance the area's streets and alternative modes of transportation. **Figure 1** shows the location of the site in relation to the area street system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing street conditions
- Description of alternative forms of transportation in the area
- 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, afternoon and evening peak hours
- Evaluation and recommendations with respect to adequacy of the site access, the adjacent street system, and alternative forms of transportation

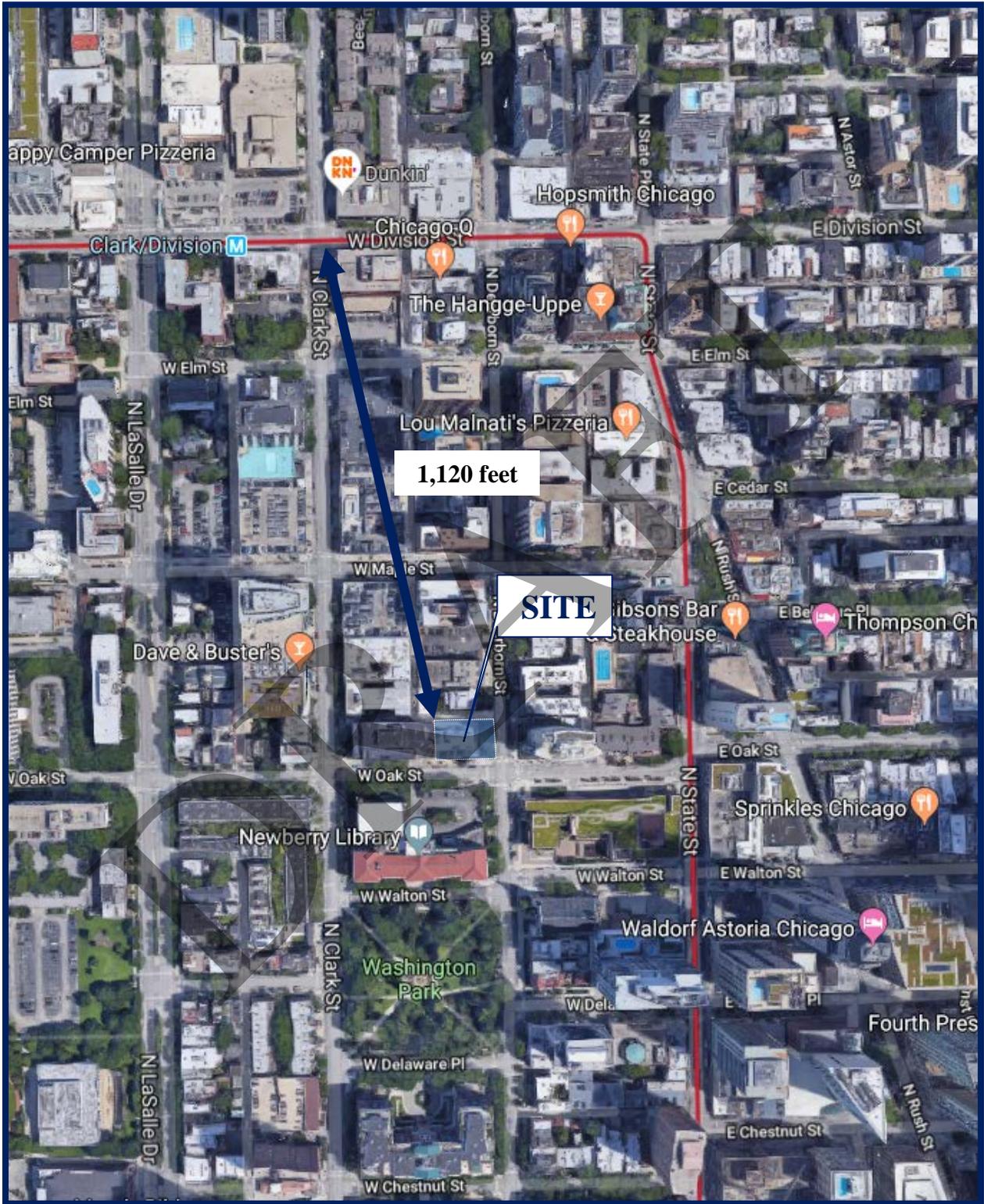
Traffic capacity analyses were conducted for the weekday morning, weekday afternoon, and weekday evening peak hours for the following conditions:

1. Existing Conditions - Analyze the capacity of the existing street system using existing peak hour traffic volumes in the surrounding area.
2. Projected Conditions – Analyze the capacity of the future street system using the projected traffic volumes that include the existing traffic volumes, background development traffic growth, and the traffic estimated to be generated by the buildout of the proposed development.



Site Location

Figure 1



Aerial View of Site

Figure 2

40 West Oak Street
Chicago, Illinois



2. Existing Conditions

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

Site Location

The site is located in the Gold Coast neighborhood of Chicago, which offers a mixture of residential, commercial, and institutional uses. Land uses in the area include Ruth Page Center For the Arts and Palette & Chisel Art Academy to the north, Warren Bar Gold Coast (Post Hospital Rehabilitation Institute) to the west, 30 West Oak Condominium to the east, and Ogden International School of Chicago, Newberry Library and Washington Park to the south.

Existing Street System Characteristics

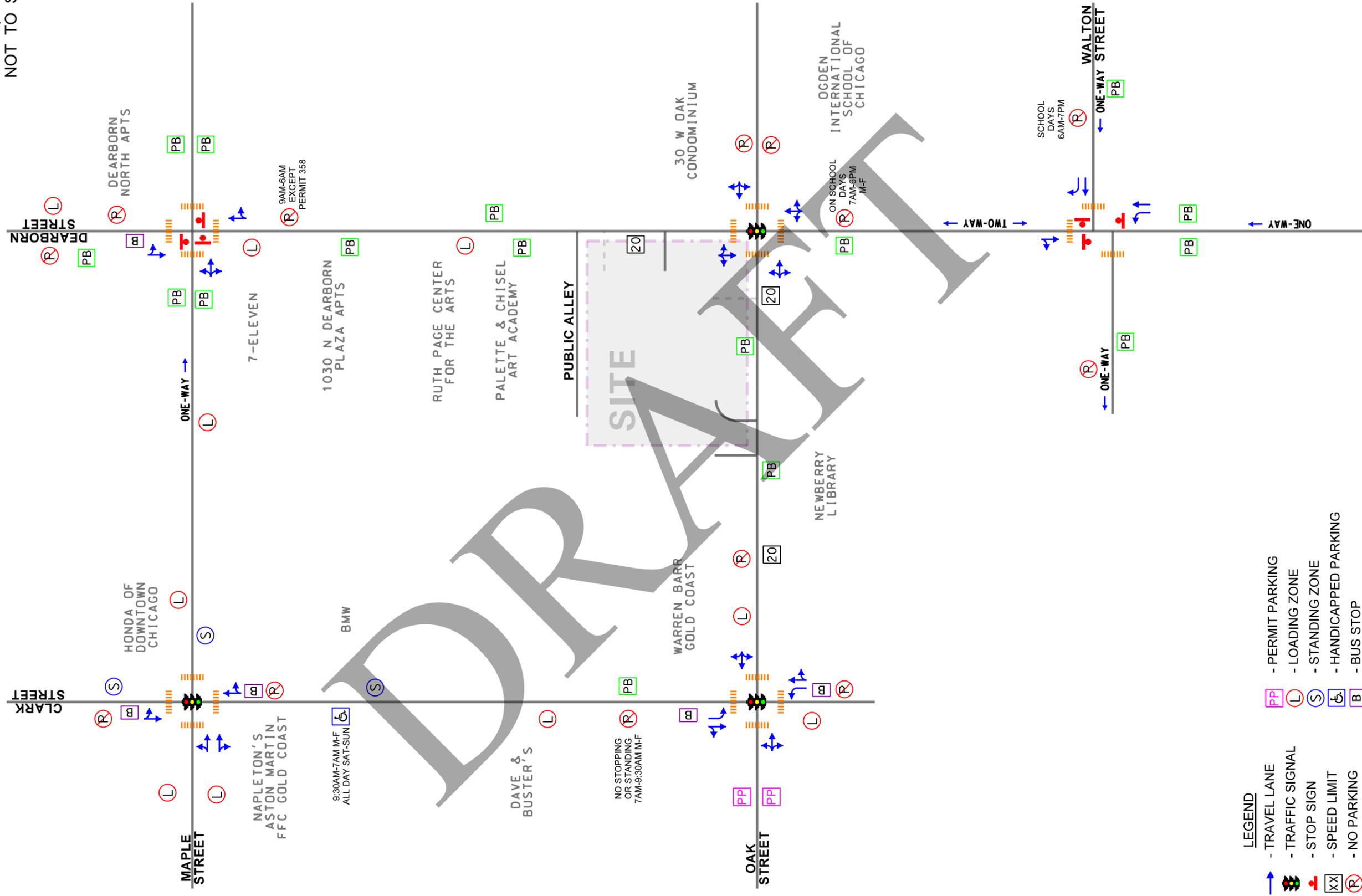
The characteristics of the existing streets near the development are described below and illustrated in **Figure 3**. Unless otherwise noted, all streets are under the jurisdiction of the Chicago Department of Transportation (CDOT).

Oak Street is an east-west local street that provides one lane in each direction in the vicinity of the site. At its signalized intersection with Clark Street, Oak Street provides a combined left/through/right-turn lane on both approaches. Both legs of the intersection provide high-visibility crosswalks with pedestrian countdown timers. At its signalized intersection with Dearborn Street, Oak Street provides a combined left/through/right-turn lane on both approaches. Both legs of the intersection provide high-visibility crosswalks with pedestrian countdown timers. Paybox Parking is provided with a mix of loading zones and no parking on both sides of the street north and south of Oak Street. Oak Street has a school zone speed limit of 20 miles per hour.

Dearborn Street is a north-south major collector street that provides one lane in each direction in the vicinity of the site. At its signalized intersection with Oak Street, Dearborn Street provides a combined left/through/right-turn lane on both approaches. Both legs of the intersection provide high-visibility crosswalks with pedestrian countdown timers. At its all-way stop sign controlled intersection with Maple Street, Dearborn Street provides a combined through/right-turn lane on the northbound approach and a through/left-turn lane on the southbound approach. Both legs of the intersection provide high-visibility crosswalks with pedestrian countdown timers. Paybox Parking is provided with a mix of loading zones and no parking on both sides of the street east and west of Dearborn Street. A CTA bus stop (Bus Route 70) is located in the northwest corner of the of the intersection of Dearborn Street with Maple Street. Dearborn Street has a school zone speed limit of 20 miles per hour.



NOT TO SCALE



- LEGEND**
- TRAVEL LANE
 - TRAFFIC SIGNAL
 - STOP SIGN
 - SPEED LIMIT
 - NO PARKING
 - PAYBOX PARKING
 - PERMIT PARKING
 - LOADING ZONE
 - STANDING ZONE
 - HANDICAPPED PARKING
 - BUS STOP
 - HIGH VISIBILITY CROSSWALK

40 W OAK STREET
CHICAGO, ILLINOIS

EXISTING STREET CHARACTERISTICS

Clark Street is a north-south major collector street that provides one lane in each direction in the vicinity of the site. At its signalized intersection with Maple Street, Clark Street provides a through/right-turn lane on the northbound approach and a through/left-turn lane on the southbound approach. Both legs of the intersection provide high-visibility crosswalks as well as push buttons and pedestrian countdown timers. A CTA bus stop is located in the northwest (Bus Route 22) and southwest (Bus Route 22 and Bus Route 70) corners of the intersection of Maple Street with Clark Street. At its signalized intersection with Oak Street, Clark Street provides an exclusive left-turn lane and a combined through/right-turn lane on both approaches. Both legs of the intersection provide high-visibility crosswalks with pedestrian countdown timers. A CTA bus stop (Bus Route 22 and Bus Route 70) is located in the northwest and southwest corners of the intersection of Oak Street with Clark Street. Paybox Parking is provided with a mix of loading zones and no parking on both sides of the street east and west of Clark Street.

Maple Street is a one-way eastbound street in the vicinity of the site. At its signalized intersection with Clark Street, Maple Street provides a combined left/through/right-turn lane on the eastbound approach. Both legs of the intersection provide high-visibility crosswalks as well as push buttons and pedestrian countdown timers. At its all-way stop sign controlled intersection with Dearborn Street, Maple Street provides a combined left/through/right-turn lane on the eastbound approach. Both legs of the intersection provide high-visibility crosswalks with pedestrian countdown timers. Paybox Parking is provided with a mix of loading zones on both sides of the street north and south of Maple Street.

Walton Street is a one-way westbound street that generally provides two travel lanes. At its all-way stop-sign controlled intersection with Dearborn Street, Walton Street provides an exclusive through lane and an exclusive right-turn lane on the westbound approach. Pay Box parking is provided on the south side of the street. On school days, parking is prohibited on the north side of the street from 7:00 A.M. to 6:00 P.M. east of Dearborn Street and west of Dearborn Street, parking is prohibited on the north side of the street.

Public Transportation

The public transportation serving the area is summarized below.

CTA Rapid Transit. The area is served by the Chicago Transit Authority (CTA) rapid transit Red Line via the following stations:

- The Clark/Division station located approximately 1,120 feet (0.21 miles) northwest of the site at a walking distance of approximately 1,660 feet.
- The Chicago station located approximately 1,528 feet (0.29 miles) southwest of the site at a walking distance of approximately 1,925 feet.

It should be noted that the CTA Red Line operates 24 hours a day, seven days a week between Howard Street and the 95th/Dan Ryan station located along the Dan Ryan Expressway at 95th Street.

Additionally, it should be noted that according to the Transit Friendly Development Guide produced in part by CDOT and the CTA, the area surrounding the Clark/Division Station is considered a Major Activity Center (MC). This classification describes station areas which are intended to be developed at a significant density that supports and provides services for the region and nearby neighborhoods. These areas often provide a balance of residential, retail, and employment uses.

CTA Bus Routes. The area is also served by the following bus routes, all of which have bus stops within the study area:

Route 22 (Clark) provides service on Clark Street from Howard Street at the north to Polk Street at the south. This route provides southbound service on Clark Street and northbound service on Dearborn Street from Walton Street to Polk Street. This route runs daily at all times, including weekends and holidays.

Route 70 (Division) provides east-west service primarily along Division Street from Dearborn Street to Austin Boulevard. It operates from approximately 5:00 A.M. to 11:00 P.M. daily.

Route 36 (Broadway) generally operates along State Street, North Broadway, and Clark Street from Loyola University to Congress Parkway. Notable stops include Lincoln Park Zoo, the Chicago History Museum, and the Main Post Office. Service is provided seven days a week, including holidays.

Route 156 (LaSalle) provides service primarily on LaSalle Street from Belmont Avenue to Adams Street. This route also extends along Belmont Avenue to Halsted Street at the north end of the route and past Union Station and the LaSalle Street Metra Station at the south end of the route. It generally runs from 5:15 A.M. to 8:00 P.M. on weekdays.

Alternative Modes of Transportation

The alternative modes of transportation serving the area are summarized below.

Pedestrian Accommodations. Sidewalks are provided on all streets within the study area and high-visibility crosswalks and pedestrian countdown timers are provided across all legs of the study area intersections.

Bike Facilities. According to the City of Chicago's *Streets for Cycling Plan 2020*, Clark Street is designated as a Spoke Route, Dearborn Street south of Walnut Street is designated as a Crosstown Bike Route and Oak Street is designated as a Neighborhood Bike Route. In addition, the Oak Street neighborhood bike route connects to the Lakefront Trail approximately one-half mile east of the site with access provided at Lake Shore Drive.

Mode-Sharing Transportation Availability. Multiple Divvy bike-sharing stations are located at four locations within the area with the closest stations located at the following intersections:

- On the southwest corner of Dearborn Parkway and Delaware Place (18 docks)
- On the southeast corner of Clark Street with Elm Street (39 docks)
- On the northwest corner of Wells Street with Walton Street (18 docks)
- On the southeast corner of Rush Street with Cedar Street (10 docks)

In addition, there are five Zipcar carsharing locations within the vicinity of the site with the two closest located in the Newberry Plaza parking garage at 1030 North State Street and within the parking garage at 75 West Elm Street.

Ogden International School of Chicago Operations and Observations

In the southeast quadrant of the intersection of Oak Street with Dearborn Street is the East Campus for the Ogden International School of Chicago which serves kindergarten through fourth grade. The school provides early entry at 8:00 A.M. with school generally in session from 8:30 A.M. to 3:30 P.M. During the morning arrival and afternoon dismissal times, Dearborn Street between Oak Street and Walton Street is closed to be used for the loading of buses only and there are approximately five to six buses serving the school. During the morning, the street segment is generally closed between 7:45 A.M. and 8:45 A.M. and during the afternoon the street segment is generally closed between 3:00 P.M. and 4:00 P.M. All school bus loading occurs on the east side of Dearborn Street.

Crossing guards are provided at the intersections of Oak Street with Dearborn Street, Dearborn Street with Walton Street, State Street and Oak Street, and Walton Street with State Street during the weekday morning arrival period and at the intersections of Oak Street with Dearborn Street, Dearborn Street with Walton Street, and Walton Street with State Street during the weekday afternoon dismissal period.

Passenger vehicle loading for the school primarily occurs within a designated loading zone that is established via cones and restricts Walton Street to a single westbound travel lane. This loading zone is located on the north side of Walton Street east of Dearborn Street. A staff member is provided who helps assist with student loading from passenger vehicles, so parents/guardians/taxi drivers do not have to get out of their vehicles. During the afternoon dismissal, this zone is not provided and vehicles queue on the north side of Walton Street and on the south side of Oak Street between Dearborn Street and State Street.

During these time periods, additional vehicles park elsewhere utilizing on-street parking areas, including Dearborn Street north of Oak Street, within the vicinity of the school or parents/guardians walk with students as a significant number of parents/guardians were observed walking students to and from the entrance of the school building.

Field observations conducted at the intersection of Oak Street with Dearborn Street during the school arrival and dismissal periods indicated that the intersection experienced minor increases in delay due to the increased number of pedestrians during these periods. Furthermore, during the Dearborn Street green phase, the crossing guard would stop traffic in all directions to allow students to cross the street and to allow northbound buses to turn onto Oak Street. Any queues that occurred as a result of the actives were minor and would clear quickly once pedestrians and buses cleared the intersection and the crossing guard allowed southbound traffic to turn onto Oak Street.

Existing Traffic Volumes

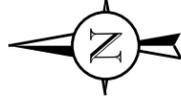
In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, KLOA, Inc. conducted peak period traffic, pedestrian, and bicycle counts using Miovision Video Scout Collection at the following intersections:

- Oak Street with Dearborn Street
- Oak Street with Clark Street
- Dearborn Street with Maple Street
- Dearborn Street with Walton Street

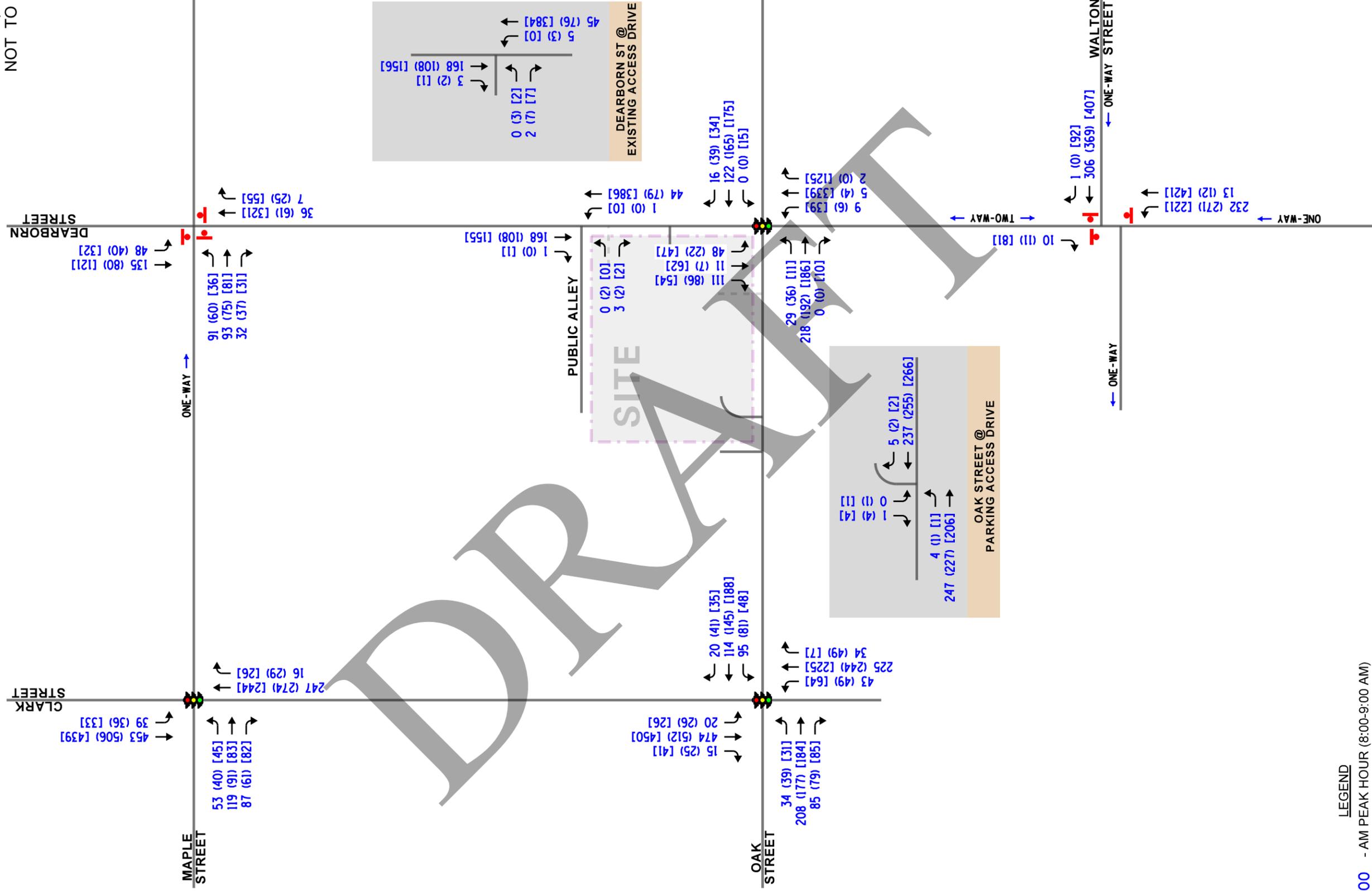
The counts were conducted on Thursday, October 10, 2019 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (2:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the weekday morning peak hour generally occurs from 8:00 A.M. to 9:00 A.M. and the weekday evening peak hour generally occurs between 5:00 P.M. and 6:00 P.M. However, as previously indicated, the pick-up/drop-of operations of Ogden International School of Chicago result of the closure of Dearborn Street between Oat Street and Walton Street from 7:45 A.M. to 8:45 A.M. during arrival period and from 3:00 P.M. to 4:00 P.M. during the afternoon dismissal period. As such, the following peak hours were analyzed for the purposes of this evaluation:

- Weekday Morning Peak Hour: 7:45 A.M. to 8:45 A.M.
- Weekday Afternoon Peak Hour: 3:00 P.M. to 4:00 P.M.
- Weekday Evening Peak Hour: 5:00 P.M. to 6:00 P.M.

These counts were supplemented with counts previously conducted by KLOA, Inc. at the intersection of Clark Street with Maple Street, Dearborn Street with the East-West Public Alley, Dearborn Street with the Parking Garage Access Drive, and Oak Street with the Parking Garage Access Drive. **Figure 4** illustrates the existing peak hour vehicle traffic volumes. **Figure 5** illustrates the existing pedestrian and bicycle volumes, showing direction of travel.



NOT TO SCALE

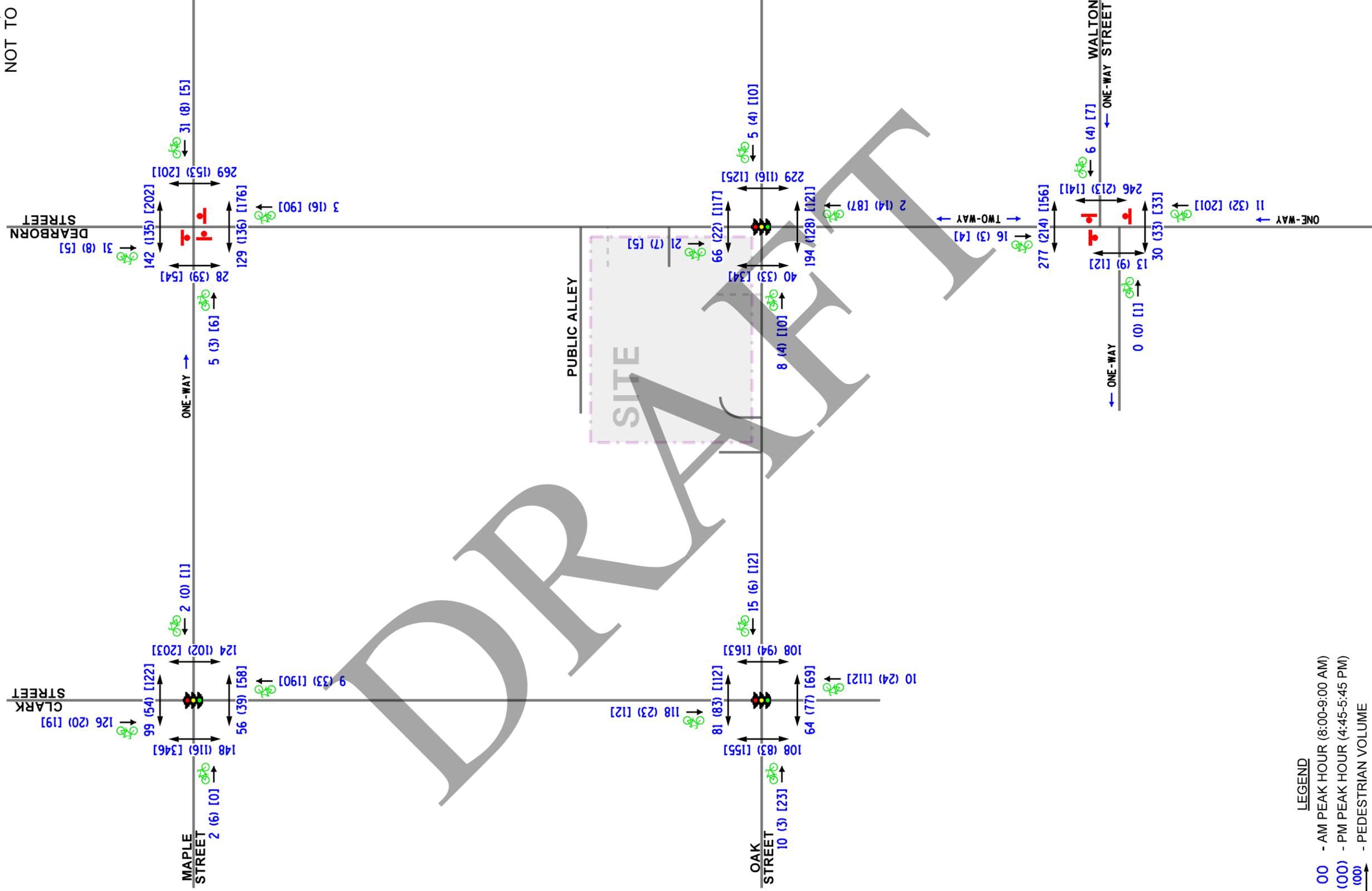
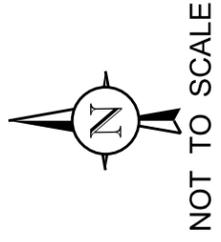


LEGEND

- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)

40 W OAK STREET
CHICAGO, ILLINOIS

EXISTING TRAFFIC VOLUMES



- LEGEND**
- 00 - AM PEAK HOUR (8:00-9:00 AM)
 - (00) - PM PEAK HOUR (4:45-5:45 PM)
 - 00 (00) - PEDESTRIAN VOLUME
 - 00 (00) - BICYCLE VOLUME

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.

Site Location and Existing Uses

The site is located at 40 West Oak Street in the Gold Coast neighborhood of Chicago and is currently occupied by a parking garage that serves the Warren Barr Gold Coast. Based on traffic counts conducted, the existing parking garage, which has access on both Dearborn Street and Oak Street, generates approximately 20 total trips during the weekday morning peak hour, 23 total trips during the weekday afternoon peak hour and 18 total trips during the weekday evening peak hour. The site is bounded by Palette & Chisel Art Academy on the north, Warren Bar Gold Coast on the west, 30 West Oak Condominium to the east, and Newberry Library to the south.

Proposed Development Plan

As proposed, the site will be redeveloped with a residential building containing approximately 90 condominium units and an approximately 160-space parking garage of which 50 spaces will be allocated for the use by Warren Barr Gold Coast. This parking garage will therefore be utilized by residents of the proposed condominium units as well as the existing parking garages users.

Proposed Vehicle Access

Access to the proposed 160-space parking garage will be provided off a proposed port cochere that will have inbound only access off Dearborn Street and outbound-only access off Oak Street. The inbound access off Dearborn Street will be located approximately 110 feet north of Oak Street and will be approximately 14-feet wide. The outbound access off Oak Street will be located approximately 60 feet west of Dearborn Street and will be approximately 14-feet wide. Outbound movements will be restricted via signage to right-turns only and should be under stop-sign control. Visual warning devices should be provided at the port cochere exit at the sidewalk. It should be noted that the proposed access drives will be replacing the existing access drives on Oak Street and Dearborn Street serving the parking garage which allow for two-way traffic.

Proposed Pedestrian Access

Pedestrian access to the proposed residential building will be provided via a lobby located on the south side of the building. Pedestrians can access the lobby via Oak Street and via the proposed port cochere located on the east side of the building. Providing access to the lobby via the port cochere will allow passenger vehicle loading/unloading to occur off-street minimizing the impact on through traffic along Oak Street. Two vehicles can be accommodated within the port cochere before blocking access to the parking garage entrance.

Truck Loading

Loading for trucks will be provided in the northwest corner of the building with access to the loading zone provided via the approximately 16-foot wide public alley that borders the north side of the proposed residential building.

Directional Distribution

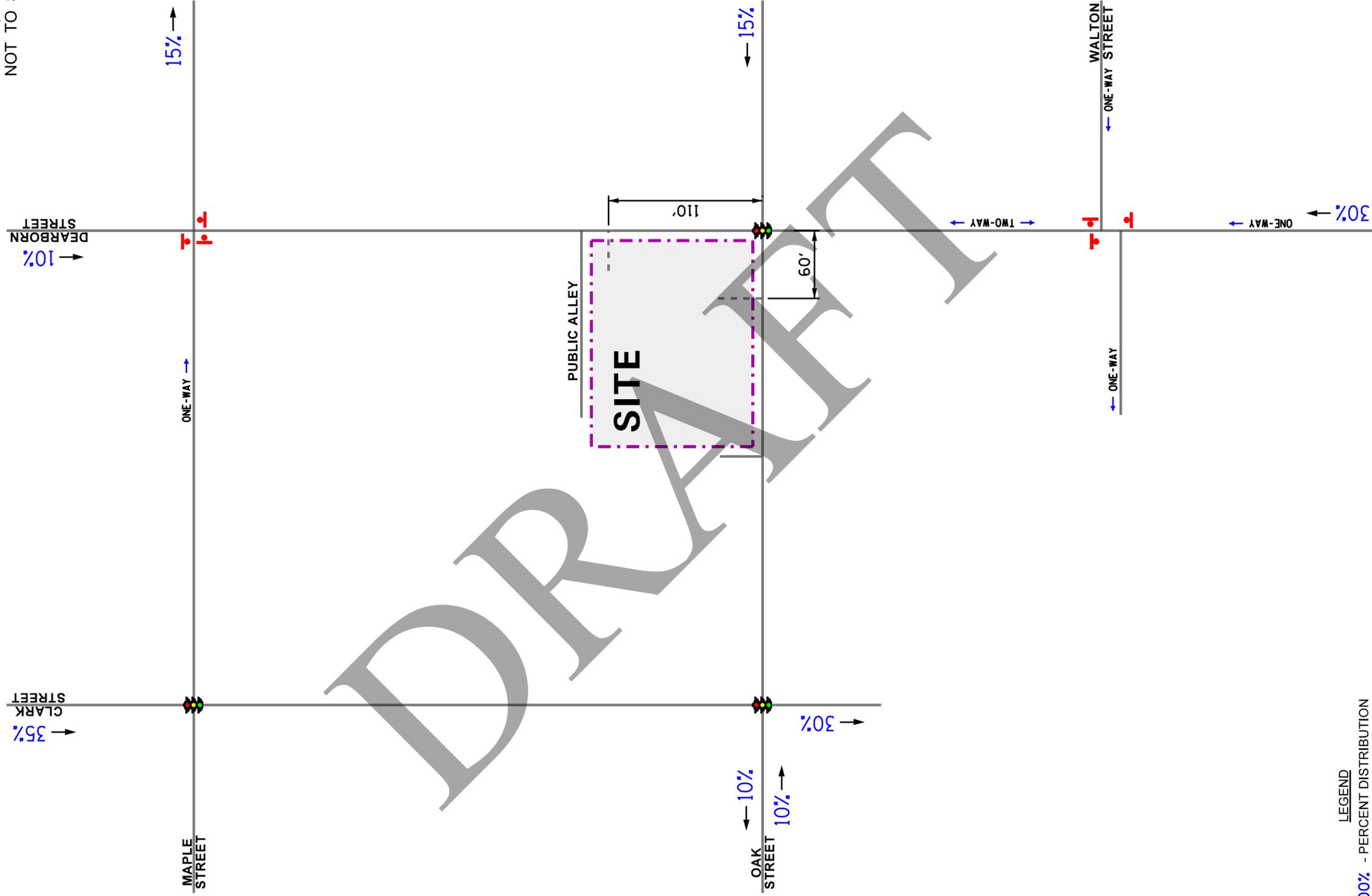
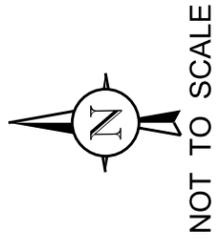
The directions from which residents will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts, one-way orientation of the adjacent streets, the closure of Dearborn Street between Oak Street and Walton Street during school activities and the proposed access system of the development. **Figure 6** illustrates the directional distribution of traffic.

Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on trip generation rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 10th Edition. **Table 1** summarizes the trips projected to be generated by the proposed residential development. These trip estimates take into account the reduction in vehicle trips generated due to the proximity of the proposed development to alternative modes of transportation. Based on census data for residences located within one-quarter mile of the Clark/Division CTA Red Line Station, approximately 55 percent of residents in the area utilize public transportation, bicycles or walk to work.

Table 1
PROJECTED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Weekday Evening Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
222	High-Rise Residential (90 units)	3	20	23	12	5	17	15	6	21



4. Projected Traffic Conditions

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

Development Traffic Assignment

The estimated weekday morning, weekday afternoon and weekday evening peak hour traffic volumes that will be generated by the proposed development were assigned to the street system in accordance with the previously described directional distribution (Figure 6). **Figure 7** illustrates the traffic assignment of the new passenger vehicle trips.

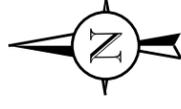
As indicated earlier, the site is currently occupied by an existing parking garage with access provided off Oak Street and Dearborn Street, and currently generates approximately 20 total trips during the weekday morning peak hour, 23 total trips during the weekday afternoon peak hour and 18 total trips during the weekday evening peak hour and that these trips will continue to utilize the proposed parking garage. As such, the existing trips generated by the parking garage were reassigned to the proposed access system and study are intersections. The reassignment of existing site generated traffic volumes is illustrated in **Figure 8**.

Ambient Traffic Growth

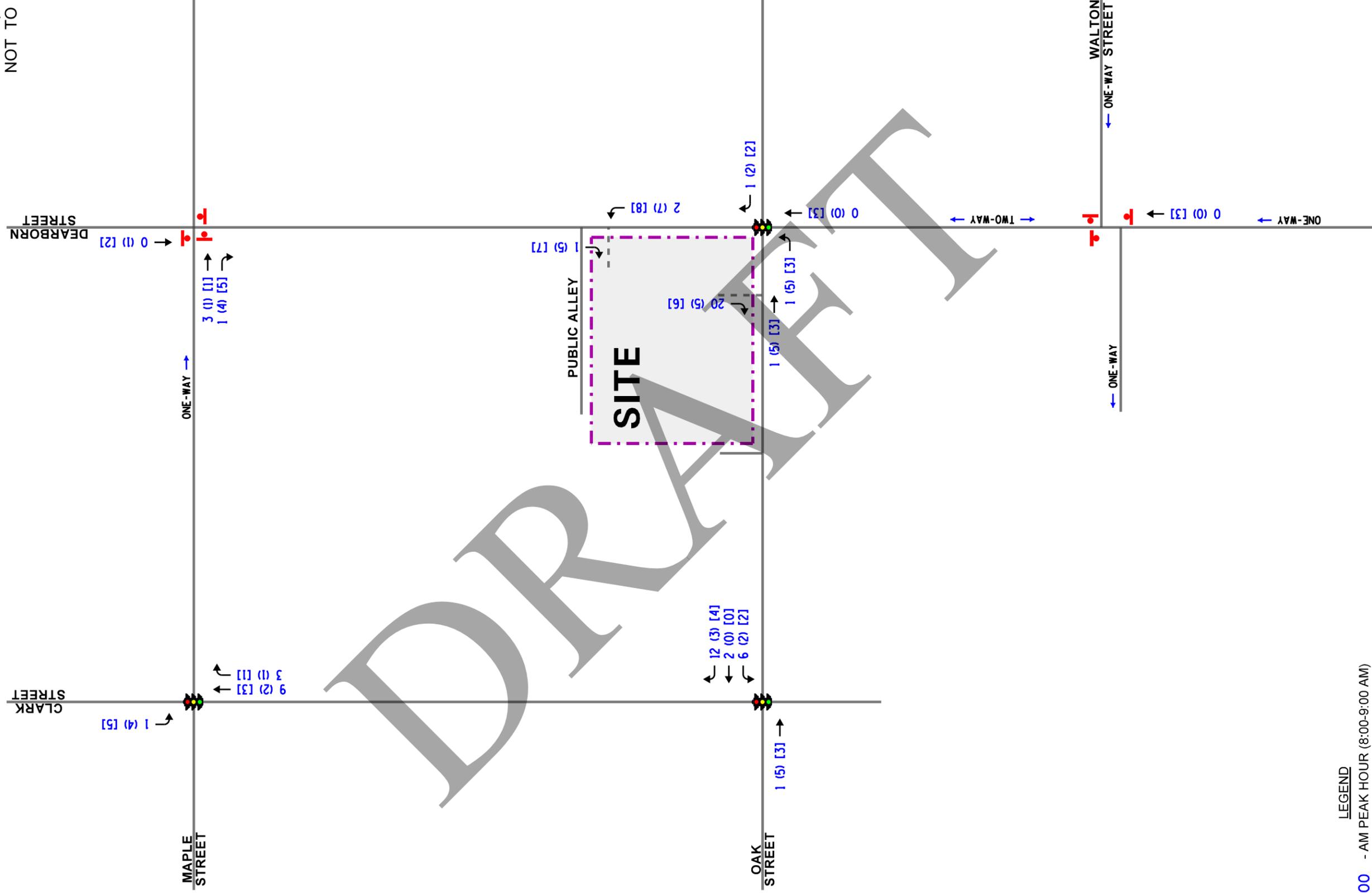
To account for any additional increase in traffic due to other factors or developments not previously discussed, an ambient growth factor of 0.5 percent per year was also applied to the study area over a six-year period to represent Year 2025 conditions. Furthermore, the traffic estimated to be generated by the proposed 12 West Maple development was included in the background traffic volumes. In order to account for the increase in population in the study area, bicycle and pedestrian volumes were increased by 10 percent at each intersection.

Total Projected Traffic Volumes

The existing traffic volumes were combined with the traffic from the other developments in the area, the ambient growth in the area, and the new peak hour traffic volumes generated by the subject development to determine the total projected traffic volumes, shown in **Figure 9**.



NOT TO SCALE

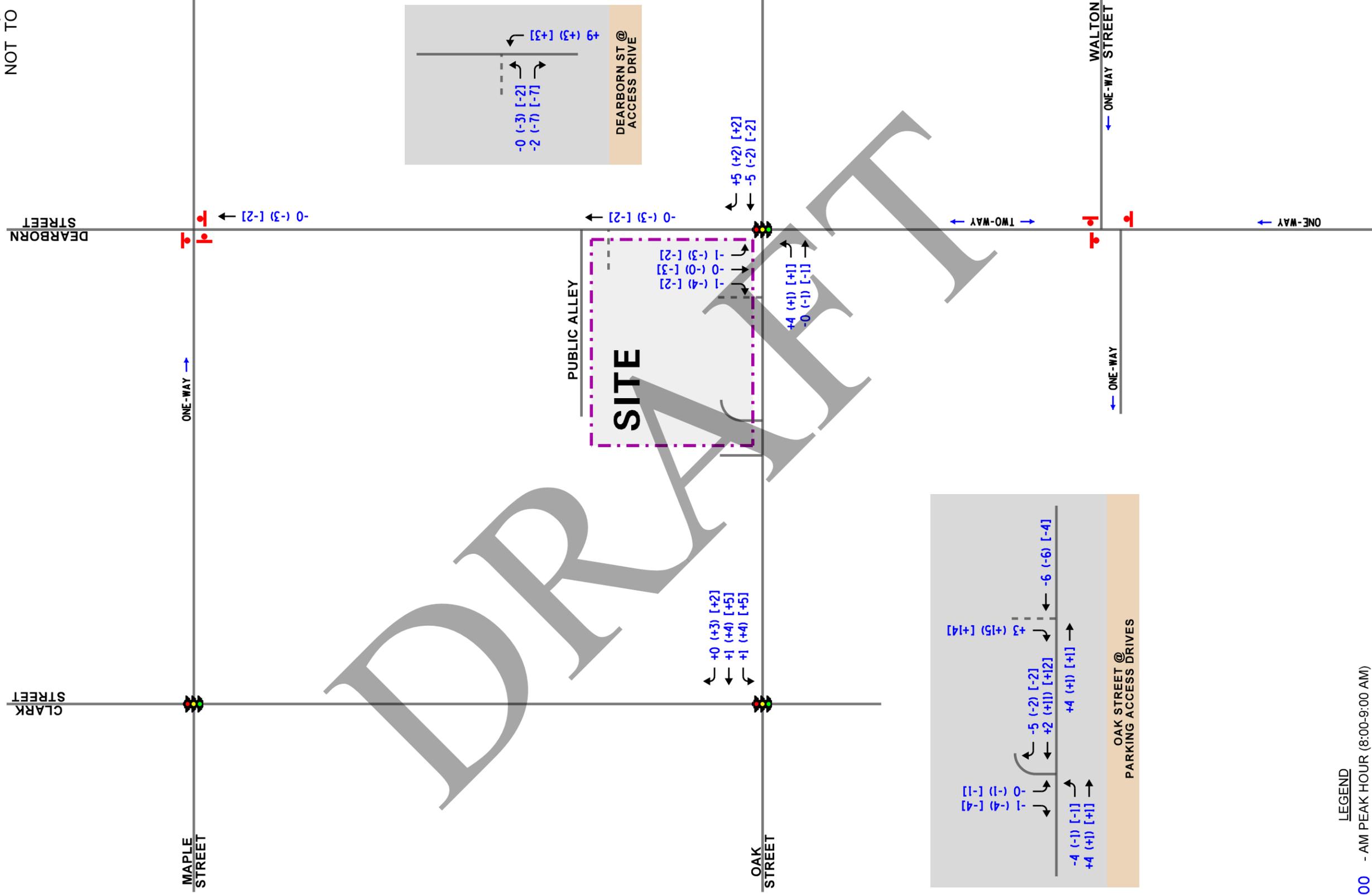


LEGEND

- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)

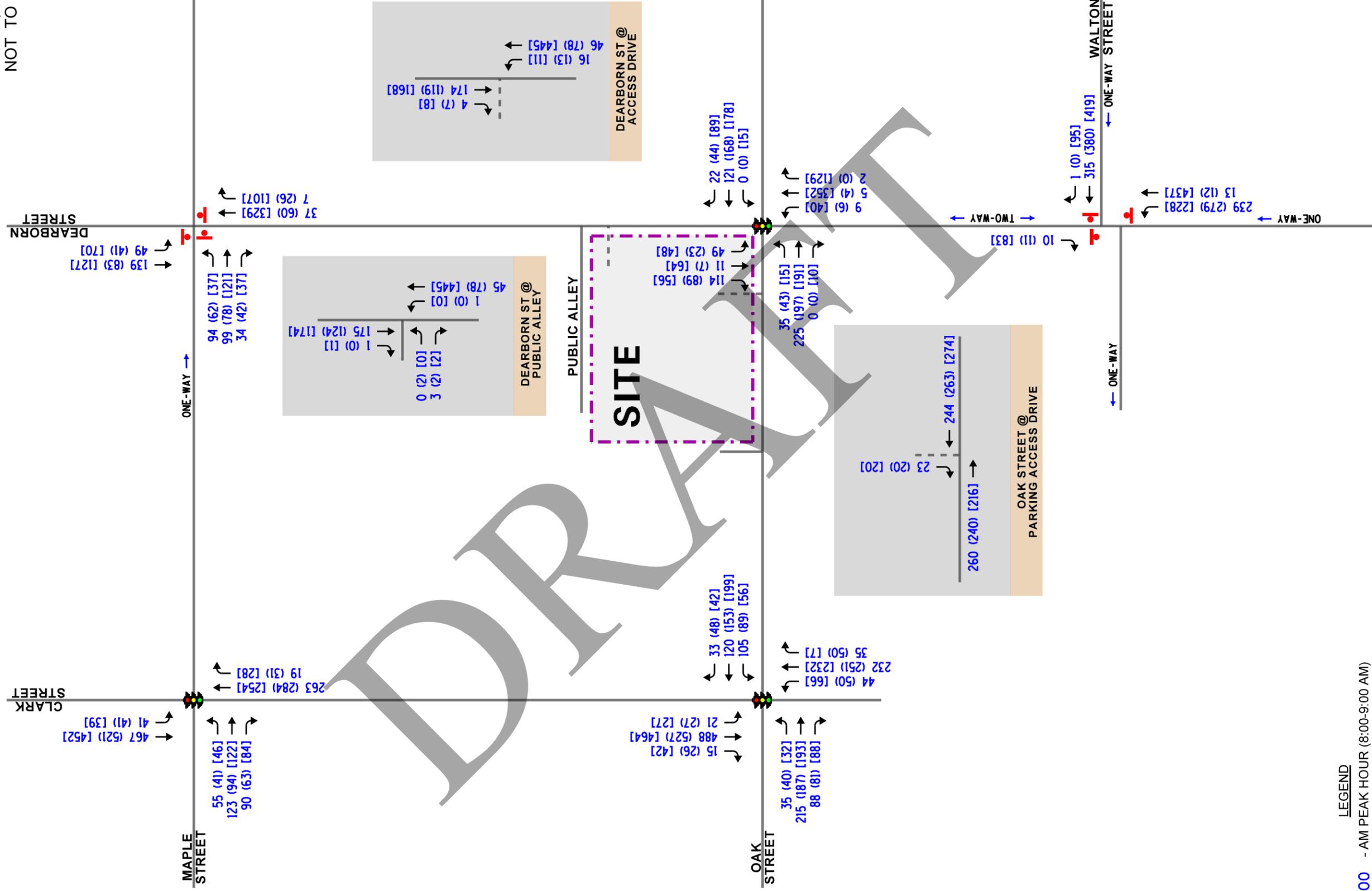


NOT TO SCALE





NOT TO SCALE



LEGEND

- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (4:45-5:45 PM)

5. Traffic Analysis and Recommendations

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

Traffic Analyses

Intersection analyses were performed for the weekday morning, weekday afternoon and weekday evening peak hours for the existing (Year 2019) and future projected (Year 2025) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro 10 software. The analyses for signalized intersections were accomplished utilizing 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 and Year 2025 total projected conditions are presented in **Tables 2** and **3**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 2

CAPACITY ANALYSIS RESULTS – YEAR 2019 EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Oak Street with Dearborn Street¹						
• Overall	B	13.8	B	15.7	B	16.8
• Eastbound Approach	B	19.7	C	20.8	B	17.4
• Westbound Approach	B	14.7	B	16.9	B	17.1
• Northbound Approach	A	8.0	A	8.3	B	19.4
• Southbound Approach	A	5.1	A	4.1	A	7.6
Oak Street with Clark Street¹						
• Overall	C	28.0	C	28.8	C	21.8
• Eastbound Approach	D	41.8	D	38.5	C	32.0
• Westbound Approach	D	49.0	D	51.4	C	31.3
• Northbound Approach	B	14.6	B	15.9	B	14.3
• Southbound Approach	B	17.6	C	20.9	B	15.1
Clark Street with Maple Street¹						
• Overall	B	15.5	B	14.9	B	14.1
• Eastbound Approach	C	22.6	B	18.5	B	18.5
• Northbound Approach	A	7.0	A	7.7	A	8.2
• Southbound Approach	B	16.3	B	17.7	B	15.6
Maple Street with Dearborn Street²						
• Overall	A	9.2	A	8.5	B	11.2
• Eastbound Approach	A	9.5	A	8.8	A	9.9
• Northbound Approach	A	8.2	A	8.0	B	12.5
• Southbound Approach	A	9.2	A	8.5	A	9.3
Dearborn Street with Walton Street²						
• Overall	B	14.6	C	15.1	C	23.9
• Westbound Approach	C	15.1	C	15.7	D	26.2
• Northbound Approach	B	14.1	B	14.5	C	23.7
• Southbound Approach	B	10.3	A	9.2	B	11.0
Dearborn Street with Public Alley³						
• Eastbound Approach	A	9.2	A	9.3	A	9.1
• Northbound Left Turn	A	7.6	--	--	--	--
Dearborn Street with Access Drive³						
• Eastbound Approach	A	9.2	A	9.2	A	9.9
• Northbound Left Turn	A	7.6	A	7.5	--	--
Oak Street with Access Drive³						
• Southbound Approach	A	9.6	B	10.5	B	10.2
• Eastbound Left Turn	A	7.7	A	7.9	A	7.8
1 – Signalized Intersection			LOS = Level of Service			
2 – All-Way Stop-Sign Controlled Intersection			Delay is measured in seconds.			
3 – Two-Way Stop-Sign Controlled Intersection						

Table 3

CAPACITY ANALYSIS RESULTS – YEAR 2025 PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Oak Street with Dearborn Street¹						
• Overall	B	14.2	B	16.3	B	17.9
• Eastbound Approach	C	20.5	C	22.0	B	17.9
• Westbound Approach	B	14.4	B	17.2	B	18.4
• Northbound Approach	A	8.0	A	8.3	C	20.9
• Southbound Approach	A	5.2	A	4.1	A	7.8
Oak Street with Clark Street¹						
• Overall	C	33.6	C	34.6	C	24.3
• Eastbound Approach	D	45.9	D	43.1	C	34.6
• Westbound Approach	E	70.1	E	71.1	D	37.8
• Northbound Approach	B	14.9	B	16.3	B	14.6
• Southbound Approach	B	18.7	C	22.9	B	16.2
Clark Street with Maple Street¹						
• Overall	B	16.1	B	15.6	B	15.6
• Eastbound Approach	C	23.3	B	18.8	C	22.0
• Northbound Approach	A	7.7	A	7.8	A	8.5
• Southbound Approach	B	17.0	B	18.8	B	16.3
Maple Street with Dearborn Street²						
• Overall	A	9.4	A	8.6	B	13.5
• Eastbound Approach	A	9.7	A	8.9	B	11.4
• Northbound Approach	A	8.3	A	8.1	C	15.7
• Southbound Approach	A	9.3	A	8.6	B	10.7
Dearborn Street with Walton Street²						
• Overall	C	15.1	C	15.6	D	26.5
• Westbound Approach	C	15.7	C	16.4	D	29.1
• Northbound Approach	B	14.5	B	14.9	D	26.4
• Southbound Approach	B	10.3	A	9.2	B	11.2
Dearborn Street with Public Alley³						
• Eastbound Approach	A	9.2	A	9.5	A	9.2
• Northbound Left Turn	A	7.6	--	--	--	--
Dearborn Street with Access Drive³						
• Northbound Left Turn	A	2.0	A	1.2	A	0.3
Oak Street with Access Drive³						
• Southbound Approach	A	9.8	B	10.2	A	9.9
1 – Signalized Intersection		LOS = Level of Service				
2 – All-Way Stop-Sign Controlled Intersection		Delay is measured in seconds.				
3 – Two-Way Stop-Sign Controlled Intersection						

Discussion and Recommendations

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

Oak Street with Dearborn Street

The results of the capacity analysis indicate that overall this intersection currently operates at LOS B during the weekday morning, weekday afternoon, and weekday evening peak hours. Under Year 2025 projected conditions, this intersection is projected to continue operating at LOS B during the weekday morning, weekday afternoon and weekday evening peak hours with increases in delay of approximately one second or less. Furthermore, all of the approaches are projected to operate at the acceptable LOS C or better during the peak hours with increases in delay of less than two seconds. The 95th percentile queues for the southbound approach are projected to be approximately 60 feet which will not extend beyond the location of the proposed inbound only access drive.

As previously indicated, during arrival and dismissal periods for Ogden International School of Chicago, the street segment of Dearborn Street between Oak Street and Walton Street is closed to northbound and southbound traffic to facilitate the loading of buses. The proposed development will have a limited impact on the school operations since during the peak outbound trip generation, which occurs during the weekday morning peak hour, the development generated traffic will be directed west on Oak Street toward Clark Street and will not traverse the intersection of Oak Street and Dearborn Street. Furthermore, the peak inbound generation for the proposed development occurs in the evening, outside the dismissal period. During the afternoon peak hour, the development is projected to generate approximately 20 percent less trips than during the weekday evening peak hour. While the street segment will be closed, inbound vehicles during this time are able to utilize other north-south streets such as State Street and LaSalle Street to travel north to access the site via either Oak Street or Maple Street. Overall, the proposed development is only projected to generate one trip per approximately every three minutes.

As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or signal modifications will be required.

Oak Street with Clark Street

The results of the capacity analysis indicate that overall this intersection currently operates at LOS C during the weekday morning, weekday afternoon and weekday evening peak hours. Under Year 2025 projected conditions, this intersection is projected to continue operating at LOS C during the weekday morning, weekday afternoon and weekday evening peak hours with increases in delay of approximately five seconds, five seconds and two seconds, respectively. Furthermore, all of the approaches are projected to operate at the acceptable LOS D or better during the peak hours with increases in delay of approximately 12 seconds or less with the exception of the westbound approach which is projected to operate at LOS E during the weekday morning and weekday afternoon peak hours. The 95th percentile queues for the westbound approach are projected to be approximately 300 feet which is an increase of approximately one to two vehicles over existing conditions.

However, it should be noted that the increases in delay are primarily a result of the existing traffic volumes increased by the regional growth factor as the proposed development is only projected to increase the traffic this intersection by two percent during the weekday morning peak hour and by approximately one-half percent during the weekday afternoon and weekday evening peak hours. In order to improve the operations of the westbound approach during the peak hours, consideration should be given to reallocating two seconds of green time from the north-south approaches to the east-west approaches. With the reallocation of green time, all of the approaches are projected to operate at LOS D or better during the peak hours and the 95th percentile queues for the westbound approach are projected to be approximately 275 feet which is approximately one vehicle longer than existing conditions. Overall, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or signal modifications will be required.

Clark Street with Maple Street

The results of the capacity analysis indicate that overall this intersection currently operates at LOS B during the weekday morning, weekday afternoon and weekday evening peak hours. Under Year 2025 projected conditions, this intersection is projected to continue operating at LOS B during the peak hours with increases in delay less than one second. Furthermore, all of the approaches are projected to continue operating at LOS C or better during the peak hours with increases in delay of approximately three seconds or less. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street improvements or signal modifications will be required.

Maple Street with Dearborn Street

The results of the capacity analysis indicate that overall this intersection currently operates at LOS A during the weekday morning and weekday afternoon peak hours and at LOS B during the weekday evening peak hour. Under Year 2025 projected conditions, this intersection is projected to continue operating at LOS A during the weekday morning and weekday afternoon peak hours and at LOS B during the weekday evening peak hour with increases in delay of approximately two seconds or less. Furthermore, all of the approaches are projected to operate at LOS C or better during the peak hours with increases in delay of approximately three seconds or less. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street or traffic control improvements will be required.

Dearborn Street with Walton Street

The results of the capacity analysis indicate that overall this intersection currently operates at LOS B during the weekday morning peak hour and at LOS C during the weekday afternoon and weekday evening peak hours. Under Year 2025 projected conditions, this intersection is projected to operate at LOS C during the weekday morning, weekday afternoon and weekday evening peak hours with increases in delay of approximately three seconds or less. Furthermore, all of the approaches are projected to operate at LOS D or better during the peak hours with increases in delay of approximately three seconds or less.

However, it should be noted that the increases in delay are primarily attributed to the existing traffic volumes increased by the regional growth factor as the proposed development is not projected to increase the volume of traffic traversing this intersection during the weekday morning and weekday afternoon peak hours and is projected to increase the volume of traffic traversing the intersection by less than one-half percent during the weekday evening peak hour.

As previously indicated, during arrival and dismissal periods for Ogden International School of Chicago, the street segment of Dearborn Street between Oak Street and Walton Street is closed to northbound and southbound traffic facilitate to the loading of buses. During these time periods, the future residents will be familiar with the road closure, and as such will seek alternative routes to access the development and will be able to utilize State Street and LaSalle Street to travel northbound to Oak Street or Maple Street and as such will have a limited impact on the operations of this intersection during school loading activities.

Overall, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street or traffic control improvements will be required.

Dearborn Street with Public Alley

The results of the capacity analysis indicate that outbound movements from the public alley onto Dearborn Street currently operate at LOS A during the weekday morning, weekday afternoon and weekday evening peak hours. Under Year 2025 projected conditions, outbound movements from the public alley onto Dearborn Street are projected to continue operating at LOS A during the peak hours with increases in delay of less than one second. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no street or traffic control improvements will be required.

Access Drives Evaluation

As previously indicated, access to the parking garage will be provided via the port cochere and pedestrian access to the residential lobby will be provided off Oak Street and via the proposed port cochere. Providing pick-up and drop-off activities on-site will limit the impact on the through traffic on Oak Street and Dearborn Street and the port cochere can accommodate stacking for two vehicles without blocking access to the proposed residential parking garage. Turning movements to/from the parking garage can occur without conflict, as illustrated in the AutoTURN exhibits included in the Appendix.

The results of the capacity analysis indicate that outbound movements, which will be restricted to right-turning movements only, from the proposed access drive onto Oak Street are projected to operate at LOS A during the weekday morning and weekday evening peak hour and at LOS B during the weekday afternoon peak hour. Furthermore, northbound left-turns from Dearborn Street onto the inbound only access drive are projected to operate at LOS A during the peak hours.

The provision of the inbound access drive as far north on the site as possible will minimize the impact southbound queues on Dearborn Street at Oak Street will have on northbound left-turning movements onto the access drive.

As previously indicated, the 95th percentile queues for southbound Dearborn Street are projected to be approximately 60 feet which currently extend beyond the location of the existing parking garage access drive but is not projected to extend beyond the proposed inbound only access drive.

Limiting the outbound movements to right-turns only can be accommodated by the area street network and will minimize delay experienced by outbound vehicles which will minimize the time vehicles are queued within the port-cochere. Additionally, restricting outbound movements to right-turns only will limit the number of vehicles traversing the intersection of Oak Street and Dearborn Street, particularly during the weekday morning peak hour when Dearborn Street south of Oak Street is closed to through traffic.

Furthermore, the existing parking garage access drives on Dearborn Street and Oak Street allow movements in and out from all directions and also require key card access which causes inbound movements to stop on the sidewalk, thus creating conflicts between passenger vehicles and pedestrians. The provision of the port cochere serving the proposed development will allow inbound movements onto the site to occur without stopping on the sidewalk.

As such, the proposed access system, with the provision of a port cochere that will provide on-site standing zone and access to the parking garage, will be adequate in accommodating the traffic estimated to be generated by the proposed residential building, will minimize the impact of the proposed development on the flow of traffic along Oak Street and Dearborn Street and will eliminate existing conflicts between pedestrians and passenger vehicles.

Transportation Sustainability Conclusions and Recommendations

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:

- Consideration should be given to providing electric vehicle charging stations within the parking garage.
- Consideration should be given to providing transit monitors in the lobby of the proposed building.

6. Conclusion

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

- Given the location of the site within an urban area and its proximity to alternative modes of transportation, the number of generated trips generated by the proposed development will be reduced.
- The proximity of the site to the Ogden International School of Chicago will not have a negative impact on the traffic operations during school loading activities based on the following:
 - During the peak outbound trip generation, which occurs during the weekday morning peak hour, the development generated traffic will be directed west on Oak Street toward Clark Street.
 - The peak inbound trip generation for the proposed development occurs during the weekday evening peak hour, which is outside the school dismissal period. During this time period the street segment of Dearborn Street between Oak Street and Walton Street open to traffic.
 - During the afternoon peak hour, the development is projected to generate approximately 20 percent less trips than during the weekday evening peak hour. Furthermore, during this time period inbound vehicles are able to utilize other north-south streets such as State Street and LaSalle Street to travel north to access the site.
 - The results of the capacity analyses indicated that the area intersections will continue to operate at adequate level of service during the peak periods analyzed.
- The existing street system has adequate capacity to accommodate the traffic that will be generated by the proposed development during the weekday morning, weekday afternoon and weekday evening peak hours and overall, the study area intersections will continue to operate at existing levels of service.
- Access to the site will be provided via the proposed port cochere on the east side of the building that will have inbound access off Dearborn Street and outbound access off Oak Street. Outbound movements will be restricted to right-turns only.
- The access system will adequately accommodate the traffic that will be generated by the proposed development and will allow for pick-up/drop-off activities to occur on site, which will not impact the through movements along Oak Street and Dearborn Street.

- The proposed access system will limit the impact of the proposed development on the loading activities for Ogden International School of Chicago and inbound vehicles will be able to utilize alternate parallel streets to access the development when Dearborn Street is closed during school activities.
- The proposed development will eliminate the existing two-way access drives that provide key car access that require vehicles to stop on the sidewalk to enter the parking garage. The proposed access system will contain all loading and garage movements on-site eliminating conflicts between vehicles and pedestrians on the sidewalk.

DRAFT

Appendix

Traffic Count Summary Sheets

Level of Service Criteria

Capacity Analysis Summary Sheets

Passenger Vehicle AutoTURN Exhibits

DRAFT

Traffic Count Summary Sheets



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Dearborn Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 1

Turning Movement Data

Start Time	Oak Street Eastbound					Oak Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	2	28	1	1	31	0	3	17	6	21	26	0	1	26	5	11	32	0	1	13	6	6	20	109
7:15 AM	0	4	28	3	1	35	0	1	21	5	23	27	0	3	32	9	13	44	0	8	18	7	12	33	139
7:30 AM	1	3	41	2	0	47	1	1	23	4	22	29	0	0	25	4	14	29	0	8	20	14	1	42	147
7:45 AM	0	8	39	0	5	47	0	1	30	2	39	33	0	0	1	1	27	2	0	11	4	22	2	37	119
Hourly Total	1	17	136	6	7	160	1	6	91	17	105	115	0	4	84	19	65	107	0	28	55	49	21	132	514
8:00 AM	0	9	50	0	6	59	0	0	34	6	65	40	0	3	4	1	32	8	0	11	7	36	21	54	161
8:15 AM	0	4	65	0	16	69	0	0	37	6	84	43	0	5	0	0	76	5	0	12	7	27	22	46	163
8:30 AM	0	8	72	0	13	80	0	0	25	2	41	27	0	1	1	1	59	3	0	18	7	29	21	54	164
8:45 AM	0	7	45	2	6	54	0	0	39	2	26	41	0	2	28	13	18	43	0	9	32	10	14	51	189
Hourly Total	0	28	232	2	41	262	0	0	135	16	216	151	0	11	33	15	185	59	0	50	53	102	78	205	677
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	4	40	2	5	46	0	2	36	6	16	44	0	5	46	8	25	59	0	5	9	8	16	22	171
2:15 PM	0	2	48	2	3	52	0	2	36	9	12	47	0	4	47	14	18	65	0	12	9	11	5	32	196
2:30 PM	0	3	30	1	2	34	0	4	30	5	19	39	0	4	50	15	16	69	0	8	10	10	11	28	170
2:45 PM	0	6	42	1	2	49	0	0	47	3	7	50	0	5	33	18	11	56	0	10	9	17	19	36	191
Hourly Total	0	15	160	6	12	181	0	8	149	23	54	180	0	18	176	55	70	249	0	35	37	46	51	118	728
3:00 PM	0	12	54	0	5	66	0	0	26	13	15	39	0	0	6	0	13	6	0	10	3	27	15	40	151
3:15 PM	0	10	48	0	5	58	0	0	38	9	25	47	0	1	5	0	19	6	0	3	2	14	15	19	130
3:30 PM	0	7	35	0	15	42	0	0	42	3	51	45	0	4	0	0	69	4	0	6	2	27	23	35	126
3:45 PM	0	8	58	0	8	66	0	0	63	14	25	77	0	2	4	2	27	8	0	9	2	20	29	31	182
Hourly Total	0	37	195	0	33	232	0	0	169	39	116	208	0	7	15	2	128	24	0	28	9	88	82	125	589
4:00 PM	0	8	50	2	3	60	0	4	35	8	54	47	0	5	37	11	33	53	0	7	14	15	23	36	196
4:15 PM	0	4	47	1	5	52	0	9	45	1	19	50	0	6	61	30	17	97	0	22	23	4	21	49	248
4:30 PM	0	1	41	6	3	48	0	5	45	6	26	56	0	11	66	25	16	102	0	8	23	11	23	42	248
4:45 PM	0	5	54	0	8	59	0	3	38	6	35	47	0	9	81	36	21	126	0	9	19	11	18	39	271
Hourly Total	0	18	192	9	19	219	0	21	158	21	134	200	0	31	245	102	87	378	0	46	79	41	85	166	963
5:00 PM	0	3	41	1	8	45	0	5	46	8	31	59	0	11	84	42	43	137	0	7	21	14	29	42	283
5:15 PM	0	4	52	5	11	61	0	4	49	12	35	65	0	8	110	35	31	153	0	13	15	13	36	41	320
5:30 PM	0	1	38	2	7	41	0	4	43	8	34	55	0	14	108	27	26	149	0	15	14	14	25	43	288
5:45 PM	0	3	64	3	8	70	0	2	46	7	25	55	0	8	118	25	21	151	0	12	16	14	27	42	318
Hourly Total	0	11	195	11	34	217	0	15	184	35	125	234	0	41	420	129	121	590	0	47	66	55	117	168	1209
Grand Total	1	126	1110	34	146	1271	1	50	886	151	750	1088	0	112	973	322	656	1407	0	234	299	381	434	914	4680
Approach %	0.1	9.9	87.3	2.7	-	-	0.1	4.6	81.4	13.9	-	-	0.0	8.0	69.2	22.9	-	-	0.0	25.6	32.7	41.7	-	-	-
Total %	0.0	2.7	23.7	0.7	-	27.2	0.0	1.1	18.9	3.2	-	23.2	0.0	2.4	20.8	6.9	-	30.1	0.0	5.0	6.4	8.1	-	19.5	-
Lights	1	121	1056	31	-	1209	0	48	845	141	-	1034	0	88	793	304	-	1185	0	223	207	365	-	795	4223

% Lights	100.0	96.0	95.1	91.2	95.1	95.1	95.0	93.4	95.4	95.0	95.0	84.2	95.3	69.2	95.8	87.0	90.2
Buses	0	0	7	0	7	0	4	0	4	4	4	31	0	41	0	41	83
% Buses	0.0	0.0	0.6	0.0	0.6	0.0	0.0	0.0	0.5	0.4	0.4	2.2	0.0	13.7	0.0	4.5	1.8
Single-Unit Trucks	0	1	12	0	13	1	13	6	21	21	21	22	0	4	4	9	65
% Single-Unit Trucks	0.0	0.8	1.1	0.0	1.0	100.0	2.0	4.0	1.5	1.9	1.9	1.6	0.4	1.3	1.0	1.0	1.4
Articulated Trucks	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1
% Articulated Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Bicycles on Road	0	4	35	3	42	0	23	4	28	28	28	169	0	47	12	69	308
% Bicycles on Road	0.0	3.2	3.2	8.8	3.3	0.0	2.6	2.6	2.6	2.6	2.6	12.0	4.3	15.7	3.1	7.5	6.6
Pedestrians	-	-	-	-	146	-	-	-	750	-	-	656	-	-	-	434	-
% Pedestrians	-	-	-	-	100.0	-	-	-	100.0	-	-	100.0	-	-	-	100.0	-

DRAFT



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Dearborn Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Oak Street Eastbound					Oak Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound											
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	8	39	0	5	47	0	1	30	2	38	0	0	1	1	1	1	1	1	27	0	11	4	22	2	37	119
8:00 AM	0	9	50	0	6	59	0	0	34	6	65	0	3	4	1	32	8	8	8	32	0	11	7	36	21	54	161
8:15 AM	0	4	65	0	16	69	0	0	37	6	84	0	5	0	0	76	5	5	5	76	0	12	7	27	22	46	163
8:30 AM	0	8	72	0	13	80	0	0	25	2	41	0	1	1	1	59	3	3	3	59	0	18	7	29	21	54	164
Total	0	29	226	0	40	255	0	1	126	16	229	0	9	6	3	194	18	18	18	194	0	52	25	114	66	191	607
Approach %	0.0	11.4	88.6	0.0	-	-	0.0	0.7	88.1	11.2	-	0.0	50.0	33.3	16.7	-	-	-	-	-	0.0	27.2	13.1	59.7	-	-	-
Total %	0.0	4.8	37.2	0.0	-	42.0	0.0	0.2	20.8	2.6	-	0.0	1.5	1.0	0.5	-	3.0	3.0	3.0	-	8.6	4.1	18.8	-	31.5	-	-
PHF	0.000	0.806	0.785	0.000	-	0.797	0.000	0.250	0.851	0.667	-	0.000	0.450	0.375	0.750	-	0.563	0.563	0.563	-	0.722	0.893	0.792	-	0.884	0.925	0.925
% Lights	0	29	213	0	-	242	0	0	120	14	134	0	3	1	0	-	4	4	4	-	48	2	109	-	159	539	539
% Lights	-	100.0	94.2	-	-	94.9	-	0.0	95.2	87.5	-	0.0	33.3	16.7	0.0	-	22.2	22.2	22.2	-	92.3	8.0	95.6	-	83.2	88.8	88.8
Buses	0	0	3	0	-	3	0	0	0	0	-	0	6	4	2	-	12	12	12	-	0	0	9	0	9	24	24
% Buses	-	0.0	1.3	-	-	1.2	-	0.0	0.0	0.0	-	0.0	66.7	66.7	66.7	-	66.7	66.7	66.7	-	0.0	36.0	0.0	-	4.7	4.0	4.0
Single-Unit Trucks	0	0	2	0	-	2	0	0	2	2	-	0	0	0	0	-	4	4	4	-	0	0	0	2	2	8	8
% Single-Unit Trucks	-	0.0	0.9	-	-	0.8	-	0.0	1.6	12.5	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	1.8	-	1.0	1.3	1.3
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
% 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	0.0	0.0
Bicycles on Road	0	0	8	0	-	8	0	1	4	0	-	0	0	1	1	-	2	2	2	-	0	4	14	3	-	21	36
% Bicycles on Road	-	0.0	3.5	-	-	3.1	-	100.0	3.2	0.0	-	0.0	0.0	16.7	33.3	-	11.1	11.1	11.1	-	7.7	56.0	2.6	-	11.0	5.9	5.9
Pedestrians	-	-	-	-	40	-	-	-	-	-	229	-	-	-	-	-	494	494	494	-	-	-	-	66	-	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	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
(847)518-9990

Count Name: Dearborn Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 4

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Oak Street Eastbound					Oak Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound												
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
3:00 PM	0	12	54	0	5	66	0	26	13	16	39	0	0	6	0	13	6	0	3	27	15	0	10	3	27	15	40	151
3:15 PM	0	10	48	0	5	58	0	38	9	25	47	0	1	5	0	19	6	0	3	14	15	0	3	2	14	15	19	130
3:30 PM	0	7	35	0	15	42	0	42	3	51	45	0	4	0	0	69	4	0	6	27	23	0	6	2	27	23	35	126
3:45 PM	0	8	58	0	8	66	0	63	14	25	77	0	2	4	2	27	8	0	9	20	29	0	9	2	20	29	31	182
Total	0	37	195	0	33	232	0	169	39	116	208	0	7	15	2	128	24	0	28	88	82	0	28	9	88	82	125	589
Approach %	0.0	15.9	84.1	0.0	-	-	0.0	81.3	18.8	-	-	0.0	29.2	62.5	8.3	-	-	0.0	22.4	7.2	70.4	-	-	-	-	-	-	-
Total %	0.0	6.3	33.1	0.0	-	39.4	0.0	28.7	6.6	-	35.3	0.0	1.2	2.5	0.3	-	4.1	0.0	4.8	1.5	14.9	-	-	-	-	-	21.2	-
PHF	0.000	0.771	0.841	0.000	-	0.879	0.000	0.671	0.696	-	0.675	0.000	0.438	0.625	0.250	-	0.750	0.000	0.700	0.750	0.815	-	-	-	-	-	0.781	0.809
% Lights	0	36	190	0	-	226	0	162	39	-	201	0	0	3	0	-	3	0	25	0	85	-	25	0	85	-	110	540
% Lights	-	97.3	97.4	-	-	97.4	-	95.9	100.0	-	96.6	-	-	20.0	0.0	-	12.5	-	89.3	0.0	96.6	-	89.3	0.0	77.8	0.0	88.0	91.7
Buses	0	0	2	0	-	2	0	1	0	-	1	0	6	0	0	-	6	0	0	7	0	-	0	7	0	-	7	16
% Buses	-	0.0	1.0	-	-	0.9	-	0.6	0.0	-	0.5	-	85.7	0.0	0.0	-	25.0	-	0.0	77.8	0.0	-	0.0	77.8	0.0	-	5.6	2.7
Single-Unit Trucks	0	0	0	0	-	0	0	2	0	-	2	0	0	1	0	-	1	0	0	0	1	-	0	0	1	-	1	4
% Single-Unit Trucks	-	0.0	0.0	-	-	0.0	-	1.2	0.0	-	1.0	-	0.0	6.7	0.0	-	4.2	-	0.0	0.0	1.1	-	0.0	0.0	1.1	-	0.8	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	-	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	0.0
Bicycles on Road	0	1	3	0	-	4	0	4	0	-	4	0	1	11	2	-	14	0	3	2	2	-	3	2	2	-	7	29
% Bicycles on Road	-	2.7	1.5	-	-	1.7	-	2.4	0.0	-	1.9	-	14.3	73.3	100.0	-	58.3	-	10.7	22.2	2.3	-	10.7	22.2	2.3	-	5.6	4.9
Pedestrians	-	-	-	-	33	-	-	-	-	116	-	-	-	-	-	128	-	-	-	-	-	82	-	-	-	-	-	-
% 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
(847)518-9990

Count Name: Dearborn Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Oak Street Eastbound					Oak Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound													
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total		
5:00 PM	0	3	41	1	8	0	5	46	8	31	0	11	84	42	43	0	7	21	14	29	0	0	28.0	39.3	32.7	0	0	42	283
5:15 PM	0	4	52	5	11	0	4	49	12	35	0	8	110	35	31	0	13	15	13	36	0	0	15	15	13	36	41	320	
5:30 PM	0	1	38	2	7	0	4	43	8	34	0	14	108	27	26	0	15	14	14	25	0	0	12	16	14	27	42	288	
5:45 PM	0	3	64	3	8	0	2	46	7	25	0	8	118	25	21	0	12	16	14	27	0	0	47	66	55	117	168	1209	
Total	0	11	195	11	34	0	15	184	35	125	0	41	420	129	121	0	47	66	55	117	0	0	28.0	39.3	32.7	0	0	168	1209
Approach %	0.0	5.1	89.9	5.1	-	0.0	6.4	78.6	15.0	-	0.0	6.9	71.2	21.9	-	0.0	3.9	5.5	4.5	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-
Total %	0.0	0.9	16.1	0.9	-	0.0	1.2	15.2	2.9	-	0.0	3.4	34.7	10.7	-	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
PHF	0.000	0.688	0.762	0.550	-	0.000	0.750	0.939	0.729	-	0.000	0.732	0.890	0.768	-	0.000	0.783	0.786	0.982	-	0.000	0.000	0.783	0.786	0.982	-	0.977	0.945	0.945
% Lights	0	11	186	10	-	0	15	172	83	-	0	38	334	124	-	0	47	55	53	-	0	0	47	55	53	-	155	1078	
% Lights	-	100.0	95.4	90.9	-	-	100.0	93.5	94.3	-	-	92.7	79.5	96.1	-	-	100.0	83.3	96.4	-	-	-	100.0	83.3	96.4	-	92.3	89.2	
Buses	0	0	0	0	-	0	0	1	0	-	0	1	0	1	-	0	0	0	0	-	0	0	0	6	0	-	6	9	
% Buses	-	0.0	0.0	0.0	-	-	0.0	0.5	0.0	-	-	2.4	0.0	0.8	-	-	0.0	0.0	0.0	-	-	-	0.0	9.1	0.0	-	3.6	0.7	
Single-Unit Trucks	0	0	0	0	-	0	0	2	1	-	0	0	5	0	-	0	0	1	1	-	0	0	1	1	1	-	2	10	
% Single-Unit Trucks	-	0.0	0.0	0.0	-	-	0.0	1.1	2.9	-	-	0.0	1.2	0.0	-	-	0.0	1.5	1.8	-	-	-	0.0	1.5	1.8	-	1.2	0.8	
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	
% 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	0	9	1	-	0	0	9	1	-	0	2	81	4	-	0	0	4	1	-	0	0	0	4	1	-	5	112	
% Bicycles on Road	-	0.0	4.6	9.1	-	-	0.0	4.9	2.9	-	-	4.9	19.3	3.1	-	-	0.0	6.1	1.8	-	-	-	6.1	1.8	-	3.0	9.3		
Pedestrians	-	-	-	-	34	-	-	-	-	125	-	-	-	-	121	-	-	-	-	-	-	-	-	-	-	117	-	-	
% 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
(847)518-9990

Count Name: Clark Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 1

Turning Movement Data

Start Time	Oak Street Eastbound					Oak Street Westbound					Clark Street Northbound					Clark Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	10	36	13	20	59	0	4	19	6	17	29	0	4	12	0	5	16	0	0	69	2	12	71	175
7:15 AM	0	4	29	12	31	45	0	3	19	5	12	27	0	3	16	0	8	19	0	6	103	8	18	117	208
7:30 AM	0	6	46	21	24	73	0	6	34	9	15	49	0	9	18	0	8	27	0	2	123	8	9	133	282
7:45 AM	0	6	46	14	23	66	0	20	26	5	27	51	0	7	50	4	11	61	0	3	140	8	15	151	329
Hourly Total	0	26	157	60	98	243	0	33	98	25	72	156	0	23	96	4	32	123	0	11	435	26	54	472	994
8:00 AM	0	11	50	18	30	79	0	30	34	6	27	70	0	9	46	5	16	60	0	7	135	7	22	149	358
8:15 AM	0	11	56	28	31	95	0	26	40	7	22	73	0	14	70	10	21	94	0	5	132	12	22	149	411
8:30 AM	0	6	65	26	24	97	0	22	25	3	32	50	0	15	67	15	16	97	0	7	164	7	22	178	422
8:45 AM	0	9	57	22	38	88	0	12	27	14	26	53	0	7	28	0	9	35	0	2	164	8	18	174	350
Hourly Total	0	37	228	94	123	359	0	90	126	30	107	246	0	45	211	30	62	286	0	21	595	34	84	650	1541
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	6	47	20	26	73	0	10	32	10	34	52	0	18	31	3	13	52	0	6	75	7	19	88	265
2:15 PM	0	9	49	10	21	68	0	7	34	12	24	53	0	13	41	2	11	56	0	4	93	8	18	105	282
2:30 PM	0	6	30	12	15	48	0	8	29	4	17	41	0	11	30	0	11	41	0	6	112	7	20	125	255
2:45 PM	0	7	46	16	17	69	0	27	41	12	21	80	0	14	39	5	7	58	0	6	102	2	12	110	317
Hourly Total	0	28	172	58	79	258	0	52	136	38	96	286	0	56	141	10	42	207	0	22	382	24	69	428	1119
3:00 PM	0	6	51	16	21	73	0	21	25	9	27	55	0	10	59	15	12	84	0	5	108	8	11	121	333
3:15 PM	0	8	47	23	20	78	0	16	35	7	21	58	0	7	62	13	20	82	0	2	105	3	13	110	328
3:30 PM	0	9	35	14	21	58	0	25	45	11	26	81	0	13	74	6	22	93	0	7	106	7	36	120	352
3:45 PM	0	16	47	26	21	89	0	19	46	14	20	79	0	21	70	16	23	107	1	12	114	7	23	134	409
Hourly Total	0	39	180	79	83	298	0	81	151	41	94	273	0	51	265	50	77	366	1	26	433	25	83	485	1422
4:00 PM	0	13	47	21	13	81	0	20	24	9	20	53	0	25	63	3	15	91	0	6	98	9	39	113	338
4:15 PM	0	5	43	19	30	67	0	11	45	11	16	67	0	10	53	2	7	66	0	5	137	4	32	146	345
4:30 PM	0	10	41	29	24	80	0	9	47	10	22	66	0	17	52	1	8	70	0	9	140	5	19	154	370
4:45 PM	0	12	47	28	33	87	0	15	40	8	33	63	0	20	82	1	15	103	0	4	125	9	18	138	391
Hourly Total	0	40	178	97	100	315	0	55	156	38	91	249	0	72	250	7	45	329	0	24	500	27	108	551	1444
5:00 PM	0	13	43	22	28	78	0	10	43	13	42	66	0	13	65	4	25	82	0	5	132	11	27	148	374
5:15 PM	0	4	49	19	35	72	0	11	57	8	39	76	0	17	93	1	13	111	0	6	122	7	28	135	394
5:30 PM	0	15	46	28	41	89	0	12	48	7	46	67	0	22	95	1	13	118	0	6	95	11	39	112	386
5:45 PM	0	7	58	19	51	84	0	15	50	9	36	74	0	19	77	1	18	97	0	6	105	12	18	123	378
Hourly Total	0	39	196	88	155	323	0	48	198	37	163	283	0	71	330	7	69	408	0	23	454	41	112	518	1532
Grand Total	0	209	1111	476	638	1796	0	359	865	209	623	1433	0	318	1293	108	327	1719	1	127	2799	177	510	3104	8052
Approach %	0.0	11.6	61.9	26.5	-	-	0.0	25.1	60.4	14.6	-	-	0.0	18.5	75.2	6.3	-	-	0.0	4.1	90.2	5.7	-	-	-
Total %	0.0	2.6	13.8	5.9	-	22.3	0.0	4.5	10.7	2.6	-	17.8	0.0	3.9	16.1	1.3	-	21.3	0.0	1.6	34.8	2.2	-	38.5	-
Lights	0	199	1056	454	-	1709	0	349	790	196	-	1335	0	297	980	103	-	1380	1	121	2491	147	-	2760	7184

% Lights	-	95.2	95.0	95.4	-	95.2	-	97.2	91.3	93.8	-	93.2	-	93.4	75.8	95.4	-	80.3	100.0	95.3	89.0	83.1	-	88.9	89.2
Buses	0	1	5	9	-	15	0	2	20	0	-	22	0	1	82	2	-	85	0	1	52	0	-	53	175
% Buses	-	0.5	0.5	1.9	-	0.8	-	0.6	2.3	0.0	-	1.5	-	-	0.3	6.3	1.9	-	4.9	0.0	0.8	1.9	0.0	-	1.7
Single-Unit Trucks	0	0	12	7	-	19	0	4	13	3	-	20	0	3	19	1	-	23	0	2	42	3	-	47	109
% Single-Unit Trucks	-	0.0	1.1	1.5	-	1.1	-	1.1	1.5	1.4	-	1.4	-	-	0.9	1.5	0.9	-	1.3	0.0	1.6	1.5	1.7	-	1.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	1	-	2	0	0	3	0	-	3	5
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.1	0.9	-	0.1	0.0	0.0	0.1	0.0	-	0.1
Bicycles on Road	0	9	38	6	-	53	0	4	42	10	-	56	0	17	211	1	-	229	0	3	211	27	-	241	579
% Bicycles on Road	-	4.3	3.4	1.3	-	3.0	-	1.1	4.9	4.8	-	3.9	-	-	5.3	16.3	0.9	-	13.3	0.0	2.4	7.5	15.3	-	7.8
Pedestrians	-	-	-	-	-	638	-	-	-	-	-	623	-	-	-	-	-	327	-	-	-	-	-	510	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-

DRAFT



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Clark Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Oak Street Eastbound					Oak Street Westbound					Clark Street Northbound					Clark Street Southbound												
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
7:45 AM	0	6	46	14	23	0	20	26	5	27	0	7	50	4	11	0	3	140	8	15	0	0	3	140	8	15	151	329
8:00 AM	0	11	50	18	30	0	30	34	6	27	0	9	46	5	16	0	7	135	7	22	0	0	7	135	7	22	149	358
8:15 AM	0	11	56	28	31	0	26	40	7	22	0	14	70	10	21	0	5	132	12	22	0	0	5	132	12	22	149	411
8:30 AM	0	6	65	26	24	0	22	25	3	32	0	15	67	15	16	0	7	164	7	22	0	0	7	164	7	22	178	422
Total	0	34	217	86	108	0	98	125	21	108	0	45	233	34	64	0	22	571	34	81	0	0	22	571	34	81	627	1520
Approach %	0.0	10.1	64.4	25.5	-	0.0	40.2	51.2	8.6	-	0.0	14.4	74.7	10.9	-	0.0	3.5	91.1	5.4	-	0.0	0.0	3.5	91.1	5.4	-	-	-
Total %	0.0	2.2	14.3	5.7	-	0.0	6.4	8.2	1.4	-	0.0	3.0	15.3	2.2	-	0.0	1.4	37.6	2.2	-	0.0	0.0	1.4	37.6	2.2	-	41.3	-
PHF	0.000	0.773	0.835	0.768	-	0.000	0.817	0.781	0.750	-	0.000	0.750	0.832	0.567	-	0.000	0.786	0.870	0.708	-	0.000	0.000	0.786	0.870	0.708	-	0.881	0.900
% Lights	0	34	204	81	-	0	95	103	20	-	0	42	201	34	-	0	19	449	13	-	0	0	19	449	13	-	481	1295
% Buses	0	0	3	4	-	0	0	6	0	-	0	0	16	0	-	0	0	18	0	-	0	0	0	18	0	-	18	47
% Buses	-	0.0	1.4	4.7	-	-	0.0	4.8	0.0	-	-	0.0	6.9	0.0	-	-	0.0	3.2	0.0	-	-	0.0	0.0	3.2	0.0	-	2.9	3.1
Single-Unit Trucks	0	0	1	0	-	0	0	5	0	-	0	1	8	0	-	0	1	6	2	-	0	0	1	6	2	-	9	24
% Single-Unit Trucks	-	0.0	0.5	0.0	-	0.0	0.0	4.0	0.0	-	0.0	2.2	3.4	0.0	-	0.0	4.5	1.1	5.9	-	0.0	0.0	4.5	1.1	5.9	-	1.4	1.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0	1	0	-	0	0	0	1	0	-	1	1
% 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	0.2	0.0	-	0.0	0.0	0.2	0.0	0.0	-	0.2	0.1
Bicycles on Road	0	0	9	1	-	0	3	11	1	-	0	2	8	0	-	0	2	97	19	-	0	0	2	97	19	-	118	153
% Bicycles on Road	-	0.0	4.1	1.2	-	0.0	3.1	8.8	4.8	-	0.0	4.4	3.4	0.0	-	0.0	9.1	17.0	55.9	-	0.0	0.0	9.1	17.0	55.9	-	18.8	10.1
Pedestrians	-	-	-	-	108	-	-	-	-	108	-	-	-	-	64	-	-	-	-	-	81	-	-	-	-	-	81	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	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
(847)518-9990

Count Name: Clark Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 4

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Oak Street Eastbound					Oak Street Westbound					Clark Street Northbound					Clark Street Southbound												
	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
3:00 PM	0	6	51	16	21	0	21	25	9	27	0	10	59	15	12	0	5	108	8	11	0	0	5	108	8	11	121	333
3:15 PM	0	8	47	23	20	0	16	35	7	21	0	7	62	13	20	0	2	105	3	13	0	0	2	105	3	13	110	328
3:30 PM	0	9	35	14	21	0	25	45	11	26	0	13	74	6	22	0	7	106	7	36	0	0	7	106	7	36	120	352
3:45 PM	0	16	47	26	21	0	19	46	14	20	0	21	70	16	23	0	12	114	7	23	0	0	12	114	7	23	134	409
Total	0	39	180	79	83	0	81	151	41	94	0	51	265	50	77	0	26	433	25	83	0	0	26	433	25	83	485	1422
Approach %	0.0	13.1	60.4	26.5	-	0.0	29.7	55.3	15.0	-	0.0	13.9	72.4	13.7	-	0.2	5.4	89.3	5.2	-	-	0.1	1.8	30.5	1.8	-	34.1	-
Total %	0.000	0.609	0.882	0.760	-	0.000	0.810	0.821	0.732	-	0.000	0.607	0.895	0.781	-	0.250	0.542	0.950	0.781	-	-	0.250	0.542	0.950	0.781	-	0.905	0.869
PHF	0	39	176	76	83	0	80	136	41	94	0	47	225	46	23	0	26	392	25	83	0	0	26	392	25	83	444	1310
% Lights	-	100.0	97.8	96.2	-	-	98.8	90.1	100.0	-	-	92.2	84.9	92.0	-	100.0	100.0	90.5	100.0	-	-	100.0	100.0	90.5	100.0	-	91.5	92.1
Buses	0	0	1	1	-	0	1	6	0	7	0	1	14	1	-	0	0	9	0	-	-	0	0	9	0	-	9	34
% Buses	-	0.0	0.6	1.3	-	0.0	1.2	4.0	0.0	2.6	-	2.0	5.3	2.0	-	0.0	0.0	2.1	0.0	-	-	0.0	0.0	2.1	0.0	-	1.9	2.4
Single-Unit Trucks	0	0	0	2	-	0	0	3	0	3	0	1	5	1	-	0	0	9	0	-	-	0	0	9	0	-	9	21
% Single-Unit Trucks	-	0.0	0.0	2.5	-	0.0	0.0	2.0	0.0	1.1	-	2.0	1.9	2.0	-	0.0	0.0	2.1	0.0	-	-	0.0	0.0	2.1	0.0	-	1.9	1.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	0	0	0	1	-	0	0	0	0	-	-	0	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	2.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	3	0	-	0	0	6	0	-	0	2	21	1	-	0	0	23	0	-	-	0	0	23	0	-	23	56
% Bicycles on Road	-	0.0	1.7	0.0	-	0.0	0.0	4.0	0.0	-	0.0	3.9	7.9	2.0	-	0.0	0.0	5.3	0.0	-	-	0.0	0.0	5.3	0.0	-	4.7	3.9
Pedestrians	-	-	-	-	83	-	-	-	-	94	-	-	-	-	77	-	-	-	-	-	-	-	-	-	-	-	83	-
% 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
(847)518-9990

Count Name: Clark Street with Oak Street
Site Code:
Start Date: 10/10/2019
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Oak Street Eastbound					Oak Street Westbound					Clark Street Northbound					Clark Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	13	43	22	28	78	0	10	43	13	42	66	0	13	65	4	25	82	0	5	132	11	27	148	374
5:15 PM	0	4	49	19	35	72	0	11	57	8	39	76	0	17	93	1	13	111	0	6	122	7	28	135	394
5:30 PM	0	15	46	28	41	89	0	12	48	7	49	67	0	22	95	1	13	118	0	6	95	11	39	112	386
5:45 PM	0	7	58	19	51	84	0	15	50	9	36	74	0	19	77	1	18	97	0	6	105	12	18	123	378
Total	0	39	196	88	155	323	0	48	198	37	163	283	0	71	330	7	69	408	0	23	454	41	112	518	1532
Approach %	0.0	12.1	60.7	27.2	-	-	0.0	17.0	70.0	13.1	-	-	0.0	17.4	80.9	1.7	-	-	0.0	4.4	87.6	7.9	-	-	-
Total %	0.0	2.5	12.8	5.7	-	21.1	0.0	3.1	12.9	2.4	-	18.5	0.0	4.6	21.5	0.5	-	26.6	0.0	1.5	29.6	2.7	-	33.8	-
PHF	0.000	0.650	0.845	0.786	-	0.907	0.000	0.800	0.868	0.712	-	0.931	0.000	0.807	0.868	0.438	-	0.864	0.000	0.958	0.860	0.854	-	0.875	0.972
% Lights	0	31	184	84	-	299	0	48	185	84	-	267	0	64	208	7	-	279	0	23	432	41	-	496	1341
% Lights	-	79.5	93.9	95.5	-	92.6	-	100.0	93.4	91.9	-	94.3	-	90.1	63.0	100.0	-	68.4	-	100.0	95.2	100.0	-	95.8	87.5
Buses	0	0	0	1	-	1	0	0	2	0	2	2	0	0	17	0	-	17	0	0	5	0	-	5	25
% Buses	-	0.0	0.0	1.1	-	0.3	-	0.0	1.0	0.0	0.7	0.7	-	0.0	5.2	0.0	-	4.2	-	0.0	1.1	0.0	-	1.0	1.6
Single-Unit Trucks	0	0	0	0	-	0	0	0	1	1	-	2	0	0	0	0	-	0	0	0	4	0	-	4	6
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.5	2.7	-	0.7	-	0.0	0.0	0.0	-	0.0	-	0.0	0.9	0.0	-	0.8	0.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% 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	0.2	0.0	-	0.2	0.1
Bicycles on Road	0	8	12	3	-	23	0	0	10	2	-	12	0	7	105	0	-	112	0	0	12	0	-	12	159
% Bicycles on Road	-	20.5	6.1	3.4	-	7.1	-	0.0	5.1	5.4	-	4.2	-	9.9	31.8	0.0	-	27.5	-	0.0	2.6	0.0	-	2.3	10.4
Pedestrians	-	-	-	-	155	-	-	-	-	-	163	-	-	-	-	-	69	-	-	-	-	-	112	-	-
% 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
(847)518-9990

Count Name: Clark Street with Maple Street
Site Code:
Start Date: 07/30/2019
Page No: 1

Turning Movement Data

Start Time	Maple Street Eastbound					Maple Street Westbound					Clark Street Northbound					Clark Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	6	21	15	23	42	0	0	0	0	0	1	0	0	9	5	7	14	0	4	83	0	24	87	144
7:15 AM	0	4	19	14	32	37	0	0	0	0	21	0	0	0	15	1	6	16	0	6	110	1	19	117	170
7:30 AM	0	11	20	13	31	44	0	1	0	0	22	1	0	0	18	6	14	24	0	6	113	0	16	119	188
7:45 AM	0	13	18	22	32	53	0	1	0	0	30	1	0	1	11	5	12	17	0	9	151	2	20	162	233
Hourly Total	0	34	78	64	118	176	0	2	0	1	82	3	0	1	53	17	39	71	0	25	457	3	79	485	735
8:00 AM	0	12	37	21	39	70	0	0	1	0	31	1	0	0	20	3	20	23	0	13	119	0	28	132	226
8:15 AM	0	14	25	23	36	62	0	0	0	0	22	0	0	0	22	5	8	27	0	12	150	0	31	162	251
8:30 AM	0	15	40	21	41	76	0	0	0	1	41	1	0	0	23	3	16	26	0	7	155	0	20	162	265
8:45 AM	0	11	20	20	35	51	0	0	0	0	30	0	0	0	27	6	7	33	0	7	146	0	20	153	237
Hourly Total	0	52	122	85	151	259	0	0	1	1	124	2	0	0	92	17	51	109	0	39	570	0	99	609	979
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	11	32	10	23	53	0	0	0	0	27	0	0	1	36	10	11	47	0	13	119	0	16	132	232
3:15 PM	0	6	24	14	31	44	0	0	0	0	22	0	0	0	43	9	12	52	0	6	129	0	13	135	231
3:30 PM	0	9	17	21	34	47	0	0	0	0	24	0	0	0	44	3	9	47	0	6	141	0	11	147	241
3:45 PM	0	14	24	16	28	54	0	0	0	0	29	0	0	0	57	7	7	64	0	13	135	0	14	148	266
Hourly Total	0	40	97	61	116	198	0	0	0	0	102	0	0	1	180	29	39	210	0	38	524	0	54	562	970
4:00 PM	0	12	29	21	39	62	0	0	0	0	25	0	0	0	64	9	14	73	0	2	142	0	30	144	279
4:15 PM	0	13	19	17	35	49	0	0	0	2	26	2	0	0	60	4	18	64	0	6	132	0	17	138	253
4:30 PM	0	14	19	20	45	53	0	0	0	1	31	1	0	0	76	12	14	88	0	7	125	0	21	132	274
4:45 PM	0	11	21	20	43	52	0	0	0	1	32	1	0	0	76	12	13	88	1	8	134	0	23	143	284
Hourly Total	0	50	88	78	162	216	0	0	0	4	114	4	0	0	276	37	59	313	1	23	533	0	91	567	1090
5:00 PM	0	10	20	22	86	52	0	0	0	0	47	0	0	0	81	9	14	90	0	8	122	0	24	130	272
5:15 PM	0	2	19	21	96	42	0	0	0	1	61	1	0	0	109	5	16	114	0	10	119	0	36	129	286
5:30 PM	0	9	18	20	81	47	0	0	0	1	47	1	0	0	123	6	17	129	0	10	119	0	37	129	306
5:45 PM	0	24	26	19	83	69	0	0	0	0	53	0	0	0	94	8	11	102	0	7	96	0	25	103	274
Hourly Total	0	45	83	82	346	210	0	0	0	2	208	2	0	0	407	28	58	435	0	35	456	0	122	491	1138
Grand Total	0	221	468	370	893	1059	0	2	1	8	630	11	0	2	1008	128	246	1138	1	160	2540	3	445	2704	4912
Approach %	0.0	20.9	44.2	34.9	-	-	0.0	18.2	9.1	72.7	-	-	0.0	0.2	88.6	11.2	-	-	0.0	5.9	93.9	0.1	-	-	-
Total %	0.0	4.5	9.5	7.5	-	21.6	0.0	0.0	0.0	0.2	-	0.2	0.0	0.0	20.5	2.6	-	23.2	0.0	3.3	51.7	0.1	-	55.0	-
Lights	0	217	451	365	-	1033	0	0	0	5	-	5	0	0	612	119	-	731	1	147	2205	1	-	2354	4123
% Lights	-	98.2	96.4	98.6	-	97.5	-	0.0	0.0	62.5	-	45.5	-	0.0	60.7	93.0	-	64.2	100.0	91.9	86.8	33.3	-	87.1	83.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	64	0	-	64	0	0	41	0	-	41	105
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	6.3	0.0	-	5.6	0.0	0.0	1.6	0.0	-	1.5	2.1
Single-Unit Trucks	0	2	9	2	-	13	0	0	0	0	-	0	0	0	17	3	-	20	0	5	48	0	-	53	86
% Single-Unit Trucks	-	0.9	1.9	0.5	-	1.2	-	0.0	0.0	0.0	-	0.0	-	0.0	1.7	2.3	-	1.8	0.0	3.1	1.9	0.0	-	2.0	1.8



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Clark Street with Maple Street
Site Code:
Start Date: 07/30/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Maple Street Eastbound					Maple Street Westbound					Clark Street Northbound					Clark Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	13	18	22	32	53	0	1	0	0	30	1	0	1	11	5	12	17	0	9	151	2	20	162	233
8:00 AM	0	12	37	21	39	70	0	0	1	0	31	1	0	0	20	3	20	23	0	13	119	0	28	132	226
8:15 AM	0	14	25	23	36	62	0	0	0	0	22	0	0	0	22	5	8	27	0	12	150	0	31	162	251
8:30 AM	0	15	40	21	41	76	0	0	0	1	41	1	0	0	23	3	16	26	0	7	155	0	20	162	265
Total	0	54	120	87	148	261	0	1	1	1	124	3	0	1	76	16	56	93	0	41	575	2	99	618	975
Approach %	0.0	20.7	46.0	33.3	-	-	0.0	33.3	33.3	33.3	-	-	0.0	1.1	81.7	17.2	-	-	0.0	6.6	93.0	0.3	-	-	-
Total %	0.0	5.5	12.3	8.9	-	26.8	0.0	0.1	0.1	0.1	-	0.3	0.0	0.1	7.8	1.6	-	9.5	0.0	4.2	59.0	0.2	-	63.4	-
PHF	0.000	0.900	0.750	0.946	-	0.859	0.000	0.250	0.250	0.250	-	0.750	0.000	0.250	0.826	0.800	-	0.861	0.000	0.788	0.927	0.250	-	0.954	0.920
% Lights	0	52	116	86	-	254	0	0	0	1	-	1	0	0	48	15	-	63	0	37	425	0	-	462	780
% Lights	-	96.3	96.7	96.9	-	97.3	-	0.0	0.0	100.0	-	33.3	-	0.0	63.2	93.8	-	67.7	-	90.2	73.9	0.0	-	74.8	80.0
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	15	0	-	15	0	0	17	0	-	17	32
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	19.7	0.0	-	16.1	-	0.0	3.0	0.0	-	2.8	3.3
Single-Unit Trucks	0	1	3	1	-	5	0	0	0	0	-	0	0	5	1	-	6	-	0	2	10	0	-	12	23
% Single-Unit Trucks	-	1.9	2.5	1.1	-	1.9	-	0.0	0.0	0.0	-	0.0	-	0.0	6.6	6.3	-	6.5	-	4.9	1.7	0.0	-	1.9	2.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% 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	0.2	0.0	-	0.2	0.1
Bicycles on Road	0	1	1	0	-	2	0	1	1	0	-	2	0	1	8	0	-	9	0	2	122	2	-	126	139
% Bicycles on Road	-	1.9	0.8	0.0	-	0.8	-	100.0	100.0	0.0	-	66.7	-	100.0	10.5	0.0	-	9.7	-	4.9	21.2	100.0	-	20.4	14.3
Pedestrians	-	-	-	-	148	-	-	-	-	-	124	-	-	-	-	-	-	56	-	-	-	-	99	-	-
% 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
(847)518-9990

Count Name: Clark Street with Maple Street
Site Code:
Start Date: 07/30/2019
Page No: 4

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Maple Street Eastbound					Maple Street Westbound					Clark Street Northbound					Clark Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
3:00 PM	0	11	32	10	23	53	0	0	0	0	27	0	1	36	10	11	11	47	0	13	119	0	16	132	232
3:15 PM	0	6	24	14	31	44	0	0	0	22	0	0	0	43	9	12	12	52	0	6	129	0	13	135	231
3:30 PM	0	9	17	21	34	47	0	0	0	24	0	0	0	44	3	9	9	47	0	6	141	0	11	147	241
3:45 PM	0	14	24	16	28	54	0	0	0	29	0	0	0	57	7	7	7	64	0	13	135	0	14	148	266
Total	0	40	97	61	116	198	0	0	0	102	0	0	1	180	29	39	39	210	0	38	524	0	54	562	970
Approach %	0.0	20.2	49.0	30.8	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.5	85.7	13.8	-	-	0.0	6.8	93.2	0.0	-	-	-
Total %	0.0	4.1	10.0	6.3	-	20.4	0.0	0.0	0.0	0.0	-	-	0.0	0.1	18.6	3.0	-	21.6	0.0	3.9	54.0	0.0	-	57.9	-
PHF	0.000	0.714	0.758	0.726	-	0.917	0.000	0.000	0.000	0.000	-	0.820	0.250	0.789	0.725	-	-	0.820	0.000	0.731	0.929	0.000	-	0.949	0.912
% Lights	0	38	91	61	116	190	0	0	0	0	102	0	0	132	28	-	-	160	0	35	488	0	-	523	873
% Lights	-	95.0	93.8	100.0	-	96.0	-	-	-	-	-	-	0.0	73.3	96.6	-	-	76.2	-	92.1	93.1	-	-	93.1	90.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	0	0	6	0	0	6	18
% Buses	-	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	0.0	6.7	0.0	0.0	0.0	5.7	-	0.0	1.1	-	-	1.1	1.9
Single-Unit Trucks	0	1	0	0	0	1	0	0	0	0	0	0	0	4	1	0	0	5	0	1	12	0	0	13	19
% Single-Unit Trucks	-	2.5	0.0	0.0	0.0	0.5	-	-	-	-	-	-	0.0	2.2	3.4	-	-	2.4	-	2.6	2.3	-	-	2.3	2.0
Articulated Trucks	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated Trucks	-	2.5	0.0	0.0	0.0	0.5	-	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	-	-	0.0	0.1
Bicycles on Road	0	0	6	0	0	6	0	0	0	0	0	33	1	32	0	0	0	33	0	2	18	0	0	20	59
% Bicycles on Road	-	0.0	6.2	0.0	0.0	3.0	-	-	-	-	-	15.7	100.0	17.8	0.0	0.0	0.0	15.7	-	5.3	3.4	-	-	3.6	6.1
Pedestrians	-	-	-	-	116	-	-	-	-	102	-	-	-	-	-	-	-	39	-	-	-	-	-	54	-
% 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
(847)518-9990

Count Name: Clark Street with Maple Street
Site Code:
Start Date: 07/30/2019
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Maple Street Eastbound					Maple Street Westbound					Clark Street Northbound					Clark Street Southbound										
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
5:00 PM	0	10	20	22	86	52	0	0	0	0	47	0	0	81	9	5	16	14	90	0	8	122	0	24	130	272
5:15 PM	0	2	19	21	96	42	0	0	0	61	1	1	0	109	5	16	114	114	114	0	10	119	0	36	129	286
5:30 PM	0	9	18	20	81	47	0	0	0	47	1	1	0	123	6	17	129	129	129	0	10	119	0	37	129	306
5:45 PM	0	24	26	19	83	69	0	0	0	53	0	0	0	94	8	11	102	102	102	0	7	96	0	25	103	274
Total	0	45	83	82	346	210	0	0	0	208	2	2	0	407	28	58	435	435	435	0	35	456	0	122	491	1138
Approach %	0.0	21.4	39.5	39.0	-	-	0.0	0.0	0.0	100.0	-	-	0.0	0.0	93.6	6.4	-	-	-	0.0	7.1	92.9	0.0	-	-	-
Total %	0.0	4.0	7.3	7.2	-	18.5	0.0	0.0	0.0	0.2	-	-	0.0	0.0	35.8	2.5	-	-	38.2	0.0	3.1	40.1	0.0	-	43.1	-
PHF	0.000	0.469	0.798	0.932	-	0.761	0.000	0.000	0.000	0.500	-	-	0.000	0.000	0.827	0.778	-	-	0.843	0.000	0.875	0.934	0.000	-	0.944	0.930
% Lights	0	45	83	81	-	209	0	0	0	1	-	-	0	0	205	26	-	-	231	0	32	429	0	-	461	902
% Lights	-	100.0	100.0	98.8	-	99.5	-	-	-	50.0	-	-	-	-	50.4	92.9	-	-	53.1	-	91.4	94.1	-	-	93.9	79.3
Buses	0	0	0	0	-	0	0	0	0	0	-	-	0	0	12	0	-	-	12	0	0	4	0	-	4	16
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	-	-	-	2.9	0.0	-	-	2.8	-	0.0	0.9	-	-	0.8	1.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	-	0	0	2	0	-	-	2	0	1	5	0	-	6	8
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	-	-	-	0.5	0.0	-	-	0.5	-	2.9	1.1	-	-	1.2	0.7
Articulated Trucks	0	0	0	1	-	1	0	0	0	0	-	-	0	0	0	0	-	-	0	0	0	1	0	-	1	2
% Articulated Trucks	-	0.0	0.0	1.2	-	0.5	-	-	-	0.0	-	-	-	-	0.0	0.0	-	-	0.0	-	0.0	0.2	-	-	0.2	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	-	0	0	188	2	-	-	190	0	2	17	0	-	19	210
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	-	-	50.0	-	-	-	-	46.2	7.1	-	-	43.7	-	5.7	3.7	-	-	3.9	18.5
Pedestrians	-	-	-	-	346	-	-	-	-	-	208	-	-	-	-	-	-	-	58	-	-	-	-	-	122	-
% 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
(847)518-9990

Count Name: Dearborn Street with Maple Street
Site Code:
Start Date: 10/10/2019
Page No: 1

Turning Movement Data

Start Time	Maple Street Eastbound					Maple Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	12	14	6	4	32	0	0	0	0	26	0	0	25	9	12	34	0	6	19	0	20	25	91	
7:15 AM	0	19	14	3	1	36	0	0	0	0	36	0	0	35	1	11	36	0	3	31	0	26	34	106	
7:30 AM	0	21	11	3	1	35	0	0	0	0	36	0	0	27	3	26	30	0	11	34	0	31	45	110	
7:45 AM	0	15	23	6	3	44	0	0	0	1	49	1	0	9	0	27	9	2	17	36	0	33	55	109	
Hourly Total	0	67	62	18	9	147	0	0	0	1	147	1	0	96	13	76	109	2	37	120	0	110	159	416	
8:00 AM	0	26	28	11	10	65	0	0	0	0	63	0	0	15	0	32	15	0	9	37	1	39	47	127	
8:15 AM	0	24	20	9	5	53	0	0	0	0	97	0	0	7	4	37	11	0	14	39	0	38	53	117	
8:30 AM	0	28	23	8	10	59	0	0	0	0	60	0	0	8	3	33	11	0	13	48	0	32	61	131	
8:45 AM	0	17	27	14	5	58	0	0	1	1	40	2	0	31	4	30	35	0	13	35	0	38	48	143	
Hourly Total	0	95	98	42	30	235	0	0	1	1	260	2	0	61	11	132	72	0	49	159	1	147	209	518	
*** BREAK ***																									
2:00 PM	0	6	11	8	5	25	0	1	0	1	26	2	0	51	5	28	56	0	13	16	0	35	29	112	
2:15 PM	0	8	19	11	7	38	0	0	0	0	32	0	0	50	9	43	59	1	6	20	0	36	27	124	
2:30 PM	0	5	19	10	9	34	0	0	0	0	33	0	0	49	11	22	60	0	5	19	0	37	24	118	
2:45 PM	0	5	27	13	6	45	0	0	0	0	32	0	0	38	5	28	43	0	11	21	0	23	32	120	
Hourly Total	0	24	76	42	27	142	0	1	0	1	123	2	0	188	30	121	218	1	35	76	0	131	112	474	
3:00 PM	0	13	17	9	8	39	0	0	0	0	24	0	0	19	9	25	28	0	18	28	0	31	46	113	
3:15 PM	0	18	16	12	15	46	0	0	1	0	38	1	0	16	7	38	23	0	9	19	0	37	28	98	
3:30 PM	0	15	21	6	7	42	0	0	1	0	46	1	0	20	4	35	24	0	10	20	0	37	30	97	
3:45 PM	0	15	23	10	9	48	0	0	0	0	45	0	0	21	6	38	27	0	4	20	0	30	24	99	
Hourly Total	0	61	77	37	39	175	0	0	2	0	153	2	0	76	26	136	102	0	41	87	0	135	128	407	
4:00 PM	0	15	15	10	8	40	0	0	2	0	53	2	0	47	6	42	53	0	7	24	0	26	31	126	
4:15 PM	0	11	23	14	8	48	0	0	1	0	29	1	0	67	6	32	78	0	5	29	0	40	34	156	
4:30 PM	0	13	16	8	2	37	0	0	0	0	38	0	0	73	2	39	75	0	5	32	0	22	37	149	
4:45 PM	0	8	21	6	4	35	0	0	1	0	46	1	0	90	9	28	99	0	15	31	0	34	46	181	
Hourly Total	0	47	75	38	22	160	0	0	4	0	166	4	0	277	23	141	300	0	32	116	0	122	148	612	
5:00 PM	0	14	22	8	8	44	0	0	0	0	40	0	0	76	20	41	96	1	11	33	0	49	45	185	
5:15 PM	0	11	18	4	17	33	0	0	0	0	65	0	0	111	10	63	122	0	5	36	0	51	41	196	
5:30 PM	0	3	17	9	18	29	0	0	0	0	47	0	0	104	15	39	119	0	6	29	0	46	35	183	
5:45 PM	0	9	27	12	11	48	0	0	0	0	49	0	0	117	13	33	130	0	10	28	0	56	38	216	
Hourly Total	0	37	84	33	54	154	0	0	0	0	201	0	0	408	58	176	467	1	32	126	0	202	159	780	
Grand Total	0	331	472	210	181	1013	0	1	7	3	1050	11	0	1106	161	782	1268	4	226	684	1	847	915	3207	
Approach %	0.0	32.7	46.6	20.7	-	-	0.0	9.1	63.6	27.3	-	-	0.0	0.1	87.2	12.7	-	-	0.4	24.7	74.8	0.1	-	-	-
Total %	0.0	10.3	14.7	6.5	-	31.6	0.0	0.0	0.2	0.1	-	0.3	0.0	0.0	34.5	5.0	-	39.5	0.1	7.0	21.3	0.0	-	28.5	-
Lights	0	315	451	202	-	968	0	0	0	0	-	0	0	1	903	145	-	1049	4	214	560	0	-	778	2795

% Lights	-	95.2	95.6	96.2	-	95.6	-	-	0.0	0.0	0.0	0.0	0.0	0.0	100.0	94.7	81.9	0.0	-	85.0	87.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	-	40	49
% 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	5.8	0.0	-	4.4	1.5
Single-Unit Trucks	0	11	9	2	-	22	0	0	0	0	0	0	0	0	0	2	9	0	-	11	59
% Single-Unit Trucks	-	3.3	1.9	1.0	-	2.2	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.3	0.0	-	1.2	1.8
Articulated Trucks	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
Bicycles on Road	0	5	12	6	-	23	0	1	7	3	-	11	0	0	0	10	75	1	-	86	304
% Bicycles on Road	-	1.5	2.5	2.9	-	2.3	-	100.0	100.0	100.0	-	100.0	-	-	0.0	4.4	11.0	100.0	-	9.4	9.5
Pedestrians	-	-	-	-	-	181	-	-	-	-	-	1050	-	-	-	-	-	-	-	847	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	100.0	-

DRAFT



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Dearborn Street with Maple Street
Site Code:
Start Date: 10/10/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Maple Street Eastbound				Maple Street Westbound				Dearborn Street Northbound				Dearborn Street Southbound							
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
7:45 AM	0	15	23	6	3	44	0	0	0	0	1	48	0	0	9	0	0	27	9	109
8:00 AM	0	26	28	11	10	65	0	0	0	0	0	63	0	0	15	0	0	32	15	127
8:15 AM	0	24	20	9	5	53	0	0	0	0	0	97	0	0	7	4	37	37	11	117
8:30 AM	0	28	23	8	10	59	0	0	0	0	0	60	0	0	8	3	33	33	11	131
Total	0	93	94	34	28	221	0	0	0	0	1	269	0	0	39	7	129	129	46	484
Approach %	0.0	42.1	42.5	15.4	-	-	0.0	0.0	0.0	100.0	-	-	0.0	0.0	84.8	15.2	-	-	-	-
Total %	0.0	19.2	19.4	7.0	-	45.7	0.0	0.0	0.0	0.2	-	0.2	-	0.0	8.1	1.4	-	-	9.5	-
PHF	0.000	0.830	0.839	0.773	-	0.850	0.000	0.000	0.000	0.250	-	0.250	-	0.000	0.650	0.438	-	-	0.767	-
Lights	0	87	88	32	-	207	0	0	0	0	0	0	0	0	31	7	0	0	38	0
% Lights	-	93.5	93.6	94.1	-	93.7	-	-	-	0.0	-	0.0	-	-	79.5	100.0	-	-	82.6	0
Buses	0	0	0	0	-	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	-	-	10.3	0.0	-	-	8.7	0
Single-Unit Trucks	0	4	5	0	-	9	0	0	0	0	0	0	0	1	0	0	0	0	1	0
% Single-Unit Trucks	-	4.3	5.3	0.0	-	4.1	-	-	-	0.0	-	0.0	-	-	2.6	0.0	-	-	2.2	0
Articulated Trucks	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
Bicycles on Road	0	2	1	2	-	5	0	0	0	1	-	1	0	0	3	0	0	0	3	0
% Bicycles on Road	-	2.2	1.1	5.9	-	2.3	-	-	-	100.0	-	100.0	-	-	7.7	0.0	-	-	6.5	0
Pedestrians	-	-	-	-	28	-	-	-	-	-	269	-	-	-	-	-	-	129	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Dearborn Street with Maple Street
Site Code:
Start Date: 10/10/2019
Page No: 4

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Maple Street Eastbound					Maple Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound								
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total
3:00 PM	0	13	17	9	8	39	0	0	0	0	24	0	0	19	9	25	0	18	28	0	31	46	113	
3:15 PM	0	18	16	12	15	46	0	0	1	0	38	1	0	16	7	38	0	9	19	0	37	28	98	
3:30 PM	0	15	21	6	7	42	0	0	1	0	49	1	0	20	4	35	0	10	20	0	37	30	97	
3:45 PM	0	15	23	10	9	48	0	0	0	0	45	0	0	21	6	38	0	4	20	0	30	24	99	
Total	0	61	77	37	39	175	0	0	2	0	153	2	0	76	26	136	0	41	87	0	135	128	407	
Approach %	0.0	34.9	44.0	21.1	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	74.5	25.5	-	32.0	68.0	0.0	-	-	-	-
Total %	0.0	15.0	18.9	9.1	-	43.0	0.0	0.0	0.5	0.0	-	25.1	0.0	18.7	6.4	-	-	10.1	21.4	0.0	-	-	31.4	-
PHF	0.000	0.847	0.837	0.771	-	0.911	0.000	0.000	0.500	0.000	-	0.911	0.000	0.905	0.722	-	-	0.569	0.777	0.000	-	-	0.696	0.900
% Lights	0	58	74	36	-	168	0	0	0	0	-	83	0	58	25	-	-	39	71	0	-	-	110	361
% Lights	-	95.1	96.1	97.3	-	96.0	-	-	0.0	0.0	-	81.4	-	76.3	96.2	-	-	95.1	81.6	-	-	-	85.9	88.7
Buses	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	8	0	0	0	8	9
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	1.0	-	1.3	0.0	-	-	0.0	9.2	-	-	-	6.3	2.2
Single-Unit Trucks	0	2	1	1	-	4	0	0	0	-	-	2	0	2	0	-	-	1	1	0	-	-	2	8
% Single-Unit Trucks	-	3.3	1.3	2.7	-	2.3	-	-	0.0	-	-	2.0	-	2.6	0.0	-	-	2.4	1.1	-	-	-	1.6	2.0
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
% 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	1	2	0	-	3	0	0	2	0	-	16	0	15	1	-	-	1	7	0	-	-	8	29
% Bicycles on Road	-	1.6	2.6	0.0	-	1.7	-	-	100.0	-	-	15.7	-	19.7	3.8	-	-	2.4	8.0	-	-	-	6.3	7.1
Pedestrians	-	-	-	-	39	-	-	-	-	-	153	-	-	-	-	136	-	-	-	-	-	135	-	-
% 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
(847)518-9990

Count Name: Dearborn Street with Maple Street
Site Code:
Start Date: 10/10/2019
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Maple Street Eastbound				Maple Street Westbound				Dearborn Street Northbound				Dearborn Street Southbound				App. Total	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						
5:00 PM	0	14	22	8	8	44	0	0	0	0	40	0	0	0	76	20	41	96	1	11	33	0	49	45	185	
5:15 PM	0	11	18	4	17	33	0	0	0	65	0	0	1	111	10	63	122	0	0	5	36	0	51	41	196	
5:30 PM	0	3	17	9	18	29	0	0	0	47	0	0	0	104	15	39	119	0	0	6	29	0	46	35	183	
5:45 PM	0	9	27	12	11	48	0	0	0	49	0	0	0	117	13	33	130	0	0	10	28	0	56	38	216	
Total	0	37	84	33	54	154	0	0	0	201	0	0	1	408	58	176	467	1	32	126	0	202	159	780		
Approach %	0.0	24.0	54.5	21.4	-	-	0.0	0.0	0.0	0.0	-	0.0	0.2	87.4	12.4	-	-	-	0.6	20.1	79.2	0.0	-	-	-	-
Total %	0.0	4.7	10.8	4.2	-	19.7	0.0	0.0	0.0	0.0	-	0.0	0.1	52.3	7.4	-	-	-	0.1	4.1	16.2	0.0	-	-	-	-
PHF	0.000	0.661	0.778	0.688	-	0.802	0.000	0.000	0.000	0.000	-	0.000	0.250	0.872	0.725	-	-	-	0.250	0.727	0.875	0.000	-	-	-	0.883
Lights	0	35	81	30	-	146	0	0	0	-	-	0	1	318	53	-	-	-	1	32	114	0	-	-	-	665
% Lights	-	94.6	96.4	90.9	-	94.8	-	-	-	-	-	-	100.0	77.9	91.4	-	-	-	100.0	100.0	90.5	-	-	-	-	85.3
Buses	0	0	0	0	-	0	0	0	0	-	-	0	0	0	0	-	-	-	0	0	6	0	-	-	-	6
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	4.8	-	-	-	-	3.8
Single-Unit Trucks	0	1	0	1	-	2	0	0	0	-	-	0	0	3	2	-	-	-	0	0	1	0	-	-	-	8
% Single-Unit Trucks	-	2.7	0.0	3.0	-	1.3	-	-	-	-	-	-	0.0	0.7	3.4	-	-	-	0.0	0.0	0.8	-	-	-	-	1.0
Articulated Trucks	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	1	3	2	-	6	0	0	0	-	-	0	0	87	3	-	-	-	0	0	5	0	-	-	-	101
% Bicycles on Road	-	2.7	3.6	6.1	-	3.9	-	-	-	-	-	-	0.0	21.3	5.2	-	-	-	0.0	0.0	4.0	-	-	-	-	12.9
Pedestrians	-	-	-	-	54	-	-	-	-	201	-	-	-	-	-	-	-	-	-	-	-	-	202	-	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Dearborn Street with Walton Street
Site Code:
Start Date: 10/10/2019
Page No: 1

Turning Movement Data

Start Time	Walton Street Eastbound					Walton Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound										
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
7:00 AM	0	0	0	0	1	0	0	0	40	10	16	50	0	11	33	0	0	6	44	0	0	1	20	15	21	115
7:15 AM	0	0	0	0	3	0	0	0	40	9	25	49	0	12	30	0	8	42	0	0	0	18	23	18	109	
7:30 AM	0	0	0	0	3	0	0	0	38	10	19	48	0	21	16	0	2	37	0	0	0	23	22	23	108	
7:45 AM	0	0	0	0	0	0	0	0	65	0	38	65	0	39	4	0	11	43	0	0	0	4	25	4	112	
Hourly Total	0	0	0	0	7	0	0	0	183	29	97	212	0	83	83	0	27	166	0	0	1	65	85	66	444	
8:00 AM	0	0	0	0	2	0	0	0	69	1	44	70	0	49	8	0	8	57	0	0	1	8	38	9	136	
8:15 AM	0	0	0	0	9	0	0	0	78	0	104	78	0	81	4	0	4	85	0	0	0	4	143	4	167	
8:30 AM	0	0	0	0	2	0	0	0	100	0	60	100	0	69	2	0	7	71	0	0	2	7	71	9	180	
8:45 AM	0	0	0	0	2	0	0	0	50	7	19	57	0	24	41	0	7	65	0	0	2	28	29	30	152	
Hourly Total	0	0	0	0	15	0	0	0	297	8	227	305	0	223	55	0	26	278	0	0	5	47	281	52	635	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2:00 PM	0	0	0	0	1	0	0	0	107	10	23	117	0	31	47	0	2	78	0	0	0	17	16	17	212	
2:15 PM	0	0	0	0	1	0	0	1	97	9	22	107	0	29	59	1	1	89	0	0	1	12	22	13	209	
2:30 PM	0	1	0	0	1	1	0	0	84	14	19	98	0	25	60	0	7	85	0	0	1	18	23	19	203	
2:45 PM	0	0	0	0	1	0	0	0	89	4	16	93	0	45	42	0	0	87	0	0	2	7	35	9	189	
Hourly Total	0	1	0	0	4	1	0	1	377	37	80	445	0	130	208	1	10	339	0	0	4	54	96	58	813	
3:00 PM	0	0	0	0	3	0	0	0	116	0	9	116	0	53	7	0	6	60	0	0	0	3	14	3	179	
3:15 PM	0	0	0	0	2	0	0	0	94	0	51	94	0	77	9	0	9	86	0	0	0	3	59	3	183	
3:30 PM	0	0	0	0	4	0	0	0	84	0	107	84	0	76	2	0	13	78	0	0	0	3	113	3	165	
3:45 PM	0	0	0	0	0	0	0	0	79	0	46	79	0	82	9	0	5	91	0	0	0	5	28	5	175	
Hourly Total	0	0	0	0	9	0	0	0	373	0	213	373	0	288	27	0	33	315	0	0	0	14	214	14	702	
4:00 PM	0	0	0	0	2	0	0	0	99	10	66	109	0	68	54	0	11	122	0	0	0	23	56	23	254	
4:15 PM	0	0	0	0	2	0	0	0	93	18	20	111	0	43	86	0	6	129	0	1	1	28	34	30	270	
4:30 PM	0	0	0	0	1	0	0	0	106	13	29	119	0	45	87	0	2	132	0	1	0	33	22	34	285	
4:45 PM	0	0	0	0	2	0	0	0	91	20	33	111	0	67	109	0	9	176	0	0	0	24	53	24	311	
Hourly Total	0	0	0	0	7	0	0	0	389	61	148	450	0	223	336	0	28	559	0	2	1	108	165	111	1120	
5:00 PM	0	0	0	0	4	0	0	0	96	23	29	119	0	59	126	0	7	185	0	0	0	27	34	27	331	
5:15 PM	0	0	0	0	1	0	0	0	114	25	36	139	0	91	123	1	13	215	0	1	0	20	40	21	375	
5:30 PM	0	0	0	1	2	1	0	0	94	20	48	114	0	87	135	0	8	222	0	0	0	16	48	16	353	
5:45 PM	0	0	0	0	5	0	0	0	109	25	28	134	0	79	142	0	4	221	0	0	1	20	34	21	376	
Hourly Total	0	0	0	1	12	1	0	0	413	93	141	506	0	316	526	1	32	843	0	1	1	83	156	85	1435	
Grand Total	0	1	0	1	54	2	0	1	2032	228	906	2261	0	1263	1235	2	156	2500	0	3	12	371	997	386	5149	
Approach %	0.0	50.0	0.0	50.0	-	-	0.0	0.0	89.9	10.1	-	-	0.0	50.5	49.4	0.1	-	-	0.0	0.8	3.1	96.1	-	-	-	
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	39.5	4.4	-	43.9	0.0	24.5	24.0	0.0	-	48.6	0.0	0.1	0.2	7.2	-	7.5	-	
Lights	0	0	0	0	-	0	0	0	1963	216	-	2179	0	1021	993	1	-	2015	0	0	0	288	-	288	4482	

% Lights	-	0.0	-	0.0	-	0.0	-	96.4	-	80.8	80.4	50.0	-	80.6	-	77.6	-	74.6	87.0
Buses	0	0	0	0	0	18	5	23	0	43	22	0	65	131	0	43	43	43	131
% Buses	-	0.0	-	0.0	-	0.9	2.2	1.0	-	3.4	1.8	0.0	2.6	2.5	-	11.6	-	11.1	2.5
Single-Unit Trucks	0	0	0	0	0	18	5	23	0	16	18	0	34	62	0	5	-	5	62
% Single-Unit Trucks	-	0.0	-	0.0	-	0.9	2.2	1.0	-	1.3	1.5	0.0	1.4	1.2	-	1.3	-	1.3	1.2
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	1
% Articulated Trucks	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0
Bicycles on Road	0	1	0	1	0	33	2	36	0	182	202	1	385	473	0	35	-	50	473
% Bicycles on Road	-	100.0	-	100.0	-	100.0	0.9	1.6	-	14.4	16.4	50.0	15.4	9.2	-	9.4	-	13.0	9.2
Pedestrians	-	-	-	54	-	-	-	906	-	-	-	-	156	-	-	-	-	997	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-

DRAFT



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Dearborn Street with Walton Street
Site Code:
Start Date: 10/10/2019
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Walton Street Eastbound				Walton Street Westbound				Dearborn Street Northbound				Dearborn Street Southbound							
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
7:45 AM	0	0	0	0	0	0	0	0	0	0	36	65	0	39	4	0	0	11	43	4
8:00 AM	0	0	0	0	2	0	0	0	0	44	70	57	0	0	1	8	38	9	136	9
8:15 AM	0	0	0	0	9	0	0	0	0	104	78	85	0	0	0	4	143	4	167	4
8:30 AM	0	0	0	0	2	0	0	0	0	60	100	71	0	0	2	7	71	9	180	9
Total	0	0	0	0	13	0	0	0	0	246	313	256	0	0	3	23	277	26	595	26
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.3	-	-	0.0	0.0	11.5	88.5	-	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.2	-	43.0	0.0	0.0	0.5	3.9	-	-	4.4	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.735	0.563	0.000	-	0.753	0.000	0.000	0.375	0.719	-	-	0.722	0.826
Lights	0	0	0	0	-	0	0	0	0	298	298	227	0	0	0	1	-	-	1	526
% Lights	-	-	-	-	-	-	-	95.5	0.0	0.0	-	88.7	-	-	0.0	4.3	-	-	3.8	88.4
Buses	0	0	0	0	-	0	0	0	0	1	4	13	0	0	0	9	-	-	9	26
% Buses	-	-	-	-	-	-	-	2.1	0.0	0.0	-	5.1	-	-	0.0	39.1	-	-	34.6	4.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	5	5	0	0	0	0	-	-	0	10
% Single-Unit Trucks	-	-	-	-	-	-	-	2.1	0.0	-	1.6	2.0	-	-	0.0	0.0	-	-	0.0	1.7
Articulated Trucks	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
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	6	11	0	0	0	3	13	-	16	33
% Bicycles on Road	-	-	-	-	-	-	-	6	0	-	2.5	4.3	-	-	100.0	56.5	-	-	61.5	5.5
Pedestrians	-	-	-	-	13	-	-	1.9	0.0	-	246	30	-	-	-	-	277	-	-	-
% Pedestrians	-	-	-	-	100.0	-	-	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
(847)518-9990

Count Name: Dearborn Street with Walton Street
Site Code:
Start Date: 10/10/2019
Page No: 4

Turning Movement Peak Hour Data (3:00 PM)

Start Time	Walton Street Eastbound				Walton Street Westbound				Dearborn Street Northbound				Dearborn Street Southbound							
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total	
3:00 PM	0	0	0	0	3	0	0	116	0	53	7	0	6	0	0	0	3	14	3	179
3:15 PM	0	0	0	0	2	0	0	94	0	77	9	0	9	0	0	0	3	59	3	183
3:30 PM	0	0	0	0	4	0	0	84	0	76	2	0	13	0	0	0	3	113	3	165
3:45 PM	0	0	0	0	0	0	0	79	0	82	9	0	5	0	0	0	5	28	5	175
Total	0	0	0	0	9	0	0	373	0	288	27	0	33	0	0	0	14	214	14	702
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	100.0	0.0	91.4	8.6	0.0	-	0.0	0.0	0.0	100.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	53.1	0.0	41.0	3.8	0.0	-	0.0	0.0	0.0	2.0	-	2.0	-
PHF	0.000	0.000	0.000	0.000	-	0.804	0.000	0.804	0.878	0.750	0.000	-	0.865	0.000	0.000	0.700	-	0.700	-	0.700
Lights	0	0	0	0	-	0	0	360	0	260	4	0	-	264	0	0	3	-	3	627
% Lights	-	-	-	-	-	-	-	96.5	-	90.3	14.8	-	-	83.8	-	-	21.4	-	21.4	89.3
Buses	0	0	0	0	-	0	0	6	0	7	6	0	-	13	0	0	8	-	8	27
% Buses	-	-	-	-	-	-	-	1.6	-	2.4	22.2	-	-	4.1	-	-	57.1	-	57.1	3.8
Single-Unit Trucks	0	0	0	0	-	0	0	3	0	4	2	0	-	6	0	0	0	-	0	9
% Single-Unit Trucks	-	-	-	-	-	-	-	0.8	-	1.4	7.4	-	-	1.9	-	-	0.0	-	0.0	1.3
Articulated Trucks	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
Bicycles on Road	0	0	0	0	-	0	0	4	0	17	15	0	-	32	0	0	3	-	3	39
% Bicycles on Road	-	-	-	-	-	-	-	1.1	-	5.9	55.6	-	-	10.2	-	-	21.4	-	21.4	5.6
Pedestrians	-	-	-	-	9	-	-	213	-	-	-	-	33	-	-	-	-	214	-	-
% 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
(847)518-9990

Count Name: Dearborn Street with Walton Street
Site Code:
Start Date: 10/10/2019
Page No: 5

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Walton Street Eastbound					Walton Street Westbound					Dearborn Street Northbound					Dearborn Street Southbound									
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	0	0	0	4	0	0	0	96	23	29	119	0	59	126	0	7	185	0	0	0	27	34	27	331
5:15 PM	0	0	0	0	1	0	0	0	114	25	36	139	0	91	123	1	13	215	0	1	0	20	40	21	375
5:30 PM	0	0	0	1	2	1	0	0	94	20	43	114	0	87	135	0	8	222	0	0	0	16	48	16	353
5:45 PM	0	0	0	0	5	0	0	0	109	25	28	134	0	79	142	0	4	221	0	0	1	20	34	21	376
Total	0	0	0	1	12	1	0	0	413	83	141	506	0	316	526	1	32	843	0	1	1	83	156	85	1435
Approach %	0.0	0.0	0.0	100.0	-	-	0.0	0.0	81.6	18.4	-	-	0.0	37.5	62.4	0.1	-	-	0.0	1.2	1.2	97.6	-	-	-
Total %	0.0	0.0	0.0	0.1	-	0.1	0.0	0.0	28.8	6.5	-	35.3	0.0	22.0	36.7	0.1	-	58.7	0.0	0.1	0.1	5.8	-	-	-
PHF	0.000	0.000	0.000	0.250	-	0.250	0.000	0.000	0.906	0.930	-	0.910	0.000	0.868	0.926	0.250	-	0.949	0.000	0.250	0.250	0.769	-	-	0.787
Lights	0	0	0	0	-	0	0	0	404	91	-	495	0	211	417	0	-	628	0	0	0	74	-	74	1197
% Lights	-	-	-	0.0	-	0.0	-	-	97.8	97.8	-	97.8	-	66.8	79.3	0.0	-	74.5	-	0.0	0.0	89.2	-	-	87.1
Buses	0	0	0	0	-	0	0	0	3	0	-	3	0	10	1	0	-	11	0	0	0	6	-	-	6
% Buses	-	-	-	0.0	-	0.0	-	-	0.7	0.0	-	0.6	-	3.2	0.2	0.0	-	1.3	-	0.0	0.0	7.2	-	-	7.1
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	1	-	1	0	0	3	0	-	3	0	0	0	1	-	-	1
% Single-Unit Trucks	-	-	-	0.0	-	0.0	-	-	0.0	1.1	-	0.2	-	0.0	0.6	0.0	-	0.4	-	0.0	0.0	1.2	-	-	1.2
Articulated Trucks	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	0	1	-	1	0	0	6	1	-	7	0	95	105	1	-	201	0	1	1	2	-	-	4
% Bicycles on Road	-	-	-	100.0	-	100.0	-	-	1.5	1.1	-	1.4	-	30.1	20.0	100.0	-	23.8	-	100.0	100.0	2.4	-	-	4.7
Pedestrians	-	-	-	-	12	-	-	-	-	-	141	-	-	-	-	-	32	-	-	-	-	-	156	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

DRAFT

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

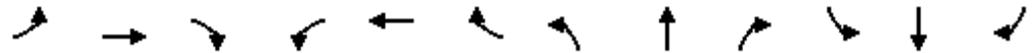
Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of 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.	>80.0
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*, 2010.

Capacity Analysis Summary Sheets

Lanes, Volumes, Timings
1: Dearborn Street & Oak Street

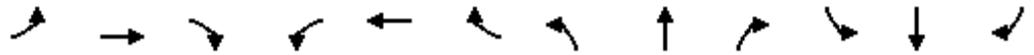
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	29	218	0	0	122	16	9	5	2	48	11	111
Future Volume (vph)	29	218	0	0	122	16	9	5	2	48	11	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.99			0.95			0.89	
Fr _t					0.984			0.984			0.912	
Fl _t Protected		0.994						0.971			0.986	
Satd. Flow (prot)	0	1525	0	0	1546	0	0	844	0	0	1241	0
Fl _t Permitted		0.959						0.894			0.930	
Satd. Flow (perm)	0	1459	0	0	1546	0	0	764	0	0	1097	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11			2			119	
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		191			259			314			90	
Travel Time (s)		6.5			8.8			10.7			3.1	
Confl. Peds. (#/hr)	66		194	194		66	40		229	229		40
Confl. Bikes (#/hr)			8			5			2			21
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	2%	13%	67%	80%	100%	8%	82%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		10			1			7			6	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	265	0	0	148	0	0	17	0	0	183	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		19.0	19.0		19.0	19.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (%)	43.1%	43.1%		43.1%	43.1%		56.9%	56.9%		56.9%	56.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

10/22/2019

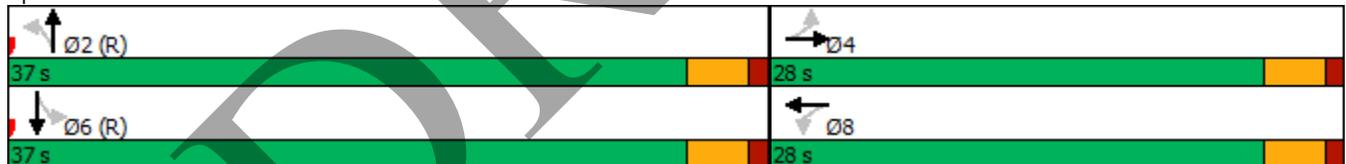


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.49			0.26			0.04				0.30
Control Delay		19.7			14.7			8.0				5.1
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		19.7			14.7			8.0				5.1
LOS		B			B			A				A
Approach Delay		19.7			14.7			8.0				5.1
Approach LOS		B			B			A				A
Queue Length 50th (ft)		79			37			3				12
Queue Length 95th (ft)		142			75			11				43
Internal Link Dist (ft)		111			179			234				10
Turn Bay Length (ft)												
Base Capacity (vph)		538			577			388				615
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		0.49			0.26			0.04				0.30

Intersection Summary

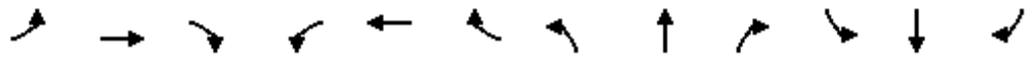
Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 13.8
 Intersection Capacity Utilization 70.0%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Dearborn Street & Oak Street



Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (vph)	34	208	85	95	114	20	43	225	34	20	474	15
Future Volume (vph)	34	208	85	95	114	20	43	225	34	20	474	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	60		0	65		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.96		0.95	0.98		0.92	0.99	
Frt		0.965			0.988			0.980			0.995	
Flt Protected		0.995			0.980		0.950			0.950		
Satd. Flow (prot)	0	1393	0	0	1452	0	1711	1350	0	1662	1509	0
Flt Permitted		0.936			0.650		0.334			0.576		
Satd. Flow (perm)	0	1298	0	0	941	0	573	1350	0	928	1509	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			7			14				3
Link Speed (mph)		30			30			30				30
Link Distance (ft)		259			294			263				570
Travel Time (s)		5.9			6.7			6.0				13.0
Confl. Peds. (#/hr)	81		64	64		81	108		108	108		108
Confl. Bikes (#/hr)			10			15			10			118
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	0%	10%	0%	2%	11%	0%	5%	5%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		12			6			4			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	363	0	0	255	0	48	288	0	22	544	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		27.0	27.0		27.0	27.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%		57.3%	57.3%		57.3%	57.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0			8.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019



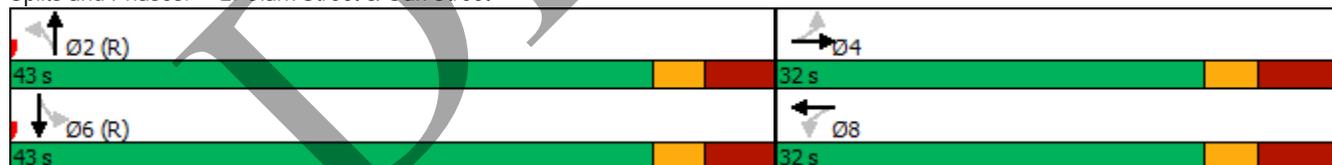
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.84			0.84		0.17	0.44		0.05	0.75	
Control Delay		41.8			49.0		13.2	14.8		10.7	17.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		41.8			49.0		13.2	14.8		10.7	17.8	
LOS		D			D		B	B		B	B	
Approach Delay		41.8			49.0			14.6			17.6	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)		145			106		12	79		4	102	
Queue Length 95th (ft)		#295			#237		33	141		m8	#195	
Internal Link Dist (ft)		179			214			183			490	
Turn Bay Length (ft)							60			65		
Base Capacity (vph)		432			305		275	655		445	725	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.84			0.84		0.17	0.44		0.05	0.75	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 62 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 28.0
 Intersection Capacity Utilization 82.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E

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.

Splits and Phases: 2: Clark Street & Oak Street



Lanes, Volumes, Timings
3: Clark Street & Maple Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (vph)	53	119	87	0	0	0	0	247	16	39	453	0
Future Volume (vph)	53	119	87	0	0	0	0	247	16	39	453	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94						0.99			0.99	
Frt		0.955						0.992				
Flt Protected		0.990									0.996	
Satd. Flow (prot)	0	1404	0	0	0	0	0	1173	0	0	1679	0
Flt Permitted		0.990									0.959	
Satd. Flow (perm)	0	1363	0	0	0	0	0	1173	0	0	1607	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37						7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			487			570			254	
Travel Time (s)		6.0			11.1			13.0			5.8	
Confl. Peds. (#/hr)	99		56	56		99	148		124	124		148
Confl. Bikes (#/hr)			2			2			9			126
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	3%	1%	0%	0%	0%	0%	29%	6%	5%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		9						6				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	282	0	0	0	0	0	285	0	0	534	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6	6	
Switch Phase												
Minimum Initial (s)	23.0	23.0						29.0		29.0	29.0	
Minimum Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (%)	41.3%	41.3%						58.7%		58.7%	58.7%	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0		0.0	0.0	
Total Lost Time (s)		5.0						4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max						Max		Max	Max	
Act Effct Green (s)		26.0						40.0		40.0	40.0	
Actuated g/C Ratio		0.35						0.53		0.53	0.53	

Lanes, Volumes, Timings
 3: Clark Street & Maple Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.57						0.45				0.62
Control Delay		22.6						7.0				16.3
Queue Delay		0.0						0.0				0.0
Total Delay		22.6						7.0				16.3
LOS		C						A				B
Approach Delay		22.6						7.0				16.3
Approach LOS		C						A				B
Queue Length 50th (ft)		91						37				161
Queue Length 95th (ft)		167						m53				261
Internal Link Dist (ft)		184			407			490				174
Turn Bay Length (ft)												
Base Capacity (vph)		496						628				857
Starvation Cap Reductn		0						0				0
Spillback Cap Reductn		0						0				0
Storage Cap Reductn		0						0				0
Reduced v/c Ratio		0.57						0.45				0.62

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 65 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 15.5
 Intersection LOS: B
 Intersection Capacity Utilization 86.2%
 ICU Level of Service E
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Clark Street & Maple Street



HCM 6th AWSC
 4: Dearborn Street & Maple Street

10/22/2019

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	91	93	32	0	0	0	0	36	7	48	135	0
Future Vol, veh/h	91	93	32	0	0	0	0	36	7	48	135	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	4	5	0	0	0	0	0	14	0	2	10	0
Mvmt Flow	99	101	35	0	0	0	0	39	8	52	147	0
Number of Lanes	0	1	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	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.5	8.2	9.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	42%	26%
Vol Thru, %	84%	43%	74%
Vol Right, %	16%	15%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	43	216	183
LT Vol	0	91	48
Through Vol	36	93	135
RT Vol	7	32	0
Lane Flow Rate	47	235	199
Geometry Grp	1	1	1
Degree of Util (X)	0.063	0.297	0.255
Departure Headway (Hd)	4.839	4.549	4.608
Convergence, Y/N	Yes	Yes	Yes
Cap	739	791	780
Service Time	2.872	2.574	2.633
HCM Lane V/C Ratio	0.064	0.297	0.255
HCM Control Delay	8.2	9.5	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	1.2	1

HCM 6th AWSC
5: Dearborn Street & Walton Street

10/22/2019

Intersection	
Intersection Delay, s/veh	14.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑	↑	↑				↑
Traffic Vol, veh/h	0	0	0	0	306	1	232	13	0	0	0	10
Future Vol, veh/h	0	0	0	0	306	1	232	13	0	0	0	10
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	0	0	3	100	4	62	0	0	0	90
Mvmt Flow	0	0	0	0	369	1	280	16	0	0	0	12
Number of Lanes	0	0	0	0	1	1	1	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	15.1	14.1	10.3
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	232	13	306	1	10
LT Vol	232	0	0	0	0
Through Vol	0	13	306	0	0
RT Vol	0	0	0	1	10
Lane Flow Rate	280	16	369	1	12
Geometry Grp	7	7	7	7	6
Degree of Util (X)	0.474	0.029	0.562	0.002	0.024
Departure Headway (Hd)	6.111	6.601	5.483	6.437	7.088
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	584	539	656	554	508
Service Time	3.897	4.387	3.247	4.202	5.088
HCM Lane V/C Ratio	0.479	0.03	0.563	0.002	0.024
HCM Control Delay	14.4	9.6	15.1	9.2	10.3
HCM Lane LOS	B	A	C	A	B
HCM 95th-tile Q	2.5	0.1	3.5	0	0.1

HCM 6th TWSC
6: Oak Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	4	247	237	5	0	1
Future Vol, veh/h	4	247	237	5	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	4	266	255	5	0	1
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	260	0	-	0	532	258
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	274	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1316	-	-	-	512	786
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	777	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1316	-	-	-	510	786
Mov Cap-2 Maneuver	-	-	-	-	510	-
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	777	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.1	0	9.6			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1316	-	-	-	-	786
HCM Lane V/C Ratio	0.003	-	-	-	-	0.001
HCM Control Delay (s)	7.7	0	-	-	-	9.6
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0

HCM 6th TWSC
7: Dearborn Street & Public Alley

10/22/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	3	1	44	168	1
Future Vol, veh/h	0	3	1	44	168	1
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	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	13	7	0
Mvmt Flow	0	3	1	47	181	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	231	182	182	0	-	0
Stage 1	182	-	-	-	-	-
Stage 2	49	-	-	-	-	-
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	762	866	1405	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	761	866	1405	-	-	-
Mov Cap-2 Maneuver	761	-	-	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	9.2		0.2		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1405	-	866	-	-	
HCM Lane V/C Ratio	0.001	-	0.004	-	-	
HCM Control Delay (s)	7.6	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

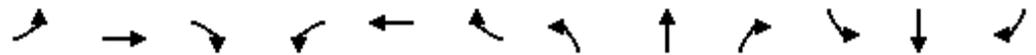
HCM 6th TWSC
8: Dearborn Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	2	5	45	168	3
Future Vol, veh/h	0	2	5	45	168	3
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	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	13	7	0
Mvmt Flow	0	2	5	48	181	3
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	241	183	184	0	0	
Stage 1	183	-	-	-	-	
Stage 2	58	-	-	-	-	
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	752	865	1403	-	-	
Stage 1	853	-	-	-	-	
Stage 2	970	-	-	-	-	
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	749	865	1403	-	-	
Mov Cap-2 Maneuver	749	-	-	-	-	
Stage 1	850	-	-	-	-	
Stage 2	970	-	-	-	-	
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	0.8		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1403	-	865	-	-	
HCM Lane V/C Ratio	0.004	-	0.002	-	-	
HCM Control Delay (s)	7.6	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Lanes, Volumes, Timings
1: Dearborn Street & Oak Street

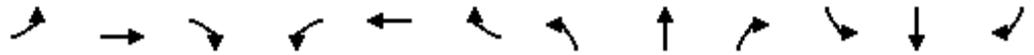
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	36	192	0	0	165	39	6	4	0	22	7	86
Future Volume (vph)	36	192	0	0	165	39	6	4	0	22	7	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.97			0.98			0.94	
Frt					0.974						0.899	
Flt Protected		0.992						0.972			0.991	
Satd. Flow (prot)	0	1536	0	0	1536	0	0	915	0	0	1273	0
Flt Permitted		0.924						0.915			0.962	
Satd. Flow (perm)	0	1414	0	0	1536	0	0	848	0	0	1209	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					21						106	
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		191			259			317			90	
Travel Time (s)		6.5			8.8			10.8			3.1	
Confl. Peds. (#/hr)	82		128	128		82	33		116	116		33
Confl. Bikes (#/hr)			4			4			14			7
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	100%	25%	0%	0%	100%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		10			1			7			6	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	281	0	0	252	0	0	12	0	0	142	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		19.0	19.0		19.0	19.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (%)	43.1%	43.1%		43.1%	43.1%		56.9%	56.9%		56.9%	56.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

10/22/2019

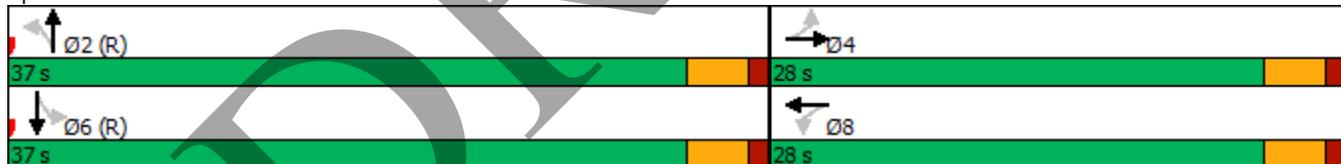


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.54			0.43			0.03				0.21
Control Delay		20.8			16.9			8.3				4.1
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		20.8			16.9			8.3				4.1
LOS		C			B			A				A
Approach Delay		20.8			16.9			8.3				4.1
Approach LOS		C			B			A				A
Queue Length 50th (ft)		85			66			2				7
Queue Length 95th (ft)		133			107			8				26
Internal Link Dist (ft)		111			179			237				10
Turn Bay Length (ft)												
Base Capacity (vph)		522			580			430				665
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		0.54			0.43			0.03				0.21

Intersection Summary

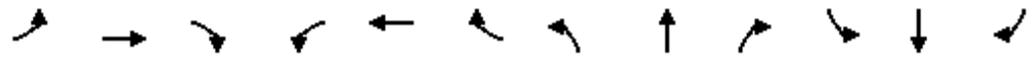
Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 15.7
 Intersection Capacity Utilization 75.0%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 1: Dearborn Street & Oak Street



Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	39	177	79	81	145	41	49	244	49	26	512	25
Future Volume (vph)	39	177	79	81	145	41	49	244	49	26	512	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	60		0	65		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.95		0.97	0.98		0.94	0.99	
Frt		0.964			0.979			0.975			0.993	
Flt Protected		0.993			0.985		0.950			0.950		
Satd. Flow (prot)	0	1393	0	0	1450	0	1678	1361	0	1745	1528	0
Flt Permitted		0.912			0.740		0.270			0.528		
Satd. Flow (perm)	0	1266	0	0	1067	0	462	1361	0	909	1528	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			13			18			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			294			263			570	
Travel Time (s)		5.9			6.7			6.0			13.0	
Confl. Peds. (#/hr)	83		77	77		83	83		94	94		83
Confl. Bikes (#/hr)			3			6			24			23
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	4%	1%	6%	0%	4%	8%	6%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		12			6			4			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	339	0	0	307	0	56	336	0	30	618	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		27.0	27.0		27.0	27.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%		57.3%	57.3%		57.3%	57.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0			8.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019

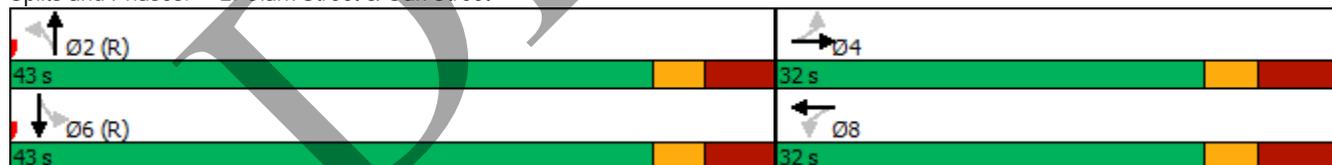


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.80			0.88		0.25	0.51		0.07	0.84	
Control Delay		38.5			51.4		15.4	16.0		10.5	21.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		38.5			51.4		15.4	16.0		10.5	21.4	
LOS		D			D		B	B		B	C	
Approach Delay		38.5			51.4			15.9			20.9	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)		132			128		15	96		5	97	
Queue Length 95th (ft)		#255			#260		38	159		m11	#394	
Internal Link Dist (ft)		179			214			183			490	
Turn Bay Length (ft)							60			65		
Base Capacity (vph)		422			350		221	662		436	736	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.80			0.88		0.25	0.51		0.07	0.84	

Intersection Summary

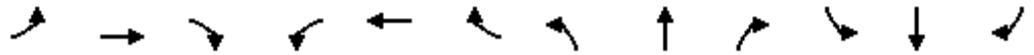
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 80
 Control Type: Pretimed
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 28.8
 Intersection LOS: C
 Intersection Capacity Utilization 82.3%
 ICU Level of Service E
 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.

Splits and Phases: 2: Clark Street & Oak Street



Lanes, Volumes, Timings
3: Clark Street & Maple Street

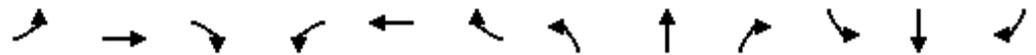
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (vph)	40	91	61	0	0	0	0	274	29	36	506	0
Future Volume (vph)	40	91	61	0	0	0	0	274	29	36	506	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96						0.99			1.00	
Frt		0.957						0.987				
Flt Protected		0.990									0.997	
Satd. Flow (prot)	0	1434	0	0	0	0	0	1344	0	0	1713	0
Flt Permitted		0.990									0.962	
Satd. Flow (perm)	0	1411	0	0	0	0	0	1344	0	0	1646	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34						11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			487			570			254	
Travel Time (s)		6.0			11.1			13.0			5.8	
Confl. Peds. (#/hr)	54		39	39		54	116		102	102		116
Confl. Bikes (#/hr)			6						33			20
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	0%	0%	0%	0%	0%	11%	3%	3%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		9						6				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	211	0	0	0	0	0	333	0	0	596	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6	6	
Switch Phase												
Minimum Initial (s)	23.0	23.0						29.0		29.0	29.0	
Minimum Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (%)	41.3%	41.3%						58.7%		58.7%	58.7%	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0		0.0	0.0	
Total Lost Time (s)		5.0						4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max						Max		Max	Max	
Act Effct Green (s)		26.0						40.0		40.0	40.0	
Actuated g/C Ratio		0.35						0.53		0.53	0.53	

Lanes, Volumes, Timings
 3: Clark Street & Maple Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.41						0.46				0.68
Control Delay		18.5						7.7				17.7
Queue Delay		0.0						0.0				0.0
Total Delay		18.5						7.7				17.7
LOS		B						A				B
Approach Delay		18.5						7.7				17.7
Approach LOS		B						A				B
Queue Length 50th (ft)		61						54				188
Queue Length 95th (ft)		118						m73				304
Internal Link Dist (ft)		184			407			490				174
Turn Bay Length (ft)												
Base Capacity (vph)		511						721				877
Starvation Cap Reductn		0						0				0
Spillback Cap Reductn		0						0				0
Storage Cap Reductn		0						0				0
Reduced v/c Ratio		0.41						0.46				0.68

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 14.9
 Intersection Capacity Utilization 85.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service E
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Clark Street & Maple Street



HCM 6th AWSC
4: Dearborn Street & Maple Street

10/22/2019

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	60	75	37	0	0	0	0	61	25	40	80	0
Future Vol, veh/h	60	75	37	0	0	0	0	61	25	40	80	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	1	3	0	0	0	0	5	0	2	11	0
Mvmt Flow	67	83	41	0	0	0	0	68	28	44	89	0
Number of Lanes	0	1	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	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.8	8	8.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	35%	33%
Vol Thru, %	71%	44%	67%
Vol Right, %	29%	22%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	86	172	120
LT Vol	0	60	40
Through Vol	61	75	80
RT Vol	25	37	0
Lane Flow Rate	96	191	133
Geometry Grp	1	1	1
Degree of Util (X)	0.117	0.235	0.169
Departure Headway (Hd)	4.409	4.418	4.554
Convergence, Y/N	Yes	Yes	Yes
Cap	814	814	789
Service Time	2.431	2.437	2.574
HCM Lane V/C Ratio	0.118	0.235	0.169
HCM Control Delay	8	8.8	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.9	0.6

HCM 6th AWSC
5: Dearborn Street & Walton Street

10/22/2019

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑	↑	↑				↑
Traffic Vol, veh/h	0	0	0	0	369	0	271	12	0	0	0	11
Future Vol, veh/h	0	0	0	0	369	0	271	12	0	0	0	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	2	0	4	67	0	0	0	27
Mvmt Flow	0	0	0	0	384	0	282	13	0	0	0	11
Number of Lanes	0	0	0	0	1	1	1	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	15.7	14.5	9.2
HCM LOS	C	B	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	271	12	369	0	11
LT Vol	271	0	0	0	0
Through Vol	0	12	369	0	0
RT Vol	0	0	0	0	11
Lane Flow Rate	282	12	384	0	11
Geometry Grp	7	7	7	7	6
Degree of Util (X)	0.483	0.023	0.584	0	0.019
Departure Headway (Hd)	6.161	6.738	5.467	5.433	6.062
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	582	527	657	0	594
Service Time	3.951	4.529	3.231	3.196	4.062
HCM Lane V/C Ratio	0.485	0.023	0.584	0	0.019
HCM Control Delay	14.7	9.7	15.7	8.2	9.2
HCM Lane LOS	B	A	C	N	A
HCM 95th-tile Q	2.6	0.1	3.8	0	0.1

HCM 6th TWSC
6: Oak Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	1	227	255	2	1	4
Future Vol, veh/h	1	227	255	2	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	1	280	315	2	1	5
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	317	0	-	0	598	316
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	282	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1255	-	-	-	468	729
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	770	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1255	-	-	-	468	729
Mov Cap-2 Maneuver	-	-	-	-	468	-
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	770	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	10.5			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1255	-	-	-	-	656
HCM Lane V/C Ratio	0.001	-	-	-	-	0.009
HCM Control Delay (s)	7.9	0	-	-	-	10.5
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

HCM 6th TWSC
7: Dearborn Street & Public Alley

10/22/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	2	0	79	108	0
Future Vol, veh/h	2	2	0	79	108	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	1	7	0
Mvmt Flow	2	2	0	98	133	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	231	133	133	0	-	0
Stage 1	133	-	-	-	-	-
Stage 2	98	-	-	-	-	-
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	762	922	1464	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	762	922	1464	-	-	-
Mov Cap-2 Maneuver	762	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.3	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1464	-	834	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	9.3	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

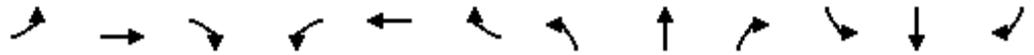
HCM 6th TWSC
 8: Dearborn Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	3	7	3	76	108	2
Future Vol, veh/h	3	7	3	76	108	2
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	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	1	7	0
Mvmt Flow	4	9	4	94	133	2
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	236	134	135	0	-	0
Stage 1	134	-	-	-	-	-
Stage 2	102	-	-	-	-	-
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	757	920	1462	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	755	920	1462	-	-	-
Mov Cap-2 Maneuver	755	-	-	-	-	-
Stage 1	894	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	9.2	0.3	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1462	-	863	-	-	
HCM Lane V/C Ratio	0.003	-	0.014	-	-	
HCM Control Delay (s)	7.5	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Lanes, Volumes, Timings
1: Dearborn Street & Oak Street

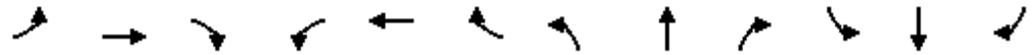
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	11	186	10	15	175	34	39	339	125	47	62	54
Future Volume (vph)	11	186	10	15	175	34	39	339	125	47	62	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.96			0.95			0.97	
Frt		0.993			0.979			0.966			0.955	
Flt Protected		0.997			0.997			0.996			0.986	
Satd. Flow (prot)	0	1531	0	0	1529	0	0	1428	0	0	1408	0
Flt Permitted		0.982			0.977			0.970			0.811	
Satd. Flow (perm)	0	1499	0	0	1487	0	0	1388	0	0	1141	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			16			37			56	
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		191			259			310			90	
Travel Time (s)		6.5			8.8			10.6			3.1	
Confl. Peds. (#/hr)	117		121	121		117	34		125	125		34
Confl. Bikes (#/hr)			10			10			87			5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	2%	3%	3%	2%	1%	0%	11%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		10			1			7			6	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	219	0	0	236	0	0	530	0	0	171	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		19.0	19.0		19.0	19.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (%)	43.1%	43.1%		43.1%	43.1%		56.9%	56.9%		56.9%	56.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.39			0.42			0.73				0.28
Control Delay		17.4			17.1			19.4				7.6
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		17.4			17.1			19.4				7.6
LOS		B			B			B				A
Approach Delay		17.4			17.1			19.4				7.6
Approach LOS		B			B			B				A
Queue Length 50th (ft)		61			63			141				23
Queue Length 95th (ft)		113			119			#270				56
Internal Link Dist (ft)		111			179			230				10
Turn Bay Length (ft)												
Base Capacity (vph)		556			559			722				606
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		0.39			0.42			0.73				0.28

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 16.8
 Intersection LOS: B
 Intersection Capacity Utilization 57.5%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Dearborn Street & Oak Street



Lanes, Volumes, Timings

2: Clark Street & Oak Street

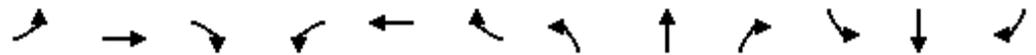
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (vph)	31	184	85	48	188	35	64	225	7	26	450	41
Future Volume (vph)	31	184	85	48	188	35	64	225	7	26	450	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	60		0	65		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.96		0.84	0.99		0.84	0.96	
Frt		0.962			0.982			0.995			0.987	
Flt Protected		0.995			0.991		0.950			0.950		
Satd. Flow (prot)	0	1424	0	0	1510	0	1745	1435	0	1646	1494	0
Flt Permitted		0.938			0.867		0.348			0.604		
Satd. Flow (perm)	0	1325	0	0	1308	0	538	1435	0	881	1494	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			11			3			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			294			263			570	
Travel Time (s)		5.9			6.7			6.0			13.0	
Confl. Peds. (#/hr)	122		58	58		122	346		203	203		346
Confl. Bikes (#/hr)						1			19			190
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	6%	0%	6%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		12			6			4			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	322	0	0	292	0	69	250	0	28	528	0
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		27.0	27.0		27.0	27.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%		57.3%	57.3%		57.3%	57.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0			8.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019

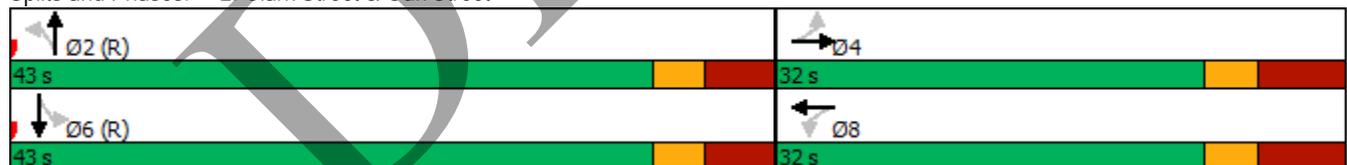


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.73			0.69		0.27	0.36		0.07	0.73	
Control Delay		32.0			31.3		15.2	14.0		9.2	15.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		32.0			31.3		15.2	14.0		9.2	15.4	
LOS		C			C		B	B		A	B	
Approach Delay		32.0			31.3			14.3			15.1	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		120			113		18	68		5	87	
Queue Length 95th (ft)		#240			#210		47	120		m10	148	
Internal Link Dist (ft)		179			214			183			490	
Turn Bay Length (ft)							60			65		
Base Capacity (vph)		443			426		258	690		422	721	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.73			0.69		0.27	0.36		0.07	0.73	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 21.8
 Intersection Capacity Utilization 90.1%
 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.

Splits and Phases: 2: Clark Street & Oak Street



Lanes, Volumes, Timings
3: Clark Street & Maple Street

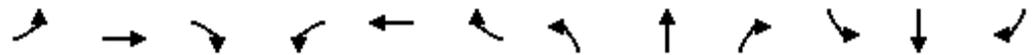
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (vph)	45	83	82	0	0	0	0	244	26	33	439	0
Future Volume (vph)	45	83	82	0	0	0	0	244	26	33	439	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93						0.99			0.99	
Frt		0.947						0.987				
Flt Protected		0.989									0.997	
Satd. Flow (prot)	0	1385	0	0	0	0	0	1168	0	0	1680	0
Flt Permitted		0.989									0.965	
Satd. Flow (perm)	0	1342	0	0	0	0	0	1168	0	0	1618	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47						11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			487			570			254	
Travel Time (s)		6.0			11.1			13.0			5.8	
Confl. Peds. (#/hr)	99		56	56		99	148		124	124		148
Confl. Bikes (#/hr)			2			2			9			126
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	3%	1%	0%	0%	0%	0%	29%	6%	5%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		9						6				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	0	0	0	0	293	0	0	513	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6	6	
Switch Phase												
Minimum Initial (s)	23.0	23.0						29.0		29.0	29.0	
Minimum Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (%)	41.3%	41.3%						58.7%		58.7%	58.7%	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0		0.0	0.0	
Total Lost Time (s)		5.0						4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max						Max		Max	Max	
Act Effct Green (s)		26.0						40.0		40.0	40.0	
Actuated g/C Ratio		0.35						0.53		0.53	0.53	

Lanes, Volumes, Timings
 3: Clark Street & Maple Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.46						0.47				0.60
Control Delay		18.5						8.2				15.6
Queue Delay		0.0						0.0				0.0
Total Delay		18.5						8.2				15.6
LOS		B						A				B
Approach Delay		18.5						8.2				15.6
Approach LOS		B						A				B
Queue Length 50th (ft)		63						43				152
Queue Length 95th (ft)		125						m62				245
Internal Link Dist (ft)		184			407			490				174
Turn Bay Length (ft)												
Base Capacity (vph)		495						628				862
Starvation Cap Reductn		0						0				0
Spillback Cap Reductn		0						0				0
Storage Cap Reductn		0						0				0
Reduced v/c Ratio		0.46						0.47				0.60

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 14.1
 Intersection Capacity Utilization 79.5%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Clark Street & Maple Street



HCM 6th AWSC
4: Dearborn Street & Maple Street

10/22/2019

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	36	81	31	0	0	0	0	321	55	32	121	0
Future Vol, veh/h	36	81	31	0	0	0	0	321	55	32	121	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	0	3	0	0	0	0	4	4	0	6	0
Mvmt Flow	40	90	34	0	0	0	0	357	61	36	134	0
Number of Lanes	0	1	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	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.9	12.5	9.3
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	24%	21%
Vol Thru, %	85%	55%	79%
Vol Right, %	15%	21%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	376	148	153
LT Vol	0	36	32
Through Vol	321	81	121
RT Vol	55	31	0
Lane Flow Rate	418	164	170
Geometry Grp	1	1	1
Degree of Util (X)	0.524	0.237	0.229
Departure Headway (Hd)	4.517	5.195	4.843
Convergence, Y/N	Yes	Yes	Yes
Cap	794	687	738
Service Time	2.561	3.262	2.899
HCM Lane V/C Ratio	0.526	0.239	0.23
HCM Control Delay	12.5	9.9	9.3
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.1	0.9	0.9

HCM 6th AWSC
5: Dearborn Street & Walton Street

10/22/2019

Intersection	
Intersection Delay, s/veh	23.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑	↑	↑				↑
Traffic Vol, veh/h	0	0	0	0	407	92	221	421	0	0	0	81
Future Vol, veh/h	0	0	0	0	407	92	221	421	0	0	0	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	1	1	5	1	0	0	0	9
Mvmt Flow	0	0	0	0	428	97	233	443	0	0	0	85
Number of Lanes	0	0	0	0	1	1	1	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	26.2	23.7	11
HCM LOS	D	C	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	421	407	92	81
LT Vol	221	0	0	0	0
Through Vol	0	421	407	0	0
RT Vol	0	0	0	92	81
Lane Flow Rate	233	443	428	97	85
Geometry Grp	7	7	7	7	6
Degree of Util (X)	0.447	0.781	0.789	0.159	0.158
Departure Headway (Hd)	6.919	6.343	6.627	5.918	6.656
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	519	567	544	604	536
Service Time	4.674	4.097	4.382	3.673	4.726
HCM Lane V/C Ratio	0.449	0.781	0.787	0.161	0.159
HCM Control Delay	15.2	28.2	29.9	9.8	11
HCM Lane LOS	C	D	D	A	B
HCM 95th-tile Q	2.3	7.3	7.4	0.6	0.6

HCM 6th TWSC
6: Oak Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	1	206	266	2	1	4
Future Vol, veh/h	1	206	266	2	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	1	217	280	2	1	4
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	282	0	-	0	500	281
Stage 1	-	-	-	-	281	-
Stage 2	-	-	-	-	219	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1292	-	-	-	534	763
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	822	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1292	-	-	-	533	763
Mov Cap-2 Maneuver	-	-	-	-	533	-
Stage 1	-	-	-	-	770	-
Stage 2	-	-	-	-	822	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	10.2			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1292	-	-	-	-	702
HCM Lane V/C Ratio	0.001	-	-	-	-	0.007
HCM Control Delay (s)	7.8	0	-	-	-	10.2
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0

HCM 6th TWSC
7: Dearborn Street & Public Alley

10/22/2019

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	2	0	386	155	1
Future Vol, veh/h	0	2	0	386	155	1
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	2	5	0
Mvmt Flow	0	2	0	406	163	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	570	164	164	0	-	0
Stage 1	164	-	-	-	-	-
Stage 2	406	-	-	-	-	-
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	486	886	1427	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	486	886	1427	-	-	-
Mov Cap-2 Maneuver	486	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1427	-	886	-	-	
HCM Lane V/C Ratio	-	-	0.002	-	-	
HCM Control Delay (s)	0	-	9.1	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

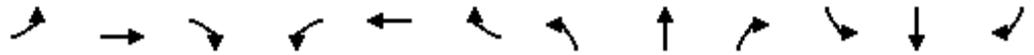
HCM 6th TWSC
8: Dearborn Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	7	0	384	156	1
Future Vol, veh/h	2	7	0	384	156	1
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	2	5	0
Mvmt Flow	2	7	0	404	164	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	569	165	165	0	-	0
Stage 1	165	-	-	-	-	-
Stage 2	404	-	-	-	-	-
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	487	885	1426	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	487	885	1426	-	-	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1426	-	749	-	-	
HCM Lane V/C Ratio	-	-	0.013	-	-	
HCM Control Delay (s)	0	-	9.9	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Lanes, Volumes, Timings
1: Dearborn Street & Oak Street

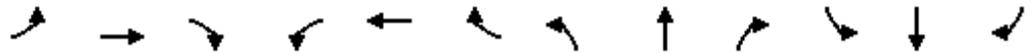
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	35	225	0	0	121	22	9	5	2	49	11	114
Future Volume (vph)	35	225	0	0	121	22	9	5	2	49	11	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.98			0.95			0.88	
Frt					0.979			0.984			0.912	
Flt Protected		0.993						0.971			0.986	
Satd. Flow (prot)	0	1524	0	0	1522	0	0	842	0	0	1238	0
Flt Permitted		0.949						0.893			0.930	
Satd. Flow (perm)	0	1441	0	0	1522	0	0	759	0	0	1088	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					16			2			123	
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		106			259			314			90	
Travel Time (s)		3.6			8.8			10.7			3.1	
Confl. Peds. (#/hr)	73		213	213		73	44		252	252		44
Confl. Bikes (#/hr)			9			6			2			23
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	2%	13%	67%	80%	100%	8%	82%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		10			1			7			6	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	280	0	0	154	0	0	17	0	0	188	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		19.0	19.0		19.0	19.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (%)	43.1%	43.1%		43.1%	43.1%		56.9%	56.9%		56.9%	56.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

10/22/2019

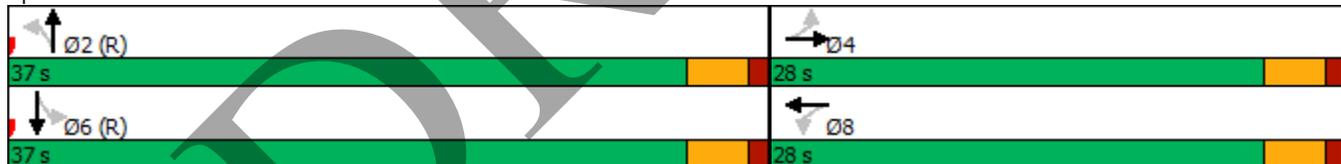


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.53			0.27			0.04				0.31
Control Delay		20.5			14.4			8.0				5.2
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		20.5			14.4			8.0				5.2
LOS		C			B			A				A
Approach Delay		20.5			14.4			8.0				5.2
Approach LOS		C			B			A				A
Queue Length 50th (ft)		85			37			3				13
Queue Length 95th (ft)		153			76			11				44
Internal Link Dist (ft)		26			179			234				10
Turn Bay Length (ft)												
Base Capacity (vph)		532			572			386				612
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			0.27			0.04				0.31

Intersection Summary

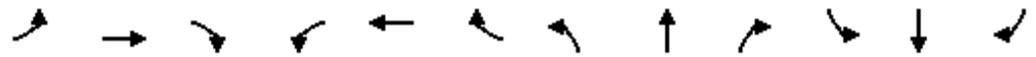
Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 14.2
 Intersection Capacity Utilization 75.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 1: Dearborn Street & Oak Street



Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	35	214	88	105	120	33	44	232	36	21	488	15
Future Volume (vph)	35	214	88	105	120	33	44	232	36	21	488	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	60		0	65		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.95		0.95	0.98		0.91	0.99	
Frt		0.965			0.983			0.980			0.995	
Flt Protected		0.995			0.980		0.950			0.950		
Satd. Flow (prot)	0	1388	0	0	1436	0	1711	1348	0	1662	1508	0
Flt Permitted		0.936			0.643		0.321			0.566		
Satd. Flow (perm)	0	1294	0	0	920	0	549	1348	0	905	1508	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			10			14				3
Link Speed (mph)		30			30			30				30
Link Distance (ft)		259			379			263				570
Travel Time (s)		5.9			8.6			6.0				13.0
Confl. Peds. (#/hr)	89		70	70		89	119		119	119		119
Confl. Bikes (#/hr)			11			17			11			130
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	5%	0%	10%	0%	2%	11%	0%	5%	5%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		12			6			4			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	375	0	0	287	0	49	298	0	23	559	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		27.0	27.0		27.0	27.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%		57.3%	57.3%		57.3%	57.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0			8.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019

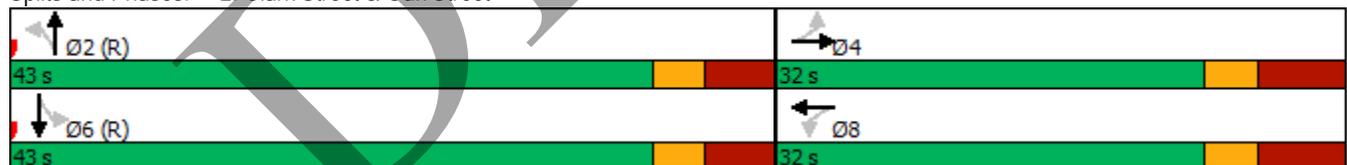


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.87			0.95		0.19	0.46		0.05	0.77	
Control Delay		45.6			69.3		13.5	15.1		11.2	19.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		45.6			69.3		13.5	15.1		11.2	19.0	
LOS		D			E		B	B		B	B	
Approach Delay		45.6			69.3			14.9			18.7	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)		153			125		12	83		4	105	
Queue Length 95th (ft)		#310			#278		34	147		m8	#214	
Internal Link Dist (ft)		179			299			183			490	
Turn Bay Length (ft)							60			65		
Base Capacity (vph)		431			301		263	654		434	725	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.87			0.95		0.19	0.46		0.05	0.77	

Intersection Summary

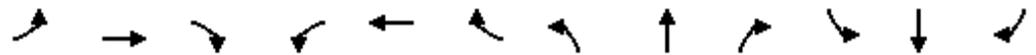
Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 62 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 33.3
 Intersection LOS: C
 Intersection Capacity Utilization 87.8%
 ICU Level of Service E
 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.

Splits and Phases: 2: Clark Street & Oak Street



Lanes, Volumes, Timings 3: Clark Street & Maple Street

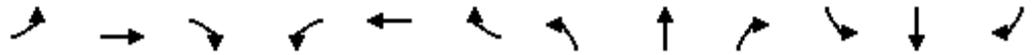
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (vph)	55	123	90	0	0	0	0	263	19	41	467	0
Future Volume (vph)	55	123	90	0	0	0	0	263	19	41	467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.93						0.99			0.99	
Frt		0.955						0.991				
Flt Protected		0.990									0.996	
Satd. Flow (prot)	0	1400	0	0	0	0	0	1171	0	0	1679	0
Flt Permitted		0.990									0.955	
Satd. Flow (perm)	0	1356	0	0	0	0	0	1171	0	0	1599	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37						8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			487			570			254	
Travel Time (s)		6.0			11.1			13.0			5.8	
Confl. Peds. (#/hr)	108		62	62		108	163		136	136		163
Confl. Bikes (#/hr)			2			2			9			139
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	3%	1%	0%	0%	0%	0%	29%	6%	5%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		9						6				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	292	0	0	0	0	0	307	0	0	553	0
Turn Type	Perm	NA						NA			Perm	NA
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6		6
Switch Phase												
Minimum Initial (s)	23.0	23.0						29.0		29.0		29.0
Minimum Split (s)	31.0	31.0						44.0		44.0		44.0
Total Split (s)	31.0	31.0						44.0		44.0		44.0
Total Split (%)	41.3%	41.3%						58.7%		58.7%		58.7%
Yellow Time (s)	3.0	3.0						3.0		3.0		3.0
All-Red Time (s)	2.0	2.0						1.0		1.0		1.0
Lost Time Adjust (s)		0.0						0.0		0.0		0.0
Total Lost Time (s)		5.0						4.0		4.0		4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max						Max		Max	Max	
Act Effect Green (s)		26.0						40.0		40.0		40.0
Actuated g/C Ratio		0.35						0.53		0.53		0.53

Lanes, Volumes, Timings
 3: Clark Street & Maple Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.59						0.49				0.65
Control Delay		23.3						7.7				17.0
Queue Delay		0.0						0.0				0.0
Total Delay		23.3						7.7				17.0
LOS		C						A				B
Approach Delay		23.3						7.7				17.0
Approach LOS		C						A				B
Queue Length 50th (ft)		95						44				170
Queue Length 95th (ft)		175						m64				277
Internal Link Dist (ft)		184			407			490				174
Turn Bay Length (ft)												
Base Capacity (vph)		494						628				852
Starvation Cap Reductn		0						0				0
Spillback Cap Reductn		0						0				0
Storage Cap Reductn		0						0				0
Reduced v/c Ratio		0.59						0.49				0.65

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 65 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 16.1
 Intersection Capacity Utilization 89.2%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Clark Street & Maple Street



HCM 6th AWSC
4: Dearborn Street & Maple Street

10/22/2019

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	94	99	34	0	0	0	0	37	7	49	139	0
Future Vol, veh/h	94	99	34	0	0	0	0	37	7	49	139	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	4	5	0	0	0	0	0	14	0	2	10	0
Mvmt Flow	102	108	37	0	0	0	0	40	8	53	151	0
Number of Lanes	0	1	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	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.7	8.3	9.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	41%	26%
Vol Thru, %	84%	44%	74%
Vol Right, %	16%	15%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	44	227	188
LT Vol	0	94	49
Through Vol	37	99	139
RT Vol	7	34	0
Lane Flow Rate	48	247	204
Geometry Grp	1	1	1
Degree of Util (X)	0.065	0.313	0.263
Departure Headway (Hd)	4.88	4.566	4.64
Convergence, Y/N	Yes	Yes	Yes
Cap	733	787	774
Service Time	2.915	2.59	2.667
HCM Lane V/C Ratio	0.065	0.314	0.264
HCM Control Delay	8.3	9.7	9.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	1.3	1.1

HCM 6th AWSC
5: Dearborn Street & Walton Street

10/22/2019

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑	↑	↑				↑
Traffic Vol, veh/h	0	0	0	0	315	1	239	13	0	0	0	10
Future Vol, veh/h	0	0	0	0	315	1	239	13	0	0	0	10
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	0	0	0	0	3	100	4	62	0	0	0	90
Mvmt Flow	0	0	0	0	380	1	288	16	0	0	0	12
Number of Lanes	0	0	0	0	1	1	1	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	15.7	14.5	10.3
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	239	13	315	1	10
LT Vol	239	0	0	0	0
Through Vol	0	13	315	0	0
RT Vol	0	0	0	1	10
Lane Flow Rate	288	16	380	1	12
Geometry Grp	7	7	7	7	6
Degree of Util (X)	0.491	0.029	0.581	0.002	0.024
Departure Headway (Hd)	6.143	6.633	5.511	6.466	7.148
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	582	536	653	551	504
Service Time	3.935	4.425	3.279	4.234	5.148
HCM Lane V/C Ratio	0.495	0.03	0.582	0.002	0.024
HCM Control Delay	14.8	9.6	15.7	9.2	10.3
HCM Lane LOS	B	A	C	A	B
HCM 95th-tile Q	2.7	0.1	3.7	0	0.1

HCM 6th TWSC
6: Oak Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	260	244	0	0	23
Future Vol, veh/h	0	260	244	0	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	2	2	0	0	0
Mvmt Flow	0	280	262	0	0	25
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	262
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	0	782
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	782
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	9.8			
HCM LOS						A
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	782			
HCM Lane V/C Ratio	-	-	0.032			
HCM Control Delay (s)	-	-	9.8			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.1			

HCM 6th TWSC
7: Dearborn Street & Public Alley

10/22/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	0	3	1	45	175	1
Future Vol, veh/h	0	3	1	45	175	1
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	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	13	7	0
Mvmt Flow	0	3	1	48	188	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	239	189	189	0	-	0
Stage 1	189	-	-	-	-	-
Stage 2	50	-	-	-	-	-
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	754	858	1397	-	-	-
Stage 1	848	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	753	858	1397	-	-	-
Mov Cap-2 Maneuver	753	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	9.2		0.2		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1397	-	858	-	-	
HCM Lane V/C Ratio	0.001	-	0.004	-	-	
HCM Control Delay (s)	7.6	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM Unsignalized Intersection Capacity Analysis

8: Dearborn Street & Access Drive

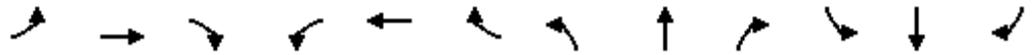
10/22/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	16	46	174	4
Future Volume (Veh/h)	0	0	16	46	174	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	0	17	49	187	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	90					
pX, platoon unblocked						
vC, conflicting volume	272	189	191			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	272	189	191			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	713	858	1395			
Direction, Lane #	NB 1	SB 1				
Volume Total	66	191				
Volume Left	17	0				
Volume Right	0	4				
cSH	1395	1700				
Volume to Capacity	0.01	0.11				
Queue Length 95th (ft)	1	0				
Control Delay (s)	2.0	0.0				
Lane LOS	A					
Approach Delay (s)	2.0	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			19.4%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

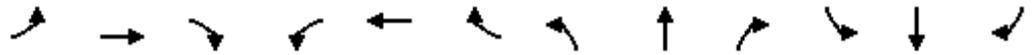
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	43	197	0	0	168	44	6	4	0	23	7	89
Future Volume (vph)	43	197	0	0	168	44	6	4	0	23	7	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			0.97			0.98			0.93	
Fr _t					0.972						0.899	
Fl _t Protected		0.991						0.972			0.991	
Satd. Flow (prot)	0	1535	0	0	1526	0	0	915	0	0	1272	0
Fl _t Permitted		0.907						0.914			0.962	
Satd. Flow (perm)	0	1384	0	0	1526	0	0	846	0	0	1206	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					23						110	
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		130			259			317			90	
Travel Time (s)		4.4			8.8			10.8			3.1	
Confl. Peds. (#/hr)	90		141	141		90	36		128	128		36
Confl. Bikes (#/hr)			4			4			15			8
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	2%	0%	100%	25%	0%	0%	100%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		10			1			7			6	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	296	0	0	261	0	0	12	0	0	147	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		19.0	19.0		19.0	19.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (%)	43.1%	43.1%		43.1%	43.1%		56.9%	56.9%		56.9%	56.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

10/22/2019

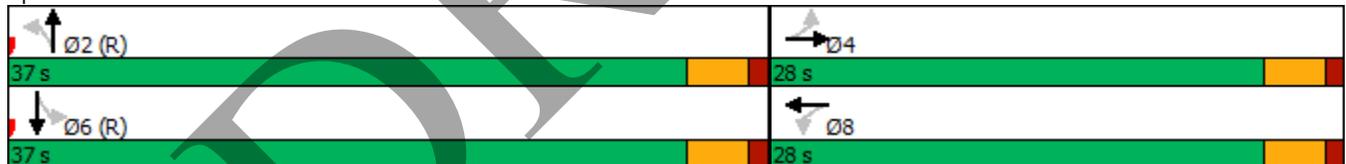


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.58			0.45			0.03				0.22
Control Delay		22.0			17.2			8.3				4.1
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		22.0			17.2			8.3				4.1
LOS		C			B			A				A
Approach Delay		22.0			17.2			8.3				4.1
Approach LOS		C			B			A				A
Queue Length 50th (ft)		92			69			2				7
Queue Length 95th (ft)		142			111			8				26
Internal Link Dist (ft)		50			179			237				10
Turn Bay Length (ft)												
Base Capacity (vph)		511			577			429				666
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		0.58			0.45			0.03				0.22

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 16.3
 Intersection Capacity Utilization 77.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 1: Dearborn Street & Oak Street



Lanes, Volumes, Timings
2: Clark Street & Oak Street

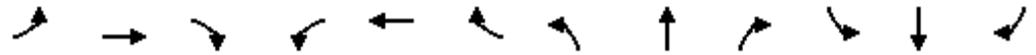
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (vph)	40	183	81	89	153	48	50	251	54	27	527	26
Future Volume (vph)	40	183	81	89	153	48	50	251	54	27	527	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	60		0	65		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.95		0.97	0.97		0.93	0.99	
Frt		0.964			0.978			0.974			0.993	
Flt Protected		0.993			0.985		0.950			0.950		
Satd. Flow (prot)	0	1389	0	0	1444	0	1678	1356	0	1745	1527	0
Flt Permitted		0.905			0.729		0.255			0.513		
Satd. Flow (perm)	0	1252	0	0	1044	0	436	1356	0	879	1527	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			14			20			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			355			263			570	
Travel Time (s)		5.9			8.1			6.0			13.0	
Confl. Peds. (#/hr)	91		85	85		91	91		103	103		91
Confl. Bikes (#/hr)			3			7			26			25
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	4%	1%	6%	0%	4%	8%	6%	0%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		12			6			4			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	349	0	0	333	0	57	351	0	31	636	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		27.0	27.0		27.0	27.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%		57.3%	57.3%		57.3%	57.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0			8.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019

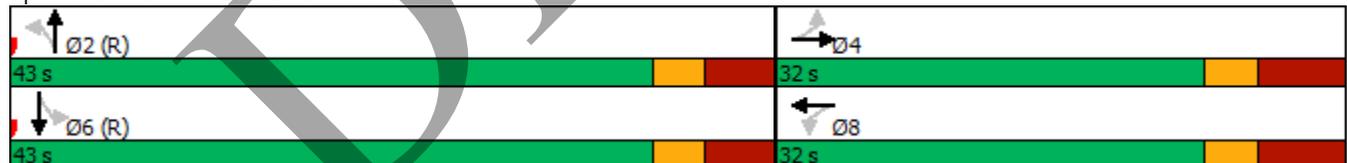


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.83			0.97		0.27	0.53		0.07	0.87	
Control Delay		41.7			69.6		16.1	16.4		11.0	23.5	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		41.7			69.6		16.1	16.4		11.0	23.5	
LOS		D			E		B	B		B	C	
Approach Delay		41.7			69.6			16.4			22.9	
Approach LOS		D			E			B			C	
Queue Length 50th (ft)		139			145		15	101		5	100	
Queue Length 95th (ft)		#269			#294		40	169		m11	#414	
Internal Link Dist (ft)		179			275			183			490	
Turn Bay Length (ft)							60			65		
Base Capacity (vph)		418			343		209	661		421	735	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.83			0.97		0.27	0.53		0.07	0.87	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 90
 Control Type: Pretimed
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 33.9
 Intersection LOS: C
 Intersection Capacity Utilization 86.0%
 ICU Level of Service E
 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.

Splits and Phases: 2: Clark Street & Oak Street



Lanes, Volumes, Timings 3: Clark Street & Maple Street

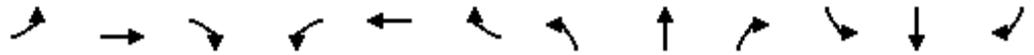
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (vph)	41	94	63	0	0	0	0	284	31	41	521	0
Future Volume (vph)	41	94	63	0	0	0	0	284	31	41	521	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95						0.99			1.00	
Frt		0.957						0.987				
Flt Protected		0.990									0.996	
Satd. Flow (prot)	0	1431	0	0	0	0	0	1343	0	0	1711	0
Flt Permitted		0.990									0.956	
Satd. Flow (perm)	0	1406	0	0	0	0	0	1343	0	0	1635	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34						11			30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			487			570			254	
Travel Time (s)		6.0			11.1			13.0			5.8	
Confl. Peds. (#/hr)	59		43	43		59	128			112	112	128
Confl. Bikes (#/hr)			7							36		22
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	0%	0%	0%	0%	0%	11%	3%	3%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		9						6				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	0	0	0	0	0	346	0	0	618	0
Turn Type	Perm	NA						NA			Perm	NA
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6		6
Switch Phase												
Minimum Initial (s)	23.0	23.0						29.0		29.0		29.0
Minimum Split (s)	31.0	31.0						44.0		44.0		44.0
Total Split (s)	31.0	31.0						44.0		44.0		44.0
Total Split (%)	41.3%	41.3%						58.7%		58.7%		58.7%
Yellow Time (s)	3.0	3.0						3.0		3.0		3.0
All-Red Time (s)	2.0	2.0						1.0		1.0		1.0
Lost Time Adjust (s)		0.0						0.0		0.0		0.0
Total Lost Time (s)		5.0						4.0		4.0		4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max						Max		Max	Max	
Act Effct Green (s)		26.0						40.0		40.0		40.0
Actuated g/C Ratio		0.35						0.53		0.53		0.53

Lanes, Volumes, Timings
 3: Clark Street & Maple Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.43						0.48				0.71
Control Delay		18.8						7.8				18.8
Queue Delay		0.0						0.0				0.0
Total Delay		18.8						7.8				18.8
LOS		B						A				B
Approach Delay		18.8						7.8				18.8
Approach LOS		B						A				B
Queue Length 50th (ft)		63						56				200
Queue Length 95th (ft)		122						m77				324
Internal Link Dist (ft)		184			407			490				174
Turn Bay Length (ft)												
Base Capacity (vph)		509						721				872
Starvation Cap Reductn		0						0				0
Spillback Cap Reductn		0						0				0
Storage Cap Reductn		0						0				0
Reduced v/c Ratio		0.43						0.48				0.71

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 15.6
 Intersection Capacity Utilization 90.4%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Clark Street & Maple Street



HCM 6th AWSC
4: Dearborn Street & Maple Street

10/22/2019

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	62	78	42	0	0	0	0	60	26	41	83	0
Future Vol, veh/h	62	78	42	0	0	0	0	60	26	41	83	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	1	3	0	0	0	0	5	0	2	11	0
Mvmt Flow	69	87	47	0	0	0	0	67	29	46	92	0
Number of Lanes	0	1	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	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.9	8.1	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	34%	33%
Vol Thru, %	70%	43%	67%
Vol Right, %	30%	23%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	86	182	124
LT Vol	0	62	41
Through Vol	60	78	83
RT Vol	26	42	0
Lane Flow Rate	96	202	138
Geometry Grp	1	1	1
Degree of Util (X)	0.118	0.248	0.175
Departure Headway (Hd)	4.435	4.42	4.58
Convergence, Y/N	Yes	Yes	Yes
Cap	809	815	784
Service Time	2.456	2.439	2.601
HCM Lane V/C Ratio	0.119	0.248	0.176
HCM Control Delay	8.1	8.9	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	1	0.6

HCM 6th AWSC
5: Dearborn Street & Walton Street

10/22/2019

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑	↑	↑				↑
Traffic Vol, veh/h	0	0	0	0	380	0	279	12	0	0	0	11
Future Vol, veh/h	0	0	0	0	380	0	279	12	0	0	0	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	0	0	2	0	4	67	0	0	0	27
Mvmt Flow	0	0	0	0	396	0	291	13	0	0	0	11
Number of Lanes	0	0	0	0	1	1	1	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	16.4	14.9	9.2
HCM LOS	C	B	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	12	380	0	11
LT Vol	279	0	0	0	0
Through Vol	0	12	380	0	0
RT Vol	0	0	0	0	11
Lane Flow Rate	291	12	396	0	11
Geometry Grp	7	7	7	7	6
Degree of Util (X)	0.5	0.024	0.604	0	0.019
Departure Headway (Hd)	6.195	6.772	5.494	5.46	6.125
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	575	524	653	0	588
Service Time	3.991	4.569	3.264	3.23	4.125
HCM Lane V/C Ratio	0.506	0.023	0.606	0	0.019
HCM Control Delay	15.1	9.7	16.4	8.2	9.2
HCM Lane LOS	C	A	C	N	A
HCM 95th-tile Q	2.8	0.1	4.1	0	0.1

HCM 6th TWSC
6: Oak Street & Access Drive

10/22/2019

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	240	263	0	0	20
Future Vol, veh/h	0	240	263	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	0	296	325	0	0	25
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	325
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	0	721
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	721
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	10.2			
HCM LOS			B			
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	721			
HCM Lane V/C Ratio	-	-	0.034			
HCM Control Delay (s)	-	-	10.2			
HCM Lane LOS	-	-	B			
HCM 95th %tile Q(veh)	-	-	0.1			

HCM 6th TWSC
7: Dearborn Street & Public Alley

10/22/2019

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	2	2	0	78	124	0
Future Vol, veh/h	2	2	0	78	124	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	1	7	0
Mvmt Flow	2	2	0	96	153	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	249	153	153	0	-	0
Stage 1	153	-	-	-	-	-
Stage 2	96	-	-	-	-	-
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	744	898	1440	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	744	898	1440	-	-	-
Mov Cap-2 Maneuver	744	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	933	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1440	-	814	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM Unsignalized Intersection Capacity Analysis

8: Dearborn Street & Access Drive

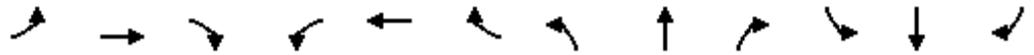
10/22/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	13	78	119	7
Future Volume (Veh/h)	0	0	13	78	119	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	0	0	16	96	147	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	90					
pX, platoon unblocked						
vC, conflicting volume	280	152	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	280	152	156			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	707	900	1436			
Direction, Lane #	NB 1	SB 1				
Volume Total	112	156				
Volume Left	16	0				
Volume Right	0	9				
cSH	1436	1700				
Volume to Capacity	0.01	0.09				
Queue Length 95th (ft)	1	0				
Control Delay (s)	1.2	0.0				
Lane LOS	A					
Approach Delay (s)	1.2	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			18.2%	ICU Level of Service	A	
Analysis Period (min)			15			

Lanes, Volumes, Timings
1: Dearborn Street & Oak Street

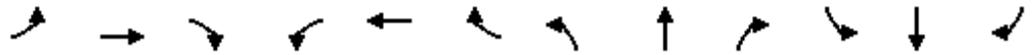
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	15	191	10	15	178	89	40	352	129	48	64	56
Future Volume (vph)	15	191	10	15	178	89	40	352	129	48	64	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98			0.93			0.95			0.96	
Frt		0.993			0.957			0.967			0.955	
Flt Protected		0.997			0.997			0.996			0.986	
Satd. Flow (prot)	0	1530	0	0	1437	0	0	1423	0	0	1407	0
Flt Permitted		0.971			0.981			0.970			0.803	
Satd. Flow (perm)	0	1480	0	0	1405	0	0	1383	0	0	1128	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			41			37			56	
Link Speed (mph)		20			20			20			20	
Link Distance (ft)		133			259			310			90	
Travel Time (s)		4.5			8.8			10.6			3.1	
Confl. Peds. (#/hr)	129		133	133		129	37		138	138		37
Confl. Bikes (#/hr)			11			11			96			6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	2%	3%	3%	2%	1%	0%	11%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		10			1			7			6	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	0	297	0	0	549	0	0	177	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		19.0	19.0		19.0	19.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (s)	28.0	28.0		28.0	28.0		37.0	37.0		37.0	37.0	
Total Split (%)	43.1%	43.1%		43.1%	43.1%		56.9%	56.9%		56.9%	56.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0			33.0			33.0	
Actuated g/C Ratio		0.37			0.37			0.51			0.51	

Lanes, Volumes, Timings
 1: Dearborn Street & Oak Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.42			0.55			0.76				0.29
Control Delay		17.9			18.4			20.9				7.8
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		17.9			18.4			20.9				7.8
LOS		B			B			C				A
Approach Delay		17.9			18.4			20.9				7.8
Approach LOS		B			B			C				A
Queue Length 50th (ft)		64			77			151				25
Queue Length 95th (ft)		119			148			#325				59
Internal Link Dist (ft)		53			179			230				10
Turn Bay Length (ft)												
Base Capacity (vph)		548			544			720				600
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		0.42			0.55			0.76				0.29

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 65
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 65
 Control Type: Pretimed
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 17.9
 Intersection LOS: B
 Intersection Capacity Utilization 59.8%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Dearborn Street & Oak Street



Lanes, Volumes, Timings

2: Clark Street & Oak Street

10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (vph)	32	191	88	56	199	42	66	232	9	27	464	42
Future Volume (vph)	32	191	88	56	199	42	66	232	9	27	464	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	60		0	65		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			85		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.95		0.83	0.99		0.83	0.96	
Frt		0.962			0.981			0.994			0.988	
Flt Protected		0.995			0.991		0.950			0.950		
Satd. Flow (prot)	0	1419	0	0	1500	0	1745	1431	0	1646	1491	0
Flt Permitted		0.936			0.839		0.334			0.599		
Satd. Flow (perm)	0	1318	0	0	1256	0	510	1431	0	860	1491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			12			4			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		259			352			263			570	
Travel Time (s)		5.9			8.0			6.0			13.0	
Confl. Peds. (#/hr)	134		64	64		134	381		223	223		381
Confl. Bikes (#/hr)						1			21			209
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	6%	0%	6%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		12			6			4			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	334	0	0	319	0	71	259	0	29	544	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	11.0	11.0		11.0	11.0		27.0	27.0		27.0	27.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (s)	32.0	32.0		32.0	32.0		43.0	43.0		43.0	43.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%		57.3%	57.3%		57.3%	57.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		8.0			8.0		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max										
Act Effect Green (s)		24.0			24.0		36.0	36.0		36.0	36.0	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	

Lanes, Volumes, Timings
2: Clark Street & Oak Street

10/22/2019

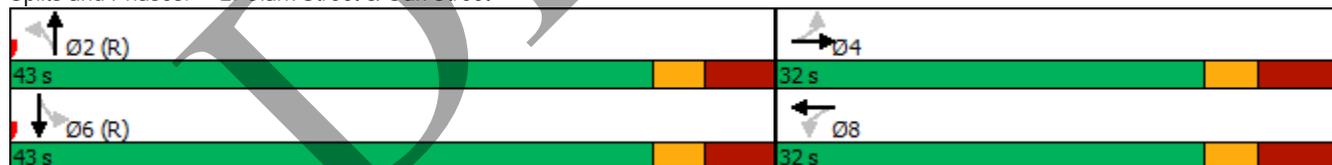


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.76			0.78		0.29	0.38		0.07	0.76	
Control Delay		34.3			37.7		15.9	14.2		9.5	16.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		34.3			37.7		15.9	14.2		9.5	16.6	
LOS		C			D		B	B		A	B	
Approach Delay		34.3			37.7			14.6			16.2	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)		127			128		19	71		5	91	
Queue Length 95th (ft)		#256			#260		49	125		m9	#168	
Internal Link Dist (ft)		179			272			183			490	
Turn Bay Length (ft)							60			65		
Base Capacity (vph)		440			410		244	688		412	719	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.76			0.78		0.29	0.38		0.07	0.76	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 24.1
 Intersection LOS: C
 Intersection Capacity Utilization 95.0%
 ICU Level of Service F
 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.

Splits and Phases: 2: Clark Street & Oak Street



Lanes, Volumes, Timings 3: Clark Street & Maple Street

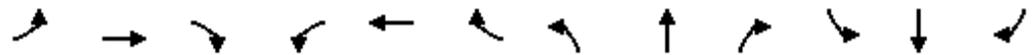
10/22/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (vph)	46	122	84	0	0	0	0	254	28	39	452	0
Future Volume (vph)	46	122	84	0	0	0	0	254	28	39	452	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94						0.99			0.99	
Frt		0.955						0.987				
Flt Protected		0.991									0.996	
Satd. Flow (prot)	0	1402	0	0	0	0	0	1167	0	0	1679	0
Flt Permitted		0.991									0.957	
Satd. Flow (perm)	0	1362	0	0	0	0	0	1167	0	0	1603	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37						11				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		264			487			570			254	
Travel Time (s)		6.0			11.1			13.0			5.8	
Confl. Peds. (#/hr)	109		62	62		109	163		136	136		163
Confl. Bikes (#/hr)			2			2			10			139
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	3%	1%	0%	0%	0%	0%	29%	6%	5%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	12	0	0	7	0
Parking (#/hr)		9						6				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	274	0	0	0	0	0	306	0	0	533	0
Turn Type	Perm	NA						NA			Perm	NA
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6	6	
Switch Phase												
Minimum Initial (s)	23.0	23.0						29.0		29.0	29.0	
Minimum Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (s)	31.0	31.0						44.0		44.0	44.0	
Total Split (%)	41.3%	41.3%						58.7%		58.7%	58.7%	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						1.0		1.0	1.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		5.0						4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max						Max		Max	Max	
Act Effct Green (s)		26.0						40.0			40.0	
Actuated g/C Ratio		0.35						0.53			0.53	

Lanes, Volumes, Timings
 3: Clark Street & Maple Street

10/22/2019

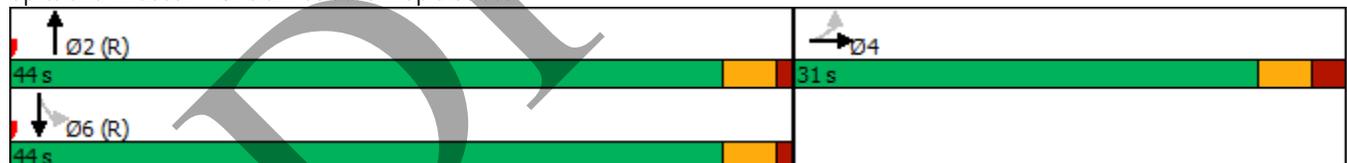


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.55						0.49				0.62
Control Delay		22.0						8.5				16.3
Queue Delay		0.0						0.0				0.0
Total Delay		22.0						8.5				16.3
LOS		C						A				B
Approach Delay		22.0						8.5				16.3
Approach LOS		C						A				B
Queue Length 50th (ft)		87						48				161
Queue Length 95th (ft)		162						m67				261
Internal Link Dist (ft)		184			407			490				174
Turn Bay Length (ft)												
Base Capacity (vph)		496						627				854
Starvation Cap Reductn		0						0				0
Spillback Cap Reductn		0						0				0
Storage Cap Reductn		0						0				0
Reduced v/c Ratio		0.55						0.49				0.62

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of 1st Green
 Natural Cycle: 75
 Control Type: Pretimed
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 15.6
 Intersection Capacity Utilization 85.8%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Clark Street & Maple Street



HCM 6th AWSC
4: Dearborn Street & Maple Street

10/22/2019

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	37	121	37	0	0	0	0	329	107	71	127	0
Future Vol, veh/h	37	121	37	0	0	0	0	329	107	71	127	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	0	3	0	0	0	0	4	4	0	6	0
Mvmt Flow	41	134	41	0	0	0	0	366	119	79	141	0
Number of Lanes	0	1	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	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	11.4	15.7	10.7
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	19%	36%
Vol Thru, %	75%	62%	64%
Vol Right, %	25%	19%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	436	195	198
LT Vol	0	37	71
Through Vol	329	121	127
RT Vol	107	37	0
Lane Flow Rate	484	217	220
Geometry Grp	1	1	1
Degree of Util (X)	0.632	0.336	0.32
Departure Headway (Hd)	4.697	5.587	5.239
Convergence, Y/N	Yes	Yes	Yes
Cap	756	646	689
Service Time	2.795	3.596	3.252
HCM Lane V/C Ratio	0.64	0.336	0.319
HCM Control Delay	15.7	11.4	10.7
HCM Lane LOS	C	B	B
HCM 95th-tile Q	4.6	1.5	1.4

HCM 6th AWSC
5: Dearborn Street & Walton Street

10/22/2019

Intersection	
Intersection Delay, s/veh	26.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑	↑	↑	↑				↑
Traffic Vol, veh/h	0	0	0	0	419	95	228	437	0	0	0	83
Future Vol, veh/h	0	0	0	0	419	95	228	437	0	0	0	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	1	1	5	1	0	0	0	9
Mvmt Flow	0	0	0	0	441	100	240	460	0	0	0	87
Number of Lanes	0	0	0	0	1	1	1	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	29.1	26.4	11.2
HCM LOS	D	D	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	228	437	419	95	83
LT Vol	228	0	0	0	0
Through Vol	0	437	419	0	0
RT Vol	0	0	0	95	83
Lane Flow Rate	240	460	441	100	87
Geometry Grp	7	7	7	7	6
Degree of Util (X)	0.466	0.819	0.821	0.166	0.164
Departure Headway (Hd)	6.988	6.411	6.698	5.988	6.748
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	514	561	538	597	529
Service Time	4.747	4.17	4.456	3.747	4.822
HCM Lane V/C Ratio	0.467	0.82	0.82	0.168	0.164
HCM Control Delay	15.7	32	33.4	9.9	11.2
HCM Lane LOS	C	D	D	A	B
HCM 95th-tile Q	2.4	8.2	8.2	0.6	0.6

HCM 6th TWSC
6: Oak Street & Access Drive

10/23/2019

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	216	274	0	0	20
Future Vol, veh/h	0	216	274	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	2	0	0	0
Mvmt Flow	0	227	288	0	0	21
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	288
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	0	756
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	756
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	9.9			
HCM LOS						A
Minor Lane/Major Mvmt	EBT	WBT	SBLn1			
Capacity (veh/h)	-	-	756			
HCM Lane V/C Ratio	-	-	0.028			
HCM Control Delay (s)	-	-	9.9			
HCM Lane LOS	-	-	A			
HCM 95th %tile Q(veh)	-	-	0.1			

HCM 6th TWSC
7: Dearborn Street & Public Alley

10/23/2019

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	2	0	445	174	1
Future Vol, veh/h	0	2	0	445	174	1
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	2	5	0
Mvmt Flow	0	2	0	468	183	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	652	184	184	0	-	0
Stage 1	184	-	-	-	-	-
Stage 2	468	-	-	-	-	-
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	436	864	1403	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	436	864	1403	-	-	-
Mov Cap-2 Maneuver	436	-	-	-	-	-
Stage 1	852	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1403	-	864	-	-	
HCM Lane V/C Ratio	-	-	0.002	-	-	
HCM Control Delay (s)	0	-	9.2	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM Unsignalized Intersection Capacity Analysis

8: Dearborn Street & Access Drive

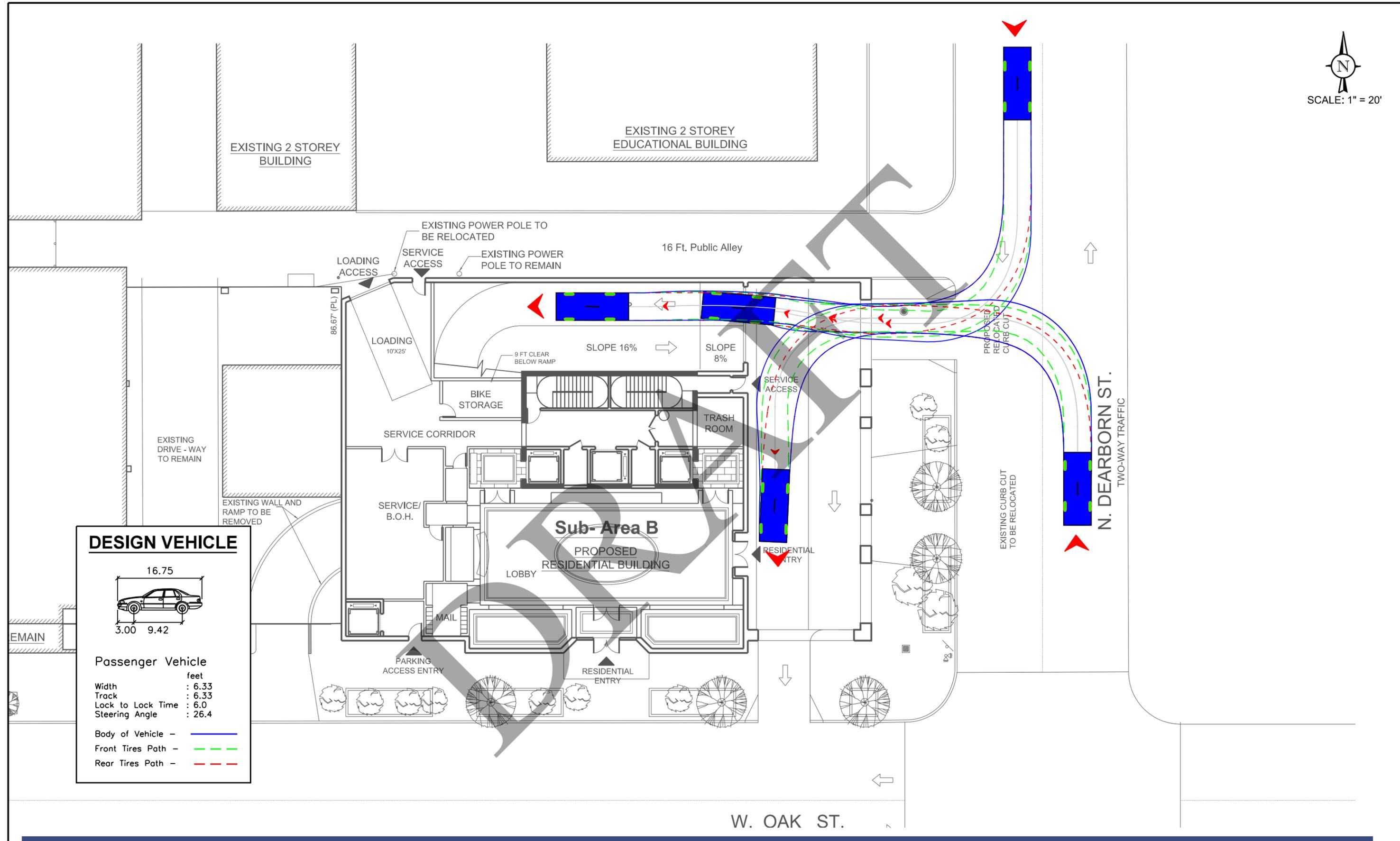
10/22/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↕	↕	
Traffic Volume (veh/h)	0	0	11	445	168	8
Future Volume (Veh/h)	0	0	11	445	168	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	12	468	177	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	90					
pX, platoon unblocked						
vC, conflicting volume	673	181	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	673	181	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	420	867	1402			
Direction, Lane #	NB 1	SB 1				
Volume Total	480	185				
Volume Left	12	0				
Volume Right	0	8				
cSH	1402	1700				
Volume to Capacity	0.01	0.11				
Queue Length 95th (ft)	1	0				
Control Delay (s)	0.3	0.0				
Lane LOS	A					
Approach Delay (s)	0.3	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			35.6%	ICU Level of Service	A	
Analysis Period (min)			15			

DRAFT

Passenger Vehicle AutoTURN Exhibits



DESIGN VEHICLE

16.75

3.00 9.42

EMAIN

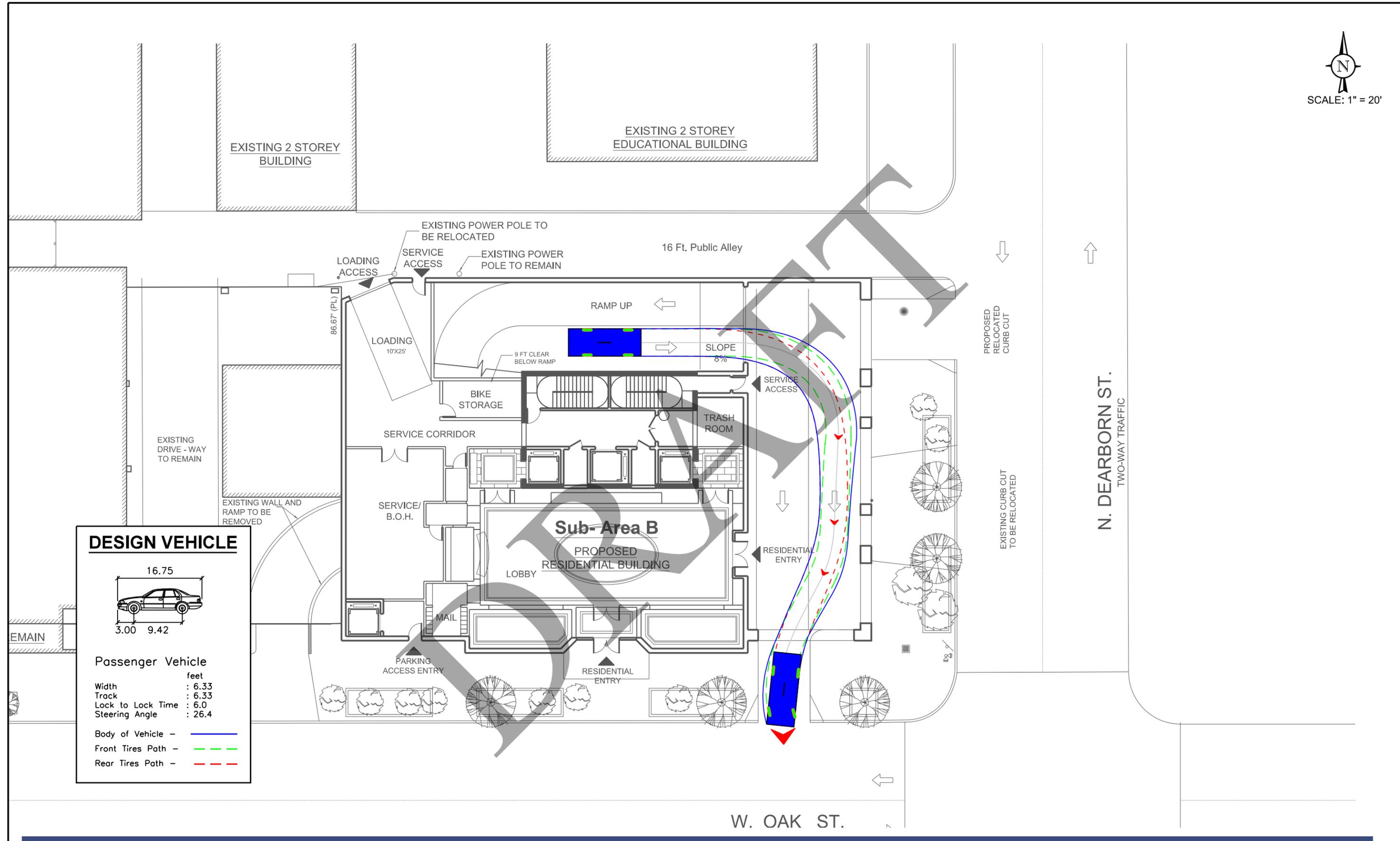
Passenger Vehicle

	feet
Width	: 6.33
Track	: 6.33
Lock to Lock Time	: 6.0
Steering Angle	: 26.4

Body of Vehicle - —

Front Tires Path - - - -

Rear Tires Path - - - -



DESIGN VEHICLE

16.75

3.00 9.42

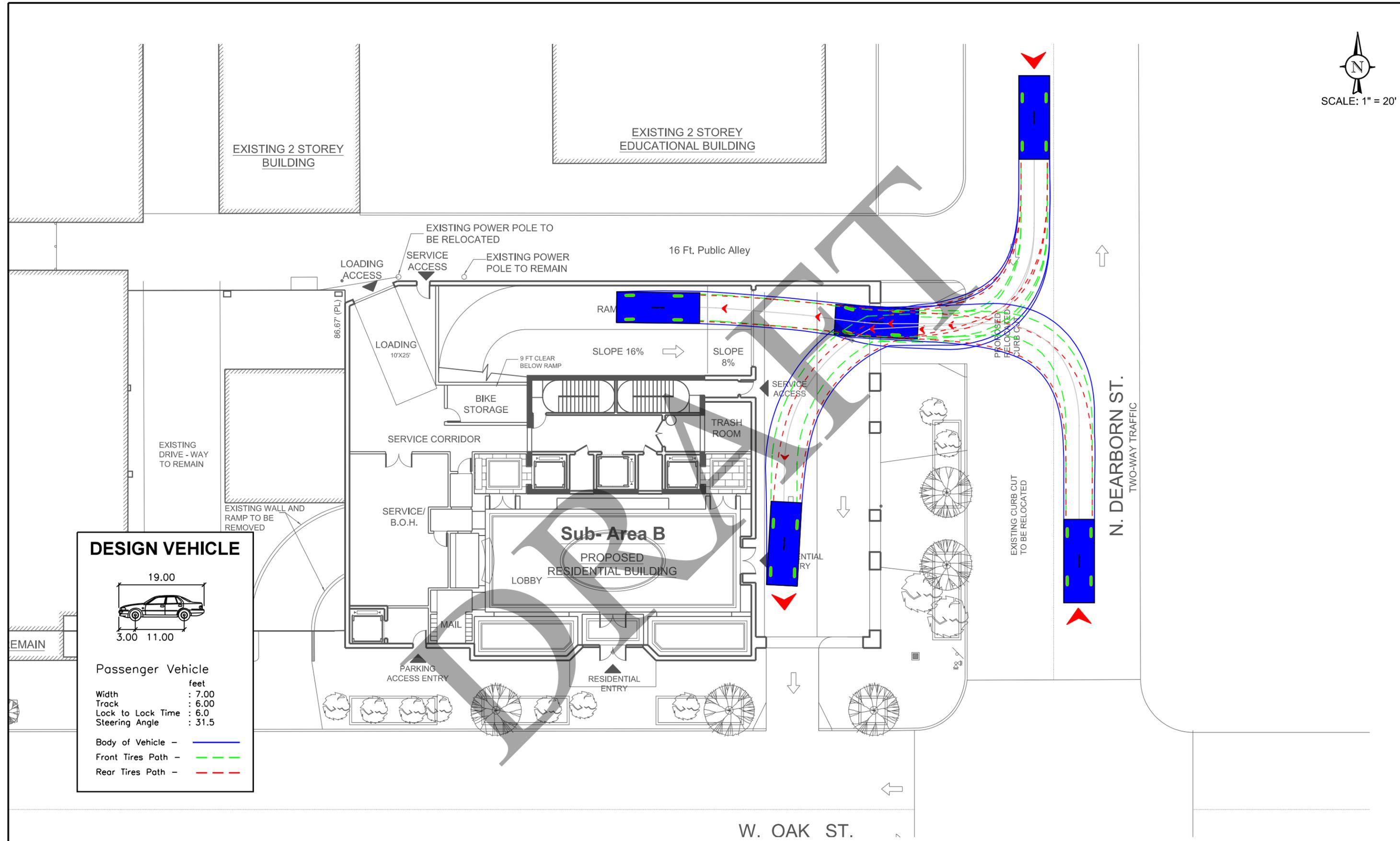
Passenger Vehicle

	feet
Width	: 6.33
Track	: 6.33
Lock to Lock Time	: 6.0
Steering Angle	: 26.4

Body of Vehicle - —

Front Tires Path - - - -

Rear Tires Path - - - -



DESIGN VEHICLE

19.00

3.00 11.00

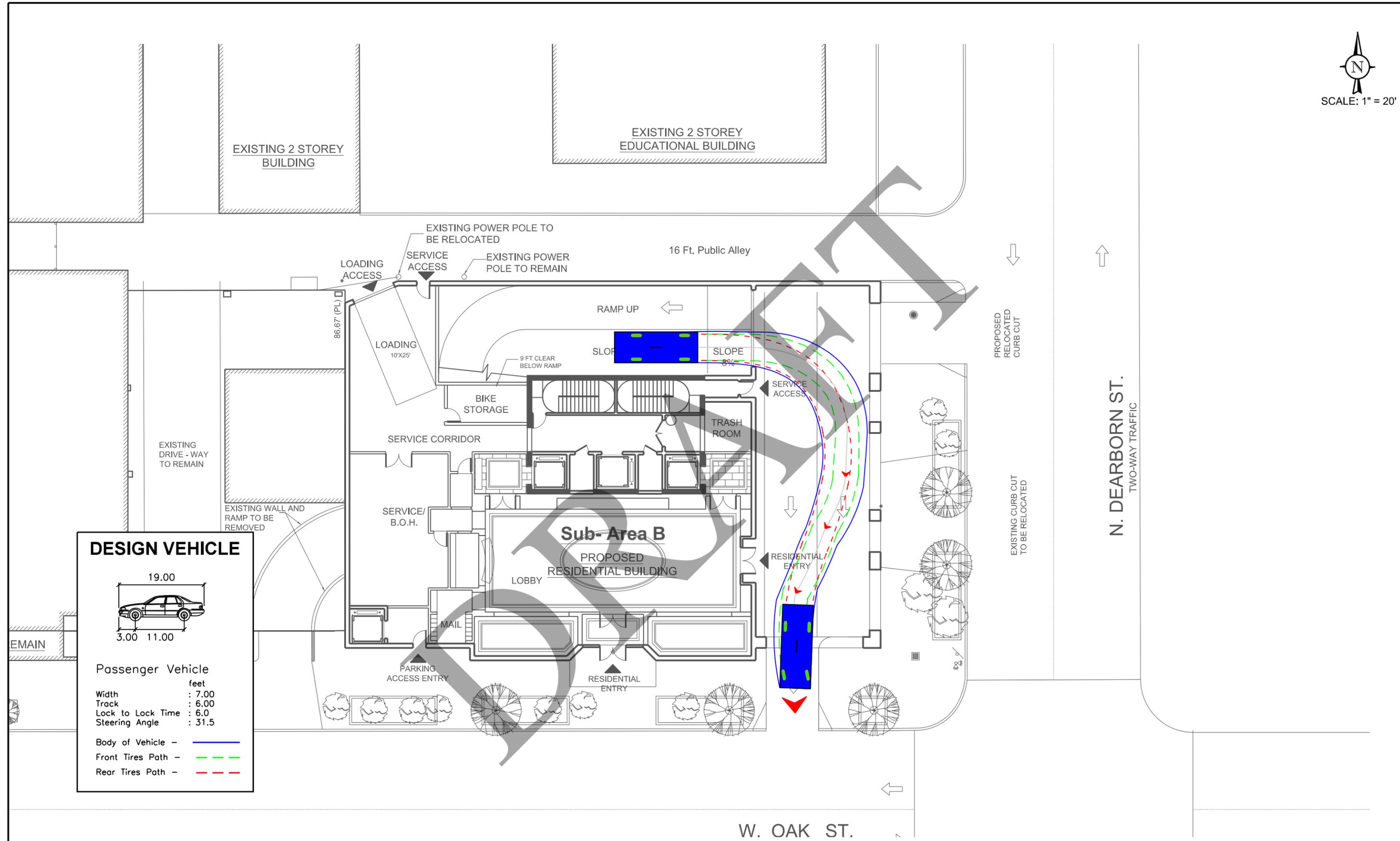
Passenger Vehicle

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.5

Body of Vehicle - —

Front Tires Path - - - -

Rear Tires Path - - - -



DESIGN VEHICLE

19.00

3.00 11.00

Passenger Vehicle

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.5

Body of Vehicle - —

Front Tires Path - - - -

Rear Tires Path - - - -