

CHICAGOLAND MATERIALS

Traffic Impact Study

Chicago, IL

**September 2022
Updated April
2023**

Prepared for:

Chicagoland Materials, Inc.

Kimley»»Horn

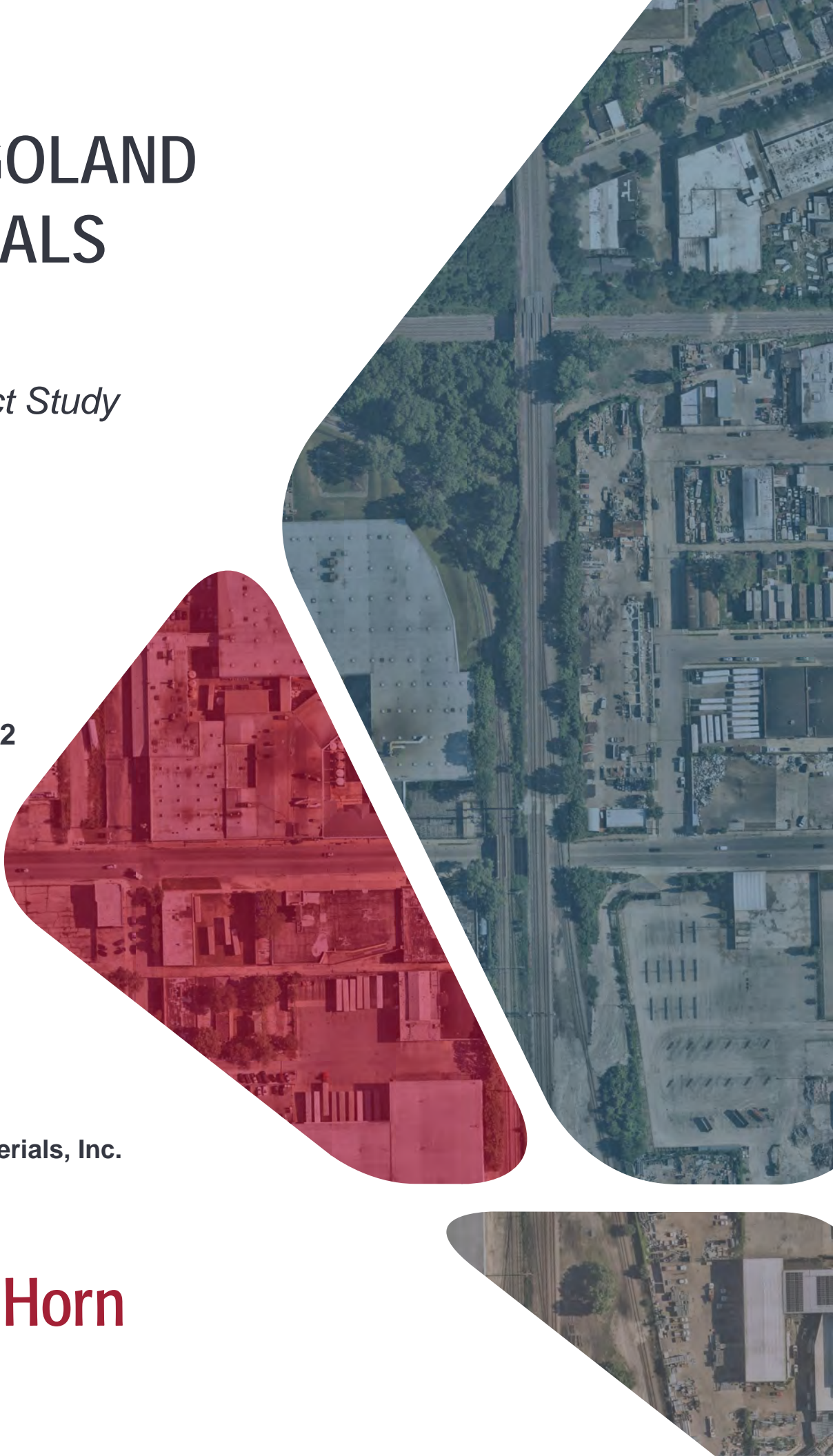


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EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc. (Kimley-Horn) was retained by Chicagoland Materials Inc. to perform a traffic impact study for an existing landscape wholesale business located at 4556 West Roosevelt Road in Chicago, Illinois. The existing site maintains two full-access driveways along the 4500 block of South Kolmar Avenue. This study was prepared as part of requirements to bring Chicagoland Materials into compliance with a new air quality ordinance recently put in place by the City of Chicago.

As part of the traffic impact study, existing and potential future conditions were evaluated at the study area intersections and the existing site access driveways to assess the potential impact growth in operations at the subject site could have on the nearby roadway network. Based on a review of future traffic conditions, site-generated traffic is not expected to materially impact the study intersections. The study intersections and approaches are expected to operate at similar levels of service under Future (2024) Potential Increased Operations conditions as compared to existing conditions. Therefore, no off-site improvements are recommended to accommodate the potential growth site traffic.

1. INTRODUCTION

Kimley-Horn was retained to conduct a traffic impact study for an existing landscape wholesale business located at 4556 West Roosevelt Road in Chicago, Illinois. The site is bounded by industrial uses to the north, Kolmar Avenue to the east, Roosevelt Road to the south, and railroad tracks to the west. Access to the site is currently provided via two full-access driveways along Kolmar Avenue (North Site Access and South Site Access). An aerial view of the study location and surrounding area roadway network is presented in **Exhibit 1**.

As part of this study, the existing network was analyzed to determine the current operations at the study intersections. Site trip generation characteristics were established and added to projected background traffic volumes in order to assess the site's potential impact of the area roadway network. This report presents and documents data collection, summarizes the evaluation of the existing and projected future traffic conditions on the surrounding roadways, and identifies recommendations to address the potential impact of site-generated traffic on the adjacent roadway network.



NORTH
NOT TO SCALE



2. EXISTING CONDITIONS

Based on aerial imagery as well as a site visit, Kimley-Horn conducted a review of the subject site including existing land uses in the surrounding area, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic conditions at nearby intersections, and other key roadway characteristics. This sections of the report details information on the existing conditions, while **Exhibit 2** graphically depicts these operations.

Area Land Uses & Connectivity

Located along the west side of Kolmar Avenue between Roosevelt Road and Filmore Street, the subject site is currently operational as a landscape wholesale business. In addition to this use, it is Kimley-Horns understanding that the site was also previously utilized by trucks to drop off recyclable materials to then be picked up and delivered to nearby recycling centers. This activity was entirely conducted by existing customers who were patronizing the business for typical landscape material transactions, such as gathering materials prior to heading to a job site in the morning or depositing excess materials after a day's work.

Local connectivity is provided in the east- and westbound directions via Roosevelt Road. Connectivity is also provided in the north- and southbound directions via Cicero Avenue, Kostner Avenue, and Kilbourn Avenue. Partial interchanges with Interstate 290 (Eisenhower Expressway) are located approximately one mile from the site and provide regional access in the east- and westbound directions.

Existing Roadway Characteristics

The following information documents key roadway characteristics within the study area's existing roadway network. Unless otherwise noted, all study area roadways are under the jurisdiction of the City of Chicago with an assumed 30 miles per hour (MPH) speed limit, per City Ordinance.

Roosevelt Road is an east-west, undivided roadway that runs along the southern frontage of the site. The Illinois Department of Transportation (IDOT) classifies Roosevelt Road as a Principal Arterial. For purposes of this study, it was assumed that Roosevelt Road provides one travel lane in each direction through the study area. At its unsignalized T-intersection with Kolmar Avenue, Roosevelt Road provides one shared left-through travel lane on the west leg of the intersection and one shared right-through travel lane on the east leg of the intersection. At its unsignalized intersection with Kilbourn Avenue, Roosevelt Road provides one shared left-through-right travel lane on the east and west legs of the intersection. At its signalized intersection with Kostner Avenue, Roosevelt Road provides one shared right-through travel lane and a dedicated left-turn lane on both the east and west legs of the intersection. A speed limit of 30 miles per hour (MPH) is posted on Roosevelt Road in both the east- and westbound directions. Roosevelt Road is under IDOT jurisdiction.

Kolmar Avenue is a north-south, undivided roadway that runs along the eastern frontage of the site. IDOT classifies Kolmar Avenue as a Local Roadway. Throughout the study area, Kolmar Avenue provides one travel lane in each direction. At its intersections with North Site Access and South Site Access, Kolmar Avenue provides a shared left-through travel lane on the south leg and a shared right-through travel lane on the north leg. At its unsignalized intersection with Roosevelt Road, Kolmar Avenue provides a shared right-left travel lane.

Kilbourn Avenue is a north-south roadway located approximately 500 feet east of the site. IDOT classifies Kilbourn Avenue as a Local Roadway. At its unsignalized intersection with Roosevelt Road, Kilbourn Avenue provides a shared right-left-through travel lane on the north and south legs of the intersection.

Kostner Avenue is a north-south roadway located approximately 1000 feet east of the site. IDOT classifies Kostner Avenue as a Major Collector. At its signalized intersection with Roosevelt Road, Kostner Avenue provides a shared right-through travel lane and a dedicated left turn lane on the north and south legs of the intersection.



LEGEND

- Existing Travel Lane
- Existing Stop Sign
- ⊕ Existing Signalized Intersection
- ⊕ Existing CTA Bus Stop
- ▭ Existing Pedestrian Crossing

Traffic Count Data

Turning movement count data was collected in June 2022 at the following intersections:

- Roosevelt Road / Kostner Avenue
- Roosevelt Road / Kilbourn Avenue
- Roosevelt Road / Kolmar Avenue
- Kolmar Avenue / South Site Access
- Kolmar Avenue / North Site Access

The counts were conducted on a typical weekday from 7:00 to 9:00 AM and 4:00 to 6:00 PM. These count periods were selected in order to capture the peak travel periods in the area. The traffic data revealed that peak traffic conditions occur within the study area from 7:15-8:15AM and 4:45-5:45PM. The peak hour vehicle traffic volumes were rounded to the nearest multiple of five and balanced between the study intersections. The existing vehicular traffic volumes are presented in **Exhibit 3A**, while the existing bicycle and pedestrian volumes are depicted on **Exhibit 3B**. A summary of the traffic count data is provided in the appendix.

Parking Observations



Parking observations were conducted along Roosevelt Road and Kolmar Avenue. The parking conditions are noted below:

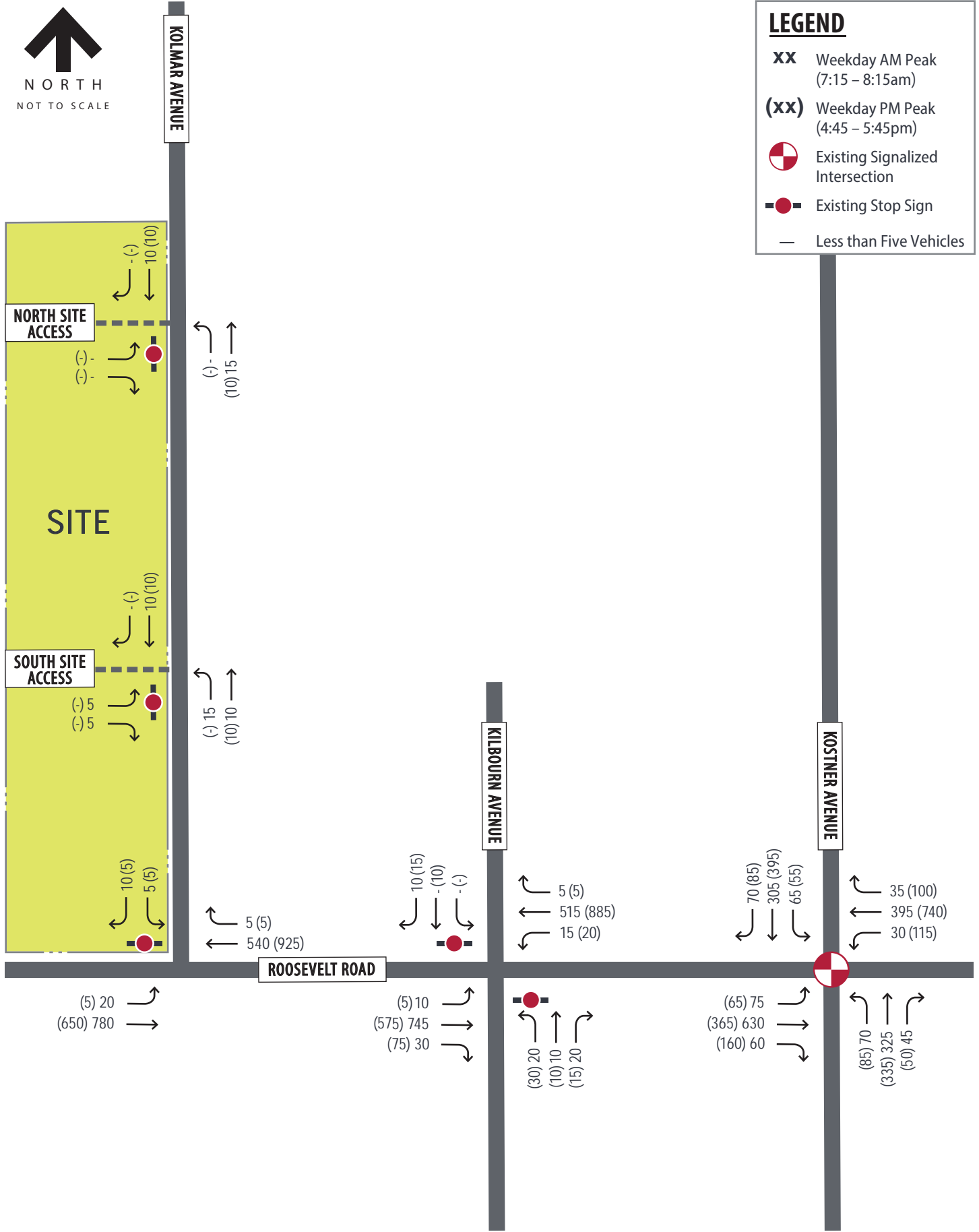
On-street parking is prohibited on both the north and south sides of Roosevelt Road in the development's vicinity.

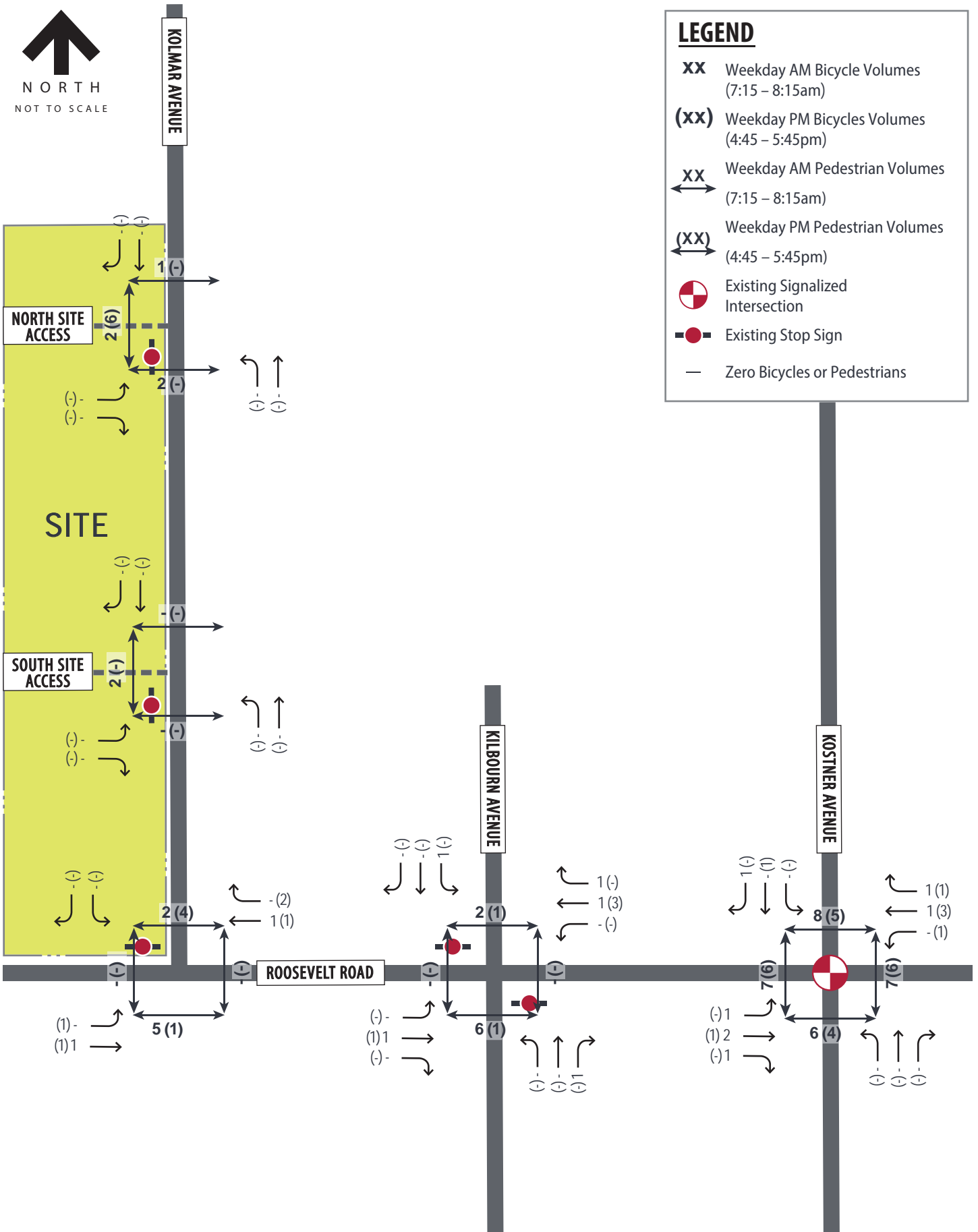
Vehicles park on both the east and west sides of Kolmar Avenue. On the west side, parking capacity includes 6 spaces south of Greshaw Street and 8 spaces north of Greshaw Street / south of Filmore Street. On the east side, parking capacity includes 6 spaces south of the South Site Access, 8 spaces in between the two site accesses, and 6 spaces north of the North Site Access. During a field visit, it was observed that trucks and trailers queue along Kolmar Avenue utilizing the on-street parking spaces during both the AM and PM peak hours. In particular, it was noted that five to six trucks were queued along Kolmar Avenue near the Chicagoland Materials site access points prior to the business opening, presumably waiting to pick up materials prior to travelling to job sites. This queue was not observed to impact operations along Roosevelt Road or adjacent streets in the area.



LEGEND

- XX** Weekday AM Peak (7:15 – 8:15am)
- (XX)** Weekday PM Peak (4:45 – 5:45pm)
-  Existing Signalized Intersection
-  Existing Stop Sign
- Less than Five Vehicles





Existing Capacity Analysis

Capacity analysis for the existing and future conditions was performed using Synchro Version 11. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions). The lowest LOS grade typically accepted by jurisdictional transportation agencies in Northeastern Illinois is LOS D.

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2.1**.

Table 2.1 Level of Service Grading Descriptions

Level of Service ¹	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

¹Highway Capacity Manual, 6th Edition.

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 2.2**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, note that higher delays are tolerated for the corresponding LOS ratings.

Table 2.2 Level of Service Grading Criteria

Level of Service ¹	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F ²	> 50	> 80

¹Highway Capacity Manual, 6th Edition

²All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Based on these standards, capacity results were identified for the study intersections under existing conditions. The results of capacity analysis for existing conditions are summarized in **Table 2.3**. In this table, operation on each approach is quantified according to the average delay per vehicle and

the corresponding level of service. The results for the study intersections are based on HCM 6th Edition capacity analysis. Copies of the Synchro reports are provided in the appendix. Signal timings at the intersection of Roosevelt Road/Kostner Avenue were obtained from the Chicago Department of Transportation (CDOT).

Table 2.3 Existing (2022) Levels of Service

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Roosevelt Road / Kostner Avenue *				
Eastbound	20+	C	18	B
Westbound	14	B	36	D
Northbound	16	B	17	B
Southbound	16	B	17	B
<i>Intersection</i>	17	B	24	C
Roosevelt Road / Kilbourn Avenue △				
Eastbound (Left)	9	A	11	B
Westbound (Left)	11	B	9	A
Northbound	40	E	108	F
Southbound	18	C	35+	E
Roosevelt Road / Kolmar Avenue △				
Eastbound (Left)	9	A	12	B
Southbound	21	C	31	D
Kolmar Avenue / South Site Access △				
Eastbound	9	A	9	A
Northbound (Left)	8	A	8	A
Kolmar Avenue / North Site Access △				
Eastbound	9	A	9	A
Northbound (Left)	7	A	7	A

* - Signalized Intersection

△ - Minor-Leg Stop-Controlled Intersection

The overall network during the AM and PM peak hours functions efficiently with most movements and approaches operating at acceptable LOS D or better, with the one exception noted below.

At the unsignalized intersection of Roosevelt Road / Kilbourn Avenue, the northbound approach currently operates at LOS E during the morning peak hour and LOS F during the evening peak hour. Additionally, the southbound approach at the intersection currently operates at LOS E during the evening peak hour. Due to heavy mainline (east and west) traffic along Roosevelt Road, it is not uncommon for the stop-controlled minor-leg approaches to experience a high level of delay. The 95th percentile queue for each of these approaches is estimated to be 3 vehicles (75 feet) or less, which does not impact any existing driveways or site access points in the area.

3. DEVELOPMENT CHARACTERISTICS

This section of the report summarizes site-specific traffic characteristics and develops future traffic projections for analysis.

Development Characteristics

The development currently operates as a landscape wholesale business at 4556 West Roosevelt Road in Chicago, Illinois. In addition to this use, the site also previously operated a recycling business in which trucks drop off recyclable materials to later be delivered to nearby recycling centers. This activity has since been placed on hold due to a new City of Chicago ordinance. It is worth noting that activity related to the recycling business was entirely conducted by existing customers who were picking up and dropping off landscape materials. The number of vehicles entering and exiting the site on any given day has not materially changed since the recycling business has been placed on hold. The existing site maintains two full-access driveways along the 4500 block of South Kolmar Avenue. The existing development characteristics reflects the characteristics assumed in this traffic study. A site plan, which does not indicate any changes or alterations to operations, is provided in the appendix.

Trip Generation

Site-generated trip estimates were developed using existing traffic count data collected in the study area and coordination with the owner. As indicated by the existing traffic count data, approximately 15 customer trips entered the site and 10 customer trips exited the site during the morning peak hour. No customer trips were observed to access the site during the evening peak hour. Based on conversations with the owner, customer trips currently generated by the site are reflective of the current operation of the facility as a landscape wholesale business and recycling business. Although site operations are not anticipated to be altered, to provide a conservative analysis demonstrative of the possible effects of increasing operational capacity, the existing driveway trips were doubled to forecast a 100% increase in operations.

No vehicles were observed to access the site during the study area evening peak hour. However, for a conservative analysis, it was assumed that roughly the same number of customers would access the site during the evening peak period as the morning peak period in a possible scenario where site operations are increased. Projected site traffic volumes for customers and employees are summarized in **Table 3.1**.

Table 3.1 Site-Generated Traffic Projections

Land Use	Weekday ¹					
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Current Operations	15	10	25	-	-	-
Potential Increased Operations	30	20	50	30	20	50

¹In/Out volumes are rounded to the nearest multiple of five.

Directional Distribution

The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as the nature of surrounding land uses, prevailing traffic volumes/patterns, characteristics of the street system, and the ease with which motorists can travel over various sections of that system. The anticipated directional distributions are outlined in **Table 3.2**.

Table 3.2 Estimated Trip Distribution

Traveling to/from	Estimated Trip Distribution
West on Roosevelt Road	30%
East on Roosevelt Road	30%
North on Kostner Avenue	30%
South on Kostner Avenue	10%
Total	100%

Directional distribution was assumed to be the same for customers and employees. Based on these assumptions, the site-generated trip assignment for a potential 100% increase in site operation is illustrated on **Exhibit 4**.

24 Hour Trip Generation

To aid in the evaluation of the air quality review, a 24-hour trip generation estimate of the site under existing operations was prepared to anticipate site traffic outside the typical peak hours analyzed in this report. The development currently operates as a landscape wholesale business and in addition to this use, the site also previously operated a recycling business. This activity has since been placed on hold due to a new City of Chicago ordinance. According to Chicagoland Materials, the recycling business was entirely conducted by existing customers who were picking up and dropping off landscape materials. The number of passenger vehicles or trucks accessing the site on any given day has not materially changed since the recycling business has been placed on hold.

The data presented in the table on the following page differs from the future traffic projections analyzed for traffic impact in Section 4 of this report. The traffic impact analysis included a hypothetical scenario of a 100 percent increase in traffic to illustrate how the surrounding streets provide more than enough capacity, even with an unrealistic increase in site traffic generation.

Since no change in operations is expected, the 24-hour trip generation estimate is based upon existing traffic data found in Section 2 of this report and the Appendix. As such, existing site traffic count data reflective of current operations was augmented to project weekday daily site-generated trips using hourly time-of-day distributions provided in the appendix of the Institute of Transportation Engineers (ITE) *Trip Generation, 11th Edition*. While the *Trip Generation, 11th Edition* manual does not provide data for the specific use of the subject site, ITE Land Use Code (LUC) 110 - General Light Industrial was selected due to its similarity in nature to the Chicagoland Materials use. ITE LUC 110 time-of-day distributions were then utilized to calculate weekday daily and weekday hourly site-generated trips for both passenger vehicles and trucks, which are displayed in **Table 3.3**.

No new passenger car or truck trips are anticipated at any time of day.

Table 3.3 Estimated Weekday 24-Hour Site-Generated Traffic Projections (Existing)

Time	Passenger Vehicle	Truck	Total
0:00 - 1:00	0	0	0
1:00 - 2:00	0	0	0
2:00 - 3:00	0	1	1
3:00 - 4:00	0	0	0
4:00 - 5:00	1	0	1
5:00 - 6:00	5	0	5
6:00 - 7:00	7	0	7
7:00 - 8:00 ¹	18	12	30
8:00 - 9:00	14	15	29
9:00 - 10:00	13	25	38
10:00 - 11:00	14	23	37
11:00 - 12:00	13	10	23
12:00 - 13:00	18	14	32
13:00 - 14:00	14	20	34
14:00 - 15:00	14	17	31
15:00 - 16:00	15	14	29
16:00 - 17:00	13	5	18
17:00 - 18:00 ¹	0	1	1
18:00 - 19:00	2	0	2
19:00 - 20:00	0	0	0
20:00 - 21:00	0	0	0
21:00 - 22:00	0	0	0
22:00 - 23:00	0	0	0
23:00 - 0:00	0	0	0
Daily	161	157	318

¹Peak hour data referenced from traffic counts in the Appendix.



4. FUTURE CONDITIONS

This section of the report summarizes site-specific traffic characteristics and develops future projections for analysis.

Future (2024) Background Traffic Projections

Background traffic volumes were estimated using data from the Chicago Metropolitan Agency for Planning (CMAP). Based on information received from CMAP, traffic growth along Roosevelt Road and Kostner Avenue is projected at a compounded rate of roughly 0.20 percent annual through Year 2050. An official letter from CMAP documenting the projected Year 2050 traffic volume on Roosevelt Road is included in the appendix. However, for purposes of this study, the CDOT standard growth rate of 0.5% for vehicular traffic was utilized. The future background traffic volumes for Year 2024 are presented in **Exhibit 5**. It should be noted that bicycle and pedestrian volumes were grown by CDOT standard 2%, however, the existing volumes for both modes were low enough that no change resulted as a result of applying the growth factor.

Table 4.1 Future (2024) Background Levels of Service

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Roosevelt Road / Kostner Avenue *				
Eastbound	21	C	18	B
Westbound	14	B	37	D
Northbound	16	B	17	B
Southbound	16	B	17	B
<i>Intersection</i>	<i>17</i>	<i>B</i>	<i>25</i>	<i>C</i>
Roosevelt Road / Kilbourn Avenue △				
Eastbound (Left)	9	A	11	B
Westbound (Left)	11	B	9	A
Northbound	40	E	108	F
Southbound	19	C	35	E
Roosevelt Road / Kolmar Avenue △				
Eastbound (Left)	9	A	12	B
Southbound	21	C	32	D
Kolmar Avenue / South Site Access △				
Eastbound	9	A	9	A
Northbound (Left)	8	A	8	A
Kolmar Avenue / North Site Access △				
Eastbound	9	A	9	A
Northbound (Left)	7	A	7	A

* - Signalized Intersection

△ - Minor-Leg Stop-Controlled Intersection

The overall network under Future (2024) Background conditions during the morning and evening peak hours is anticipated to continue functioning similar to existing conditions with most movements and approaches operating acceptably at LOS D or better. The minor-leg approaches at the unsignalized intersection of Roosevelt Road/Kilbourn Avenue operate similarly to existing conditions without notable increases in delay or projected 95th percentile queue length.

Future (2024) Potential Increased Operations Traffic Projections



Site trips reflective of an increase in site operations (Exhibit 3) were added to the background traffic projections (Exhibit 4) to calculate traffic projections in a future scenario where site operations are increased by 100%. Traffic projections for the Future (2024) Potential Increased Operations scenario are illustrated in **Exhibit 6**.

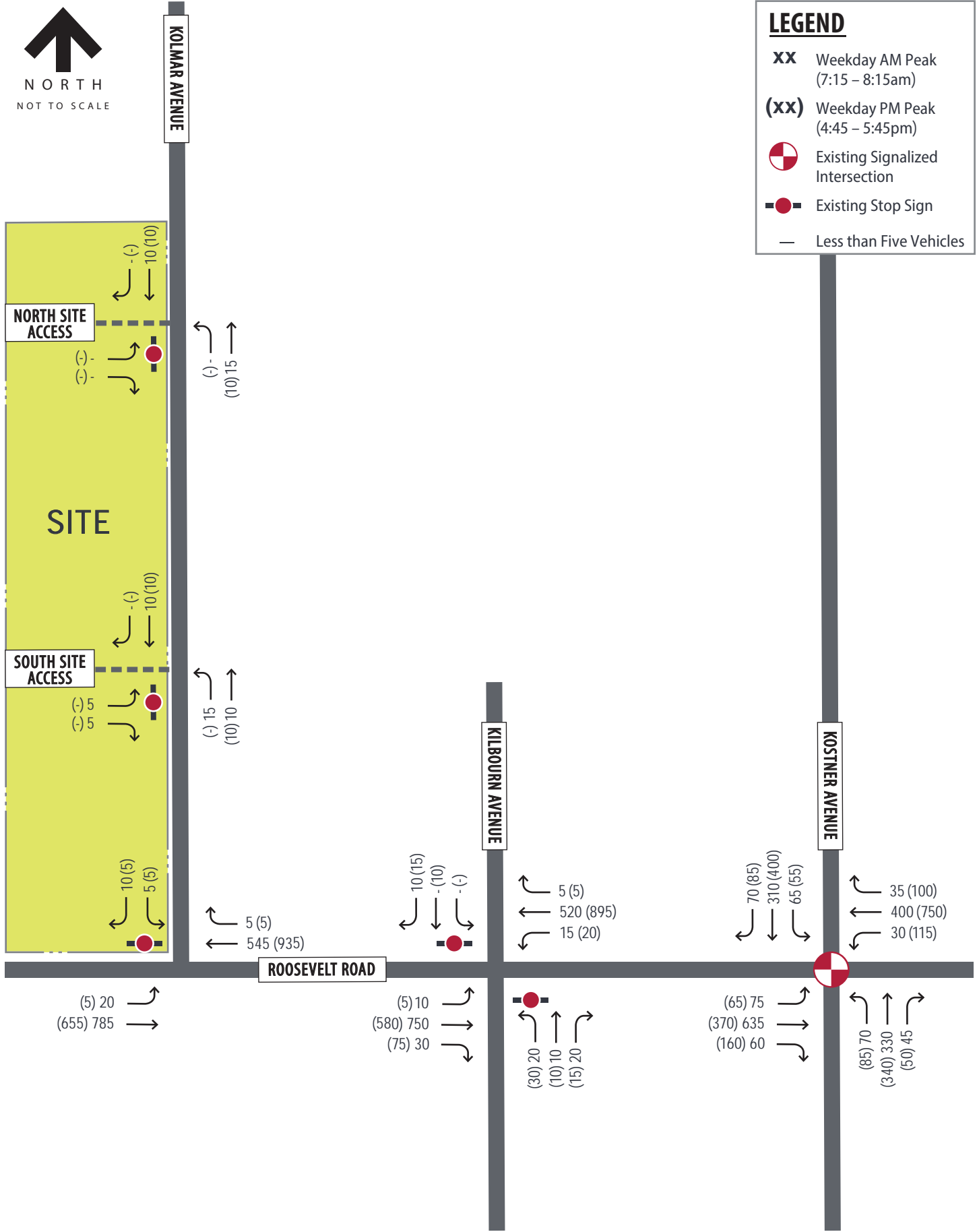
Future Geometry

Given the results of the capacity analysis in **Table 4.1**, additional turn lanes and modifications to the traffic signal at Roosevelt / Kostner, as well as both the north and south site access driveways along Kolmar are not recommended. The existing roadway network is expected to function at adequate levels of service.



LEGEND

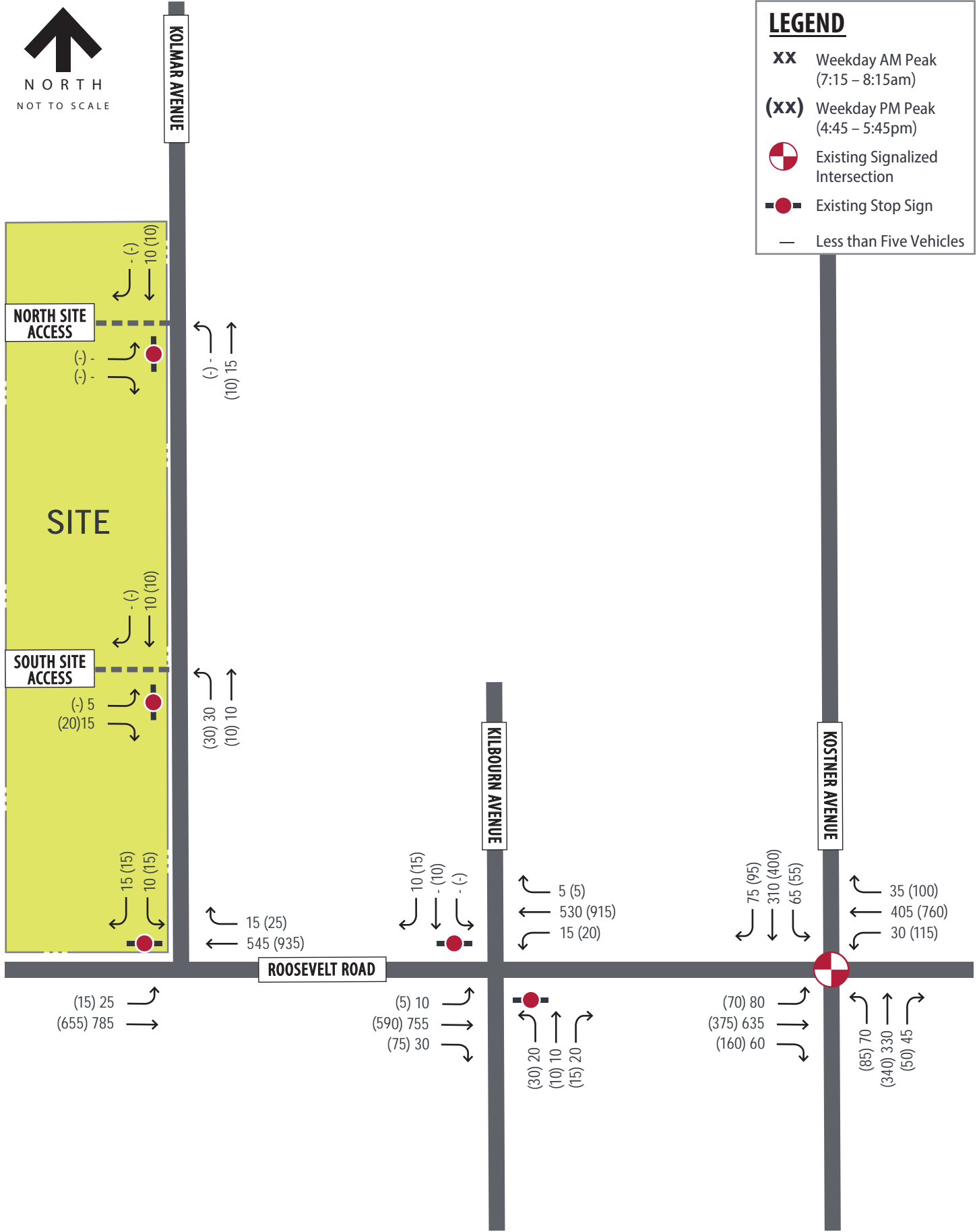
- XX** Weekday AM Peak (7:15 – 8:15am)
- (XX)** Weekday PM Peak (4:45 – 5:45pm)
-  Existing Signalized Intersection
-  Existing Stop Sign
- Less than Five Vehicles





LEGEND

- XX** Weekday AM Peak (7:15 – 8:15am)
- (XX)** Weekday PM Peak (4:45 – 5:45pm)
- Existing Signalized Intersection
- Existing Stop Sign
- Less than Five Vehicles



Future (2024) Potential Increased Operations Capacity Analysis

Based on the volume projections presented in Exhibit 5, capacity results were identified for the study intersections under Future (2024) Potential Increased Operations conditions. The results of the capacity analysis are summarized in **Table 4.2**. Consistent with the existing (2022) conditions analysis, the results for the study intersections are based on Synchro's HCM 6th Edition reports.

Table 4.2 Future (2024) Potential Increased Operations Levels of Service

Intersection	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Roosevelt Road / Kostner Avenue ★				
Eastbound	21	C	19	B
Westbound	14	B	39	D
Northbound	16	B	17	B
Southbound	16	B	17	B
<i>Intersection</i>	<i>17</i>	<i>B</i>	<i>26</i>	<i>C</i>
Roosevelt Road / Kilbourn Avenue △				
Eastbound (Left)	9	A	11	B
Westbound (Left)	11	B	9	A
Northbound	42	E	121	F
Southbound	19	C	37	E
Roosevelt Road / Kolmar Avenue △				
Eastbound (Left)	9	A	13	B
Southbound	24	C	39	E
Kolmar Avenue / South Site Access △				
Eastbound	9	A	9	A
Northbound (Left)	8	A	8	A
Kolmar Avenue / North Site Access △				
Eastbound	9	A	9	A
Northbound (Left)	7	A	7	A

★ - Signalized Intersection

△ - Minor-Leg Stop-Controlled Intersection

The overall network under Future (2024) Potential Increased Operations conditions during the morning and evening peak hours is anticipated to continue functioning similar to existing and Future (2024) Background conditions with most movements and approaches operating acceptably at LOS D or better. The minor-leg approaches at the unsignalized intersection of Roosevelt Road/Kilbourn Avenue operate similarly to existing and no-build conditions without notable increases in delay or projected 95th percentile queue length.

At the unsignalized intersection of Roosevelt Road/Kolmar Avenue, the addition of traffic attributable to a potential increase in site operation adds a few seconds of delay to the southbound approach during the evening peak hour and the approach is projected to operate at LOS E (compared to LOS D under background conditions). As stated previously, under existing conditions no traffic was observed accessing the site during the evening peak hour. Therefore, this increase in delay only depicts a potential scenario in which a slight increase in delay could be expected.

5. RECOMMENDATIONS & CONCLUSIONS

Based on Kimley-Horn's review of existing site operations and evaluation of existing and future traffic conditions, the study intersections are projected to adequately accommodate traffic associated with the existing use of the site in addition to a potential scenario where a 100% increase in site operations during the morning and evening peak hours occurs.

Several additional items should be taken into consideration if an increase in site operations require site improvement plans for the subject development. If a change in the site design progresses, care should be taken with landscaping, signage, and monumentation at the site access locations to ensure that adequate horizontal sight distance is provided from the new stop bars. If alterations to the site plan or land use should occur, changes to the analysis provided within this traffic impact study may be needed.

TECHNICAL APPENDIX

Traffic Count Data

Existing (2022) Capacity Reports

Existing Site Plan

Time-of-Day Distribution Data for ITE Land Use 110 - General Light Industrial

CMAP Year 2050 Projections

Future (2024) Background Operations Capacity Reports

Future (2024) Potential Increased Operations Capacity Reports

TRAFFIC COUNT DATA

Study Name 1_Roosevelt Road & Kolmar Avenue
 Date Wednesday, June 22, 2022

Report Summary

Time Period	Class.	Eastbound				Westbound				Northbound				Southbound				Total	Crosswalk											
		U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R		I	O	Bicycles on Crosswalk	Pedestrians	Total							
AM Peak Period	Lights	1	15	718	0	734	509	1	0	498	3	502	722	0	0	0	0	0	0	0	3	0	10	13	18	1249	EB	0	0	0
Specified Period	%	100%	88%	93%	0%	93%	91%	100%	0%	92%	50%	91%	93%	0%	0%	0%	0%	0%	0%	0%	75%	0%	77%	76%	78%	92%	0%	0%	0%	0%
7:15 AM - 8:15 AM	Mediums	0	2	35	0	37	34	0	0	32	3	35	36	0	0	0	0	0	0	0	1	0	2	3	5	75	WB	0	0	0
One Hour Peak	%	0%	12%	5%	0%	5%	6%	0%	0%	6%	50%	6%	5%	0%	0%	0%	0%	0%	0%	0%	25%	0%	15%	18%	22%	6%	0%	0%	0%	0%
7:15 AM - 8:15 AM	Articulated Trucks	0	0	17	0	17	14	0	0	13	0	13	17	0	0	0	0	0	0	0	0	0	1	1	0	31	NB	1	4	5
	%	0%	0%	2%	0%	2%	3%	0%	0%	2%	0%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	6%	0%	2%	20%	80%	0%	0%
	Bicycles on Road	0	0	1	0	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	SB	1	1	2
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%
	Total	1	17	771	0	789	558	1	0	544	6	551	776	0	0	0	0	0	0	0	4	0	13	17	23	1357		2	5	7
	PHF	0.25	0.47	0.86	0	0.87	0.85	0.25	0	0.85	0.5	0.86	0.87	0	0	0	0	0	0	0	0.5	0	0.81	0.71	0.48	0.87				
	HV %	0%	12%	7%	0%	7%	9%	0%	0%	8%	50%	9%	7%	0%	0%	0%	0%	0%	0%	0%	25%	0%	23%	24%	22%	8%				
PM Peak Period	Lights	0	1	617	0	618	890	1	1	885	4	891	622	0	0	0	1	1	1	0	3	0	5	8	5	1518	EB	0	0	0
Specified Period	%	0%	17%	97%	0%	96%	97%	100%	100%	97%	67%	97%	97%	0%	0%	0%	100%	100%	100%	0%	100%	0%	71%	80%	42%	96%	0%	0%	0%	0%
4:45 PM - 5:45 PM	Mediums	0	2	17	0	19	21	0	0	19	0	19	17	0	0	0	0	0	0	0	0	0	2	2	2	40	WB	0	0	0
One Hour Peak	%	0%	33%	3%	0%	3%	2%	0%	0%	2%	0%	2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	20%	17%	3%	0%	0%	0%	0%
4:45 PM - 5:45 PM	Articulated Trucks	0	2	3	0	5	9	0	0	9	0	9	3	0	0	0	0	0	0	0	0	0	0	0	2	14	NB	0	1	1
	%	0%	33%	0%	0%	1%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	17%	1%	0%	100%	0%	0%
	Bicycles on Road	0	1	1	0	2	1	0	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	3	5	SB	3	1	4
	%	0%	17%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%	75%	25%	0%	0%
	Total	0	6	638	0	644	921	1	1	914	6	922	643	0	0	0	1	1	1	0	3	0	7	10	12	1577		3	2	5
	PHF	0	0.5	0.85	0	0.84	0.95	0.25	0.25	0.95	0.75	0.95	0.86	0	0	0	0.25	0.25	0.25	0	0.38	0	0.58	0.83	0.75	0.94				
	HV %	0%	67%	3%	0%	4%	3%	0%	0%	3%	0%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	20%	33%	3%				

Study Name 2_Kolmar Avenue & North Site Access
 Date Wednesday, June 22, 2022

Report Summary

Time Period	Class.	Eastbound				Northbound				Southbound				Total	EB	Crosswalk					
		U	L	R	I	O	U	L	T	I	O	U	T			R	I	O	Bicycles on Crosswalk	Pedestrians	Total
AM Peak Period	Lights	0	0	0	0	2	0	1	8	9	6	0	6	1	7	8	16	EB	0	2	2
Specified Period	%	0%	0%	0%	0%	100%	0%	100%	100%	100%	55%	0%	55%	100%	58%	100%	76%		0%	100%	
7:15 AM - 8:15 AM	Mediums	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4	NB	0	0	0	
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	36%	0%	36%	0%	33%	0%	19%		0%	0%		
7:15 AM - 8:15 AM	Articulated Trucks	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	SB	0	0	0	
	%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%	9%	0%	8%	0%	5%		0%	0%		
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	2	2	
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%					
	Total	0	0	0	0	2	0	1	8	9	11	0	11	1	12	8	21				
	PHF	0	0	0	0	0.5	0	0.25	0.5	0.56	0.46	0	0.46	0.25	0.5	0.5	0.52				
	HV %	0%	0%	0%	0%	0%	0%	0%	0%	45%	0%	45%	0%	42%	0%	24%					
PM Peak Period	Lights	0	0	0	0	0	0	4	4	6	0	6	0	6	4	10	EB	0	0	0	
Specified Period	%	0%	0%	0%	0%	0%	0%	67%	67%	67%	0%	67%	0%	67%	67%	67%		0%	0%		
4:45 PM - 5:45 PM	Mediums	0	0	0	0	0	0	1	1	3	0	3	0	3	1	4	NB	0	0	0	
One Hour Peak	%	0%	0%	0%	0%	0%	0%	17%	17%	33%	0%	33%	0%	33%	17%	27%		0%	0%		
4:45 PM - 5:45 PM	Articulated Trucks	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	SB	0	0	0	
	%	0%	0%	0%	0%	0%	0%	17%	17%	0%	0%	0%	0%	17%	7%			0%	0%		
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%					
	Total	0	0	0	0	0	0	6	6	9	0	9	0	9	6	15					
	PHF	0	0	0	0	0	0	0.5	0.5	0.56	0	0.56	0	0.56	0.5	0.54					
	HV %	0%	0%	0%	0%	0%	0%	33%	33%	33%	0%	33%	0%	33%	33%	33%					

Study Name 3_Kolmar Avenue & South Site Access
 Date Wednesday, June 22, 2022

Report Summary

Time Period	Class.	Eastbound				Northbound				Southbound				Total	EB	Crosswalk					
		U	L	R	I	O	U	L	T	I	O	U	T			R	I	O	Bicycles on Crosswalk	Pedestrians	Total
AM Peak Period	Lights	0	3	4	7	9	1	9	8	18	9	0	4	0	4	11	29	EB	0	2	2
Specified Period	%	0%	43%	67%	54%	60%	100%	64%	100%	78%	60%	0%	50%	0%	44%	73%	64%		0%	100%	
7:15 AM - 8:15 AM	Mediums	0	4	2	6	5	0	4	0	4	5	0	3	1	4	4	14	NB	0	2	2
One Hour Peak	%	0%	57%	33%	46%	33%	0%	29%	0%	17%	33%	0%	38%	100%	44%	27%	31%		0%	100%	
7:15 AM - 8:15 AM	Articulated Trucks	0	0	0	0	1	0	1	0	1	1	0	1	0	1	0	2	SB	0	1	1
	%	0%	0%	0%	0%	7%	0%	7%	0%	4%	7%	0%	13%	0%	11%	0%	4%		0%	100%	
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	5	5
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
	Total	0	7	6	13	15	1	14	8	23	15	0	8	1	9	15	45				
	PHF	0	0.58	0.75	0.65	0.42	0.25	0.39	0.5	0.44	0.75	0	0.67	0.25	0.56	0.75	0.66				
	HV %	0%	57%	33%	46%	40%	0%	36%	0%	22%	40%	0%	50%	100%	56%	27%	36%				
PM Peak Period	Lights	0	0	0	0	0	0	0	10	10	7	0	7	0	7	10	17	EB	0	6	6
Specified Period	%	0%	0%	0%	0%	0%	0%	0%	83%	77%	70%	0%	70%	0%	70%	83%	74%		0%	100%	
4:45 PM - 5:45 PM	Mediums	0	0	0	0	0	0	0	1	1	3	0	3	0	3	1	4	NB	0	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	8%	8%	30%	0%	30%	0%	30%	8%	17%		0%	0%	
4:45 PM - 5:45 PM	Articulated Trucks	0	0	0	0	1	0	1	1	2	0	0	0	0	0	1	2	SB	0	0	0
	%	0%	0%	0%	0%	100%	0%	100%	8%	15%	0%	0%	0%	0%	0%	8%	9%		0%	0%	
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	6	6
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%				
	Total	0	0	0	0	1	0	1	12	13	10	0	10	0	10	12	23				
	PHF	0	0	0	0	0.25	0	0.25	0.5	0.54	0.62	0	0.62	0	0.62	0.5	0.82				
	HV %	0%	0%	0%	0%	100%	0%	100%	17%	23%	30%	0%	30%	0%	30%	17%	26%				

Study Name 4_Roosevelt Road & Kilbourn Avenue
 Date Wednesday, June 22, 2022

Report Summary

Time Period	Class.	Eastbound						Westbound						Northbound						Southbound						Crosswalk				
		U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total	Bicycles on Crosswalk	Pedestrians	Total	
AM Peak Period	Lights	0	8	708	23	739	502	0	9	475	2	486	724	0	21	10	16	47	33	0	0	1	6	7	20	1279	EB	0	0	0
Specified Period	%	0%	89%	94%	82%	93%	91%	0%	53%	92%	67%	91%	93%	0%	95%	100%	84%	92%	72%	0%	0%	100%	60%	54%	91%	92%	0%	0%	0%	
7:15 AM - 8:15 AM	Mediums	0	0	34	2	36	34	0	7	32	0	39	35	0	1	0	0	1	9	0	1	0	1	2	0	78	WB	0	0	0
One Hour Peak	%	0%	0%	5%	7%	5%	6%	0%	41%	6%	0%	7%	5%	0%	5%	0%	0%	2%	20%	0%	50%	0%	10%	15%	0%	6%	0%	0%	0%	
7:15 AM - 8:15 AM	Articulated Trucks	0	1	11	3	15	12	0	1	9	0	10	13	0	0	0	2	2	4	0	0	0	3	3	1	30	NB	2	4	6
	%	0%	11%	1%	11%	2%	2%	0%	6%	2%	0%	2%	2%	0%	0%	0%	11%	4%	9%	0%	0%	0%	30%	23%	5%	2%	33%	67%	2%	
	Bicycles on Road	0	0	1	0	1	1	0	0	1	1	2	3	0	0	0	1	1	0	0	1	0	0	1	1	5	SB	1	1	2
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	5%	2%	0%	0%	50%	0%	0%	8%	5%	0%	50%	50%	0%	
	Total	0	9	754	28	791	549	0	17	517	3	537	775	0	22	10	19	51	46	0	2	1	10	13	22	1392		3	5	8
	PHF	0	0.75	0.92	0.7	0.9	0.87	0	0.71	0.86	0.38	0.87	0.91	0	0.79	0.5	0.79	0.85	0.88	0	0.5	0.25	0.62	0.81	0.61	0.89				
	HV %	0%	11%	6%	18%	6%	8%	0%	47%	8%	0%	9%	6%	0%	5%	0%	11%	6%	28%	0%	50%	0%	40%	38%	5%	8%				
PM Peak Period	Lights	0	4	552	67	623	900	1	22	858	5	886	568	0	27	10	14	51	97	0	1	8	15	24	19	1584	EB	0	0	0
Specified Period	%	0%	67%	97%	96%	97%	97%	100%	100%	97%	100%	97%	97%	0%	90%	83%	100%	91%	97%	0%	100%	100%	100%	100%	83%	97%	0%	0%	0%	
4:45 PM - 5:45 PM	Mediums	0	2	11	2	15	16	0	0	13	0	13	11	0	3	2	0	5	2	0	0	0	0	0	4	33	WB	0	0	0
One Hour Peak	%	0%	33%	2%	3%	2%	2%	0%	0%	1%	0%	1%	2%	0%	10%	17%	0%	9%	2%	0%	0%	0%	0%	0%	17%	2%	0%	0%	0%	
4:45 PM - 5:45 PM	Articulated Trucks	0	0	3	1	4	7	0	0	7	0	7	3	0	0	0	0	0	1	0	0	0	0	0	0	11	NB	0	1	1
	%	0%	0%	1%	1%	1%	1%	0%	0%	1%	0%	1%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	100%	0%	
	Bicycles on Road	0	0	1	0	1	3	0	0	3	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	SB	1	0	1
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	
	Total	0	6	567	70	643	926	1	22	881	5	909	583	0	30	12	14	56	100	0	1	8	15	24	23	1632		1	1	2
	PHF	0	0.75	0.89	0.67	0.86	0.94	0.25	0.79	0.97	0.31	0.95	0.9	0	0.68	0.5	0.88	0.88	0.76	0	0.25	0.67	0.47	0.55	0.82	0.96				
	HV %	0%	33%	2%	4%	3%	2%	0%	0%	2%	0%	2%	2%	0%	10%	17%	0%	9%	3%	0%	0%	0%	0%	0%	17%	3%				

Study Name 5_Roosevelt Road & Kostner Avenue
 Date Wednesday, June 22, 2022























Report Summary

Time Period	Class.	Eastbound						Westbound						Northbound						Southbound						Crosswalk				
		U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	U	L	T	R	I	O	Total	Bicycles on Crosswalk	Pedestrians	Total	
AM Peak Period	Lights	0	70	598	50	718	487	0	32	357	28	417	700	0	68	310	40	418	370	0	62	288	62	412	408	1965	EB	1	6	7
Specified Period	%	0%	95%	93%	93%	93%	91%	0%	100%	90%	85%	91%	93%	0%	96%	95%	91%	95%	95%	0%	94%	95%	89%	94%	94%	93%		14%	86%	
7:15 AM - 8:15 AM	Mediums	0	3	32	3	38	38	0	0	31	3	34	37	0	1	14	1	16	17	0	4	14	6	24	20	112	WB	2	5	7
One Hour Peak	%	0%	4%	5%	6%	5%	7%	0%	0%	8%	9%	7%	5%	0%	1%	4%	2%	4%	4%	0%	6%	5%	9%	5%	5%	5%		29%	71%	
7:15 AM - 8:15 AM	Articulated Trucks	0	0	8	0	8	9	0	0	6	1	7	11	0	2	3	3	8	2	0	0	2	1	3	4	26	NB	1	5	6
	%	0%	0%	1%	0%	1%	2%	0%	0%	2%	3%	2%	1%	0%	3%	1%	7%	2%	1%	0%	0%	1%	1%	1%	1%	1%		17%	83%	
	Bicycles on Road	0	1	2	1	4	2	0	0	1	1	2	2	0	0	0	0	0	1	0	0	0	1	1	2	7	SB	3	5	8
	%	0%	1%	0%	2%	1%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%		38%	63%	
	Total	0	74	640	54	768	536	0	32	395	33	460	750	0	71	327	44	442	390	0	66	304	70	440	434	2110		7	21	28
	PHF	0	0.74	0.87	0.71	0.86	0.85	0	0.89	0.81	0.82	0.83	0.88	0	0.89	0.9	0.79	0.94	0.93	0	0.82	0.89	0.83	0.98	0.89	0.92				
	HV %	0%	4%	6%	6%	6%	9%	0%	0%	9%	12%	9%	6%	0%	4%	5%	9%	5%	5%	0%	6%	5%	10%	6%	6%	7%				
PM Peak Period	Lights	0	66	367	154	587	889	0	115	725	97	937	471	0	82	326	49	457	653	0	55	384	82	521	489	2502	EB	0	6	6
Specified Period	%	0%	100%	96%	97%	97%	97%	0%	99%	97%	97%	97%	97%	0%	99%	97%	98%	98%	98%	0%	100%	97%	98%	98%	98%	97%		0%	100%	
4:45 PM - 5:45 PM	Mediums	0	0	13	2	15	15	0	0	14	2	16	14	0	0	9	1	10	9	0	0	7	1	8	11	49	WB	1	5	6
One Hour Peak	%	0%	0%	3%	1%	2%	2%	0%	0%	2%	2%	2%	3%	0%	0%	3%	2%	2%	1%	0%	0%	2%	1%	2%	2%	2%		17%	83%	
4:45 PM - 5:45 PM	Articulated Trucks	0	0	0	2	2	6	0	0	5	0	5	0	0	0	0	0	0	4	0	0	2	1	3	0	10	NB	1	3	4
	%	0%	0%	0%	1%	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	1%	1%	0%	0%		25%	75%	
	Bicycles on Road	0	0	1	0	1	4	0	1	3	1	5	1	0	1	0	0	1	2	0	0	1	0	1	1	8	SB	0	5	5
	%	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	100%	
	Total	0	66	381	158	605	914	0	116	747	100	963	486	0	83	335	50	468	668	0	55	394	84	533	501	2569		2	19	21
	PHF	0	0.79	0.86	0.9	0.86	0.95	0	0.81	0.99	0.74	0.95	0.84	0	0.83	0.91	0.83	0.9	0.9	0	0.57	0.93	0.78	0.87	0.9	0.96				
	HV %	0%	0%	3%	3%	3%	2%	0%	0%	3%	2%	2%	3%	0%	0%	3%	2%	2%	2%	0%	0%	2%	2%	2%	2%	2%				

EXISTING (2022) CAPACITY REPORTS

HCM 6th Signalized Intersection Summary
 100: Kostner Avenue & Roosevelt Road

Existing 2022 Traffic Volumes
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	630	60	30	395	35	70	325	45	65	305	70
Future Volume (veh/h)	75	630	60	30	395	35	70	325	45	65	305	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1811	1870	1767	1722	1841	1826	1767	1811	1826	1752
Adj Flow Rate, veh/h	79	663	63	32	416	37	74	342	47	68	321	74
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
Percent Heavy Veh, %	4	6	6	2	9	12	4	5	9	6	5	10
Cap, veh/h	419	826	79	234	811	72	388	1131	154	388	1035	235
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	921	1628	155	727	1598	142	969	3063	417	958	2802	637
Grp Volume(v), veh/h	79	0	726	32	0	453	74	192	197	68	197	198
Grp Sat Flow(s),veh/h/ln	921	0	1782	727	0	1740	969	1735	1746	958	1735	1704
Q Serve(g_s), s	4.1	0.0	22.0	2.5	0.0	11.3	3.8	5.1	5.2	3.5	5.2	5.4
Cycle Q Clear(g_c), s	15.3	0.0	22.0	24.5	0.0	11.3	9.2	5.1	5.2	8.7	5.2	5.4
Prop In Lane	1.00		0.09	1.00		0.08	1.00		0.24	1.00		0.37
Lane Grp Cap(c), veh/h	419	0	905	234	0	884	388	640	645	388	640	629
V/C Ratio(X)	0.19	0.00	0.80	0.14	0.00	0.51	0.19	0.30	0.31	0.18	0.31	0.31
Avail Cap(c_a), veh/h	419	0	905	234	0	884	388	640	645	388	640	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	13.3	23.5	0.0	10.6	17.9	14.5	14.6	17.7	14.6	14.6
Incr Delay (d2), s/veh	1.0	0.0	7.4	1.2	0.0	2.1	1.1	1.2	1.2	1.0	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	14.2	0.9	0.0	7.6	1.7	3.8	3.9	1.5	3.8	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	0.0	20.7	24.7	0.0	12.8	19.0	15.7	15.8	18.7	15.8	15.9
LnGrp LOS	B	A	C	C	A	B	B	B	B	B	B	B
Approach Vol, veh/h		805			485			463			463	
Approach Delay, s/veh		20.3			13.6			16.3			16.3	
Approach LOS		C			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		37.0		28.0		37.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		33.0		24.0		33.0				
Max Q Clear Time (g_c+I1), s		11.2		24.0		10.7		26.5				
Green Ext Time (p_c), s		2.3		3.7		2.2		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				17.2								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	745	30	15	515	5	20	10	20	1	1	10
Future Vol, veh/h	10	745	30	15	515	5	20	10	20	1	1	10
Conflicting Peds, #/hr	2	0	6	6	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	11	6	18	47	8	2	5	2	11	50	2	40
Mvmt Flow	11	784	32	16	542	5	21	11	21	1	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	549	0	0	822	0	0	1411	1409	806	1417	1423	547
Stage 1	-	-	-	-	-	-	828	828	-	579	579	-
Stage 2	-	-	-	-	-	-	583	581	-	838	844	-
Critical Hdwy	4.21	-	-	4.57	-	-	7.15	6.52	6.31	7.6	6.52	6.6
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.52	-	6.6	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.52	-	6.6	5.52	-
Follow-up Hdwy	2.299	-	-	2.623	-	-	3.545	4.018	3.399	3.95	4.018	3.66
Pot Cap-1 Maneuver	977	-	-	643	-	-	114	139	368	90	136	470
Stage 1	-	-	-	-	-	-	361	386	-	426	501	-
Stage 2	-	-	-	-	-	-	493	500	-	300	379	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	975	-	-	639	-	-	105	130	366	76	127	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	105	130	-	76	127	-
Stage 1	-	-	-	-	-	-	351	376	-	416	482	-
Stage 2	-	-	-	-	-	-	464	481	-	269	369	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			39.7			18.3		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	155	975	-	-	639	-	-	283
HCM Lane V/C Ratio	0.34	0.011	-	-	0.025	-	-	0.045
HCM Control Delay (s)	39.7	8.7	0	-	10.8	0	-	18.3
HCM Lane LOS	E	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	20	780	540	5	5	10
Future Vol, veh/h	20	780	540	5	5	10
Conflicting Peds, #/hr	2	0	0	2	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, %	12	7	8	50	25	23
Mvmt Flow	21	821	568	5	5	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	575	0	-	0	1436 573
Stage 1	-	-	-	-	573 -
Stage 2	-	-	-	-	863 -
Critical Hdwy	4.22	-	-	-	6.65 6.43
Critical Hdwy Stg 1	-	-	-	-	5.65 -
Critical Hdwy Stg 2	-	-	-	-	5.65 -
Follow-up Hdwy	2.308	-	-	-	3.725 3.507
Pot Cap-1 Maneuver	950	-	-	-	131 481
Stage 1	-	-	-	-	521 -
Stage 2	-	-	-	-	377 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	948	-	-	-	125 480
Mov Cap-2 Maneuver	-	-	-	-	125 -
Stage 1	-	-	-	-	499 -
Stage 2	-	-	-	-	376 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	948	-	-	-	247
HCM Lane V/C Ratio	0.022	-	-	-	0.064
HCM Control Delay (s)	8.9	0	-	-	20.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	5	5	15	10	10	1
Future Vol, veh/h	5	5	15	10	10	1
Conflicting Peds, #/hr	1	2	2	0	0	2
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, %	57	33	36	2	50	100
Mvmt Flow	5	5	16	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	58	16	14	0	0
Stage 1	14	-	-	-	-
Stage 2	44	-	-	-	-
Critical Hdwy	6.97	6.53	4.46	-	-
Critical Hdwy Stg 1	5.97	-	-	-	-
Critical Hdwy Stg 2	5.97	-	-	-	-
Follow-up Hdwy	4.013	3.597	2.524	-	-
Pot Cap-1 Maneuver	828	980	1409	-	-
Stage 1	883	-	-	-	-
Stage 2	855	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	816	976	1406	-	-
Mov Cap-2 Maneuver	816	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	853	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	4.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1406	-	889	-	-
HCM Lane V/C Ratio	0.011	-	0.012	-	-
HCM Control Delay (s)	7.6	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	1	1	15	10	1
Future Vol, veh/h	1	1	1	15	10	1
Conflicting Peds, #/hr	0	0	2	0	0	2
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, %	2	2	2	2	45	2
Mvmt Flow	1	1	1	16	11	1

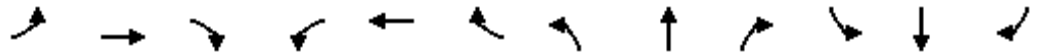
Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	32	14	14	0	0
Stage 1	14	-	-	-	-
Stage 2	18	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	982	1066	1604	-	-
Stage 1	1009	-	-	-	-
Stage 2	1005	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	977	1064	1601	-	-
Mov Cap-2 Maneuver	977	-	-	-	-
Stage 1	1006	-	-	-	-
Stage 2	1003	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1601	-	1019	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary
 100: Kostner Avenue & Roosevelt Road

Existing 2022 Traffic Volumes
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	365	160	115	740	100	85	335	50	55	395	85
Future Volume (veh/h)	65	365	160	115	740	100	85	335	50	55	395	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1856	1870	1856	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	384	168	121	779	105	89	353	53	58	416	89
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
Percent Heavy Veh, %	2	3	3	2	3	2	2	3	2	2	2	2
Cap, veh/h	136	621	272	352	812	110	345	1135	169	390	1075	228
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	628	1223	535	855	1600	216	891	3074	457	975	2912	618
Grp Volume(v), veh/h	68	0	552	121	0	884	89	201	205	58	252	253
Grp Sat Flow(s),veh/h/ln	628	0	1757	855	0	1816	891	1763	1769	975	1777	1753
Q Serve(g_s), s	2.6	0.0	14.7	7.7	0.0	30.4	5.3	5.3	5.4	2.9	6.8	6.9
Cycle Q Clear(g_c), s	33.0	0.0	14.7	22.3	0.0	30.4	12.2	5.3	5.4	8.3	6.8	6.9
Prop In Lane	1.00		0.30	1.00		0.12	1.00		0.26	1.00		0.35
Lane Grp Cap(c), veh/h	136	0	892	352	0	922	345	651	653	390	656	647
V/C Ratio(X)	0.50	0.00	0.62	0.34	0.00	0.96	0.26	0.31	0.31	0.15	0.38	0.39
Avail Cap(c_a), veh/h	136	0	892	352	0	922	345	651	653	390	656	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	0.0	11.5	19.5	0.0	15.3	19.6	14.6	14.6	17.6	15.1	15.1
Incr Delay (d2), s/veh	12.4	0.0	3.2	2.7	0.0	21.2	1.8	1.2	1.3	0.8	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	9.5	3.0	0.0	22.3	2.2	4.0	4.0	1.3	5.1	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	0.0	14.7	22.2	0.0	36.6	21.4	15.8	15.9	18.4	16.8	16.9
LnGrp LOS	D	A	B	C	A	D	C	B	B	B	B	B
Approach Vol, veh/h		620			1005			495			563	
Approach Delay, s/veh		18.0			34.8			16.9			17.0	
Approach LOS		B			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		37.0		28.0		37.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		33.0		24.0		33.0				
Max Q Clear Time (g_c+I1), s		14.2		35.0		10.3		32.4				
Green Ext Time (p_c), s		2.1		0.0		2.8		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				23.9								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Capacity Analysis
100: Kostner Avenue & Roosevelt Road

Existing 2022 Traffic Volumes
PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	365	160	115	740	100	85	335	50	55	395	85
Future Volume (veh/h)	65	365	160	115	740	100	85	335	50	55	395	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1856	1856	1870	1856	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	384	168	121	779	105	89	353	53	58	416	89
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
Percent Heavy Veh, %	2	3	3	2	3	2	2	3	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	136	621	272	352	812	110	345	1135	169	390	1075	228
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Unsig. Movement Delay												
Ln Grp Delay, s/veh	44.5	0.0	14.7	22.2	0.0	36.6	21.4	15.8	15.9	18.4	16.8	16.9
Ln Grp LOS	D	A	B	C	A	D	C	B	B	B	B	B
Approach Vol, veh/h		620			1005			495			563	
Approach Delay, s/veh		18.0			34.8			16.9			17.0	
Approach LOS		B			C			B			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs			2		4		6		8			
Case No			6.0		6.0		6.0		6.0			
Phs Duration (G+Y+Rc), s			28.0		37.0		28.0		37.0			
Change Period (Y+Rc), s			4.0		4.0		4.0		4.0			
Max Green (Gmax), s			24.0		33.0		24.0		33.0			
Max Allow Headway (MAH), s			5.4		5.5		5.3		5.3			
Max Q Clear (g_c+I1), s			14.2		35.0		10.3		32.4			
Green Ext Time (g_e), s			2.1		0.0		2.8		0.4			
Prob of Phs Call (p_c)			1.00		1.00		1.00		1.00			
Prob of Max Out (p_x)			0.00		0.00		0.00		0.00			
Left-Turn Movement Data												
Assigned Mvmt			5		7		1		3			
Mvmt Sat Flow, veh/h			891		628		975		855			
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3074		1223		2912		1600			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			457		535		618		216			
Left Lane Group Data												
Assigned Mvmt		0	5	0	7	0	1	0	3			
Lane Assignment			L		L		L		L			

HCM 6th Signalized Intersection Capacity Analysis
 100: Kostner Avenue & Roosevelt Road

Existing 2022 Traffic Volumes
 PM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	89	0	68	0	58	0	121
Grp Sat Flow (s), veh/h/ln	0	891	0	628	0	975	0	855
Q Serve Time (g_s), s	0.0	5.3	0.0	2.6	0.0	2.9	0.0	7.7
Cycle Q Clear Time (g_c), s	0.0	12.2	0.0	33.0	0.0	8.3	0.0	22.3
Perm LT Sat Flow (s_l), veh/h/ln	0	891	0	628	0	975	0	855
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	24.0	0.0	33.0	0.0	24.0	0.0	33.0
Perm LT Serve Time (g_u), s	0.0	17.1	0.0	2.6	0.0	18.6	0.0	18.3
Perm LT Q Serve Time (g_ps), s	0.0	5.3	0.0	2.6	0.0	2.9	0.0	7.7
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	345	0	136	0	390	0	352
V/C Ratio (X)	0.00	0.26	0.00	0.50	0.00	0.15	0.00	0.34
Avail Cap (c_a), veh/h	0	345	0	136	0	390	0	352
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.6	0.0	32.0	0.0	17.6	0.0	19.5
Incr Delay (d2), s/veh	0.0	1.8	0.0	12.4	0.0	0.8	0.0	2.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.4	0.0	44.5	0.0	18.4	0.0	22.2
1st-Term Q (Q1), veh/ln	0.0	1.1	0.0	1.0	0.0	0.6	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.5	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	2.2	0.0	2.7	0.0	1.3	0.0	3.0
%ile Storage Ratio (RQ%)	0.00	0.62	0.00	0.62	0.00	0.38	0.00	1.28
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T				T		
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	201	0	0	0	252	0	0
Grp Sat Flow (s), veh/h/ln	0	1763	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	5.3	0.0	0.0	0.0	6.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	5.3	0.0	0.0	0.0	6.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	651	0	0	0	656	0	0
V/C Ratio (X)	0.00	0.31	0.00	0.00	0.00	0.38	0.00	0.00
Avail Cap (c_a), veh/h	0	651	0	0	0	656	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	14.6	0.0	0.0	0.0	15.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.0	1.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.8	0.0	0.0	0.0	16.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	0.0	0.0	2.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.3	0.0	0.0

HCM 6th Signalized Intersection Capacity Analysis
 100: Kostner Avenue & Roosevelt Road

Existing 2022 Traffic Volumes
 PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.00	0.00	1.80	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	4.0	0.0	0.0	0.0	5.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.20	0.00	0.00	0.00	0.27	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		T+R		T+R		T+R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	205	0	552	0	253	0	884
Grp Sat Flow (s), veh/h/ln	0	1769	0	1757	0	1753	0	1816
Q Serve Time (g_s), s	0.0	5.4	0.0	14.7	0.0	6.9	0.0	30.4
Cycle Q Clear Time (g_c), s	0.0	5.4	0.0	14.7	0.0	6.9	0.0	30.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.26	0.00	0.30	0.00	0.35	0.00	0.12
Lane Grp Cap (c), veh/h	0	653	0	892	0	647	0	922
V/C Ratio (X)	0.00	0.31	0.00	0.62	0.00	0.39	0.00	0.96
Avail Cap (c_a), veh/h	0	653	0	892	0	647	0	922
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.6	0.0	11.5	0.0	15.1	0.0	15.3
Incr Delay (d2), s/veh	0.0	1.3	0.0	3.2	0.0	1.8	0.0	21.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.9	0.0	14.7	0.0	16.9	0.0	36.6
1st-Term Q (Q1), veh/ln	0.0	2.0	0.0	4.8	0.0	2.5	0.0	10.3
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.8	0.0	0.3	0.0	5.4
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.69	0.00	1.80	0.00	1.41
%ile Back of Q (95%), veh/ln	0.0	4.0	0.0	9.5	0.0	5.1	0.0	22.3
%ile Storage Ratio (RQ%)	0.00	0.21	0.00	0.41	0.00	0.27	0.00	0.95
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	575	75	20	885	5	30	10	15	1	10	15
Future Vol, veh/h	5	575	75	20	885	5	30	10	15	1	10	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	33	2	4	2	2	2	10	17	2	2	2	2
Mvmt Flow	5	605	79	21	932	5	32	11	16	1	11	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	937	0	0	684	0	0	1645	1634	645	1645	1671	935
Stage 1	-	-	-	-	-	-	655	655	-	977	977	-
Stage 2	-	-	-	-	-	-	990	979	-	668	694	-
Critical Hdwy	4.43	-	-	4.12	-	-	7.2	6.67	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.67	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.67	-	6.12	5.52	-
Follow-up Hdwy	2.497	-	-	2.218	-	-	3.59	4.153	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	619	-	-	909	-	-	76	93	472	79	96	322
Stage 1	-	-	-	-	-	-	442	440	-	302	329	-
Stage 2	-	-	-	-	-	-	287	310	-	448	444	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	619	-	-	909	-	-	63	87	472	66	90	322
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	87	-	66	90	-
Stage 1	-	-	-	-	-	-	436	434	-	298	313	-
Stage 2	-	-	-	-	-	-	251	295	-	417	438	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			103.2			34.3		
HCM LOS	F			B			F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	88	619	-	-	909	-	-	150
HCM Lane V/C Ratio	0.658	0.009	-	-	0.023	-	-	0.182
HCM Control Delay (s)	103.2	10.9	0	-	9.1	0	-	34.3
HCM Lane LOS	F	B	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3.1	0	-	-	0.1	-	-	0.6

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	5	650	925	5	5	5
Future Vol, veh/h	5	650	925	5	5	5
Conflicting Peds, #/hr	4	0	0	4	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, %	67	3	3	2	2	29
Mvmt Flow	5	684	974	5	5	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	983	0	0	1675	981
Stage 1	-	-	-	981	-
Stage 2	-	-	-	694	-
Critical Hdwy	4.77	-	-	6.42	6.49
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.803	-	-	3.518	3.561
Pot Cap-1 Maneuver	500	-	-	105	269
Stage 1	-	-	-	363	-
Stage 2	-	-	-	496	-
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver	498	-	-	102	268
Mov Cap-2 Maneuver	-	-	-	102	-
Stage 1	-	-	-	356	-
Stage 2	-	-	-	494	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	31.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	498	-	-	-	148
HCM Lane V/C Ratio	0.011	-	-	-	0.071
HCM Control Delay (s)	12.3	0	-	-	31.2
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	1	10	10	1
Future Vol, veh/h	1	1	1	10	10	1
Conflicting Peds, #/hr	0	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	100	17	30	2
Mvmt Flow	1	1	1	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	31	18	18	0	0
Stage 1	18	-	-	-	-
Stage 2	13	-	-	-	-
Critical Hdwy	6.42	6.22	5.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	3.1	-	-
Pot Cap-1 Maneuver	983	1061	1141	-	-
Stage 1	1005	-	-	-	-
Stage 2	1010	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	970	1055	1134	-	-
Mov Cap-2 Maneuver	970	-	-	-	-
Stage 1	998	-	-	-	-
Stage 2	1004	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1134	-	1011	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	8.2	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

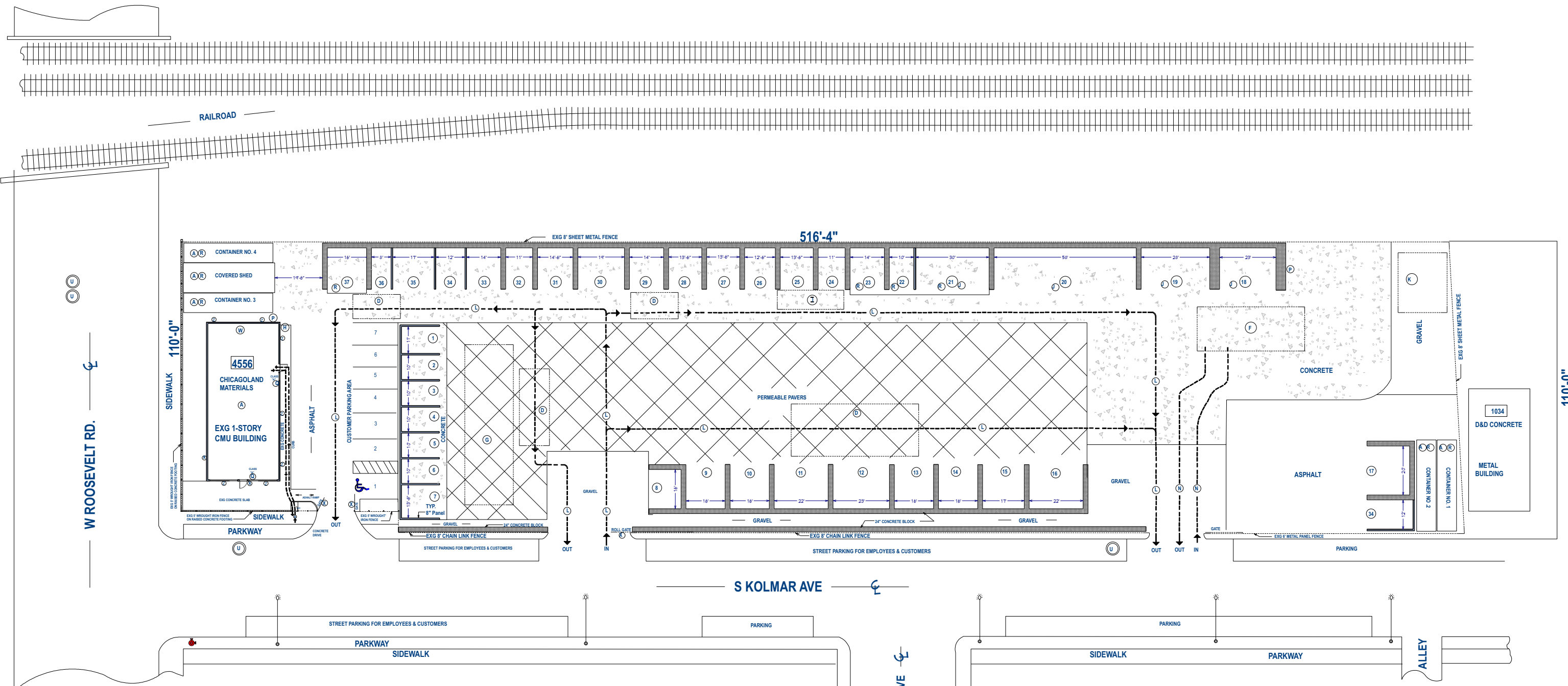
Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	1	1	10	10	1
Future Vol, veh/h	1	1	1	10	10	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	33	33	2
Mvmt Flow	1	1	1	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	25	12	12	0	0
Stage 1	12	-	-	-	-
Stage 2	13	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	991	1069	1607	-	-
Stage 1	1011	-	-	-	-
Stage 2	1010	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	990	1069	1607	-	-
Mov Cap-2 Maneuver	990	-	-	-	-
Stage 1	1010	-	-	-	-
Stage 2	1010	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	1028	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

EXISTING SITE PLAN



OUTDOOR MATERIAL STORAGE BIN INDEX			
1	Wisconsin Boulders	21	Dirt
2	Red Cedar Pathway	22	Garden Mix
3	Rustic Orange Granite	23	Topsoil
4	Canandian Heritage	24	Leaf Mulch
5	Bluestone Chips 3/8"	25	Garden Mix
6	Bluestone Chips 3/8"	26	Blended Compost
7	Bluestone Pathway	27	Bank Sand
8	Gray Slate	28	Mason Sand
9	Bike Path	29	Torpedo Sand
10	Pea Gravel	30	Premium Hardwood Bark Mulch
11	River Rock 3/4"	31	Pine Fines
12	River Rock 1-1/2"	32	Red Mulch
13	Limestone Chips 3/8"	33	Dark Brown Mulch
14	Limestone Screenings	34	Grade 9
15	CA7	35	Pallets
16	CA6 Grade 8	36	Container
17	Recycled CA6	37	Brixtment Shed
18	Brick & Block	38	
19	Concrete	39	
20	Dirt	40	

PROPOSED SITE PLAN (CHICAGOLAND MATERIALS)
 SCALE: 1" = 40'-0"
 → N →

RECYCLING FACILITY APPLICATION (7. SITE PLAN CHECKLIST LEGEND AND NOTES)			
A	Location of all buildings and structures	O	Location of any other facility operation not already identified in this question
B	Location of all surrounding fences and screens	P	Location of water sources for fire protection and dust control
C	Location of all employee and customer parking areas	Q	Location of all fire extinguishers. (Also, Class C extinguishers are mounted in every facility vehicle)
D	Location of all customer queuing areas	R	Location of covered material storage area
E	Location where customers will unload their recyclable materials for purchase (NA)	S	Location of liquid waste storage area
F	Location where facility vehicles will load recyclable materials for transport off site	T	Location of surrounding streets and avenues
G	Location of parking area for facility vehicles used to transport materials from the facility	U	Location of sewers (No sewers inside facility).
H	Location of all scales	V	Location of all paved surfaces and type of paving
I	Location of recyclable material processing areas	W	Location of required records
J	Location of recyclable materials storage areas	X	Does the facility have a proper signage per ordinance and regulations? (Entrance signs on 2 gates).
K	Location where facility equipment will be staged and used	Y	Location recyclable material storage area
L	Traffic flow for customer vehicles	Z	Is the facility adequately lighted after dark?
M	Traffic flow for walk-in customers		
N	Traffic flow for facility vehicles used to transport recyclable materials from the facility		

PREPARED FOR: Chicagoland Materials DESIGNED BY: Owner PREPARED BY: J&R Architectural CAD Drawing Services SITE ADDRESS: 4556 W. Roosevelt Rd., Chicago, IL., 60624	JOB NO: C-4556-R DATE: 7/17/2021 DRAWING SCALE: 1" = 40'-0" DRAWING SHEET SIZE: 11" x 17" SHEET NO. 1/1	PROJECT DESCRIPTION: SHEET TITLE: SITE PLAN	NO: DESCRIPTION: DATE:	DRAWING NO: A-0
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**TIME-OF-DAY DISTRIBUTION DATA FOR ITE LAND USE CODE 110 - GENERAL LIGHT
INDUSTRIAL**

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	110		
Land Use	General Light Industrial		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	27		
	% of 24-Hour Vehicle Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.0%	0.0%	0.0%
1:00 - 2:00 AM	0.0%	0.0%	0.1%
2:00 - 3:00 AM	0.0%	0.0%	0.1%
3:00 - 4:00 AM	0.0%	0.1%	0.0%
4:00 - 5:00 AM	0.3%	0.6%	0.0%
5:00 - 6:00 AM	2.9%	5.4%	0.4%
6:00 - 7:00 AM	3.9%	7.2%	0.7%
7:00 - 8:00 AM	10.1%	18.0%	2.3%
8:00 - 9:00 AM	7.7%	10.8%	4.6%
9:00 - 10:00 AM	7.3%	7.3%	7.3%
10:00 - 11:00 AM	7.7%	7.7%	7.8%
11:00 - 12:00 PM	7.5%	6.5%	8.5%
12:00 - 1:00 PM	9.9%	9.0%	10.8%
1:00 - 2:00 PM	7.9%	8.5%	7.3%
2:00 - 3:00 PM	8.1%	7.3%	8.9%
3:00 - 4:00 PM	8.7%	6.0%	11.3%
4:00 - 5:00 PM	7.5%	4.1%	10.8%
5:00 - 6:00 PM	9.0%	1.2%	16.7%
6:00 - 7:00 PM	1.2%	0.1%	2.4%
7:00 - 8:00 PM	0.0%	0.0%	0.1%
8:00 - 9:00 PM	0.0%	0.0%	0.0%
9:00 - 10:00 PM	0.0%	0.0%	0.0%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.0%	0.0%	0.0%

Hourly Distribution of Entering and Exiting Truck Trips by Land Use

Source: ITE *Trip Generation Manual*, 11th Edition

Land Use Code	110		
Land Use	General Light Industrial		
Setting	General Urban/Suburban		
Time Period	Weekday		
# Data Sites	27		
	% of 24-Hour Truck Trips		
Time	Total	Entering	Exiting
12:00 - 1:00 AM	0.0%	0.0%	0.0%
1:00 - 2:00 AM	0.0%	0.0%	0.0%
2:00 - 3:00 AM	0.4%	0.0%	0.8%
3:00 - 4:00 AM	0.0%	0.0%	0.0%
4:00 - 5:00 AM	0.0%	0.0%	0.0%
5:00 - 6:00 AM	0.0%	0.0%	0.0%
6:00 - 7:00 AM	0.0%	0.0%	0.0%
7:00 - 8:00 AM	7.6%	9.8%	5.3%
8:00 - 9:00 AM	9.5%	9.1%	9.8%
9:00 - 10:00 AM	15.5%	15.2%	15.9%
10:00 - 11:00 AM	14.8%	12.1%	17.4%
11:00 - 12:00 PM	6.1%	7.6%	4.5%
12:00 - 1:00 PM	8.7%	9.1%	8.3%
1:00 - 2:00 PM	12.9%	12.9%	12.9%
2:00 - 3:00 PM	10.6%	10.6%	10.6%
3:00 - 4:00 PM	9.1%	9.8%	8.3%
4:00 - 5:00 PM	3.4%	3.0%	3.8%
5:00 - 6:00 PM	1.5%	0.8%	2.3%
6:00 - 7:00 PM	0.0%	0.0%	0.0%
7:00 - 8:00 PM	0.0%	0.0%	0.0%
8:00 - 9:00 PM	0.0%	0.0%	0.0%
9:00 - 10:00 PM	0.0%	0.0%	0.0%
10:00 - 11:00 PM	0.0%	0.0%	0.0%
11:00 - 12:00 AM	0.0%	0.0%	0.0%

CMAP YEAR 2050 PROJECTIONS



Chicago Metropolitan
Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607
312-454-0400
cmap.illinois.gov

June 7, 2022

Daniel Blalock, E.I.T.
Kimley-Horn
4201 Winfield Road
Suite 600
Warrenville, IL 60555

Subject: West Roosevelt Road @ South Kilbourn Avenue
IDOT, CDOT

Dear Mr. Blalock:

In response to a request made on your behalf and dated June 6, 2022, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
W. Roosevelt Rd west of S. Kostner Ave	28,300	30,100
S. Kostner Ave north of W. Roosevelt Rd	14,600	15,500
S. Kostner Ave south of W. Roosevelt Rd	15,700	16,700

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2021 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

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

cc: Rios (IDOT); (CDOT)
2022_ForecastTraffic\Chicago\ck-71-22\ck-71-22.docx

FUTURE (2024) BACKGROUND OPERATIONS CAPACITY REPORTS

HCM 6th Signalized Intersection Summary
100: Kostner Avenue & Roosevelt Road

Future (2024) Background Traffic Projections
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	635	60	30	400	35	70	330	45	65	310	70
Future Volume (veh/h)	75	635	60	30	400	35	70	330	45	65	310	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1811	1870	1767	1722	1841	1826	1767	1811	1826	1752
Adj Flow Rate, veh/h	79	668	63	32	421	37	74	347	47	68	326	74
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
Percent Heavy Veh, %	4	6	6	2	9	12	4	5	9	6	5	10
Cap, veh/h	415	827	78	231	812	71	386	1133	152	386	1038	232
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	917	1629	154	724	1600	141	964	3070	412	954	2811	629
Grp Volume(v), veh/h	79	0	731	32	0	458	74	195	199	68	199	201
Grp Sat Flow(s),veh/h/ln	917	0	1783	724	0	1741	964	1735	1747	954	1735	1706
Q Serve(g_s), s	4.1	0.0	22.2	2.5	0.0	11.4	3.9	5.2	5.3	3.6	5.3	5.5
Cycle Q Clear(g_c), s	15.5	0.0	22.2	24.8	0.0	11.4	9.3	5.2	5.3	8.8	5.3	5.5
Prop In Lane	1.00		0.09	1.00		0.08	1.00		0.24	1.00		0.37
Lane Grp Cap(c), veh/h	415	0	905	231	0	884	386	640	645	386	640	630
V/C Ratio(X)	0.19	0.00	0.81	0.14	0.00	0.52	0.19	0.30	0.31	0.18	0.31	0.32
Avail Cap(c_a), veh/h	415	0	905	231	0	884	386	640	645	386	640	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	0.0	13.4	23.7	0.0	10.7	18.0	14.6	14.6	17.7	14.6	14.7
Incr Delay (d2), s/veh	1.0	0.0	7.7	1.3	0.0	2.2	1.1	1.2	1.2	1.0	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	14.4	0.9	0.0	7.6	1.7	3.8	3.9	1.5	3.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.9	0.0	21.0	24.9	0.0	12.9	19.1	15.8	15.8	18.7	15.9	16.0
LnGrp LOS	B	A	C	C	A	B	B	B	B	B	B	B
Approach Vol, veh/h		810			490			468			468	
Approach Delay, s/veh		20.6			13.6			16.3			16.3	
Approach LOS		C			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		37.0		28.0		37.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		33.0		24.0		33.0				
Max Q Clear Time (g_c+I1), s		11.3		24.2		10.8		26.8				
Green Ext Time (p_c), s		2.3		3.7		2.3		1.6				
Intersection Summary												
HCM 6th Ctrl Delay				17.3								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	750	30	15	520	5	20	10	20	1	1	10
Future Vol, veh/h	10	750	30	15	520	5	20	10	20	1	1	10
Conflicting Peds, #/hr	2	0	6	6	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	11	6	18	47	8	2	5	2	11	50	2	40
Mvmt Flow	11	789	32	16	547	5	21	11	21	1	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	554	0	0	827	0	0	1421	1419	811	1427	1433	552
Stage 1	-	-	-	-	-	-	833	833	-	584	584	-
Stage 2	-	-	-	-	-	-	588	586	-	843	849	-
Critical Hdwy	4.21	-	-	4.57	-	-	7.15	6.52	6.31	7.6	6.52	6.6
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.52	-	6.6	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.52	-	6.6	5.52	-
Follow-up Hdwy	2.299	-	-	2.623	-	-	3.545	4.018	3.399	3.95	4.018	3.66
Pot Cap-1 Maneuver	973	-	-	640	-	-	112	137	366	89	134	467
Stage 1	-	-	-	-	-	-	359	384	-	423	498	-
Stage 2	-	-	-	-	-	-	490	497	-	298	377	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	971	-	-	636	-	-	103	128	364	75	125	466
Mov Cap-2 Maneuver	-	-	-	-	-	-	103	128	-	75	125	-
Stage 1	-	-	-	-	-	-	349	374	-	413	479	-
Stage 2	-	-	-	-	-	-	461	478	-	267	367	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			40.4			18.5		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	153	971	-	-	636	-	-	280
HCM Lane V/C Ratio	0.344	0.011	-	-	0.025	-	-	0.045
HCM Control Delay (s)	40.4	8.7	0	-	10.8	0	-	18.5
HCM Lane LOS	E	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	20	785	545	5	5	10
Future Vol, veh/h	20	785	545	5	5	10
Conflicting Peds, #/hr	2	0	0	2	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, %	12	7	8	50	25	23
Mvmt Flow	21	826	574	5	5	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	581	0	-	0	1447 579
Stage 1	-	-	-	-	579 -
Stage 2	-	-	-	-	868 -
Critical Hdwy	4.22	-	-	-	6.65 6.43
Critical Hdwy Stg 1	-	-	-	-	5.65 -
Critical Hdwy Stg 2	-	-	-	-	5.65 -
Follow-up Hdwy	2.308	-	-	-	3.725 3.507
Pot Cap-1 Maneuver	946	-	-	-	129 478
Stage 1	-	-	-	-	518 -
Stage 2	-	-	-	-	375 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	944	-	-	-	123 477
Mov Cap-2 Maneuver	-	-	-	-	123 -
Stage 1	-	-	-	-	496 -
Stage 2	-	-	-	-	374 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	20.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	944	-	-	-	243
HCM Lane V/C Ratio	0.022	-	-	-	0.065
HCM Control Delay (s)	8.9	0	-	-	20.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection						
Int Delay, s/veh	4.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	5	5	15	10	10	1
Future Vol, veh/h	5	5	15	10	10	1
Conflicting Peds, #/hr	1	2	2	0	0	2
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, %	57	33	36	2	50	100
Mvmt Flow	5	5	16	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	58	16	14	0	0
Stage 1	14	-	-	-	-
Stage 2	44	-	-	-	-
Critical Hdwy	6.97	6.53	4.46	-	-
Critical Hdwy Stg 1	5.97	-	-	-	-
Critical Hdwy Stg 2	5.97	-	-	-	-
Follow-up Hdwy	4.013	3.597	2.524	-	-
Pot Cap-1 Maneuver	828	980	1409	-	-
Stage 1	883	-	-	-	-
Stage 2	855	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	816	976	1406	-	-
Mov Cap-2 Maneuver	816	-	-	-	-
Stage 1	872	-	-	-	-
Stage 2	853	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	4.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1406	-	889	-	-
HCM Lane V/C Ratio	0.011	-	0.012	-	-
HCM Control Delay (s)	7.6	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	1	1	15	10	1
Future Vol, veh/h	1	1	1	15	10	1
Conflicting Peds, #/hr	0	0	2	0	0	2
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, %	2	2	2	2	45	2
Mvmt Flow	1	1	1	16	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	32	14	14	0	0
Stage 1	14	-	-	-	-
Stage 2	18	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	982	1066	1604	-	-
Stage 1	1009	-	-	-	-
Stage 2	1005	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	977	1064	1601	-	-
Mov Cap-2 Maneuver	977	-	-	-	-
Stage 1	1006	-	-	-	-
Stage 2	1003	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1601	-	1019	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary
100: Kostner Avenue & Roosevelt Road

Future (2024) Background Traffic Projections
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘		↗	↕		↗	↘	
Traffic Volume (veh/h)	65	370	160	115	750	100	85	340	50	55	400	85
Future Volume (veh/h)	65	370	160	115	750	100	85	340	50	55	400	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1856	1870	1856	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	389	168	121	789	105	89	358	53	58	421	89
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
Percent Heavy Veh, %	2	3	3	2	3	2	2	3	2	2	2	2
Cap, veh/h	130	623	269	349	814	108	343	1137	167	388	1078	226
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	622	1228	530	851	1603	213	887	3081	452	971	2919	612
Grp Volume(v), veh/h	68	0	557	121	0	894	89	203	208	58	255	255
Grp Sat Flow(s),veh/h/ln	622	0	1758	851	0	1816	887	1763	1770	971	1777	1754
Q Serve(g_s), s	2.0	0.0	14.8	7.8	0.0	31.0	5.4	5.4	5.4	3.0	6.9	7.0
Cycle Q Clear(g_c), s	33.0	0.0	14.8	22.6	0.0	31.0	12.3	5.4	5.4	8.4	6.9	7.0
Prop In Lane	1.00		0.30	1.00		0.12	1.00		0.26	1.00		0.35
Lane Grp Cap(c), veh/h	130	0	893	349	0	922	343	651	653	388	656	648
V/C Ratio(X)	0.52	0.00	0.62	0.35	0.00	0.97	0.26	0.31	0.32	0.15	0.39	0.39
Avail Cap(c_a), veh/h	130	0	893	349	0	922	343	651	653	388	656	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	11.5	19.7	0.0	15.5	19.7	14.6	14.6	17.6	15.1	15.1
Incr Delay (d2), s/veh	14.3	0.0	3.3	2.7	0.0	23.1	1.8	1.3	1.3	0.8	1.7	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.0	9.6	3.0	0.0	23.1	2.2	4.0	4.1	1.3	5.1	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.5	0.0	14.8	22.4	0.0	38.6	21.5	15.9	15.9	18.5	16.8	16.9
LnGrp LOS	D	A	B	C	A	D	C	B	B	B	B	B
Approach Vol, veh/h		625			1015			500			568	
Approach Delay, s/veh		18.3			36.7			16.9			17.0	
Approach LOS		B			D			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		37.0		28.0		37.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		33.0		24.0		33.0				
Max Q Clear Time (g_c+I1), s		14.3		35.0		10.4		33.0				
Green Ext Time (p_c), s		2.2		0.0		2.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				24.7								
HCM 6th LOS				C								

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	580	75	20	895	5	30	10	15	1	10	15
Future Vol, veh/h	5	580	75	20	895	5	30	10	15	1	10	15
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	33	2	4	2	2	2	10	17	2	2	2	2
Mvmt Flow	5	611	79	21	942	5	32	11	16	1	11	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	948	0	0	691	0	0	1662	1652	652	1662	1689	946
Stage 1	-	-	-	-	-	-	662	662	-	988	988	-
Stage 2	-	-	-	-	-	-	1000	990	-	674	701	-
Critical Hdwy	4.43	-	-	4.12	-	-	7.2	6.67	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.67	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.67	-	6.12	5.52	-
Follow-up Hdwy	2.497	-	-	2.218	-	-	3.59	4.153	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	613	-	-	904	-	-	74	91	468	77	93	317
Stage 1	-	-	-	-	-	-	438	437	-	297	325	-
Stage 2	-	-	-	-	-	-	283	306	-	444	441	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	612	-	-	903	-	-	61	85	468	64	87	317
Mov Cap-2 Maneuver	-	-	-	-	-	-	61	85	-	64	87	-
Stage 1	-	-	-	-	-	-	432	431	-	293	309	-
Stage 2	-	-	-	-	-	-	247	291	-	413	435	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			107.8			35.3		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	86	612	-	-	903	-	-	146
HCM Lane V/C Ratio	0.673	0.009	-	-	0.023	-	-	0.187
HCM Control Delay (s)	107.8	10.9	0	-	9.1	0	-	35.3
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	3.2	0	-	-	0.1	-	-	0.7

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	5	655	935	5	5	5
Future Vol, veh/h	5	655	935	5	5	5
Conflicting Peds, #/hr	4	0	0	4	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, %	67	3	3	2	2	29
Mvmt Flow	5	689	984	5	5	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	993	0	-	0	1690 991
Stage 1	-	-	-	-	991 -
Stage 2	-	-	-	-	699 -
Critical Hdwy	4.77	-	-	-	6.42 6.49
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.803	-	-	-	3.518 3.561
Pot Cap-1 Maneuver	495	-	-	-	103 266
Stage 1	-	-	-	-	359 -
Stage 2	-	-	-	-	493 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	493	-	-	-	101 265
Mov Cap-2 Maneuver	-	-	-	-	101 -
Stage 1	-	-	-	-	352 -
Stage 2	-	-	-	-	491 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	31.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	493	-	-	-	146
HCM Lane V/C Ratio	0.011	-	-	-	0.072
HCM Control Delay (s)	12.4	0	-	-	31.6
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	1	1	10	10	1
Future Vol, veh/h	1	1	1	10	10	1
Conflicting Peds, #/hr	0	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	100	17	30	2
Mvmt Flow	1	1	1	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	31	18	18	0	0
Stage 1	18	-	-	-	-
Stage 2	13	-	-	-	-
Critical Hdwy	6.42	6.22	5.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	3.1	-	-
Pot Cap-1 Maneuver	983	1061	1141	-	-
Stage 1	1005	-	-	-	-
Stage 2	1010	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	970	1055	1134	-	-
Mov Cap-2 Maneuver	970	-	-	-	-
Stage 1	998	-	-	-	-
Stage 2	1004	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1134	-	1011	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	8.2	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	1	1	10	10	1
Future Vol, veh/h	1	1	1	10	10	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, %	2	2	2	33	33	2
Mvmt Flow	1	1	1	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	25	12	12	0	0
Stage 1	12	-	-	-	-
Stage 2	13	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	991	1069	1607	-	-
Stage 1	1011	-	-	-	-
Stage 2	1010	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	990	1069	1607	-	-
Mov Cap-2 Maneuver	990	-	-	-	-
Stage 1	1010	-	-	-	-
Stage 2	1010	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	1028	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

FUTURE (2024) POTENTIAL INCREASED OPERATIONS CAPACITY REPORTS

HCM 6th Signalized Intersection Summary Future (2024) Increased Operations Traffic Projections
 100: Kostner Avenue & Roosevelt Road AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	635	60	30	405	35	70	330	45	65	310	75
Future Volume (veh/h)	80	635	60	30	405	35	70	330	45	65	310	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1811	1870	1767	1722	1841	1826	1767	1811	1826	1752
Adj Flow Rate, veh/h	84	668	63	32	426	37	74	347	47	68	326	79
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
Percent Heavy Veh, %	4	6	6	2	9	12	4	5	9	6	5	10
Cap, veh/h	411	827	78	231	813	71	383	1133	152	386	1024	244
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	913	1629	154	724	1602	139	960	3070	412	954	2772	662
Grp Volume(v), veh/h	84	0	731	32	0	463	74	195	199	68	202	203
Grp Sat Flow(s),veh/h/ln	913	0	1783	724	0	1741	960	1735	1747	954	1735	1699
Q Serve(g_s), s	4.4	0.0	22.2	2.5	0.0	11.6	3.9	5.2	5.3	3.6	5.4	5.6
Cycle Q Clear(g_c), s	16.0	0.0	22.2	24.8	0.0	11.6	9.4	5.2	5.3	8.8	5.4	5.6
Prop In Lane	1.00		0.09	1.00		0.08	1.00		0.24	1.00		0.39
Lane Grp Cap(c), veh/h	411	0	905	231	0	884	383	640	645	386	640	627
V/C Ratio(X)	0.20	0.00	0.81	0.14	0.00	0.52	0.19	0.30	0.31	0.18	0.32	0.32
Avail Cap(c_a), veh/h	411	0	905	231	0	884	383	640	645	386	640	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	13.4	23.7	0.0	10.7	18.1	14.6	14.6	17.7	14.6	14.7
Incr Delay (d2), s/veh	1.1	0.0	7.7	1.3	0.0	2.2	1.1	1.2	1.2	1.0	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	14.4	0.9	0.0	7.7	1.7	3.8	3.9	1.5	3.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	0.0	21.0	24.9	0.0	12.9	19.2	15.8	15.8	18.7	15.9	16.0
LnGrp LOS	B	A	C	C	A	B	B	B	B	B	B	B
Approach Vol, veh/h		815			495			468			473	
Approach Delay, s/veh		20.6			13.7			16.3			16.4	
Approach LOS		C			B			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		37.0		28.0		37.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		33.0		24.0		33.0				
Max Q Clear Time (g_c+I1), s		11.4		24.2		10.8		26.8				
Green Ext Time (p_c), s		2.3		3.7		2.3		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				17.3								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	760	30	15	530	5	20	10	20	1	1	10
Future Vol, veh/h	10	760	30	15	530	5	20	10	20	1	1	10
Conflicting Peds, #/hr	2	0	6	6	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	11	6	18	47	8	2	5	2	11	50	2	40
Mvmt Flow	11	800	32	16	558	5	21	11	21	1	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	565	0	0	838	0	0	1443	1441	822	1449	1455	563
Stage 1	-	-	-	-	-	-	844	844	-	595	595	-
Stage 2	-	-	-	-	-	-	599	597	-	854	860	-
Critical Hdwy	4.21	-	-	4.57	-	-	7.15	6.52	6.31	7.6	6.52	6.6
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.52	-	6.6	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.52	-	6.6	5.52	-
Follow-up Hdwy	2.299	-	-	2.623	-	-	3.545	4.018	3.399	3.95	4.018	3.66
Pot Cap-1 Maneuver	963	-	-	633	-	-	108	133	361	85	130	460
Stage 1	-	-	-	-	-	-	354	379	-	417	492	-
Stage 2	-	-	-	-	-	-	483	491	-	293	373	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	961	-	-	629	-	-	100	124	359	71	122	459
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	124	-	71	122	-
Stage 1	-	-	-	-	-	-	344	369	-	407	473	-
Stage 2	-	-	-	-	-	-	453	472	-	262	363	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			41.8			18.9		
HCM LOS							E			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	149	961	-	-	629	-	-	272
HCM Lane V/C Ratio	0.353	0.011	-	-	0.025	-	-	0.046
HCM Control Delay (s)	41.8	8.8	0	-	10.9	0	-	18.9
HCM Lane LOS	E	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	1.5	0	-	-	0.1	-	-	0.1

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	25	785	545	15	10	15
Future Vol, veh/h	25	785	545	15	10	15
Conflicting Peds, #/hr	2	0	0	2	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, %	12	7	8	50	25	23
Mvmt Flow	26	826	574	16	11	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	592	0	-	0	1462 584
Stage 1	-	-	-	-	584 -
Stage 2	-	-	-	-	878 -
Critical Hdwy	4.22	-	-	-	6.65 6.43
Critical Hdwy Stg 1	-	-	-	-	5.65 -
Critical Hdwy Stg 2	-	-	-	-	5.65 -
Follow-up Hdwy	2.308	-	-	-	3.725 3.507
Pot Cap-1 Maneuver	936	-	-	-	126 474
Stage 1	-	-	-	-	515 -
Stage 2	-	-	-	-	371 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	934	-	-	-	119 473
Mov Cap-2 Maneuver	-	-	-	-	119 -
Stage 1	-	-	-	-	488 -
Stage 2	-	-	-	-	370 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	24
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	934	-	-	-	216
HCM Lane V/C Ratio	0.028	-	-	-	0.122
HCM Control Delay (s)	9	0	-	-	24
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection						
Int Delay, s/veh	5.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	30	10	10	1
Future Vol, veh/h	5	15	30	10	10	1
Conflicting Peds, #/hr	1	2	2	0	0	2
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, %	57	33	36	2	50	100
Mvmt Flow	5	16	32	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	90	16	14	0	0
Stage 1	14	-	-	-	-
Stage 2	76	-	-	-	-
Critical Hdwy	6.97	6.53	4.46	-	-
Critical Hdwy Stg 1	5.97	-	-	-	-
Critical Hdwy Stg 2	5.97	-	-	-	-
Follow-up Hdwy	4.013	3.597	2.524	-	-
Pot Cap-1 Maneuver	792	980	1409	-	-
Stage 1	883	-	-	-	-
Stage 2	825	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	771	976	1406	-	-
Mov Cap-2 Maneuver	771	-	-	-	-
Stage 1	861	-	-	-	-
Stage 2	823	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	5.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1406	-	915	-	-
HCM Lane V/C Ratio	0.022	-	0.023	-	-
HCM Control Delay (s)	7.6	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	1	1	15	10	1
Future Vol, veh/h	1	1	1	15	10	1
Conflicting Peds, #/hr	0	0	2	0	0	2
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, %	2	2	2	2	45	2
Mvmt Flow	1	1	1	16	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	32	14	14	0	0
Stage 1	14	-	-	-	-
Stage 2	18	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	982	1066	1604	-	-
Stage 1	1009	-	-	-	-
Stage 2	1005	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	977	1064	1601	-	-
Mov Cap-2 Maneuver	977	-	-	-	-
Stage 1	1006	-	-	-	-
Stage 2	1003	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1601	-	1019	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th Signalized Intersection Summary Future (2024) Increased Operations Traffic Projections

100: Kostner Avenue & Roosevelt Road

PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	375	160	115	760	100	85	340	50	55	400	95
Future Volume (veh/h)	70	375	160	115	760	100	85	340	50	55	400	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1856	1870	1856	1870	1870	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	395	168	121	800	105	89	358	53	58	421	100
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
Percent Heavy Veh, %	2	3	3	2	3	2	2	3	2	2	2	2
Cap, veh/h	123	627	267	344	815	107	338	1137	167	388	1052	248
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	616	1234	525	846	1606	211	878	3081	452	971	2849	671
Grp Volume(v), veh/h	74	0	563	121	0	905	89	203	208	58	261	260
Grp Sat Flow(s),veh/h/ln	616	0	1759	846	0	1817	878	1763	1770	971	1777	1743
Q Serve(g_s), s	1.2	0.0	15.1	7.8	0.0	31.8	5.4	5.4	5.4	3.0	7.1	7.2
Cycle Q Clear(g_c), s	33.0	0.0	15.1	22.9	0.0	31.8	12.6	5.4	5.4	8.4	7.1	7.2
Prop In Lane	1.00		0.30	1.00		0.12	1.00		0.26	1.00		0.38
Lane Grp Cap(c), veh/h	123	0	893	344	0	922	338	651	653	388	656	644
V/C Ratio(X)	0.60	0.00	0.63	0.35	0.00	0.98	0.26	0.31	0.32	0.15	0.40	0.40
Avail Cap(c_a), veh/h	123	0	893	344	0	922	338	651	653	388	656	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	11.6	19.9	0.0	15.7	19.9	14.6	14.6	17.6	15.2	15.2
Incr Delay (d2), s/veh	20.1	0.0	3.4	2.8	0.0	25.4	1.9	1.3	1.3	0.8	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.2	0.0	9.7	3.1	0.0	24.1	2.2	4.0	4.1	1.3	5.3	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	0.0	15.0	22.7	0.0	41.1	21.8	15.9	15.9	18.5	17.0	17.1
LnGrp LOS	D	A	B	C	A	D	C	B	B	B	B	B
Approach Vol, veh/h		637			1026			500			579	
Approach Delay, s/veh		19.3			38.9			16.9			17.2	
Approach LOS		B			D			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		37.0		28.0		37.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		24.0		33.0		24.0		33.0				
Max Q Clear Time (g_c+I1), s		14.6		35.0		10.4		33.8				
Green Ext Time (p_c), s		2.1		0.0		2.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				25.8								
HCM 6th LOS				C								

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	590	75	20	915	5	30	10	15	1	10	15
Future Vol, veh/h	5	590	75	20	915	5	30	10	15	1	10	15
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	33	2	4	2	2	2	10	17	2	2	2	2
Mvmt Flow	5	621	79	21	963	5	32	11	16	1	11	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	969	0	0	701	0	0	1693	1683	662	1693	1720	967
Stage 1	-	-	-	-	-	-	672	672	-	1009	1009	-
Stage 2	-	-	-	-	-	-	1021	1011	-	684	711	-
Critical Hdwy	4.43	-	-	4.12	-	-	7.2	6.67	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.2	5.67	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.67	-	6.12	5.52	-
Follow-up Hdwy	2.497	-	-	2.218	-	-	3.59	4.153	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	601	-	-	896	-	-	70	87	462	74	89	308
Stage 1	-	-	-	-	-	-	433	432	-	290	318	-
Stage 2	-	-	-	-	-	-	275	299	-	439	436	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	600	-	-	895	-	-	57	81	462	61	83	308
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	81	-	61	83	-
Stage 1	-	-	-	-	-	-	427	426	-	286	301	-
Stage 2	-	-	-	-	-	-	239	283	-	408	429	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			121			36.9		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	600	-	-	895	-	-	140
HCM Lane V/C Ratio	0.715	0.009	-	-	0.024	-	-	0.195
HCM Control Delay (s)	121	11.1	0	-	9.1	0	-	36.9
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	3.4	0	-	-	0.1	-	-	0.7

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	15	655	935	25	15	15
Future Vol, veh/h	15	655	935	25	15	15
Conflicting Peds, #/hr	4	0	0	4	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, %	67	3	3	2	2	29
Mvmt Flow	16	689	984	26	16	16

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1014	0	-	0	1722 1001
Stage 1	-	-	-	-	1001 -
Stage 2	-	-	-	-	721 -
Critical Hdwy	4.77	-	-	-	6.42 6.49
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.803	-	-	-	3.518 3.561
Pot Cap-1 Maneuver	485	-	-	-	98 262
Stage 1	-	-	-	-	355 -
Stage 2	-	-	-	-	482 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	483	-	-	-	92 261
Mov Cap-2 Maneuver	-	-	-	-	92 -
Stage 1	-	-	-	-	334 -
Stage 2	-	-	-	-	480 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	39.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	483	-	-	-	136
HCM Lane V/C Ratio	0.033	-	-	-	0.232
HCM Control Delay (s)	12.7	0	-	-	39.3
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Intersection						
Int Delay, s/veh	5.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			W	W	
Traffic Vol, veh/h	1	20	20	10	10	1
Future Vol, veh/h	1	20	20	10	10	1
Conflicting Peds, #/hr	0	0	6	0	0	6
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	100	17	30	2
Mvmt Flow	1	21	21	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	71	18	18	0	0
Stage 1	18	-	-	-	-
Stage 2	53	-	-	-	-
Critical Hdwy	6.42	6.22	5.1	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	3.1	-	-
Pot Cap-1 Maneuver	933	1061	1141	-	-
Stage 1	1005	-	-	-	-
Stage 2	970	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	904	1055	1134	-	-
Mov Cap-2 Maneuver	904	-	-	-	-
Stage 1	980	-	-	-	-
Stage 2	964	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	5.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1134	-	1047	-	-
HCM Lane V/C Ratio	0.019	-	0.021	-	-
HCM Control Delay (s)	8.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	1	1	10	10	1
Future Vol, veh/h	1	1	1	10	10	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, %	2	2	2	33	33	2
Mvmt Flow	1	1	1	11	11	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	25	12	12	0	0
Stage 1	12	-	-	-	-
Stage 2	13	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	991	1069	1607	-	-
Stage 1	1011	-	-	-	-
Stage 2	1010	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	990	1069	1607	-	-
Mov Cap-2 Maneuver	990	-	-	-	-
Stage 1	1010	-	-	-	-
Stage 2	1010	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	1028	-	-
HCM Lane V/C Ratio	0.001	-	0.002	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



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