Traffic Impact Study
Proposed Affordable Apartment Development

Arlington Heights, Illinois

Prepared For:

HTG Illinois Developer, LLC

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

April 15, 2021

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed affordable apartment development in Arlington Heights, Illinois. The site, which is currently vacant, is located in the southeast quadrant of the intersection of Rand Road with Chestnut Avenue. As proposed, the site will be developed to provide a four-story building containing approximately 40 apartment units and an approximate 80-space surface parking lot. Access to the parking lot will be provided off Chestnut Avenue.

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

The sections of this report present the following:

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

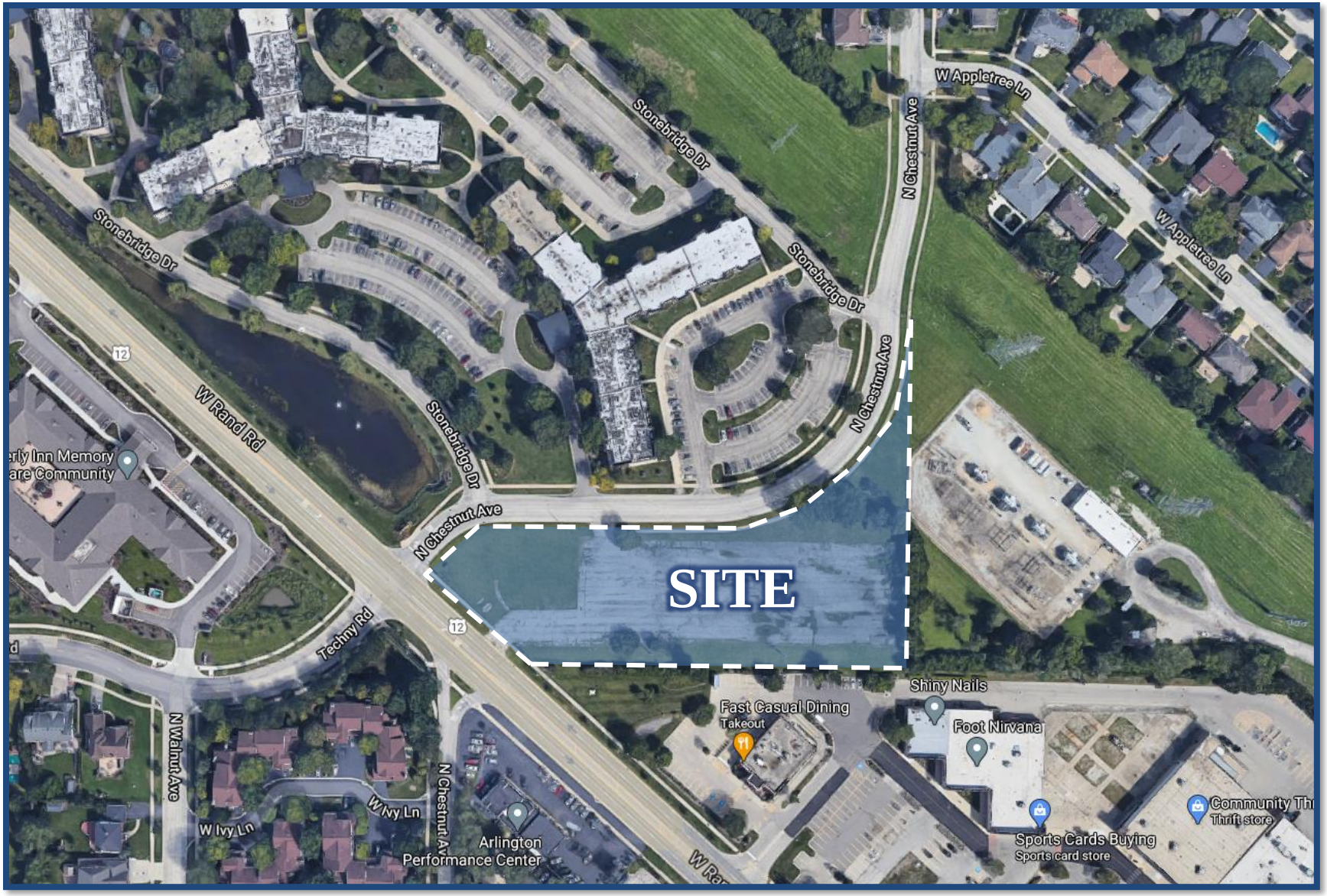
Traffic capacity analyses were conducted for the weekday morning and evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Background Conditions – Analyzes the capacity of the future roadway system using the traffic volumes that include the existing traffic volumes and the ambient area growth not attributable to any particular development.

3. Projected Conditions – Analyzes the capacity of the future roadway system using the traffic volumes that include the background traffic volumes and the traffic estimated to be generated by the proposed development.

Site Location **Figure 1**



Aerial View of Site **Figure 2**

2. Existing Conditions

The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which is currently vacant, is bounded by Chestnut Avenue to the north, a residential area to the east, Rand Road to the west, and Fast Casual Dining restaurant to the south.

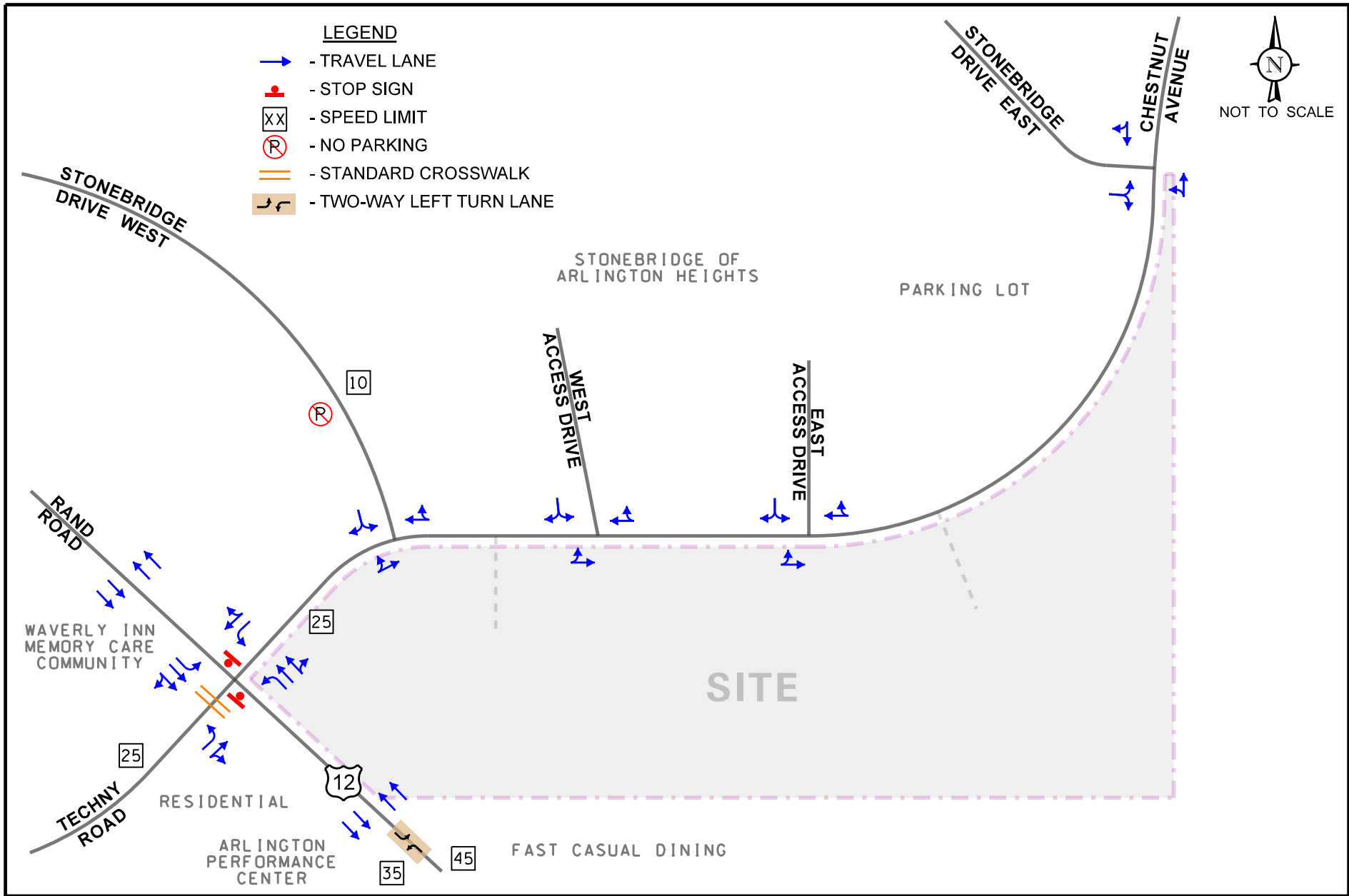
Existing Roadway System Characteristics

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

Rand Road is a northwest-southeast, other principal arterial that generally provides two lanes in each direction in the vicinity of the site. At its unsignalized intersection with Techny Road and Chestnut Avenue, Rand Road provides an exclusive left-turn lane, a through lane, and a combined through/right-turn lane on both approaches. Rand Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is classified as a Strategic Regional Arterial (SRA), and carries an Annual Average Daily Traffic (AADT) volume of 29,900 vehicles (IDOT 2019). Rand Road has a posted speed limit of 45 miles per hour.

Chestnut Avenue is an east-west, local road that provides one lane in each direction in the vicinity of the site. At its unsignalized intersection with Rand Road, Chestnut Avenue provides an exclusive left-turn lane and a combined through/right-turn lane on the westbound approach. The west leg of this intersection is Techny Road, which provides an exclusive left-turn lane and a combined through/right-turn lane at its intersection with Chestnut Avenue. A standard style crosswalk is provided on the west leg of this intersection. At its unsignalized intersection with Stonebridge Drive (both legs) and the access drives in between, Chestnut Avenue provides a combined through/left-turn lane on the eastbound approach. The westbound approach provides a combined through/right-turn lane. Chestnut Avenue is under the jurisdiction of the Village of Arlington Heights and has a posted speed limit of 25 miles per hour.

Stonebridge Drive is a local road serving Stonebridge of Arlington Heights apartment building. At its unsignalized intersection with Chestnut Avenue, both legs of Stonebridge Drive provide a combined left-turn/right-turn lane on the southbound approach. Stonebridge Drive is under the jurisdiction of the Village of Arlington Heights and has a posted speed limit of 10 miles per hour.



Affordable Apartment Development
Arlington Heights, Illinois

Existing Roadway Characteristics

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

Job No: 21-088

Figure: 3

Existing Traffic Volumes

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

- Chestnut Avenue with Rand Road and Techny Road
- Chestnut Avenue with Stonebridge Drive (both legs)
- Chestnut Avenue with access drives between both legs of Stonebridge Road

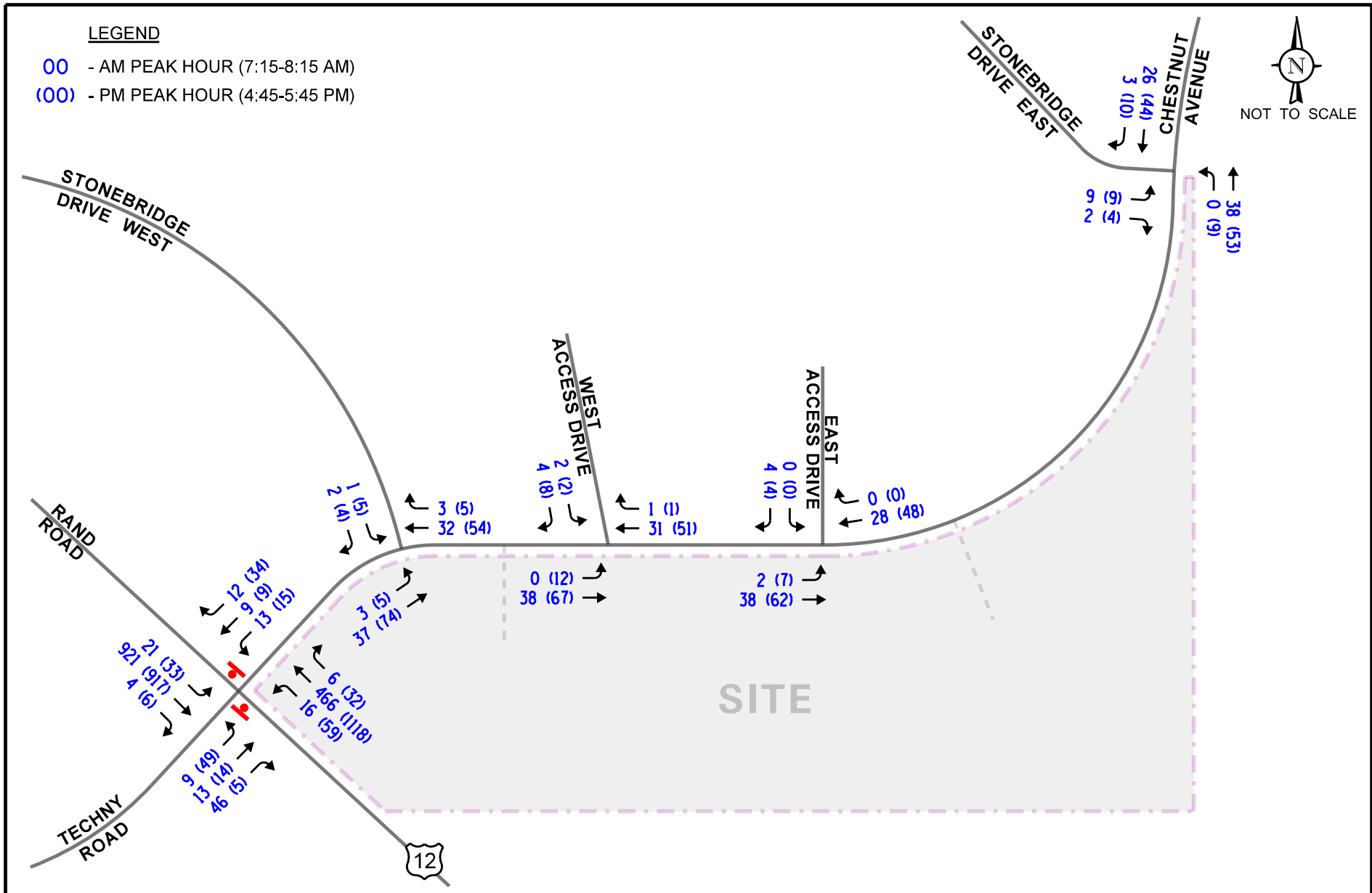
The traffic counts were conducted on Monday, April 6, 2021 during the evening (4:00 P.M. to 6:00 P.M.) and on Tuesday, April 6, 20021 during the morning (7:00 A.M. to 9:00 A.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:15 A.M. and 8:15 A.M. during the morning peak period and between 4:45 P.M. and 5:45 P.M. during the evening peak period. Copies of the traffic count summary sheets are included in the Appendix.

Due to the ongoing COVID-19 pandemic, traffic volumes in the study area do not reflect normal or typical conditions. As such, KLOA, Inc. compared the April 2021 traffic counts with previous counts conducted by KLOA, Inc. in 2015 (adjusted with CMAP growth factors to be discussed later to reflect 2021 traffic conditions). The comparison indicated that the April 2021 weekday morning peak hour volumes were similar while the evening peak hour volumes were approximately 10 percent lower. Therefore, the traffic counts were increased by 10 percent during the weekday evening peak hour to reflect normal or typical conditions. The Year 2021 base traffic volumes are illustrated in **Figure 4**.

Crash Analysis

KLOA, Inc. obtained accident data[1] for the most recent available past five years (2015 to 2019) for the intersection of Chestnut Avenue with Rand Road and Techny Road. A summary of the crash data for the intersection of Chestnut Avenue with Rand Road and Techny Road is shown in **Table 1**. A review of the crash data revealed no fatalities were reported at any of the studied intersections during the review period.

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.



Affordable Apartment Development
Arlington Heights, Illinois

Year 2021 Base Traffic Volumes

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

Job No: 21-088

Figure: 4

Table 1
RAND ROAD WITH CHESTNUT AVENUE AND TECHNY ROAD - CRASH SUMMARY

Year	Type of Accident Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2015	3	0	0	0	2	0	5
2016	0	0	0	0	2	0	2
2017	1	0	0	0	1	0	2
2018	1	0	0	0	1	0	2
2019	0	0	0	0	1	0	1
Total	**5**	**0**	**0**	**0**	**7**	**0**	**12**
Average/Year	**1.0**	**0**	**0**	**0**	**1.4**	**0**	**2.4**

3. Traffic Characteristics of the Proposed Development

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

Proposed Site and Development Plan

As proposed, the site will be redeveloped to provide a four-story building containing approximately 40 apartment units and an approximate 80-space surface parking lot. Access to the parking lot will be provided via the following:

- A proposed full movement access drive off Chestnut Avenue located approximately 225 feet east of Rand Road. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control.

- A proposed full movement access drive off Chestnut Avenue located approximately 515 feet east of Rand Road. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control.

It should be noted that, as part of the development, the existing access drive on Rand Road will be eliminated, which will improve the traffic flow along Rand Road.

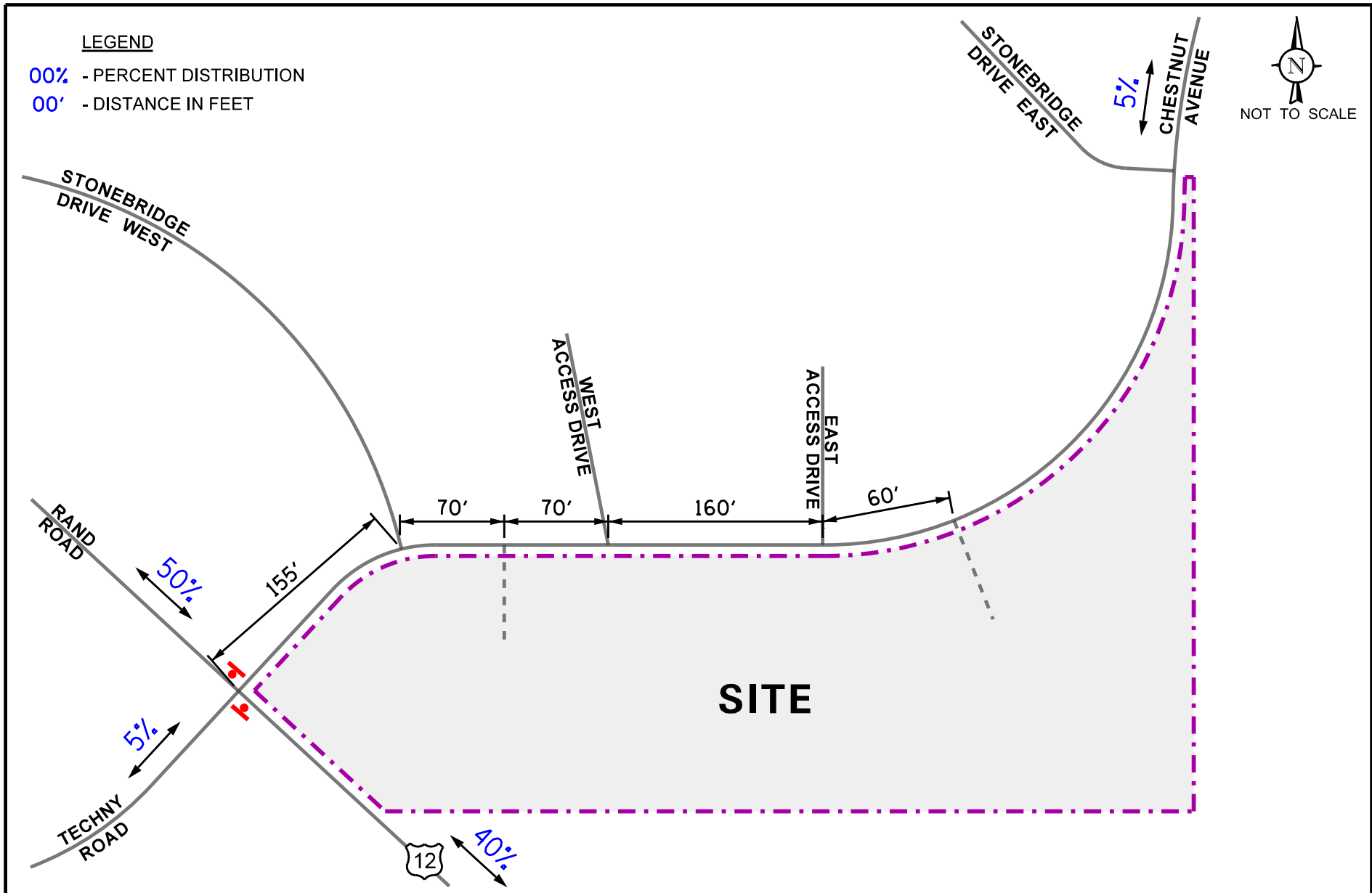
A copy of the preliminary site plan depicting the proposed development is included in the Appendix.

Directional Distribution

The directions from which residents and visitors of the development will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the traffic to be generated by the proposed development.

Development Traffic Generation

The vehicle trip generation for the overall development was calculated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. **Table 2** shows the estimated vehicle trip generation for the weekday morning and weekday evening peak hours as well as daily traffic. Copies of the ITE trip generation worksheets are included in the Appendix.



Affordable Apartment Development
Arlington Heights, Illinois

Estimated Directional Distribution

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

Job No: 21-088

Figure: 5

Table 2
ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Traffic
		In	Out	Total	In	Out	Total	
221	Apartments (40 units)	4	10	14	11	7	18	218

Trip Generation Comparison

The traffic that will be generated by the proposed apartment development was compared with trip generation estimates for an approximate 5,000 square-foot restaurant that could be developed on site. ITE trip rates for "High Turnover Sit Down Restaurant" (Land-Use Code 932) were utilized. **Table 3** shows the trip generation comparison between the proposed use and the restaurant.

Table 3
ESTIMATED PEAK HOUR DEVELOPMENT-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Traffic
		In	Out	Total	In	Out	Total	
221	Apartments (40 units)	4	10	14	11	7	18	218
932	High Turnover (Sit Down) Restaurant	28	22	50	30	19	49	561
	45 Percent Pass-By Reduction	*-11*	*-11*	*-22*	*-11*	*-11*	*-22*	*-252*
	Subtotal	17	11	28	19	8	27	309
	Difference	**-13**	**-1**	**-14**	**-8**	**-1**	**-9**	**-91**

As can be seen in Table 3, the proposed residential development will generate less traffic than the restaurant during the peak hours and on a daily basis. As such, the traffic to be generated by the proposed residential development will have a lower impact on the roadway system.

4. Projected Traffic Conditions

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

Development Traffic Assignment

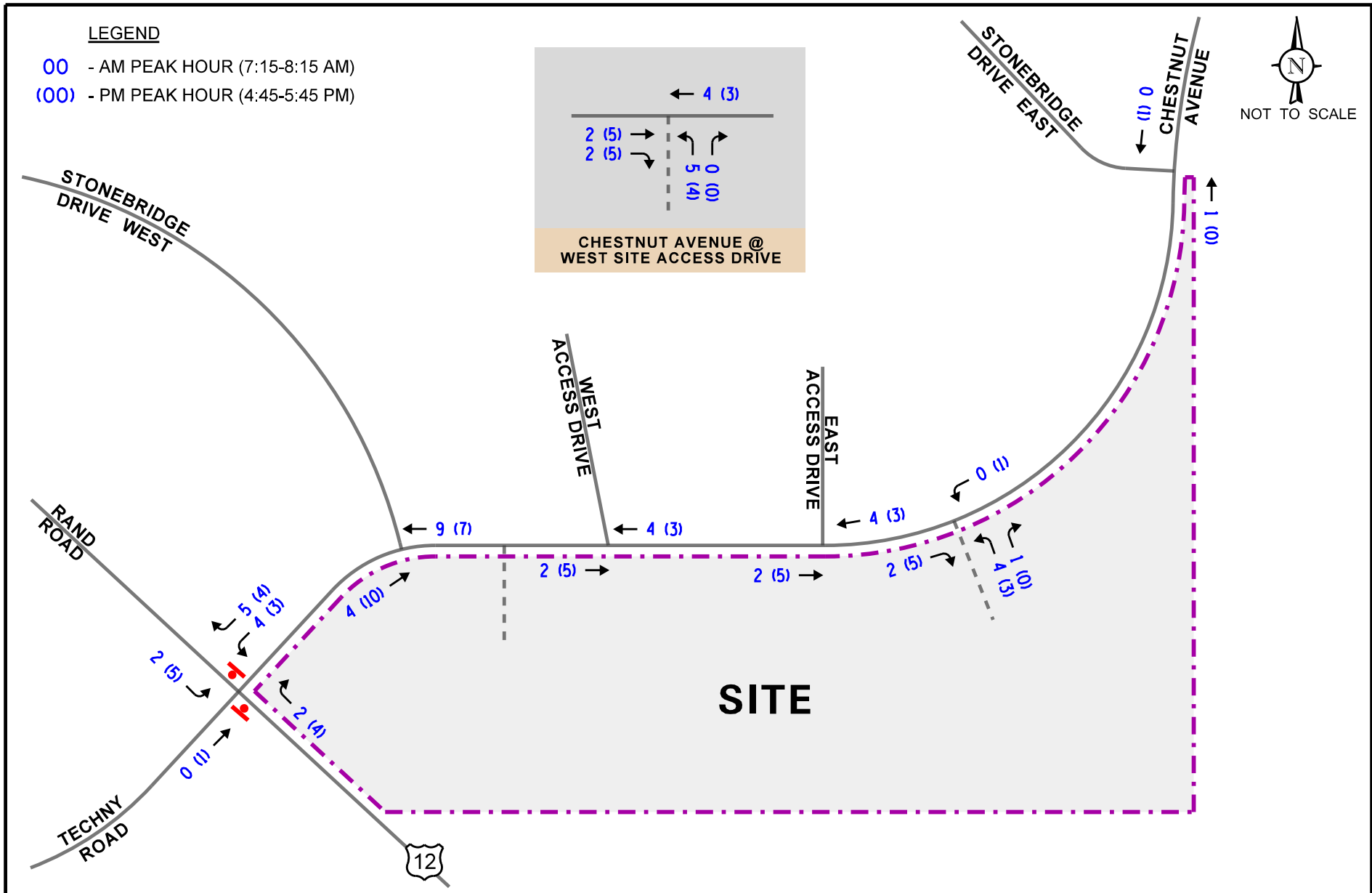
The estimated peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution. **Figure 6** illustrates the assignment of the traffic volumes estimated to be generated by the proposed development.

Background Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated April 6, 2021, the existing traffic volumes were increased by an annually compounded growth rate for six years (one-year buildout plus five years) totaling 2.1 percent to represent Year 2027 background (no-build) conditions. **Figure 7** shows the Year 2027 no-build traffic conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

Total Projected Traffic Volumes

The total projected traffic volumes include the Year 2027 no-build traffic volumes (Figure 7) and the traffic estimated to be generated by the proposed development (Figure 6). **Figure 8** shows the Year 2027 total projected traffic volumes.



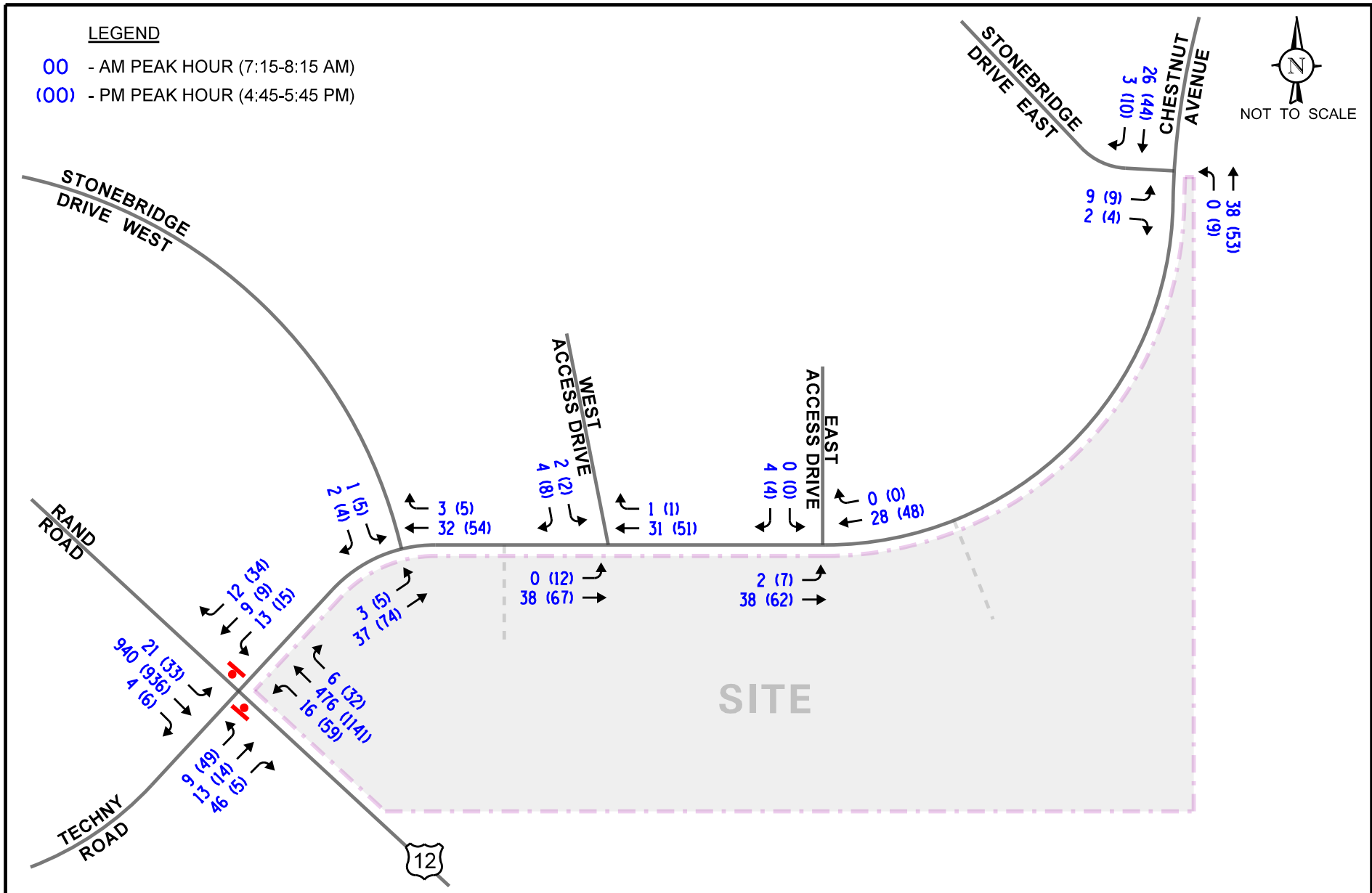
Affordable Apartment Development
Arlington Heights, Illinois

Estimated Site-Generated Traffic Volumes

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

Job No: 21-088

Figure: 6



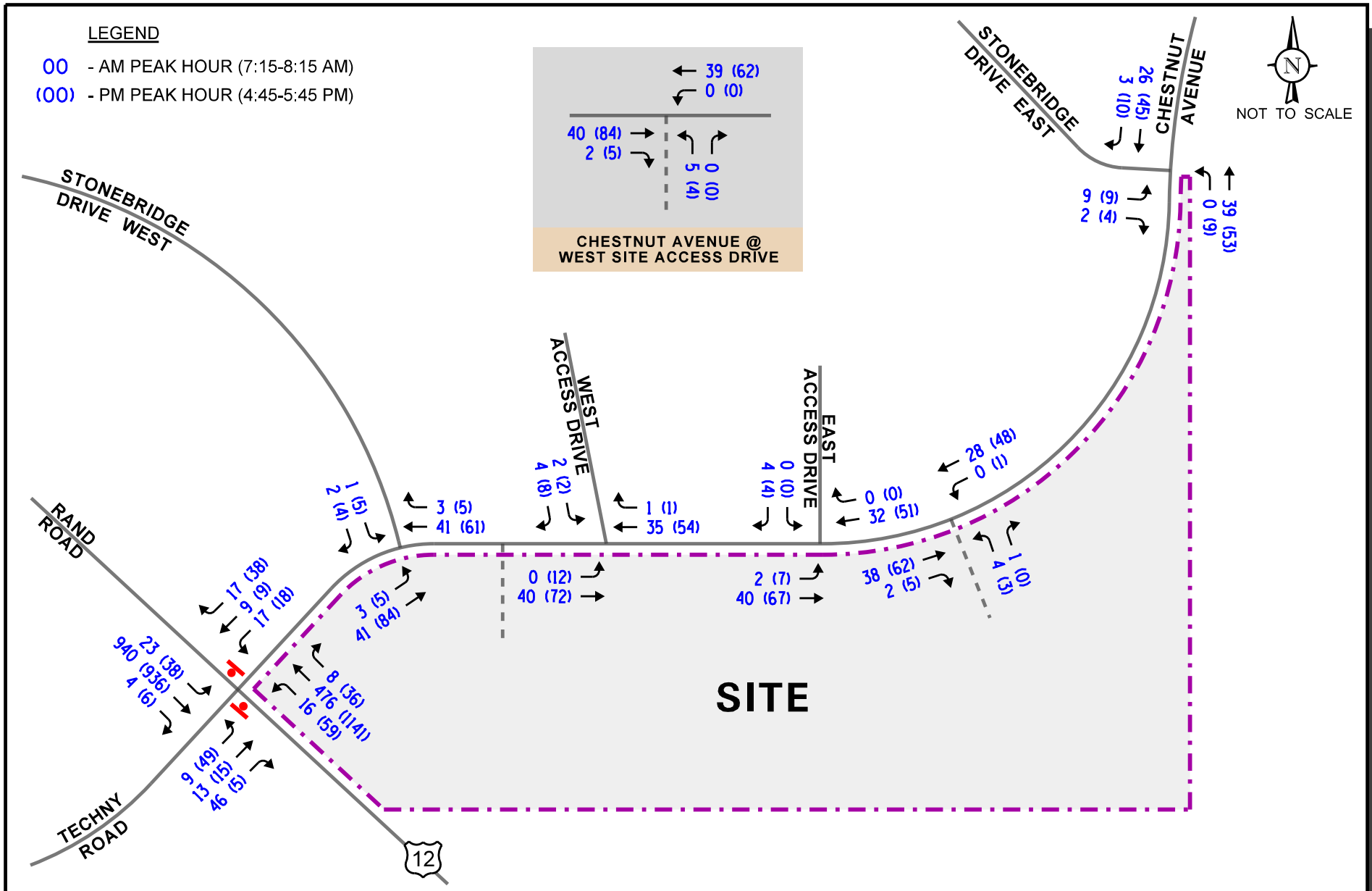
Affordable Apartment Development
Arlington Heights, Illinois

Year 2027 No-Build Traffic Volumes

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

Job No: 21-088

Figure: 7



Affordable Apartment Development
Arlington Heights, Illinois

Year 2027 Total Projected Traffic Volumes

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

Job No: 21-088

Figure: 8

5. Traffic Analysis and Recommendations

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

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and evening peak hours for the existing (Year 2021), no-build (Year 2027), and future projected (Year 2027) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 6th Edition and analyzed using Synchro/SimTraffic 10 software.

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

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

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2027 no-build conditions, and Year 2027 total projected conditions are presented in **Tables 4** through **6**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 4
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS - UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Chestnut Avenue and Techny Road				
• Northwest-bound Left Turns (Rand Road)	B	10.1	B	10.7
• Eastbound Left Turns	C	23.5	E	49.8
• Eastbound Through/Right Turns	C	15.4	E	36.6
• Westbound Left Turns	B	18.9	E	45.9
• Westbound Through/Right Turns	C	16.1	C	21.1
• Southeast-bound Left Turns (Rand Road)	A	8.4	B	11.7
Chestnut Avenue with Stonebridge Drive (West Leg)				
• Eastbound Left Turns	A	7.3	A	7.3
• Southbound Approach	A	8.6	A	9.0
Chestnut Avenue with Existing Access Drive (West)				
• Northbound Left Turns	A	0.1	A	7.3
• Southbound Approach	A	8.6	A	8.7
Chestnut Avenue with Existing Access Drive (East)				
• Northbound Left Turns	A	7.3	A	7.3
• Eastbound Approach	A	8.4	A	8.5
Chestnut Avenue with Stonebridge Drive (East Leg)				
• Northbound Left Turns	A	0.1	A	7.3
• Southbound Approach	A	8.8	A	9.0

LOS = Level of Service
Delay is measured in seconds.

Table 5
CAPACITY ANALYSIS RESULTS – NO-BUILD CONDITIONS - UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Chestnut Avenue and Techny Road				
• Northwest-bound Left Turns (Rand Road)	B	10.2	B	10.8
• Eastbound Left Turns	C	24.0	F	52.1
• Eastbound Through/Right Turns	C	15.7	E	38.1
• Westbound Left Turns	B	19.2	E	48.3
• Westbound Through/Right Turns	C	16.4	C	21.7
• Southeast-bound Left Turns (Rand Road)	A	8.4	B	11.9
Chestnut Avenue with Stonebridge Drive (West Leg)				
• Eastbound Left Turns	A	7.3	A	7.3
• Southbound Approach	A	8.6	A	9.0
Chestnut Avenue with Existing Access Drive (West)				
• Northbound Left Turns	A	0.1	A	7.3
• Southbound Approach	A	8.6	A	8.7
Chestnut Avenue with Existing Access Drive (East)				
• Northbound Left Turns	A	7.3	A	7.3
• Eastbound Approach	A	8.4	A	8.5
Chestnut Avenue with Stonebridge Drive (East Leg)				
• Northbound Left Turns	A	0.1	A	7.3
• Southbound Approach	A	8.8	A	9.0

LOS = Level of Service
Delay is measured in seconds.

Table 6
CAPACITY ANALYSIS RESULTS – TOTAL PROJECTED CONDITIONS - UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Rand Road with Chestnut Avenue and Techny Road				
• Northwest-bound Left Turns (Rand Road)	B	10.2	B	10.8
• Eastbound Left Turns	C	24.3	F	55.3
• Eastbound Through/Right Turns	C	15.7	E	40.4
• Westbound Left Turns	B	19.6	F	51.1
• Westbound Through/Right Turns	C	15.4	C	21.5
• Southeast-bound Left Turns (Rand Road)	A	8.5	B	12.0
Chestnut Avenue with Stonebridge Drive (West Leg)				
• Eastbound Left Turns	A	7.3	A	7.3
• Southbound Approach	A	8.7	A	9.1
Chestnut Avenue with Existing Access Drive (West)				
• Northbound Left Turns	A	0.1	A	7.3
• Southbound Approach	A	8.6	A	8.8
Chestnut Avenue with Existing Access Drive (East)				
• Northbound Left Turns	A	7.3	A	7.3
• Eastbound Approach	A	8.5	A	8.6
Chestnut Avenue with Stonebridge Drive (East Leg)				
• Northbound Left Turns	A	0.1	A	7.3
• Southbound Approach	A	8.8	A	9.0
Chestnut Avenue with Proposed Site Access Drive (West)				
• Northbound Approach	A	8.9	A	9.3
• Westbound Left Turns	A	0.1	A	0.1
Chestnut Avenue with Proposed Site Access Drive (East)				
• Northbound Approach	A	8.8	A	9.1
• Westbound Left Turns	A	0.1	A	7.3

LOS = Level of Service
Delay is measured in seconds.

Discussion and Recommendations

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

Rand Road with Chestnut Avenue and Techny Road

The results of the capacity analysis indicate that the northwest-bound and southeast-bound left-turn movements from Rand Road onto Chestnut Avenue and Techny Road are operating at LOS B or better during the weekday morning and evening peak hours. In addition, the eastbound movements from Techny Road onto Rand Road currently operate at LOS C during the weekday morning peak hour and LOS E during the weekday evening peak hour. The westbound left-turn movements from Chestnut Avenue onto Rand Road are operating at LOS B during the weekday morning peak hour and LOS E during the weekday evening peak hour. In addition, the westbound through/right-turn movements from Chestnut Avenue onto Rand Road currently operate at LOS C during both peak hours.

Under Year 2027 no-build conditions, all movements will continue to operate at the same existing levels of serving during the weekday morning and evening peak hours except for the eastbound left-turn movements, which will operate at LOS C during the weekday morning peak hour and LOS F during the weekday evening peak hour. This is normal and expected when a minor road intersects a major road such as Rand Road.

Under Year 2027 total projected conditions, the westbound left-turn movements will operate at LOS B during the weekday morning peak hour and LOS F during the weekday evening peak hour with increases in delay of less than three seconds. It should be noted that the westbound left-turn movements will have a volume-to-capacity (v/c) ratio of less than one (0.43) during the weekday evening peak hour, which indicates that adequate reserve capacity is available to accommodate the increase in traffic. All of the other movements will continue to operate at the same levels of service during both peak hours with increases in delay of approximately two seconds or less. Based on a review of the simulation, the westbound left-turn queues on Chestnut Avenue will experience 95th percentile queues of 47 feet during the weekday morning peak hour and 58 feet during the weekday evening peak hour. In addition, the westbound right-turn queues on Chestnut Avenue will experience 95th percentile queues of 27 feet during the weekday morning peak hour and 90 feet during the weekday evening peak hour. As such, the westbound queues will generally not extend to or beyond the proposed site access drives. Furthermore, the proposed development is projected to increase the volume of traffic traversing this intersection by less than one percent during both peak hours. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development and no roadway improvements and/or traffic control modifications are required.

Chestnut Avenue with Stonebridge Drive (West Leg)

The results of the capacity analysis indicate that the eastbound left-turn movements and the southbound approach are operating at LOS A during the weekday morning and evening peak hours.

Under Year 2027 no-build conditions, all movements will continue to operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second.

Under Year 2027 total projected conditions, all movements will operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development and no roadway improvements and/or traffic control modifications are required.

Chestnut Avenue with Existing Access Drive (West Leg)

The results of the capacity analysis indicate that the eastbound left-turn movements and the southbound approach are operating at LOS A during the weekday morning and evening peak hours.

Under Year 2027 no-build conditions, all movements will continue to operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second.

Under Year 2027 total projected conditions, all movements will operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development and no roadway improvements and/or traffic control modifications are required.

Chestnut Avenue with Existing Access Drive (East Leg)

The results of the capacity analysis indicate that the eastbound left-turn movements and the southbound approach are operating at LOS A during the weekday morning and evening peak hours.

Under Year 2027 no-build conditions, all movements will continue to operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second.

Under Year 2027 total projected conditions, all movements will operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development and no roadway improvements and/or traffic control modifications are required.

Chestnut Avenue with Stonebridge Drive (East Leg)

The results of the capacity analysis indicate that the eastbound left-turn movements and the southbound approach are operating at LOS A during the weekday morning and evening peak hours.

Under Year 2027 no-build conditions, all movements will continue to operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second.

Under Year 2027 total projected conditions, all movements will operate at LOS A during the weekday morning and evening peak hours with increases in delay of less than one second. As such, this intersection has sufficient reserve capacity to accommodate the traffic projected to be generated by the development and no roadway improvements and/or traffic control modifications are required.

Chestnut Avenue with Proposed Access Drive (West)

The results of the analysis indicate that the outbound movements from the site onto Chestnut Avenue will operate at LOS A during the weekday morning and evening peak hours with 95th percentile queues of one to two vehicles. In addition, the westbound left-turn movements will operate at LOS A during both peak hours with 95th percentile queues of one to two vehicles. As such, this access drive will be adequate in accommodating the traffic estimated to be generated by the proposed development and will ensure efficient and flexible access is provided.

Chestnut Avenue with Proposed Access Drive (East)

The results of the analysis indicate that the outbound movements from the site onto Chestnut Avenue will operate at LOS A during the weekday morning and evening peak hours with 95th percentile queues of one to two vehicles. In addition, the westbound left-turn movements will operate at LOS A during both peak hours with 95th percentile queues of one to two vehicles. As such, this access drive will be adequate in accommodating the traffic estimated to be generated by the proposed development and will ensure efficient and flexible access is provided.

Parking Evaluation

As previously indicated, the proposed development will have approximately 40 apartment units and an approximate 80-space surface parking lot at a ratio of 2.0 spaces per unit. In order to determine the adequacy of the parking supply, the parking requirement was estimated based on the Village of Arlington Heights code, parking rates published by the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*, 5th Edition, and comparison with other similar developments. Based on the two methodologies, the parking demand for the proposed development is as follows:

Parking Requirements of Proposed Development per Village of Arlington Heights Zoning Code

- Multifamily Housing (40 units)
    - 80 parking spaces (ratio of 2.0 parking space per dwelling unit)

Based on the above and the requirements of the Village of Arlington Heights, this translates into 80 parking spaces, which results in a deficit of zero parking spaces.

ITE Parking Generation Manual

- Residential Use (Multifamily Housing Mid-Rise (no nearby rail transit) – Land Use Code 221:
    - 59 parking spaces (ratio of 1.47 spaces per dwelling unit)

Based on the above and the rates published in the ITE *Parking Generation Manual*, this translates into 59 parking spaces, which results in a surplus of 21 parking spaces. Therefore, the proposed parking supply of 80 parking spaces exceeds ITE's requirements of 59 parking spaces.

Parking Ratios of Similar Developments

Parking occupancy surveys were conducted at two similar facilities in Lake in the Hills and Orland Hills:

- Villas of Lake in the Hills in Lake in the Hills, which includes 60 units (6 one-bedroom units, 40 two-bedroom units, and 14 three-bedroom units)

- Pheasant Ridge Hunter Apartments in Orland Hills, which includes 177 units (60 one-bedroom, 72 two-bedroom and 45 three-bedroom units)

The surveys were conducted on Friday, March 19, 2021 and on Saturday, March 20, 2021 in one-hour intervals from 6:00 A.M. to 10:00 A.M. and from 2:00 P.M. to 10:00 P.M. The parking occupancy surveys are summarized in **Table 6**. (Table 6 is included in the Appendix.)

Villas of Lake in the Hills – Lake in the Hills

The results of the parking occupancy surveys at the Villas of Lake in the Hills indicated the following:

- Villas of Lake in the Hills provides approximately 132 parking spaces, resulting in a ratio of 2.2 parking spaces per unit.

- The parking occupancy on Friday ranged from 43 to 67 vehicles (33 to 51 percent occupied).

- The parking occupancy on Saturday ranged from 46 to 66 vehicles (35 to 50 percent occupied).

- Peak occupancy on Friday was 67 vehicles (51 percent) occurring at 6:00 A.M. resulting in a surplus of 65 parking spaces.

- Peak occupancy on Saturday was 66 vehicles (50 percent) occurring at 6:00 A.M. resulting in a surplus of 66 parking spaces.

As such, the observed peak parking demand was 67 spaces, resulting in a parking ratio of 1.12 parking spaces per unit.

Pheasant Ridge Hunter Apartments in Orland Hills

The results of the parking occupancy surveys at Pheasant Ridge Hunter Apartments indicated the following:

- Pheasant Ridge Hunter Apartments provides approximately 282 parking spaces, resulting in a ratio of 1.59 parking spaces per unit.
- The parking occupancy on Friday ranged from 85 to 166 vehicles (30 to 59 percent occupied).
- The parking occupancy on Saturday ranged from 85 to 149 vehicles (30 to 53 percent occupied).
- Peak occupancy on Friday was 166 vehicles (59 percent) occurring at 6:00 A.M. resulting in a surplus of 116 parking spaces.
- Peak occupancy on Saturday was 149 vehicles (53 percent) occurring at 10:00 P.M. resulting in a surplus of 83 parking spaces.

As such, the observed peak parking demand was 166 spaces, resulting in a parking ratio of 0.94 parking spaces per unit.

Based on the parking surveys conducted at two similar facilities in Lake in the Hills and Orland Hills, the proposed parking ratio of 2.0 spaces per unit at the proposed affordable apartment development will be adequate in accommodating the projected parking demand.

6. Conclusion

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

- The results of the capacity analysis indicate that the proposed development traffic will not have a significant impact on the area roadways.

- The development-generated traffic will only add less than one percent of the traffic projected to be traversing the intersection of Rand Road with Chestnut Avenue and Techny Road during the weekday morning and evening peak hours.

- The proposed access drives will be adequate in accommodating the traffic projected to be generated by the proposed development and will ensure that a flexible access system is provided.

- The proposed residential development will generate less traffic than a sit down restaurant that could be developed on the site and, as such, will have a lower impact on area roadways.

- As part of the development, the existing access drive on Rand Road will be eliminated, which will improve the traffic flow along Rand Road.

- The proposed parking that will be provided on site will ensure that adequate parking is provided to accommodate its projected parking demand.

Appendix

Traffic Count Summary Sheets
Preliminary Site Plan
ITE Trip Generation Worksheets
CMAP 2050 Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets
Parking Occupancy Surveys

Traffic Count Summary Sheets

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

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

Count Name: Chestnut Avenue with Rand Road
Site Code:
Start Date: 04/05/2021

Turning Movement Data

Start Time	Chestnut Avenue Eastbound						Chestnut Avenue Westbound						Rand Road Northbound						Rand Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	1	1	14	1	16	0	3	2	5	0	10	0	19	240	15	0	274	0	7	207	2	0	216	516
4:15 PM	0	3	1	3	0	7	0	5	4	13	0	22	0	10	257	9	0	276	0	7	196	3	0	206	511
4:30 PM	0	1	1	16	2	18	0	3	4	6	3	13	0	7	245	4	0	256	0	7	201	4	0	212	499
4:45 PM	0	1	2	11	0	14	0	3	2	10	0	15	0	13	264	7	0	284	0	5	183	3	0	191	504
Hourly Total	0	6	5	44	3	55	0	14	12	34	3	60	0	49	1006	35	0	1090	0	26	787	12	0	825	2030
5:00 PM	0	1	3	13	0	17	0	5	1	5	0	11	0	13	240	8	0	261	0	11	218	0	2	229	518
5:15 PM	0	1	6	14	1	21	0	4	4	5	0	13	0	16	291	9	0	316	0	8	209	1	0	218	568
5:30 PM	0	2	3	11	1	16	0	3	2	12	0	17	0	17	221	8	0	246	0	9	224	2	2	235	514
5:45 PM	0	1	1	8	1	10	0	6	5	3	0	14	1	14	219	2	0	236	0	1	176	1	1	178	438
Hourly Total	0	5	13	46	3	64	0	18	12	25	0	55	1	60	971	27	0	1059	0	29	827	4	5	860	2038
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	1	28	0	0	29	33
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	1	28	0	0	29	33
7:00 AM	0	0	3	14	2	17	0	4	3	5	0	12	0	1	86	0	0	87	0	2	165	0	0	167	283
7:15 AM	0	2	1	16	0	19	0	6	3	2	0	11	0	4	86	2	0	92	0	9	249	1	0	259	381
7:30 AM	0	3	4	11	0	18	0	3	3	2	0	8	1	3	127	2	0	133	0	4	241	1	0	246	405
7:45 AM	0	3	6	12	0	21	0	4	3	6	0	13	0	4	118	1	0	123	0	4	228	2	0	234	391
Hourly Total	0	8	14	53	2	75	0	17	12	15	0	44	1	12	417	5	0	435	0	19	883	4	0	906	1460
8:00 AM	0	1	0	7	0	8	0	0	0	2	0	2	0	4	135	1	0	140	0	4	203	0	0	207	357
8:15 AM	0	1	2	7	2	10	0	3	2	1	0	6	0	5	104	6	0	115	0	5	182	1	0	188	319
8:30 AM	0	1	1	13	0	15	0	3	5	5	0	13	0	4	135	7	0	146	0	8	205	1	0	214	388
8:45 AM	0	1	3	16	0	20	0	2	2	7	0	11	0	4	141	3	0	148	0	3	183	3	0	189	368
Hourly Total	0	4	6	43	2	53	0	8	9	15	0	32	0	17	515	17	0	549	0	20	773	5	0	798	1432
Grand Total	0	23	38	186	10	247	0	57	45	89	3	191	2	138	2913	84	0	3137	0	95	3298	25	5	3418	6993
Approach %	0.0	9.3	15.4	75.3	-	-	0.0	29.8	23.6	46.6	-	-	0.1	4.4	92.9	2.7	-	-	0.0	2.8	96.5	0.7	-	-	-
Total %	0.0	0.3	0.5	2.7	-	3.5	0.0	0.8	0.6	1.3	-	2.7	0.0	2.0	41.7	1.2	-	44.9	0.0	1.4	47.2	0.4	-	48.9	-
Lights	0	23	37	186	-	246	0	55	42	89	-	186	2	137	2844	81	-	3064	0	94	3222	25	-	3341	6837
% Lights	-	100.0	97.4	100.0	-	99.6	-	96.5	93.3	100.0	-	97.4	100.0	99.3	97.6	96.4	-	97.7	-	98.9	97.7	100.0	-	97.7	97.8
Buses	0	0	0	0	-	0	0	1	0	0	-	1	0	0	3	2	-	5	0	0	4	0	-	4	10
% Buses	-	0.0	0.0	0.0	-	0.0	-	1.8	0.0	0.0	-	0.5	0.0	0.0	0.1	2.4	-	0.2	-	0.0	0.1	0.0	-	0.1	0.1
Single-Unit Trucks	0	0	0	0	-	0	0	1	1	0	-	2	0	0	37	1	-	38	0	1	36	0	-	37	77
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	1.8	2.2	0.0	-	1.0	0.0	0.0	1.3	1.2	-	1.2	-	1.1	1.1	0.0	-	1.1	1.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	28	0	-	29	0	0	35	0	-	35	64
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.7	1.0	0.0	-	0.9	-	0.0	1.1	0.0	-	1.0	0.9

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

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

Count Name: Chestnut Avenue with Rand Road
Site Code:
Start Date: 04/05/2021

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Chestnut Avenue Eastbound						Chestnut Avenue Westbound						Rand Road Northbound						Rand Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:45 PM	0	1	2	11	0	14	0	3	2	10	0	15	0	13	264	7	0	284	0	5	183	3	0	191	504
5:00 PM	0	1	3	13	0	17	0	5	1	5	0	11	0	13	240	8	0	261	0	11	218	0	2	229	518
5:15 PM	0	1	6	14	1	21	0	4	4	5	0	13	0	16	291	9	0	316	0	8	209	1	0	218	568
5:30 PM	0	2	3	11	1	16	0	3	2	12	0	17	0	17	221	8	0	246	0	9	224	2	2	235	514
Total	0	5	14	49	2	68	0	15	9	32	0	56	0	59	1016	32	0	1107	0	33	834	6	4	873	2104
Approach %	0.0	7.4	20.6	72.1	-	-	0.0	26.8	16.1	57.1	-	-	0.0	5.3	91.8	2.9	-	-	0.0	3.8	95.5	0.7	-	-	-
Total %	0.0	0.2	0.7	2.3	-	3.2	0.0	0.7	0.4	1.5	-	2.7	0.0	2.8	48.3	1.5	-	52.6	0.0	1.6	39.6	0.3	-	41.5	-
PHF	0.000	0.833	0.778	1.167	-	1.079	0.000	1.000	0.750	0.889	-	1.098	0.000	1.157	1.164	1.185	-	1.168	0.000	1.000	1.241	0.667	-	1.238	1.235
Lights	0	5	14	49	-	68	0	14	9	32	-	55	0	58	1003	31	-	1092	0	33	827	6	-	866	2081
% Lights	-	100.0	100.0	100.0	-	100.0	-	93.3	100.0	100.0	-	98.2	-	98.3	98.7	96.9	-	98.6	-	100.0	99.2	100.0	-	99.2	98.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	1	0	0	-	1	0	0	5	1	-	6	0	0	4	0	-	4	11
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	6.7	0.0	0.0	-	1.8	-	0.0	0.5	3.1	-	0.5	-	0.0	0.5	0.0	-	0.5	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	8	0	-	9	0	0	3	0	-	3	12
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	1.7	0.8	0.0	-	0.8	-	0.0	0.4	0.0	-	0.3	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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

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

Count Name: Chestnut Avenue with Rand Road
Site Code:
Start Date: 04/05/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Chestnut Avenue Eastbound						Chestnut Avenue Westbound						Rand Road Northbound						Rand Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	2	1	16	0	19	0	6	3	2	0	11	0	4	86	2	0	92	0	9	249	1	0	259	381
7:30 AM	0	3	4	11	0	18	0	3	3	2	0	8	1	3	127	2	0	133	0	4	241	1	0	246	405
7:45 AM	0	3	6	12	0	21	0	4	3	6	0	13	0	4	118	1	0	123	0	4	228	2	0	234	391
8:00 AM	0	1	0	7	0	8	0	0	0	2	0	2	0	4	135	1	0	140	0	4	203	0	0	207	357
Total	0	9	11	46	0	66	0	13	9	12	0	34	1	15	466	6	0	488	0	21	921	4	0	946	1534
Approach %	0.0	13.6	16.7	69.7	-	-	0.0	38.2	26.5	35.3	-	-	0.2	3.1	95.5	1.2	-	-	0.0	2.2	97.4	0.4	-	-	-
Total %	0.0	0.6	0.7	3.0	-	4.3	0.0	0.8	0.6	0.8	-	2.2	0.1	1.0	30.4	0.4	-	31.8	0.0	1.4	60.0	0.3	-	61.7	-
PHF	0.000	1.000	0.611	0.958	-	1.048	0.000	0.722	1.000	0.667	-	0.872	0.333	1.250	1.151	1.000	-	1.162	0.000	0.778	1.233	0.667	-	1.218	1.263
Lights	0	9	11	46	-	66	0	13	8	12	-	33	1	15	443	6	-	465	0	21	888	4	-	913	1477
% Lights	-	100.0	100.0	100.0	-	100.0	-	100.0	88.9	100.0	-	97.1	100.0	100.0	95.1	100.0	-	95.3	-	100.0	96.4	100.0	-	96.5	96.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.1	0.1
Single-Unit Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	12	0	-	12	0	0	17	0	-	17	30
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	11.1	0.0	-	2.9	0.0	0.0	2.6	0.0	-	2.5	-	0.0	1.8	0.0	-	1.8	2.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	11	0	-	11	0	0	15	0	-	15	26
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	2.4	0.0	-	2.3	-	0.0	1.6	0.0	-	1.6	1.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Count Name: Chestnut Avenue with Stonebridge Drive - West
Site Code:
Start Date: 04/05/2021

Turning Movement Data

Start Time	Chestnut Avenue Eastbound					Chestnut Avenue Westbound					Stonebridge Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	1	1	23	0	25	0	14	0	0	14	0	0	1	1	1	40
4:15 PM	0	1	12	0	13	0	14	2	0	16	0	1	0	0	1	30
4:30 PM	0	2	12	1	14	0	12	1	0	13	0	1	1	0	2	29
4:45 PM	0	2	13	0	15	0	15	0	0	15	0	0	0	2	0	30
Hourly Total	1	6	60	1	67	0	55	3	0	58	0	2	2	3	4	129
5:00 PM	0	1	22	0	23	0	8	1	0	9	0	2	3	0	5	37
5:15 PM	0	1	23	0	24	0	15	0	0	15	0	0	1	2	1	40
5:30 PM	0	1	13	0	14	0	16	4	0	20	0	3	0	1	3	37
5:45 PM	0	0	3	0	3	0	9	2	0	11	0	3	0	0	3	17
Hourly Total	0	3	61	0	64	0	48	7	0	55	0	8	4	3	12	131
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:45 AM	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	4
Hourly Total	0	0	2	0	2	0	2	0	0	2	0	0	0	0	0	4
7:00 AM	0	0	7	0	7	0	13	3	0	16	0	1	1	0	2	25
7:15 AM	0	1	10	0	11	0	8	1	0	9	0	0	0	0	0	20
7:30 AM	0	0	10	0	10	0	9	1	0	10	0	1	1	0	2	22
7:45 AM	0	1	11	0	12	0	10	0	0	10	0	0	0	0	0	22
Hourly Total	0	2	38	0	40	0	40	5	0	45	0	2	2	0	4	89
8:00 AM	0	1	4	0	5	0	4	1	0	5	0	0	1	0	1	11
8:15 AM	0	1	13	0	14	0	3	1	0	4	0	1	1	0	2	20
8:30 AM	0	1	15	0	16	0	16	3	0	19	1	0	0	0	1	36
8:45 AM	0	1	5	0	6	0	7	2	0	9	0	1	0	1	1	16
Hourly Total	0	4	37	0	41	0	30	7	0	37	1	2	2	1	5	83
Grand Total	1	15	198	1	214	0	175	22	0	197	1	14	10	7	25	436
Approach %	0.5	7.0	92.5	-	-	0.0	88.8	11.2	-	-	4.0	56.0	40.0	-	-	-
Total %	0.2	3.4	45.4	-	49.1	0.0	40.1	5.0	-	45.2	0.2	3.2	2.3	-	5.7	-
Lights	1	13	194	-	208	0	171	12	-	183	1	11	9	-	21	412
% Lights	100.0	86.7	98.0	-	97.2	-	97.7	54.5	-	92.9	100.0	78.6	90.0	-	84.0	94.5
Buses	0	1	1	-	2	0	0	5	-	5	0	0	1	-	1	8
% Buses	0.0	6.7	0.5	-	0.9	-	0.0	22.7	-	2.5	0.0	0.0	10.0	-	4.0	1.8
Single-Unit Trucks	0	0	2	-	2	0	2	0	-	2	0	0	0	-	0	4
% Single-Unit Trucks	0.0	0.0	1.0	-	0.9	-	1.1	0.0	-	1.0	0.0	0.0	0.0	-	0.0	0.9
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	1	1	-	2	0	2	5	-	7	0	3	0	-	3	12
% Bicycles on Road	0.0	6.7	0.5	-	0.9	-	1.1	22.7	-	3.6	0.0	21.4	0.0	-	12.0	2.8

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

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

Count Name: Chestnut Avenue with Stonebridge Drive - West
Site Code:
Start Date: 04/05/2021

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Chestnut Avenue Eastbound					Chestnut Avenue Westbound					Stonebridge Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:45 PM	0	2	13	0	15	0	15	0	0	15	0	0	0	2	0	30
5:00 PM	0	1	22	0	23	0	8	1	0	9	0	2	3	0	5	37
5:15 PM	0	1	23	0	24	0	15	0	0	15	0	0	1	2	1	40
5:45 PM	0	1	13	0	14	0	16	4	0	20	0	3	0	1	3	37
Total	0	5	71	0	76	0	54	5	0	59	0	5	4	5	9	144
Approach %	0.0	6.6	93.4	-	-	0.0	91.5	8.5	-	-	0.0	55.6	44.4	-	-	-
Total %	0.0	3.5	49.3	-	52.8	0.0	37.5	3.5	-	41.0	0.0	3.5	2.8	-	6.3	-
PHF	0.000	0.833	1.029	-	1.056	0.000	1.125	0.417	-	0.983	0.000	0.556	0.444	-	0.600	1.200
Lights	0	5	70	-	75	0	52	2	-	54	0	4	4	-	8	137
% Lights	-	100.0	98.6	-	98.7	-	96.3	40.0	-	91.5	-	80.0	100.0	-	88.9	95.1
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	1	-	1	0	1	0	-	1	0	0	0	-	0	2
% Single-Unit Trucks	-	0.0	1.4	-	1.3	-	1.9	0.0	-	1.7	-	0.0	0.0	-	0.0	1.4
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	1	3	-	4	0	1	0	-	1	5
% Bicycles on Road	-	0.0	0.0	-	0.0	-	1.9	60.0	-	6.8	-	20.0	0.0	-	11.1	3.5
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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

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

Count Name: Chestnut Avenue with Stonebridge Drive - West
Site Code:
Start Date: 04/05/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Chestnut Avenue Eastbound					Chestnut Avenue Westbound					Stonebridge Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	1	10	0	11	0	8	1	0	9	0	0	0	0	0	20
7:30 AM	0	0	10	0	10	0	9	1	0	10	0	1	1	0	2	22
7:45 AM	0	1	11	0	12	0	10	0	0	10	0	0	0	0	0	22
8:00 AM	0	1	4	0	5	0	4	1	0	5	0	0	1	0	1	11
Total	0	3	35	0	38	0	31	3	0	34	0	1	2	0	3	75
Approach %	0.0	7.9	92.1	-	-	0.0	91.2	8.8	-	-	0.0	33.3	66.7	-	-	-
Total %	0.0	4.0	46.7	-	50.7	0.0	41.3	4.0	-	45.3	0.0	1.3	2.7	-	4.0	-
PHF	0.000	1.000	1.061	-	1.056	0.000	1.033	1.000	-	1.133	0.000	0.333	0.667	-	0.500	1.136
Lights	0	2	35	-	37	0	30	3	-	33	0	1	2	-	3	73
% Lights	-	66.7	100.0	-	97.4	-	96.8	100.0	-	97.1	-	100.0	100.0	-	100.0	97.3
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	3.2	0.0	-	2.9	-	0.0	0.0	-	0.0	1.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Bicycles on Road	-	33.3	0.0	-	2.6	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	1.3
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Count Name: Chestnut Avenue with Stonebridge Drive - East
Site Code:
Start Date: 04/05/2021

Turning Movement Data

Start Time	Chestnut Avenue Eastbound					Chestnut Avenue Westbound					Stonebridge Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:15 PM	0	1	16	0	17	0	20	2	0	22	0	1	0	1	1	40
4:30 PM	0	1	10	0	11	0	9	1	0	10	0	0	1	3	1	22
4:45 PM	0	2	8	0	10	0	12	4	0	16	0	2	1	2	3	29
Hourly Total	0	4	34	0	38	0	41	7	0	48	0	3	2	6	5	91
5:00 PM	0	2	13	0	15	0	7	4	0	11	0	3	2	1	5	31
5:15 PM	0	3	16	0	19	0	7	1	0	8	0	3	0	1	3	30
5:30 PM	0	2	14	0	16	0	13	1	1	14	0	1	1	3	2	32
5:45 PM	0	1	3	0	4	0	8	1	0	9	0	2	1	2	3	16
Hourly Total	0	8	46	0	54	0	35	7	1	42	0	9	4	7	13	109
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:00 AM	0	0	6	0	6	0	10	1	0	11	0	0	2	0	2	19
7:15 AM	0	0	11	0	11	0	8	0	0	8	0	3	0	0	3	22
7:30 AM	0	0	12	0	12	0	6	1	0	7	0	1	1	0	2	21
7:45 AM	0	0	9	0	9	0	7	2	0	9	0	3	1	0	4	22
Hourly Total	0	0	38	0	38	0	31	4	0	35	0	7	4	0	11	84
8:00 AM	0	0	6	0	6	0	3	0	0	3	0	2	0	0	2	11
8:15 AM	0	0	6	0	6	0	4	3	0	7	0	5	1	1	6	19
8:30 AM	0	1	12	0	13	0	7	2	0	9	0	4	3	0	7	29
8:45 AM	0	1	5	0	6	0	7	0	0	7	0	5	2	2	7	20
Hourly Total	0	2	29	0	31	0	21	5	0	26	0	16	6	3	22	79
Grand Total	0	14	147	0	161	0	128	23	1	151	0	35	17	16	52	364
Approach %	0.0	8.7	91.3	-	-	0.0	84.8	15.2	-	-	0.0	67.3	32.7	-	-	-
Total %	0.0	3.8	40.4	-	44.2	0.0	35.2	6.3	-	41.5	0.0	9.6	4.7	-	14.3	-
Lights	0	13	144	-	157	0	123	22	-	145	0	32	16	-	48	350
% Lights	-	92.9	98.0	-	97.5	-	96.1	95.7	-	96.0	-	91.4	94.1	-	92.3	96.2
Buses	0	0	0	-	0	0	3	0	-	3	0	2	0	-	2	5
% Buses	-	0.0	0.0	-	0.0	-	2.3	0.0	-	2.0	-	5.7	0.0	-	3.8	1.4
Single-Unit Trucks	0	1	1	-	2	0	1	0	-	1	0	0	1	-	1	4
% Single-Unit Trucks	-	7.1	0.7	-	1.2	-	0.8	0.0	-	0.7	-	0.0	5.9	-	1.9	1.1
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	2	-	2	0	1	1	-	2	0	1	0	-	1	5
% Bicycles on Road	-	0.0	1.4	-	1.2	-	0.8	4.3	-	1.3	-	2.9	0.0	-	1.9	1.4
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	16	-	-

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

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

Count Name: Chestnut Avenue with Stonebridge Drive - East
Site Code:
Start Date: 04/05/2021

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Chestnut Avenue Eastbound					Chestnut Avenue Westbound					Stonebridge Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:45 PM	0	2	8	0	10	0	12	4	0	16	0	2	1	2	3	29
5:00 PM	0	2	13	0	15	0	7	4	0	11	0	3	2	1	5	31
5:15 PM	0	3	16	0	19	0	7	1	0	8	0	3	0	1	3	30
5:30 PM	0	2	14	0	16	0	13	1	1	14	0	1	1	3	2	32
Total	0	9	51	0	60	0	39	10	1	49	0	9	4	7	13	122
Approach %	0.0	15.0	85.0	-	-	0.0	79.6	20.4	-	-	0.0	69.2	30.8	-	-	-
Total %	0.0	7.4	41.8	-	49.2	0.0	32.0	8.2	-	40.2	0.0	7.4	3.3	-	10.7	-
PHF	0.000	1.000	1.063	-	1.053	0.000	1.000	0.833	-	1.021	0.000	1.000	0.667	-	0.867	1.271
Lights	0	8	51	-	59	0	39	10	-	49	0	9	3	-	12	120
% Lights	-	88.9	100.0	-	98.3	-	100.0	100.0	-	100.0	-	100.0	75.0	-	92.3	98.4
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	0	-	1	0	0	0	-	0	0	0	1	-	1	2
% Single-Unit Trucks	-	11.1	0.0	-	1.7	-	0.0	0.0	-	0.0	-	0.0	25.0	-	7.7	1.6
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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

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

Count Name: Chestnut Avenue with Stonebridge Drive - East
Site Code:
Start Date: 04/05/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Chestnut Avenue Eastbound					Chestnut Avenue Westbound					Stonebridge Drive Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	11	0	11	0	8	0	0	8	0	3	0	0	3	22
7:30 AM	0	0	12	0	12	0	6	1	0	7	0	1	1	0	2	21
7:45 AM	0	0	9	0	9	0	7	2	0	9	0	3	1	0	4	22
8:00 AM	0	0	6	0	6	0	3	0	0	3	0	2	0	0	2	11
Total	0	0	38	0	38	0	24	3	0	27	0	9	2	0	11	76
Approach %	0.0	0.0	100.0	-	-	0.0	88.9	11.1	-	-	0.0	81.8	18.2	-	-	-
Total %	0.0	0.0	50.0	-	50.0	0.0	31.6	3.9	-	35.5	0.0	11.8	2.6	-	14.5	-
PHF	0.000	0.000	1.056	-	1.056	0.000	1.000	0.500	-	1.000	0.000	1.000	0.667	-	0.917	1.152
Lights	0	0	38	-	38	0	23	3	-	26	0	8	2	-	10	74
% Lights	-	-	100.0	-	100.0	-	95.8	100.0	-	96.3	-	88.9	100.0	-	90.9	97.4
Buses	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Buses	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	11.1	0.0	-	9.1	1.3
Single-Unit Trucks	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	-	0.0	-	0.0	-	4.2	0.0	-	3.7	-	0.0	0.0	-	0.0	1.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Study Name	Chestnut Avenue with Central Drives
Start Date	Monday, April 05, 2021 4:11 PM
End Date	Tuesday, April 06, 2021 9:11 AM
Site Code	

Report Summary

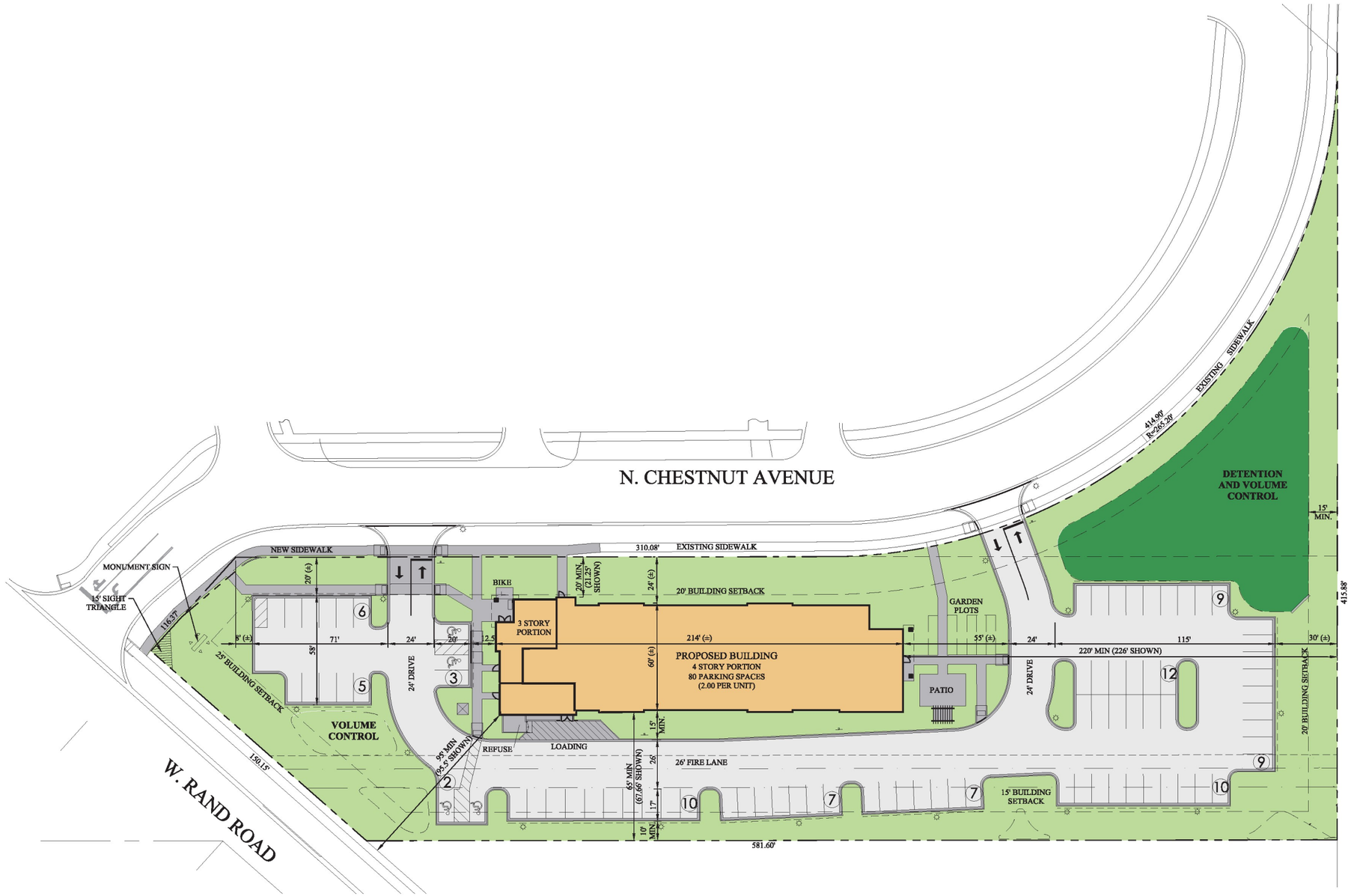
		Eastbound							Westbound							Southeastbound							Northeastbound							Southwestbound							Crosswalk		
Time Period	**Class.**	**U**	**HL**	**BL**	**T**	**HR**	**I**	**O**	**U**	**BL**	**T**	**BR**	**HR**	**I**	**O**	**U**	**L**	**BL**	**R**	**HR**	**I**	**O**	**U**	**HL**	**L**	**T**	**BR**	**I**	**O**	**U**	**HL**	**T**	**BR**	**R**	**I**	**O**	**Total**		**ıdestria**	**Total**
Peak 1	Lights	0	11	5	57	1	74	53	0	0	40	1	0	41	58	0	1	1	0	8	10	14	0	0	0	0	0	0	1	0	0	0	5	2	7	6	132	W	4	4
Specified Period	%	0%	100%	100%	98%	100%	99%	90%	0%	0%	93%	100%	0%	93%	98%	0%	100%	100%	0%	100%	100%	93%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	63%	100%	70%	100%	94%		100%	
4:45 PM - 5:45 PM	Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	E	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
4:56 PM - 5:45 PM	ıgle-Unit Truc	0	0	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	NW	38	38
	%	0%	0%	0%	2%	0%	1%	2%	0%	0%	2%	0%	0%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SW	1	1
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	icycles on Roa	0	0	0	0	0	0	5	0	0	2	0	0	2	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	3	0	3	0	6	NE	37	37
	%	0%	0%	0%	0%	0%	0%	8%	0%	0%	5%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	38%	0%	30%	0%	4%		100%	
	Total	**0**	**11**	**5**	**58**	**1**	**75**	**59**	**0**	**0**	**43**	**1**	**0**	**44**	**59**	**0**	**1**	**1**	**0**	**8**	**10**	**15**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**8**	**2**	**10**	**6**	**140**		**80**	**80**
	PHF	0	0.39	0.62	0.76	0.25	0.67	0.74	0	0	0.77	0.25	0	0.73	0.78	0	0.25	0.25	0	0.67	0.83	0.54	0	0	0.25	0	0	0.25	0.25	0	0	0	0.5	0.25	0.42	0.75	0.81			
	Approach %						54%	42%						31%	42%						7%	11%						1%	1%						7%	4%				

Study Name	Chestnut Avenue with Central Drives
Start Date	Monday, April 05, 2021 4:11 PM
End Date	Tuesday, April 06, 2021 9:11 AM
Site Code	

Report Summary

		Eastbound							Westbound							Southeastbound							Northeastbound							Southwestbound								Crosswalk	
Time Period	**Class.**	**U**	**HL**	**BL**	**T**	**HR**	**I**	**O**	**U**	**BL**	**T**	**BR**	**HR**	**I**	**O**	**U**	**L**	**BL**	**R**	**HR**	**I**	**O**	**U**	**HL**	**L**	**T**	**BR**	**I**	**O**	**U**	**HL**	**T**	**BR**	**R**	**I**	**O**	**Total**		**ıdestria**	**Total**
Peak 1	Lights	0	0	2	36	0	38	31	0	0	27	1	0	28	38	0	0	2	0	1	3	1	0	0	0	0	0	0	0	0	0	0	3	0	3	2	72	W	1	1
Specified Period	%	0%	0%	100%	100%	0%	100%	97%	0%	0%	96%	100%	0%	97%	100%	0%	0%	100%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	100%	99%		100%	
7:15 AM - 8:15 AM	Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	E	0	0
One Hour Peak	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
7:26 AM - 8:15 AM	ıgle-Unit Truc	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	NW	7	7
	%	0%	0%	0%	0%	0%	0%	3%	0%	0%	4%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		100%	
	ticulated Truc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	SW	0	0
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
	icycles on Roa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NE	7	7
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		100%	
	Total	**0**	**0**	**2**	**36**	**0**	**38**	**32**	**0**	**0**	**28**	**1**	**0**	**29**	**38**	**0**	**0**	**2**	**0**	**1**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**2**	**73**		**15**	**15**
	PHF	0	0	0.5	0.69	0	0.68	0.73	0	0	0.78	0.25	0	0.72	0.73	0	0	0.5	0	0.25	0.75	0.25	0	0	0	0	0	0	0	0	0	0	0.38	0	0.38	0.5	0.79			
	Approach %						52%	44%						40%	52%						4%	1%						0%	0%						4%	3%				

Preliminary Site Plan


N. CHESTNUT AVENUE
W. RAND ROAD
EXISTING SIDEWALK
NEW SIDEWALK
MONUMENT SIGN
15' SIGHT TRIANGLE
116.37'
25' BUILDING SETBACK
VOLUME CONTROL
150.15'
20' (±)
8' (±)
71'
58'
24'
24' DRIVE
20'
2.5'
BIKE
20' MIN. (21.25' SHOWN)
24' (±)
20' BUILDING SETBACK
3 STORY PORTION
214' (±)
60' (±)
PROPOSED BUILDING
4 STORY PORTION
80 PARKING SPACES
(2.00 PER UNIT)
310.08'
GARDEN PLOTS
55' (±)
PATIO
24' DRIVE
115'
30' (±)
220' MIN (226' SHOWN)
DETENTION AND VOLUME CONTROL
15' MIN.
414.90'
R=265.20'
415.88'
20' BUILDING SETBACK
REFUSE
LOADING
95' MIN (95.5' SHOWN)
15' MIN.
26'
26' FIRE LANE
65' MIN (67.66' SHOWN)
17'
10' MIN.
15' BUILDING SETBACK
581.60'

ITE Trip Generation Worksheets

Multifamily Housing (Mid-Rise)
(221)

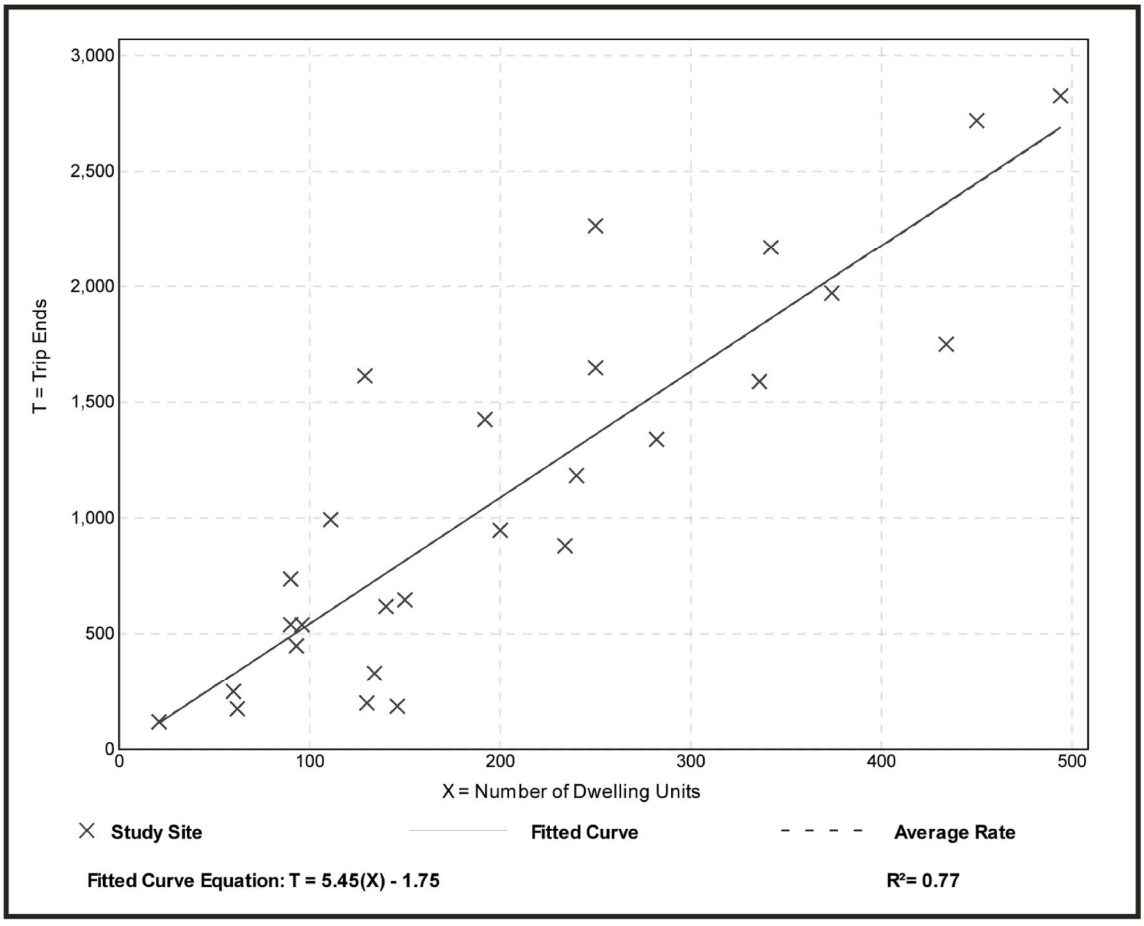
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



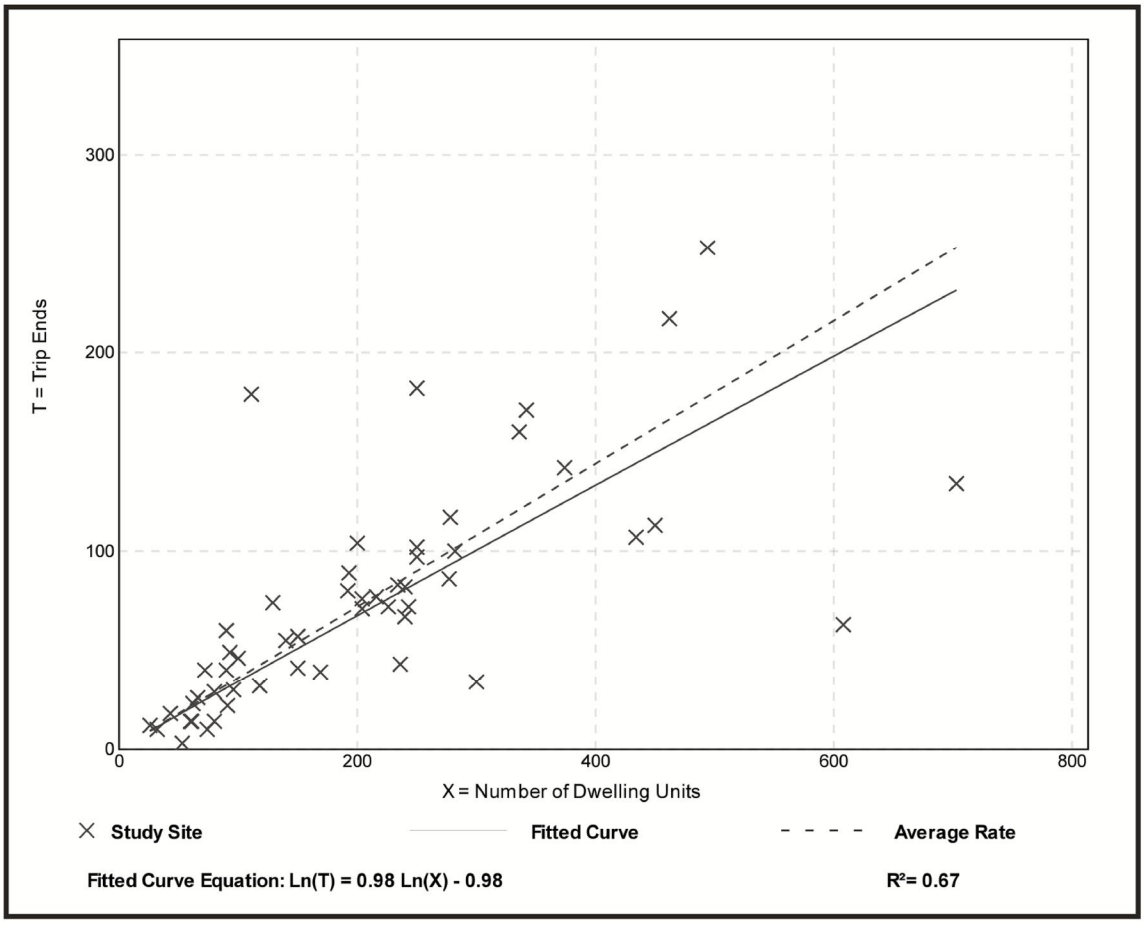
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 53
Avg. Num. of Dwelling Units: 207
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



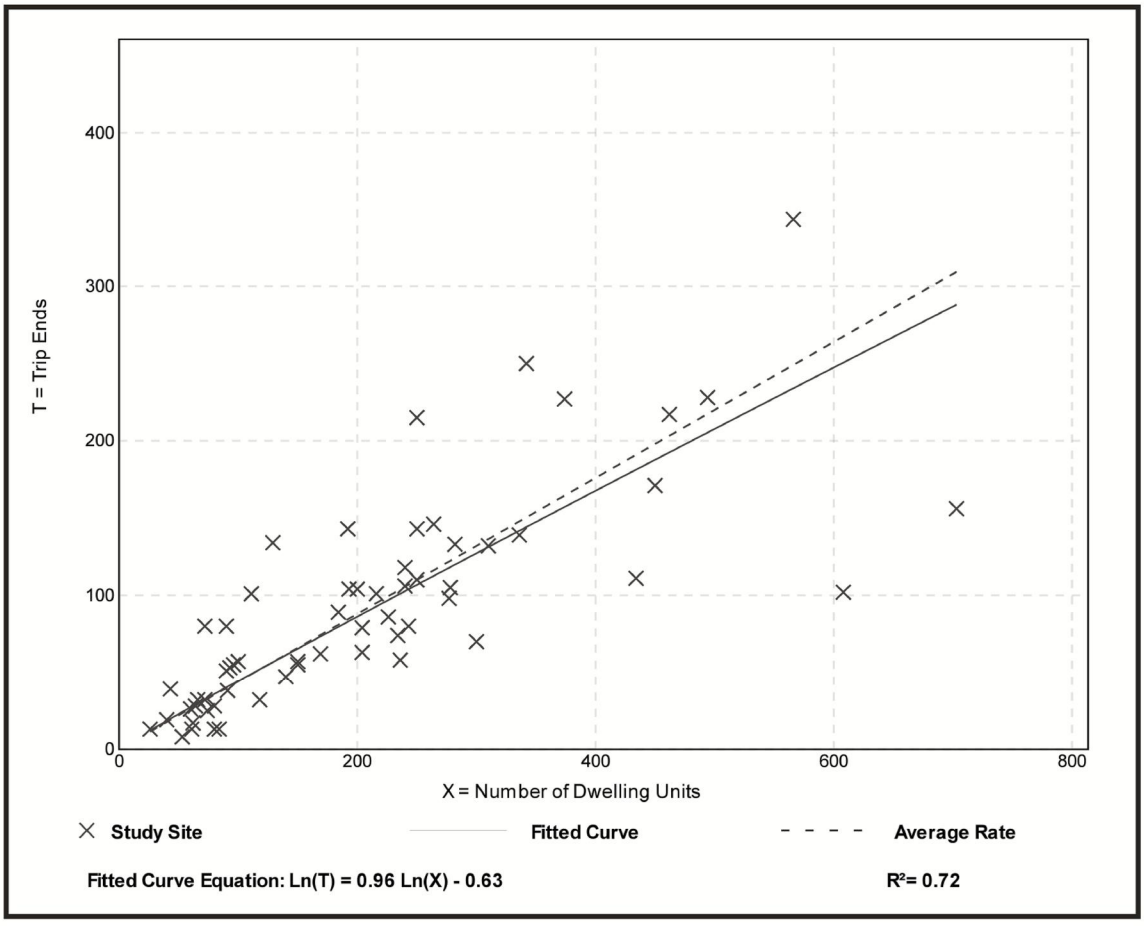
Multifamily Housing (Mid-Rise)
(221)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 60
Avg. Num. of Dwelling Units: 208
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607

312-454-0400
cmap.illinois.gov

April 6, 2021

Brendan S. May
Senor Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: ***Rand Road (US 12) @ Chestnut Avenue/Techny Road***
IDOT

Dear Mr. May:

In response to a request made on your behalf and dated April 6, 2021, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current AADT	Year 2050 AADT
Rand Rd, @ Chestnut Ave/Techny Rd	29,900	33,200

Traffic projections are developed using existing ADT data provided in the request letter and the results from the December 2020 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: Quigley (IDOT)
\2021_CY_TrafficForecast\ArlingtonHeights\ck-47-21\ck-47-21.docx

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

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

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour Conditions

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	9	13	46	13	9	12	21	921	4	16	466	6
Future Vol, veh/h	9	13	46	13	9	12	21	921	4	16	466	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	-	125	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	11	0	0	4	0	0	5	0
Mvmt Flow	9	14	48	14	9	13	22	969	4	17	491	6

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1299	1546	487	1064	1545	249	497	0	0	973	0	0
Stage 1	1015	1015	-	528	528	-	-	-	-	-	-	-
Stage 2	284	531	-	536	1017	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.72	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4.11	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	121	116	532	180	104	757	1077	-	-	717	-	-
Stage 1	259	318	-	507	504	-	-	-	-	-	-	-
Stage 2	705	529	-	501	294	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	111	111	532	151	99	757	1077	-	-	717	-	-
Mov Cap-2 Maneuver	204	222	-	273	200	-	-	-	-	-	-	-
Stage 1	254	312	-	497	492	-	-	-	-	-	-	-
Stage 2	664	516	-	427	288	-	-	-	-	-	-	-

Approach	EB	WB	SE	NW
HCM Control Delay, s	16.5	17.2	0.2	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	WBLn2	SEL	SET	SER
Capacity (veh/h)	717	-	-	204	407	273	345	1077	-	-
HCM Lane V/C Ratio	0.023	-	-	0.046	0.153	0.05	0.064	0.021	-	-
HCM Control Delay (s)	10.1	-	-	23.5	15.4	18.9	16.1	8.4	-	-
HCM Lane LOS	B	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.5	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	37	32	3	1	2
Future Vol, veh/h	3	37	32	3	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	3	39	34	3	1	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	81	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	926	1042
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	924	1042
Mov Cap-2 Maneuver	-	-	-	-	924	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	983	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	999
HCM Lane V/C Ratio	0.002	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	38	31	1	2	4
Future Vol, veh/h	0	38	31	1	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	0	40	33	1	2	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	74	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1591	-	-	-	935	1045
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	935	1045
Mov Cap-2 Maneuver	-	-	-	-	935	-
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	988	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1006
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	38	28	0	0	4
Future Vol, veh/h	2	38	28	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	2	40	29	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	29	0	-	0	73	29
Stage 1	-	-	-	-	29	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1597	-	-	-	936	1052
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1597	-	-	-	935	1052
Mov Cap-2 Maneuver	-	-	-	-	935	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1597	-	-	-	1052
HCM Lane V/C Ratio	0.001	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	2	0	38	26	3
Future Vol, veh/h	9	2	0	38	26	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	3	0
Mvmt Flow	9	2	0	40	27	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	69	29	30	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	941	1052	1596	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1052	1596	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	988	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1596	-	959	-	-
HCM Lane V/C Ratio	-	-	0.012	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour Conditions

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	49	14	5	15	9	34	33	917	6	59	1118	32
Future Vol, veh/h	49	14	5	15	9	34	33	917	6	59	1118	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	-	125	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	7	0	0	0	1	0	2	1	3
Mvmt Flow	53	15	5	16	10	37	35	986	6	63	1202	34

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1791	2421	496	1916	2407	618	1236	0	0	992	0	0
Stage 1	1059	1059	-	1345	1345	-	-	-	-	-	-	-
Stage 2	732	1362	-	571	1062	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.64	6.5	6.9	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.64	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.64	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.57	4	3.3	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 52	33	525	39	34	437	571	-	-	693	-	-
Stage 1	243	304	-	153	222	-	-	-	-	-	-	-
Stage 2	383	218	-	461	303	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 40	28	525	31	29	437	571	-	-	693	-	-
Mov Cap-2 Maneuver	131	106	-	104	110	-	-	-	-	-	-	-
Stage 1	228	285	-	144	202	-	-	-	-	-	-	-
Stage 2	304	198	-	406	285	-	-	-	-	-	-	-

Approach	EB	WB	SE	NW
HCM Control Delay, s	46.1	27.5	0.4	0.5
HCM LOS	E	D		

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	WBLn2	SEL	SET	SER
Capacity (veh/h)	693	-	-	131	134	104	269	571	-	-
HCM Lane V/C Ratio	0.092	-	-	0.402	0.152	0.155	0.172	0.062	-	-
HCM Control Delay (s)	10.7	-	-	49.8	36.6	45.9	21.1	11.7	-	-
HCM Lane LOS	B	-	-	E	E	E	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.7	0.5	0.5	0.6	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	74	54	5	5	4
Future Vol, veh/h	5	74	54	5	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	5	80	58	5	5	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	63	0	-	0	151	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	90	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1553	-	-	-	846	1010
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1553	-	-	-	843	1010
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	939	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1553	-	-	-	910
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	67	51	1	2	8
Future Vol, veh/h	12	67	51	1	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	13	72	55	1	2	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	56	0	-	0	154	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1562	-	-	-	842	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1562	-	-	-	834	1016
Mov Cap-2 Maneuver	-	-	-	-	834	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	931	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1562	-	-	-	974
HCM Lane V/C Ratio	0.008	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	62	48	0	0	4
Future Vol, veh/h	7	62	48	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	8	67	52	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	52	0	-	0	135	52
Stage 1	-	-	-	-	52	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1567	-	-	-	863	1021
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1567	-	-	-	859	1021
Mov Cap-2 Maneuver	-	-	-	-	859	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	945	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	1021
HCM Lane V/C Ratio	0.005	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	4	9	53	44	10
Future Vol, veh/h	9	4	9	53	44	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	4	0
Mvmt Flow	10	4	10	57	47	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	130	53	58	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	869	1020	1559	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	863	1020	1559	-	-	-
Mov Cap-2 Maneuver	863	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	906	-	-
HCM Lane V/C Ratio	0.006	-	0.015	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Capacity Analysis Summary Sheets

No-Build Weekday Morning Peak Hour Conditions

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	9	13	46	13	9	12	21	940	4	16	476	6
Future Vol, veh/h	9	13	46	13	9	12	21	940	4	16	476	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	-	125	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	11	0	0	4	0	0	5	0
Mvmt Flow	9	14	48	14	9	13	22	989	4	17	501	6

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1324	1576	497	1084	1575	254	507	0	0	993	0	0
Stage 1	1035	1035	-	538	538	-	-	-	-	-	-	-
Stage 2	289	541	-	546	1037	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.72	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4.11	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	116	111	524	174	100	752	1068	-	-	704	-	-
Stage 1	252	312	-	500	499	-	-	-	-	-	-	-
Stage 2	700	524	-	495	288	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	106	524	145	96	752	1068	-	-	704	-	-
Mov Cap-2 Maneuver	199	216	-	267	195	-	-	-	-	-	-	-
Stage 1	247	305	-	490	487	-	-	-	-	-	-	-
Stage 2	659	511	-	420	282	-	-	-	-	-	-	-

Approach	EB	WB	SE	NW
HCM Control Delay, s	16.8	17.5	0.2	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	WBLn2	SEL	SET	SER
Capacity (veh/h)	704	-	-	199	399	267	338	1068	-	-
HCM Lane V/C Ratio	0.024	-	-	0.048	0.156	0.051	0.065	0.021	-	-
HCM Control Delay (s)	10.2	-	-	24	15.7	19.2	16.4	8.4	-	-
HCM Lane LOS	B	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.5	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	37	32	3	1	2
Future Vol, veh/h	3	37	32	3	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	3	39	34	3	1	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	37	0	-	0	81	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1587	-	-	-	926	1042
Stage 1	-	-	-	-	992	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1587	-	-	-	924	1042
Mov Cap-2 Maneuver	-	-	-	-	924	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	983	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1587	-	-	-	999
HCM Lane V/C Ratio	0.002	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	38	31	1	2	4
Future Vol, veh/h	0	38	31	1	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	0	40	33	1	2	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	74	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	40	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1591	-	-	-	935	1045
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	935	1045
Mov Cap-2 Maneuver	-	-	-	-	935	-
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	988	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1006
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	38	28	0	0	4
Future Vol, veh/h	2	38	28	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	2	40	29	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	29	0	-	0	73	29
Stage 1	-	-	-	-	29	-
Stage 2	-	-	-	-	44	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1597	-	-	-	936	1052
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1597	-	-	-	935	1052
Mov Cap-2 Maneuver	-	-	-	-	935	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1597	-	-	-	1052
HCM Lane V/C Ratio	0.001	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	2	0	38	26	3
Future Vol, veh/h	9	2	0	38	26	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	3	0
Mvmt Flow	9	2	0	40	27	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	69	29	30	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	941	1052	1596	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1052	1596	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	988	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1596	-	959	-	-
HCM Lane V/C Ratio	-	-	0.012	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Capacity Analysis Summary Sheets

No-Build Weekday Evening Peak Hour Conditions

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	49	14	5	15	9	34	33	936	6	59	1141	32
Future Vol, veh/h	49	14	5	15	9	34	33	936	6	59	1141	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	-	125	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	7	0	0	0	1	0	2	1	3
Mvmt Flow	53	15	5	16	10	37	35	1006	6	63	1227	34

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1824	2466	506	1951	2452	631	1261	0	0	1012	0	0
Stage 1	1079	1079	-	1370	1370	-	-	-	-	-	-	-
Stage 2	745	1387	-	581	1082	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.64	6.5	6.9	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.64	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.64	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.57	4	3.3	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 49	31	517	36	31	429	558	-	-	681	-	-
Stage 1	237	297	-	147	216	-	-	-	-	-	-	-
Stage 2	377	212	-	454	296	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 37	26	517	28	26	429	558	-	-	681	-	-
Mov Cap-2 Maneuver	127	102	-	99	105	-	-	-	-	-	-	-
Stage 1	222	278	-	138	196	-	-	-	-	-	-	-
Stage 2	298	192	-	398	277	-	-	-	-	-	-	-

Approach	EB	WB	SE	NW
HCM Control Delay, s	48.2	28.6	0.4	0.5
HCM LOS	E	D		

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	WBLn2	SEL	SET	SER
Capacity (veh/h)	681	-	-	127	129	99	261	558	-	-
HCM Lane V/C Ratio	0.093	-	-	0.415	0.158	0.163	0.177	0.064	-	-
HCM Control Delay (s)	10.8	-	-	52.1	38.1	48.3	21.7	11.9	-	-
HCM Lane LOS	B	-	-	F	E	E	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.8	0.5	0.6	0.6	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	74	54	5	5	4
Future Vol, veh/h	5	74	54	5	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	5	80	58	5	5	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	63	0	-	0	151	61
Stage 1	-	-	-	-	61	-
Stage 2	-	-	-	-	90	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1553	-	-	-	846	1010
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	939	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1553	-	-	-	843	1010
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	939	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1553	-	-	-	910
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	67	51	1	2	8
Future Vol, veh/h	12	67	51	1	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	13	72	55	1	2	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	56	0	-	0	154	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1562	-	-	-	842	1016
Stage 1	-	-	-	-	972	-
Stage 2	-	-	-	-	931	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1562	-	-	-	834	1016
Mov Cap-2 Maneuver	-	-	-	-	834	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	931	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1562	-	-	-	974
HCM Lane V/C Ratio	0.008	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	62	48	0	0	4
Future Vol, veh/h	7	62	48	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	8	67	52	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	52	0	-	0	135	52
Stage 1	-	-	-	-	52	-
Stage 2	-	-	-	-	83	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1567	-	-	-	863	1021
Stage 1	-	-	-	-	976	-
Stage 2	-	-	-	-	945	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1567	-	-	-	859	1021
Mov Cap-2 Maneuver	-	-	-	-	859	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	945	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1567	-	-	-	1021
HCM Lane V/C Ratio	0.005	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	4	9	53	44	10
Future Vol, veh/h	9	4	9	53	44	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	4	0
Mvmt Flow	10	4	10	57	47	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	130	53	58	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	869	1020	1559	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	863	1020	1559	-	-	-
Mov Cap-2 Maneuver	863	-	-	-	-	-
Stage 1	968	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	906	-	-
HCM Lane V/C Ratio	0.006	-	0.015	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Capacity Analysis Summary Sheets

Projected Weekday Morning Peak Hour Conditions

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	9	13	46	17	9	17	23	940	4	16	476	8
Future Vol, veh/h	9	13	46	17	9	17	23	940	4	16	476	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	-	125	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	11	0	0	4	0	0	5	0
Mvmt Flow	9	14	48	18	9	18	24	989	4	17	501	8

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1328	1582	497	1089	1580	255	509	0	0	993	0	0
Stage 1	1039	1039	-	539	539	-	-	-	-	-	-	-
Stage 2	289	543	-	550	1041	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.72	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.72	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.72	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4.11	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	115	110	524	172	99	750	1066	-	-	704	-	-
Stage 1	250	310	-	499	498	-	-	-	-	-	-	-
Stage 2	700	523	-	492	286	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	104	105	524	143	94	750	1066	-	-	704	-	-
Mov Cap-2 Maneuver	196	215	-	265	193	-	-	-	-	-	-	-
Stage 1	244	303	-	488	486	-	-	-	-	-	-	-
Stage 2	654	510	-	417	279	-	-	-	-	-	-	-

Approach	EB	WB	SE	NW
HCM Control Delay, s	16.8	17.1	0.2	0.3
HCM LOS	C	C		

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	WBLn2	SEL	SET	SER
Capacity (veh/h)	704	-	-	196	398	265	375	1066	-	-
HCM Lane V/C Ratio	0.024	-	-	0.048	0.156	0.068	0.073	0.023	-	-
HCM Control Delay (s)	10.2	-	-	24.3	15.7	19.6	15.4	8.5	-	-
HCM Lane LOS	B	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.5	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	41	41	3	1	2
Future Vol, veh/h	3	41	41	3	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	3	43	43	3	1	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	46	0	-	0	94	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1575	-	-	-	911	1031
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1575	-	-	-	909	1031
Mov Cap-2 Maneuver	-	-	-	-	909	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1575	-	-	-	987
HCM Lane V/C Ratio	0.002	-	-	-	0.003
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	35	1	2	4
Future Vol, veh/h	0	40	35	1	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	0	42	37	1	2	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	38	0	-	0	80	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	42	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1585	-	-	-	927	1040
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	986	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1585	-	-	-	927	1040
Mov Cap-2 Maneuver	-	-	-	-	927	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	986	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1585	-	-	-	999
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	40	32	0	0	4
Future Vol, veh/h	2	40	32	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	3	0	0	0
Mvmt Flow	2	42	34	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	34	0	-	0	80	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	46	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1591	-	-	-	927	1045
Stage 1	-	-	-	-	994	-
Stage 2	-	-	-	-	982	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1591	-	-	-	926	1045
Mov Cap-2 Maneuver	-	-	-	-	926	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	982	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1045
HCM Lane V/C Ratio	0.001	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	2	0	39	26	3
Future Vol, veh/h	9	2	0	39	26	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	3	0
Mvmt Flow	9	2	0	41	27	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	70	29	30	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	41	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	939	1052	1596	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	939	1052	1596	-	-	-
Mov Cap-2 Maneuver	939	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	987	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1596	-	958	-	-
HCM Lane V/C Ratio	-	-	0.012	-	-
HCM Control Delay (s)	0	-	8.8	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	40	2	0	39	5	0
Future Vol, veh/h	40	2	0	39	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	3	0	0
Mvmt Flow	42	2	0	41	5	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	44	0	84	43
Stage 1	-	-	-	-	43	-
Stage 2	-	-	-	-	41	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1577	-	923	1033
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	987	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1577	-	923	1033
Mov Cap-2 Maneuver	-	-	-	-	923	-
Stage 1	-	-	-	-	985	-
Stage 2	-	-	-	-	987	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	923	-	-	1577	-
HCM Lane V/C Ratio	0.006	-	-	-	-
HCM Control Delay (s)	8.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	38	2	0	28	4	1
Future Vol, veh/h	38	2	0	28	4	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	3	0	0
Mvmt Flow	40	2	0	29	4	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	42	0	70	41
Stage 1	-	-	-	-	41	-
Stage 2	-	-	-	-	29	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1580	-	939	1036
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1580	-	939	1036
Mov Cap-2 Maneuver	-	-	-	-	939	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	999	-

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

Minor Lane/Major Mvmt	NBT	NBR	NWLn1	SBL	SBT
Capacity (veh/h)	-	-	957	1580	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	-	-	8.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Capacity Analysis Summary Sheets

Projected Weekday Evening Peak Hour Conditions

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Vol, veh/h	49	15	5	18	9	38	38	936	6	59	1141	36
Future Vol, veh/h	49	15	5	18	9	38	38	936	6	59	1141	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	0	-	-	125	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	7	0	0	0	1	0	2	1	3
Mvmt Flow	53	16	5	19	10	41	41	1006	6	63	1227	39

Major/Minor	Minor1			Minor2			Major1			Major2		
Conflicting Flow All	1836	2483	506	1966	2467	633	1266	0	0	1012	0	0
Stage 1	1091	1091	-	1373	1373	-	-	-	-	-	-	-
Stage 2	745	1392	-	593	1094	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.64	6.5	6.9	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.64	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.64	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.57	4	3.3	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 48	30	517	35	31	427	556	-	-	681	-	-
Stage 1	233	293	-	147	215	-	-	-	-	-	-	-
Stage 2	377	211	-	447	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 35	25	517	27	26	427	556	-	-	681	-	-
Mov Cap-2 Maneuver	122	98	-	97	104	-	-	-	-	-	-	-
Stage 1	216	271	-	136	195	-	-	-	-	-	-	-
Stage 2	294	191	-	385	270	-	-	-	-	-	-	-

Approach	EB	WB	SE	NW
HCM Control Delay, s	51	29.7	0.5	0.5
HCM LOS	F	D		

Minor Lane/Major Mvmt	NWL	NWT	NWR	EBLn1	EBLn2	WBLn1	WBLn2	SEL	SET	SER
Capacity (veh/h)	681	-	-	122	123	97	268	556	-	-
HCM Lane V/C Ratio	0.093	-	-	0.432	0.175	0.2	0.189	0.073	-	-
HCM Control Delay (s)	10.8	-	-	55.3	40.4	51.1	21.5	12	-	-
HCM Lane LOS	B	-	-	F	E	F	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.9	0.6	0.7	0.7	0.2	-	-

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	84	61	5	5	4
Future Vol, veh/h	5	84	61	5	5	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	5	90	66	5	5	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	71	0	-	0	169	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	100	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1542	-	-	-	826	1000
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	929	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1542	-	-	-	824	1000
Mov Cap-2 Maneuver	-	-	-	-	824	-
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	929	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1542	-	-	-	894
HCM Lane V/C Ratio	0.003	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	72	54	1	2	8
Future Vol, veh/h	12	72	54	1	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	13	77	58	1	2	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	59	0	-	0	162	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1558	-	-	-	834	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1558	-	-	-	826	1012
Mov Cap-2 Maneuver	-	-	-	-	826	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	926	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1558	-	-	-	968
HCM Lane V/C Ratio	0.008	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	67	51	0	0	4
Future Vol, veh/h	7	67	51	0	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	1	4	0	0	0
Mvmt Flow	8	72	55	0	0	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	55	0	-	0	143	55
Stage 1	-	-	-	-	55	-
Stage 2	-	-	-	-	88	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1563	-	-	-	854	1018
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1563	-	-	-	850	1018
Mov Cap-2 Maneuver	-	-	-	-	850	-
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	940	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1563	-	-	-	1018
HCM Lane V/C Ratio	0.005	-	-	-	0.004
HCM Control Delay (s)	7.3	0	-	-	8.6
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	4	9	53	45	10
Future Vol, veh/h	9	4	9	53	45	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	1	4	0
Mvmt Flow	10	4	10	57	48	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	131	54	59	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	868	1019	1558	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	862	1019	1558	-	-	-
Mov Cap-2 Maneuver	862	-	-	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	1.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1558	-	905	-	-
HCM Lane V/C Ratio	0.006	-	0.015	-	-
HCM Control Delay (s)	7.3	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	84	5	0	62	4	0
Future Vol, veh/h	84	5	0	62	4	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	1	0	0	4	0	0
Mvmt Flow	90	5	0	67	4	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	95	0	160	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1512	-	836	970
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1512	-	836	970
Mov Cap-2 Maneuver	-	-	-	-	836	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	961	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	836	-	-	1512	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	9.3	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	3	0	62	5	1	48
Future Vol, veh/h	3	0	62	5	1	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	1	0	0	4
Mvmt Flow	3	0	67	5	1	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	124	70	0	0	72	0
Stage 1	70	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	876	998	-	-	1541	-
Stage 1	958	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	875	998	-	-	1541	-
Mov Cap-2 Maneuver	875	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	9.1	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	875	1541	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Parking Occupancy Surveys

Table 6
PARKING OCCUPANCY SURVEYS

Time	Villas of Lake in the Hills (Lake in the Hills)		Pheasant Ridge Hunter Apartments (Orland Hills)	
	Friday	Saturday	Friday	Saturday
6:00 AM	67	66	166	148
7:00 AM	65	64	142	145
8:00 AM	55	63	142	138
9:00 AM	52	62	138	131
10:00 AM	51	55	130	123
2:00 PM	44	48	109	94
3:00 PM	43	46	108	94
4:00 PM	43	54	109	85
5:00 PM	43	50	85	87
6:00 PM	55	57	97	88
7:00 PM	55	58	98	110
8:00 PM	55	61	93	122
9:00 PM	61	63	123	139
10:00 PM	63	56	148	149
Inventory	**132**	**132**	**282**	**282**