

Traffic Study Commercial Development

St. Charles, Illinois



Prepared For:

vequity

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

April 14, 2026

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 commercial development to be located in the southeast quadrant of the intersection of Main Street with Kautz Road in St. Charles, Illinois. The plans call for multiple outlot parcels that will contain restaurants, retail, a car wash, a bank, a daycare, an oil change store, and a car dealership. Access will be provided via Main Street, Kautz Road, and Pheasant Run.

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 the 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, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

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

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area adjusted to reflect normal conditions.
2. No-Build Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes including ambient traffic growth.
3. Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient traffic growth, and the traffic estimated to be generated by the full buildout of the proposed development.



Site Location

Commercial Development
St. Charles, Illinois

Figure 1





Aerial View of Site

Figure 2

*Commercial Development
St. Charles, Illinois*



2. Existing Conditions

The following provides a detailed description of the physical characteristics of the roadways including geometry and traffic control, adjacent land uses, and peak hour traffic flows along area roadways.

Site Location

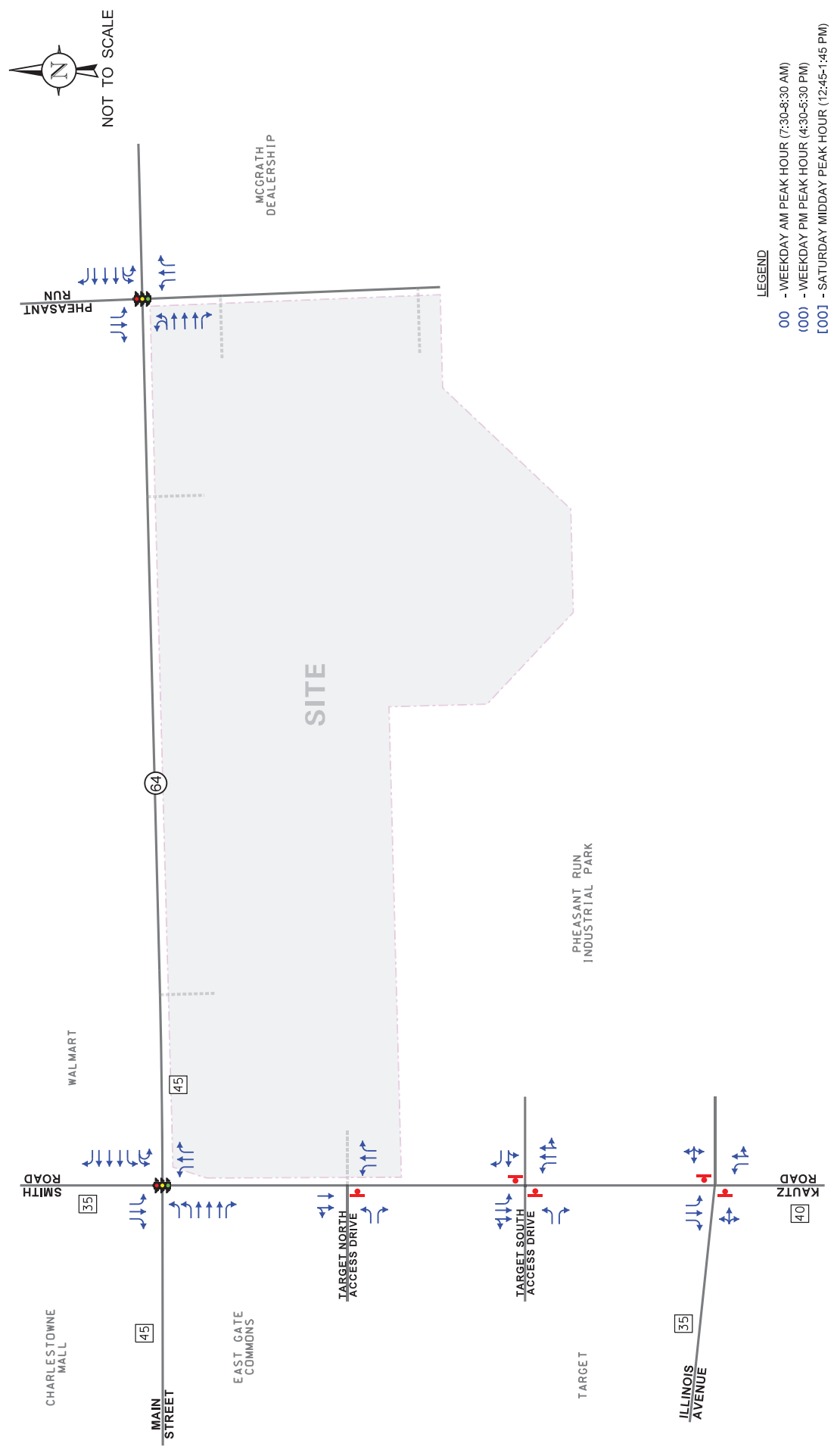
The site is located in the southeast quadrant of the intersection of Main Street with Kautz Road in St. Charles, Illinois. Land uses in the vicinity of the site are primarily commercial with some residential developments to the north of Main Street. Commercial developments in the vicinity of the site include Portillo's and Target to the west of the site, McDonald's restaurant, Walmart Supercenter, and Pheasant Run Crossing center to the north of the site, and McGrath Honda car dealership to the east. Additionally, Pheasant Run industrial park is located to the south of the site.

Existing Roadway System Characteristics

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

Main Street (Illinois Route 64) is an east-west, other principal arterial roadway that provides three travel lanes in each direction. At its signalized intersection with Kautz Road/Smith Road, Main Street provides dual left-turn lanes, three through lanes, and an exclusive right-turn lane on the eastbound approach and a left-turn/U-turn lane, an exclusive left-turn lane, three through lanes, and an exclusive right-turn lane on the westbound approach. Standard style crosswalks are provided on the north and west legs of this intersection. At its signalized intersection with Pheasant Run, Main Street provides a left-turn/U-turn lane, three through lanes, and an exclusive right-turn lane on both approaches. A standard style crosswalk is provided on the west leg of this intersection. Main Street is under the jurisdiction of the Illinois Department of Transportation (IDOT), has a posted speed limit of 45 miles per hour, is designated as a Strategic Regional Arterial (SRA) route, and carries an annual average daily traffic (AADT) volume of 33,000 vehicles (DOT 2023) west of Kautz Road and 31,600 vehicles east of Kautz Road (IDOT 2023).

Kautz Road is a north-south, major collector roadway that extends south from Main Street and provides two southbound travel lanes and one northbound travel lane narrowing to one lane in each direction south of Illinois Avenue. At its signalized intersection with Main Street/Smith Road, Kautz Road provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the northbound approach and is aligned opposite Smith Road. At its unsignalized intersection with Illinois Road/industrial park south access drive, Kautz Road provides an exclusive left-turn lane and a shared through/right-turn lane on the northbound approach and an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach. A standard crosswalk is provided on the west leg of this intersection. At its unsignalized intersections with Target south access drive/ industrial park north access drive, Kautz Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. A standard style crosswalk is provided on the west leg of this intersection.



At its unsignalized intersection with Target north access drive, Kautz Road provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the northbound approach and a through lane and a shared through/right-turn lane on the southbound approach. Kautz Road is under the jurisdiction of the City of St. Charles, has a posted speed limit of 40 mph, and carries an AADT volume of 8,050 vehicles (IDOT 2023).

Smith Road is a north-south, major collector roadway that extends north from Main Street and provides two northbound lanes and one southbound lane narrowing to one lane in each direction north of the Charlestowne Mall access road. At its signalized intersection with Main Street/Kautz Road, Smith Road provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the southbound approach and is aligned opposite Kautz Road. Smith Road is under the jurisdiction of the City of St. Charles, has a posted speed limit of 35 mph, and carries an AADT volume of 6,600 vehicles (IDOT 2024).

Illinois Avenue is an east-west, local roadway that extends west from Kautz Road and provides one travel lane in each direction. At its unsignalized intersection with Kautz Road/industrial park south access drive, Illinois Avenue provides a shared left-turn/through/right-turn lane on the eastbound approach. Illinois Avenue is under the jurisdiction of the City of St. Charles and has a posted speed limit of 35 miles per hour.

Pheasant Run is a north-south local roadway that provides access to the Pheasant run Crossing center to the north of Main Street and McGrath Honda Dealership south of Main Street. At its signalized intersection with Main Street, Pheasant Run provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on both approaches.

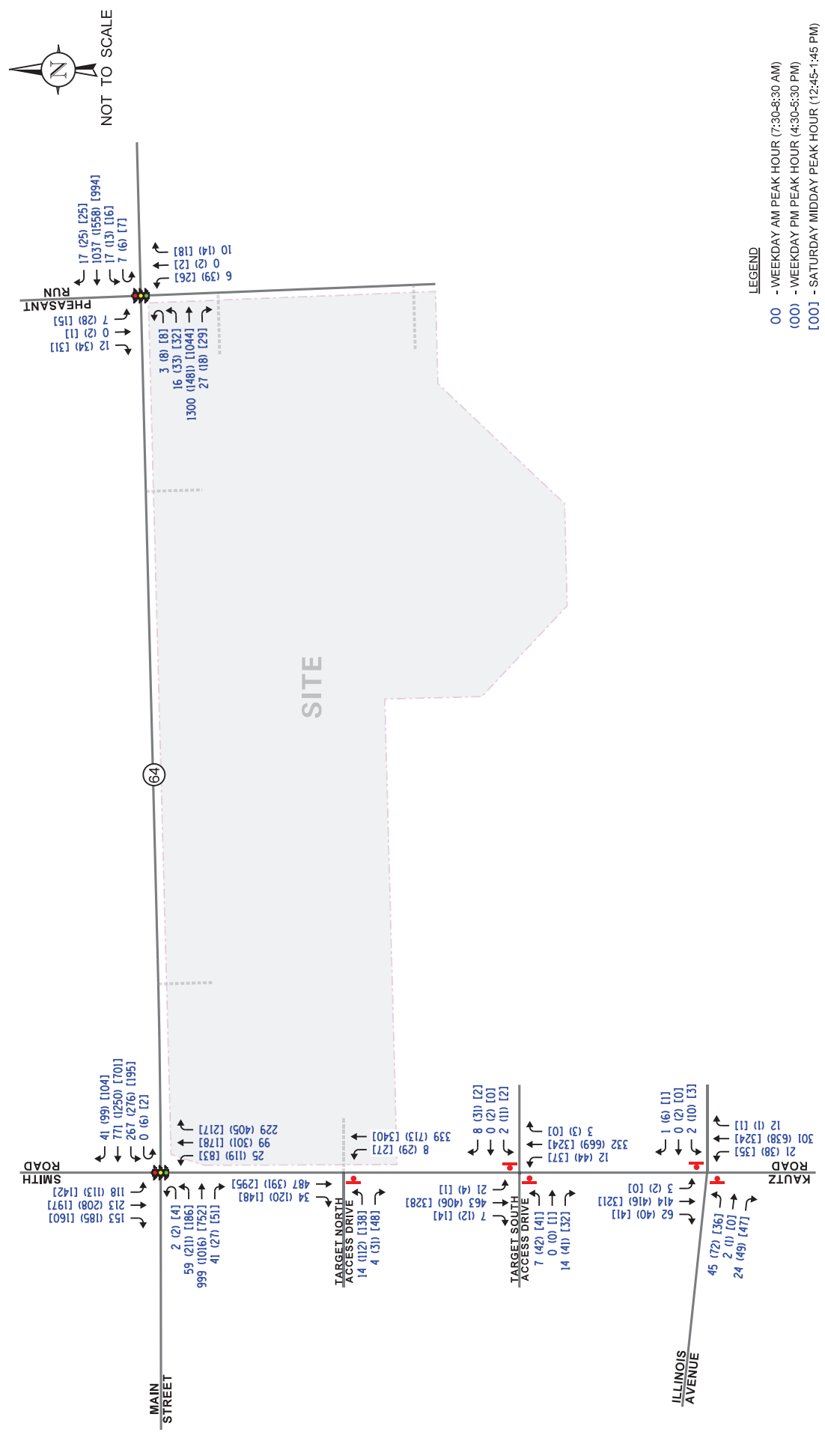
Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Video Collection Units during the weekday morning (6:00 to 9:00 A.M.), weekday evening (4:00 to 6:00 P.M.), and Saturday midday (11:00 to 2:00 P.M.) peak periods in July, 2025 at the following intersections:

- Main Street with Kautz Road/Smith Road
- Main Street with Pheasant Run
- Kautz Road with Illinois Avenue/Industrial Park South Access Drive
- Kautz Road with Industrial Park North Access Drive/Target South Access Drive
- Kautz Road with Target North Access Drive

The results of the traffic counts showed that the weekday morning peak hour of traffic occurs from 7:30 A.M. to 8:30 A.M., the weekday evening peak hour of traffic occurs from 4:30 P.M. to 5:30 P.M. and the Saturday midday peak hour of traffic occurs from 12:45 P.M. to 1:45 P.M. **Figure 4** illustrates the existing traffic volumes.

Copies of the traffic count summary sheets are included in the Appendix.



Crash Data Summary

KLOA, Inc. obtained crash data¹ for the past five years (2020 to 2024) for the intersections of Main Street with Kautz Road/Smith Road and Pheasant Run. It should be noted that no crash was reported at the intersection of Main Street with Pheasant Run and no fatality was reported at both intersections during the review period. Crash data for the intersection of Main Street with Kautz Road/Smith Road are summarized in **Table 1**.

Table 1

MAIN STREET WITH KAUTZ ROAD/SMITH ROAD – CRASH SUMMARY

Year	Type of Crash								Severity		
	A	HO	O	RE	S	T	Other	Total	PD	I	F
2019	0	0	0	0	0	0	0	0	0	0	0
2020	1	0	0	0	0	2	0	3	1	2	0
2021	0	0	0	1	0	1	0	2	2	0	0
2022	0	0	0	0	0	0	0	0	0	0	0
2023	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	1	0	0	2	0	3	0	6	3	3	0
Avg	<1.0	--	--	<1.0	--	<1.0	--	1.2	<1.0	<1.0	--
A – Angle; HO – Head On; O – Object; RE – Rear End; S – Sideswipe; T – Turning PD – Property Damage; I – Injury; F – Fatal											

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).

3. Traffic Characteristics of the Proposed Development

To evaluate the impact of the subject development on the area roadway system, it was necessary to quantify the number of vehicle trips the site will generate during the peak hours and then determine the directions from which the proposed traffic will approach and depart the site.

Proposed Site and Site Plan

As proposed, the site will be developed with the following:

- LOT 1: An approximately 4,000 square-foot bank building with two drive-through lanes.
- LOT 2: An approximately 11,700 square-foot day care center.
- LOT 3: An approximately 5,500 square-foot multi-tenant retail building.
- LOT 4: An approximately 6,500 square-foot multi-tenant building that will contain an approximately 2,400 square-foot Quick Service Restaurant (QSR) with a drive-through and 4,100 square-feet of retail space.
- LOT 5: An approximately 986 square-foot coffee shop with a drive-through.
- LOT 6: An approximately 8,500 square-foot multi-tenant building that will contain an approximately 1,500 square-foot QSR with a drive-through and 7,000 square-feet of retail space.
- LOT 7: An approximately 2,785 square-foot QSR with a drive-through.
- LOT 8: An approximately 2,076 square-foot QSR with a drive-through.
- LOT 9: An approximately 10,000 square-foot retail building.
- LOT 10: An approximately 8,250 square-foot retail building.
- LOT 11: An approximately 1,762 square-foot oil change store.
- LOT 12: An approximately 4,800 square-foot automated car wash.
- LOT 13: An approximately 60,322 square-foot car dealership.

Access to the site will be provided via the following access drives:

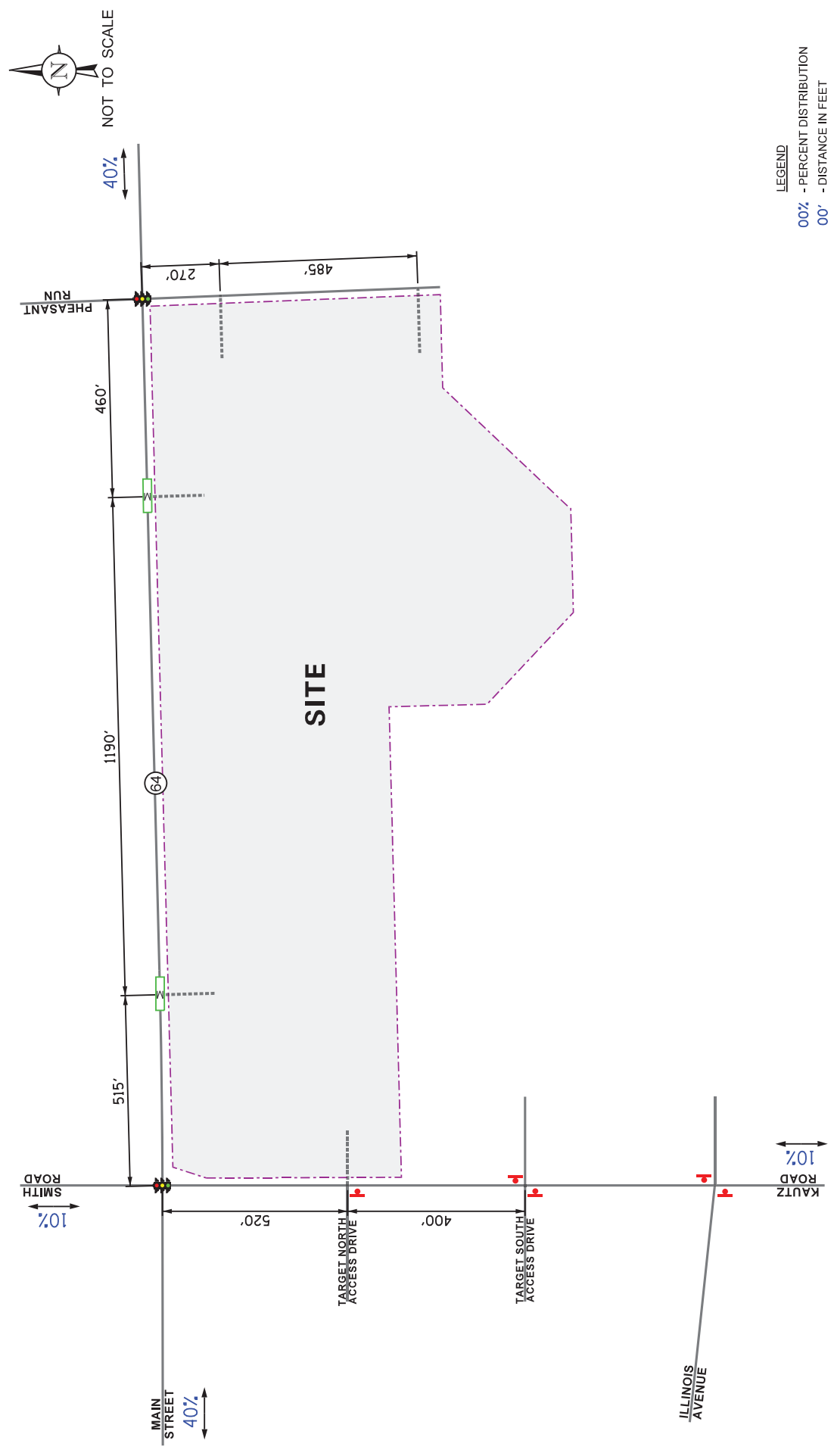
- A proposed right-in/right-out access drive on the south side of Main Street to be located approximately 485 feet east of Kautz Road. This driveway will provide one inbound lane and one outbound lane with the outbound movement under stop sign control. An eastbound right-turn lane will be provided on Main Street and should provide 215 feet of storage and a 220-foot taper.

- A proposed right-in/right-out access drive on the south side of Main Street to be located approximately 460 feet west of Pheasant Run and approximately 1,190 feet east of the proposed right-in/right-out access drive. This driveway will provide one inbound lane and one outbound lane with the outbound movement under stop sign control. An eastbound right-turn lane will be provided on Main Street and should provide 215 feet of storage and a 220-foot taper.
- A proposed full-movement access drive on the east side of Kautz Road to be located approximately 520 feet south of Main Street. This driveway will be aligned with Target north access drive and will provide one inbound lane and two outbound lanes striped for a shared left-turn/through lane and an exclusive right-turn lane. Outbound movements from this access drive will be under stop sign control. A southbound left-turn lane along Kautz Road will be provided to serve this access drive.
- A full-movement access drive on the west side of Pheasant Run to be located approximately 270 south of Main Street. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control. This access drive will provide direct access to the proposed car dealership.
- A full-movement access drive on the west side of Pheasant Run to be located approximately 760 south of Main Street. This access drive will provide one inbound lane and one outbound lane with the outbound movements under stop sign control.

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

Directional Distribution of Site Traffic

The directions that traffic will approach and depart the site was estimated based on the existing travel patterns as derived from the peak hour traffic volumes, the operation of the roadway system, and the configuration of the access drives. **Figure 5** shows the estimated directional distribution for the proposed development.



Development Traffic Generation

The number of peak hour trips estimated to be generated by the proposed retail development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 12th Edition, published by the Institute of Transportation Engineers (ITE). The following Land Use Codes (LUC) were used to estimate the trips generated by the proposed development:

- “Drive-In Bank” (LUC 912) was used for the proposed bank.
- “Strip Retail Plaza (<40k)” (LUC 822) was used for the proposed multi-tenant buildings and retail spaces.
- “Day Care Center” (LUC 565) was used for the proposed day care.
- “Fast-Food Restaurant with Drive Through Window” (LUC 934) was used for the proposed restaurants with drive-through facility.
- “Coffee/Donut Shop with Drive Through Window” (LUC 937) was used for the proposed coffee shop
- “Quick Lubrication Vehicle Shop” (LUC 941) was used for the proposed oil change store.
- “Automated Car Wash” (LUC 948) was used for the proposed car wash.
- “Automobile Sales (New)” (LUC 840) rates were used for the proposed car dealership.

Surveys conducted by ITE have shown that a significant number of trips made to restaurants, coffee shops, car washes, and retail stores are diverted from the existing traffic on the area roadways. This is particularly true during the weekday morning peak hours when traffic is diverted from the home-to-work and work-to-home trips. Such diverted trips are referred to as pass-by traffic. Based on ITE the following pass-by rates were used:

- Strip Retail Plaza (<40k) (LUC 822): 20 percent
- Fast-Food Restaurant with Drive Through Window (LUC 934): 50 percent
- Coffee/Donut Shop with Drive Through Window (LUC 937): 70 percent

Furthermore, a 10 percent interaction reduction was applied to the restaurant-generated trips to account for interaction within the development. It should be noted that in order to provide a conservative analysis no pass-by reduction was applied to the car-wash.

Table 2 summarizes the trips projected to be generated by the proposed development during the peak hours. Copies of the ITE trip generation sheets are included in the Appendix.

Table 2
ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Lot 1													
912	Bank with Drive-Through (Two Lanes)	11	7	18	26	28	54	27	27	54	126	126	252
Lot 2													
565	Day Care (11,700 s.f.)	67	60	127	59	67	126	0	0	0	230	230	460
Lot 3													
822	Multi-Tenant Building (5,500 s.f.)	12	10	22	25	26	51	19	17	36	231	231	462
Lot 4													
822	Multi-Tenant Building (4,100 s.f.)	9	7	16	21	21	42	14	13	27	202	202	404
934	Fast-Food Restaurant with Drive-Through (2,400 s.f.)	41	39	80	39	37	76	62	60	122	538	538	1,076
Lot 5													
937	Coffee/Donut Shop with Drive-Through (986 s.f.)	43	42	85	19	20	39	36	37	73	297	297	594
Lot 6													
822	Multi-Tenant Building (7,000 s.f.)	15	13	28	30	30	60	24	22	46	263	263	526
934	Fast-Food Restaurant with Drive-Through (1,500 s.f.)	25	25	50	25	22	47	39	37	76	336	336	672
Lot 7													
934	Fast-Food Restaurant with Drive-Through (2,785 s.f.)	47	46	93	46	42	88	72	70	142	625	625	1,250
Lot 8													
934	Fast-Food Restaurant with Drive-Through (2,076 s.f.)	35	34	69	34	32	66	54	52	106	466	466	932
Lot 9													
822	Multi-Tenant Building (10,000 s.f.)	22	17	39	38	38	76	34	32	66	326	326	652
Lot 10													
822	Multi-Tenant Building (8,250 s.f.)	18	14	32	34	33	67	28	27	55	289	289	578
Lot 11													
941	Oil Change Shop (1,762 s.f.)	8	2	10	6	9	15	6	9	15	61	61	122
Lot 12													
948	Car Wash (4,800 s.f.)	39	32	71	57	60	117	77	77	154	608	608	1,216
Lot 13													
840	Car Dealership (60,322 s.f.)	75	28	103	48	72	120	80	69	149	849	849	1,698
Total Trips		467	376	843	507	537	1,044	572	549	1121	5,447	5,447	10,894
Internal Interaction Reduction ¹		-16	-15	-31	-15	-13	-28	-22	-22	-44	-198	-198	-396
Retail Pass-By Reduction (20%)		-14	-14	-28	-30	-30	-60	-23	-23	-46	-262	-262	-524
Fast Food Pass-By Reduction (50%)		-47	-47	-94	-45	-45	-90	-73	-73	-146	-642	-642	-1,284
Coffee Shop Pass-By Reduction (70%)		-30	-30	-60	-14	-14	-28	-26	-26	-52	-208	-208	-416
Total New Trips		360	270	630	403	435	838	428	405	833	4,137	4,137	8,274
1 - 10% internal reduction was applied to the restaurant trips only.													

1 - 10% internal reduction was applied to the restaurant trips only.

4. Projected Traffic Conditions

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

Development Traffic Assignment

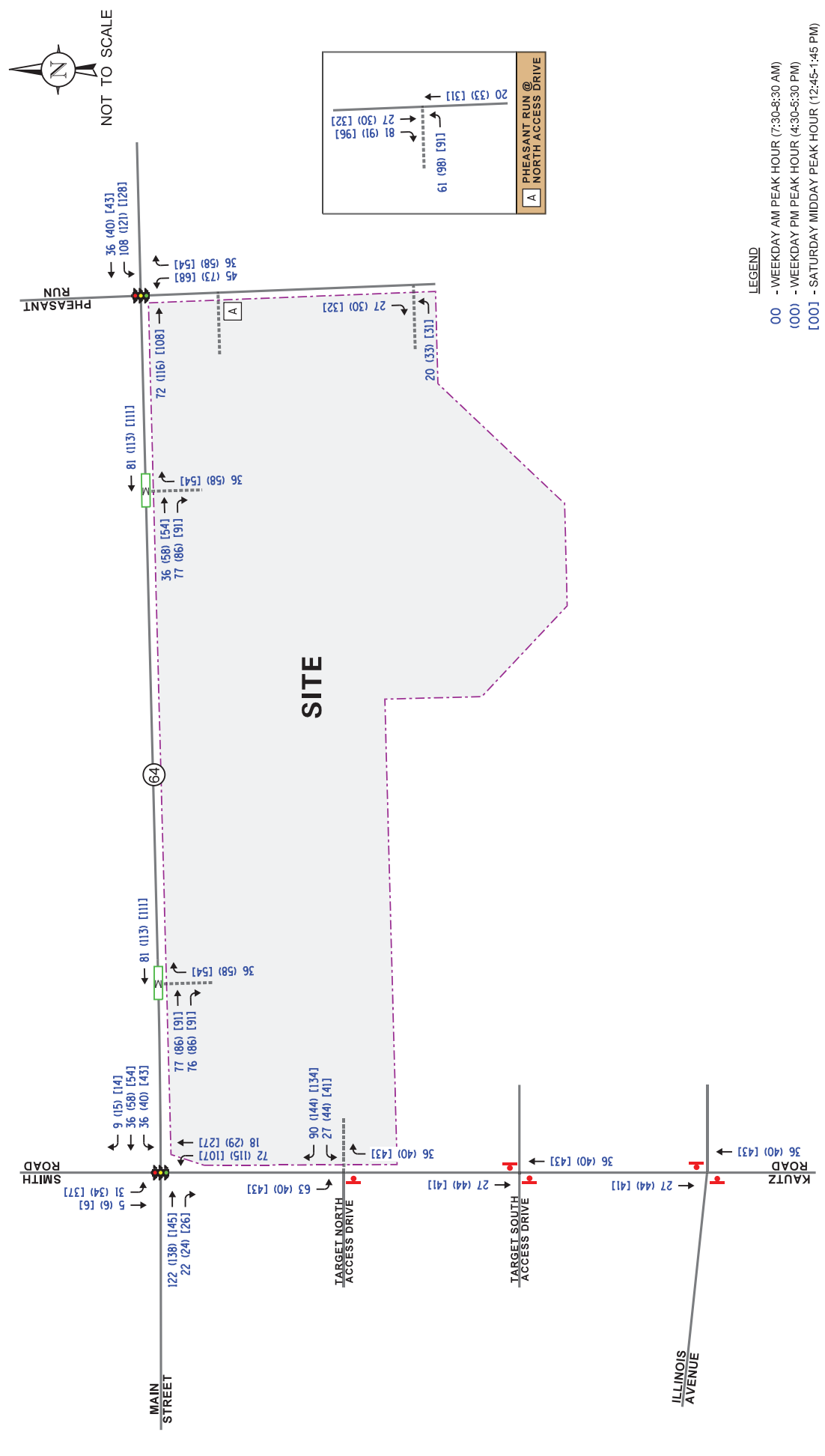
The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figures 6 and 7** illustrate the traffic assignments for the new site-generated trips and the pass-by trips, respectively.

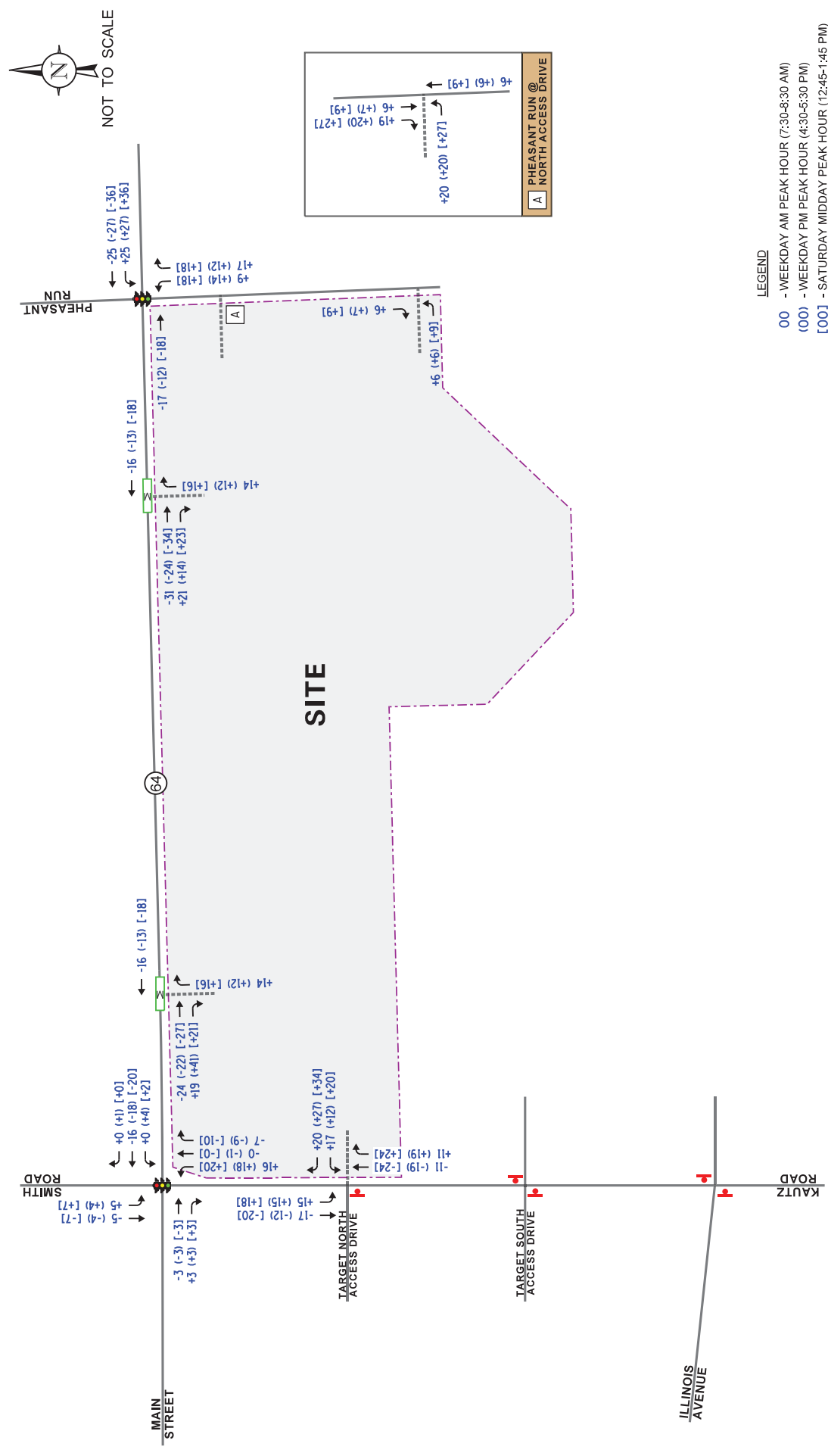
Background (No-Build) Traffic Conditions

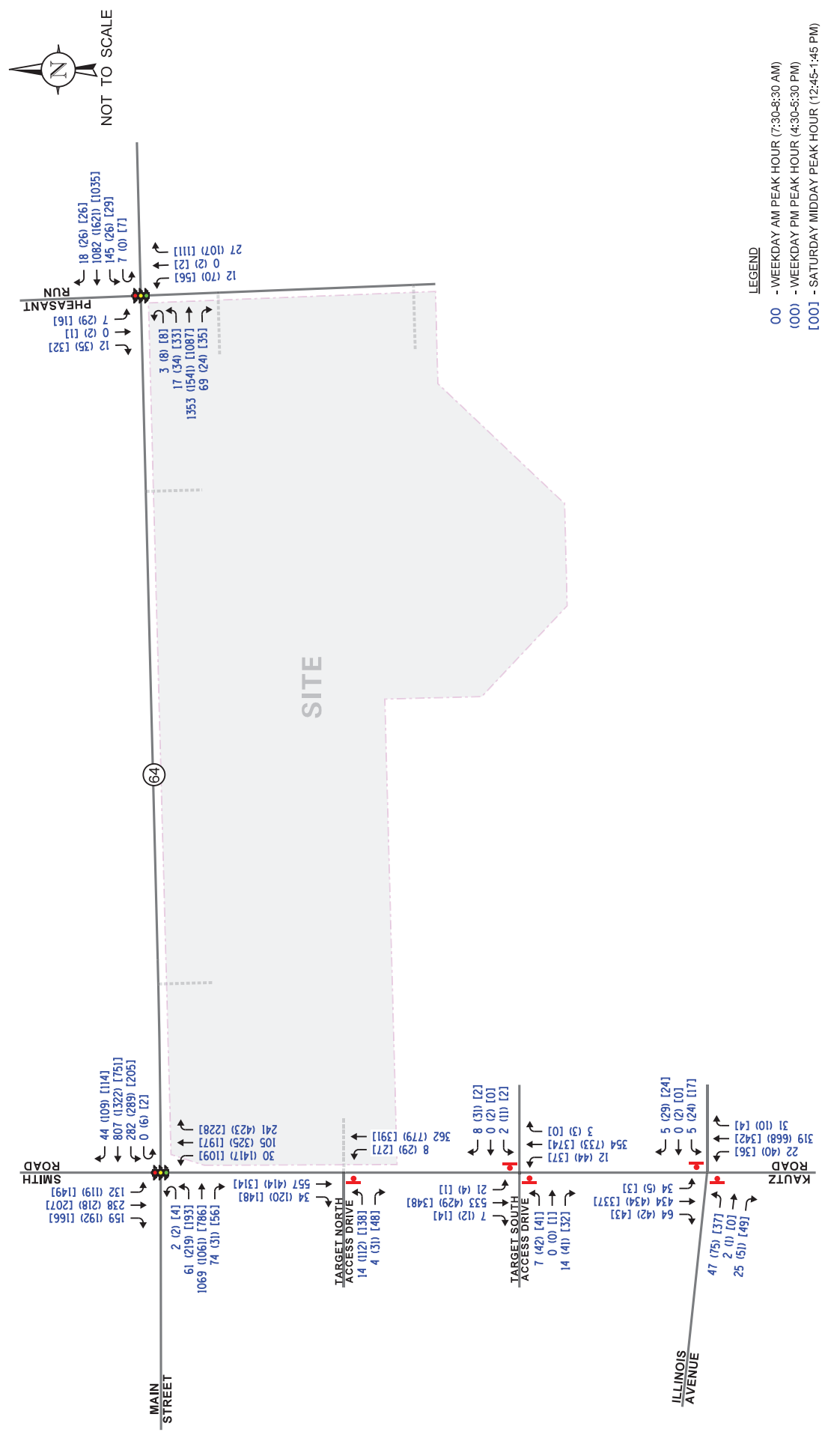
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate for six years (one-year buildout plus five years) totaling four percent to represent Year 2031 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix. Additionally, the traffic estimated to be generated by the full occupancy of the industrial development located just south of the subject site was included in the background traffic conditions. **Figure 8** shows the Year 2031 no-build traffic conditions.

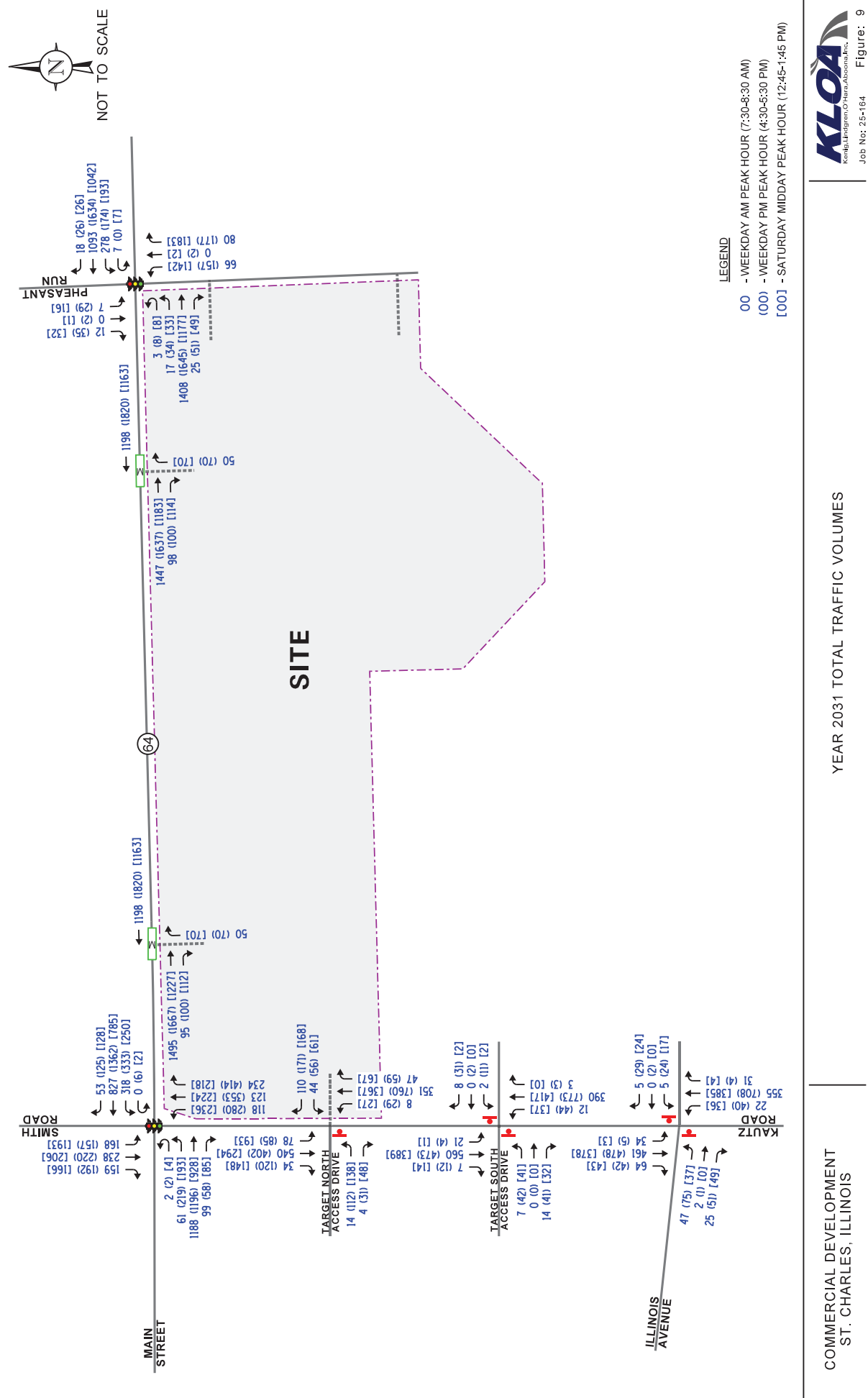
Year 2031 Total Projected Traffic Conditions

The development-generated traffic (Figures 6 and 7) was added to the no-build traffic volumes (Figure 8) to determine the Year 2031 total projected traffic volumes, which are illustrated in **Figure 9**.









5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday evening, and Saturday midday 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 road improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing, Year 2031 no-build, and Year 2031 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 7th Edition and analyzed using Synchro/SimTraffic 12 software. The analysis for the traffic-signal controlled intersections were accomplished using actual cycle lengths and phasings to determine the average overall vehicle delay and levels of services.

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, no-build, and total projected conditions are presented in **Tables 3** through **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix

Table 3

CAPACITY ANALYSIS RESULTS – MAIN STREET WITH KAUTZ ROAD/SMITH ROAD – SIGNALIZED

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E	C	A	E	B	A	D	E	B	D	E	B	C 27.5
		62.4	21.7	0.1	60.1	15.4	1.0	36.0	55.6	12.2	42.6	64.6	10.4	
		C – 23.1			C – 25.9			C – 26.1			D – 42.1			
	Weekday Evening	E	C	A	E	C	A	D	E	D	D	E	A	D 38.1
77.4		27.4	0.5	76.2	23.0	1.7	41.9	75.8	44.9	48.6	62.6	9.4		
D – 35.5			C – 30.9			E – 55.7			D – 40.0					
No-Build Conditions	Saturday Midday	E	C	A	E	B	A	C	E	B	D	D	A	C 28.1
		58.9	21.0	1.6	58.0	18.0	1.4	31.8	57.2	10.2	35.7	53.8	9.3	
		C – 27.3			C – 24.1			C – 31.4			C – 34.4			
	Weekday Morning	E	C	A	E	B	A	D	D	B	D	E	B	C 29.1
62.4		23.2	1.3	60.1	16.8	1.0	36.7	54.3	14.2	42.8	73.0	10.6		
C – 23.9			C – 26.9			C – 27.2			D – 46.7					
No-Build Conditions	Weekday Evening	E	C	A	E	C	A	D	E	D	D	E	A	D 40.1
		78.1	28.4	0.9	75.9	24.0	3.2	48.0	80.0	42.1	50.2	64.7	9.5	
		D – 36.1			C – 31.6			E – 61.2			D – 41.4			
	Saturday Midday	E	C	A	E	B	A	C	E	A	D	E	A	C 28.6
59.3		21.5	2.0	58.2	17.8	1.3	33.8	58.4	9.9	37.3	56.5	9.5		
C – 27.6			C – 23.8			C – 32.7			D – 36.1					
Projected Conditions	Weekday Morning	E	C	A	E	B	A	D	E	C	D	F	B	C 32.8
		62.4	25.0	2.6	65.8	17.4	1.4	51.8	55.3	28.4	47.3	80.9	11.0	
		C – 25.1			C – 29.5			D – 41.2			D – 51.2			
	Weekday Evening	E	C	A	F	C	A	F	F	D	E	E	B	D 44.0
78.1		30.8	3.1	81.0	24.9	4.2	87.4	90.0	44.9	60.1	63.4	10.3		
D – 36.7			C – 33.9			E – 71.5			D – 44.6					
Projected Conditions	Saturday Midday	E	C	A	E	B	A	D	E	C	D	E	A	C 31.9
		59.3	23.9	2.7	57.8	17.7	1.2	51.9	60.6	20.7	44.6	59.0	9.7	
		C – 28.2			C – 24.5			D – 44.7			D – 39.6			
	Letter denotes Level of Service Delay is measured in seconds.													

Table 4

CAPACITY ANALYSIS RESULTS – MAIN STREET AND PHEASANT RUN – SIGNALIZED

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E	A	A	E	A	A	D	A	A	D	A	A	A 5.5
		71.1	3.3	0.1	64.9	5.4	0.1	53.5	0.1	0.2	49.0	0.1	0.2	
		A – 4.2			A – 6.6			C – 20.9			B – 18.8			
	Weekday Evening	E	A	A	E	A	A	E	E	A	E	E	A	A 9.4
		79.7	4.6	0.1	74.3	9.6	0.1	62.8	66.5	1.1	56.0	68.0	3.2	
No-Build Conditions	Saturday Midday	A – 6.5			B – 10.2			D – 47.0			C – 28.0			A 8.7
		E	A	A	E	A	A	D	D	A	D	D	A	
		58.1	5.3	0.1	58.0	8.4	0.1	45.9	51.5	0.9	42.0	52.0	1.7	
	Weekday Morning	A – 7.0			A – 9.3			C – 28.3			B – 15.3			B 10.8
		E	A	A	E	A	A	D	A	A	D	A	A	
Projected Conditions	Weekday Evening	73.5	8.1	0.3	57.3	7.0	0.1	47.6	0.1	0.6	48.6	0.1	0.2	B 11.8
		A – 8.6			B – 13.0			B – 14.8			B – 18.6			
		E	A	A	E	B	A	E	E	B	D	E	A	
	Saturday Midday	79.9	6.1	0.1	76.6	11.3	0.2	59.0	63.5	19.0	54.3	67.5	3.3	B 10.8
		A – 8.0			B – 12.3			D – 35.1			C – 27.7			
Projected Conditions	Weekday Morning	E	A	A	E	A	A	D	D	B	D	D	A	C 20.2
		58.1	6.5	0.2	59.5	9.8	0.1	44.3	48.5	15.9	39.9	52.0	1.7	
		A – 8.1			B – 11.2			C – 25.7			B – 14.9			
	Weekday Evening	E	B	A	F	A	A	E	A	A	D	A	A	B 18.5
		70.1	13.7	0.0	96.0	7.8	0.0	57.2	0.1	2.3	47.4	0.1	0.3	
Projected Conditions	Saturday Midday	B – 14.3			C – 25.7			C – 27.1			B – 18.2			B 17.4
		F	B	A	E	B	A	E	E	B	D	E	A	
		84.3	12.7	0.7	71.6	13.2	0.2	66.8	60.5	15.3	51.4	67.5	3.2	
	Weekday Evening	B – 14.0			B – 18.6			D – 39.6			C – 26.4			B 17.4
		E	B	A	E	B	A	D	D	B	D	D	A	
Projected Conditions	Saturday Midday	58.6	12.0	0.5	59.8	10.6	0.0	54.7	47.0	14.4	38.4	50.0	1.6	B 17.4
		B – 13.0			B – 18.1			C – 32.1			B – 14.4			

Table 5
CAPACITY ANALYSIS RESULTS
UNSIGNALIZED INTERSECTIONS – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Kautz Road with Target North Access Drive¹						
• Eastbound Approach	B	11.0	B	14.5	B	12.4
• Northbound Left Turn	A	8.1	A	8.2	A	8.1
Kautz Road with Target South Access Drive/Industrial Park North Access Drive²						
• Eastbound Approach	B	10.5	C	15.6	B	11.6
• Westbound Approach	B	11.4	C	15.7	B	11.7
• Northbound Left Turn	A	8.0	A	8.0	A	7.8
• Southbound Left Turn	A	8.2	A	9.8	A	8.0
Kautz Road with Illinois Avenue and Industrial Park South Access Drive²						
• Eastbound Approach	B	14.1	C	22.8	B	12.3
• Westbound Approach	B	12.7	C	18.4	B	12.8
• Northbound Left Turn	A	8.5	A	8.6	A	8.1
• Southbound Left Turn	A	8.4	A	9.0	A	0.1
LOS = Level of Service Delay is measured in seconds.			1 – One way stop control 2 – Two-way stop control			

Table 6

CAPACITY ANALYSIS RESULTS

UNSIGNALIZED INTERSECTIONS – YEAR 2031 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Kautz Road with Target North Access Drive¹						
• Eastbound Approach	B	11.3	B	14.9	B	12.8
• Northbound Left Turn	A	8.2	A	8.2	A	8.2
Kautz Road with Target South Access Drive/ Industrial Park North Access Drive²						
• Eastbound Approach	B	10.8	C	16.7	B	11.9
• Westbound Approach	B	11.6	C	16.8	B	12.1
• Northbound Left Turn	A	8.1	A	8.0	A	7.8
• Southbound Left Turn	A	8.3	B	10.1	A	8.1
Kautz Road with Illinois Avenue and Industrial Park South Access Drive²						
• Eastbound Approach	C	15.8	D	26.9	B	12.9
• Westbound Approach	B	13.1	C	20.1	B	12.5
• Northbound Left Turn	A	8.6	A	8.7	A	8.2
• Southbound Left Turn	A	8.7	A	9.2	A	8.0
LOS = Level of Service			1 – One way stop control			
Delay is measured in seconds.			2 – Two-way stop control			

Table 7

CAPACITY ANALYSIS RESULTS

UNSIGNALIZED INTERSECTIONS – YEAR 2031 TOTAL PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Kautz Road with Target North Access Drive/Proposed Access Drive²						
• Eastbound Approach	C	16.4	F	99+	D	33.3
• Westbound Approach	B	12.1	C	23.2	B	13.3
• Northbound Left Turn	A	8.2	A	8.8	A	8.1
• Southbound Left Turn	A	8.4	B	10.3	A	8.6
Kautz Road with Target South Access Drive/ Industrial Park North Access Drive²						
• Eastbound Approach	B	11.1	C	17.7	B	12.4
• Westbound Approach	B	12.1	C	17.6	B	12.7
• Northbound Left Turn	A	8.2	A	8.1	A	7.9
• Southbound Left Turn	A	8.4	B	10.3	A	8.2
Kautz Road with Illinois Avenue and Industrial Park South Access Drive²						
• Eastbound Approach	C	16.8	D	30.6	B	13.6
• Westbound Approach	B	13.7	C	21.4	B	13.2
• Northbound Left Turn	A	8.8	A	8.9	A	8.4
• Southbound Left Turn	A	8.8	A	9.4	A	8.1
Main Street with Proposed West Access Drive¹						
• Northbound Approach	B	10.7	B	11.1	B	10.5
Main Street with Proposed East Access Drive¹						
• Northbound Approach	B	10.5	B	11.1	B	10.4
LOS = Level of Service Delay is measured in seconds.			1 – One way stop control 2 – Two-way stop control			

Discussion and Recommendations

The following is an evaluation of the analyzed intersections based on the projected traffic volumes and the capacity analyses performed.

Main Street with Kautz Road/Smith Road

The results of the capacity analysis indicate that overall, this intersection currently operates at Level of Service (LOS) C during the weekday morning and Saturday midday peak hours and LOS D during the weekday evening peak hour. It should be noted that left-turn movements and northbound and southbound through movements at this intersection operate at LOS D to E during peak hours. This delay is the result of the long cycle length (130 to 150 seconds) and the fact that Main Street is an SRA and through movements on IL 64 receive a majority of the green time.

Under Year 2031 no-build conditions the intersection and all its approaches are projected to continue operating at the same existing levels of service during the peak hours, except for the southbound approach during the Saturday midday peak hour which is projected to operate at LOS D.

As part of the proposed development, a the traffic signal will be modified to provide a northbound right-turn overlap phase. Under Year 2031 total projected conditions, assuming the implementation of the overlap phase, the intersection overall is projected to operate at existing levels of service during the peak hours with increases in delay of approximately four seconds or less over existing conditions. The eastbound and westbound approaches are projected to operate at LOS D or better during all three peak hours and the northbound and southbound approaches are projected to continue operating at LOS E or better during the peak hours. It should be noted that the 95th percentile queue for the northbound approach is projected to be approximately 560 feet during the weekday evening peak hour and will extend to the location of the proposed access drive. Overall, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvement or additional traffic control adjustments will be required.

Main Street with Pheasant Run

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening and Saturday midday peak hours. It should be noted that the northbound and southbound approaches at this intersection operate at LOS D to E during peak hours. This delay is the result of the long cycle length (130 to 150 seconds) and the fact that IL 64 is an SRA and through movements on IL 64 receive a majority of the green time.

Under Year 2031 no-build conditions, the intersection is projected to operate at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours. All approaches are projected to operate at LOS D or better during the peak hours.

Under Year 2031 total projected conditions, the intersection is projected to operate at LOS C or better during the peak hours and all of the approaches are projected to continue operating at LOS D or better during the peak hours. It should be noted that the westbound left-turn movement is projected to operate at LOS F during the weekday morning peak hour, with a volume to capacity ratio of less than 1.0 and 95th percentile queues of approximately 570 feet. These queues are primarily the result of the long cycle length and amount of green time allocated to the Main Street approaches. As such, to better accommodate the queue for the westbound left-turn movement, consideration should be given reallocating additional green time from the eastbound through movement to the westbound left-turn movement and extending the left-turn lane storage provided. It should be noted that even when reallocating 14 seconds of green time from the eastbound through movement to the westbound left-turn movement, the eastbound through movements are projected to continue operating at LOS B, while the 95th percentile queues for the westbound left-turn movement can decrease by up to 180 feet to 390 feet. A 390 foot westbound left-turn lane storage would also accommodate the 95th percentile queues during the other peak hours without signal timing modifications.

Kautz Road with Target North Access Drive/Proposed Access Drive

The results of the capacity analysis indicate that the eastbound approach currently operates at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours while the northbound left-turn movement operates at LOS A during all three peak hours. Under Year 2031 no-build conditions, the eastbound approach is projected to operate at LOS B during the weekday morning and Saturday midday peak hours and LOS C during the weekday evening peak hour. The northbound left-turn movement is projected to continue operating at the same existing levels of service.

Under Year 2031 total projected conditions and with the build out of the proposed development, the access drive to the development will become the fourth leg of this intersection. It should be noted that as part of the development, an exclusive southbound left-turn lane will be provided along Kautz Road to serve this access drive. Given the proximity to North Avenue, this turn lane will be limited providing approximately 50 feet of storage. The result of the capacity analyses indicate that the eastbound and westbound approaches are projected to operate at LOS D or better during the peak hours except for the eastbound approach during the weekday evening peak hour which is projected to operate at LOS F. However, it is expected that a number of outbound left-turn movements from the Target access drive that currently occur at this intersection, may be diverted to the southern access drive to avoid conflict with outbound traffic from the proposed access drive of the proposed development, thus improving the delays experienced at the north access drive.

Additionally, the northbound and southbound left-turn movements are projected to operate at LOS B or better during all three peak hours with 95th percentile queues of one to two vehicles that can be accommodated within the existing and proposed left-turn lanes. As previously indicated, the 95th percentile queues for the northbound approach of Kautz Road at Main Street are projected extend to the location of this interaction during the weekday evening peak hour. Therefore, the total projected traffic volumes should be monitored to see if these queues are realized and if do not block intersection striping and signage should be provided. Overall, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and will ensure efficient and flexible access is provided.

A traffic signal warrant analysis was performed for this intersection based on the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 2009. For the purposes of this study, Signal Warrant 3 (Peak Hour) was used. **Table 8** contains the peak hour traffic volumes at this intersection. **Figure 9** shows the peak hour volumes plotted on the Warrant 3 traffic volume graph. As can be seen, a traffic signal is not warranted during any of the three peak hours.

Table 8

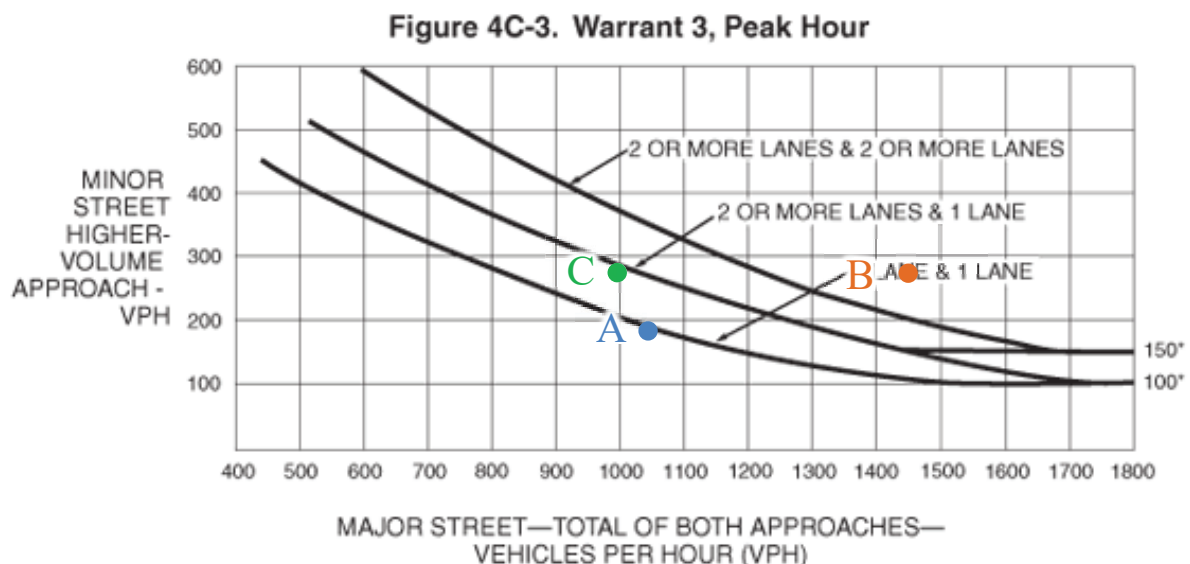
WARRANT VOLUME SUMMARY – KAUTZ ROAD WITH THE NORTH TARGET NORTH ACCESS DRIVE/PROPOSED ACCESS DRIVE

Condition	Peak Hour	Figure 9 Reference ¹	Minor Approach ²		Major Approach (Two-Way)	Signal Warrant Met? ³
			Target Access	Site Access		
Projected Volumes	Weekday Morning	A	16	88	1058	No
	Weekday Evening	B	128	159	1455	No
	Saturday Midday	C	160	128	996	No

1 – Only the higher minor approach is shown.

2 – Per IDOT guidelines, a 60 percent right-turn reduction factor was used. Based on the geometry of the access drives, a 60 percent reduction was used, reduced by a mainline congestion factor.

3 - MUTCD Signal Warrant 3 (Peak Hour), two or more lanes on major approach, two lanes on minor approach.



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

MUTCD Signal Warrant 3 (Peak Hour)

Figure 9

Kautz Road with Target South Access Drive/Industrial Park North Access Drive

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at LOS C or better during the weekday morning, weekday evening, and Saturday midday peak hours. The northbound and southbound left-turn movements operate at LOS A during all three peak hours.

Under Year 2031 no-build conditions, the eastbound and westbound approaches are projected to continue operating at the same existing levels of service during the peak hours while the northbound and southbound left-turn movements are projected to operate at LOS B or better during peak hours.

Under Year 2031 total projected conditions, all approaches and their critical movements are projected to continue to operate at LOS C or better during all three peak hours. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Kautz Road with Illinois Avenue/Industrial Park South Access Drive

The results of the capacity analysis indicate that the eastbound and westbound approaches currently operate at LOS B during the weekday morning and Saturday midday peak hours and LOS C during the weekday evening peak hour. The northbound and southbound approaches operate at LOS A during all three peak hours.

Under Year 2031 no-build conditions, the eastbound and westbound approaches are projected to operate at LOS D or better during all three peak hours while the northbound and southbound approaches are projected to continue operating at LOS A during the peak hours.

Under Year 2031 total projected conditions, the eastbound and westbound approaches are projected to continue to operate at LOS D or better during peak hours. The northbound and southbound left-turn movements are projected to continue operating at LOS A during all three peak hours. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Main Street with Proposed Right-In/Right-Out Access Drives

With the buildout of the proposed development, direct access to the site from Main Street will be provided via two right-in/right-out access drives located on the south side of Main Street. Eastbound right-turn lanes with 215 feet of storage and 220-foot tapers will be provided for both access drives. The results of the capacity analysis indicate that the northbound approaches at both access drives are projected to operate at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours. As such, these access drives will be adequate to accommodate the traffic estimated to be generated by the proposed development and will ensure efficient access is provided to the site.

6. Conclusion

Based on existing conditions and the traffic capacity analyses, the findings and recommendations of this study are outlined below:

- The site will be developed with a commercial development that will contain a mix of commercial uses.
- The volume of new traffic generated by the site will be reduced due to the pass-by traffic and the internal interaction between different uses.
- The results of the capacity analysis indicate that the roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by the development.
 - A northbound right-turn overlap phase will be provided at the intersection of Main Street with Kautz Road.
 - It is recommended that additional green time to the westbound left-turn movement at the intersection of Main Street with Pheasant Run during the weekday morning.
 - It is recommended that the westbound left-turn storage at the intersection of Main Street with Pheasant Run be increased to 390 feet.
- Access to the site will be provided via the following access drives:
 - A proposed right-in/right-out access drive on the south side of Main Street to be located approximately 485 feet east of Kautz Road. An eastbound right-turn lane will be provided on Main Street serving this access drive and should provide 215 feet of storage and a 220-foot taper.
 - A proposed right-in/right-out access drive on the south side of Main Street to be located approximately 460 feet west of Pheasant Run. An eastbound right-turn lane will be provided on Main Street serving this access drive and should provide 215 feet of storage and a 220-foot taper.
 - A proposed full-movement access drive on the east side of Kautz Road to be located approximately 520 feet south of Main Street. An southbound left-turn lane will be provided on Kautz Road serving this access drive and will provide approximately 50 feet of storage.
 - Two full-movement access drives on the west side of Pheasant Run located approximately 270 and 760 feet south of Main Street.
- The proposed access system will provide adequate and flexible access for the traffic that will be generated by the proposed development.
- The proposed internal site layout design of the development will ensure efficient internal circulation and access between different buildings.

Appendix

Traffic Count Summary Sheets

Site Plan

ITE Trip Generation Summary Sheets

CMAP 2050 Projections Letter

Level of Service Criteria

Capacity Analysis Summary Sheets

Traffic Count Summary Sheets



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

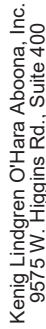
Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: IL 64 with Kautz Road TMC
Site Code:
Start Date: 07/12/2025
Page No: 1

Turning Movement Data

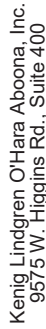
Start Time	IL 64 Eastbound						IL 64 Westbound						Kautz Road Northbound						Smith Road Southbound					
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total
	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total	Int. Total
11:00 AM	0	53	138	9	2	200	2	22	187	14	0	225	0	38	47	65	0	150	1	38	30	55	0	124
11:15 AM	1	42	127	8	3	178	4	34	203	18	0	259	0	14	37	35	0	86	0	41	47	57	1	145
11:30 AM	0	33	131	7	1	171	0	35	221	29	0	285	0	15	32	40	0	87	0	40	41	38	0	119
11:45 AM	1	40	135	7	1	183	0	52	185	24	0	261	0	14	47	53	0	114	0	31	37	48	0	116
Hourly Total	2	168	531	31	7	732	6	143	796	85	0	1030	0	81	163	193	0	437	1	150	155	198	1	504
12:00 PM	0	37	131	9	3	177	1	49	196	21	0	267	0	22	34	63	0	119	1	36	46	44	0	127
12:15 PM	1	44	135	5	0	185	3	62	194	18	0	277	0	18	39	53	0	110	0	36	45	37	0	118
12:30 PM	1	45	129	10	0	185	1	55	179	20	0	255	0	17	49	67	0	133	0	30	41	47	0	118
12:45 PM	2	49	142	8	0	201	0	56	179	31	0	266	0	18	41	67	0	126	0	26	43	36	0	105
Hourly Total	4	175	537	32	3	748	5	222	748	90	0	1065	0	75	163	250	0	488	1	128	175	164	0	468
1:00 PM	0	40	151	13	0	204	0	40	162	21	0	223	2	21	21	40	0	84	0	44	42	38	0	124
1:15 PM	0	41	173	16	0	230	1	52	192	23	0	268	0	23	44	51	0	118	0	35	41	47	0	123
1:30 PM	2	56	184	14	0	256	1	47	168	29	0	245	0	19	51	59	0	129	1	36	44	39	0	120
1:45 PM	0	53	160	13	0	226	1	56	195	20	0	272	0	18	46	50	0	114	1	26	40	28	1	95
Hourly Total	2	190	668	56	0	916	3	195	717	93	0	1008	2	81	162	200	0	445	2	141	167	152	1	462
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	0	18	187	11	0	216	1	39	107	5	0	152	0	6	18	22	0	46	0	14	24	9	0	47
6:15 AM	0	14	180	11	1	205	0	45	130	3	0	178	0	8	9	29	0	46	0	23	27	14	0	64
6:30 AM	0	19	208	14	0	241	0	62	164	4	0	230	0	6	17	38	0	61	0	23	39	19	0	81
6:45 AM	1	17	214	13	0	245	0	70	193	8	0	271	0	3	12	45	0	60	0	31	53	35	0	119
Hourly Total	1	68	789	49	1	907	1	216	594	20	0	831	0	23	56	134	0	213	0	91	143	77	0	311
7:00 AM	1	19	227	3	0	250	0	50	145	7	0	202	0	7	18	41	0	66	0	35	36	33	0	104
7:15 AM	1	16	219	5	0	241	0	60	177	6	0	243	0	5	14	60	0	79	0	29	40	26	0	95
7:30 AM	0	17	269	4	0	290	0	51	190	7	0	248	0	4	23	51	0	78	0	32	32	29	0	93
7:45 AM	1	15	253	15	1	284	0	70	214	13	0	297	0	7	15	76	0	98	0	29	56	42	0	127
Hourly Total	3	67	968	27	1	1065	0	231	726	33	0	990	0	23	70	228	0	321	0	125	164	130	0	419
8:00 AM	0	12	200	6	0	218	0	80	187	13	0	280	0	7	26	49	0	82	0	24	46	39	0	109
8:15 AM	1	15	199	16	0	231	0	66	180	8	0	254	0	7	23	53	0	83	0	33	39	43	0	115
8:30 AM	3	26	171	8	0	208	0	55	170	10	0	235	0	3	17	40	0	60	0	27	43	38	0	108
8:45 AM	0	17	158	16	0	191	0	45	192	12	0	249	0	7	17	43	0	67	0	28	44	49	0	121
Hourly Total	4	70	728	46	0	848	0	246	729	43	0	1018	0	24	83	185	0	292	0	112	172	169	0	453
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	41	185	7	0	233	1	68	220	23	0	312	0	20	64	109	0	193	0	26	41	34	0	101
4:15 PM	0	46	213	6	0	265	1	78	223	39	0	341	1	15	55	98	0	169	0	32	63	34	0	129
4:30 PM	0	52	230	7	0	289	0	65	293	26	0	384	0	32	87	115	0	234	0	29	36	48	0	113

4:45 PM	2	44	205	8	0	259	1	67	321	18	0	407	0	33	59	86	0	178	0	28	42	45	0	115	959
Hourly Total	2	183	833	28	0	1046	3	278	1057	106	0	1444	1	100	265	408	0	774	0	115	182	161	0	458	3722
5:00 PM	0	72	257	9	0	338	0	66	318	22	0	406	0	30	83	121	0	234	0	29	40	47	0	116	1094
5:15 PM	0	43	244	3	0	290	2	78	318	33	0	431	0	24	72	83	0	179	0	27	61	45	0	133	1033
5:30 PM	0	44	214	10	0	268	3	61	320	30	0	414	0	19	68	69	0	156	0	22	45	52	0	119	957
5:45 PM	0	46	187	8	0	241	0	45	311	23	0	379	0	28	43	55	0	126	0	26	35	46	0	107	853
Hourly Total	0	205	902	30	0	1137	5	250	1267	108	0	1630	0	101	266	328	0	695	0	104	181	190	0	475	3937
6:00 PM	1	49	194	9	0	253	0	54	343	19	0	416	0	17	49	59	0	125	0	31	50	61	0	142	936
6:15 PM	2	48	168	9	1	227	0	43	298	12	0	353	0	17	38	49	0	104	0	21	38	44	0	103	787
6:30 PM	1	45	173	6	0	225	0	24	290	29	0	343	0	24	33	42	0	99	0	18	34	45	0	97	764
6:45 PM	1	53	139	4	0	197	0	24	215	13	0	252	0	18	23	26	0	67	0	20	34	37	0	91	607
Hourly Total	5	195	674	28	1	902	0	145	1146	73	0	1364	0	76	143	176	0	395	0	90	156	187	0	433	3094
Grand Total	23	1321	6630	327	13	8301	23	1926	7780	651	0	10380	3	594	1371	2102	0	4060	4	1056	1495	1428	2	3983	26724
Approach %	0.3	15.9	79.9	3.9	-	-	0.2	18.6	75.0	6.3	-	-	0.1	14.4	33.8	51.8	-	-	0.1	26.5	37.5	35.9	-	-	-
Total %	0.1	4.9	24.8	1.2	-	31.1	0.1	7.2	29.1	2.4	-	38.8	0.0	2.2	5.1	7.9	-	15.2	0.0	4.0	5.6	5.3	-	14.9	-
Lights	23	1290	6322	320	-	7955	22	1826	7446	636	-	9930	3	575	1361	2014	-	3953	4	1037	1483	1407	-	3931	25769
% Lights	100.0	97.7	95.4	97.9	-	95.8	95.7	94.8	95.7	97.7	-	95.7	100.0	98.5	99.3	95.8	-	97.4	100.0	98.2	99.2	98.5	-	98.7	96.4
Buses	0	0	5	0	-	5	0	2	2	0	0	4	0	0	0	1	-	1	0	1	0	1	-	2	12
% Buses	0.0	0.0	0.1	0.0	-	0.1	0.0	0.1	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	0.0
Single-Unit Trucks	0	11	134	5	-	150	0	57	161	9	-	227	0	6	7	48	-	61	0	12	10	7	-	29	467
% Single-Unit Trucks	0.0	0.8	2.0	1.5	-	1.8	0.0	3.0	2.1	1.4	-	2.2	0.0	1.0	0.5	2.3	-	1.5	0.0	1.1	0.7	0.5	-	0.7	1.7
Articulated Trucks	0	20	169	2	-	191	1	41	171	6	-	219	0	3	3	38	-	44	0	6	1	13	-	20	474
% Articulated Trucks	0.0	1.5	2.5	0.6	-	2.3	4.3	2.1	2.2	0.9	-	2.1	0.0	0.5	0.2	1.8	-	1.1	0.0	0.6	0.1	0.9	-	0.5	1.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	0	0	1	0	-	1	2
% 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	0.1	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	13	-	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



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

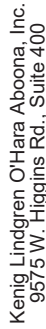
Turning Movement Peak Hour Data (12:45 PM)



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

Turning Movement Peak Hour Data (7:30 AM)

Start Time	IL 64 Eastbound							IL 64 Westbound							Kautz Road Northbound							Smith Road Southbound										
	U-Turn			Thru			Peds	App. Total	U-Turn			Thru			Peds	App. Total	U-Turn			Thru			Peds	App. Total	U-Turn			Thru			Peds	App. Total
	Left	Right		Left	Right			Left	Right		Left	Right		Left	Right			Left	Right		Left	Right		Left	Right		Left	Right				
7:30 AM	0	17	269	4	0	290	0	290	0	51	190	7	0	248	0	4	23	51	0	78	0	32	32	29	0	93	709					
7:45 AM	1	15	253	15	1	284	0	284	0	70	214	13	0	297	0	7	15	76	0	98	0	29	56	42	0	127	806					
8:00 AM		12	200	6	0	218	0	218	0	80	187	13	0	280	0	7	26	49	0	82	0	24	46	39	0	109	689					
8:15 AM	1	15	199	16	0	231	0	231	0	66	180	8	0	254	0	7	23	53	0	83	0	33	39	43	0	115	683					
Total	2	59	921	41	1	1023	0	1023	0	267	771	41	0	1079	0	25	87	229	0	341	0	118	173	153	0	444	2887					
Approach %	0.2	5.8	90.0	4.0	-	-	0.0	24.7	71.5	3.8	-	-	-	-	0.0	7.3	25.5	67.2	-	-	0.0	26.6	39.0	34.5	-	-	-					
Total %	0.1	2.0	31.9	1.4	-	35.4	0.0	9.2	26.7	1.4	-	37.4	0.0	0.9	3.0	7.9	-	11.8	-	15.4	0.0	4.1	6.0	5.3	-	15.4	-					
PHF	0.500	0.868	0.856	0.641	-	0.882	0.000	0.834	0.901	0.788	-	0.908	0.000	0.893	0.837	0.753	-	0.870	-	0.874	0.000	0.894	0.772	0.890	-	0.874	0.895					
Lights	2	54	846	39	-	941	0	239	704	40	-	983	0	25	85	213	-	323	-	427	0	114	170	143	-	427	2674					
% Lights	100.0	91.5	91.9	95.1	-	92.0	-	89.5	91.3	97.6	-	91.1	-	100.0	97.7	93.0	-	94.7	-	96.2	-	96.6	98.3	93.5	-	96.2	92.6					
Buses	0	0	2	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0	1	0	1	0	5						
% Buses	0.0	0.0	0.2	0.0	-	0.2	-	0.4	0.0	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.5	-	0.8	0.0	0.7	-	0.5	0.2					
Single-Unit Trucks	0	2	30	1	-	33	0	17	36	1	-	54	0	0	1	10	-	11	-	7	0	2	3	2	-	7	105					
% Single-Unit Trucks	0.0	3.4	3.3	2.4	-	3.2	-	6.4	4.7	2.4	-	5.0	-	0.0	1.1	4.4	-	3.2	-	1.6	-	1.7	1.7	1.3	-	1.6	3.6					
Articulated Trucks	0	3	43	1	-	47	0	10	31	0	-	41	0	0	1	6	-	7	-	8	0	1	0	7	-	103						
% Articulated Trucks	0.0	5.1	4.7	2.4	-	4.6	-	3.7	4.0	0.0	-	3.8	-	0.0	1.1	2.6	-	2.1	-	1.8	-	0.8	0.0	4.6	-	1.8	3.6					
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0.0					
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-	0	-	-					
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					



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

Turning Movement Peak Hour Data (4:30 PM)

Start Time	IL 64 Eastbound							IL 64 Westbound							Kautz Road Northbound							Smith Road Southbound								
	U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total			
4:30 PM	0	52	230	7	0	289		0	65	293	26	0	384		0	32	87	115	0	234		0	29	36	48	0	113		1020	
4:45 PM	2	44	205	8	0	259		1	67	321	18	0	407		0	33	59	86	0	178		0	28	42	45	0	115		959	
5:00 PM	0	72	257	9	0	338		0	66	318	22	0	406		0	30	83	121	0	234		0	29	40	47	0	116		1094	
5:15 PM	0	43	244	3	0	290		2	78	318	33	0	431		0	24	72	83	0	179		0	27	61	45	0	133		1033	
Total	2	211	936	27	0	1176		3	276	1250	99	0	1628		0	119	301	405	0	825		0	113	179	185	0	477		4106	
Approach %	0.2	17.9	79.6	2.3	-	-		0.2	17.0	76.8	6.1	-	-		-	0.0	14.4	36.5	49.1	-	-		0.0	23.7	37.5	38.8	-	-		-
Total %	0.0	5.1	22.8	0.7	-	28.6		0.1	6.7	30.4	2.4	-	39.6		0.0	2.9	7.3	9.9	4.4	-	20.1		0.0	2.8	4.4	4.5	-	11.6		-
PHF	0.250	0.733	0.911	0.750	-	0.870		0.375	0.885	0.974	0.750	-	0.944		0.000	0.902	0.865	0.837	-	0.881		0.000	0.974	0.734	0.964	-	0.897		0.938	
Lights	2	209	894	26	-	1131		3	266	1228	98	-	1595		0	118	300	391	-	809		0	112	179	185	-	476		4011	
% Lights	100.0	99.1	95.5	96.3	-	96.2		100.0	96.4	98.2	99.0	-	98.0		-	99.2	99.7	96.5	-	98.1		-	99.1	100.0	100.0	-	99.8		97.7	
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	-	0.0		0.0	
Single-Unit Trucks	0	1	11	1	-	13		0	1	7	0	-	8		0	1	1	4	-	6		0	0	0	0	-	0		27	
% Single-Unit Trucks	0.0	0.5	1.2	3.7	-	1.1		0.0	0.4	0.6	0.0	-	0.5		-	0.8	0.3	1.0	-	0.7		-	0.0	0.0	0.0	-	0.0		0.7	
Articulated Trucks	0	1	31	0	-	32		0	9	15	1	-	25		0	0	0	9	-	9		0	1	0	0	-	1		67	
% Articulated Trucks	0.0	0.5	3.3	0.0	-	2.7		0.0	3.3	1.2	1.0	-	1.5		-	0.0	0.0	2.2	-	1.1		-	0.9	0.0	0.0	-	0.2		1.6	
Bicycles on Road	0	0	0	0	-	0		0	0	0	0	-	0		0	0	0	1	-	1		0	0	0	0	-	0		1	
% 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	0.2	-	0.1		-	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

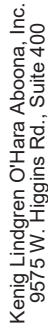
Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Kautz Road with Illinois Avenue
TMC
Site Code:
Start Date: 07/12/2025
Page No: 1

Turning Movement Data

Start Time	Illinois Avenue Eastbound						Westbound Approach						Kautz Road Northbound						Kautz Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	14	0	9	0	23	0	15	2	13	0	30	0	5	76	1	0	82	0	0	59	8	0	67	202
11:15 AM	0	8	0	5	0	13	0	0	0	2	0	2	0	7	53	0	0	60	0	0	58	2	0	60	135
11:30 AM	0	9	0	6	0	15	0	0	1	1	0	2	0	12	62	0	0	74	0	0	70	12	0	82	173
11:45 AM	0	13	1	7	0	21	0	0	0	0	0	0	0	6	78	0	0	84	0	0	64	15	0	79	184
Hourly Total	0	44	1	27	0	72	0	15	3	16	0	34	0	30	269	1	0	300	0	0	251	37	0	288	694
12:00 PM	0	12	0	11	0	23	0	0	0	0	0	0	0	16	80	0	0	96	0	0	83	8	0	91	210
12:15 PM	0	10	0	10	0	20	0	2	0	0	0	2	0	3	82	0	0	85	0	0	80	18	0	98	205
12:30 PM	0	15	1	8	0	24	0	0	0	0	0	0	0	10	84	0	0	94	0	0	79	7	0	86	204
12:45 PM	0	16	0	17	0	33	0	0	0	1	0	1	0	8	80	0	0	88	0	0	78	15	0	93	215
Hourly Total	0	53	1	46	0	100	0	2	0	1	0	3	0	37	326	0	0	363	0	0	320	48	0	368	834
1:00 PM	0	5	0	12	0	17	0	0	0	0	0	0	0	10	66	1	0	77	0	0	67	9	0	76	170
1:15 PM	0	8	0	8	0	16	0	1	0	0	0	1	0	9	84	0	0	93	0	0	79	11	0	90	200
1:30 PM	0	7	0	10	2	17	0	2	0	0	0	2	0	8	94	0	0	102	0	0	92	6	0	98	219
1:45 PM	0	3	0	6	0	9	0	0	0	2	0	2	0	11	77	1	0	89	0	0	70	9	0	79	179
Hourly Total	0	23	0	36	2	59	0	3	0	2	0	5	0	38	321	2	0	361	0	0	308	35	0	343	768
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	0	3	4	2	0	9	0	2	0	0	0	2	0	2	42	7	0	51	0	2	50	4	0	56	118
6:15 AM	0	3	0	2	1	5	0	0	0	1	0	1	0	1	43	3	0	47	0	1	69	7	0	77	130
6:30 AM	0	1	2	5	0	8	0	2	0	0	0	2	0	2	63	0	0	65	0	0	94	10	0	104	179
6:45 AM	0	4	2	5	0	11	0	0	0	0	0	0	0	6	53	1	0	60	0	1	122	13	0	136	207
Hourly Total	0	11	8	14	1	33	0	4	0	1	0	5	0	11	201	11	0	223	0	4	335	34	0	373	634
7:00 AM	0	4	1	3	0	8	0	1	0	0	0	1	0	5	65	4	0	74	0	0	84	11	0	95	178
7:15 AM	0	5	2	9	0	16	0	0	0	0	0	0	0	6	80	2	0	88	0	0	89	15	0	104	208
7:30 AM	0	12	0	6	0	18	0	1	0	0	0	1	0	6	85	2	1	93	0	1	83	15	0	99	211
7:45 AM	0	17	1	8	1	26	0	0	0	0	0	0	0	3	73	3	0	79	0	1	123	14	0	138	243
Hourly Total	0	38	4	26	1	68	0	2	0	0	0	2	0	20	303	11	1	334	0	2	379	55	0	436	840
8:00 AM	0	5	1	6	0	12	0	0	0	1	0	1	0	6	70	4	0	80	0	1	103	20	0	124	217
8:15 AM	0	11	0	4	0	15	0	1	0	0	0	1	0	6	73	3	0	82	0	0	105	13	0	118	216
8:30 AM	0	11	1	6	0	18	0	1	0	0	0	1	0	13	56	2	0	71	0	1	83	19	0	103	193
8:45 AM	0	9	0	7	0	16	0	1	0	0	0	1	0	11	65	0	0	76	0	0	95	16	0	111	204
Hourly Total	0	36	2	23	0	61	0	3	0	1	0	4	0	36	264	9	0	309	0	2	386	68	0	456	830
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	16	0	14	0	30	0	0	0	0	0	0	0	15	150	0	0	165	0	0	92	12	0	104	299
4:15 PM	0	19	1	8	0	28	0	1	0	0	0	1	0	11	135	1	0	147	0	0	127	22	0	149	325
4:30 PM	0	22	0	7	0	29	0	3	1	3	0	7	0	11	180	0	0	191	0	0	93	11	0	104	331

4:45 PM	0	13	0	16	0	29	0	2	0	0	0	2	0	8	127	0	0	135	0	1	97	12	0	110	276
Hourly Total	0	70	1	45	0	116	0	6	1	3	0	10	0	45	592	1	0	638	0	1	409	57	0	467	1231
5:00 PM	0	20	0	14	0	34	0	4	1	3	0	8	0	8	192	0	0	200	0	0	106	8	0	114	356
5:15 PM	0	17	1	12	0	30	0	1	0	0	0	1	0	11	128	1	0	140	0	1	120	9	0	130	301
5:30 PM	0	14	0	11	0	25	0	0	0	0	0	0	0	9	124	0	0	133	0	0	81	6	0	87	245
5:45 PM	0	8	0	10	0	18	0	1	0	1	0	2	0	11	87	0	0	98	0	0	80	9	0	89	207
Hourly Total	0	59	1	47	0	107	0	6	1	4	0	11	0	39	531	1	0	571	0	1	387	32	0	420	1109
6:00 PM	0	11	0	11	0	22	0	0	0	0	0	0	0	13	91	0	0	104	0	0	70	3	0	73	199
6:15 PM	0	4	0	5	0	9	0	1	0	1	0	2	0	7	78	2	0	87	0	0	58	4	0	62	160
6:30 PM	0	6	0	10	0	16	0	0	0	0	0	0	0	5	58	0	0	63	0	0	45	2	0	47	126
6:45 PM	0	6	0	7	0	13	0	0	0	0	0	0	0	6	50	0	0	56	0	0	49	6	0	55	124
Hourly Total	0	27	0	33	0	60	0	1	0	1	0	2	0	31	277	2	0	310	0	0	222	15	0	237	609
Grand Total	0	361	18	297	4	676	0	42	5	29	0	76	0	287	3084	38	1	3409	0	10	2997	381	0	3388	7549
Approach %	0.0	53.4	2.7	43.9	-	-	0.0	55.3	6.6	38.2	-	-	0.0	8.4	90.5	1.1	-	-	0.0	0.3	88.5	11.2	-	-	-
Total %	0.0	4.8	0.2	3.9	-	9.0	0.0	0.6	0.1	0.4	-	1.0	0.0	3.8	40.9	0.5	-	45.2	0.0	0.1	39.7	5.0	-	44.9	-
Lights	0	347	14	287	-	648	0	42	5	29	-	76	0	283	2988	38	-	3309	0	9	2878	372	-	3259	7292
% Lights	-	96.1	77.8	96.6	-	95.9	-	100.0	100.0	100.0	-	100.0	-	98.6	96.9	100.0	-	97.1	-	90.0	96.0	97.6	-	96.2	96.6
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	2	1	-	3	4
% 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	0.1	0.3	-	0.1	0.1
Single-Unit Trucks	0	9	2	8	-	19	0	0	0	0	-	0	0	4	56	0	-	60	0	0	74	6	-	80	159
% Single-Unit Trucks	-	2.5	11.1	2.7	-	2.8	-	0.0	0.0	0.0	-	0.0	-	1.4	1.8	0.0	-	1.8	-	0.0	2.5	1.6	-	2.4	2.1
Articulated Trucks	0	5	0	1	-	6	0	0	0	0	-	0	0	0	38	0	-	38	0	1	42	2	-	45	89
% Articulated Trucks	-	1.4	0.0	0.3	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.0	1.2	0.0	-	1.1	-	10.0	1.4	0.5	-	1.3	1.2
Bicycles on Road	0	0	2	1	-	3	0	0	0	0	-	0	0	0	1	0	-	1	0	0	1	0	-	1	5
% Bicycles on Road	-	0.0	11.1	0.3	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



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

Turning Movement Peak Hour Data (12:45 PM)

[illegible]



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

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

Count Name: Kautz Road with Illinois Avenue
TMC
Site Code:
Start Date: 07/12/2025
Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Illinois Avenue Eastbound						Westbound Approach						Kautz Road Northbound						Kautz Road Southbound					
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total
7:30 AM	0	12	0	6	0	18	0	1	0	0	0	1	0	6	85	2	1	93	0	1	83	15	0	99
7:45 AM	0	17	1	8	1	26	0	0	0	0	0	0	0	3	73	3	0	79	0	1	123	14	0	138
8:00 AM	0	5	1	6	0	12	0	0	0	1	0	1	0	6	70	4	0	80	0	1	103	20	0	124
8:15 AM	0	11	0	4	0	15	0	1	0	0	0	1	0	6	73	3	0	82	0	0	105	13	0	118
Total	0	45	2	24	1	71	0	2	0	1	0	3	0	21	301	12	1	334	0	3	414	62	0	479
Approach %	0.0	63.4	2.8	33.8	-	-	0.0	66.7	0.0	33.3	-	-	0.0	6.3	90.1	3.6	-	-	0.0	0.6	86.4	12.9	-	-
Total %	0.0	5.1	0.2	2.7	-	8.0	0.0	0.2	0.0	0.1	-	0.3	0.0	2.4	33.9	1.4	-	37.7	0.0	0.3	46.7	7.0	-	54.0
PHF	0.000	0.662	0.500	0.750	-	0.683	0.000	0.500	0.000	0.250	-	0.750	0.000	0.875	0.885	0.750	-	0.898	0.000	0.750	0.841	0.775	-	0.868
Lights	0	41	1	24	-	66	0	2	0	1	-	3	0	21	284	12	-	317	0	2	383	59	-	444
% Lights	-	91.1	50.0	100.0	-	93.0	-	100.0	-	100.0	-	100.0	-	100.0	94.4	100.0	-	94.9	-	66.7	92.5	95.2	-	92.7
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	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	0.2	0.0	-	0.2
Single-Unit Trucks	0	2	1	0	-	3	0	0	0	0	-	0	0	0	12	0	-	12	0	0	21	1	-	22
% Single-Unit Trucks	-	4.4	50.0	0.0	-	4.2	-	0.0	-	0.0	-	0.0	-	0.0	4.0	0.0	-	3.6	-	0.0	5.1	1.6	-	4.6
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	-	0	0	0	5	0	-	5	0	1	9	2	-	12
% Articulated Trucks	-	4.4	0.0	0.0	-	2.8	-	0.0	-	0.0	-	0.0	-	0.0	1.7	0.0	-	1.5	-	33.3	2.2	3.2	-	2.5
Bicycles on Road	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
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	0
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-



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

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

Count Name: Kautz Road with Illinois Avenue
TMC
Site Code:
Start Date: 07/12/2025
Page No.: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Illinois Avenue Eastbound							Westbound Approach							Kautz Road Northbound							Kautz Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	22	0	7	0	29		0	3	1	3	0	7		0	11	180	0	0	191		0	0	93	11	0	104	331
4:45 PM	0	13	0	16	0	29		0	2	0	0	0	2		0	8	127	0	0	135		0	1	97	12	0	110	276
5:00 PM	0	20	0	14	0	34		0	4	1	3	0	8		0	8	192	0	0	200		0	0	106	8	0	114	356
5:15 PM	0	17	1	12	0	30		0	1	0	0	0	1		0	11	128	1	0	140		0	1	120	9	0	130	301
Total	0	72	1	49	0	122		0	10	2	6	0	18		0	38	627	1	0	666		0	2	416	40	0	458	1264
Approach %	0.0	59.0	0.8	40.2	-	-		0.0	55.6	11.1	33.3	-	-		0.0	5.7	94.1	0.2	-	-		0.0	0.4	90.8	8.7	-	-	-
Total %	0.0	5.7	0.1	3.9	-	9.7		0.0	0.8	0.2	0.5	-	1.4		0.0	3.0	49.6	0.1	-	52.7		0.0	0.2	32.9	3.2	-	36.2	-
PHF	0.000	0.818	0.250	0.766	-	0.897		0.000	0.625	0.500	0.500	-	0.563		0.000	0.864	0.816	0.250	-	0.833		0.000	0.500	0.867	0.833	-	0.881	0.888
Lights	0	70	1	46	-	117		0	10	2	6	-	18		0	37	615	1	-	653		0	2	401	40	-	443	1231
% Lights	-	97.2	100.0	93.9	-	95.9		-	100.0	100.0	100.0	-	100.0		-	97.4	98.1	100.0	-	98.0		-	100.0	96.4	100.0	-	96.7	97.4
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	2	-	2		0	0	0	0	-	0		0	1	5	0	-	6		0	0	6	0	-	6	14
% Single-Unit Trucks	-	0.0	0.0	4.1	-	1.6		-	0.0	0.0	0.0	-	0.0		-	2.6	0.8	0.0	-	0.9		-	0.0	1.4	0.0	-	1.3	1.1
Articulated Trucks	0	2	0	0	-	2		0	0	0	0	-	0		0	0	6	0	-	6		0	0	9	0	-	9	17
% Articulated Trucks	-	2.8	0.0	0.0	-	1.6		-	0.0	0.0	0.0	-	0.0		-	0.0	1.0	0.0	-	0.9		-	0.0	2.2	0.0	-	2.0	1.3
Bicycles on Road	0	0	0	1	-	1		0	0	0	0	-	0		0	0	1	0	-	1		0	0	0	0	-	0	2
% Bicycles on Road	-	0.0	0.0	2.0	-	0.8		-	0.0	0.0	0.0	-	0.0		-	0.0	0.2	0.0	-	0.2		-	0.0	0.0	0.0	-	0.0	0.2
Pedestrians	-	-	-	-	0	-		-	-	-	-	0	-		-	-	-	-	-	-		-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-	-



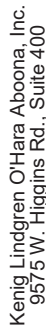
Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

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

Count Name: Kautz Road
with+Target+North+Access TMC
Site Code:
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Turning Movement Data

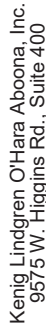
Start Time	Access Drive Eastbound					Kautz Road Northbound					Kautz Road Southbound				
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total
11:00 AM	0	20	13	1	33	0	5	127	0	132	0	37	26	0	63
11:15 AM	0	20	9	0	29	0	2	65	0	67	0	48	42	0	90
11:30 AM	0	18	9	0	27	0	7	69	0	76	0	64	20	0	84
11:45 AM	0	28	10	0	38	0	7	89	0	96	0	70	32	0	102
Hourly Total	0	86	41	1	127	0	21	350	0	371	0	219	120	0	339
12:00 PM	0	30	7	0	37	0	6	90	0	96	0	77	31	0	108
12:15 PM	0	32	10	0	42	0	9	80	0	89	0	85	33	0	118
12:30 PM	1	30	10	0	41	0	6	98	0	104	0	73	37	0	110
12:45 PM	0	32	11	0	43	0	8	91	0	99	0	78	38	0	116
Hourly Total	1	124	38	0	163	0	29	359	0	388	0	313	139	0	452
1:00 PM	0	32	11	0	43	0	5	60	0	65	0	64	35	0	99
1:15 PM	0	41	10	0	51	0	7	86	0	93	0	81	41	0	122
1:30 PM	0	33	16	0	49	0	7	96	0	103	0	72	34	0	106
1:45 PM	0	32	12	0	44	0	3	79	0	82	0	58	45	0	103
Hourly Total	0	138	49	0	187	0	22	321	0	343	0	275	155	0	430
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6:00 AM	0	3	0	0	3	0	0	42	0	42	0	79	3	0	82
6:15 AM	0	1	0	1	1	0	1	51	0	52	0	83	3	0	86
6:30 AM	0	0	0	0	0	0	0	53	0	53	0	112	4	0	116
6:45 AM	0	4	3	0	7	0	1	55	0	56	0	129	9	0	138
Hourly Total	0	8	3	1	11	0	2	201	0	203	0	403	19	0	422
7:00 AM	0	0	1	0	1	0	2	68	0	70	0	93	8	0	101
7:15 AM	0	2	0	0	2	0	1	77	0	78	0	102	2	0	104
7:30 AM	0	4	2	0	6	0	4	89	0	93	0	95	7	0	102
7:45 AM	0	3	0	1	3	0	2	84	0	86	0	139	11	0	150
Hourly Total	0	9	3	1	12	0	9	318	0	327	0	429	28	0	457
8:00 AM	0	4	1	0	5	0	1	82	0	83	0	136	7	0	143
8:15 AM	0	3	1	0	4	0	1	80	0	81	0	115	9	0	124
8:30 AM	0	2	1	0	3	0	4	56	0	60	0	103	7	0	110
8:45 AM	0	3	0	0	3	0	2	70	0	72	0	99	9	0	108
Hourly Total	0	12	3	0	15	0	8	288	0	296	0	453	32	0	485
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	22	6	0	28	0	2	170	0	172	0	96	16	0	112
4:15 PM	0	17	9	0	26	0	2	154	0	156	0	122	34	0	156
4:30 PM	0	27	9	0	36	0	11	199	0	210	0	90	30	0	120
4:45 PM	0	30	11	0	41	0	6	143	0	149	0	84	32	0	116



Count Name: Kautz Road
with+Target+North+Access TMC
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Turning Movement Peak Hour Data (12:45 PM)

[illegible]



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

Count Name: Kautz Road
with+Target+North+Access TMC
Site Code:
Start Date: 07/12/2025
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Turning Movement Peak Hour Data (7:30 AM)

[illegible]



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

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

Count Name: Kautz Road
with+Target+North+Access TMC
Site Code:
Start Date: 07/12/2025
Page No.: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Access Drive Eastbound					Kautz Road Northbound					Kautz Road Southbound				
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total
4:30 PM	0	27	9	0	36	0	11	199	0	210	0	90	30	0	120
4:45 PM	0	30	11	0	41	0	6	143	0	149	0	84	32	0	116
5:00 PM	0	29	7	0	36	0	7	206	0	213	0	99	21	0	120
5:15 PM	0	26	4	0	30	0	5	147	0	152	0	109	37	0	146
Total	0	112	31	0	143	0	29	695	0	724	0	382	120	0	502
Approach %	0.0	78.3	21.7	-	-	0.0	4.0	96.0	-	-	0.0	76.1	23.9	-	-
Total %	0.0	8.2	2.3	-	10.4	0.0	2.1	50.8	-	52.9	0.0	27.9	8.8	-	36.7
PHF	0.000	0.933	0.705	-	0.872	0.000	0.659	0.843	-	0.850	0.000	0.876	0.811	-	0.860
% Lights	0	111	31	-	142	0	29	680	-	709	0	368	120	-	488
% Buses	-	99.1	100.0	-	99.3	-	100.0	97.8	-	97.9	-	96.3	100.0	-	97.2
% Single-Unit Trucks	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	1	-	1	0	0	0	-	0
% Pedestrians	-	0.0	0.0	-	0.0	-	0.0	0.1	-	0.1	-	0.0	0.0	-	0.0
% Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-



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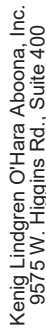
Rosemont, Illinois, United States 60018
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Count Name: Kautz Road
with+Target+South+Access TMC
Site Code:
Start Date: 07/12/2025
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Turning Movement Data

Start Time	Access Drive Eastbound					Westbound Approach					Kautz Road Northbound					Kautz Road Southbound					App. Total	Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total				
11:00 AM	0	6	0	9	2	15	0	10	2	39	0	51	0	14	88	0	0	102	0	49	217	
11:15 AM	0	9	0	8	0	17	0	0	0	2	0	2	0	9	59	1	0	69	0	57	145	
11:30 AM	0	10	0	11	0	21	0	1	0	2	0	3	0	7	63	1	0	71	0	78	173	
11:45 AM	0	15	0	7	0	22	0	1	0	1	0	2	0	8	82	1	0	91	0	74	189	
Hourly Total	0	40	0	35	2	75	0	12	2	44	0	58	0	38	292	3	0	333	0	258	724	
12:00 PM	0	7	0	8	0	15	0	1	1	1	0	3	0	8	82	0	0	90	0	99	207	
12:15 PM	0	11	0	5	0	16	0	3	0	0	0	3	0	10	86	0	0	96	0	85	200	
12:30 PM	0	13	0	13	0	26	0	1	0	1	0	2	0	12	86	1	0	99	1	86	213	
12:45 PM	0	12	0	10	0	22	0	1	0	1	0	2	0	9	85	0	0	94	0	89	207	
Hourly Total	0	43	0	36	0	79	0	6	1	3	0	10	0	39	339	1	0	379	1	359	827	
1:00 PM	0	7	1	3	0	11	0	0	0	0	0	0	0	9	67	0	0	76	0	85	172	
1:15 PM	0	9	0	8	0	17	0	1	0	1	0	2	0	7	79	0	0	86	0	80	185	
1:30 PM	0	13	0	11	0	24	0	0	0	0	0	0	0	12	89	0	0	101	0	87	212	
1:45 PM	0	8	0	11	0	19	0	0	0	0	0	0	0	9	76	0	0	85	0	70	174	
Hourly Total	0	37	1	33	0	71	0	1	0	1	0	2	0	37	311	0	0	348	0	322	743	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	3	39	4	0	46	0	66	114	
6:15 AM	0	1	0	0	1	1	0	0	0	1	0	1	0	3	43	1	0	47	0	82	131	
6:30 AM	0	0	0	1	0	1	0	0	1	0	0	1	0	2	62	1	0	65	0	103	170	
6:45 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	3	52	1	0	56	0	142	199	
Hourly Total	0	1	0	2	1	3	0	0	1	3	0	4	0	11	196	7	0	214	0	393	614	
7:00 AM	0	0	0	3	0	3	0	0	0	1	0	1	0	1	66	0	0	67	0	97	168	
7:15 AM	0	1	0	1	0	2	0	1	0	0	0	1	0	2	83	1	0	86	0	105	194	
7:30 AM	0	0	0	4	0	4	0	0	0	0	0	0	1	2	96	0	0	99	0	98	201	
7:45 AM	0	3	0	5	1	8	0	1	0	2	0	3	0	4	85	1	0	90	0	143	244	
Hourly Total	0	4	0	13	1	17	0	2	0	3	0	5	1	9	330	2	0	342	0	443	807	
8:00 AM	0	1	0	2	0	3	0	0	0	5	0	5	0	2	74	1	0	77	0	138	223	
8:15 AM	0	3	0	3	1	6	0	1	0	1	0	2	0	3	77	1	0	81	0	112	201	
8:30 AM	0	2	0	5	0	7	0	0	0	1	0	1	0	7	64	1	0	72	0	105	185	
8:45 AM	0	5	0	5	0	10	0	1	0	1	0	2	0	8	63	1	0	72	0	103	187	
Hourly Total	0	11	0	15	1	26	0	2	0	8	0	10	0	20	278	4	0	302	0	458	796	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	11	1	5	0	17	0	0	1	2	0	3	0	9	155	1	1	165	0	99	284	
4:15 PM	0	7	0	13	0	20	0	2	0	4	0	6	0	13	141	0	0	154	0	136	316	
4:30 PM	0	8	0	7	0	15	0	1	0	12	0	13	0	8	193	2	0	203	0	100	331	

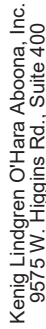
4:45 PM	0	15	0	11	0	26	0	7	2	9	0	18	0	10	128	1	0	139	0	2	89	2	0	93	276
Hourly Total	0	41	1	36	0	78	0	10	3	27	0	40	0	40	617	4	1	661	0	4	416	8	0	428	1207
5:00 PM	0	8	0	8	0	16	0	0	0	4	0	4	0	16	198	0	0	214	0	0	99	5	0	104	338
5:15 PM	0	11	0	15	0	26	0	3	0	6	0	9	0	10	136	0	0	146	0	0	110	3	0	113	294
5:30 PM	0	9	0	5	0	14	0	0	0	2	0	2	0	6	132	0	0	138	0	1	81	2	0	84	238
5:45 PM	0	8	0	5	0	13	0	0	0	0	0	0	0	12	83	0	0	95	0	0	82	3	0	85	193
Hourly Total	0	36	0	33	0	69	0	3	0	12	0	15	0	44	549	0	0	593	0	1	372	13	0	386	1063
6:00 PM	0	11	0	5	0	16	0	0	0	0	0	0	0	7	94	0	0	101	0	0	71	5	0	76	193
6:15 PM	0	9	0	9	0	18	0	0	0	0	0	0	0	7	75	0	0	82	0	0	52	6	0	58	158
6:30 PM	0	8	0	4	0	12	0	0	0	0	0	0	0	9	57	0	0	66	0	0	43	3	0	46	124
6:45 PM	0	8	0	7	0	15	0	0	0	0	0	0	0	5	50	0	0	55	0	0	48	4	0	52	122
Hourly Total	0	36	0	25	0	61	0	0	0	0	0	0	0	28	276	0	0	304	0	0	214	18	0	232	597
Grand Total	0	249	2	228	5	479	0	36	7	101	0	144	1	266	3188	21	1	3476	1	60	3126	92	0	3279	7378
Approach %	0.0	52.0	0.4	47.6	-	-	0.0	25.0	4.9	70.1	-	-	0.0	7.7	91.7	0.6	-	-	0.0	1.8	95.3	2.8	-	-	-
Total %	0.0	3.4	0.0	3.1	-	6.5	0.0	0.5	0.1	1.4	-	2.0	0.0	3.6	43.2	0.3	-	47.1	0.0	0.8	42.4	1.2	-	44.4	-
Lights	0	249	2	227	-	478	0	30	7	94	-	131	1	266	3084	17	-	3368	1	55	3003	92	-	3151	7128
% Lights	-	100.0	100.0	99.6	-	99.8	-	83.3	100.0	93.1	-	91.0	100.0	100.0	96.7	81.0	-	96.9	100.0	91.7	96.1	100.0	-	96.1	96.6
Buses	0	0	0	1	-	1	0	0	0	0	-	0	0	0	1	0	-	1	0	0	2	0	-	2	4
% Buses	-	0.0	0.0	0.4	-	0.2	-	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	2	0	2	-	4	0	0	66	1	-	67	0	0	80	0	-	80	151
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	5.6	0.0	2.0	-	2.8	0.0	0.0	2.1	4.8	-	1.9	0.0	0.0	2.6	0.0	-	2.4	2.0
Articulated Trucks	0	0	0	0	-	0	0	4	0	5	-	9	0	0	36	3	-	39	0	5	39	0	-	44	92
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	11.1	0.0	5.0	-	6.3	0.0	0.0	1.1	14.3	-	1.1	0.0	8.3	1.2	0.0	-	1.3	1.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	2	0	-	2	3
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	0.0
Pedestrians	-	-	-	-	5	-	-	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400
Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Turning Movement Peak Hour Data (12:45 PM)

[illegible]



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

Turning Movement Peak Hour Data (7:30 AM)

[illegible]



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9575 W. Higgins Rd., Suite 400

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

Count Name: Kautz Road
with+Target+South+Access TMC
Site Code:
Start Date: 07/12/2025
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Access Drive Eastbound							Westbound Approach							Kautz Road Northbound							Kautz Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	8	0	7	0	15		0	1	0	12	0	13		0	8	193	2	0	203		0	2	96	2	0	100	331
4:45 PM	0	15	0	11	0	26		0	7	2	9	0	18		0	10	128	1	0	139		0	2	89	2	0	93	276
5:00 PM	0	8	0	8	0	16		0	0	0	4	0	4		0	16	198	0	0	214		0	0	99	5	0	104	338
5:15 PM	0	11	0	15	0	26		0	3	0	6	0	9		0	10	136	0	0	146		0	0	110	3	0	113	294
Total	0	42	0	41	0	83		0	11	2	31	0	44		0	44	655	3	0	702		0	4	394	12	0	410	1239
Approach %	0.0	50.6	0.0	49.4	-	-		0.0	25.0	4.5	70.5	-	-		0.0	6.3	93.3	0.4	-	-		0.0	1.0	96.1	2.9	-	-	-
Total %	0.0	3.4	0.0	3.3	-	6.7		0.0	0.9	0.2	2.5	-	3.6		0.0	3.6	52.9	0.2	-	56.7		0.0	0.3	31.8	1.0	-	33.1	-
PHF	0.000	0.700	0.000	0.683	-	0.798		0.000	0.393	0.250	0.646	-	0.611		0.000	0.688	0.827	0.375	-	0.820		0.000	0.500	0.895	0.600	-	0.907	0.916
Lights	0	42	0	41	-	83		0	10	2	28	-	40		0	44	643	2	-	689		0	3	381	12	-	396	1208
% Lights	-	100.0	-	100.0	-	100.0		-	90.9	100.0	90.3	-	90.9		-	100.0	98.2	66.7	-	98.1		-	75.0	96.7	100.0	-	96.6	97.5
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
Single-Unit Trucks	0	0	0	0	-	0		0	0	0	0	-	0		0	0	6	0	-	6		0	0	5	0	-	5	11
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0		-	0.0	0.0	0.0	-	0.0		-	0.0	0.9	0.0	-	0.9		-	0.0	1.3	0.0	-	1.2	0.9
Articulated Trucks	0	0	0	0	-	0		0	1	0	3	-	4		0	0	5	1	-	6		0	1	8	0	-	9	19
% Articulated Trucks	-	0.0	-	0.0	-	0.0		-	9.1	0.0	9.7	-	9.1		-	0.0	0.8	33.3	-	0.9		-	25.0	2.0	0.0	-	2.2	1.5
Bicycles on Road	0	0	0	0	-	0		0	0	0	0	-	0		0	0	1	0	-	1		0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	-	0.0	-	0.0		-	0.0	0.0	0.0	-	0.0		-	0.0	0.2	0.0	-	0.1		-	0.0	0.0	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-		-	-	-	-	0	-	-		-	-	-	-	-		-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-	-



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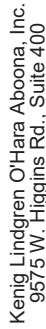
Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Count Name: Main Street with Pheasant Run
TMC
Site Code:
Start Date: 07/12/2025
Page No: 1

Turning Movement Data

Start Time	Main Street Eastbound						Main Street Westbound						Pheasant Run Northbound						Pheasant Run Southbound					
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total					
11:00 AM	0	4	240	4	0	248	3	5	198	1	0	207	0	10	0	3	0	13	481					
11:15 AM	3	9	216	5	0	233	3	5	250	6	0	264	0	6	0	6	0	12	519					
11:30 AM	2	4	228	8	0	242	0	8	227	4	0	239	0	10	0	3	0	13	504					
11:45 AM	1	11	219	6	0	237	1	6	262	7	0	276	0	3	1	4	0	8	532					
Hourly Total	6	28	903	23	0	960	7	24	937	18	0	986	0	29	1	16	0	46	2036					
12:00 PM	2	8	248	8	0	266	1	8	237	0	0	246	0	10	0	0	0	10	533					
12:15 PM	4	9	229	10	0	252	1	4	260	1	0	266	0	8	0	6	0	14	543					
12:30 PM	0	8	247	12	0	267	2	2	234	4	0	242	0	8	0	2	0	10	534					
12:45 PM	2	9	248	8	0	267	3	8	267	12	0	290	0	6	0	4	0	10	581					
Hourly Total	8	34	972	38	0	1052	7	22	998	17	0	1044	0	32	0	12	0	44	2191					
1:00 PM	1	7	252	5	0	265	1	3	231	5	0	240	0	6	1	7	0	14	531					
1:15 PM	1	7	259	8	0	275	1	2	265	4	0	272	0	8	0	4	0	12	571					
1:30 PM	4	9	285	8	0	306	2	3	231	4	0	240	0	6	1	3	0	10	565					
1:45 PM	1	7	246	3	0	257	1	7	259	4	0	271	0	7	0	4	0	11	552					
Hourly Total	7	30	1042	24	0	1103	5	15	986	17	0	1023	0	27	2	18	0	47	2219					
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
6:00 AM	1	2	234	4	0	241	1	4	156	1	0	162	0	1	0	0	0	1	405					
6:15 AM	2	5	236	6	0	249	0	3	171	1	0	175	0	2	0	1	0	3	431					
6:30 AM	3	4	288	5	0	300	0	6	254	1	0	261	0	2	0	0	0	3	575					
6:45 AM	3	6	279	6	0	294	3	2	259	2	0	266	0	3	0	2	0	5	572					
Hourly Total	9	17	1037	21	0	1084	4	15	840	5	0	864	0	8	0	4	0	12	1983					
7:00 AM	0	1	305	8	0	314	1	9	206	3	0	219	0	3	0	0	0	3	542					
7:15 AM	1	1	323	6	0	331	0	4	242	1	0	247	0	3	0	2	0	5	592					
7:30 AM	0	4	347	8	0	359	0	3	235	6	0	244	0	3	0	3	0	6	611					
7:45 AM	0	5	359	10	0	374	3	5	290	5	0	303	0	2	0	0	0	5	690					
Hourly Total	1	11	1334	32	0	1378	4	21	973	15	0	1013	0	11	0	8	0	19	2435					
8:00 AM	2	5	279	3	0	289	1	4	258	4	0	267	0	0	0	2	0	2	565					
8:15 AM	1	2	315	6	0	324	3	5	254	2	0	264	0	1	0	2	0	3	593					
8:30 AM	0	4	242	6	0	252	2	3	226	5	0	236	0	3	0	4	0	7	498					
8:45 AM	2	6	226	11	0	245	3	7	251	5	0	266	0	4	0	3	0	7	525					
Hourly Total	5	17	1062	26	0	1110	9	19	989	16	0	1033	0	8	0	11	0	19	2181					
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
4:00 PM	0	7	330	4	0	341	1	5	300	3	0	309	0	20	0	5	0	25	690					
4:15 PM	0	11	341	6	1	358	1	3	355	8	0	367	0	5	0	0	0	5	743					
4:30 PM	0	8	377	4	0	389	0	5	340	0	0	345	0	13	1	6	0	20	769					

4:45 PM	4	8	334	4	0	350	2	2	394	14	0	412	0	8	1	4	0	13	0	3	1	11	0	15	790
Hourly Total	4	34	1382	18	1	1438	4	15	1389	25	0	1433	0	46	2	15	0	63	0	31	2	25	0	58	2992
5:00 PM	3	10	398	7	0	418	1	4	386	4	0	395	0	12	0	2	0	14	0	7	0	13	0	20	847
5:15 PM	1	7	372	3	0	383	3	2	438	7	0	450	0	6	0	2	0	8	0	7	1	6	0	14	855
5:30 PM	0	6	311	6	0	323	0	5	415	5	0	425	0	15	0	3	0	18	0	4	0	10	0	14	780
5:45 PM	1	10	266	4	0	281	0	1	379	7	0	387	0	6	0	2	0	8	0	3	0	11	0	14	690
Hourly Total	5	33	1347	20	0	1405	4	12	1618	23	0	1657	0	39	0	9	0	48	0	21	1	40	0	62	3172
6:00 PM	2	7	264	3	0	276	1	2	375	5	0	383	0	10	0	1	0	11	0	8	0	8	0	16	686
6:15 PM	0	5	227	7	0	239	4	2	314	6	0	326	0	7	2	3	0	12	0	7	0	7	1	14	591
6:30 PM	1	15	205	3	0	224	2	3	302	2	0	309	0	6	0	4	0	10	0	7	0	10	0	17	560
6:45 PM	2	13	178	7	0	200	1	4	239	1	0	245	0	3	0	4	0	7	0	3	1	15	0	19	471
Hourly Total	5	40	874	20	0	939	8	11	1230	14	0	1263	0	26	2	12	0	40	0	25	1	40	1	66	2308
Grand Total	50	244	9953	222	1	10469	52	154	9960	150	0	10316	0	226	7	105	0	338	0	151	6	237	2	394	21517
Approach %	0.5	2.3	95.1	2.1	-	-	0.5	1.5	96.5	1.5	-	-	0.0	66.9	2.1	31.1	-	-	0.0	38.3	1.5	60.2	-	-	-
Total %	0.2	1.1	46.3	1.0	-	48.7	0.2	0.7	46.3	0.7	-	47.9	0.0	1.1	0.0	0.5	-	1.6	0.0	0.7	0.0	1.1	-	1.8	-
Lights	48	242	9514	219	-	10023	51	142	9524	149	-	9866	0	219	7	96	-	322	0	149	6	236	-	391	20602
% Lights	96.0	99.2	95.6	98.6	-	95.7	98.1	92.2	95.6	99.3	-	95.6	-	96.9	100.0	91.4	-	95.3	-	98.7	100.0	99.6	-	99.2	95.7
Buses	0	0	7	0	-	7	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	12
% Buses	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.1	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	1	2	211	2	-	216	0	10	222	0	-	232	0	3	0	2	-	5	0	1	0	1	-	2	455
% Single-Unit Trucks	2.0	0.8	2.1	0.9	-	2.1	0.0	6.5	2.2	0.0	-	2.2	-	1.3	0.0	1.9	-	1.5	-	0.7	0.0	0.4	-	0.5	2.1
Articulated Trucks	1	0	221	1	-	223	1	2	209	1	-	213	0	4	0	7	-	11	0	1	0	0	-	1	448
% Articulated Trucks	2.0	0.0	2.2	0.5	-	2.1	1.9	1.3	2.1	0.7	-	2.1	-	1.8	0.0	6.7	-	3.3	-	0.7	0.0	0.0	-	0.3	2.1
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	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



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(847)518-9990 sainkeshavarzi@kloainc.com

Site Code:
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Page No: 3

Turning Movement Peak Hour Data (12:45 PM)

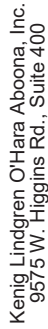
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Site Code:
Start Date: 07/12/2025
Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

[illegible]

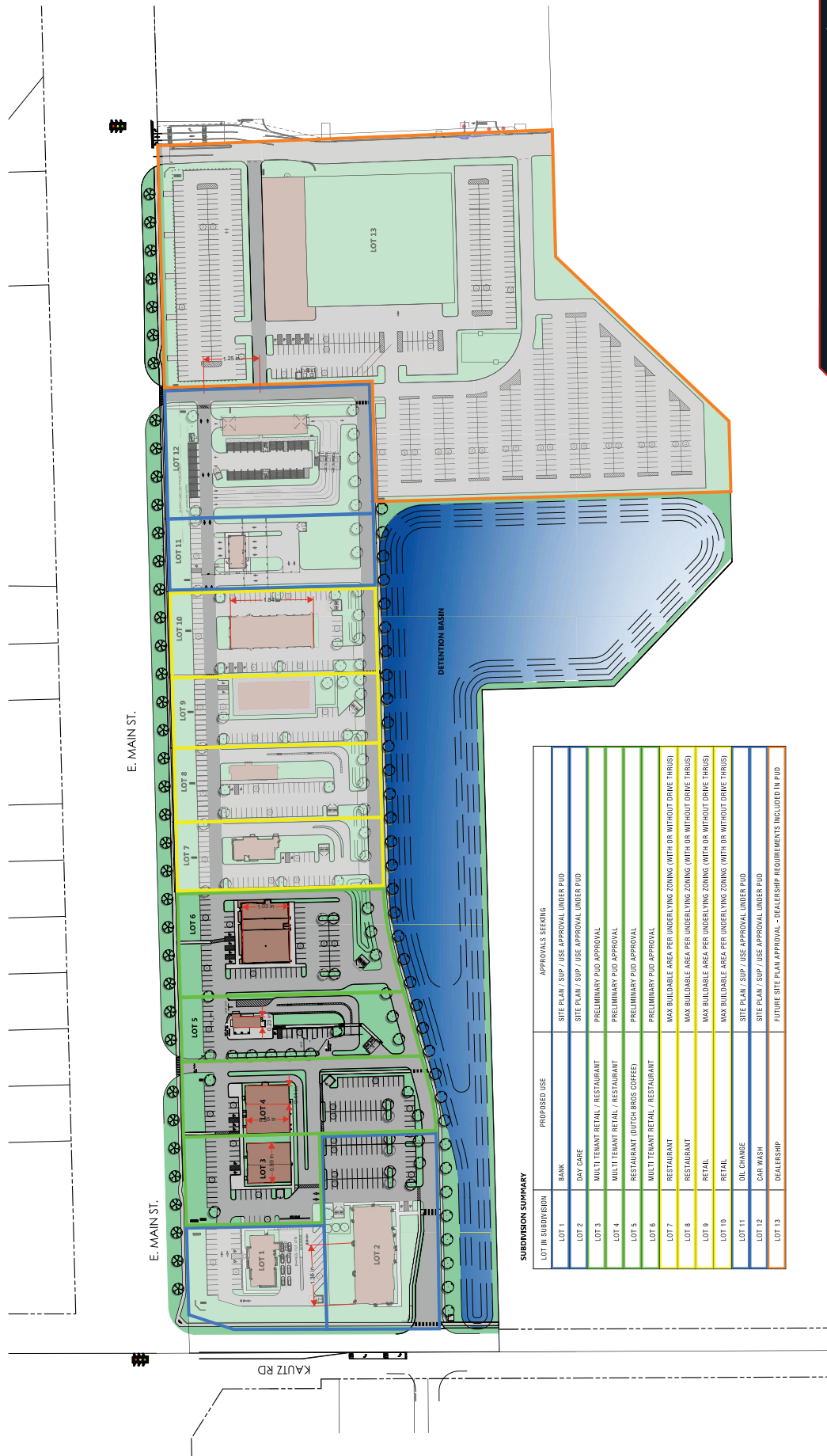


Rosemont, Illinois, United States 60018
(847)518-9990 sainkeshavarzi@kloainc.com

Turning Movement Peak Hour Data (4:30 PM)

[illegible]

Site Plan



SUBDIVISION SUMMARY

LOT IN SUBDIVISION	PROPOSED USE	APPROVALS SEEKING
LOT 1	BANK	SITE PLAN / SUP / USE APPROVAL UNDER PUD
LOT 2	DAY CARE	SITE PLAN / SUP / USE APPROVAL UNDER PUD
LOT 3	MULTI TENANT RETAIL / RESTAURANT	PRELIMINARY PUD APPROVAL
LOT 4	MULTI TENANT RETAIL / RESTAURANT	PRELIMINARY PUD APPROVAL
LOT 5	RESTAURANT (DUTCH BROS COFFEE)	PRELIMINARY PUD APPROVAL
LOT 6	MULTI TENANT RETAIL / RESTAURANT	PRELIMINARY PUD APPROVAL
LOT 7	RESTAURANT	MAX BUILDABLE AREA PER UNDERLYING ZONING (WITH OR WITHOUT DRIVE THRU)
LOT 8	RESTAURANT	MAX BUILDABLE AREA PER UNDERLYING ZONING (WITH OR WITHOUT DRIVE THRU)
LOT 9	RETAIL	MAX BUILDABLE AREA PER UNDERLYING ZONING (WITH OR WITHOUT DRIVE THRU)
LOT 10	RETAIL	MAX BUILDABLE AREA PER UNDERLYING ZONING (WITH OR WITHOUT DRIVE THRU)
LOT 11	OIL CHANGE	SITE PLAN / SUP / USE APPROVAL UNDER PUD
LOT 12	CAR WASH	SITE PLAN / SUP / USE APPROVAL UNDER PUD
LOT 13	DEALERSHIP	FUTURE SITE PLAN APPROVAL - DEALERSHIP REQUIREMENTS INCLUDED IN PUD

**Spaceco**
Civil Engineering & Surveying

Rosemont Office
9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
Phone: (847) 656-4650



SITE PLAN EXHIBIT - V51
THE SHOPS AT PHEASANT RUN
4051 E. MAIN ST. - ST. CHARLES, IL - 02/09/2026



Spaceco REPORT TECHNICAL COLOR SITE EXHIBIT FOR ILL. SITE PLAN, V51 EXHIBIT UNDER USE HAZARDOUS

ITE Trip Generation Summary Sheets

Day Care Center (565)

Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 7

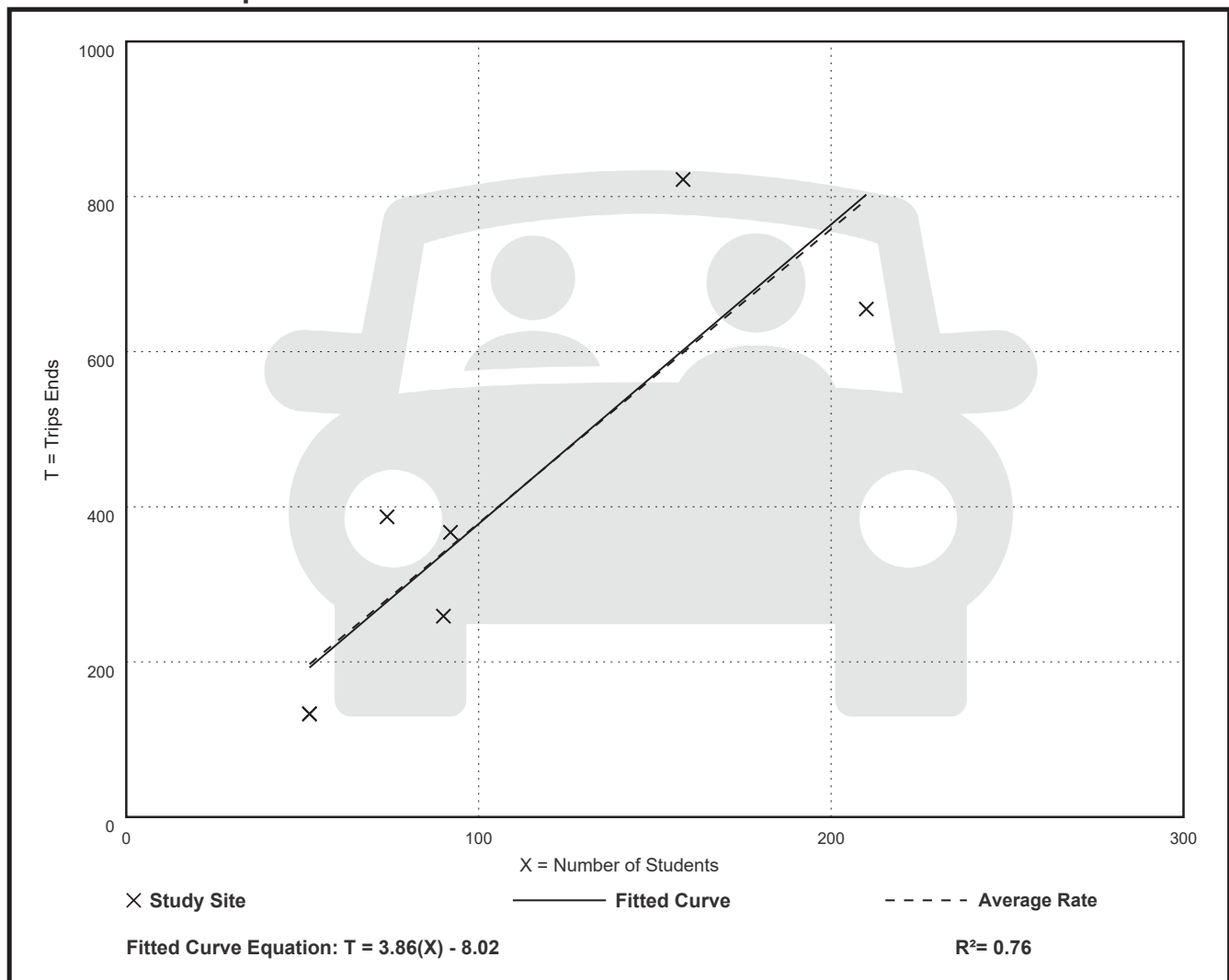
Avg. Num. of Students: 104

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
3.79	2.56 - 5.23	1.13

Data Plot and Equation



Day Care Center (565)

Vehicle Trip Ends vs: Students

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: 63

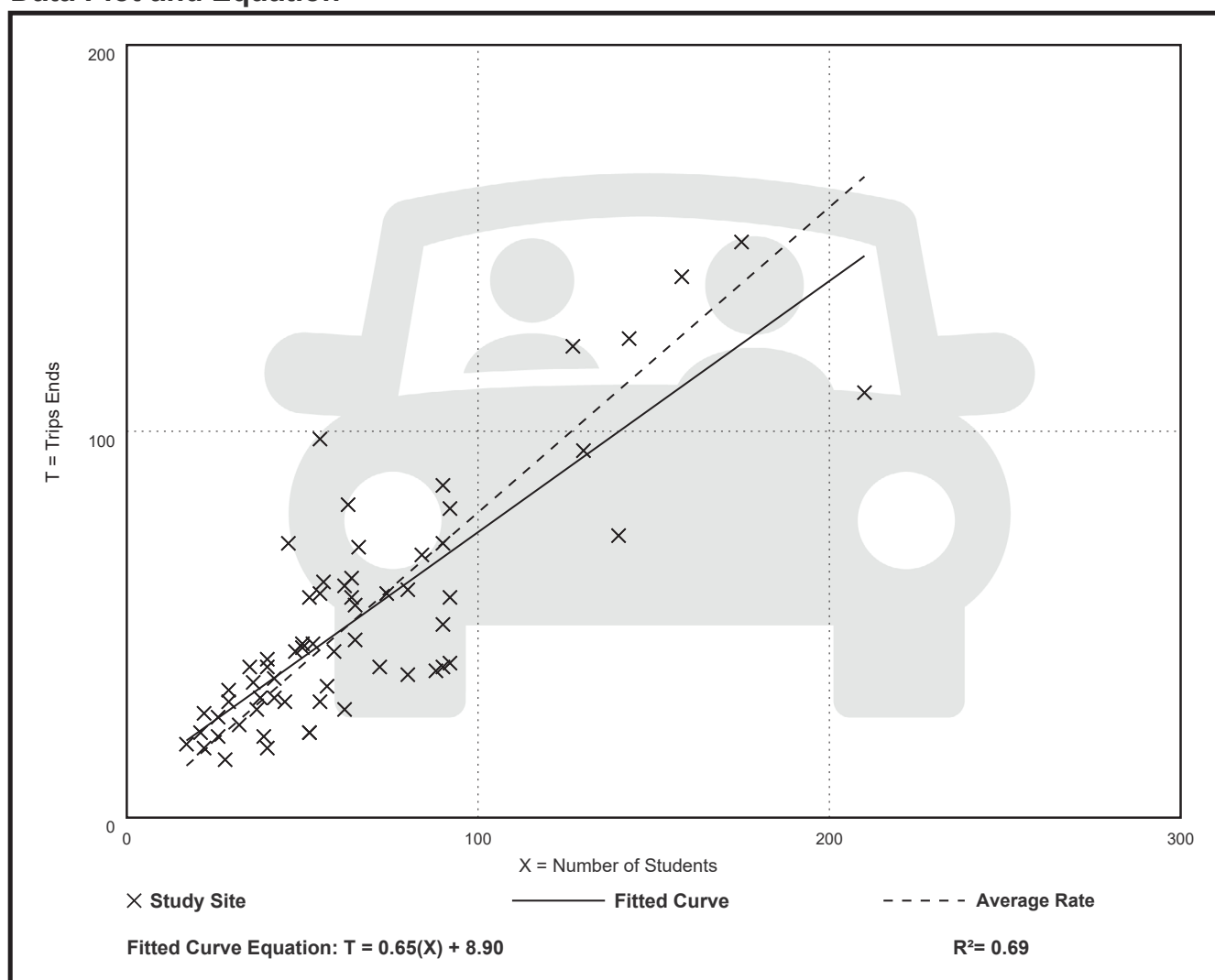
Avg. Num. of Students: 66

Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.79	0.42 - 1.78	0.26

Data Plot and Equation



Day Care Center (565)

Vehicle Trip Ends vs: Students

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: 63

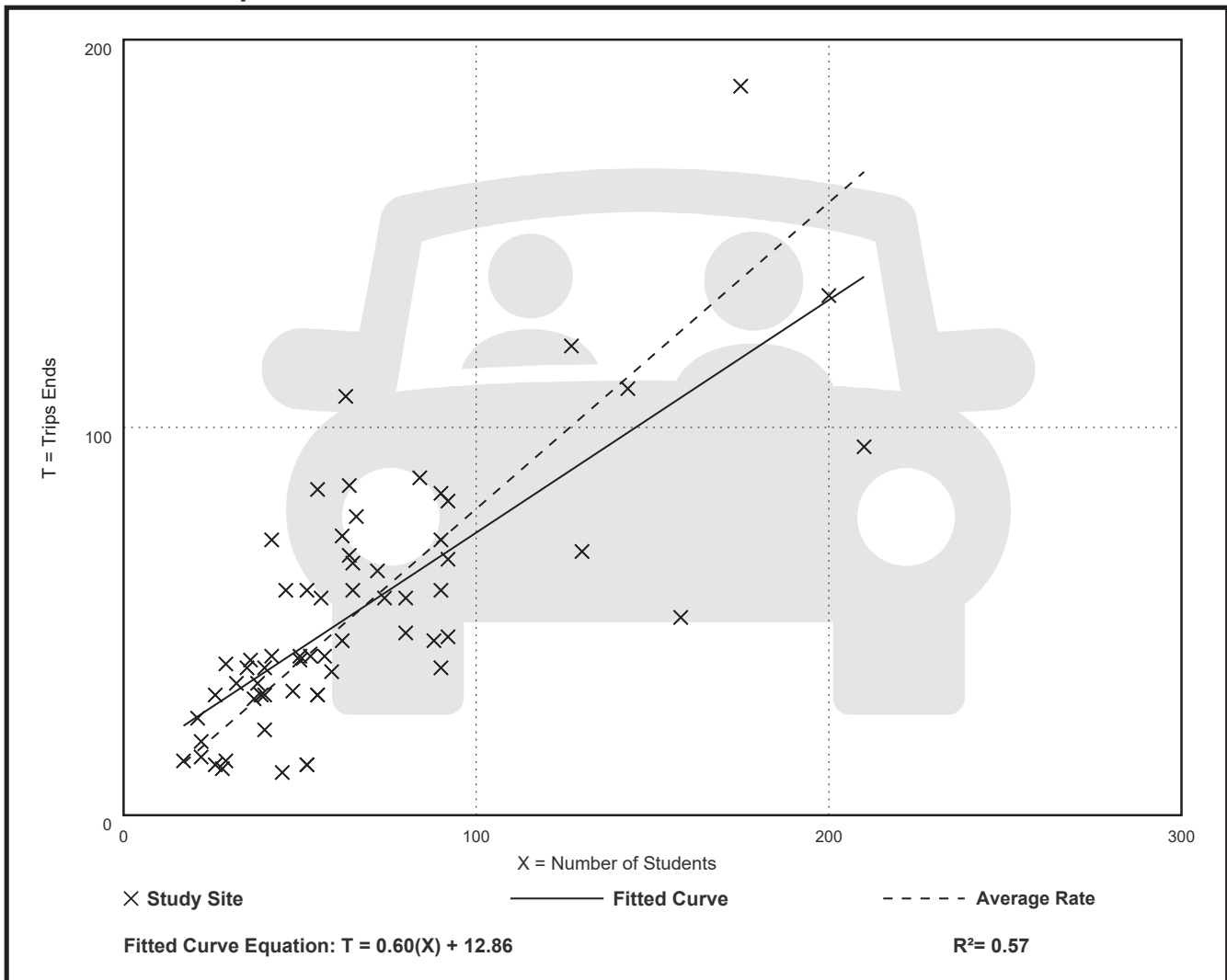
Avg. Num. of Students: 67

Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
0.79	0.24 - 1.71	0.31

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 4

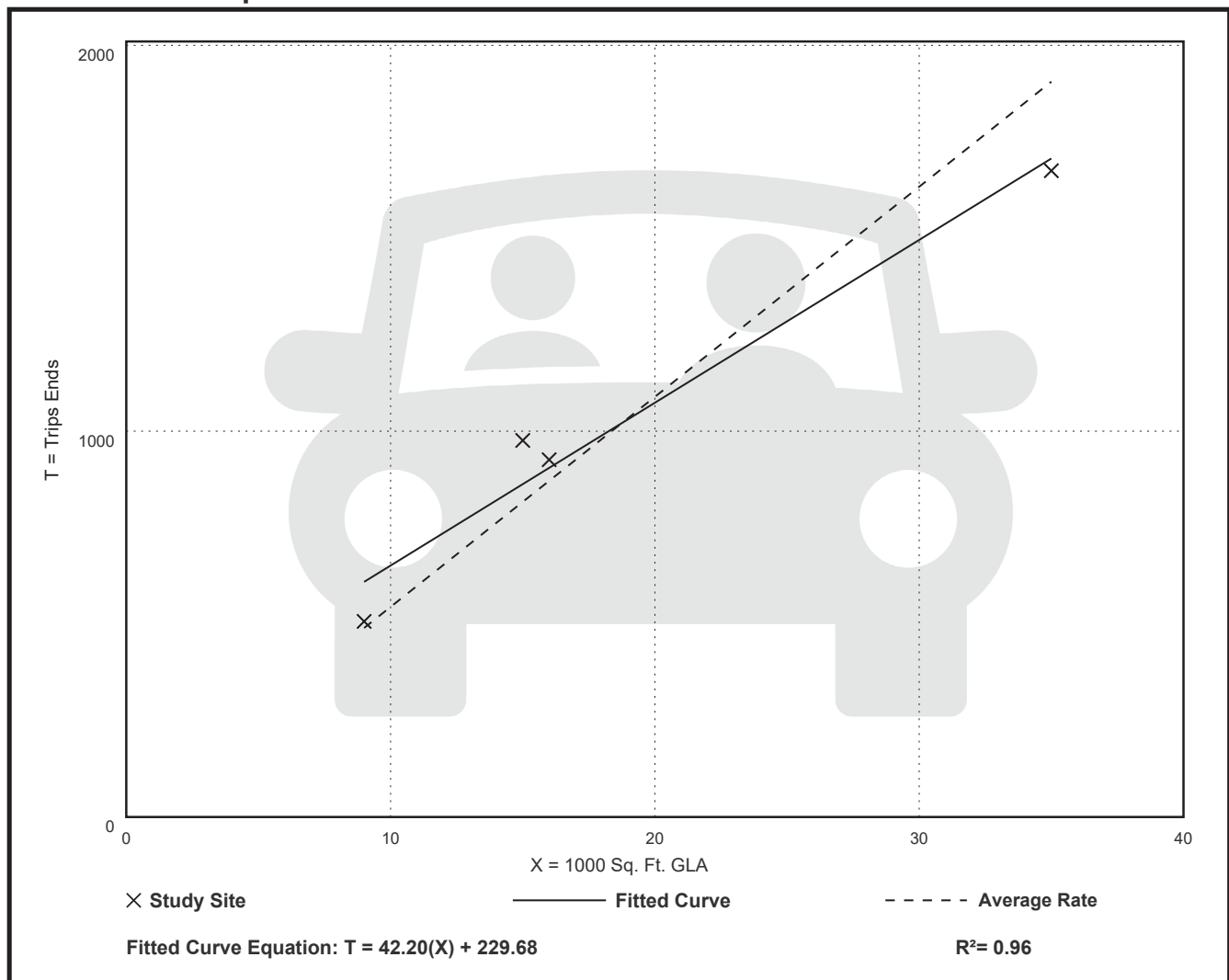
Avg. 1000 Sq. Ft. GLA: 19

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 6

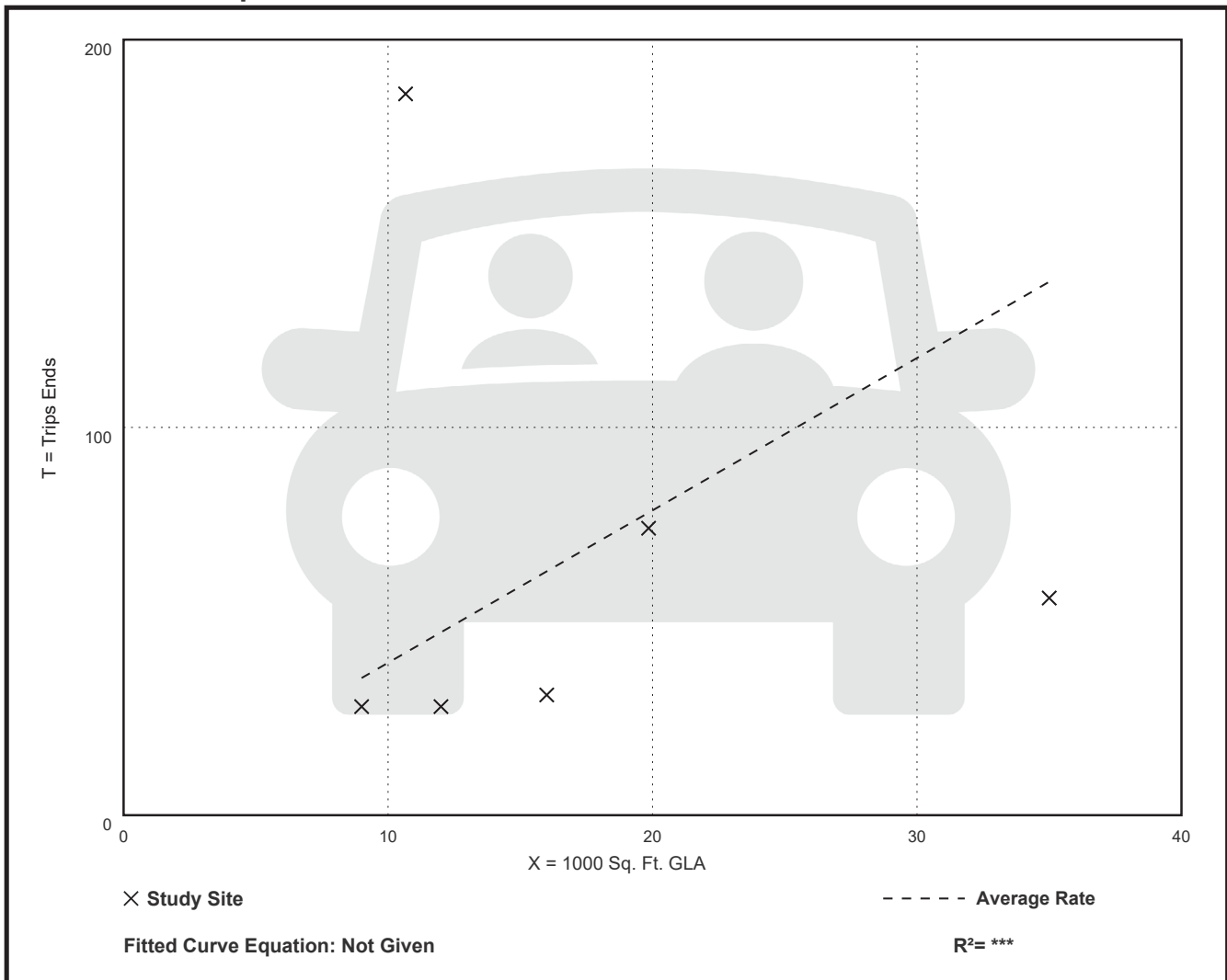
Avg. 1000 Sq. Ft. GLA: 17

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.93	1.60 - 17.44	5.12

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 24

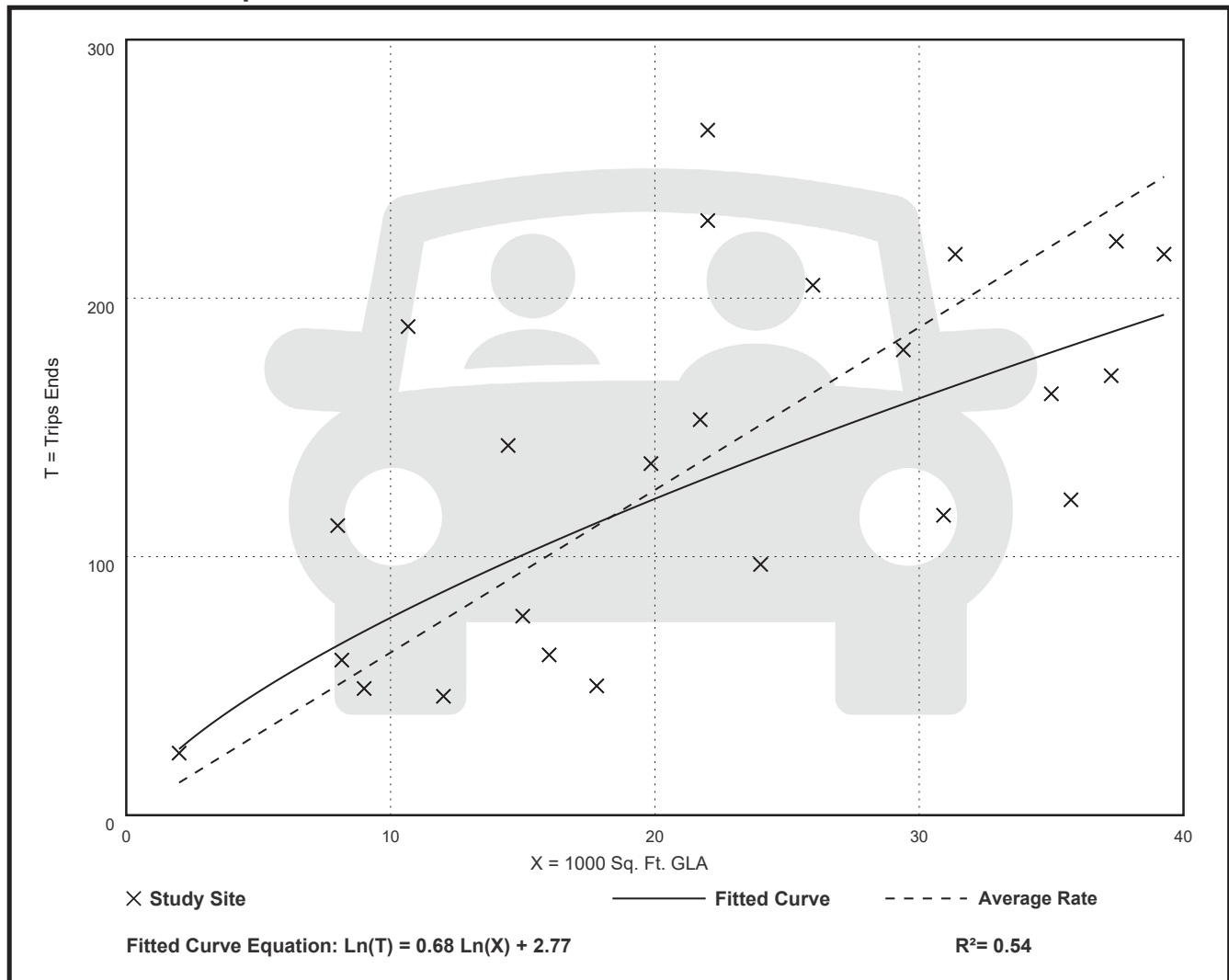
Avg. 1000 Sq. Ft. GLA: 22

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.29	2.81 - 17.72	3.02

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 14

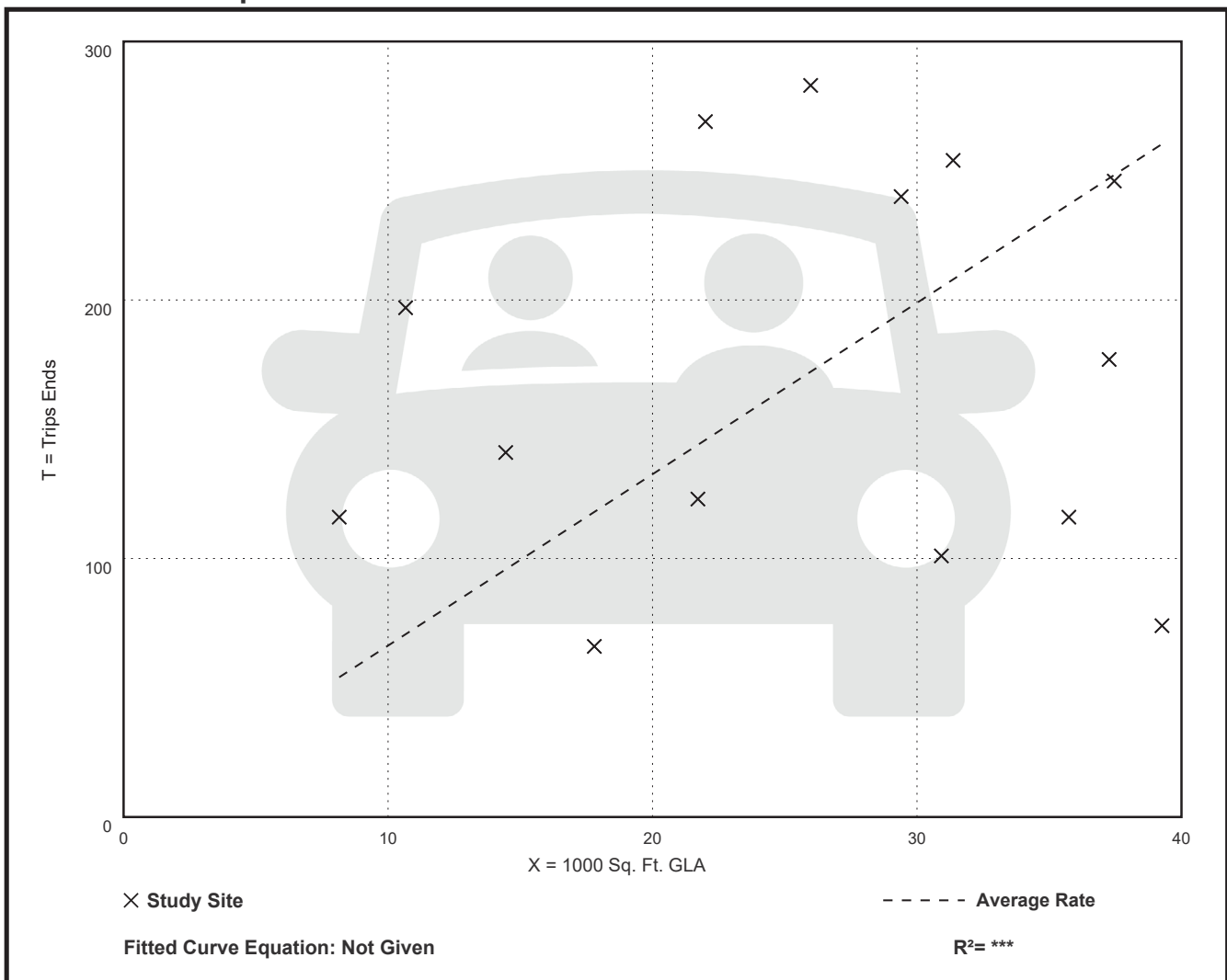
Avg. 1000 Sq. Ft. GLA: 26

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.63	1.88 - 18.48	3.99

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 21

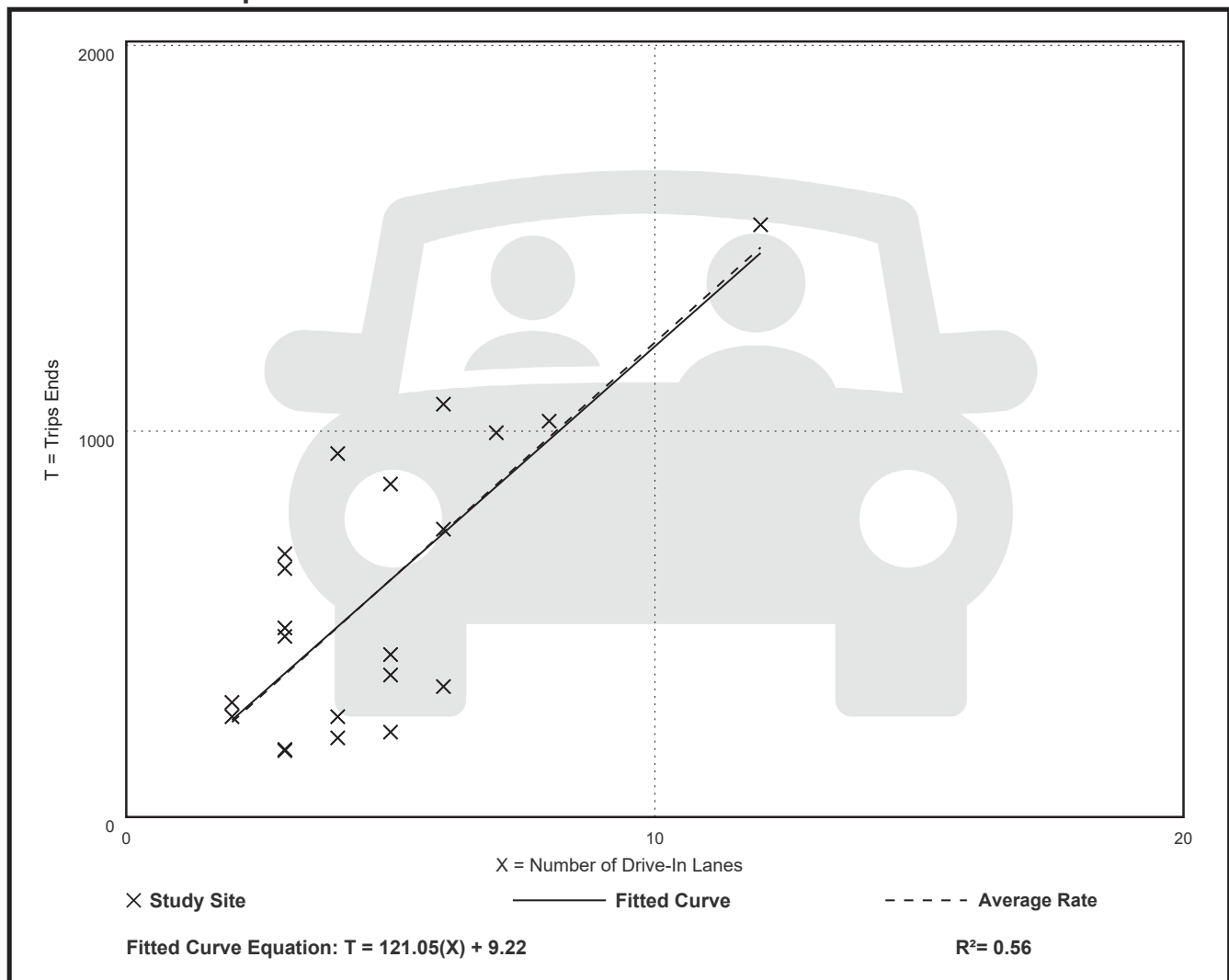
Avg. Num. of Drive-In Lanes: 5

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
123.01	44.00 - 235.50	55.36

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes

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: 38

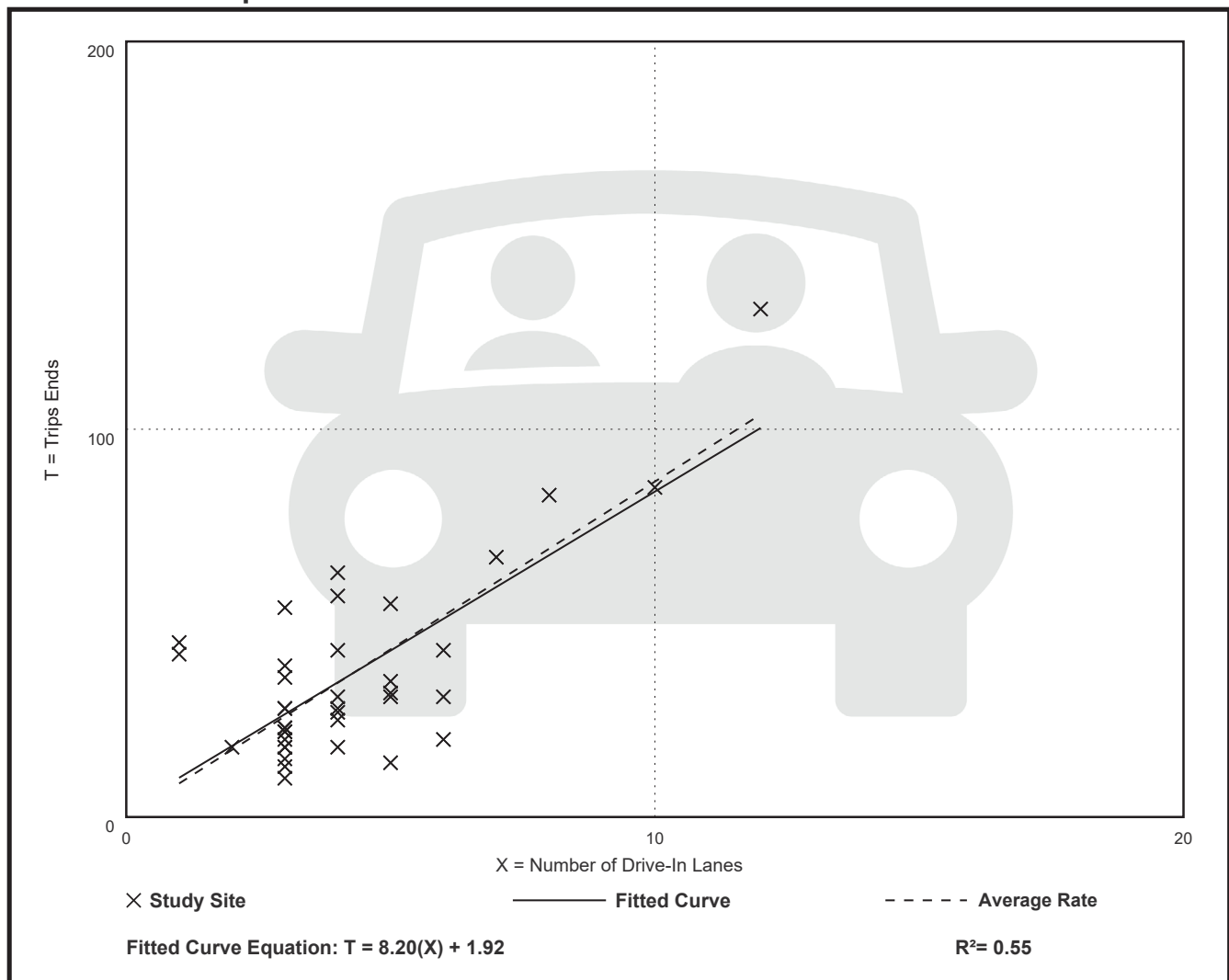
Avg. Num. of Drive-In Lanes: 4

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
8.65	2.80 - 45.00	5.13

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes

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: 111

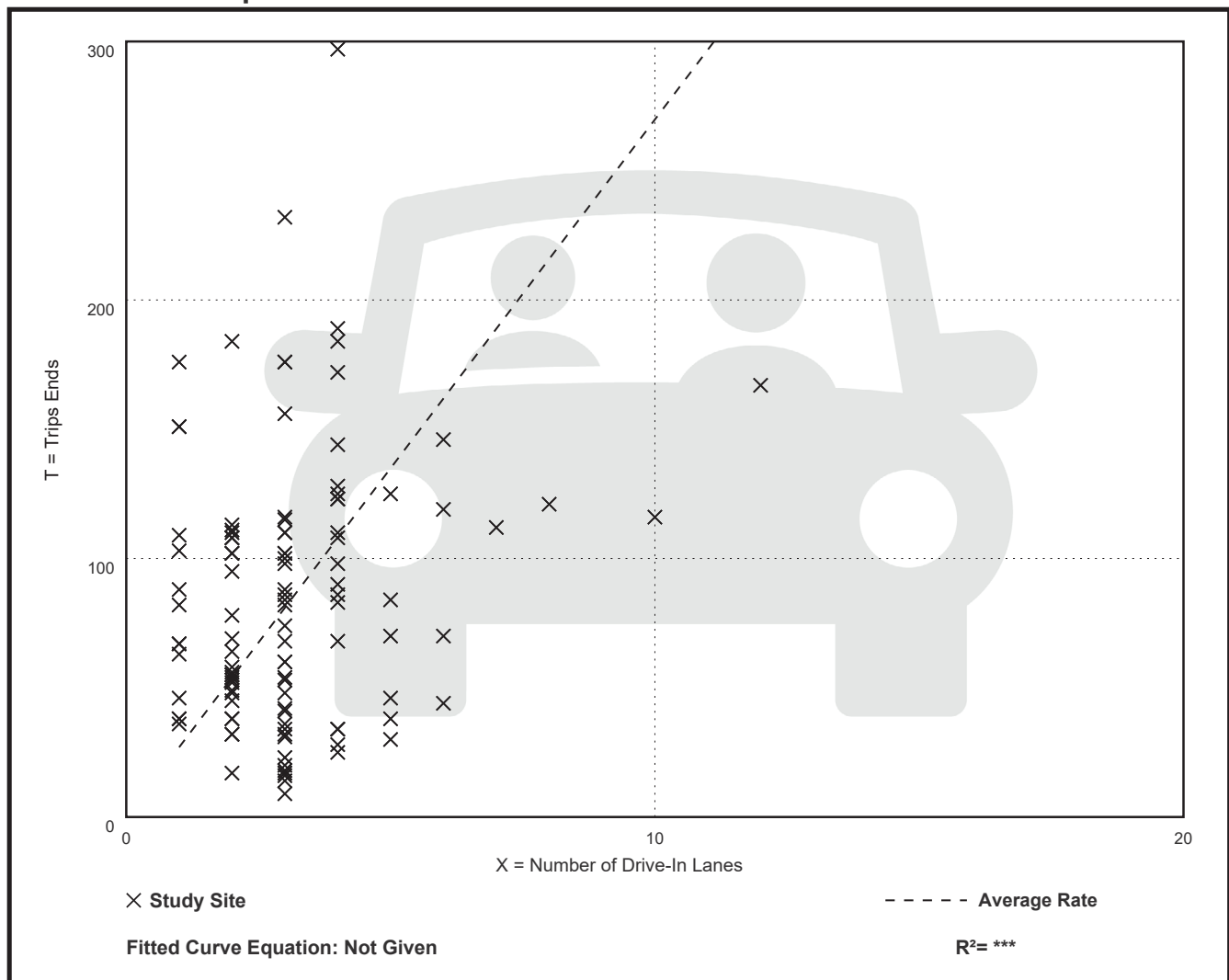
Avg. Num. of Drive-In Lanes: 3

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
26.98	3.00 - 176.00	22.18

Data Plot and Equation



Drive-in Bank (912)

Vehicle Trip Ends vs: Drive-In Lanes

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 32

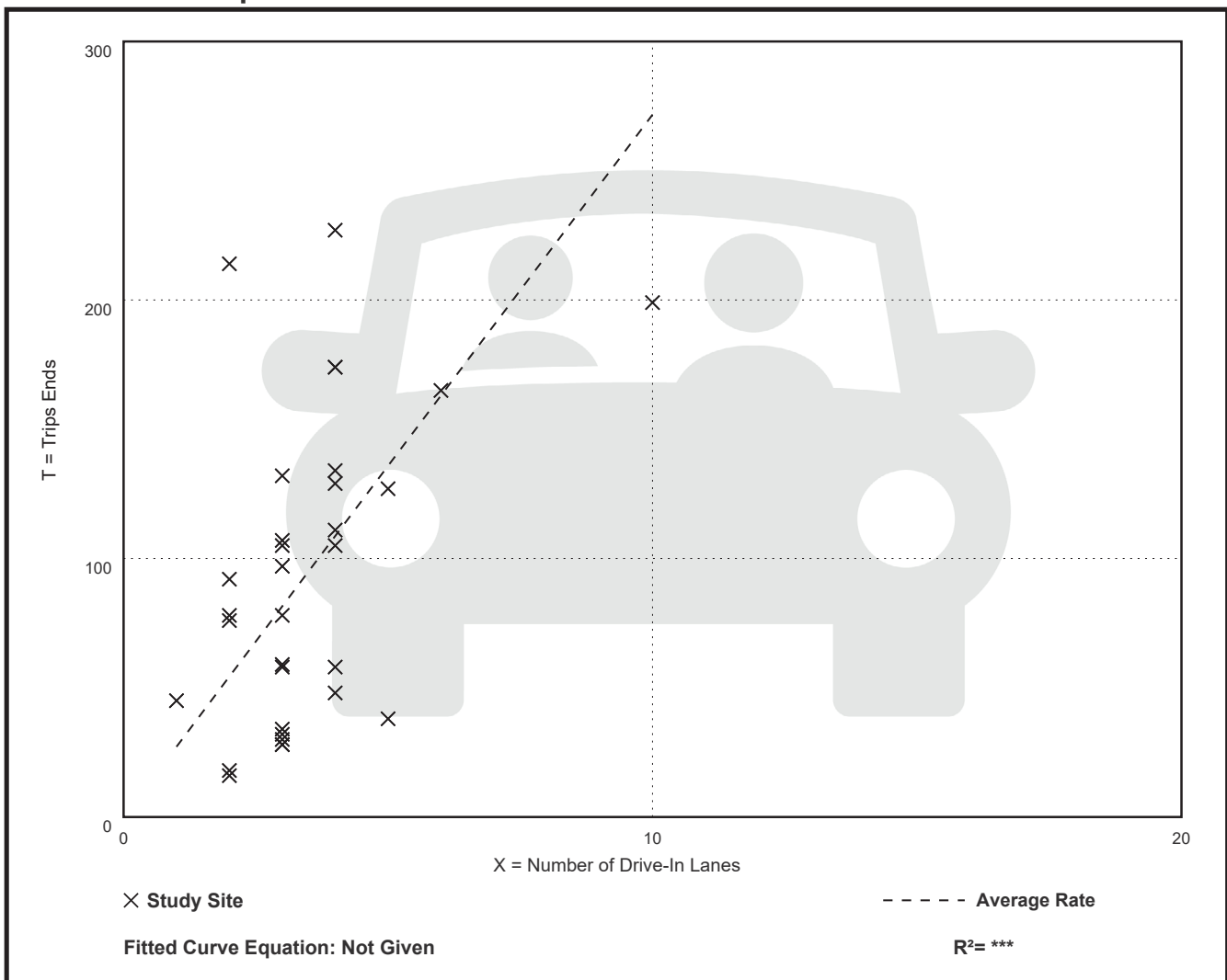
Avg. Num. of Drive-In Lanes: 3

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Drive-In Lane

Average Rate	Range of Rates	Standard Deviation
27.17	7.60 - 107.00	17.16

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 68

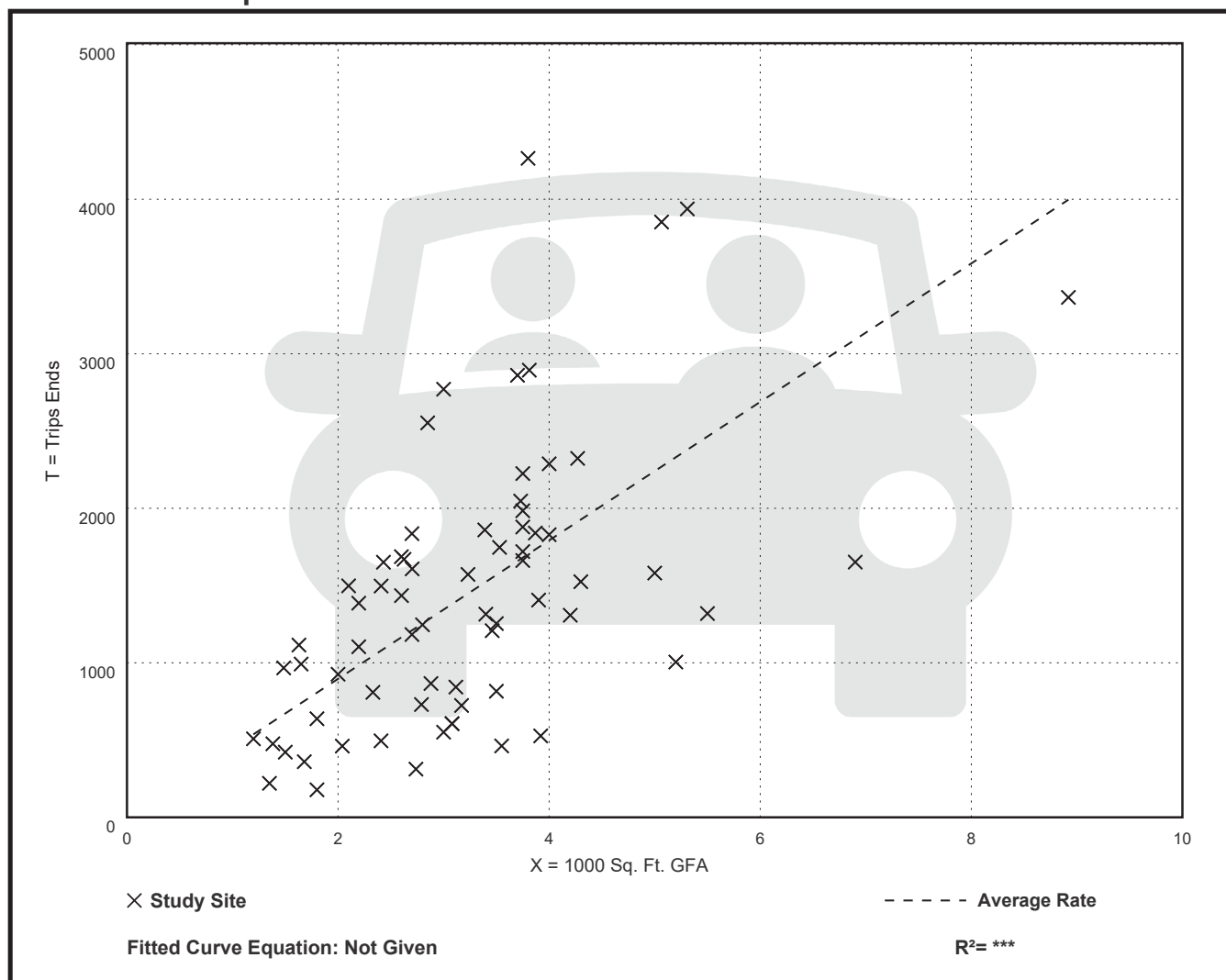
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
448.12	98.89 - 1122.37	217.66

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 55

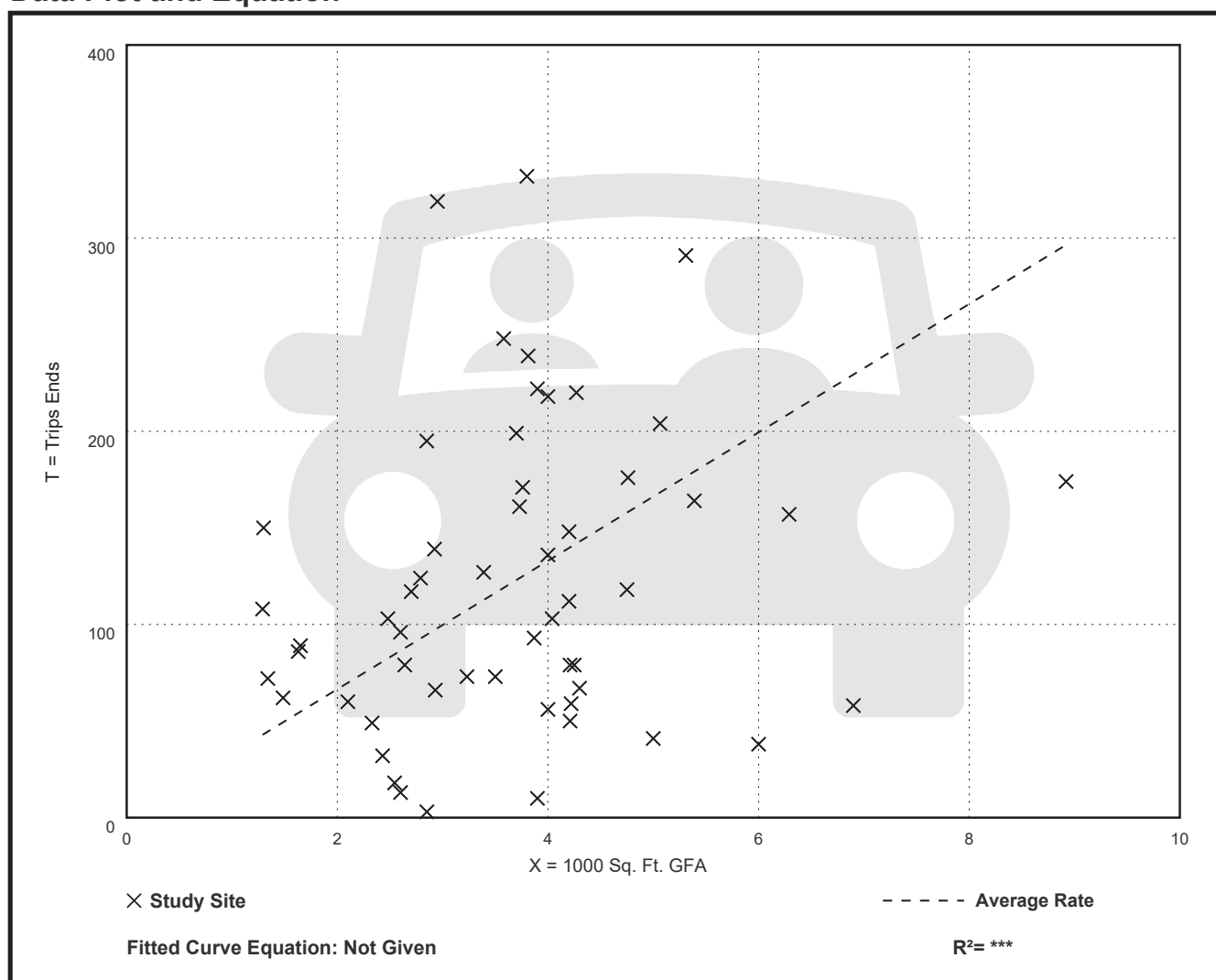
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.24	1.05 - 115.38	22.70

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 139

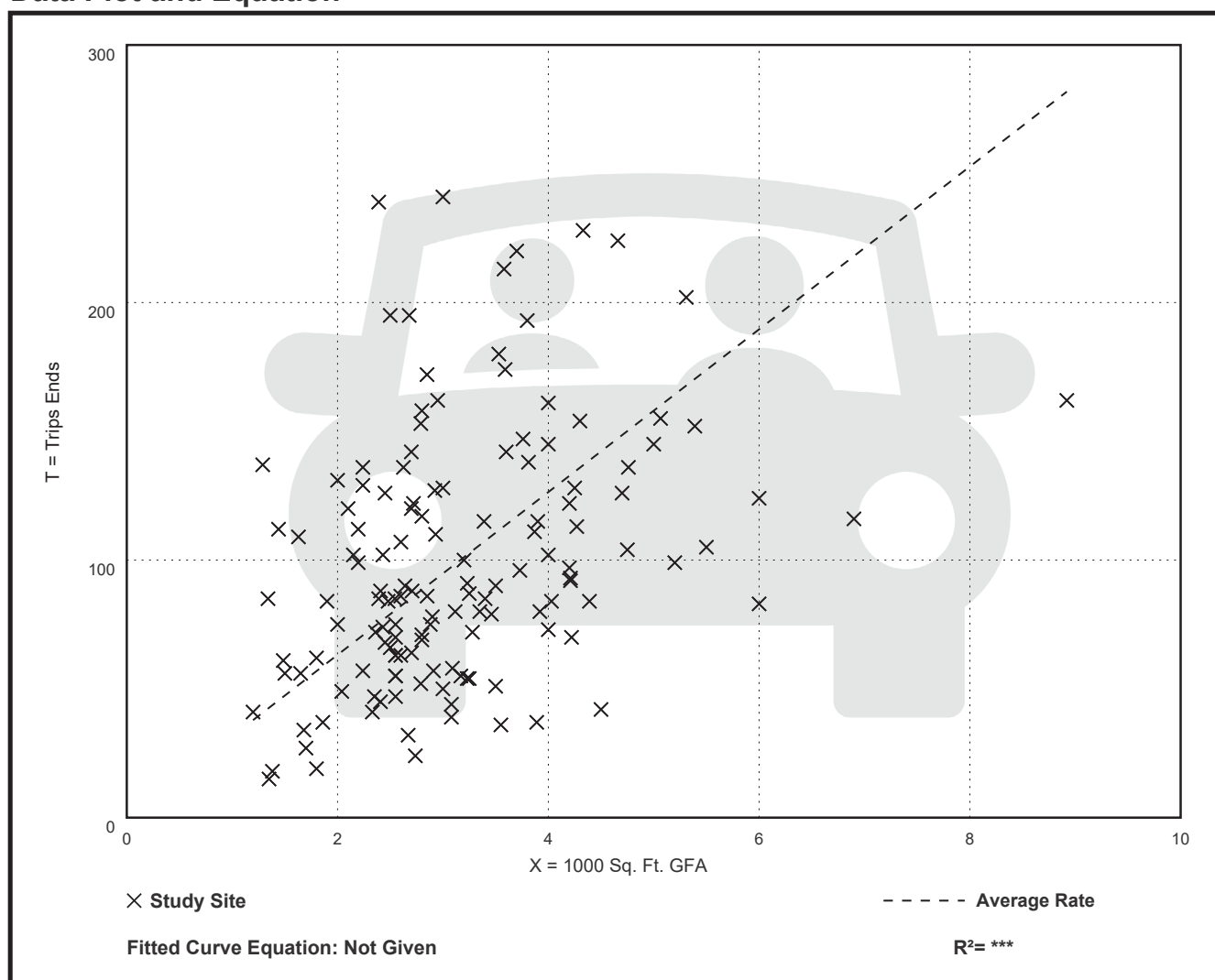
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
31.60	8.77 - 106.20	16.21

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 36

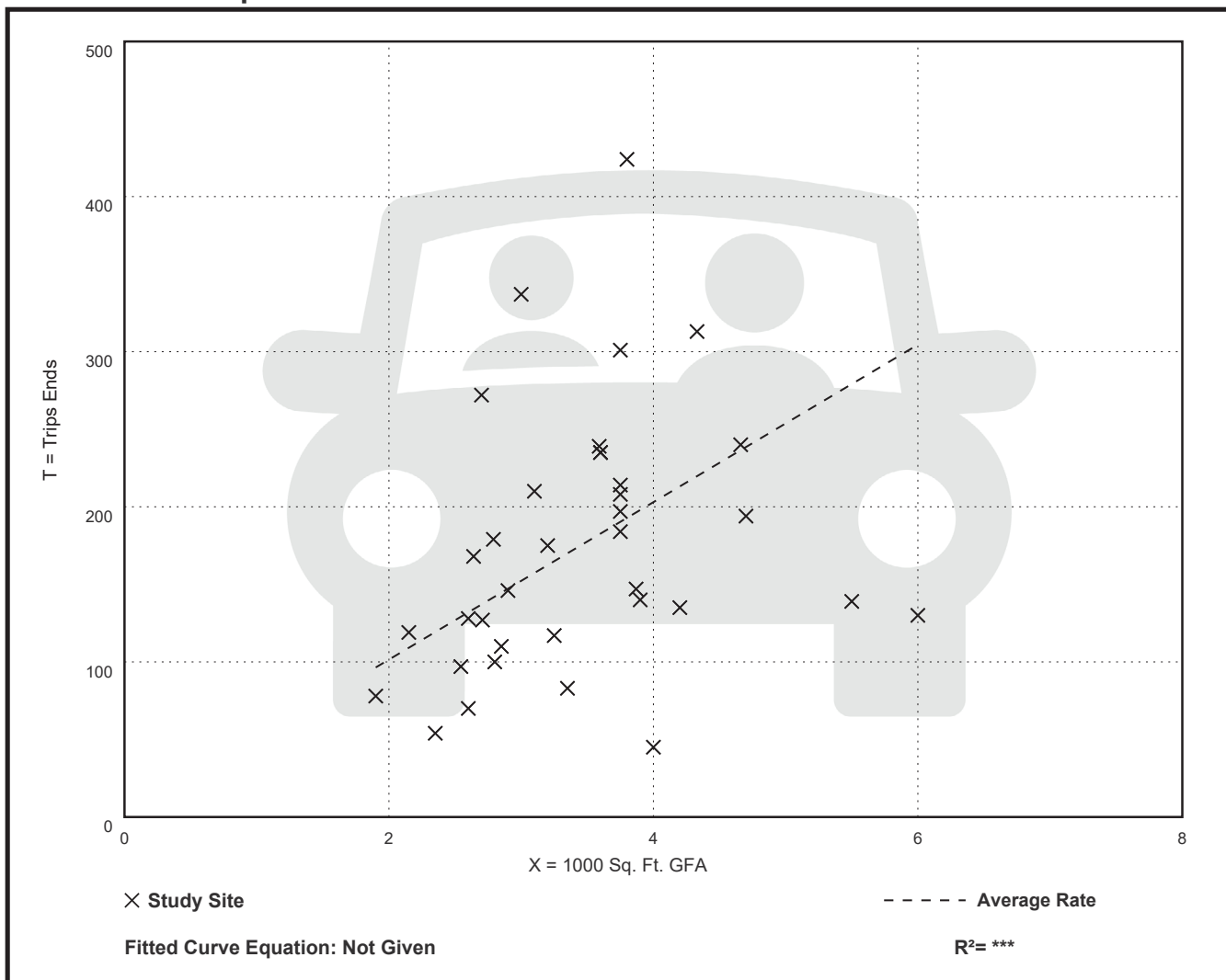
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
50.75	11.25 - 112.33	23.80

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 8

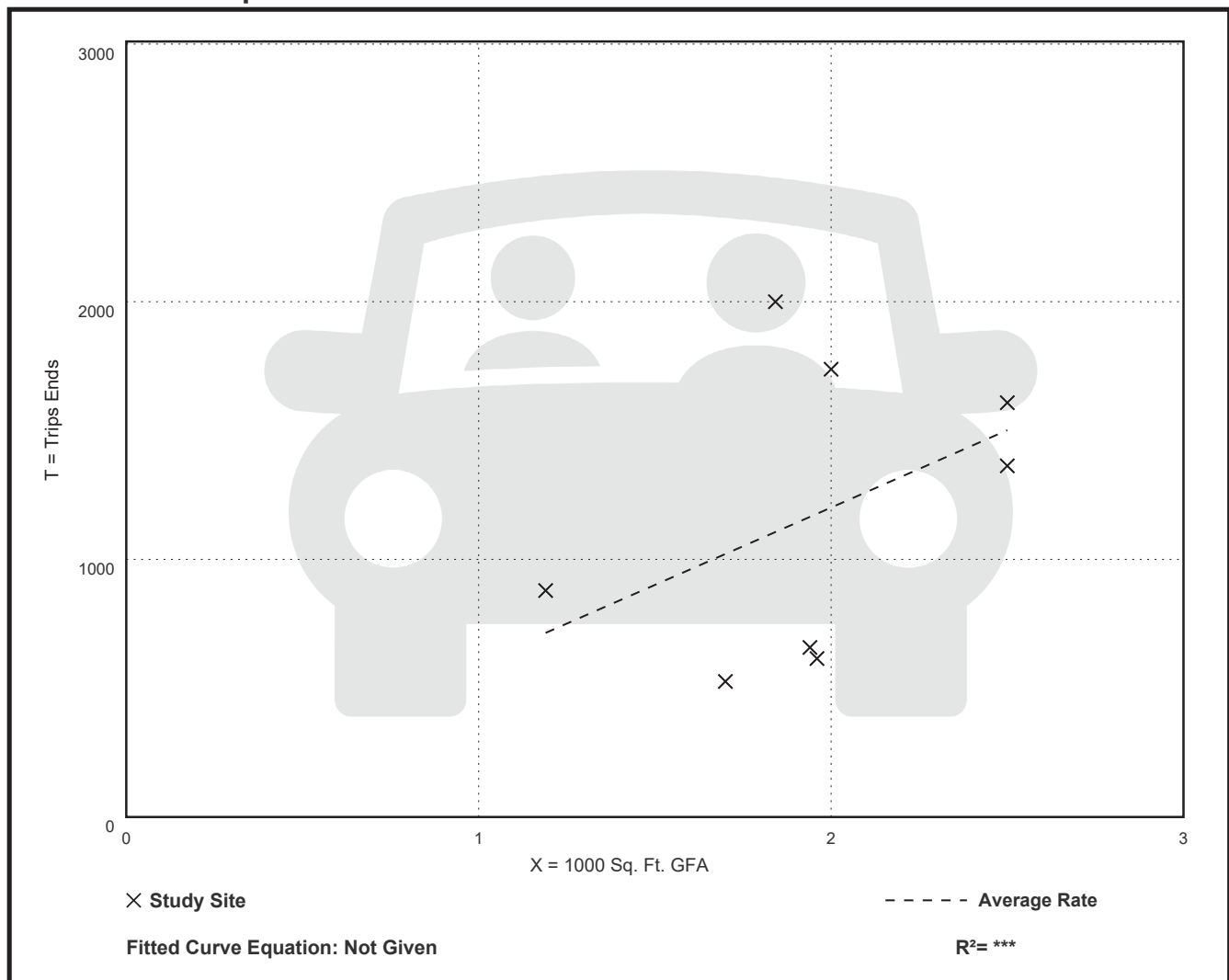
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
600.50	309.41 - 1085.78	277.14

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 84

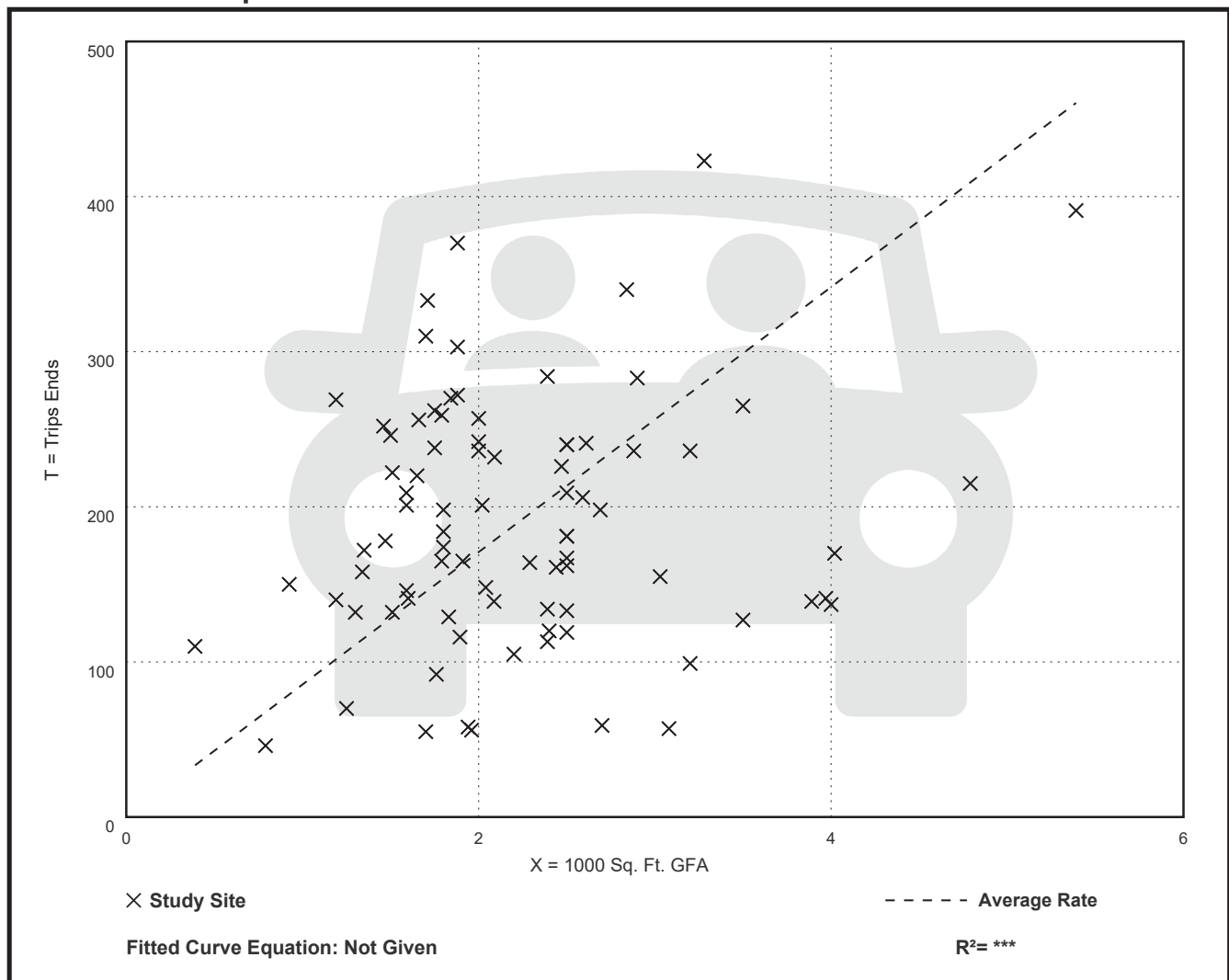
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
85.41	18.51 - 282.05	44.24

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 41

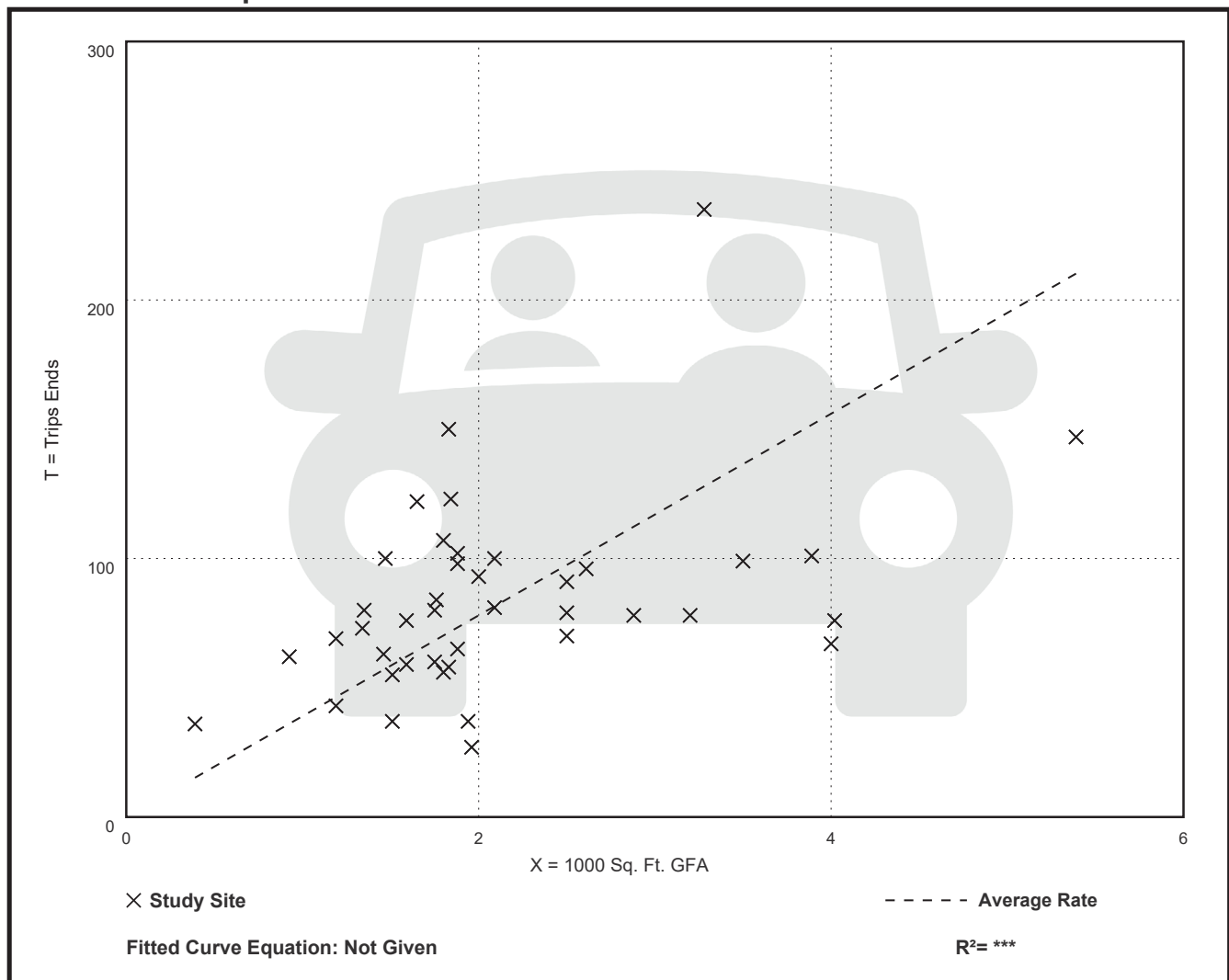
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
39.00	13.78 - 92.31	17.60

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 13

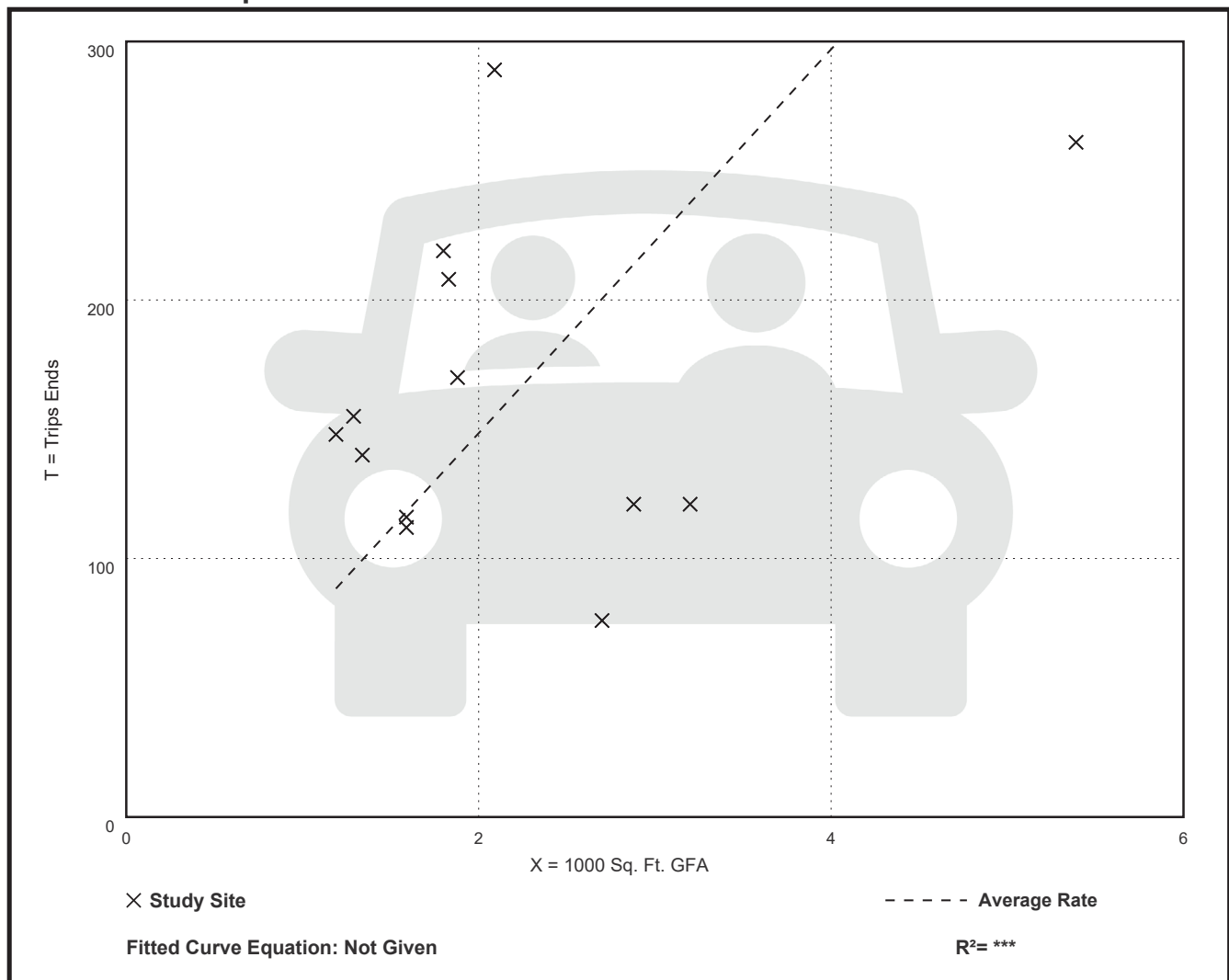
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
74.24	28.15 - 138.28	38.56

Data Plot and Equation



Quick Lubrication Vehicle Shop (941)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 1

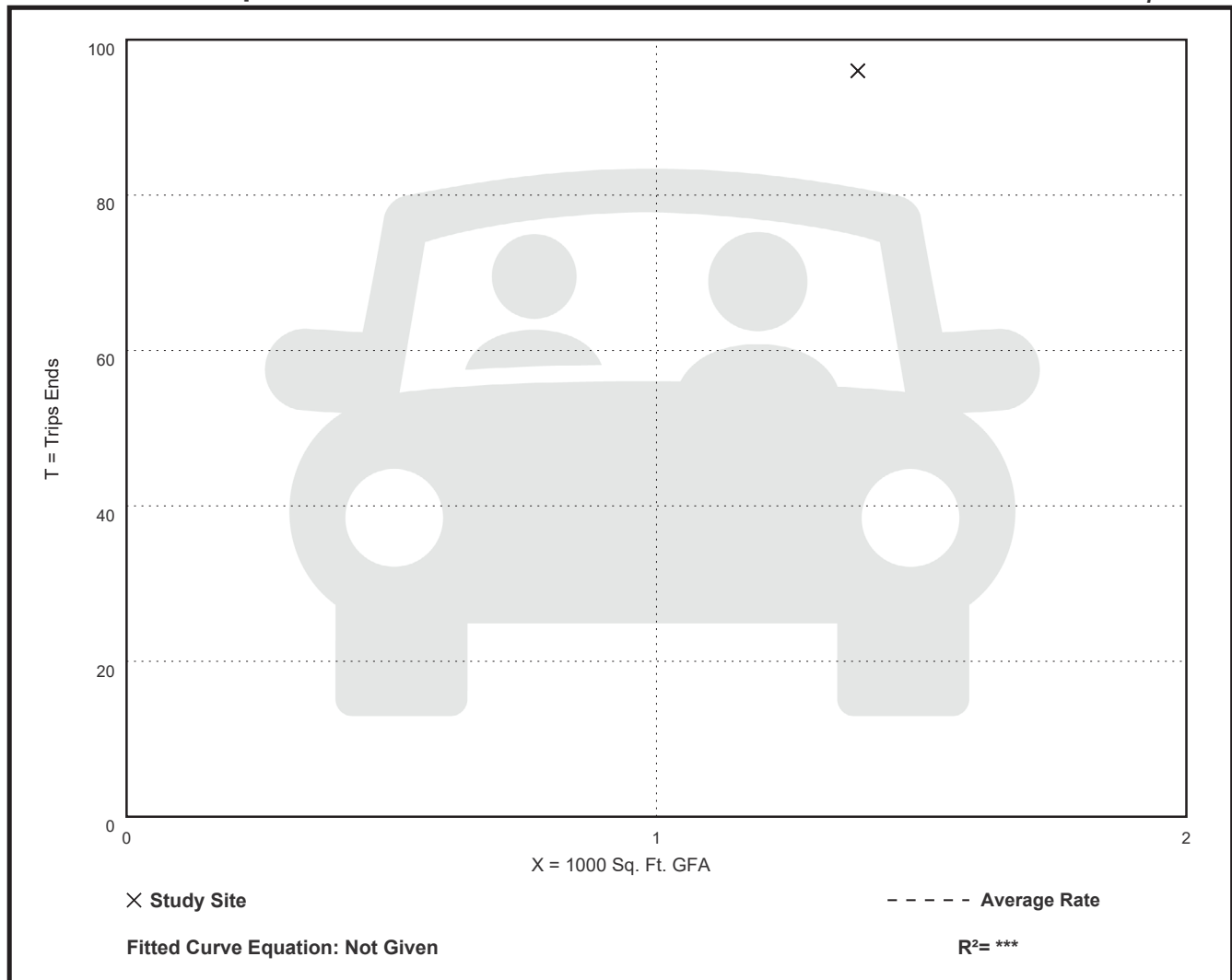
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
69.57	69.57 - 69.57	***

Data Plot and Equation

Caution – Small Sample Size



Quick Lubrication Vehicle Shop (941)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 1

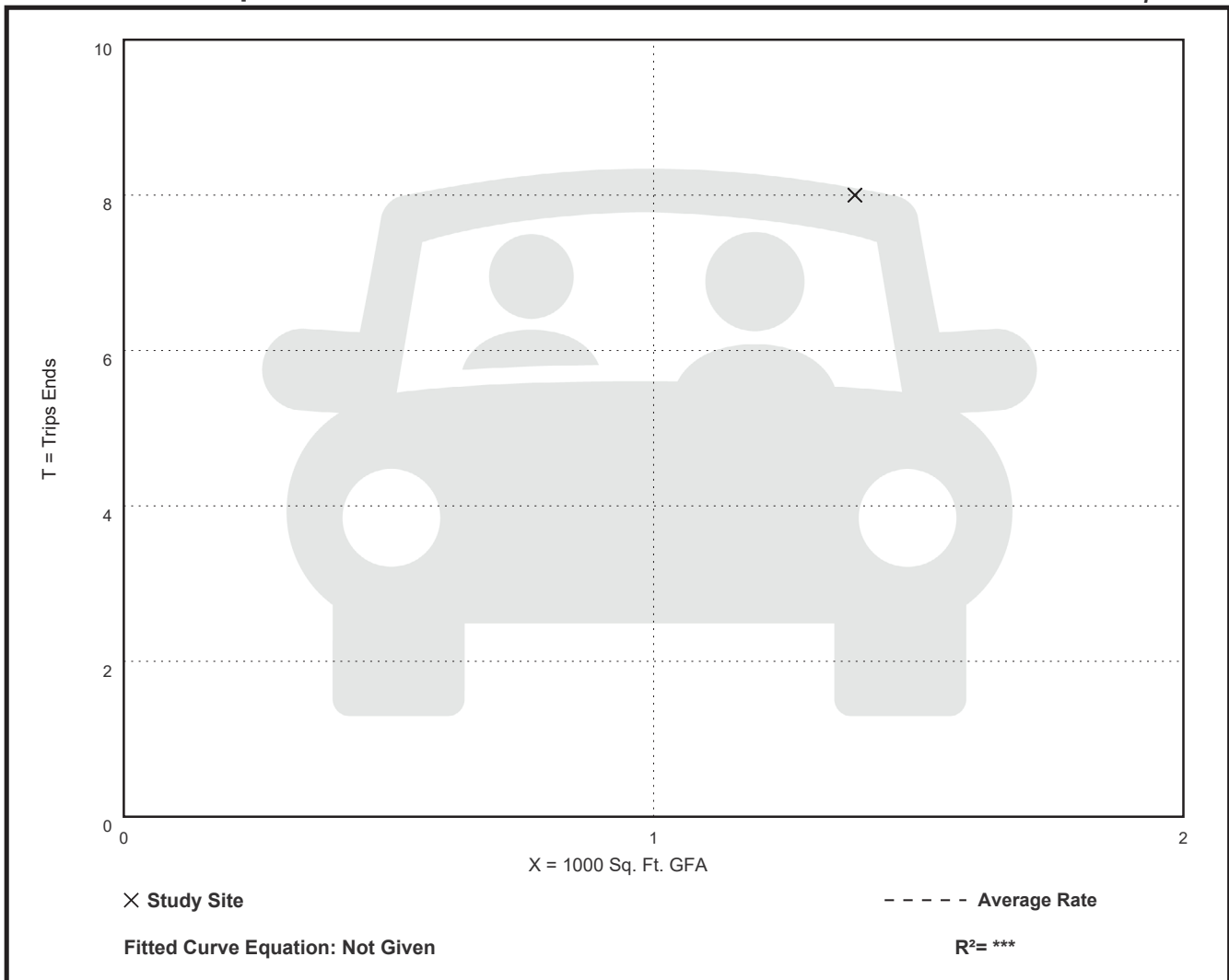
Directional Distribution: 75% entering, 25% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
5.80	5.80 - 5.80	***

Data Plot and Equation

Caution – Small Sample Size



Quick Lubrication Vehicle Shop (941)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 1

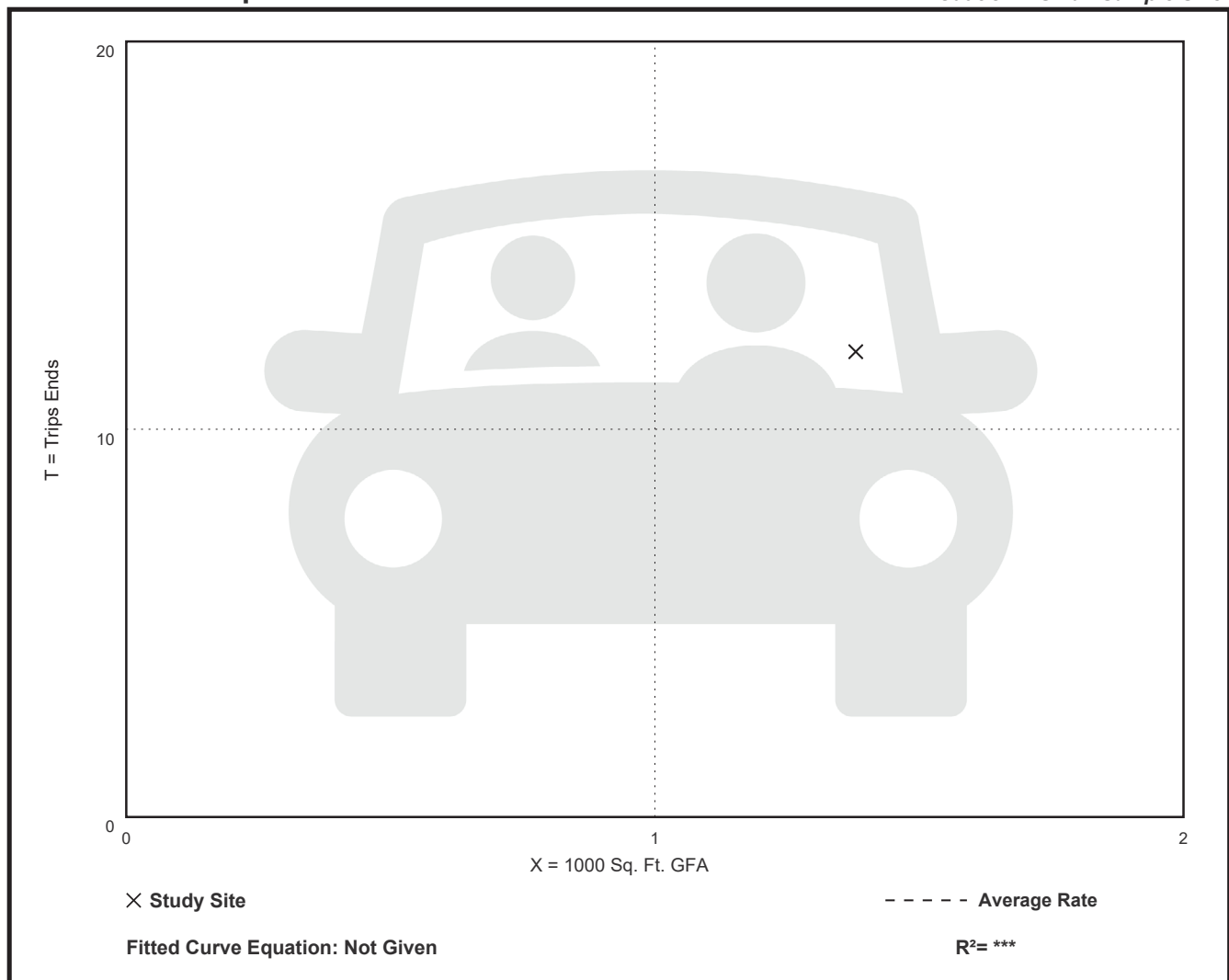
Directional Distribution: 42% entering, 58% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
8.70	8.70 - 8.70	***

Data Plot and Equation

Caution – Small Sample Size



Automated Car Wash (948)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 14

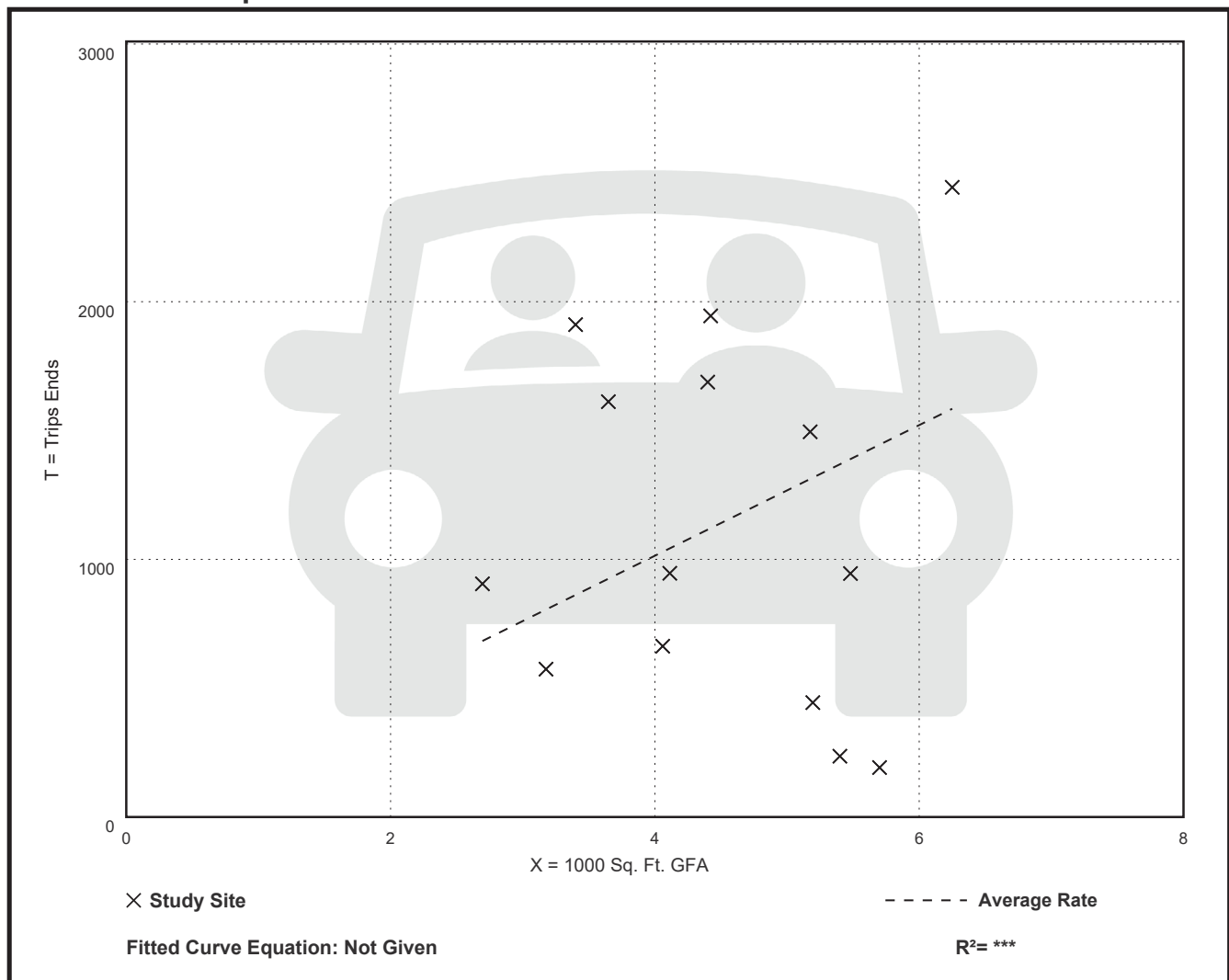
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
253.51	33.68 - 562.06	163.78

Data Plot and Equation



Automated Car Wash (948)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 14

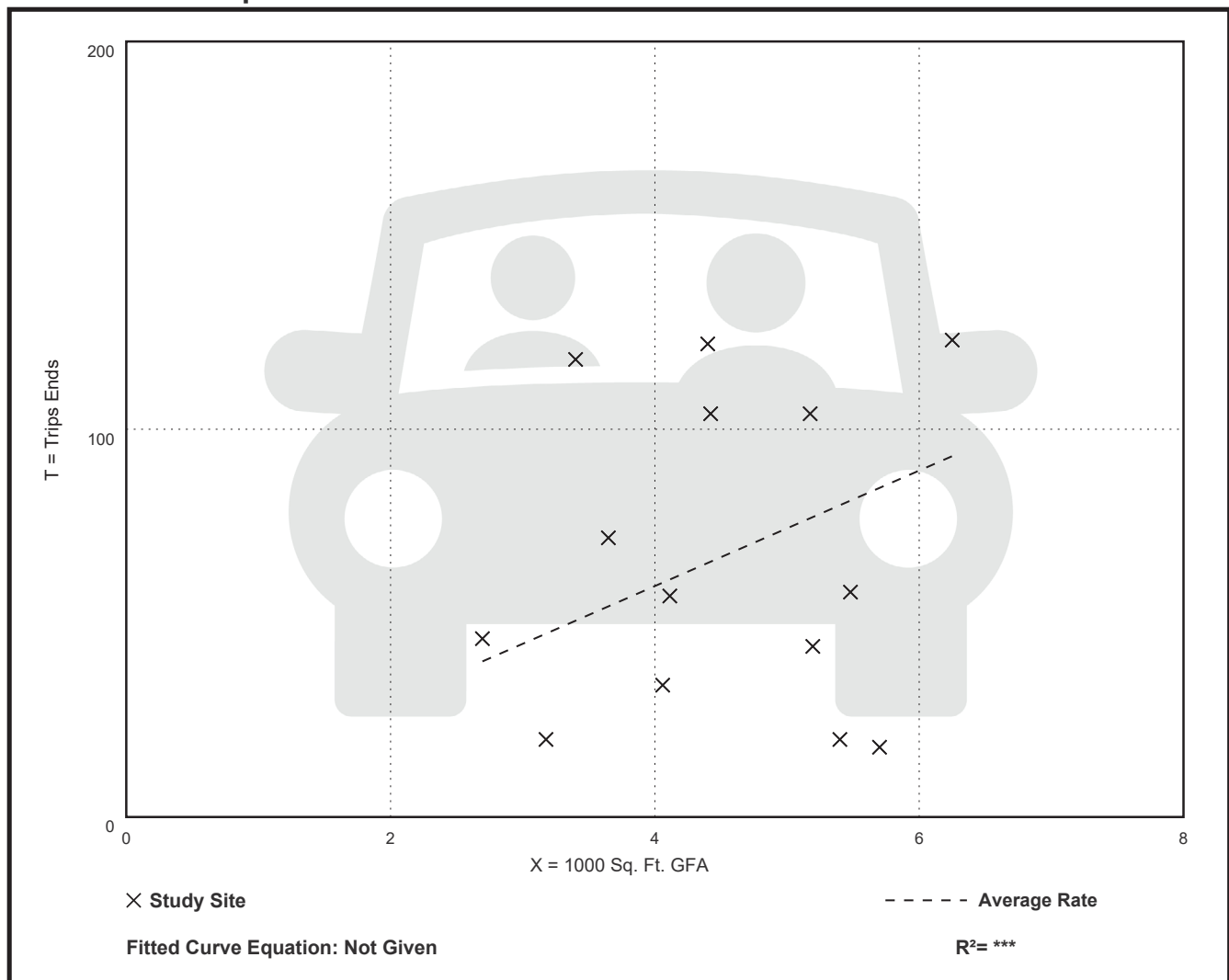
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
14.89	3.16 - 34.71	9.20

Data Plot and Equation



Automated Car Wash (948)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 15

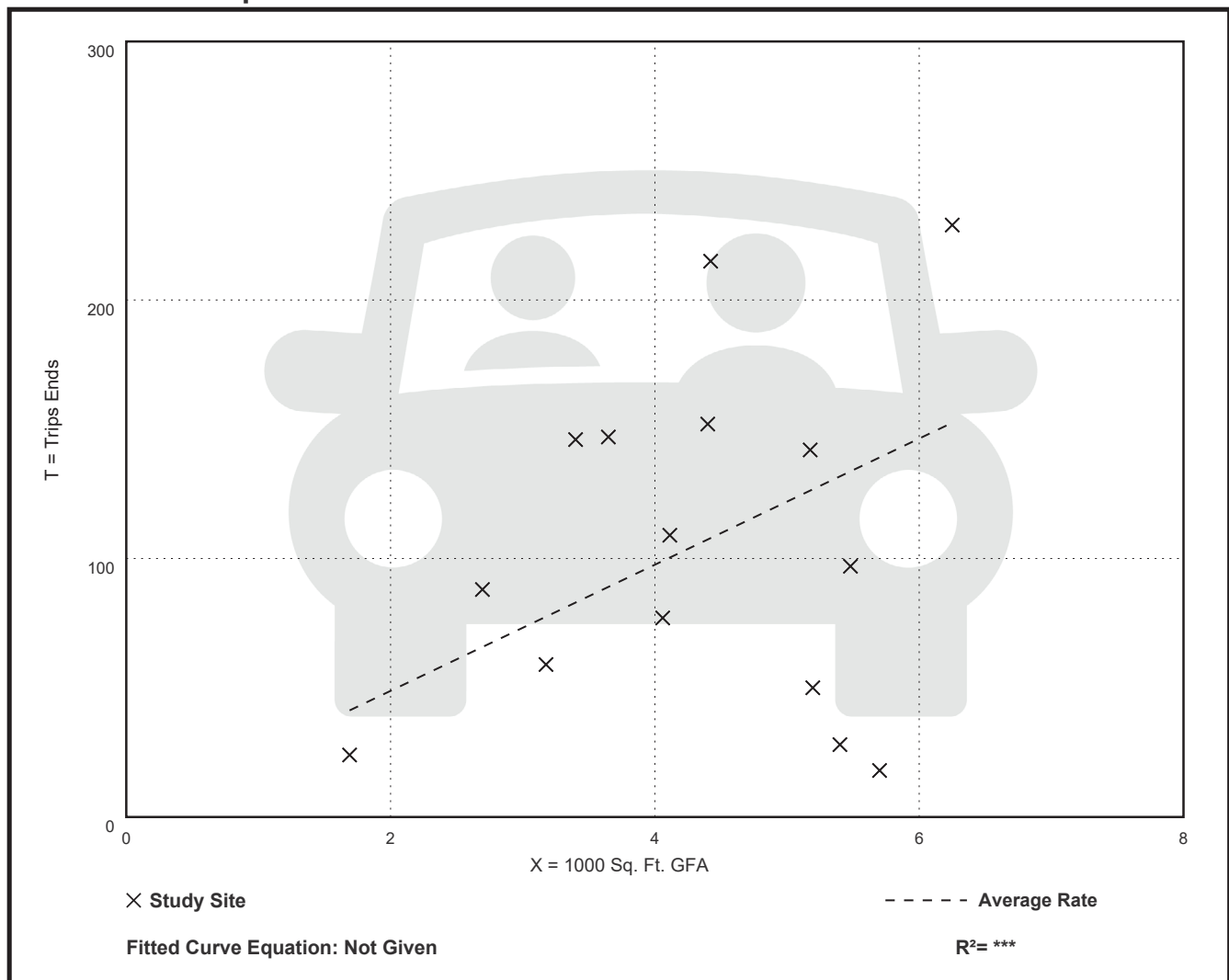
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
24.40	3.16 - 48.62	14.47

Data Plot and Equation



Automated Car Wash (948)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 17

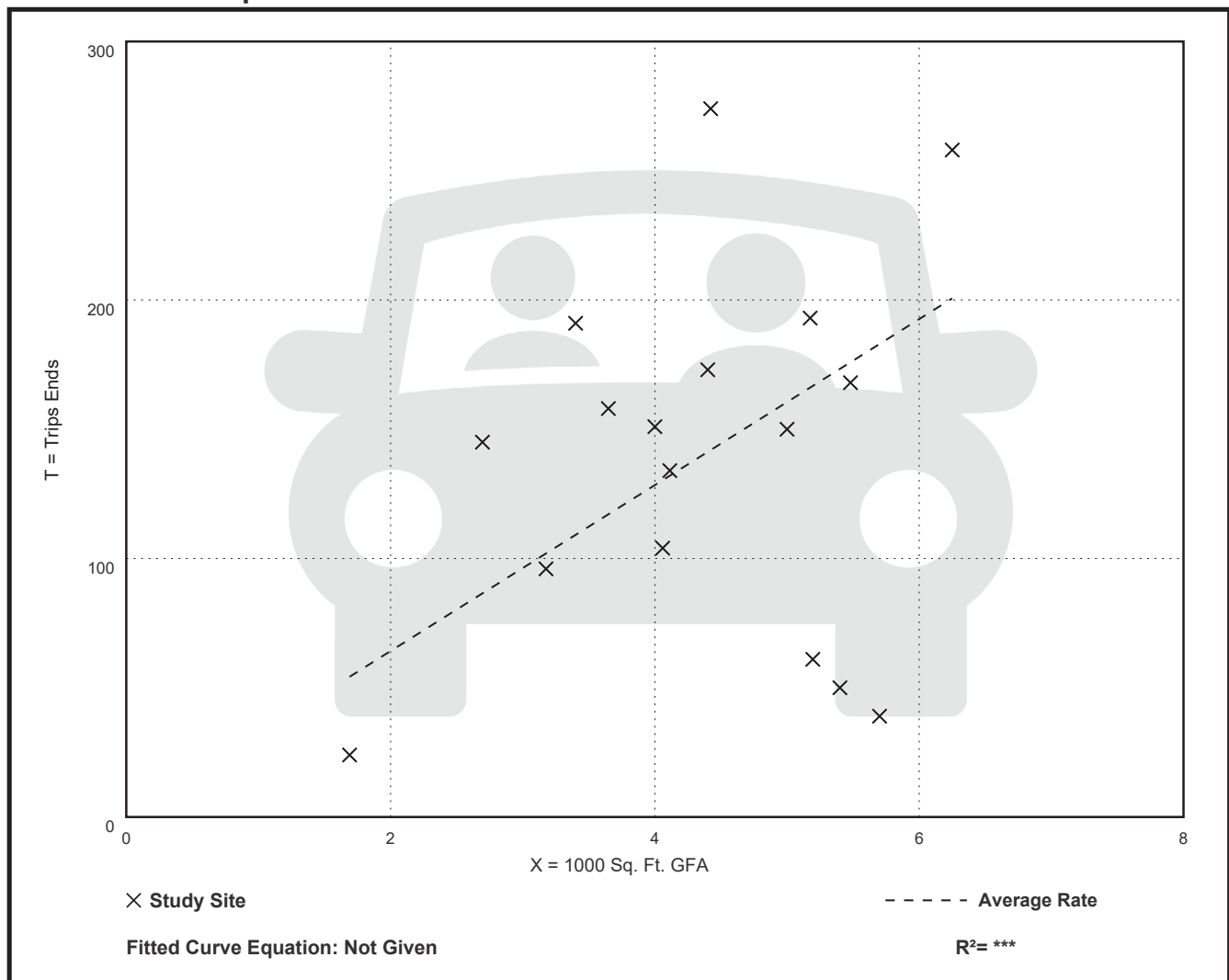
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.10	6.84 - 61.96	16.11

Data Plot and Equation



CMAP 2050 Projections Letter



June 20, 2025

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

Subject: North Avenue and Kautz Road
IDOT

Dear Mr. May:

In response to a request made on your behalf and dated June 19, 2025, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
North Avenue west of Kautz Road	33,000	39,000
North Avenue east of Kautz Road	31,600	38,800
Kautz Road north of North Ave	6,600	7,100
Kautz Road south of North Ave	8,050	9,700

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

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

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

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤ 10
B	Good progression, with more vehicles stopping than for Level of Service A.	$> 10 - 20$
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	$> 20 - 35$
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	$> 35 - 55$
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	$> 55 - 80$
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 80
Unsignalized Intersections		
Level of Service		Average Total Delay (sec/veh)
A		0 - 10
B		$> 10 - 15$
C		$> 15 - 25$
D		$> 25 - 35$
E		$> 35 - 50$
F		> 50
Source: <i>Highway Capacity Manual</i> , 7 th Edition.		

Capacity Analysis Summary Sheets
Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	59	999	41	267	771	41	25	99	229	118	213
Future Volume (vph)	2	59	999	41	267	771	41	25	99	229	118	213
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		255		200	300		190	200		580	195	
Storage Lanes		2		1	2		1	1		1	1	
Taper Length (ft)		300			300			175			175	
Lane Util. Factor	0.91	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	3249	5056	1538	3183	5009	1583	1805	1961	1509	1752	1961
Flt Permitted		0.950			0.950			0.406			0.550	
Satd. Flow (perm)	0	3249	5056	1538	3183	5009	1583	771	1961	1509	1015	1961
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				105			67			254		
Link Speed (mph)			45			45			40			40
Link Distance (ft)			2097			2145			538			1315
Travel Time (s)			31.8			32.5			9.2			22.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	8%	8%	5%	10%	9%	2%	0%	2%	7%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	1110	46	297	857	46	28	110	254	131	237
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	5	2	3	1	6	7	3	8		7	4
Permitted Phases				2			6	8		8	4	
Detector Phase	5	5	2	3	1	6	7	3	8	8	7	4
Switch Phase												
Minimum Initial (s)	4.0	4.0	28.0	4.0	4.0	28.0	4.0	4.0	8.0	8.0	4.0	8.0
Minimum Split (s)	8.5	8.5	34.0	7.5	8.5	34.0	7.5	7.5	14.5	14.5	7.5	14.5
Total Split (s)	18.0	18.0	67.0	13.0	23.0	72.0	13.0	13.0	27.0	27.0	13.0	27.0
Total Split (%)	13.8%	13.8%	51.5%	10.0%	17.7%	55.4%	10.0%	10.0%	20.8%	20.8%	10.0%	20.8%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.5	6.5	3.5	6.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	C-Min	None	None	None	None	None	None
Act Effect Green (s)		8.1	65.9	79.0	16.5	76.4	92.1	27.4	17.4	17.4	32.5	21.9
Actuated g/C Ratio		0.06	0.51	0.61	0.13	0.59	0.71	0.21	0.13	0.13	0.25	0.17

25-164 - Commercial Dev. St. Charles
Existing Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

12/08/2025

Lane Group	SBR
Lane Configurations	↗
Traffic Volume (vph)	153
Future Volume (vph)	153
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1509
Flt Permitted	
Satd. Flow (perm)	1509
Right Turn on Red	Yes
Satd. Flow (RTOR)	170
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	7%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	170
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.5
Total Split (s)	27.0
Total Split (%)	20.8%
Yellow Time (s)	4.5
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
Act Effct Green (s)	21.9
Actuated g/C Ratio	0.17

25-164 - Commercial Dev. St. Charles
Existing Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
v/c Ratio		0.34	0.43	0.05	0.74	0.29	0.04	0.13	0.42	0.60	0.43	0.72
Control Delay (s/veh)		62.4	21.7	0.1	60.1	15.4	1.0	36.0	55.6	12.2	42.6	64.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		62.4	21.7	0.1	60.1	15.4	1.0	36.0	55.6	12.2	42.6	64.6
LOS		E	C	A	E	B	A	D	E	B	D	E
Approach Delay (s/veh)			23.1			25.9			26.1			42.1
Approach LOS			C			C			C			D
Queue Length 50th (ft)		28	223	0	124	138	0	17	84	0	86	189
Queue Length 95th (ft)		53	268	0	172	189	8	42	143	79	143	#304
Internal Link Dist (ft)			2017			2065			458			1235
Turn Bay Length (ft)		255		200	300		190	200		580	195	
Base Capacity (vph)		337	2564	1002	452	2943	1141	253	309	451	308	330
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.20	0.43	0.05	0.66	0.29	0.04	0.11	0.36	0.56	0.43	0.72

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay (s/veh): 27.5

Intersection LOS: C

Intersection Capacity Utilization 69.2%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64





Lane Group	SBR
v/c Ratio	0.43
Control Delay (s/veh)	10.4
Queue Delay	0.0
Total Delay (s/veh)	10.4
LOS	B
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	65
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	395
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.43
Intersection Summary	

Lanes, Volumes, Timings

2: Pheasant Run & II 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	16	1300	27	7	17	1037	17	6	0	10	7
Future Volume (vph)	3	16	1300	27	7	17	1037	17	6	0	10	7
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5103	1509	0	1664	5009	1615	1543	2000	1242	1805
Flt Permitted		0.950				0.950						0.930
Satd. Flow (perm)	0	1805	5103	1509	0	1664	5009	1615	1624	2000	1242	1767
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				63				63			251	
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				918			1071		
Travel Time (s)			32.5				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	7%	7%	0%	12%	9%	0%	17%	0%	30%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	21	1461	30	0	27	1165	19	7	0	11	8
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	16.0	16.0	78.0	13.0	16.0	16.0	78.0	13.0	13.0	23.0	23.0	13.0
Total Split (%)	12.3%	12.3%	60.0%	10.0%	12.3%	12.3%	60.0%	10.0%	10.0%	17.7%	17.7%	10.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		7.1	106.8	114.3			7.6	107.3	117.6	8.3	8.0	11.0
Actuated g/C Ratio		0.05	0.82	0.88			0.06	0.83	0.90	0.06	0.06	0.08

25-164 - Commercial Dev. St. Charles
Existing Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	0	12
Future Volume (vph)	0	12
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		287
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.89	0.89
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	13
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	23.0	23.0
Total Split (%)	17.7%	17.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		8.0
Actuated g/C Ratio		0.06

25-164 - Commercial Dev. St. Charles
Existing Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.21	0.35	0.02		0.28	0.28	0.01	0.07		0.04	0.05
Control Delay (s/veh)		71.1	3.3	0.0		64.9	5.4	0.0	53.5		0.2	49.0
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)		71.1	3.3	0.0		64.9	5.4	0.0	53.5		0.2	49.0
LOS		E	A	A		E	A	A	D		A	D
Approach Delay (s/veh)			4.2				6.6			20.9		
Approach LOS			A				A			C		
Queue Length 50th (ft)		19	55	0		22	80	0	6		0	7
Queue Length 95th (ft)		m42	97	m1		53	171	0	20		0	20
Internal Link Dist (ft)			2065				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		159	4191	1354		147	4133	1481	139		380	191
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.13	0.35	0.02		0.18	0.28	0.01	0.05		0.03	0.04

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.35

Intersection Signal Delay (s/veh): 5.5

Intersection LOS: A

Intersection Capacity Utilization 47.2%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
16 s		78 s		13 s		23 s	
	Ø5		Ø6 (R)		Ø7		Ø8
16 s		78 s		13 s		23 s	



Lane Group	SBT	SBR
v/c Ratio		0.04
Control Delay (s/veh)		0.2
Queue Delay		0.0
Total Delay (s/veh)		0.2
LOS		A
Approach Delay (s/veh)	18.8	
Approach LOS	B	
Queue Length 50th (ft)		0
Queue Length 95th (ft)		0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		460
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.03
Intersection Summary		

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	4	8	339	487	34
Future Vol, veh/h	14	4	8	339	487	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	110	0	100	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	6	7	0
Mvmt Flow	15	4	9	368	529	37

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	749	283	566	0	-	0
Stage 1	548	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	485	*958	1187	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %	0	0	0	-	-	-
Mov Cap-1 Maneuver	482	*958	1187	-	-	-
Mov Cap-2 Maneuver	564	-	-	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	819	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.95	0.19	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1187	-	564	958	-	-
HCM Lane V/C Ratio	0.007	-	0.027	0.005	-	-
HCM Ctrl Dly (s/v)	8.1	-	11.6	8.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

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	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	0	14	2	0	8	12	332	3	21	463	7
Future Vol, veh/h	7	0	14	2	0	8	12	332	3	21	463	7
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	50	0	25	0	6	0	10	7	0
Mvmt Flow	8	0	16	2	0	9	13	373	3	24	520	8

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	971	975	264	709	977	375	528	0	0	376	0	0
Stage 1	571	571	-	402	402	-	-	-	-	-	-	-
Stage 2	400	403	-	307	575	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	8.05	6.5	6.575	4.1	-	-	4.25	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.85	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	7.25	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.975	4.3	5.375	2.2	-	-	2.295	-	-
Pot Cap-1 Maneuver	293	313	*974	*385	312	614	1203	-	-	1131	-	-
Stage 1	633	609	-	*522	604	-	-	-	-	-	-	-
Stage 2	630	603	-	*809	607	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0		0	-	-		-	-
Mov Cap-1 Maneuver	279	303	*974	*367	302	614	1203	-	-	1131	-	-
Mov Cap-2 Maneuver	403	405	-	*434	407	-	-	-	-	-	-	-
Stage 1	619	597	-	*516	597	-	-	-	-	-	-	-
Stage 2	614	596	-	*779	594	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB				
HCM Ctrl Dly, s/v	10.54		11.43		0.28			0.35				
HCM LOS	B		B									

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1203	-	-	403	974	434	614	1131	-	-
HCM Lane V/C Ratio	0.011	-	-	0.02	0.016	0.005	0.015	0.021	-	-
HCM Ctrl Dly (s/v)	8	-	-	14.1	8.8	13.3	11	8.2	-	-
HCM Lane LOS	A	-	-	B	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	0	0.1	-	-

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

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	↗
Traffic Vol, veh/h	45	2	24	2	0	1	21	301	12	3	414	62
Future Vol, veh/h	45	2	24	2	0	1	21	301	12	3	414	62
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	9	50	0	0	0	0	0	6	0	33	7	5
Mvmt Flow	49	2	26	2	0	1	23	331	13	3	455	68

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	838	852	455	846	913	337	523	0	0	344	0	0
Stage 1	462	462	-	384	384	-	-	-	-	-	-	-
Stage 2	377	390	-	463	530	-	-	-	-	-	-	-
Critical Hdwy	7.19	7	6.2	7.1	6.5	6.2	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	6.19	6	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	6	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.45	3.3	3.5	4	3.3	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	289	252	692	295	268	709	1037	-	-	1061	-	-
Stage 1	635	527	-	643	615	-	-	-	-	-	-	-
Stage 2	631	532	-	651	545	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	282	246	692	274	261	709	1037	-	-	1061	-	-
Mov Cap-2 Maneuver	413	350	-	405	373	-	-	-	-	-	-	-
Stage 1	633	525	-	629	602	-	-	-	-	-	-	-
Stage 2	616	520	-	621	543	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	14.06	12.67	0.54	0.05
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1037	-	-	475 473	1061	-	-
HCM Lane V/C Ratio	0.022	-	-	0.164 0.007	0.003	-	-
HCM Ctrl Dly (s/v)	8.5	-	-	14.1 12.7	8.4	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6 0	0	-	-

Capacity Analysis Summary Sheets
Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	211	1016	27	6	276	1250	99	119	301	405	113
Future Volume (vph)	2	211	1016	27	6	276	1250	99	119	301	405	113
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3467	5250	1553	0	3370	5353	1599	1787	2000	1568	1787
Flt Permitted		0.950				0.950			0.388			0.152
Satd. Flow (perm)	0	3467	5250	1553	0	3370	5353	1599	730	2000	1568	286
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				58				104			243	
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	4%	4%	0%	4%	2%	1%	1%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	1081	29	0	300	1330	105	127	320	431	120
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	28.0	4.0	4.0	4.0	28.0	4.0	4.0	8.0	8.0	4.0
Minimum Split (s)	8.5	8.5	34.0	7.5	8.5	8.5	34.0	7.5	7.5	14.5	14.5	7.5
Total Split (s)	20.0	20.0	73.0	18.0	24.0	24.0	77.0	18.0	18.0	35.0	35.0	18.0
Total Split (%)	13.3%	13.3%	48.7%	12.0%	16.0%	16.0%	51.3%	12.0%	12.0%	23.3%	23.3%	12.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	2.0	2.0	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	5.5	6.5	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		14.1	71.2	89.7			17.6	74.7	93.3	43.6	29.1	43.7
Actuated g/C Ratio		0.09	0.47	0.60			0.12	0.50	0.62	0.29	0.19	0.29

25-164 - Commercial Dev. St. Charles
Existing Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	208	185
Future Volume (vph)	208	185
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		197
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	221	197
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.5	14.5
Total Split (s)	35.0	35.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.5	6.5
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	28.2	28.2
Actuated g/C Ratio	0.19	0.19

25-164 - Commercial Dev. St. Charles
Existing Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.70	0.43	0.03		0.76	0.50	0.10	0.42	0.82	0.88	0.58
Control Delay (s/veh)		77.4	27.4	0.5		76.2	23.0	1.7	41.9	75.8	44.9	48.6
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		77.4	27.4	0.5		76.2	23.0	1.7	41.9	75.8	44.9	48.6
LOS		E	C	A		E	C	A	D	E	D	D
Approach Delay (s/veh)			35.3				30.9			55.7		
Approach LOS			D				C			E		
Queue Length 50th (ft)		111	263	0		156	227	0	90	300	192	84
Queue Length 95th (ft)		157	308	3		207	250	17	144	#449	#386	137
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		358	2493	972		438	2667	1052	322	400	499	231
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.63	0.43	0.03		0.68	0.50	0.10	0.39	0.80	0.86	0.52

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 53 (35%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay (s/veh): 38.1

Intersection LOS: D

Intersection Capacity Utilization 80.2%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
v/c Ratio	0.59	0.43
Control Delay (s/veh)	62.6	9.4
Queue Delay	0.0	0.0
Total Delay (s/veh)	62.6	9.4
LOS	E	A
Approach Delay (s/veh)	40.0	
Approach LOS	D	
Queue Length 50th (ft)	197	0
Queue Length 95th (ft)	291	70
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	387	471
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.57	0.42
Intersection Summary		

Lanes, Volumes, Timings

2: Pheasant Run & II 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	33	1481	18	6	13	1558	25	39	2	14	28
Future Volume (vph)	8	33	1481	18	6	13	1558	25	39	2	14	28
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1762	5250	1615	0	1805	5353	1615	1805	2000	1615	1805
Flt Permitted		0.950				0.950						0.556
Satd. Flow (perm)	0	1762	5250	1615	0	1805	5353	1615	1900	2000	1615	1056
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				55				55			80	
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				918			1071		
Travel Time (s)			32.5				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	4%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	43	1559	19	0	20	1640	26	41	2	15	29
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	90.0	20.0	17.0	17.0	90.0	20.0	20.0	23.0	23.0	20.0
Total Split (%)	11.3%	11.3%	60.0%	13.3%	11.3%	11.3%	60.0%	13.3%	13.3%	15.3%	15.3%	13.3%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		9.0	116.1	128.4			7.2	112.2	129.6	13.2	8.5	17.9
Actuated g/C Ratio		0.06	0.77	0.86			0.05	0.75	0.86	0.09	0.06	0.12

25-164 - Commercial Dev. St. Charles
Existing Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	2	34
Future Volume (vph)	2	34
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		80
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.95	0.95
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2	36
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	23.0	23.0
Total Split (%)	15.3%	15.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	8.0	8.0
Actuated g/C Ratio	0.05	0.05

25-164 - Commercial Dev. St. Charles
Existing Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.41	0.38	0.01		0.23	0.41	0.02	0.25	0.02	0.09	0.15
Control Delay (s/veh)		79.7	4.6	0.0		74.3	9.6	0.1	62.8	66.5	1.1	56.0
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		79.7	4.6	0.0		74.3	9.6	0.1	62.8	66.5	1.1	56.0
LOS		E	A	A		E	A	A	E	E	A	E
Approach Delay (s/veh)			6.5				10.2			47.0		
Approach LOS			A				B			D		
Queue Length 50th (ft)		40	138	0		19	239	0	39	2	0	25
Queue Length 95th (ft)		m73	166	m0		48	308	1	72	11	0	56
Internal Link Dist (ft)			2065				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		146	4065	1450		150	4005	1433	239	226	253	248
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.29	0.38	0.01		0.13	0.41	0.02	0.17	0.01	0.06	0.12

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 68 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay (s/veh): 9.4

Intersection LOS: A

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
17 s		90 s		20 s		23 s	
	Ø5		Ø6 (R)		Ø7		Ø8
17 s		90 s		20 s		23 s	



Lane Group	SBT	SBR
v/c Ratio	0.02	0.22
Control Delay (s/veh)	68.0	3.2
Queue Delay	0.0	0.0
Total Delay (s/veh)	68.0	3.2
LOS	E	A
Approach Delay (s/veh)	28.0	
Approach LOS	C	
Queue Length 50th (ft)	2	0
Queue Length 95th (ft)	11	0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)	226	253
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.01	0.14
Intersection Summary		

Intersection

Int Delay, s/veh 1.7

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 112 31 29 713 391 120

Future Vol, veh/h 112 31 29 713 391 120

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 110 0 100 - - -

Veh in Median Storage, # 1 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 93 93 93 93 93 93

Heavy Vehicles, % 1 0 0 2 4 0

Mvmt Flow 120 33 31 767 420 129

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 931 275 549 0 - 0

Stage 1 485 - - - - -

Stage 2 446 - - - - -

Critical Hdwy 6.82 6.9 4.1 - - -

Critical Hdwy Stg 1 5.82 - - - - -

Critical Hdwy Stg 2 5.82 - - - - -

Follow-up Hdwy 3.51 3.3 2.2 - - -

Pot Cap-1 Maneuver 331 *990 1156 - - -

Stage 1 718 - - - - -

Stage 2 615 - - - - -

Platoon blocked, % 0 0 0 - - -

Mov Cap-1 Maneuver 323 *990 1156 - - -

Mov Cap-2 Maneuver 445 - - - - -

Stage 1 699 - - - - -

Stage 2 615 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 14.49 0.32 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h) 1156 - 445 990 - -

HCM Lane V/C Ratio 0.027 - 0.271 0.034 - -

HCM Ctrl Dly (s/v) 8.2 - 16.1 8.8 - -

HCM Lane LOS A - C A - -

HCM 95th %tile Q(veh) 0.1 - 1.1 0.1 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s

+: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	0	41	11	2	31	44	669	3	4	406	12
Future Vol, veh/h	42	0	41	11	2	31	44	669	3	4	406	12
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	9	0	10	0	2	33	25	3	0
Mvmt Flow	46	0	45	12	2	34	48	727	3	4	441	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1280	1283	227	1054	1288	729	454	0	0	730	0	0
Stage 1	457	457	-	824	824	-	-	-	-	-	-	-
Stage 2	824	826	-	229	463	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	7.435	6.5	6.35	4.1	-	-	4.475	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.235	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.635	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5855	4	3.395	2.2	-	-	2.4375	-	-
Pot Cap-1 Maneuver	162	192	*990	*232	191	405	1262	-	-	755	-	-
Stage 1	719	673	-	*353	390	-	-	-	-	-	-	-
Stage 2	370	389	-	*911	668	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0		0	-	-	-	-	-
Mov Cap-1 Maneuver	141	184	*990	*211	183	405	1262	-	-	755	-	-
Mov Cap-2 Maneuver	253	291	-	*290	288	-	-	-	-	-	-	-
Stage 1	715	669	-	*340	375	-	-	-	-	-	-	-
Stage 2	325	375	-	*865	665	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	15.64	15.69	0.49	0.09
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1262	-	-	253	990	289	405	755	-	-
HCM Lane V/C Ratio	0.038	-	-	0.18	0.045	0.049	0.083	0.006	-	-
HCM Ctrl Dly (s/v)	8	-	-	22.3	8.8	18.1	14.7	9.8	-	-
HCM Lane LOS	A	-	-	C	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.1	0.2	0.3	0	-	-

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

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	↗
Traffic Vol, veh/h	72	1	49	10	2	6	38	638	1	2	416	40
Future Vol, veh/h	72	1	49	10	2	6	38	638	1	2	416	40
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	0	4	0	0	0	3	2	0	0	4	0
Mvmt Flow	81	1	55	11	2	7	43	717	1	2	467	45

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1275	1275	467	1275	1320	717	512	0	0	718	0	0
Stage 1	472	472	-	803	803	-	-	-	-	-	-	-
Stage 2	803	803	-	472	517	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.24	7.1	6.5	6.2	4.13	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.336	3.5	4	3.3	2.227	-	-	2.2	-	-
Pot Cap-1 Maneuver	124	144	669	126	133	433	1035	-	-	892	-	-
Stage 1	635	586	-	380	399	-	-	-	-	-	-	-
Stage 2	375	399	-	639	553	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	116	138	669	110	127	433	1035	-	-	892	-	-
Mov Cap-2 Maneuver	253	269	-	246	256	-	-	-	-	-	-	-
Stage 1	633	584	-	364	383	-	-	-	-	-	-	-
Stage 2	352	382	-	584	552	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	22.8		18.39		0.48		0.04	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1035	-	-	337	289	892	-
HCM Lane V/C Ratio	0.041	-	-	0.407	0.07	0.003	-
HCM Ctrl Dly (s/v)	8.6	-	-	22.8	18.4	9	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.9	0.2	0	-

Capacity Analysis Summary Sheets
Existing Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	186	752	51	2	195	701	104	83	178	217	142
Future Volume (vph)	4	186	752	51	2	195	701	104	83	178	217	142
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3468	5406	1615	0	3434	5406	1583	1805	1980	1599	1787
Flt Permitted		0.950				0.950			0.487			0.390
Satd. Flow (perm)	0	3468	5406	1615	0	3434	5406	1583	925	1980	1599	734
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				73				111			231	
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	1%	0%	0%	2%	1%	2%	0%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	202	800	54	0	209	746	111	88	189	231	151
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	25.0	4.0	4.0	4.0	25.0	4.0	4.0	8.0	8.0	4.0
Minimum Split (s)	8.5	8.5	31.0	7.5	8.5	8.5	31.0	7.5	7.5	14.5	14.5	7.5
Total Split (s)	18.0	18.0	55.0	15.0	22.0	22.0	59.0	15.0	15.0	28.0	28.0	15.0
Total Split (%)	15.0%	15.0%	45.8%	12.5%	18.3%	18.3%	49.2%	12.5%	12.5%	23.3%	23.3%	12.5%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	2.0	2.0	0.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	6.5	6.5	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		11.8	56.8	72.2		12.6	57.6	75.6	30.5	18.1	18.1	35.6
Actuated g/C Ratio		0.10	0.47	0.60		0.11	0.48	0.63	0.25	0.15	0.15	0.30

25-164 - Commercial Dev. St. Charles
Existing Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	197	160
Future Volume (vph)	197	160
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	1980	1599
Flt Permitted		
Satd. Flow (perm)	1980	1599
Right Turn on Red		Yes
Satd. Flow (RTOR)		170
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	1%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	210	170
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.5	14.5
Total Split (s)	28.0	28.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.5	6.5
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	20.7	20.7
Actuated g/C Ratio	0.17	0.17

25-164 - Commercial Dev. St. Charles
Existing Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.59	0.31	0.05		0.58	0.29	0.11	0.29	0.63	0.53	0.47
Control Delay (s/veh)		58.9	21.0	1.6		58.0	18.0	1.4	31.8	57.2	10.2	35.7
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		58.9	21.0	1.6		58.0	18.0	1.4	31.8	57.2	10.2	35.7
LOS		E	C	A		E	B	A	C	E	B	D
Approach Delay (s/veh)			27.3				24.1			31.4		
Approach LOS			C				C			C		
Queue Length 50th (ft)		77	140	0		83	112	1	49	139	0	87
Queue Length 95th (ft)		117	186	11		127	115	13	88	211	69	141
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		390	2557	1027		500	2623	1044	335	354	476	329
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.52	0.31	0.05		0.42	0.28	0.11	0.26	0.53	0.49	0.46

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 31 (26%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay (s/veh): 28.1

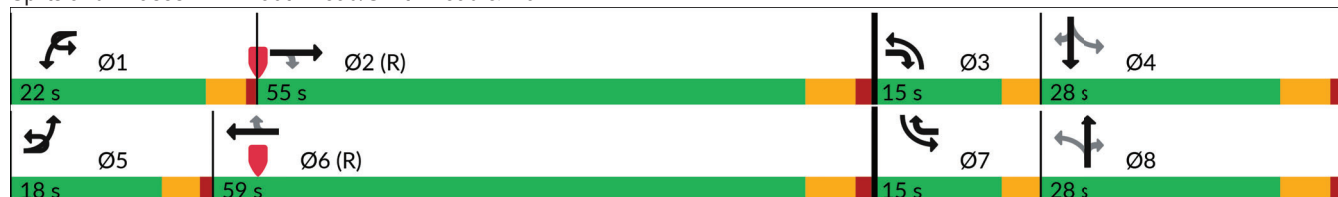
Intersection LOS: C

Intersection Capacity Utilization 65.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
v/c Ratio	0.62	0.41
Control Delay (s/veh)	53.8	9.3
Queue Delay	0.0	0.0
Total Delay (s/veh)	53.8	9.3
LOS	D	A
Approach Delay (s/veh)	34.4	
Approach LOS	C	
Queue Length 50th (ft)	150	0
Queue Length 95th (ft)	233	60
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	370	437
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.57	0.39
Intersection Summary		

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	32	1044	29	7	16	994	25	26	2	18	15
Future Volume (vph)	8	32	1044	29	7	16	994	25	26	2	18	15
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1760	5406	1615	0	1805	5406	1615	1805	2000	1615	1805
Flt Permitted		0.950				0.950			0.769			0.727
Satd. Flow (perm)	0	1760	5406	1615	0	1805	5406	1615	1461	2000	1615	1381
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				68				68			100	
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				918			1071		
Travel Time (s)			32.5				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	1076	30	0	23	1025	26	27	2	19	15
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	70.0	15.0	15.0	15.0	68.0	15.0	15.0	20.0	20.0	15.0
Total Split (%)	14.2%	14.2%	58.3%	12.5%	12.5%	12.5%	56.7%	12.5%	12.5%	16.7%	16.7%	12.5%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		8.3	89.6	102.0			7.1	86.3	99.5	12.6	8.4	13.6
Actuated g/C Ratio		0.07	0.75	0.85			0.06	0.72	0.83	0.11	0.07	0.11

25-164 - Commercial Dev. St. Charles
Existing Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	1	31
Future Volume (vph)	1	31
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		100
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.97	0.97
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1	32
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	20.0	20.0
Total Split (%)	16.7%	16.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	8.0	8.0
Actuated g/C Ratio	0.07	0.07

25-164 - Commercial Dev. St. Charles
Existing Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.34	0.27	0.02		0.22	0.26	0.02	0.15	0.01	0.09	0.08
Control Delay (s/veh)		58.1	5.3	0.1		58.0	8.4	0.0	45.9	51.5	0.9	42.0
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		58.1	5.3	0.1		58.0	8.4	0.0	45.9	51.5	0.9	42.0
LOS		E	A	A		E	A	A	D	D	A	D
Approach Delay (s/veh)			7.0				9.3			28.3		
Approach LOS			A				A			C		
Queue Length 50th (ft)		33	75	0		17	120	0	20	1	0	10
Queue Length 95th (ft)		m66	119	m1		44	162	0	44	10	0	29
Internal Link Dist (ft)			2065				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		183	4037	1403		157	3889	1386	225	233	276	249
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.22	0.27	0.02		0.15	0.26	0.02	0.12	0.01	0.07	0.06

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 34 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.34

Intersection Signal Delay (s/veh): 8.7

Intersection LOS: A

Intersection Capacity Utilization 49.6%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
15 s		70 s		15 s		20 s	
	Ø5		Ø6 (R)		Ø7		Ø8
17 s		68 s		15 s		20 s	



Lane Group	SBT	SBR
v/c Ratio	0.01	0.16
Control Delay (s/veh)	52.0	1.7
Queue Delay	0.0	0.0
Total Delay (s/veh)	52.0	1.7
LOS	D	A
Approach Delay (s/veh)	15.3	
Approach LOS	B	
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	7	0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)	233	276
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.00	0.12
Intersection Summary		

Intersection

Int Delay, s/veh 2.5

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 138 48 27 340 295 148

Future Vol, veh/h 138 48 27 340 295 148

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 110 0 100 - - -

Veh in Median Storage, # 1 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 93 93 93 93 93 93

Heavy Vehicles, % 0 0 0 2 2 1

Mvmt Flow 148 52 29 366 317 159

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 638 238 476 0 - 0

Stage 1 397 - - - - -

Stage 2 241 - - - - -

Critical Hdwy 6.8 6.9 4.1 - - -

Critical Hdwy Stg 1 5.8 - - - - -

Critical Hdwy Stg 2 5.8 - - - - -

Follow-up Hdwy 3.5 3.3 2.2 - - -

Pot Cap-1 Maneuver 495 963 1193 - - -

Stage 1 758 - - - - -

Stage 2 783 - - - - -

Platoon blocked, % 0 0 0 - - -

Mov Cap-1 Maneuver 483 963 1193 - - -

Mov Cap-2 Maneuver 567 - - - - -

Stage 1 739 - - - - -

Stage 2 783 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 12.39 0.6 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h) 1193 - 567 963 - -

HCM Lane V/C Ratio 0.024 - 0.262 0.054 - -

HCM Ctrl Dly (s/v) 8.1 - 13.6 9 - -

HCM Lane LOS A - B A - -

HCM 95th %tile Q(veh) 0.1 - 1 0.2 - -

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	1	32	2	0	2	37	324	0	1	328	14
Future Vol, veh/h	41	1	32	2	0	2	37	324	0	1	328	14
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	3	0	0	50	0	11	0	0	2	0
Mvmt Flow	45	1	35	2	0	2	40	352	0	1	357	15

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	799	799	186	614	807	352	372	0	0	352	0	0
Stage 1	366	366	-	433	433	-	-	-	-	-	-	-
Stage 2	433	433	-	181	374	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.945	7.3	6.5	6.95	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.3	3.285	3.5	4	3.775	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	352	370	*1008	*483	366	578	1312	-	-	1218	-	-
Stage 1	760	707	-	*605	585	-	-	-	-	-	-	-
Stage 2	605	585	-	*959	701	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	340	358	*1008	*450	354	578	1312	-	-	1218	-	-
Mov Cap-2 Maneuver	451	446	-	*506	438	-	-	-	-	-	-	-
Stage 1	760	706	-	*587	567	-	-	-	-	-	-	-
Stage 2	585	567	-	*924	700	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.62	11.7	0.8	0.02
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1312	-	-	451	971	506	578	1218	-	-
HCM Lane V/C Ratio	0.031	-	-	0.099	0.037	0.004	0.004	0.001	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	13.9	8.8	12.1	11.3	8	-	-
HCM Lane LOS	A	-	-	B	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0	0	0	-	-

Notes

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

Intersection

Int Delay, s/veh 1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	0	47	3	0	1	35	324	1	0	321	41
Future Vol, veh/h	36	0	47	3	0	1	35	324	1	0	321	41
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	0	4	0	0	0	0	1	0	0	1	5
Mvmt Flow	39	0	51	3	0	1	38	352	1	0	349	45

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	777	778	349	778	822	353	393	0	0	353	0	0
Stage 1	349	349	-	429	429	-	-	-	-	-	-	-
Stage 2	428	429	-	349	393	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.24	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.336	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	326	333	775	330	310	695	1181	-	-	1217	-	-
Stage 1	737	668	-	608	588	-	-	-	-	-	-	-
Stage 2	603	587	-	743	634	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	-	-	-	-	-	-
Mov Cap-1 Maneuver	315	322	775	298	300	695	1181	-	-	1217	-	-
Mov Cap-2 Maneuver	437	425	-	418	403	-	-	-	-	-	-	-
Stage 1	737	668	-	589	569	-	-	-	-	-	-	-
Stage 2	582	568	-	694	634	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.34	12.82	0.79	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1181	-	-	580 465	1217	-	-
HCM Lane V/C Ratio	0.032	-	-	0.155 0.009	-	-	-
HCM Ctrl Dly (s/v)	8.1	-	-	12.3 12.8	0	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5 0	0	-	-

Capacity Analysis Summary Sheets
Year 2031 No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	61	1069	74	282	807	44	30	105	241	132	238
Future Volume (vph)	2	61	1069	74	282	807	44	30	105	241	132	238
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		255		200	300		190	200		580	195	
Storage Lanes		2		1	2		1	1		1	1	
Taper Length (ft)		300			300			175			175	
Lane Util. Factor	0.91	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	3249	5056	1538	3183	5009	1583	1805	1961	1509	1752	1961
Flt Permitted		0.950			0.950			0.287			0.573	
Satd. Flow (perm)	0	3249	5056	1538	3183	5009	1583	545	1961	1509	1057	1961
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				105			67			250		
Link Speed (mph)			45			45			40			40
Link Distance (ft)			2097			2145			538			1315
Travel Time (s)			31.8			32.5			9.2			22.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	8%	8%	5%	10%	9%	2%	0%	2%	7%	3%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	70	1188	82	313	897	49	33	117	268	147	264
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	5	2	3	1	6	7	3	8		7	4
Permitted Phases				2			6	8		8	4	
Detector Phase	5	5	2	3	1	6	7	3	8	8	7	4
Switch Phase												
Minimum Initial (s)	4.0	4.0	28.0	4.0	4.0	28.0	4.0	4.0	8.0	8.0	4.0	8.0
Minimum Split (s)	8.5	8.5	34.0	7.5	8.5	34.0	7.5	7.5	14.5	14.5	7.5	14.5
Total Split (s)	18.0	18.0	67.0	13.0	23.0	72.0	13.0	13.0	27.0	27.0	13.0	27.0
Total Split (%)	13.8%	13.8%	51.5%	10.0%	17.7%	55.4%	10.0%	10.0%	20.8%	20.8%	10.0%	20.8%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.5	6.5	3.5	6.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	C-Min	None	None	None	None	None	None
Act Effect Green (s)		8.2	64.0	77.3	16.8	74.7	90.2	29.5	19.2	19.2	33.8	21.4
Actuated g/C Ratio		0.06	0.49	0.59	0.13	0.57	0.69	0.23	0.15	0.15	0.26	0.16

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

12/08/2025

Lane Group	SBR
Lane Configurations	↗
Traffic Volume (vph)	159
Future Volume (vph)	159
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1509
Flt Permitted	
Satd. Flow (perm)	1509
Right Turn on Red	Yes
Satd. Flow (RTOR)	177
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	7%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	177
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.5
Total Split (s)	27.0
Total Split (%)	20.8%
Yellow Time (s)	4.5
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
Act Effct Green (s)	21.4
Actuated g/C Ratio	0.16

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
v/c Ratio		0.34	0.48	0.09	0.76	0.31	0.04	0.17	0.40	0.62	0.45	0.82
Control Delay (s/veh)		62.4	23.2	1.3	60.1	16.8	1.0	36.7	54.3	14.2	42.8	73.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		62.4	23.2	1.3	60.1	16.8	1.0	36.7	54.3	14.2	42.8	73.0
LOS		E	C	A	E	B	A	D	D	B	D	E
Approach Delay (s/veh)			23.9			26.9			27.2			46.7
Approach LOS			C			C			C			D
Queue Length 50th (ft)		29	246	0	131	145	0	20	89	13	98	214
Queue Length 95th (ft)		54	291	13	182	212	9	48	151	100	159	#366
Internal Link Dist (ft)			2017			2065			458			1235
Turn Bay Length (ft)		255		200	300		190	200		580	195	
Base Capacity (vph)		337	2489	981	452	2879	1119	224	309	448	325	327
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.21	0.48	0.08	0.69	0.31	0.04	0.15	0.38	0.60	0.45	0.81

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay (s/veh): 29.1

Intersection LOS: C

Intersection Capacity Utilization 71.1%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64

 Ø1	 Ø2 (R)	 Ø3	 Ø4
23 s	67 s	13 s	27 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
18 s	72 s	13 s	27 s



Lane Group	SBR
v/c Ratio	0.45
Control Delay (s/veh)	10.6
Queue Delay	0.0
Total Delay (s/veh)	10.6
LOS	B
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	66
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	399
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.44
Intersection Summary	

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	17	1353	69	7	145	1082	18	12	0	27	7
Future Volume (vph)	3	17	1353	69	7	145	1082	18	12	0	27	7
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5103	1509	0	1620	5009	1615	1543	2000	1242	1805
Flt Permitted		0.950				0.950			0.597			
Satd. Flow (perm)	0	1805	5103	1509	0	1620	5009	1615	969	2000	1242	1900
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				78				63			247	
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				918			1071		
Travel Time (s)			32.5				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	7%	7%	0%	12%	9%	0%	17%	0%	30%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	1520	78	0	171	1216	20	13	0	30	8
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	16.0	16.0	78.0	13.0	16.0	16.0	78.0	13.0	13.0	23.0	23.0	13.0
Total Split (%)	12.3%	12.3%	60.0%	10.0%	12.3%	12.3%	60.0%	10.0%	10.0%	17.7%	17.7%	10.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		7.2	77.8	94.1			24.1	100.1	109.9	14.8	8.3	10.3
Actuated g/C Ratio		0.06	0.60	0.72			0.19	0.77	0.85	0.11	0.06	0.08

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	0	12
Future Volume (vph)	0	12
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		275
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.89	0.89
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	13
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	23.0	23.0
Total Split (%)	17.7%	17.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		8.0
Actuated g/C Ratio		0.06

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.22	0.50	0.07		0.57	0.32	0.01	0.08		0.10	0.05
Control Delay (s/veh)		73.5	8.1	0.3		57.3	7.0	0.0	47.6		0.6	48.6
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)		73.5	8.1	0.3		57.3	7.0	0.0	47.6		0.6	48.6
LOS		E	A	A		E	A	A	D		A	D
Approach Delay (s/veh)			8.6				13.0			14.8		
Approach LOS			A				B			B		
Queue Length 50th (ft)		19	88	0		133	143	0	10		0	7
Queue Length 95th (ft)		m40	110	m3		213	185	0	28		0	20
Internal Link Dist (ft)			2065				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		159	3054	1130		300	3857	1406	173		377	193
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.14	0.50	0.07		0.57	0.32	0.01	0.08		0.08	0.04

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay (s/veh): 10.8

Intersection LOS: B

Intersection Capacity Utilization 60.3%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
16 s		78 s		13 s		23 s	
	Ø5		Ø6 (R)		Ø7		Ø8
16 s		78 s		13 s		23 s	



Lane Group	SBT	SBR
v/c Ratio		0.04
Control Delay (s/veh)		0.2
Queue Delay		0.0
Total Delay (s/veh)		0.2
LOS		A
Approach Delay (s/veh)	18.6	
Approach LOS	B	
Queue Length 50th (ft)		0
Queue Length 95th (ft)		0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		450
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.03
Intersection Summary		

Intersection

Int Delay, s/veh 0.3

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 14 4 8 362 557 34

Future Vol, veh/h 14 4 8 362 557 34

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 110 0 100 - - -

Veh in Median Storage, # 1 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 0 0 0 6 7 0

Mvmt Flow 15 4 9 393 605 37

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 838 321 642 0 - 0

Stage 1 624 - - - - -

Stage 2 214 - - - - -

Critical Hdwy 6.8 6.9 4.1 - - -

Critical Hdwy Stg 1 5.8 - - - - -

Critical Hdwy Stg 2 5.8 - - - - -

Follow-up Hdwy 3.5 3.3 2.2 - - -

Pot Cap-1 Maneuver 439 *942 1128 - - -

Stage 1 670 - - - - -

Stage 2 807 - - - - -

Platoon blocked, % 0 0 0 - - -

Mov Cap-1 Maneuver 435 *942 1128 - - -

Mov Cap-2 Maneuver 527 - - - - -

Stage 1 665 - - - - -

Stage 2 807 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 11.32 0.18 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h) 1128 - 527 942 - -

HCM Lane V/C Ratio 0.008 - 0.029 0.005 - -

HCM Ctrl Dly (s/v) 8.2 - 12 8.8 - -

HCM Lane LOS A - B A - -

HCM 95th %tile Q(veh) 0 - 0.1 0 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s

+: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	0	14	2	0	8	12	354	3	21	533	7
Future Vol, veh/h	7	0	14	2	0	8	12	354	3	21	533	7
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	50	0	25	0	6	0	10	7	0
Mvmt Flow	8	0	16	2	0	9	13	398	3	24	599	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1075	1078	303	773	1080	399	607	0	0	401	0	0
Stage 1	650	650	-	426	426	-	-	-	-	-	-	-
Stage 2	425	428	-	347	654	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	8.05	6.5	6.575	4.1	-	-	4.25	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.85	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	7.25	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.975	4.3	5.375	2.2	-	-	2.295	-	-
Pot Cap-1 Maneuver	265	286	*942	*382	285	593	1167	-	-	1107	-	-
Stage 1	613	591	-	*504	589	-	-	-	-	-	-	-
Stage 2	611	588	-	*782	588	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0		0	-	-		-	-
Mov Cap-1 Maneuver	252	277	*942	*363	276	593	1167	-	-	1107	-	-
Mov Cap-2 Maneuver	382	385	-	*422	387	-	-	-	-	-	-	-
Stage 1	600	578	-	*499	582	-	-	-	-	-	-	-
Stage 2	595	581	-	*752	575	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	10.8	11.64	0.26	0.31
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1167	-	-	382	942	422	593	1107	-	-
HCM Lane V/C Ratio	0.012	-	-	0.021	0.017	0.005	0.015	0.021	-	-
HCM Ctrl Dly (s/v)	8.1	-	-	14.6	8.9	13.6	11.2	8.3	-	-
HCM Lane LOS	A	-	-	B	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	0	0.1	-	-

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

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	2	25	5	0	5	22	319	31	34	434	64
Future Vol, veh/h	47	2	25	5	0	5	22	319	31	34	434	64
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	9	50	0	0	0	0	0	6	0	33	7	5
Mvmt Flow	52	2	27	5	0	5	24	351	34	37	477	70

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	951	985	477	969	1038	368	547	0	0	385	0	0
Stage 1	552	552	-	416	416	-	-	-	-	-	-	-
Stage 2	399	433	-	553	622	-	-	-	-	-	-	-
Critical Hdwy	7.19	7	6.2	7.1	6.5	6.2	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	6.19	6	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	6	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.45	3.3	3.5	4	3.3	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	232	198	677	232	216	682	1011	-	-	1023	-	-
Stage 1	557	468	-	618	595	-	-	-	-	-	-	-
Stage 2	613	508	-	571	485	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	216	186	677	208	203	682	1011	-	-	1023	-	-
Mov Cap-2 Maneuver	348	293	-	343	319	-	-	-	-	-	-	-
Stage 1	536	451	-	603	581	-	-	-	-	-	-	-
Stage 2	594	496	-	525	468	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	15.82		13.08		0.51		0.55	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1011	-	-	414 457	1023	-	-
HCM Lane V/C Ratio	0.024	-	-	0.197 0.024	0.037	-	-
HCM Ctrl Dly (s/v)	8.6	-	-	15.8 13.1	8.7	-	-
HCM Lane LOS	A	-	-	C B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7 0.1	0.1	-	-

Capacity Analysis Summary Sheets
Year 2031 No-Build Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	219	1061	31	6	289	1322	109	174	325	423	119
Future Volume (vph)	2	219	1061	31	6	289	1322	109	174	325	423	119
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3467	5250	1553	0	3370	5353	1599	1787	2000	1568	1787
Flt Permitted		0.950				0.950			0.340			0.145
Satd. Flow (perm)	0	3467	5250	1553	0	3370	5353	1599	640	2000	1568	273
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				58				87			235	
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	4%	4%	0%	4%	2%	1%	1%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	1129	33	0	313	1406	116	185	346	450	127
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	28.0	4.0	4.0	4.0	28.0	4.0	4.0	8.0	8.0	4.0
Minimum Split (s)	8.5	8.5	34.0	7.5	8.5	8.5	34.0	7.5	7.5	14.5	14.5	7.5
Total Split (s)	20.0	20.0	73.0	18.0	24.0	24.0	77.0	18.0	18.0	35.0	35.0	18.0
Total Split (%)	13.3%	13.3%	48.7%	12.0%	16.0%	16.0%	51.3%	12.0%	12.0%	23.3%	23.3%	12.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	2.0	2.0	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	5.5	6.5	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		14.3	70.0	90.0			17.9	73.6	92.3	45.9	29.9	43.3
Actuated g/C Ratio		0.10	0.47	0.60			0.12	0.49	0.62	0.31	0.20	0.29

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	218	192
Future Volume (vph)	218	192
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		204
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	232	204
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.5	14.5
Total Split (s)	35.0	35.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.5	6.5
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	27.6	27.6
Actuated g/C Ratio	0.18	0.18

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.71	0.46	0.03		0.78	0.54	0.11	0.61	0.87	0.91	0.62
Control Delay (s/veh)		78.1	28.4	0.9		75.9	24.0	3.2	48.0	80.0	52.1	50.2
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		78.1	28.4	0.9		75.9	24.0	3.2	48.0	80.0	52.1	50.2
LOS		E	C	A		E	C	A	D	E	D	D
Approach Delay (s/veh)			36.1				31.6			61.2		
Approach LOS			D				C			E		
Queue Length 50th (ft)		115	280	0		161	245	7	135	330	226	90
Queue Length 95th (ft)		163	324	5		213	284	25	205	#506	#442	144
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		358	2451	960		438	2626	1035	307	403	495	228
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.66	0.46	0.03		0.71	0.54	0.11	0.60	0.86	0.91	0.56

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 53 (35%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay (s/veh): 40.1

Intersection LOS: D

Intersection Capacity Utilization 82.0%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	73 s	18 s	35 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
20 s	77 s	18 s	35 s

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
v/c Ratio	0.63	0.44
Control Delay (s/veh)	64.7	9.5
Queue Delay	0.0	0.0
Total Delay (s/veh)	64.7	9.5
LOS	E	A
Approach Delay (s/veh)	41.4	
Approach LOS	D	
Queue Length 50th (ft)	211	0
Queue Length 95th (ft)	306	71
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	380	472
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.61	0.43
Intersection Summary		

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	34	1541	24	6	26	1621	26	70	2	107	29
Future Volume (vph)	8	34	1541	24	6	26	1621	26	70	2	107	29
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1763	5250	1615	0	1805	5353	1615	1805	2000	1615	1805
Flt Permitted		0.950				0.950			0.492			0.757
Satd. Flow (perm)	0	1763	5250	1615	0	1805	5353	1615	935	2000	1615	1438
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				55				55			113	
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				918			1071		
Travel Time (s)			32.5				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	4%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	1622	25	0	33	1706	27	74	2	113	31
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	90.0	20.0	17.0	17.0	90.0	20.0	20.0	23.0	23.0	20.0
Total Split (%)	11.3%	11.3%	60.0%	13.3%	11.3%	11.3%	60.0%	13.3%	13.3%	15.3%	15.3%	13.3%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		9.1	107.0	125.2			8.2	106.1	119.8	22.5	10.9	10.9
Actuated g/C Ratio		0.06	0.71	0.83			0.05	0.71	0.80	0.15	0.07	0.11

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	2	35
Future Volume (vph)	2	35
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		80
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.95	0.95
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2	37
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	23.0	23.0
Total Split (%)	15.3%	15.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	8.1	8.1
Actuated g/C Ratio	0.05	0.05

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.42	0.43	0.02		0.34	0.45	0.02	0.36	0.01	0.51	0.18
Control Delay (s/veh)		79.9	6.1	0.0		76.6	11.3	0.2	59.0	63.5	19.0	54.3
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		79.9	6.1	0.0		76.6	11.3	0.2	59.0	63.5	19.0	54.3
LOS		E	A	A		E	B	A	E	E	B	D
Approach Delay (s/veh)			8.0				12.3			35.1		
Approach LOS			A				B			D		
Queue Length 50th (ft)		42	154	0		32	267	0	64	2	0	26
Queue Length 95th (ft)		m73	178	m0		68	353	2	111	11	63	56
Internal Link Dist (ft)			2065				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		146	3745	1396		150	3787	1387	245	226	283	267
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.30	0.43	0.02		0.22	0.45	0.02	0.30	0.01	0.40	0.12

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 68 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay (s/veh): 11.8

Intersection LOS: B

Intersection Capacity Utilization 58.8%

ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64





Lane Group	SBT	SBR
v/c Ratio	0.02	0.23
Control Delay (s/veh)	67.5	3.3
Queue Delay	0.0	0.0
Total Delay (s/veh)	67.5	3.3
LOS	E	A
Approach Delay (s/veh)	27.7	
Approach LOS	C	
Queue Length 50th (ft)	2	0
Queue Length 95th (ft)	11	0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)	226	253
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.01	0.15
Intersection Summary		

Intersection

Int Delay, s/veh 1.6

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 112 31 29 779 414 120

Future Vol, veh/h 112 31 29 779 414 120

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 110 0 100 - - -

Veh in Median Storage, # 1 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 93 93 93 93 93 93

Heavy Vehicles, % 1 0 0 2 4 0

Mvmt Flow 120 33 31 838 445 129

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 991 287 574 0 - 0

Stage 1 510 - - - - -

Stage 2 481 - - - - -

Critical Hdwy 6.82 6.9 4.1 - - -

Critical Hdwy Stg 1 5.82 - - - - -

Critical Hdwy Stg 2 5.82 - - - - -

Follow-up Hdwy 3.51 3.3 2.2 - - -

Pot Cap-1 Maneuver 311 *976 1150 - - -

Stage 1 718 - - - - -

Stage 2 590 - - - - -

Platoon blocked, % 0 0 0 - - -

Mov Cap-1 Maneuver 302 *976 1150 - - -

Mov Cap-2 Maneuver 428 - - - - -

Stage 1 698 - - - - -

Stage 2 590 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 14.97 0.29 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h) 1150 - 428 976 - -

HCM Lane V/C Ratio 0.027 - 0.281 0.034 - -

HCM Ctrl Dly (s/v) 8.2 - 16.7 8.8 - -

HCM Lane LOS A - C A - -

HCM 95th %tile Q(veh) 0.1 - 1.1 0.1 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s

+: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	0	41	11	2	31	44	733	3	4	429	12
Future Vol, veh/h	42	0	41	11	2	31	44	733	3	4	429	12
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	9	0	10	0	2	33	25	3	0
Mvmt Flow	46	0	45	12	2	34	48	797	3	4	466	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1375	1377	240	1136	1382	798	479	0	0	800	0	0
Stage 1	482	482	-	894	894	-	-	-	-	-	-	-
Stage 2	893	896	-	242	488	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	7.435	6.5	6.35	4.1	-	-	4.475	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.235	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.635	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5855	4	3.395	2.2	-	-	2.4375	-	-
Pot Cap-1 Maneuver	141	170	*976	*207	169	369	1257	-	-	708	-	-
Stage 1	720	672	-	*322	362	-	-	-	-	-	-	-
Stage 2	339	362	-	*898	667	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	121	163	*976	*188	162	369	1257	-	-	708	-	-
Mov Cap-2 Maneuver	231	270	-	*265	268	-	-	-	-	-	-	-
Stage 1	716	668	-	*310	349	-	-	-	-	-	-	-
Stage 2	294	348	-	*852	663	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	16.74		16.79		0.45		0.09	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1257	-	-	231	976	265	369	708	-	-
HCM Lane V/C Ratio	0.038	-	-	0.198	0.046	0.053	0.091	0.006	-	-
HCM Ctrl Dly (s/v)	8	-	-	24.4	8.9	19.3	15.7	10.1	-	-
HCM Lane LOS	A	-	-	C	A	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.1	0.2	0.3	0	-	-

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

Intersection

Int Delay, s/veh 3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	1	51	24	2	29	40	668	4	5	434	42
Future Vol, veh/h	75	1	51	24	2	29	40	668	4	5	434	42
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	0	4	0	0	0	3	2	0	0	4	0
Mvmt Flow	84	1	57	27	2	33	45	751	4	6	488	47

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1340	1344	488	1342	1389	753	535	0	0	755	0	0
Stage 1	499	499	-	843	843	-	-	-	-	-	-	-
Stage 2	842	845	-	499	546	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.24	7.1	6.5	6.2	4.13	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.336	3.5	4	3.3	2.227	-	-	2.2	-	-
Pot Cap-1 Maneuver	107	126	654	109	116	413	1011	-	-	865	-	-
Stage 1	614	569	-	361	383	-	-	-	-	-	-	-
Stage 2	358	382	-	619	535	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	93	120	654	94	111	413	1011	-	-	865	-	-
Mov Cap-2 Maneuver	223	251	-	229	240	-	-	-	-	-	-	-
Stage 1	610	565	-	345	366	-	-	-	-	-	-	-
Stage 2	313	365	-	560	532	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	26.92		20.07		0.49		0.1	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1011	-	-	304 300	865	-	-
HCM Lane V/C Ratio	0.044	-	-	0.47 0.206	0.006	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	26.9 20.1	9.2	-	-
HCM Lane LOS	A	-	-	D C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.4 0.8	0	-	-

Capacity Analysis Summary Sheets
Year 2031 No-Build Saturday Midday Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	193	786	56	2	205	751	114	109	197	228	149
Future Volume (vph)	4	193	786	56	2	205	751	114	109	197	228	149
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3468	5406	1615	0	3434	5406	1583	1805	1980	1599	1787
Flt Permitted		0.950				0.950			0.421			0.374
Satd. Flow (perm)	0	3468	5406	1615	0	3434	5406	1583	800	1980	1599	704
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				73				121			243	
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				2145			538		
Travel Time (s)			31.8				32.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	1%	0%	0%	2%	1%	2%	0%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	836	60	0	220	799	121	116	210	243	159
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	25.0	4.0	4.0	4.0	25.0	4.0	4.0	8.0	8.0	4.0
Minimum Split (s)	8.5	8.5	31.0	7.5	8.5	8.5	31.0	7.5	7.5	14.5	14.5	7.5
Total Split (s)	18.0	18.0	55.0	15.0	22.0	22.0	59.0	15.0	15.0	28.0	28.0	15.0
Total Split (%)	15.0%	15.0%	45.8%	12.5%	18.3%	18.3%	49.2%	12.5%	12.5%	23.3%	23.3%	12.5%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	2.0	2.0	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	6.5	6.5	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		11.9	56.1	72.3			13.0	57.1	74.6	32.2	18.9	34.8
Actuated g/C Ratio		0.10	0.47	0.60			0.11	0.48	0.62	0.27	0.16	0.29

25-164 - Commercial Dev. St. Charles
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Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	207	166
Future Volume (vph)	207	166
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	1980	1599
Flt Permitted		
Satd. Flow (perm)	1980	1599
Right Turn on Red		Yes
Satd. Flow (RTOR)		177
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	1%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	220	177
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.5	14.5
Total Split (s)	28.0	28.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.5	6.5
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	20.2	20.2
Actuated g/C Ratio	0.17	0.17

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Year 2031 N.B. Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.61	0.33	0.06		0.59	0.31	0.12	0.39	0.67	0.53	0.52
Control Delay (s/veh)		59.3	21.5	2.0		58.2	17.8	1.3	33.8	58.4	9.9	37.3
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		59.3	21.5	2.0		58.2	17.8	1.3	33.8	58.4	9.9	37.3
LOS		E	C	A		E	B	A	C	E	A	D
Approach Delay (s/veh)			27.6				23.8			32.7		
Approach LOS			C				C			C		
Queue Length 50th (ft)		80	154	0		90	121	0	63	152	0	89
Queue Length 95th (ft)		120	196	15		130	126	12	111	233	71	148
Internal Link Dist (ft)			2017				2065			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		390	2525	1018		500	2574	1035	319	354	485	314
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.54	0.33	0.06		0.44	0.31	0.12	0.36	0.59	0.50	0.51

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 31 (26%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay (s/veh): 28.6

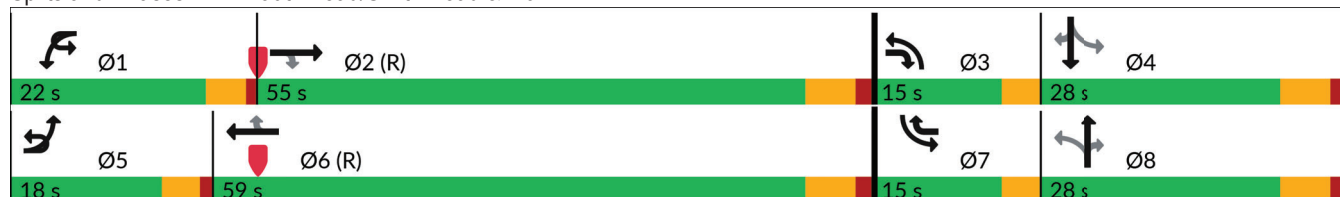
Intersection LOS: C

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

12/08/2025



Lane Group	SBT	SBR
v/c Ratio	0.66	0.43
Control Delay (s/veh)	56.5	9.5
Queue Delay	0.0	0.0
Total Delay (s/veh)	56.5	9.5
LOS	E	A
Approach Delay (s/veh)	36.1	
Approach LOS	D	
Queue Length 50th (ft)	156	0
Queue Length 95th (ft)	245	61
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	360	435
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.61	0.41
Intersection Summary		

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	33	1087	35	7	29	1035	26	56	2	111	16
Future Volume (vph)	8	33	1087	35	7	29	1035	26	56	2	111	16
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1761	5406	1615	0	1805	5406	1615	1805	2000	1615	1805
Flt Permitted		0.950				0.950			0.497			0.757
Satd. Flow (perm)	0	1761	5406	1615	0	1805	5406	1615	944	2000	1615	1438
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				68				68			114	
Link Speed (mph)			45				45			30		
Link Distance (ft)			2145				918			1071		
Travel Time (s)			32.5				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	1121	36	0	37	1067	27	58	2	114	16
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	70.0	15.0	15.0	15.0	68.0	15.0	15.0	20.0	20.0	15.0
Total Split (%)	14.2%	14.2%	58.3%	12.5%	12.5%	12.5%	56.7%	12.5%	12.5%	16.7%	16.7%	12.5%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		8.3	83.4	99.3			7.9	80.8	93.2	18.6	10.1	14.1
Actuated g/C Ratio		0.07	0.70	0.83			0.07	0.67	0.78	0.16	0.08	0.12

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Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	1	32
Future Volume (vph)	1	32
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		100
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.97	0.97
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1	33
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	20.0	20.0
Total Split (%)	16.7%	16.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	8.3	8.3
Actuated g/C Ratio	0.07	0.07

25-164 - Commercial Dev. St. Charles
Year 2031 N.B. Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

12/08/2025

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.35	0.30	0.03		0.31	0.29	0.02	0.27	0.01	0.48	0.09
Control Delay (s/veh)		58.1	6.5	0.2		59.5	9.8	0.0	44.3	48.5	15.9	39.9
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		58.1	6.5	0.2		59.5	9.8	0.0	44.3	48.5	15.9	39.9
LOS		E	A	A		E	A	A	D	D	B	D
Approach Delay (s/veh)			8.1				11.2			25.7		
Approach LOS			A				B			C		
Queue Length 50th (ft)		34	81	0		28	131	0	38	1	0	10
Queue Length 95th (ft)		m66	131	m1		63	186	0	74	10	55	29
Internal Link Dist (ft)			2065				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		183	3756	1368		157	3639	1334	234	233	289	251
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.23	0.30	0.03		0.24	0.29	0.02	0.25	0.01	0.39	0.06

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 34 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay (s/veh): 10.8

Intersection LOS: B

Intersection Capacity Utilization 50.6%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
15 s		70 s		15 s		20 s	
	Ø5		Ø6 (R)		Ø7		Ø8
17 s		68 s		15 s		20 s	



Lane Group	SBT	SBR
v/c Ratio	0.01	0.16
Control Delay (s/veh)	52.0	1.7
Queue Delay	0.0	0.0
Total Delay (s/veh)	52.0	1.7
LOS	D	A
Approach Delay (s/veh)	14.9	
Approach LOS	B	
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	7	0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)	233	276
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.00	0.12
Intersection Summary		

Intersection

Int Delay, s/veh 2.4

Movement EBL EBR NBL NBT SBT SBRLane Configurations 

Traffic Vol, veh/h 138 48 27 391 314 148

Future Vol, veh/h 138 48 27 391 314 148

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 110 0 100 - - -

Veh in Median Storage, # 1 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 93 93 93 93 93 93

Heavy Vehicles, % 0 0 0 2 2 1

Mvmt Flow 148 52 29 420 338 159

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 685 248 497 0 - 0

Stage 1 417 - - - - -

Stage 2 268 - - - - -

Critical Hdwy 6.8 6.9 4.1 - - -

Critical Hdwy Stg 1 5.8 - - - - -

Critical Hdwy Stg 2 5.8 - - - - -

Follow-up Hdwy 3.5 3.3 2.2 - - -

Pot Cap-1 Maneuver 459 948 1172 - - -

Stage 1 739 - - - - -

Stage 2 758 - - - - -

Platoon blocked, % 0 0 0 - - -

Mov Cap-1 Maneuver 448 948 1172 - - -

Mov Cap-2 Maneuver 541 - - - - -

Stage 1 721 - - - - -

Stage 2 758 - - - - -

Approach EB NB SB

HCM Ctrl Dly, s/v 12.82 0.53 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 EBLn2 SBT SBR

Capacity (veh/h) 1172 - 541 948 - -

HCM Lane V/C Ratio 0.025 - 0.274 0.054 - -

HCM Ctrl Dly (s/v) 8.2 - 14.1 9 - -

HCM Lane LOS A - B A - -

HCM 95th %tile Q(veh) 0.1 - 1.1 0.2 - -

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	1	32	2	0	2	37	374	0	1	348	14
Future Vol, veh/h	41	1	32	2	0	2	37	374	0	1	348	14
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	3	0	0	50	0	11	0	0	2	0
Mvmt Flow	45	1	35	2	0	2	40	407	0	1	378	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	875	875	197	679	883	407	393	0	0	407	0	0
Stage 1	388	388	-	487	487	-	-	-	-	-	-	-
Stage 2	487	487	-	192	396	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.945	7.3	6.5	6.95	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.3	3.285	3.5	4	3.775	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	324	344	*991	*455	340	534	1317	-	-	1163	-	-
Stage 1	773	712	-	*566	554	-	-	-	-	-	-	-
Stage 2	566	554	-	*942	707	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0		0	-	-		-	-
Mov Cap-1 Maneuver	313	333	*991	*424	329	534	1317	-	-	1163	-	-
Mov Cap-2 Maneuver	426	425	-	*476	418	-	-	-	-	-	-	-
Stage 1	773	712	-	*548	537	-	-	-	-	-	-	-
Stage 2	546	537	-	*907	706	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.97	12.18	0.7	0.02
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1317	-	-	426	952	476	534	1163	-	-
HCM Lane V/C Ratio	0.031	-	-	0.105	0.038	0.005	0.004	0.001	-	-
HCM Ctrl Dly (s/v)	7.8	-	-	14.4	8.9	12.6	11.8	8.1	-	-
HCM Lane LOS	A	-	-	B	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0	0	0	-	-

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

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	↗
Traffic Vol, veh/h	37	0	49	17	0	24	36	342	4	3	337	43
Future Vol, veh/h	37	0	49	17	0	24	36	342	4	3	337	43
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	0	4	0	0	0	0	1	0	0	1	5
Mvmt Flow	40	0	53	18	0	26	39	372	4	3	366	47

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	823	827	366	825	872	374	413	0	0	376	0	0
Stage 1	373	373	-	452	452	-	-	-	-	-	-	-
Stage 2	450	454	-	373	420	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.24	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.336	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	300	308	754	302	287	677	1158	-	-	1193	-	-
Stage 1	712	650	-	591	574	-	-	-	-	-	-	-
Stage 2	587	573	-	718	615	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	278	297	754	270	276	677	1158	-	-	1193	-	-
Mov Cap-2 Maneuver	403	405	-	395	383	-	-	-	-	-	-	-
Stage 1	710	648	-	571	554	-	-	-	-	-	-	-
Stage 2	545	553	-	665	613	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	12.91		12.53		0.77		0.06	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1158	-	-	549 523	1193	-	-
HCM Lane V/C Ratio	0.034	-	-	0.17 0.085	0.003	-	-
HCM Ctrl Dly (s/v)	8.2	-	-	12.9 12.5	8	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6 0.3	0	-	-

Capacity Analysis Summary Sheets
Year 2031 Total Projected Weekday Morning Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	2	61	1188	99	318	827	53	118	123	234	168	238
Future Volume (vph)	2	61	1188	99	318	827	53	118	123	234	168	238
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		255		200	300		190	200		580	195	
Storage Lanes		2		1	2		1	1		1	1	
Taper Length (ft)		300			300			175			175	
Lane Util. Factor	0.91	0.97	0.91	1.00	0.97	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	3249	5103	1553	3183	5056	1583	1805	1961	1509	1770	1961
Flt Permitted		0.950			0.950			0.231			0.577	
Satd. Flow (perm)	0	3249	5103	1553	3183	5056	1583	439	1961	1509	1075	1961
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				105			67			60		
Link Speed (mph)			45			45			40			40
Link Distance (ft)			2097			738			538			1315
Travel Time (s)			31.8			11.2			9.2			22.4
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	8%	7%	4%	10%	8%	2%	0%	2%	7%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	70	1320	110	353	919	59	131	137	260	187	264
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	5	5	2	3	1	6	7	3	8	1!	7	4
Permitted Phases				2			6	8		8	4	
Detector Phase	5	5	2	3	1	6	7	3	8	1	7	4
Switch Phase												
Minimum Initial (s)	4.0	4.0	28.0	4.0	4.0	28.0	4.0	4.0	8.0	4.0	4.0	8.0
Minimum Split (s)	8.5	8.5	34.0	7.5	8.5	34.0	7.5	7.5	14.5	8.5	7.5	14.5
Total Split (s)	18.0	18.0	67.0	13.0	23.0	72.0	13.0	13.0	27.0	23.0	13.0	27.0
Total Split (%)	13.8%	13.8%	51.5%	10.0%	17.7%	55.4%	10.0%	10.0%	20.8%	17.7%	10.0%	20.8%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.5	0.0	0.0	2.0	1.0	0.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.5	4.5	3.5	6.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	C-Min	None	None	None	None	None	None
Act Effect Green (s)		8.2	62.5	77.7	17.6	74.0	89.5	32.2	19.9	44.0	32.6	20.1
Actuated g/C Ratio		0.06	0.48	0.60	0.14	0.57	0.69	0.25	0.15	0.34	0.25	0.15

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings
1: Kautz Road/Smith Road & Il 64

04/02/2026

Lane Group	SBR
Lane Configurations	↗
Traffic Volume (vph)	159
Future Volume (vph)	159
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1509
Flt Permitted	
Satd. Flow (perm)	1509
Right Turn on Red	Yes
Satd. Flow (RTOR)	177
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.90
Growth Factor	100%
Heavy Vehicles (%)	7%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	177
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.5
Total Split (s)	27.0
Total Split (%)	20.8%
Yellow Time (s)	4.5
All-Red Time (s)	2.0
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.5
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
Act Effct Green (s)	20.1
Actuated g/C Ratio	0.15

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
v/c Ratio		0.34	0.54	0.11	0.82	0.32	0.05	0.64	0.46	0.47	0.58	0.87
Control Delay (s/veh)		62.4	25.0	2.6	65.8	17.4	1.4	51.8	55.3	28.4	47.3	80.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		62.4	25.0	2.6	65.8	17.4	1.4	51.8	55.3	28.4	47.3	80.9
LOS		E	C	A	E	B	A	D	E	C	D	F
Approach Delay (s/veh)			25.1			29.5			41.2			51.2
Approach LOS			C			C			D			D
Queue Length 50th (ft)		31	301	2	163	150	0	86	108	136	129	223
Queue Length 95th (ft)		57	350	27	#233	232	11	142	176	223	201	#374
Internal Link Dist (ft)			2017			658			458			1235
Turn Bay Length (ft)		255		200	300		190	200		580	195	
Base Capacity (vph)		337	2451	973	452	2877	1110	209	309	560	320	309
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.21	0.54	0.11	0.78	0.32	0.05	0.63	0.44	0.46	0.58	0.85

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 32 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay (s/veh): 32.8

Intersection LOS: C

Intersection Capacity Utilization 72.0%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

! Phase conflict between lane groups.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64





Lane Group	SBR
v/c Ratio	0.46
Control Delay (s/veh)	11.0
Queue Delay	0.0
Total Delay (s/veh)	11.0
LOS	B
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	70
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	387
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.46
Intersection Summary	

Lanes, Volumes, Timings

2: Pheasant Run & II 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	17	1408	25	7	278	1093	18	66	0	80	7
Future Volume (vph)	3	17	1408	25	7	278	1093	18	66	0	80	7
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1805	5103	1509	0	1616	5009	1615	1543	2000	1242	1805
Flt Permitted		0.950				0.950			0.482			0.833
Satd. Flow (perm)	0	1805	5103	1509	0	1616	5009	1615	783	2000	1242	1583
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				63				63			244	
Link Speed (mph)			45				45			30		
Link Distance (ft)			606				3118			1071		
Travel Time (s)			9.2				47.2			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	7%	7%	0%	12%	9%	0%	17%	0%	30%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	22	1582	28	0	320	1228	20	74	0	90	8
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt		Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	16.0	16.0	78.0	13.0	16.0	16.0	78.0	13.0	13.0	23.0	23.0	13.0
Total Split (%)	12.3%	12.3%	60.0%	10.0%	12.3%	12.3%	60.0%	10.0%	10.0%	17.7%	17.7%	10.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		7.2	72.0	89.2			26.4	95.4	107.5	17.3	9.1	11.3
Actuated g/C Ratio		0.06	0.55	0.69			0.20	0.73	0.83	0.13	0.07	0.09

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Weekday Morning Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

04/02/2026



Lane Group	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	0	12
Future Volume (vph)	0	12
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		232
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.89	0.89
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	0	13
Turn Type		Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	23.0	23.0
Total Split (%)	17.7%	17.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)		8.0
Actuated g/C Ratio		0.06

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.22	0.56	0.03		0.98	0.33	0.01	0.44		0.29	0.05
Control Delay (s/veh)		70.1	13.7	0.0		96.0	7.8	0.0	57.2		2.3	47.4
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)		70.1	13.7	0.0		96.0	7.8	0.0	57.2		2.3	47.4
LOS		E	B	A		F	A	A	E		A	D
Approach Delay (s/veh)			14.3				25.7			27.1		
Approach LOS			B				C			C		
Queue Length 50th (ft)		19	143	0		~328	155	0	64		0	7
Queue Length 95th (ft)		m37	165	m0		#567	208	0	114		0	20
Internal Link Dist (ft)			526				3038			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		159	2826	1062		328	3674	1386	173		374	185
Starvation Cap Reductn		0	0	0		0	0	0	0		0	0
Spillback Cap Reductn		0	0	0		0	0	0	0		0	0
Storage Cap Reductn		0	0	0		0	0	0	0		0	0
Reduced v/c Ratio		0.14	0.56	0.03		0.98	0.33	0.01	0.43		0.24	0.04

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 59 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay (s/veh): 20.2

Intersection LOS: C

Intersection Capacity Utilization 68.7%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
16 s		78 s		13 s		23 s	
	Ø5		Ø6 (R)		Ø7		Ø8
16 s		78 s		13 s		23 s	



Lane Group	SBT	SBR
v/c Ratio		0.04
Control Delay (s/veh)		0.3
Queue Delay		0.0
Total Delay (s/veh)		0.3
LOS		A
Approach Delay (s/veh)	18.2	
Approach LOS	B	
Queue Length 50th (ft)		0
Queue Length 95th (ft)		0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)		412
Starvation Cap Reductn		0
Spillback Cap Reductn		0
Storage Cap Reductn		0
Reduced v/c Ratio		0.03
Intersection Summary		

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	0	4	44	0	110	8	351	47	78	540	34
Future Vol, veh/h	14	0	4	44	0	110	8	351	47	78	540	34
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	110	-	0	-	-	0	100	-	120	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	0	0	0	6	0	0	7	0
Mvmt Flow	15	0	4	48	0	120	9	382	51	85	587	37

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	1174	-	312	862	1192	382	624	0	0	433	0	0
Stage 1	775	-	-	399	399	-	-	-	-	-	-	-
Stage 2	399	-	-	463	793	-	-	-	-	-	-	-
Critical Hdwy	7.3	-	6.9	7.3	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	-	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	220	0	*942	392	240	670	1148	-	-	1138	-	-
Stage 1	505	0	-	631	606	-	-	-	-	-	-	-
Stage 2	631	0	-	819	499	-	-	-	-	-	-	-
Platoon blocked, %	0		0	0	0		0	-	-		-	-
Mov Cap-1 Maneuver	166	-	*942	358	220	670	1148	-	-	1138	-	-
Mov Cap-2 Maneuver	280	-	-	472	333	-	-	-	-	-	-	-
Stage 1	467	-	-	626	601	-	-	-	-	-	-	-
Stage 2	515	-	-	754	462	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	16.43	12.09	0.16	1.01
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1148	-	-	280	942	472	670	1138	-	-
HCM Lane V/C Ratio	0.008	-	-	0.054	0.005	0.101	0.178	0.075	-	-
HCM Ctrl Dly (s/v)	8.2	-	-	18.6	8.8	13.5	11.5	8.4	-	-
HCM Lane LOS	A	-	-	C	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0.3	0.6	0.2	-	-

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

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	0	14	2	0	8	12	391	3	21	560	7
Future Vol, veh/h	7	0	14	2	0	8	12	391	3	21	560	7
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	50	0	25	0	6	0	10	7	0
Mvmt Flow	8	0	16	2	0	9	13	439	3	24	629	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1147	1150	319	830	1152	441	637	0	0	443	0	0
Stage 1	680	680	-	468	468	-	-	-	-	-	-	-
Stage 2	466	470	-	362	684	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	8.05	6.5	6.575	4.1	-	-	4.25	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.85	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	7.25	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.975	4.3	5.375	2.2	-	-	2.295	-	-
Pot Cap-1 Maneuver	232	256	*942	*341	255	560	1133	-	-	1068	-	-
Stage 1	585	570	-	*476	565	-	-	-	-	-	-	-
Stage 2	581	564	-	*782	568	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	220	248	*942	*324	247	560	1133	-	-	1068	-	-
Mov Cap-2 Maneuver	354	362	-	*394	363	-	-	-	-	-	-	-
Stage 1	572	558	-	*470	558	-	-	-	-	-	-	-
Stage 2	564	557	-	*752	555	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.06	12.06	0.24	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1133	-	-	354	942	394	560	1068	-	-
HCM Lane V/C Ratio	0.012	-	-	0.022	0.017	0.006	0.016	0.022	-	-
HCM Ctrl Dly (s/v)	8.2	-	-	15.4	8.9	14.2	11.5	8.4	-	-
HCM Lane LOS	A	-	-	C	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	0	0.1	-	-

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

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	47	2	25	5	0	5	22	355	31	34	461	64
Future Vol, veh/h	47	2	25	5	0	5	22	355	31	34	461	64
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	9	50	0	0	0	0	0	6	0	33	7	5
Mvmt Flow	52	2	27	5	0	5	24	390	34	37	507	70

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1020	1054	507	1038	1107	407	577	0	0	424	0	0
Stage 1	581	581	-	455	455	-	-	-	-	-	-	-
Stage 2	438	473	-	582	652	-	-	-	-	-	-	-
Critical Hdwy	7.19	7	6.2	7.1	6.5	6.2	4.1	-	-	4.43	-	-
Critical Hdwy Stg 1	6.19	6	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.19	6	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.581	4.45	3.3	3.5	4	3.3	2.2	-	-	2.497	-	-
Pot Cap-1 Maneuver	202	174	644	201	191	648	979	-	-	987	-	-
Stage 1	530	449	-	588	572	-	-	-	-	-	-	-
Stage 2	584	486	-	544	467	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	187	163	644	180	179	648	979	-	-	987	-	-
Mov Cap-2 Maneuver	322	273	-	318	300	-	-	-	-	-	-	-
Stage 1	510	432	-	574	558	-	-	-	-	-	-	-
Stage 2	564	474	-	499	449	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	16.82		13.66		0.47		0.53	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	979	-	-	385	427	987	-
HCM Lane V/C Ratio	0.025	-	-	0.211	0.026	0.038	-
HCM Ctrl Dly (s/v)	8.8	-	-	16.8	13.7	8.8	-
HCM Lane LOS	A	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.1	0.1	-

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1495	95	0	1198	0	50
Future Vol, veh/h	1495	95	0	1198	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	2	0	0
Mvmt Flow	1574	100	0	1261	0	53

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 787
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.1
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.9
Pot Cap-1 Maneuver	-	-	0 - 0 *688
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	- - - 0
Mov Cap-1 Maneuver	-	-	- - - *688
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.67
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	688	-	-	-
HCM Lane V/C Ratio	0.077	-	-	-
HCM Ctrl Dly (s/v)	10.7	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes

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

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1447	98	0	1198	0	50
Future Vol, veh/h	1447	98	0	1198	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	2	2	0	0
Mvmt Flow	1523	103	0	1261	0	53

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 762
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.1
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.9
Pot Cap-1 Maneuver	-	-	0 - 0 *701
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	- - - 0
Mov Cap-1 Maneuver	-	-	- - - *701
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.55
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	701	-	-	-
HCM Lane V/C Ratio	0.075	-	-	-
HCM Ctrl Dly (s/v)	10.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes

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

Capacity Analysis Summary Sheets
Year 2031 Total Projected Weekday Evening Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	2	219	1196	58	6	333	1362	125	280	353	414	157
Future Volume (vph)	2	219	1196	58	6	333	1362	125	280	353	414	157
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3467	5250	1568	0	3369	5353	1599	1787	2000	1568	1787
Flt Permitted		0.950				0.950			0.344			0.140
Satd. Flow (perm)	0	3467	5250	1568	0	3369	5353	1599	647	2000	1568	263
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				62				77			53	
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				759			538		
Travel Time (s)			31.8				11.5			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	4%	3%	0%	4%	2%	1%	1%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	1272	62	0	360	1449	133	298	376	440	167
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt
Protected Phases	5	5	2	3	1!	1	6	7	3	8	1!	7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	1	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	28.0	4.0	4.0	4.0	28.0	4.0	4.0	8.0	4.0	4.0
Minimum Split (s)	8.5	8.5	34.0	7.5	8.5	8.5	34.0	7.5	7.5	14.5	8.5	7.5
Total Split (s)	20.0	20.0	73.0	18.0	24.0	24.0	77.0	18.0	18.0	35.0	24.0	18.0
Total Split (%)	13.3%	13.3%	48.7%	12.0%	16.0%	16.0%	51.3%	12.0%	12.0%	23.3%	16.0%	12.0%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.0	0.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5		4.5	6.0	3.5	3.5	5.0	4.5	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		14.3	68.1	88.6		18.9	72.6	92.6	46.1	30.1	54.0	45.0
Actuated g/C Ratio		0.10	0.45	0.59		0.13	0.48	0.62	0.31	0.20	0.36	0.30

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	220	192
Future Volume (vph)	220	192
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		198
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	234	204
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.5	14.5
Total Split (s)	35.0	35.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	28.5	28.5
Actuated g/C Ratio	0.19	0.19

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Weekday Evening Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.71	0.53	0.07		0.85	0.56	0.13	0.96	0.94	0.74	0.76
Control Delay (s/veh)		78.1	30.8	3.1		81.0	24.9	4.2	87.4	90.0	44.9	60.1
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		78.1	30.8	3.1		81.0	24.9	4.2	87.4	90.0	44.9	60.1
LOS		E	C	A		F	C	A	F	F	D	E
Approach Delay (s/veh)			36.7				33.9			71.5		
Approach LOS			D				C			E		
Queue Length 50th (ft)		117	339	0		189	269	12	237	366	339	122
Queue Length 95th (ft)		165	386	21		#264	334	31	#346	#566	481	#208
Internal Link Dist (ft)			2017				679			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		358	2382	951		437	2592	1022	309	402	604	226
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.66	0.53	0.07		0.82	0.56	0.13	0.96	0.94	0.73	0.74

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 53 (35%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay (s/veh): 44.0

Intersection LOS: D

Intersection Capacity Utilization 83.2%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

! Phase conflict between lane groups.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64

 Ø1	 Ø2 (R)	 Ø3	 Ø4
24 s	73 s	18 s	35 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
20 s	77 s	18 s	35 s

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	SBT	SBR
v/c Ratio	0.62	0.44
Control Delay (s/veh)	63.4	10.3
Queue Delay	0.0	0.0
Total Delay (s/veh)	63.4	10.3
LOS	E	B
Approach Delay (s/veh)	44.6	
Approach LOS	D	
Queue Length 50th (ft)	212	5
Queue Length 95th (ft)	306	76
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	386	471
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.61	0.43
Intersection Summary		

Lanes, Volumes, Timings

2: Pheasant Run & II 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	8	34	1645	51	174	1634	26	157	2	177	29	2
Future Volume (vph)	8	34	1645	51	174	1634	26	157	2	177	29	2
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		190		195	200		200	100		100	80	
Storage Lanes		1		1	1		1	1		1	1	
Taper Length (ft)		200			200			100			115	
Lane Util. Factor	0.91	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850			0.850			0.850		
Flt Protected		0.950			0.950			0.950			0.950	
Satd. Flow (prot)	0	1763	5250	1615	1805	5353	1615	1805	2000	1615	1805	2000
Flt Permitted		0.950			0.950			0.492			0.757	
Satd. Flow (perm)	0	1763	5250	1615	1805	5353	1615	935	2000	1615	1438	2000
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)				55			55			186		
Link Speed (mph)			45			45			30			30
Link Distance (ft)			526			918			1071			404
Travel Time (s)			8.0			13.9			24.3			9.2
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	4%	0%	0%	2%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	1732	54	183	1720	27	165	2	186	31	2
Turn Type	Prot	Prot	NA	pm+ov	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	5	5	2	3	1	6	7	3	8		7	4
Permitted Phases				2			6	8		8	4	
Detector Phase	5	5	2	3	1	6	7	3	8	8	7	4
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0	8.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5	14.0
Total Split (s)	17.0	17.0	90.0	20.0	17.0	90.0	20.0	20.0	23.0	23.0	20.0	23.0
Total Split (%)	11.3%	11.3%	60.0%	13.3%	11.3%	60.0%	13.3%	13.3%	15.3%	15.3%	13.3%	15.3%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5	4.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0	1.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5	4.5	6.0	3.5	3.5	6.0	6.0	3.5	6.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	C-Min	None	None	None	None	None	None
Act Effect Green (s)		9.1	85.7	107.0	23.6	102.2	115.8	26.7	14.9	14.9	16.2	8.1
Actuated g/C Ratio		0.06	0.57	0.71	0.16	0.68	0.77	0.18	0.10	0.10	0.11	0.05

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Weekday Evening Peak Hour

Synchro 12 Report



Lane Group	SBR
Lane Configurations	↗
Traffic Volume (vph)	35
Future Volume (vph)	35
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	80
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	0.95
Growth Factor	100%
Heavy Vehicles (%)	0%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	37
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Detector Phase	4
Switch Phase	
Minimum Initial (s)	8.0
Minimum Split (s)	14.0
Total Split (s)	23.0
Total Split (%)	15.3%
Yellow Time (s)	4.5
All-Red Time (s)	1.5
Lost Time Adjust (s)	0.0
Total Lost Time (s)	6.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	None
Act Effct Green (s)	8.1
Actuated g/C Ratio	0.05

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
v/c Ratio		0.42	0.58	0.05	0.64	0.47	0.02	0.65	0.01	0.57	0.18	0.02
Control Delay (s/veh)		84.3	12.7	0.7	71.6	13.2	0.2	66.8	60.5	15.3	51.4	67.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		84.3	12.7	0.7	71.6	13.2	0.2	66.8	60.5	15.3	51.4	67.5
LOS		F	B	A	E	B	A	E	E	B	D	E
Approach Delay (s/veh)			14.0			18.6			39.6			26.4
Approach LOS			B			B			D			C
Queue Length 50th (ft)		42	223	0	173	311	0	143	2	0	25	2
Queue Length 95th (ft)		m76	244	m4	#280	378	2	219	11	76	55	11
Internal Link Dist (ft)			446			838			991			324
Turn Bay Length (ft)		190		195	200		200	100		100	80	
Base Capacity (vph)		146	2999	1179	284	3648	1350	267	226	347	280	226
Starvation Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.30	0.58	0.05	0.64	0.47	0.02	0.62	0.01	0.54	0.11	0.01

Intersection Summary

Area Type: Other

Cycle Length: 150

Actuated Cycle Length: 150

Offset: 68 (45%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay (s/veh): 18.5

Intersection LOS: B

Intersection Capacity Utilization 71.2%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
17 s		90 s		20 s		23 s	
	Ø5		Ø6 (R)		Ø7		Ø8
17 s		90 s		20 s		23 s	



Lane Group	SBR
v/c Ratio	0.23
Control Delay (s/veh)	3.2
Queue Delay	0.0
Total Delay (s/veh)	3.2
LOS	A
Approach Delay (s/veh)	
Approach LOS	
Queue Length 50th (ft)	0
Queue Length 95th (ft)	0
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	253
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.15
Intersection Summary	

Intersection												
Int Delay, s/veh	32.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	112	0	31	56	0	171	29	760	59	85	402	120
Future Vol, veh/h	112	0	31	56	0	171	29	760	59	85	402	120
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	110	-	0	-	-	0	100	-	120	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, %	1	2	0	0	0	0	0	2	0	0	4	0
Mvmt Flow	120	0	33	60	0	184	31	817	63	91	432	129

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	1559	-	281	1278	1624	817	561	0	0	881	0	0
Stage 1	680	-	-	880	880	-	-	-	-	-	-	-
Stage 2	880	-	-	399	744	-	-	-	-	-	-	-
Critical Hdwy	7.315	-	6.9	7.3	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.515	-	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.115	-	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5095	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 97	0	986	163	115	379	1143	-	-	776	-	-
Stage 1	514	0	-	345	368	-	-	-	-	-	-	-
Stage 2	343	0	-	782	489	-	-	-	-	-	-	-
Platoon blocked, %	0		0	0	0		0	-	-		-	-
Mov Cap-1 Maneuver	~ 43	-	986	135	98	379	1143	-	-	776	-	-
Mov Cap-2 Maneuver	~ 71	-	-	254	217	-	-	-	-	-	-	-
Stage 1	454	-	-	335	358	-	-	-	-	-	-	-
Stage 2	172	-	-	667	431	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Ctrl Dly, s/v	\$ 368.59		23.2		0.28		1.44	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1143	-	-	71	986	254	379	776	-	-
HCM Lane V/C Ratio	0.027	-	-	1.705	0.034	0.237	0.485	0.118	-	-
HCM Ctrl Dly (s/v)	8.2	-	-	\$ 468.2	8.8	23.5	23.1	10.3	-	-
HCM Lane LOS	A	-	-	F	A	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	10.5	0.1	0.9	2.6	0.4	-	-

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

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	0	41	11	2	31	44	773	3	4	473	12
Future Vol, veh/h	42	0	41	11	2	31	44	773	3	4	473	12
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	9	0	10	0	2	33	25	3	0
Mvmt Flow	46	0	45	12	2	34	48	840	3	4	514	13

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1466	1468	264	1203	1473	842	527	0	0	843	0	0
Stage 1	529	529	-	938	938	-	-	-	-	-	-	-
Stage 2	937	939	-	266	536	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.9	7.435	6.5	6.35	4.1	-	-	4.475	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.235	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.635	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5855	4	3.395	2.2	-	-	2.4375	-	-
Pot Cap-1 Maneuver	122	151	*962	*189	150	348	1225	-	-	679	-	-
Stage 1	698	653	-	*305	346	-	-	-	-	-	-	-
Stage 2	320	345	-	*885	649	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	104	144	*962	*172	143	348	1225	-	-	679	-	-
Mov Cap-2 Maneuver	214	254	-	*249	253	-	-	-	-	-	-	-
Stage 1	693	649	-	*293	332	-	-	-	-	-	-	-
Stage 2	276	332	-	*839	645	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	17.71	17.58	0.43	0.08
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1225	-	-	214	962	250	348	679	-	-
HCM Lane V/C Ratio	0.039	-	-	0.213	0.046	0.057	0.097	0.006	-	-
HCM Ctrl Dly (s/v)	8.1	-	-	26.3	8.9	20.3	16.4	10.3	-	-
HCM Lane LOS	A	-	-	D	A	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	0.1	0.2	0.3	0	-	-

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

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	75	1	51	24	2	29	40	708	4	5	478	42
Future Vol, veh/h	75	1	51	24	2	29	40	708	4	5	478	42
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	0	4	0	0	0	3	2	0	0	4	0
Mvmt Flow	84	1	57	27	2	33	45	796	4	6	537	47

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	1435	1438	537	1437	1483	798	584	0	0	800	0	0
Stage 1	548	548	-	888	888	-	-	-	-	-	-	-
Stage 2	887	890	-	549	596	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.24	7.1	6.5	6.2	4.13	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.336	3.5	4	3.3	2.227	-	-	2.2	-	-
Pot Cap-1 Maneuver	86	103	616	87	95	389	959	-	-	832	-	-
Stage 1	579	538	-	341	365	-	-	-	-	-	-	-
Stage 2	338	364	-	583	505	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	~ 74	98	616	74	90	389	959	-	-	832	-	-
Mov Cap-2 Maneuver	204	232	-	209	220	-	-	-	-	-	-	-
Stage 1	575	535	-	325	348	-	-	-	-	-	-	-
Stage 2	293	347	-	524	502	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	30.64	21.66	0.48	0.09
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	959	-	-	279	277	832	-
HCM Lane V/C Ratio	0.047	-	-	0.511	0.223	0.007	-
HCM Ctrl Dly (s/v)	8.9	-	-	30.6	21.7	9.4	-
HCM Lane LOS	A	-	-	D	C	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.7	0.8	0	-

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

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1667	100	0	1820	0	70
Future Vol, veh/h	1667	100	0	1820	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	0	0	2	0
Mvmt Flow	1755	105	0	1916	0	74

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 877
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.1
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.9
Pot Cap-1 Maneuver	-	-	0 - 0 *660
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	- - - 0
Mov Cap-1 Maneuver	-	-	- - - *660
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	660	-	-	-
HCM Lane V/C Ratio	0.112	-	-	-
HCM Ctrl Dly (s/v)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Notes

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

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1637	100	0	1820	0	70
Future Vol, veh/h	1637	100	0	1820	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1723	105	0	1916	0	74

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 862
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.1
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.9
Pot Cap-1 Maneuver	-	-	0 - 0 *660
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	- - - 0
Mov Cap-1 Maneuver	-	-	- - - *660
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	660	-	-	-
HCM Lane V/C Ratio	0.112	-	-	-
HCM Ctrl Dly (s/v)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Notes

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

Capacity Analysis Summary Sheets
Year 2031 Total Projected Saturday Midday Peak Hour

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	193	928	85	2	250	785	128	236	224	218	193
Future Volume (vph)	4	193	928	85	2	250	785	128	236	224	218	193
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		255		200		300		190	200		580	195
Storage Lanes		2		1		2		1	1		1	1
Taper Length (ft)		300				300			175			175
Lane Util. Factor	0.91	0.97	0.91	1.00	0.91	0.97	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	3468	5406	1615	0	3434	5406	1583	1805	1980	1599	1787
Flt Permitted		0.950				0.950			0.368			0.356
Satd. Flow (perm)	0	3468	5406	1615	0	3434	5406	1583	699	1980	1599	670
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				90				136			78	
Link Speed (mph)			45				45			40		
Link Distance (ft)			2097				739			538		
Travel Time (s)			31.8				11.2			9.2		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	1%	0%	0%	2%	1%	2%	0%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	209	987	90	0	268	835	136	251	238	232	205
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt
Protected Phases	5	5	2	3	1!	1	6	7	3	8	1!	7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	1	7
Switch Phase												
Minimum Initial (s)	4.0	4.0	25.0	4.0	4.0	4.0	25.0	4.0	4.0	8.0	4.0	4.0
Minimum Split (s)	8.5	8.5	31.0	7.5	8.5	8.5	31.0	7.5	7.5	14.5	8.5	7.5
Total Split (s)	18.0	18.0	55.0	15.0	22.0	22.0	59.0	15.0	15.0	28.0	22.0	15.0
Total Split (%)	15.0%	15.0%	45.8%	12.5%	18.3%	18.3%	49.2%	12.5%	12.5%	23.3%	18.3%	12.5%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	2.0	1.0	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	6.5	4.5	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		11.9	53.4	71.8			14.4	55.8	73.6	35.4	19.9	40.8
Actuated g/C Ratio		0.10	0.45	0.60			0.12	0.47	0.61	0.30	0.17	0.28

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	206	166
Future Volume (vph)	206	166
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	1980	1599
Flt Permitted		
Satd. Flow (perm)	1980	1599
Right Turn on Red		Yes
Satd. Flow (RTOR)		177
Link Speed (mph)	40	
Link Distance (ft)	1315	
Travel Time (s)	22.4	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.94	0.94
Growth Factor	100%	100%
Heavy Vehicles (%)	1%	1%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	219	177
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.5	14.5
Total Split (s)	28.0	28.0
Total Split (%)	23.3%	23.3%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.5	6.5
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	19.3	19.3
Actuated g/C Ratio	0.16	0.16

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.61	0.41	0.09		0.65	0.33	0.13	0.78	0.73	0.39	0.68
Control Delay (s/veh)		59.3	23.9	2.7		57.8	17.7	1.2	51.9	60.6	20.7	44.6
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		59.3	23.9	2.7		57.8	17.7	1.2	51.9	60.6	20.7	44.6
LOS		E	C	A		E	B	A	D	E	C	D
Approach Delay (s/veh)			28.2				24.5			44.7		
Approach LOS			C				C			D		
Queue Length 50th (ft)		81	191	0		105	120	1	151	176	87	121
Queue Length 95th (ft)		121	241	23		149	143	11	#266	265	150	189
Internal Link Dist (ft)			2017				659			458		
Turn Bay Length (ft)		255		200		300		190	200		580	195
Base Capacity (vph)		390	2404	1002		500	2514	1025	320	354	634	302
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.54	0.41	0.09		0.54	0.33	0.13	0.78	0.67	0.37	0.68

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 31 (26%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay (s/veh): 31.9

Intersection LOS: C

Intersection Capacity Utilization 68.9%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

! Phase conflict between lane groups.

Splits and Phases: 1: Kautz Road/Smith Road & Il 64



Lanes, Volumes, Timings

1: Kautz Road/Smith Road & Il 64

04/02/2026



Lane Group	SBT	SBR
v/c Ratio	0.69	0.44
Control Delay (s/veh)	59.0	9.7
Queue Delay	0.0	0.0
Total Delay (s/veh)	59.0	9.7
LOS	E	A
Approach Delay (s/veh)	39.6	
Approach LOS	D	
Queue Length 50th (ft)	160	0
Queue Length 95th (ft)	244	62
Internal Link Dist (ft)	1235	
Turn Bay Length (ft)		
Base Capacity (vph)	354	431
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.62	0.41
Intersection Summary		

Lanes, Volumes, Timings

2: Pheasant Run & II 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	8	33	1177	49	7	193	1042	26	142	2	183	16
Future Volume (vph)	8	33	1177	49	7	193	1042	26	142	2	183	16
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	1900	2000	1900	1900	2000	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		190		195		200		200	100		100	80
Storage Lanes		1		1		1		1	1		1	1
Taper Length (ft)		200				200			100			115
Lane Util. Factor	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt				0.850				0.850			0.850	
Flt Protected		0.950				0.950			0.950			0.950
Satd. Flow (prot)	0	1761	5406	1615	0	1805	5406	1615	1805	2000	1615	1805
Flt Permitted		0.950				0.950			0.463			0.757
Satd. Flow (perm)	0	1761	5406	1615	0	1805	5406	1615	880	2000	1615	1438
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)				68				68			189	
Link Speed (mph)			45				45			30		
Link Distance (ft)			466				918			1071		
Travel Time (s)			7.1				13.9			24.3		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	13%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%				0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	42	1213	51	0	206	1074	27	146	2	189	16
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	pm+pt	NA	Perm	pm+pt
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6	8		8	4
Detector Phase	5	5	2	3	1	1	6	7	3	8	8	7
Switch Phase												
Minimum Initial (s)	3.0	3.0	15.0	3.0	3.0	3.0	15.0	3.0	3.0	8.0	8.0	3.0
Minimum Split (s)	7.5	7.5	21.0	7.5	7.5	7.5	21.0	7.5	7.5	14.0	14.0	7.5
Total Split (s)	17.0	17.0	70.0	15.0	15.0	15.0	68.0	15.0	15.0	20.0	20.0	15.0
Total Split (%)	14.2%	14.2%	58.3%	12.5%	12.5%	12.5%	56.7%	12.5%	12.5%	16.7%	16.7%	12.5%
Yellow Time (s)	3.5	3.5	4.5	3.5	3.5	3.5	4.5	3.5	3.5	4.5	4.5	3.5
All-Red Time (s)	1.0	1.0	1.5	0.0	1.0	1.0	1.5	0.0	0.0	1.5	1.5	0.0
Lost Time Adjust (s)		0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5	6.0	3.5			4.5	6.0	3.5	3.5	6.0	3.5
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	C-Min	None	None	None	C-Min	None	None	None	None	None
Act Effect Green (s)		8.3	64.9	82.2			20.7	79.3	91.7	20.4	11.6	13.5
Actuated g/C Ratio		0.07	0.54	0.69			0.17	0.66	0.76	0.17	0.10	0.11

25-164 - Commercial Dev. St. Charles
Year 2031 Projected Saturday Midday Peak Hour

Synchro 12 Report

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

04/02/2026



Lane Group	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	1	32
Future Volume (vph)	1	32
Ideal Flow (vphpl)	2000	1900
Lane Width (ft)	12	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	1.00	1.00
Ped Bike Factor		
Frt		0.850
Flt Protected		
Satd. Flow (prot)	2000	1615
Flt Permitted		
Satd. Flow (perm)	2000	1615
Right Turn on Red		Yes
Satd. Flow (RTOR)		100
Link Speed (mph)	30	
Link Distance (ft)	404	
Travel Time (s)	9.2	
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor	0.97	0.97
Growth Factor	100%	100%
Heavy Vehicles (%)	0%	0%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1	33
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Detector Phase	4	4
Switch Phase		
Minimum Initial (s)	8.0	8.0
Minimum Split (s)	14.0	14.0
Total Split (s)	20.0	20.0
Total Split (%)	16.7%	16.7%
Yellow Time (s)	4.5	4.5
All-Red Time (s)	1.5	1.5
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	None	None
Act Effct Green (s)	8.7	8.7
Actuated g/C Ratio	0.07	0.07

Lanes, Volumes, Timings

2: Pheasant Run & Il 64

04/02/2026

												
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
v/c Ratio		0.35	0.41	0.05		0.66	0.30	0.02	0.62	0.01	0.58	0.09
Control Delay (s/veh)		58.6	12.0	0.5		59.8	10.6	0.0	54.7	47.0	14.4	38.4
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)		58.6	12.0	0.5		59.8	10.6	0.0	54.7	47.0	14.4	38.4
LOS		E	B	A		E	B	A	D	D	B	D
Approach Delay (s/veh)			13.0				18.1			32.1		
Approach LOS			B				B			C		
Queue Length 50th (ft)		32	138	0		157	143	0	98	1	0	10
Queue Length 95th (ft)		m65	159	m3		#330	198	0	156	10	68	28
Internal Link Dist (ft)			386				838			991		
Turn Bay Length (ft)		190		195		200		200	100		100	80
Base Capacity (vph)		183	2927	1130		311	3571	1315	239	237	358	256
Starvation Cap Reductn		0	0	0		0	0	0	0	0	0	0
Spillback Cap Reductn		0	0	0		0	0	0	0	0	0	0
Storage Cap Reductn		0	0	0		0	0	0	0	0	0	0
Reduced v/c Ratio		0.23	0.41	0.05		0.66	0.30	0.02	0.61	0.01	0.53	0.06

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 34 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay (s/veh): 17.4

Intersection LOS: B

Intersection Capacity Utilization 64.4%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Pheasant Run & Il 64

	Ø1		Ø2 (R)		Ø3		Ø4
15 s		70 s		15 s		20 s	
	Ø5		Ø6 (R)		Ø7		Ø8
17 s		68 s		15 s		20 s	



Lane Group	SBT	SBR
v/c Ratio	0.01	0.16
Control Delay (s/veh)	50.0	1.6
Queue Delay	0.0	0.0
Total Delay (s/veh)	50.0	1.6
LOS	D	A
Approach Delay (s/veh)	14.4	
Approach LOS	B	
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	6	0
Internal Link Dist (ft)	324	
Turn Bay Length (ft)		
Base Capacity (vph)	233	276
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.00	0.12
Intersection Summary		

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	138	0	48	61	0	168	27	367	67	93	294	148
Future Vol, veh/h	138	0	48	61	0	168	27	367	67	93	294	148
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	110	-	0	-	-	0	100	-	120	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	2	0	0	0	0	0	2	0	0	2	1
Mvmt Flow	148	0	52	66	0	181	29	395	72	100	316	159

Major/Minor	Minor2	Minor1		Major1		Major2		Major2		Major2		Major2	
Conflicting Flow All	1048	-	238	811	1128	395	475	0	0	467	0	0	0
Stage 1	596	-	-	453	453	-	-	-	-	-	-	-	-
Stage 2	453	-	-	358	675	-	-	-	-	-	-	-	-
Critical Hdwy	7.3	-	6.9	7.3	6.5	6.2	4.1	-	-	4.1	-	-	-
Critical Hdwy Stg 1	6.5	-	-	6.1	5.5	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	-	-	6.5	5.5	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	-	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-	-
Pot Cap-1 Maneuver	230	0	964	345	231	659	1195	-	-	1105	-	-	-
Stage 1	546	0	-	590	574	-	-	-	-	-	-	-	-
Stage 2	590	0	-	769	506	-	-	-	-	-	-	-	-
Platoon blocked, %	0		0	0	0		0	-	-		-	-	-
Mov Cap-1 Maneuver ~ 148	-	-	964	290	205	659	1195	-	-	1105	-	-	-
Mov Cap-2 Maneuver	239	-	-	407	313	-	-	-	-	-	-	-	-
Stage 1	497	-	-	576	560	-	-	-	-	-	-	-	-
Stage 2	418	-	-	662	460	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	33.3	13.32	0.47	1.49
HCM LOS	D	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1195	-	-	239	964	407	659	1105	-	-
HCM Lane V/C Ratio	0.024	-	-	0.62	0.054	0.161	0.274	0.09	-	-
HCM Ctrl Dly (s/v)	8.1	-	-	41.8	8.9	15.5	12.5	8.6	-	-
HCM Lane LOS	A	-	-	E	A	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	3.7	0.2	0.6	1.1	0.3	-	-

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

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	1	32	2	0	2	37	417	0	1	389	14
Future Vol, veh/h	41	1	32	2	0	2	37	417	0	1	389	14
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	100	-	-	-	-	0	130	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	3	0	0	50	0	11	0	0	2	0
Mvmt Flow	45	1	35	2	0	2	40	453	0	1	423	15

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	966	966	219	748	974	453	438	0	0	453	0	0
Stage 1	433	433	-	534	534	-	-	-	-	-	-	-
Stage 2	534	534	-	214	440	-	-	-	-	-	-	-
Critical Hdwy	7.3	6.5	6.945	7.3	6.5	6.95	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.3	3.285	3.5	4	3.775	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	289	312	*974	*425	309	499	1295	-	-	1118	-	-
Stage 1	761	701	-	*534	528	-	-	-	-	-	-	-
Stage 2	534	528	-	*926	695	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	279	302	*974	*396	299	499	1295	-	-	1118	-	-
Mov Cap-2 Maneuver	399	401	-	*449	394	-	-	-	-	-	-	-
Stage 1	760	700	-	*517	512	-	-	-	-	-	-	-
Stage 2	515	512	-	*891	694	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.42	12.65	0.64	0.02
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1295	-	-	399	933	449	499	1118	-	-
HCM Lane V/C Ratio	0.031	-	-	0.112	0.038	0.005	0.004	0.001	-	-
HCM Ctrl Dly (s/v)	7.9	-	-	15.2	9	13.1	12.2	8.2	-	-
HCM Lane LOS	A	-	-	C	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0	0	0	-	-

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

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	↗
Traffic Vol, veh/h	37	0	49	17	0	24	36	385	4	3	378	43
Future Vol, veh/h	37	0	49	17	0	24	36	385	4	3	378	43
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	-	-	-	-	-	-	105	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	0	4	0	0	0	0	1	0	0	1	5
Mvmt Flow	40	0	53	18	0	26	39	418	4	3	411	47

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	914	918	411	916	963	421	458	0	0	423	0	0
Stage 1	417	417	-	499	499	-	-	-	-	-	-	-
Stage 2	497	501	-	417	464	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.24	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.336	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	254	266	725	256	247	637	1110	-	-	1147	-	-
Stage 1	684	624	-	557	547	-	-	-	-	-	-	-
Stage 2	553	546	-	689	589	-	-	-	-	-	-	-
Platoon blocked, %	0	0	0	0	0	0	0	-	-	-	-	-
Mov Cap-1 Maneuver	234	256	725	228	237	637	1110	-	-	1147	-	-
Mov Cap-2 Maneuver	369	375	-	362	354	-	-	-	-	-	-	-
Stage 1	682	622	-	538	528	-	-	-	-	-	-	-
Stage 2	512	527	-	637	587	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.59	13.18	0.71	0.06
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1110	-	-	512 484	1147	-	-
HCM Lane V/C Ratio	0.035	-	-	0.182 0.092	0.003	-	-
HCM Ctrl Dly (s/v)	8.4	-	-	13.6 13.2	8.1	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7 0.3	0	-	-

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1227	112	0	1163	0	70
Future Vol, veh/h	1227	112	0	1163	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1292	118	0	1224	0	74

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 646
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 7.1
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.9
Pot Cap-1 Maneuver	-	-	0 - 0 *727
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	- - - 0
Mov Cap-1 Maneuver	-	-	- - - *727
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.51
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	727	-	-	-
HCM Lane V/C Ratio	0.101	-	-	-
HCM Ctrl Dly (s/v)	10.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Notes

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑		↑↑↑		↑
Traffic Vol, veh/h	1183	114	0	1163	0	70
Future Vol, veh/h	1183	114	0	1163	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	215	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	1245	120	0	1224	0	74

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	623
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	*742
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	0
Mov Cap-1 Maneuver	-	-	-	-	*742
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.38
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	742	-	-	-
HCM Lane V/C Ratio	0.099	-	-	-
HCM Ctrl Dly (s/v)	10.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

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