TRAFFIC ANALYSIS & DESIGN, INC.

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Skyline Development
Traffic Impact Analysis

City of Waukesha
Waukesha County, Wisconsin
January 23, 2020

TRAFFIC IMPACT ANALYSIS FOR:

SKYLINE DEVELOPMENT

WAUKESHA, WISCONSIN

January 23, 2020

PREPARED FOR:
Bielinski Homes
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CHAPTER I - DEVELOPMENT

PART A - INTRODUCTION

Bielinski Homes is proposing to construct a 156-unit single family residential development on the north side of Summit Avenue (USH 18), directly west of the existing Woodland Hills development in Waukesha, Wisconsin. The development is proposed to have one full-access connection to Summit Avenue (Skyline Drive) directly across from Oakmont Drive. The development will also be able to access Summit Avenue from Woodland Hills Drive, via new roadway connections between the Skyline development and the Woodland Hills development. The location of the proposed development with respect to the surrounding street system is shown on Exhibit 1.

This traffic impact analysis (TIA) summarizes the trip generation and traffic operations anticipated with the buildout of the proposed Skyline development as well as the remaining buildout of the existing Woodland Hills development.

PART B - STUDY AREA

The study area includes the Summit Avenue intersections with Oakmont Drive and Woodland Hills Drive. The location of the study intersections is shown on Exhibit 1. The existing transportation system (lane geometrics, traffic control, roadway speeds, etc.) at these study intersections are shown on Exhibit 2. The study area roadways are discussed below:

Summit Avenue, also designated as USH 18, is a two-lane east/west undivided Principal Arterial with a 45-mph speed limit through the study area. The Wisconsin Department of Transportation (WisDOT) Year 2015 average annual daily traffic (AADT) volume on Summit Avenue was 7,600 vehicles per day (vpd) east of Woodland Hills Drive. Sidewalks are located on the north side of Summit Avenue, along the Woodland Hills development property and on the south side of Summit Avenue, along the Oakmont development property.

Oakmont Drive and Woodland Hills Drive are two-lane north/south local roadways providing access to Summit Avenue from their respective residential developments. The speed limit on these development roadways is 25 mph. Sidewalks are located along both sides of these development roadways.

PART C - ON-SITE DEVELOPMENT

The conceptual site plan for the proposed Skyline development is shown on Exhibit 3. As shown, there is proposed to be 156 single-family residential units. The development is proposed to connect with Summit Avenue via Skyline Drive, a new roadway directly across from the existing Oakmont Drive. The development is also expected to connect to existing roadways within the Woodland Hills development, allowing residents to access Summit Avenue via Woodland Hills Drive. For the northeastern-most units on the Skyline development site, using the Woodland Hills Drive access to Summit Avenue may be more convenient than using the Skyline Drive. Therefore, it was estimated that 30 percent of the site trips would travel through the Woodland Hills development to reach Summit Avenue and the remaining 70 percent would use Skyline Drive.

PART D - OFF-SITE DEVELOPMENT

The existing Woodland Hills development began construction in 2007 on the north side of Summit Avenue with duplex condominiums for the active adult community. According to

representatives for Belman Homes who are developing the site, approximately 60 of the duplexes (120 units) have already been constructed on site. By full buildout, there will be 115 duplexes and 31 single-family homes for a total of 261 residential units. The development has access to Summit Avenue via Woodland Hills Drive.

CHAPTER II – EXISTING & PROJECT TRAFFIC

PART A - EXISTING DATA COLLECTION

A1. Data Collection

TADI collected weekday turning movement traffic counts at the study intersections in January 2020. The traffic counts were collected on weekdays from 6:00-9:00 a.m. and from 3:00-6:00 p.m.

Based on the turning movement counts (included in Appendix A), the weekday peak hours were identified as being from 7:00-8:00 a.m. (AM peak hour) and from 4:30-5:30 p.m. (PM peak hour). The peak hour traffic volumes were balanced between intersections and are shown on Exhibit 4.

PART B – EXISTING & NEW DEVELOPMENT TRIPS

B1. Trip Generation

The trip generation for the proposed land uses were developed using trip rates or equations as published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 10th Edition.* The use of trip rates or equations was based on the procedures set forth in the ITE *Trip Generation Handbook, 3rd Edition*. Land use trip data from the ITE manual is included in Appendix A. The trip generation tables for the full buildout of the proposed Skyline development and the remaining buildout of the existing Woodland Hills development are shown on Exhibit 5.

Full buildout of the 156-unit Skyline development is expected to generate 1,565 weekday daily trips, with 115 trips occurring during the weekday AM peak hour and 155 trips occurring during the weekday PM peak hour. The remaining buildout of the Woodland Hills development is expected to generate 760 additional weekday daily trips, 45 additional weekday AM peak hour trips, and 65 additional weekday PM peak hour trips.

B2. Trip Distribution/Traffic Assignment

The trip distribution for the site was determined based on the existing traffic patterns to and from the Oakmont and Woodland Hills developments. Based on the traffic count volumes, the residential trip distribution is as follows:

- 25% to/from the west on Summit Avenue
- 75% to/from the east on Summit Avenue

B3. Traffic Assignment

The Skyline and Woodland Hills development new trip were assigned to the study intersections based on the above trip distribution. The traffic assignments are shown on the following exhibits:

- Exhibit 6A – Woodland Hills Development – Remaining Buildout New Trips
- Exhibit 6B – Skyline Development – Full Buildout New Trips

B4. Future Traffic Volumes

The Woodland Hills and Skyline development new trips were added to the Year 2020 Existing traffic volumes to generate the Year 2020 Build traffic volumes, as shown on Exhibit 7.

CHAPTER III - TRAFFIC OPERATIONAL ANALYSIS

PART A – DESCRIPTION OF LEVEL OF SERVICE

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual* (HCM), 6th Edition using the Synchro 10 traffic analysis software program. Intersection operation is defined by "level of service". Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A', to very poor, represented by LOS 'F'. For this study, LOS D was used to define acceptable peak hour operating conditions. Descriptions of the various levels of service are as follows:

LOS A is the highest level of service that can be achieved. Under this condition, intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation. At signalized intersections, average delays are less than 10 seconds. At unsignalized intersections, average delays are less than 10 seconds.

LOS B represents stable operation. At signalized intersections, average vehicle delays are 10 to 20 seconds. At unsignalized intersections, average delays are 10 to 15 seconds.

LOS C still represents stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so. At signalized intersections, average vehicle delays are 20 to 35 seconds. At unsignalized intersections, average delays are 15 to 25 seconds.

LOS D represents increasing traffic restrictions as the intersection approaches instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs, thus preventing excessive backups. At signalized intersections, average vehicle delays are 35 to 55 seconds. At unsignalized intersections, average delays are 25 to 35 seconds.

LOS E represents the capacity of the intersection. At signalized intersections, average vehicle delays are 55 to 80 seconds. At unsignalized intersections, average delays are 35 to 50 seconds.

LOS F represents jammed conditions where the intersection is over capacity and acceptable gaps for unsignalized intersections in the mainline traffic flow are minimal. At signalized intersections, average vehicle delays exceed 80 seconds. At unsignalized intersections, average delays exceed 50 seconds.

All capacity analysis worksheets for this study are included in Appendix B. The existing traffic LOS and queues for all analyses are shown on Exhibit 8.

PART B – EXISTING TRAFFIC CAPACITY/LOS ANALYSIS

The existing traffic analysis was conducted with the Year 2019 Existing traffic volumes, existing geometrics, and existing traffic control at the study intersections. As shown, all turning movements at the study intersections operate acceptably at LOS C or better during the weekday AM and PM peak hours.

PART C – BUILD TRAFFIC CAPACITY/LOS ANALYSIS

The Year 2020 Build traffic capacity analysis represents the analysis of peak hour traffic volumes with the remaining buildout of the Woodland Hills development plus full buildout of the proposed

Skyline development. Using the WisDOT FDM "warrant" criteria for right-turn lanes, the Year 2020 Build traffic volumes at the Summit Avenue intersection with Oakmont Drive and the new Skyline Drive are high enough to require a separate westbound right-turn lane on Summit Avenue. The "warrant" criteria for left-turn lanes at the intersection are not met. However, Waukesha County generally requires left-turn lanes be constructed at intersections with roadways that have AADT volumes at the levels on Summit Avenue. The "warrant" sheets are included with the capacity analysis worksheets in Appendix B.

The analysis was completed with the Year 2020 Build traffic volumes and proposed Skyline Drive roadway across from Oakmont Drive. The Skyline Drive/Oakmont Drive intersection with Summit Avenue was evaluated with eastbound and westbound left-turn lanes (in place of the existing westbound left-turn bypass lane), a new westbound right-turn lane (to match right-turn lanes at adjacent roadways), and a two-lane Skyline Drive approach with stop sign control. With these geometrics and traffic control, the existing and proposed study intersections are expected to continue to operate acceptably at LOS C or better during the weekday peak hours.

CHAPTER IV - RECOMMENDATIONS AND CONCLUSION

PART A – SUMMARY/RECOMMENDATIONS

The Woodland Hills active adult residential development directly to the east began buildout in 2007, and there is approximately 110 condominium units and 31 single-family units left to be constructed before full buildout is reached. Access to the Woodland Hills development is through Woodland Avenue, a roadway that connects to Summit Avenue approximately ½ mile east of Oakmont Drive. The remaining buildout of Woodland Hills is expected to generate 760 additional weekday trips, 45 additional weekday AM peak hour trips, and 65 additional weekday PM peak hour trips.

The Skyline development is proposed to be constructed with 156 single-family residential units and access via a new roadway (Skyline Drive) to Summit Avenue, directly across from Oakmont Drive. Access is also proposed through internal roadway connections with the internal roadways within the Woodland Hills development. Due to the proximity of some of the Skyline development lots to the Woodland Hills development roadways, this study estimates about 30% of the Skyline development trips to use access Summit Avenue via Woodland Hills Drive. At full buildout, the Skyline development is expected to generate 1,565 weekday daily trips, 115 weekday AM peak hour trips and 155 weekday PM peak hour trips. Based on the proximity of some of the residential units to the Woodland Hills development roadways, it is estimated that about 30% of the Skyline development traffic volumes may use Woodland Hills Drive instead of Skyline Drive to reach Summit Avenue.

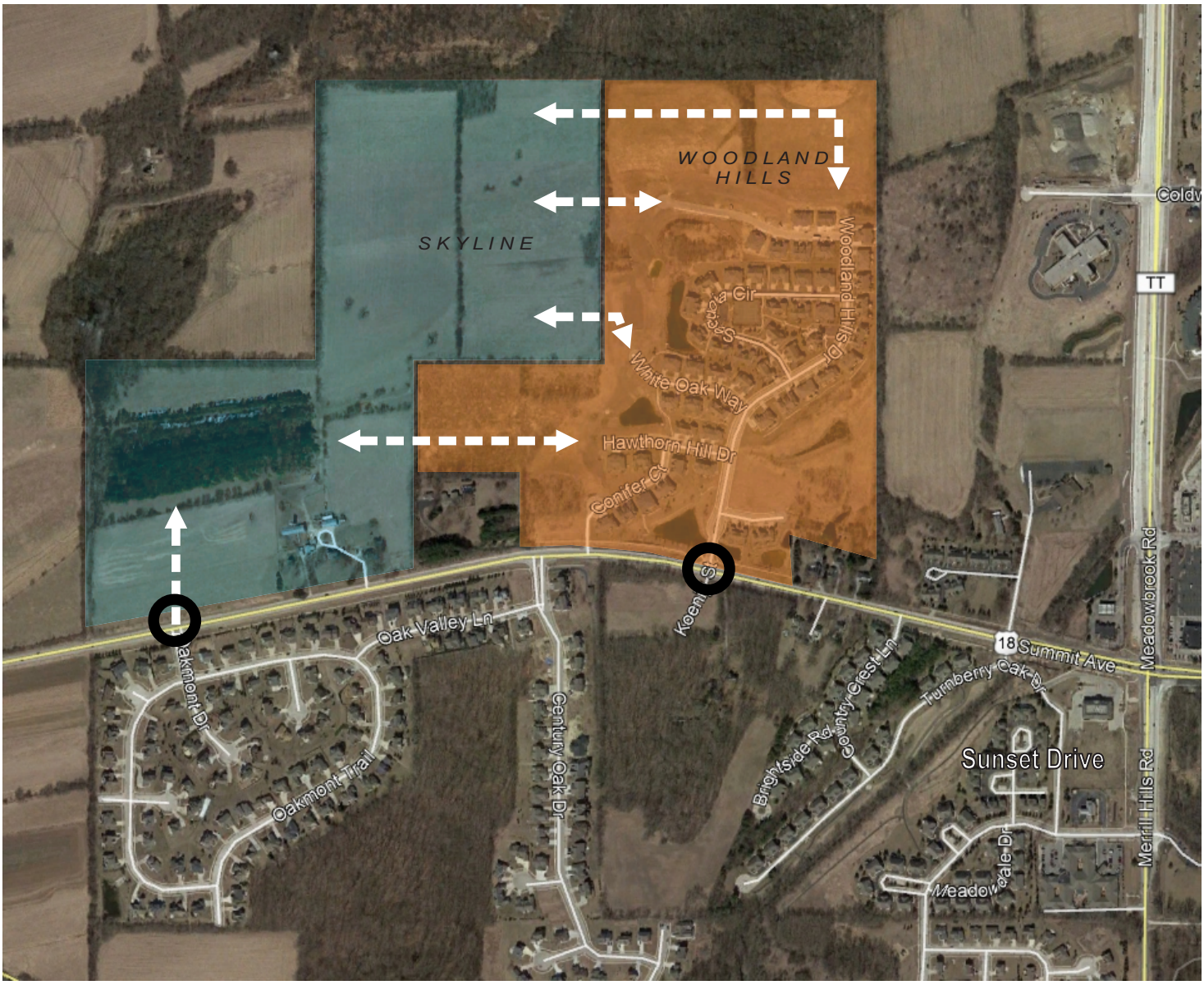
With the Summit Avenue posted speed limit and future traffic volumes at the intersection with Oakmont Drive/Skyline Drive, a westbound right-turn lane on Summit Avenue is required. According to Waukesha County requirements, a left-turn lane is also required. It is therefore recommended to remove the westbound left-turn bypass lane on Summit Avenue so that both eastbound and westbound left-turn lanes can be provided for traffic entering both Oakmont Drive and Skyline Drive.

With the expected traffic volumes with the remaining buildout of the Woodland Hills development plus full buildout of the proposed Skyline development, all study intersections are expected to operate acceptably at LOS D or better during the peak hours. Therefore, no modifications, except for those summarized below, are recommended for the study area.

- Construct Skyline Drive at Summit Avenue directly across from Oakmont Drive.
- Remove the westbound left-turn bypass lane and replace with at least a 100-foot (plus taper) eastbound and westbound left-turn lanes.
- Construct at least a 100-foot (plus taper) westbound right-turn lane on Summit Avenue to match the geometrics at adjacent residential roadway intersections.
- Construct the southbound approach of Skyline Drive with a wide cross-section (similar to Oakmont Drive and Woodland Hills Drive) to allow for two-lane exits to Summit Avenue.
- Install stop signs on the southbound approach to Skyline Drive.

PART B – CONCLUSIONS

With the recommendations listed above, the study intersections are expected to operate safely and efficiently with buildout of the Skyline residential development.



LEGEND

- Study Intersection
- Skyline Development
- Woodland Hills Development

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NOT TO SCALE

EXHIBIT 1
SITE LOCATION MAP

WAUKESHA COUNTY, WISCONSIN

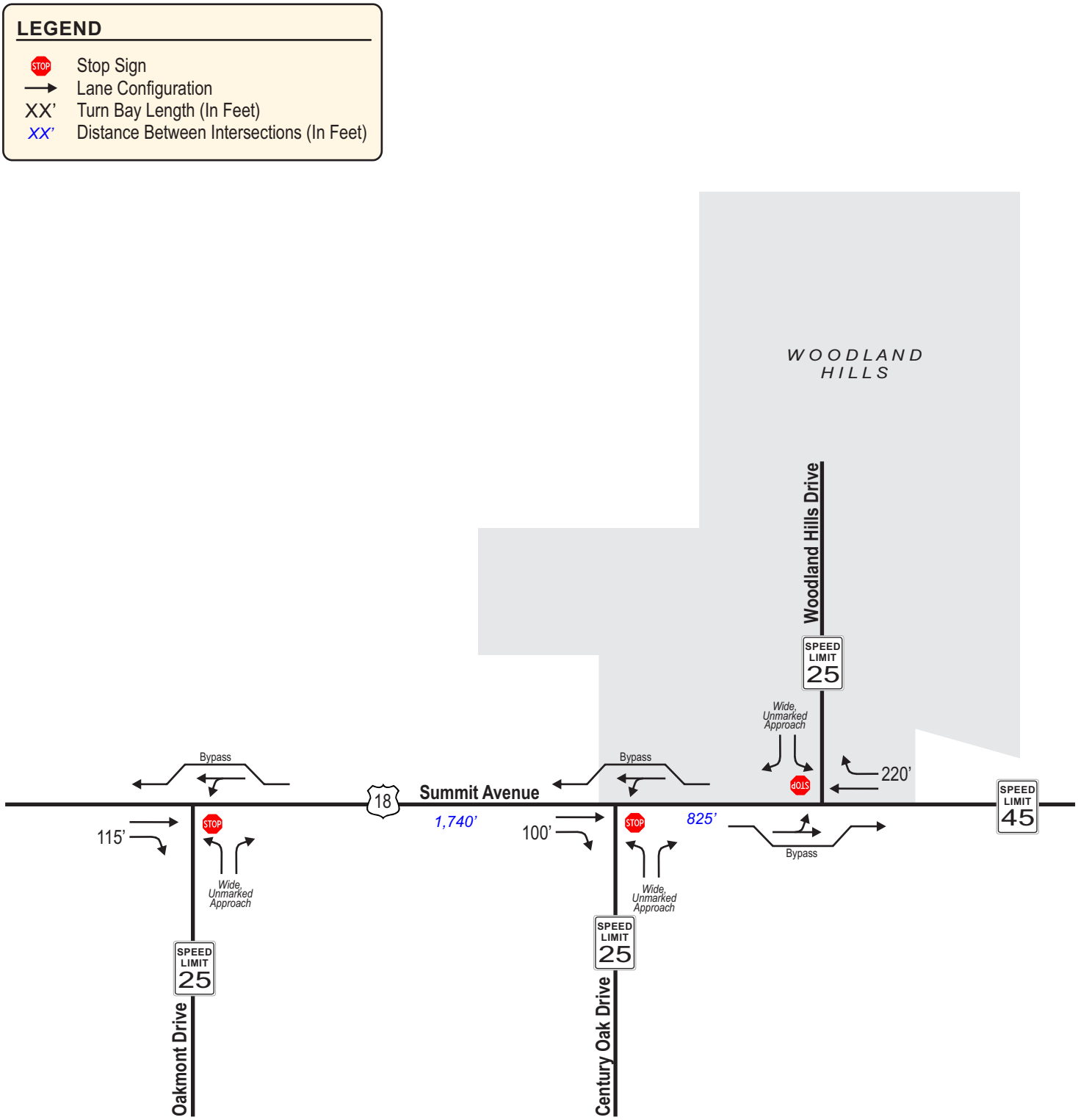

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EXHIBIT 2
EXISTING TRANSPORTATION SYSTEM

WAUKESHA COUNTY, WISCONSIN

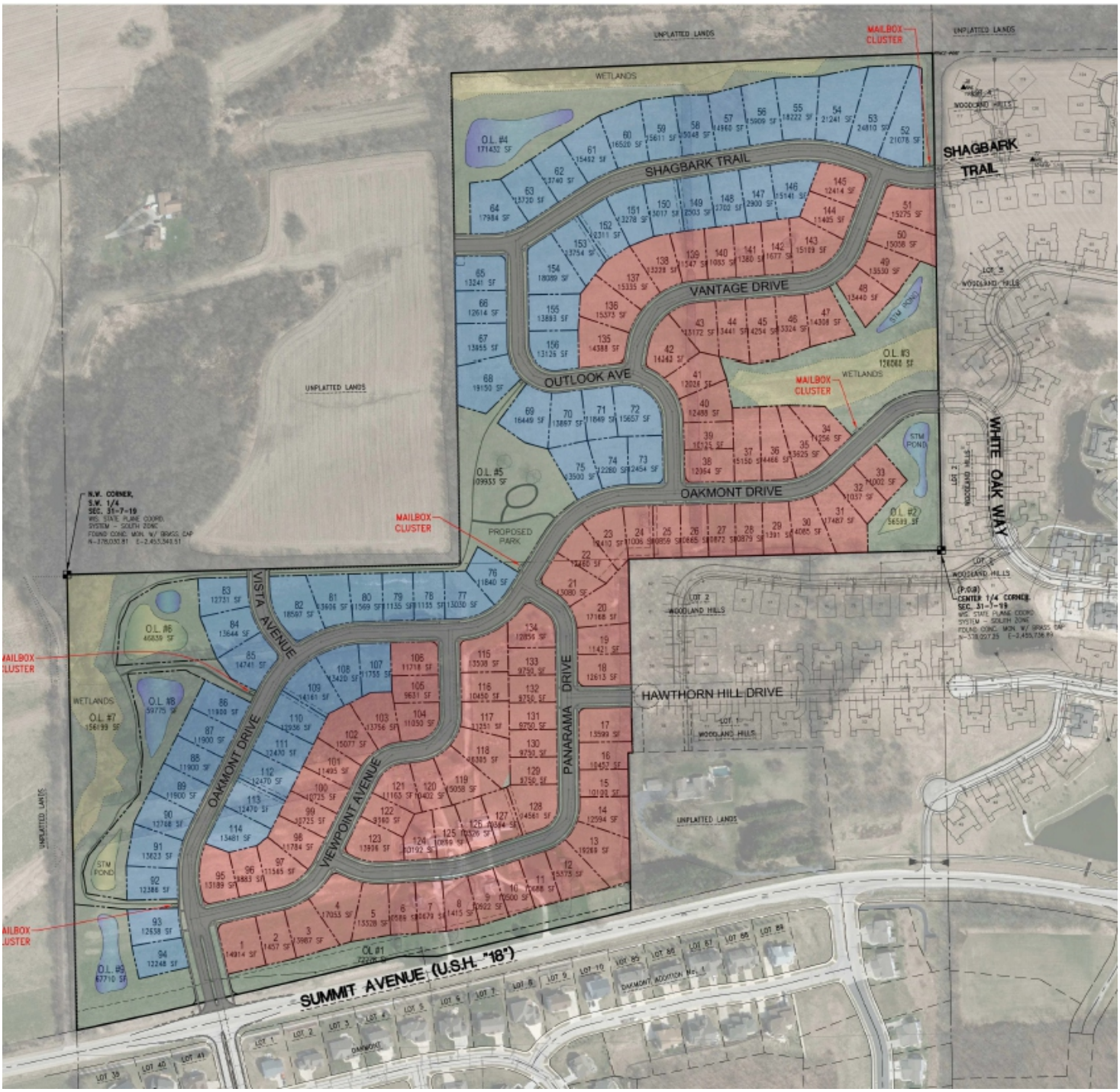

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EXHIBIT 3
CONCEPTUAL SITE PLAN

WAUKESHA COUNTY, WISCONSIN

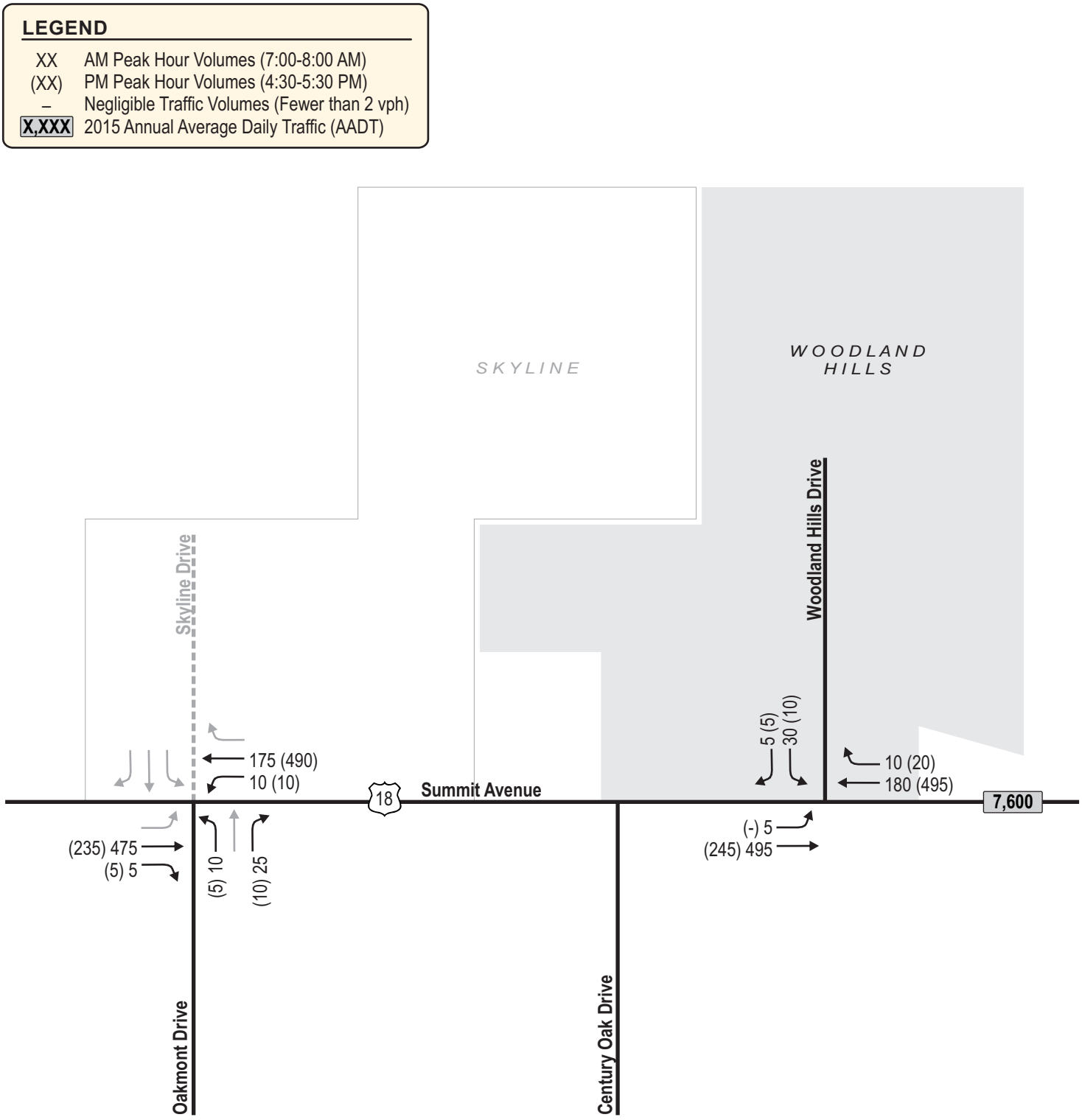

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EXHIBIT 4
YEAR 2020 EXISTING TRAFFIC VOLUMES

WAUKESHA COUNTY, WISCONSIN

Trip Generation Table

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak In	AM Peak Out	AM Peak Total	PM Peak In	PM Peak Out	PM Peak Total
Single-Family Detached Housing (Skyline Development)	210	156 Units	1,565 FCE	30 (25%)	85 (75%)	115 FCE	100 (63%)	55 (37%)	155 FCE
Total Trips			**1,565**	**30**	**85**	**115**	**100**	**55**	**155**

Notes

ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual, 10th Edition.

TRIP DISTRIBUTION (New Trips)

W. on Summit Avenue	25%	390	10	20		25	15
E. on Summit Avenue	75%	1175	20	65		75	40
	100%	***1565***	***30***	***85***		***100***	***55***

Woodland Hills - Remaining Buildout Trip Generation Table

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak In	AM Peak Out	AM Peak Total	PM Peak In	PM Peak Out	PM Peak Total
Single-Family Detached Housing	210	31 Units	355 FCE	5 (25%)	20 (75%)	25 FCE	20 (63%)	15 (37%)	35 FCE
Senior Adult Housing - Attached	252	110 Units	405 (3.70)	5 (35%)	15 (65%)	20 (0.20)	15 (55%)	15 (45%)	30 (0.26)
Total Trips			**760**	**10**	**35**	**45**	**35**	**30**	**65**

Notes

ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual, 10th Edition.

TRIP DISTRIBUTION (New Trips)

W. on Summit Avenue	25%	190	5	10		10	10
E. on Summit Avenue	75%	570	5	25		25	20
	100%	***760***	***10***	***35***		***35***	***30***

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EXHIBIT 5
TRIP GENERATION & DISTRIBUTION

WAUKESHA COUNTY, WISCONSIN

LEGEND

XX	AM Peak Hour Volumes (7:00-8:00 AM)
(XX)	PM Peak Hour Volumes (4:30-5:30 PM)
–	Negligible Traffic Volumes (Fewer than 2 vph)

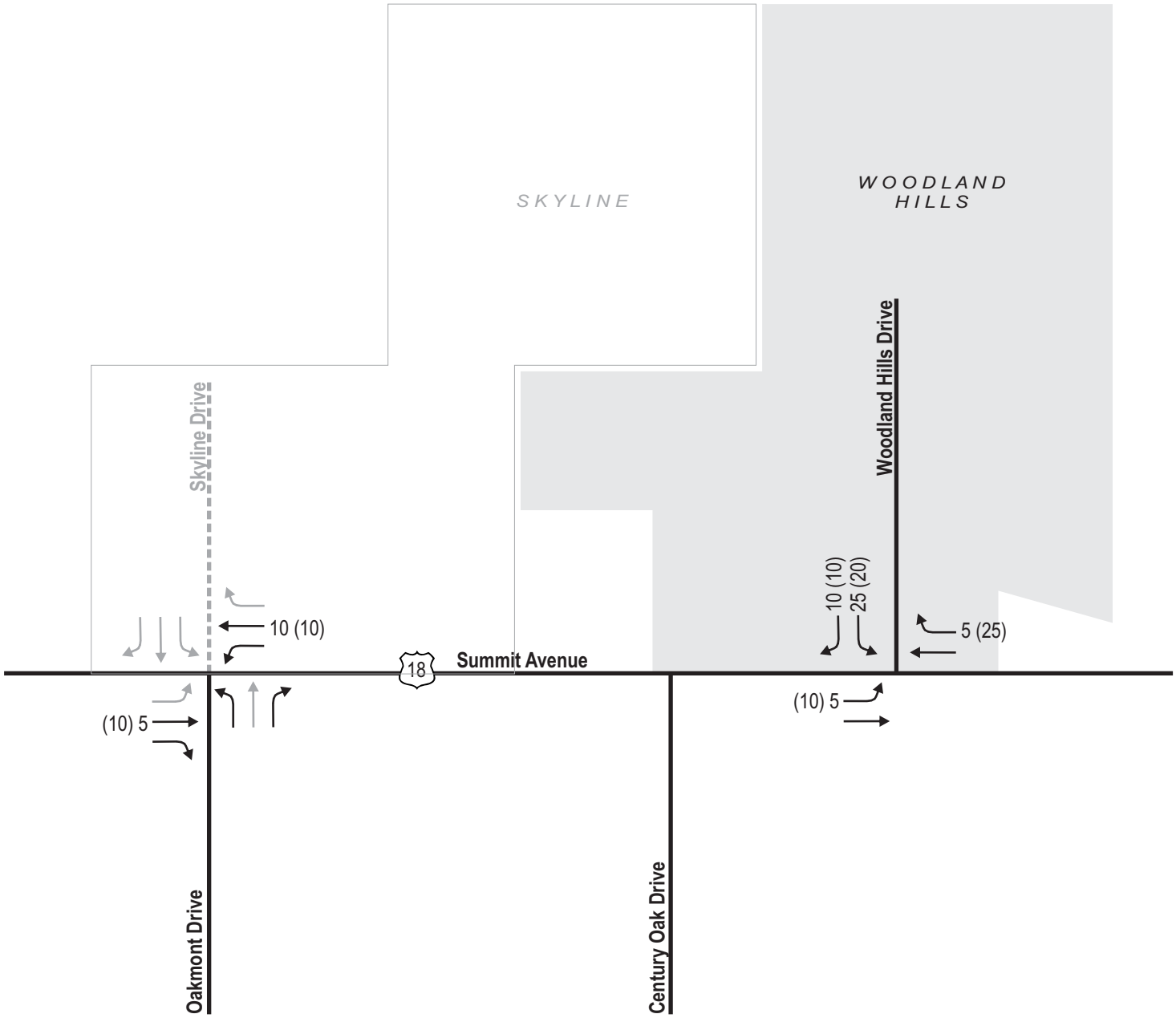

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EXHIBIT 6A
WOODLAND HILLS DEVELOPMENT
REMAINING BUILDOUT NEW TRIPS

WAUKESHA COUNTY, WISCONSIN

LEGEND

XX	AM Peak Hour Volumes (7:00-8:00 AM)
(XX)	PM Peak Hour Volumes (4:30-5:30 PM)
–	Negligible Traffic Volumes (Fewer than 2 vph)

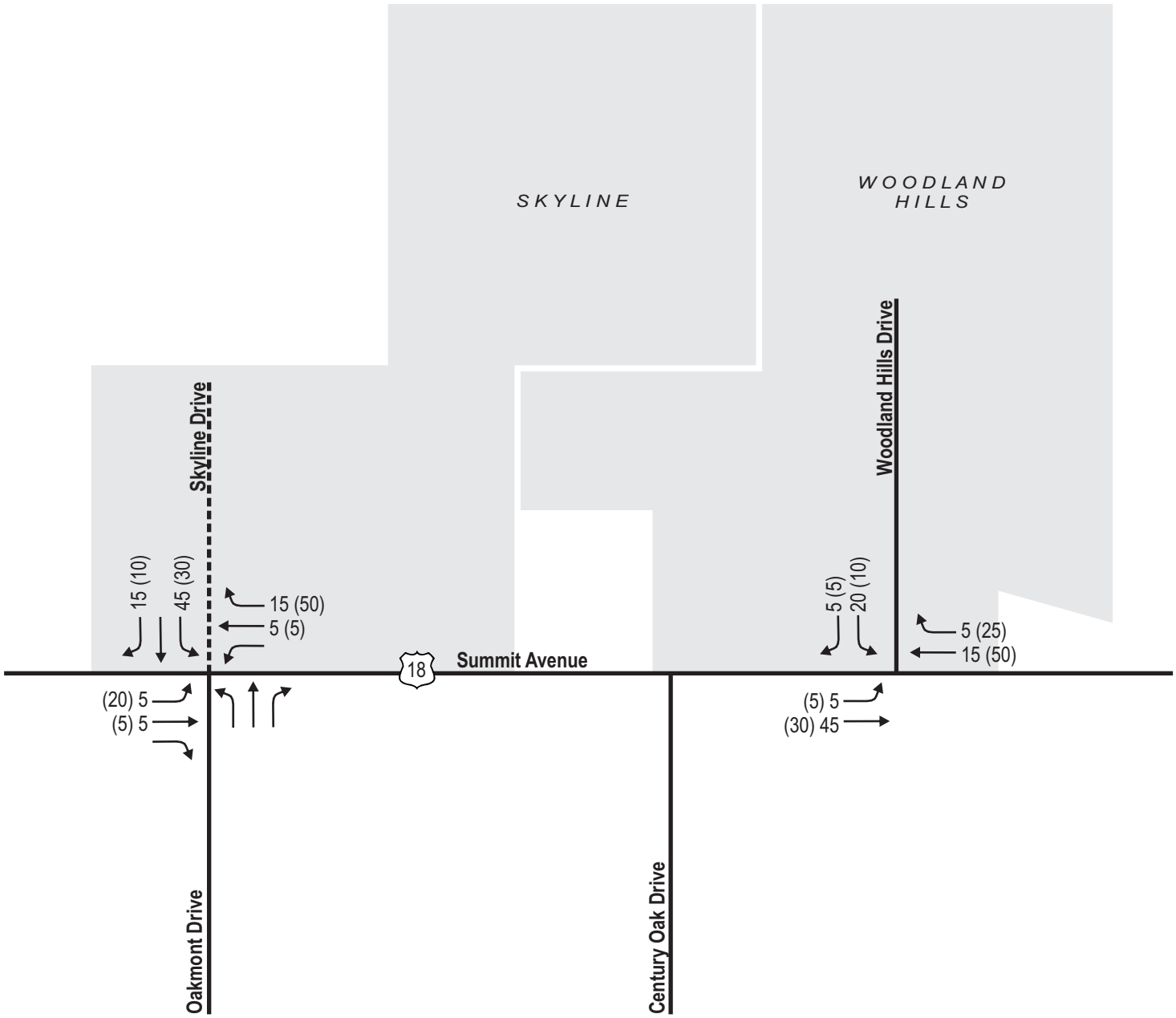

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EXHIBIT 6B
SKYLINE DEVELOPMENT
FULL BUILDOUT NEW TRIPS

WAUKESHA COUNTY, WISCONSIN

LEGEND

XX	AM Peak Hour Volumes (7:00-8:00 AM)
(XX)	PM Peak Hour Volumes (4:30-5:30 PM)
–	Negligible Traffic Volumes (Fewer than 2 vph)

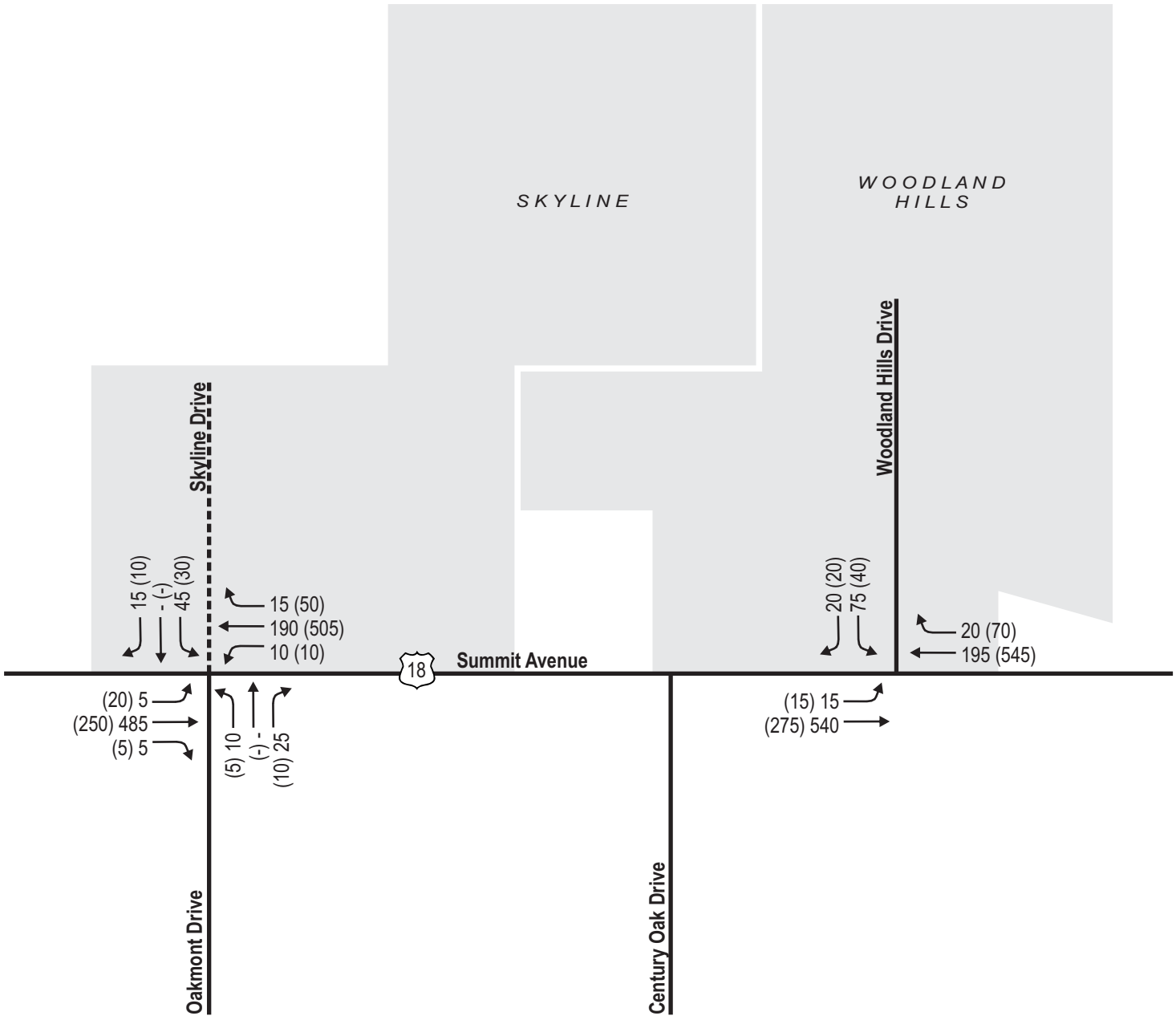

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EXHIBIT 7
YEAR 2020 BUILD TRAFFIC VOLUMES

WAUKESHA COUNTY, WISCONSIN

Year 2020 Existing Traffic Operations & Queues
Without Modifications

Intersection	Peak Hour	MOE[1,2]	Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Node 100: Summit Avenue & Oakmont Drive *(Stop Sign)*	AM	LOS	-	*	*	A	*	-	C	-	B	-		
		Queue	-	*	*	0	*	-	5	-	5	-		
	PM	LOS	-	*	*	A	*	-	C	-	A	-		
		Queue	-	*	*	0	*	-	0	-	0	-		
Node 200: Summit Avenue & Woodland Hills Drive *(Stop Sign)*	AM	LOS	A	*	-	-	*	*	-			C	-	A
		Queue	0	*	-	-	*	*	-			10	-	0
	PM	LOS	A	*	-	-	*	*	-			C	-	B
		Queue	0	*	-	-	*	*	-			5	-	0

[1] *(--) indicates a movement that is prohibited, not analyzed, or does not exist; (*) indicates a freeflow movement.*

[2] *Queue is maximum of the 50th & 95th percentile queue, measured in feet.*

Year 2020 Build Traffic Operations & Queues
Without Modifications

Intersection	Peak Hour	MOE[1,2]	Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Node 100: Summit Avenue & Oakmont Drive/Skyline Drive *(Stop Sign)*	AM	LOS	A	*	*	A	*	-	C		B	C		A
		Queue	0	*	*	0	*	-	5		5	15		5
	PM	LOS	A	*	*	A	*	-	C		A	C		B
		Queue	5	*	*	0	*	-	5		0	10		5
Node 200: Summit Avenue & Woodland Hills Drive *(Stop Sign)*	AM	LOS	A	*	-	-	*	*	-			C	-	A
		Queue	0	*	-	-	*	*	-			25	-	5
	PM	LOS	A	*	-	-	*	*	-			C	-	B
		Queue	5	*	-	-	*	*	-			15	-	5

[1] *(--) indicates a movement that is prohibited, not analyzed, or does not exist; (*) indicates a freeflow movement.*

[2] *Queue is maximum of the 50th & 95th percentile queue, measured in feet.*

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EXHIBIT 8
INTERSECTION OPERATIONS & QUEUES

WAUKESHA COUNTY, WISCONSIN

LEGEND

- STOP Stop Sign
- → Lane Configuration
- XX' Turn Bay Length (In Feet)

Recommendations are shown in BLUE

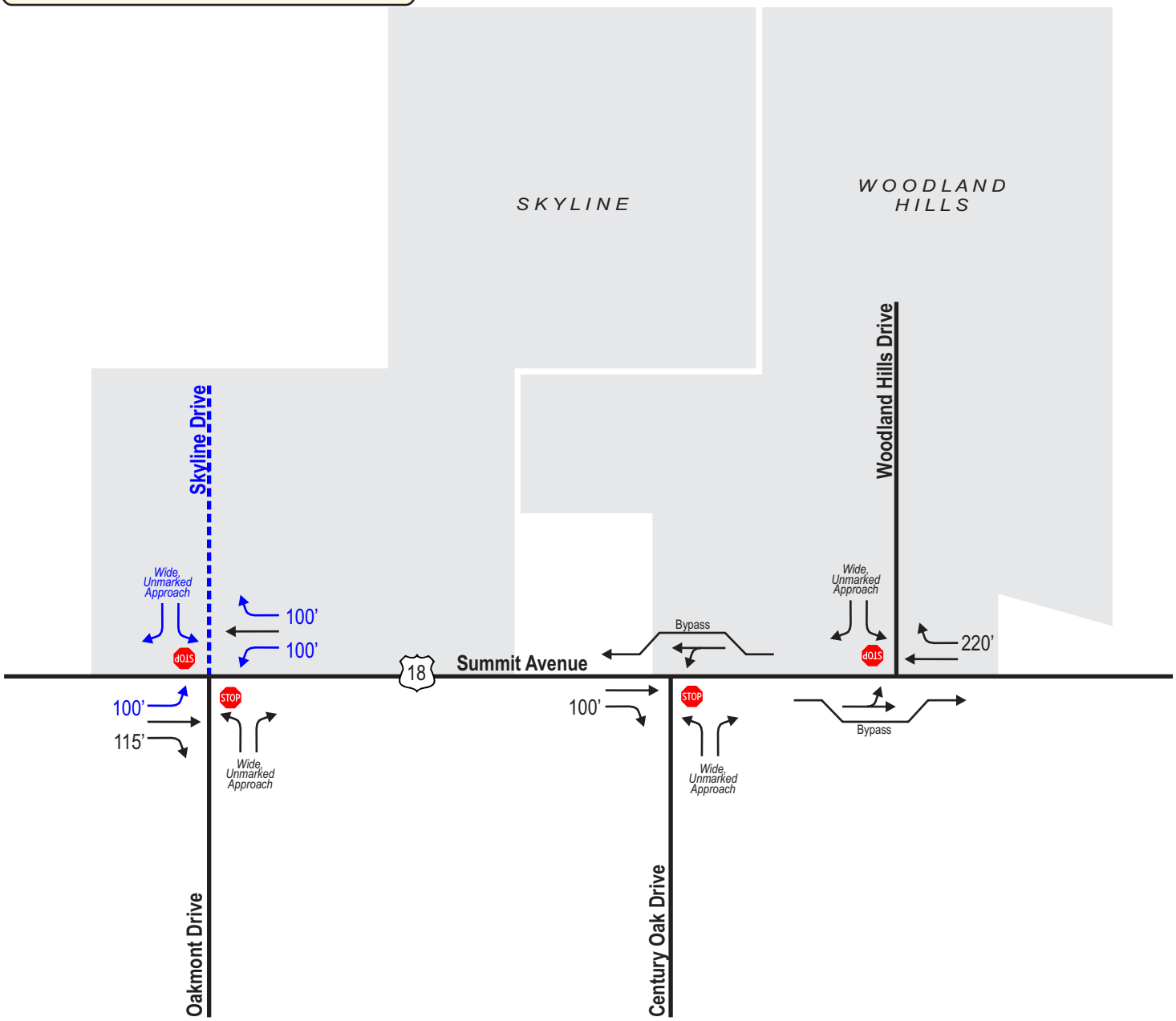

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EXHIBIT 9
RECOMMENDATIONS

WAUKESHA COUNTY, WISCONSIN

APPENDIX A

Traffic Counts &
ITE Land Use Data

Intersection Traffic Volume Report

Count Basics	Version 2013.J4.1		Page 1 of 13
Start Date:	Monday, January 13, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Intersection of: Oakmont Drive and USH 18-Summit Avenue

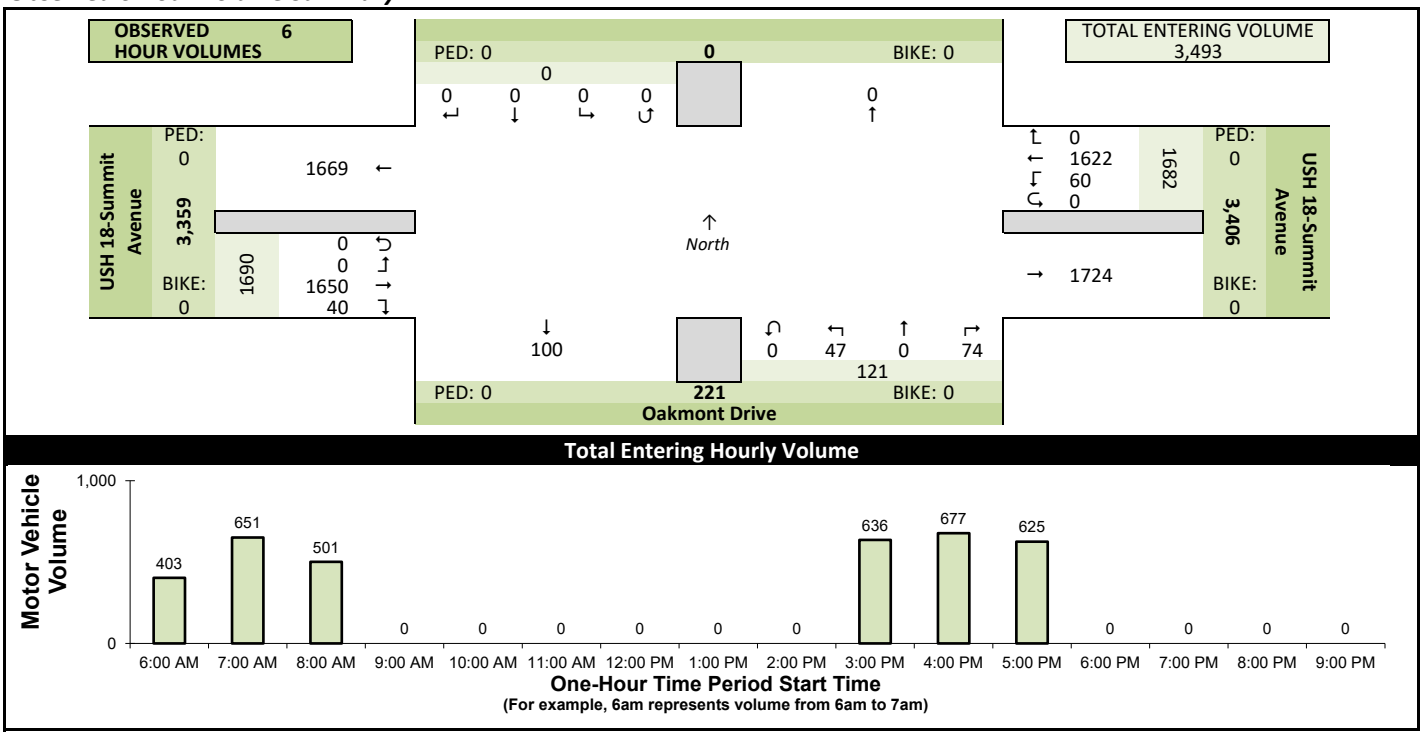
Site Information

Municipality	City of Waukesha		
County	Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg			
East Leg	USH 18-Summit Avenue		
South Leg	Oakmont Drive		
West Leg	USH 18-Summit Avenue		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

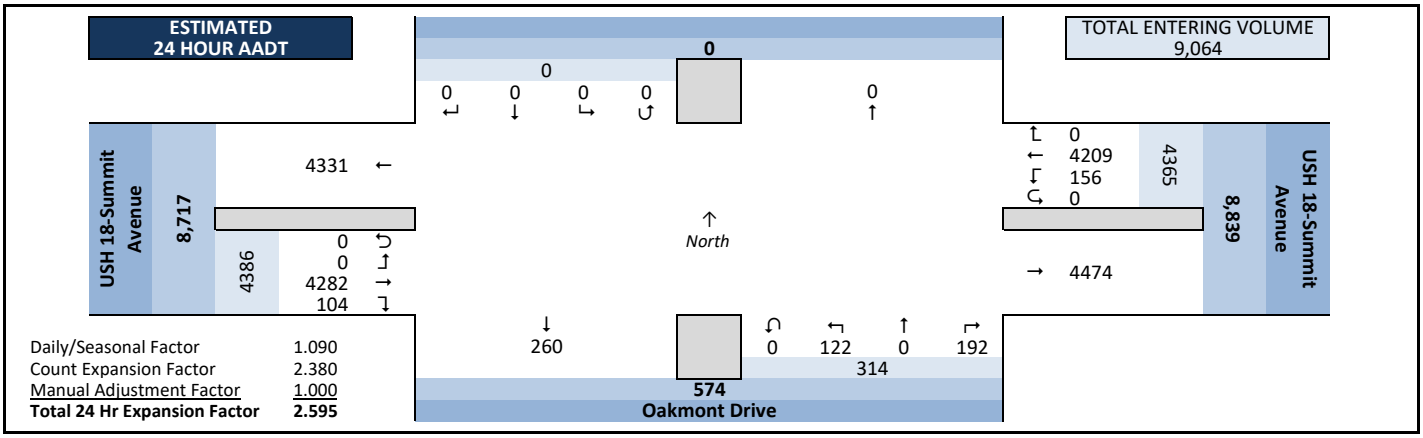
Count Information

Hrs Counted:	6:00 AM-9:00 AM and 3:00 PM-6:00 PM				
1st Day of Count	Monday, January 13, 2020			Weather	
AM Peak Period	Wednesday, January 15, 2020			Clear & Dry	
Midday Peak Period	Wednesday, January 15, 2020			Clear & Dry	
PM Peak Period	Monday, January 13, 2020			Clear & Dry	
Calculated Peak Hours					
AM	6:45-7:45am	MD		PM	4:30-5:30pm
Peak Hours Selected for Analysis					
AM	7:00-8:00am	MD		PM	4:30-5:30pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	1.090	Count Expansion Factor	2.380		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	Amy Scheuerlein			
	Midday Peak Period	None			
	PM Peak Period	Amy Scheuerlein			
Comments	2018 DOT Seasonal Factors				

Observed 6 Hour Volume Summary



Estimated 24 Hour AADT



Intersection Traffic Volume Report

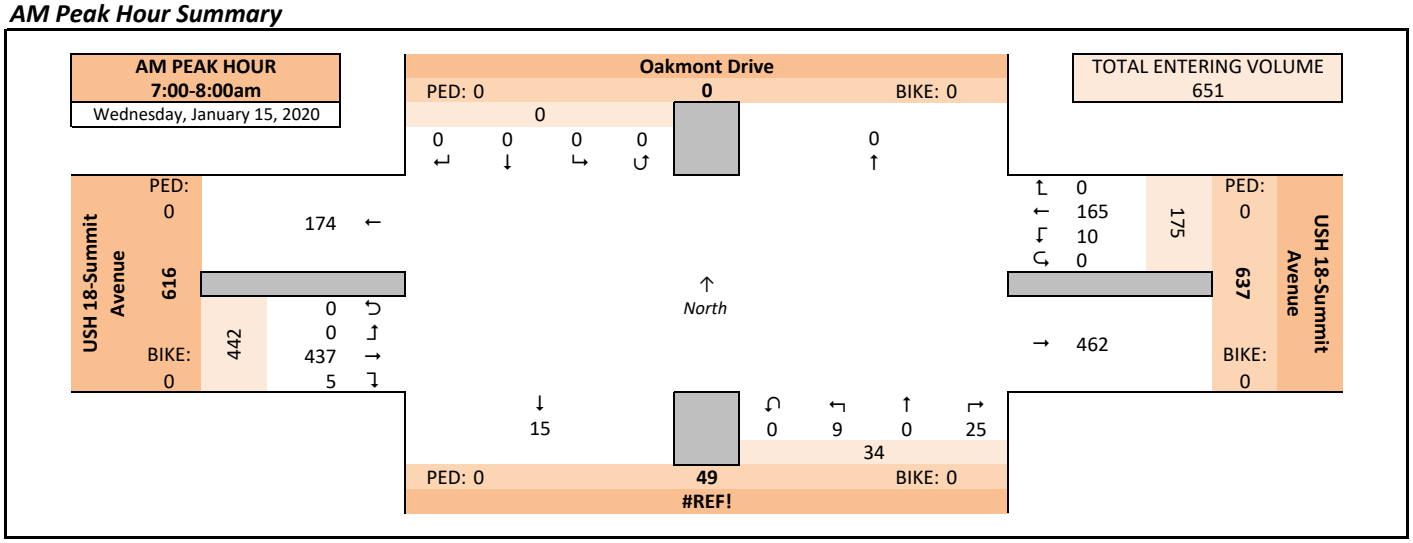
Count Basics			Page 2 of 13
Start Date:	Monday, January 13, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Graphical Summary

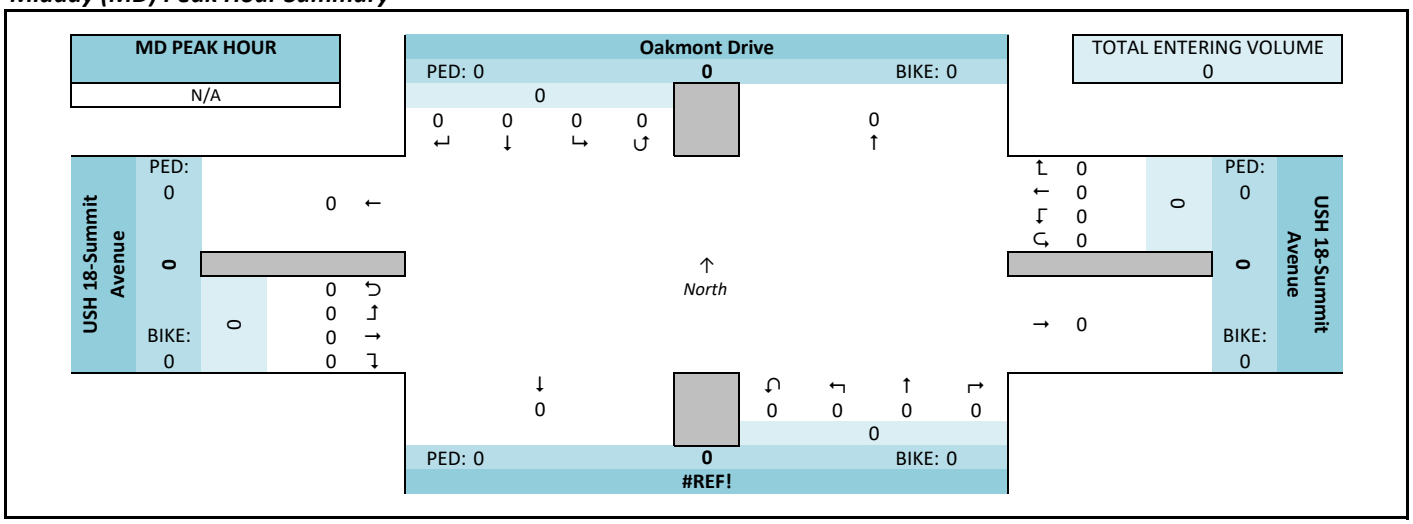
All Motor Vehicles

Oakmont Drive and USH 18-Summit Avenue

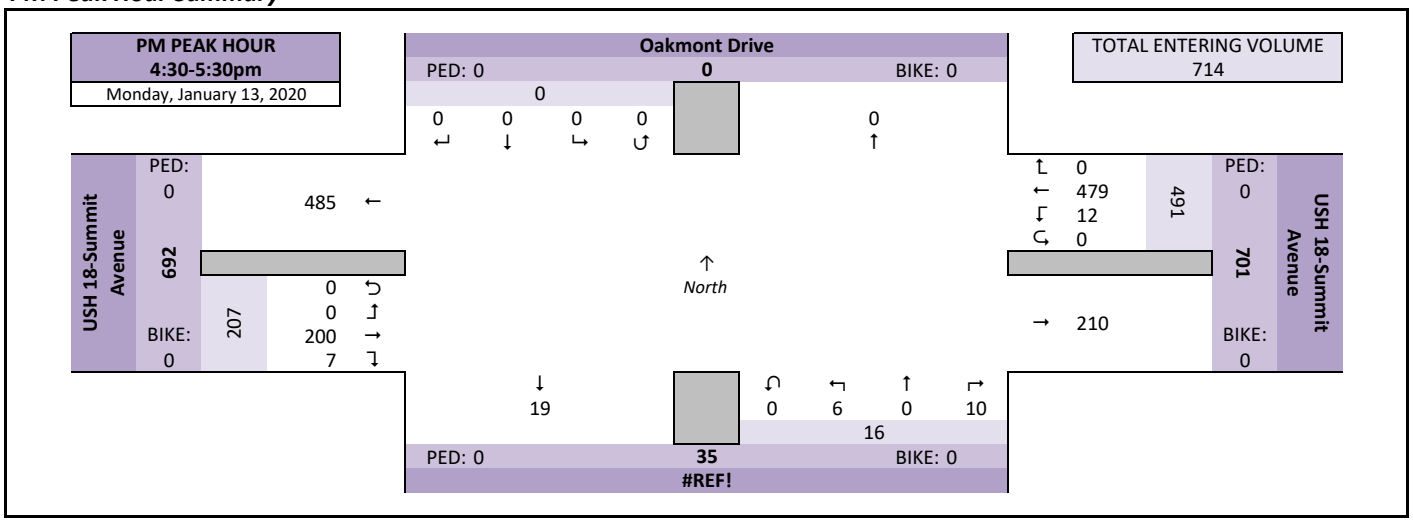
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics		*Page 3 of 13*
Start Date: Monday, January 13, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

Peak Hour Volume Summary

Oakmont Drive and USH 18-Summit Avenue

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Wednesday, January 15, 2020		From North					From East					From South					From West					
	AM Peak Hour	Oakmont Drive					USH 18-Summit Avenue					#REF!					USH 18-Summit Avenue					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:00 AM	0	0	0	0	0	0	41	3	0	44	5	0	5	0	10	1	91	0	0	92	146
	7:15 AM	0	0	0	0	0	0	41	3	0	44	6	0	2	0	8	4	128	0	0	132	184
	7:30 AM	0	0	0	0	0	0	46	1	0	47	8	0	1	0	9	0	116	0	0	116	172
	7:45 AM	0	0	0	0	0	0	37	3	0	40	6	0	1	0	7	0	102	0	0	102	149
	Peak Hour Volume	0	0	0	0	0	0	165	10	0	175	25	0	9	0	34	5	437	0	0	442	651
	Rounded Hourly Volume	0	0	0	0	0	0	165	10	0	175	25	0	10	0	35	5	435	0	0	440	650
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	3.0	10.0	0.0	3.4	4.0	0.0	0.0	0.0	2.9	0.0	1.4	0.0	0.0	1.4	2.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.5
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	3.6	10.0	0.0	4.0	4.0	0.0	0.0	0.0	2.9	0.0	1.8	0.0	0.0	1.8	2.5
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.83	0.00	0.93	0.78	0.00	0.45	0.00	0.85	0.31	0.85	0.00	0.00	0.84	0.88

N/A		From North					From East					From South					From West					
	MD Peak Hour	Oakmont Drive					USH 18-Summit Avenue					#REF!					USH 18-Summit Avenue					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Monday, January 13, 2020		From North					From East					From South					From West					
	PM Peak Hour	Oakmont Drive					USH 18-Summit Avenue					#REF!					USH 18-Summit Avenue					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:30 PM	0	0	0	0	0	0	108	5	0	113	2	0	0	0	2	0	55	0	0	55	170
	4:45 PM	0	0	0	0	0	0	120	2	0	122	1	0	2	0	3	3	54	0	0	57	182
	5:00 PM	0	0	0	0	0	0	122	2	0	124	3	0	1	0	4	1	46	0	0	47	175
	5:15 PM	0	0	0	0	0	0	129	3	0	132	4	0	3	0	7	3	45	0	0	48	187
	Peak Hour Volume	0	0	0	0	0	0	479	12	0	491	10	0	6	0	16	7	200	0	0	207	714
	Rounded Hourly Volume	0	0	0	0	0	0	480	10	0	490	10	0	5	0	15	5	200	0	0	205	710
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.6	8.3	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.7
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	8.3	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.7
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.60	0.00	0.93	0.62	0.00	0.50	0.00	0.57	0.58	0.91	0.00	0.00	0.91	0.95

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Oakmont Drive			USH 18-Summit Avenue			#REF!			USH 18-Summit Avenue			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics		*Page 5 of 13*
Start Date: Monday, January 13, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

All Motor Vehicles

Oakmont Drive and USH 18-Summit Avenue

15-Minute Motor Vehicle Data

15-Minute Time Period		From North (↓)					From East (←)					From South (↑)					From West (→)					15-Min	Hourly	
		Oakmont Drive					USH 18-Summit Avenue					#REF!					USH 18-Summit Avenue					Totals	Sum	PHF
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	10	0	0	10	1	0	0	0	1	1	37	0	0	38	49	403	0.64
	6:15 AM	0	0	0	0	0	0	22	0	0	22	1	0	4	0	5	1	51	0	0	52	79	500	0.80
	6:30 AM	0	0	0	0	0	0	28	1	0	29	3	0	0	0	3	0	86	0	0	86	118	605	0.82
	6:45 AM	0	0	0	0	0	0	57	2	0	59	3	0	6	0	9	1	88	0	0	89	157	659	0.90
	7:00 AM	0	0	0	0	0	0	41	3	0	44	5	0	5	0	10	1	91	0	0	92	146	651	0.88
	7:15 AM	0	0	0	0	0	0	41	3	0	44	6	0	2	0	8	4	128	0	0	132	184	638	0.87
	7:30 AM	0	0	0	0	0	0	46	1	0	47	8	0	1	0	9	0	116	0	0	116	172	596	0.87
	7:45 AM	0	0	0	0	0	0	37	3	0	40	6	0	1	0	7	0	102	0	0	102	149	546	0.92
	8:00 AM	0	0	0	0	0	0	36	2	0	38	1	0	5	0	6	1	88	0	0	89	133	501	0.88
	8:15 AM	0	0	0	0	0	0	46	1	0	47	6	0	2	0	8	1	86	0	0	87	142		
	8:30 AM	0	0	0	0	0	0	38	0	0	38	2	0	1	0	3	3	78	0	0	81	122		
	8:45 AM	0	0	0	0	0	0	27	0	0	27	4	0	0	0	4	1	72	0	0	73	104		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	0	0	0	0	0	0	85	4	0	89	4	0	2	0	6	2	47	0	0	49	144	636	0.89
	3:15 PM	0	0	0	0	0	0	91	5	0	96	1	0	3	0	4	1	59	0	0	60	160	667	0.93
	3:30 PM	0	0	0	0	0	0	86	3	0	89	3	0	1	0	4	2	58	0	0	60	153	657	0.92
	3:45 PM	0	0	0	0	0	0	93	7	0	100	2	0	3	0	5	9	65	0	0	74	179	674	0.94
	4:00 PM	0	0	0	0	0	0	99	2	0	101	3	0	0	0	3	2	69	0	0	71	175	677	0.93
	4:15 PM	0	0	0	0	0	0	97	3	0	100	0	0	0	0	0	0	50	0	0	50	150	677	0.93
	4:30 PM	0	0	0	0	0	0	108	5	0	113	2	0	0	0	2	0	55	0	0	55	170	714	0.95
	4:45 PM	0	0	0	0	0	0	120	2	0	122	1	0	2	0	3	3	54	0	0	57	182	688	0.92
	5:00 PM	0	0	0	0	0	0	122	2	0	124	3	0	1	0	4	1	46	0	0	47	175	625	0.84
	5:15 PM	0	0	0	0	0	0	129	3	0	132	4	0	3	0	7	3	45	0	0	48	187		
	5:30 PM	0	0	0	0	0	0	93	4	0	97	2	0	2	0	4	2	41	0	0	43	144		
	5:45 PM	0	0	0	0	0	0	70	4	0	74	3	0	3	0	6	1	38	0	0	39	119		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		0	0	0	0	0	0	1622	60	0	1682	74	0	47	0	121	40	1650	0	0	1690	3493		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		From North (↓)					From East (←)					From South (↑)					From West (→)					Total Hourly	
		Oakmont Drive					USH 18-Summit Avenue					#REF!					USH 18-Summit Avenue						
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	PHF
AM	7:00 AM	0	0	0	0	0	0	165	10	0	175	25	0	9	0	34	5	437	0	0	442	651	0.88
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:30 PM	0	0	0	0	0	0	479	12	0	491	10	0	6	0	16	7	200	0	0	207	714	0.95

Intersection Traffic Volume Report

Count Basics			*Page 9 of 13*
Start Date:	Monday, January 13, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

Oakmont Drive and USH 18-Summit Avenue

15-Minute Heavy Vehicle Data

15-Minute Time Period		From North (↓) Oakmont Drive					From East (←) USH 18-Summit Avenue					From South (↑) #REF!					From West (→) USH 18-Summit Avenue					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	14
	6:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3	14
	6:45 AM	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	1	3	0	0	4	7	19
	7:00 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2	16
	7:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	19
	7:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8	24
	7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	21
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5	22
	8:15 AM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	4	0	0	4	7	
	8:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	
	8:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	2	3	0	5	0	0	0	0	0	0	1	0	0	1	6	16
	3:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2	13
	3:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	12
	3:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2	0	2	0	0	2	5	10
	4:00 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	3	7
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4
	4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5
	4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	5
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	5:15 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	
	5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	0	0	0	0	23	11	0	34	2	0	4	0	6	2	35	0	0	37	77	

Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period		From North (↓) Oakmont Drive					From East (←) USH 18-Summit Avenue					From South (↑) #REF!					From West (→) USH 18-Summit Avenue					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:00 AM	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	0	8	0	0	8	16
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	1	0	0	1	5

Intersection Traffic Volume Report

Count Basics	Version 2013.J4.1	Page 1 of 13
Start Date:	Wednesday, January 15, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Intersection of: Woodland Hills Drive and USH 18-Summit Avenue

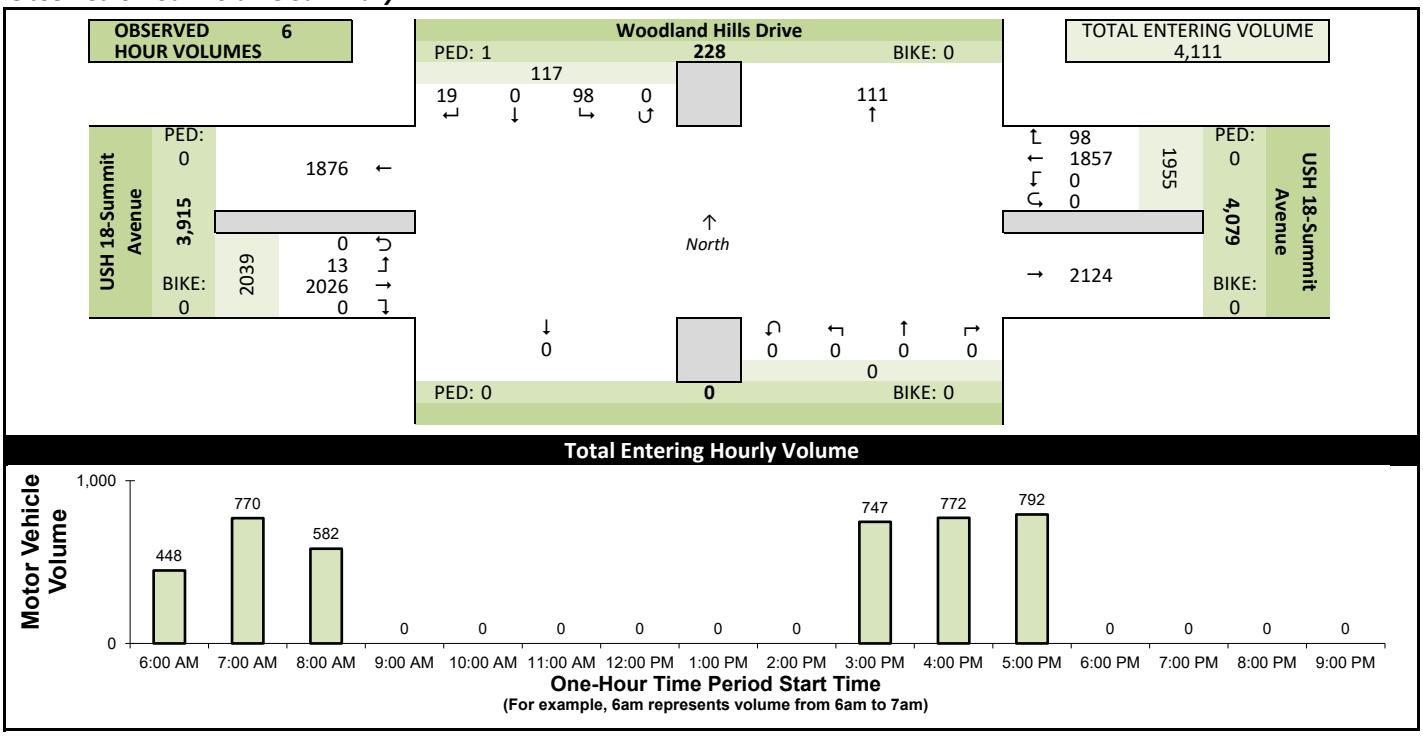
Site Information

Municipality	City of Waukesha		
County	Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Woodland Hills Drive		
East Leg	USH 18-Summit Avenue		
South Leg			
West Leg	USH 18-Summit Avenue		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

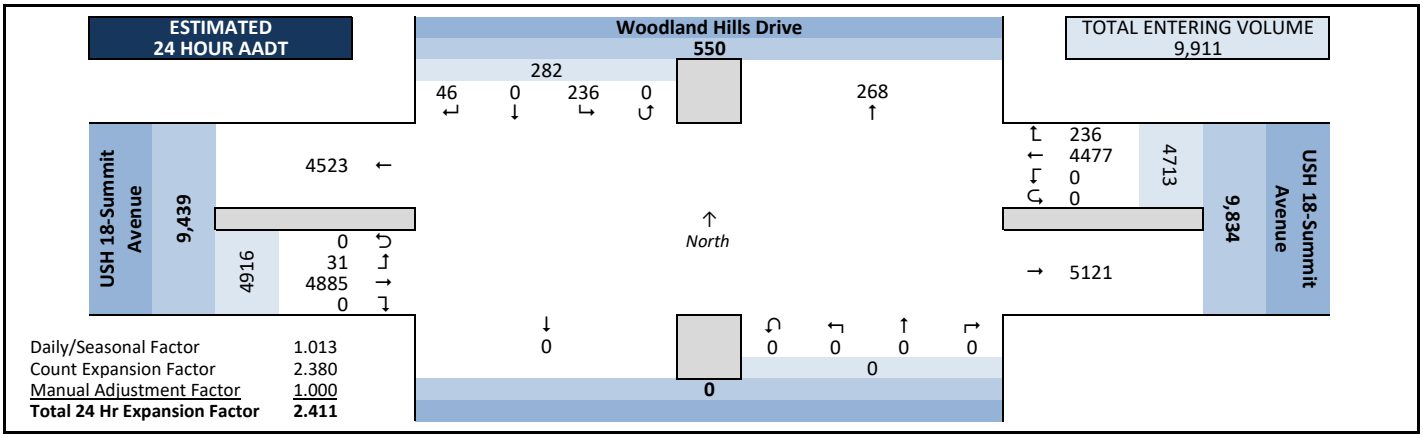
Count Information

Hrs Counted:	6:00 AM-9:00 AM and 3:00 PM-6:00 PM				
1st Day of Count	Wednesday, January 15, 2020			Weather	
AM Peak Period	Wednesday, January 15, 2020			Clear & Dry	
Midday Peak Period	Wednesday, January 15, 2020			Clear & Dry	
PM Peak Period	Wednesday, January 15, 2020			Clear & Dry	
Calculated Peak Hours					
AM	7:00-8:00am	MD		PM	4:30-5:30pm
Peak Hours Selected for Analysis					
AM	7:00-8:00am	MD		PM	4:30-5:30pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	1.013	Count Expansion Factor	2.380		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	Jeff Schleif			
	Midday Peak Period	None			
	PM Peak Period	Amy Scheuerlein			
Comments	2018 DOT Seasonal Factors				

Observed 6 Hour Volume Summary



Estimated 24 Hour AADT



Intersection Traffic Volume Report

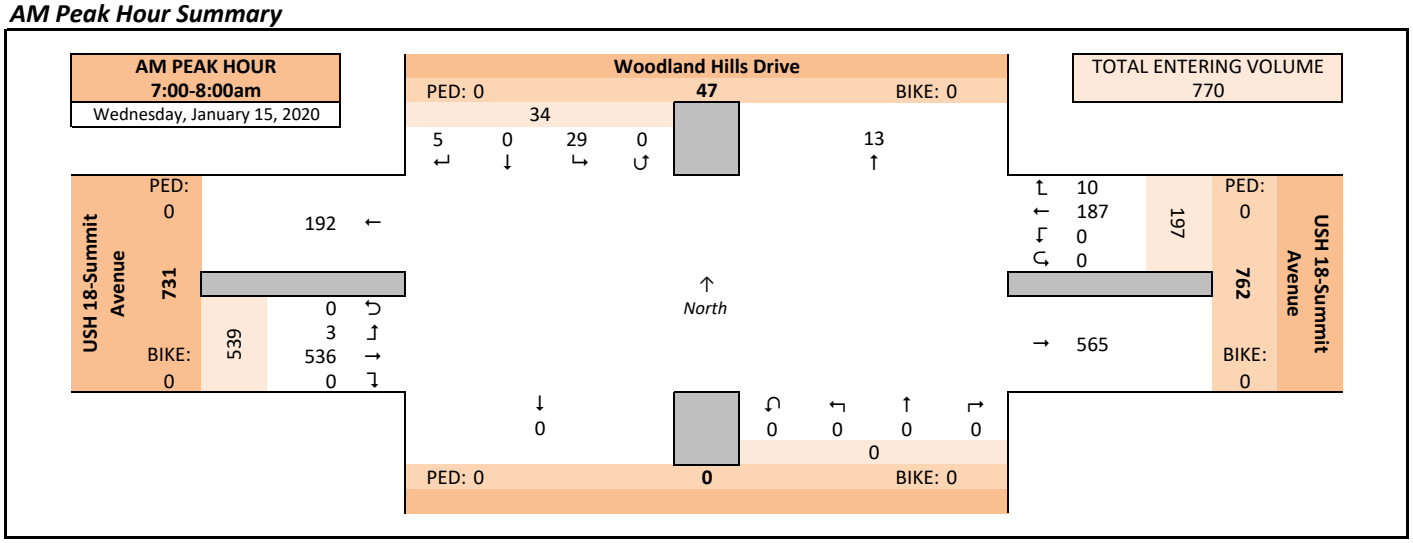
Count Basics			Page 2 of 13
Start Date:	Wednesday, January 15, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Graphical Summary

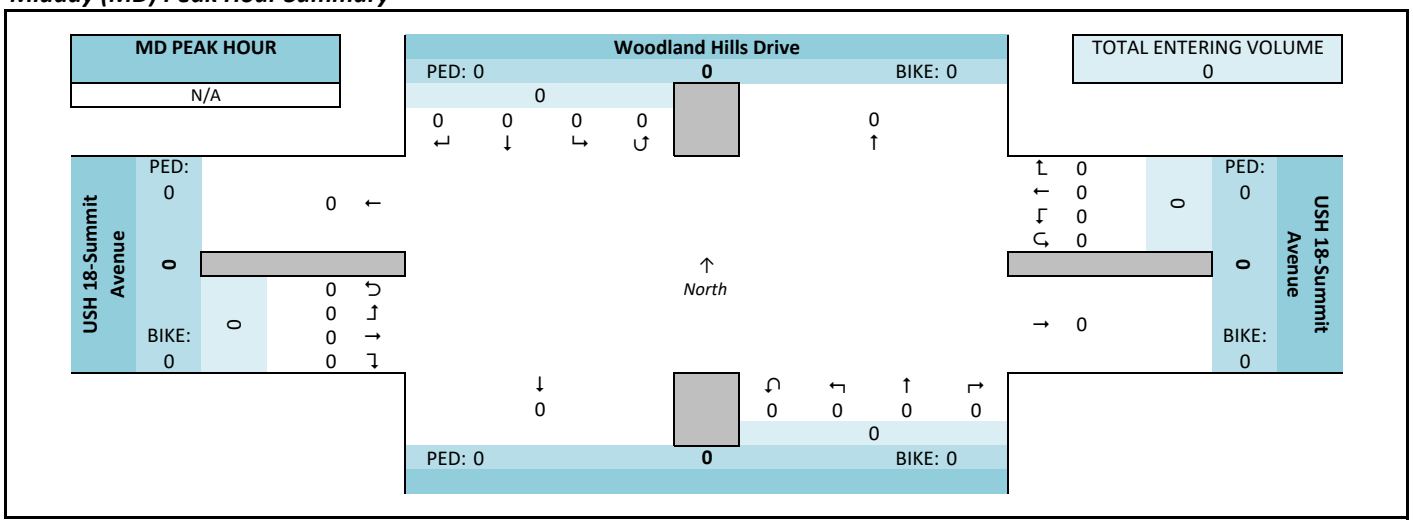
Woodland Hills Drive and USH 18-Summit Avenue

All Motor Vehicles

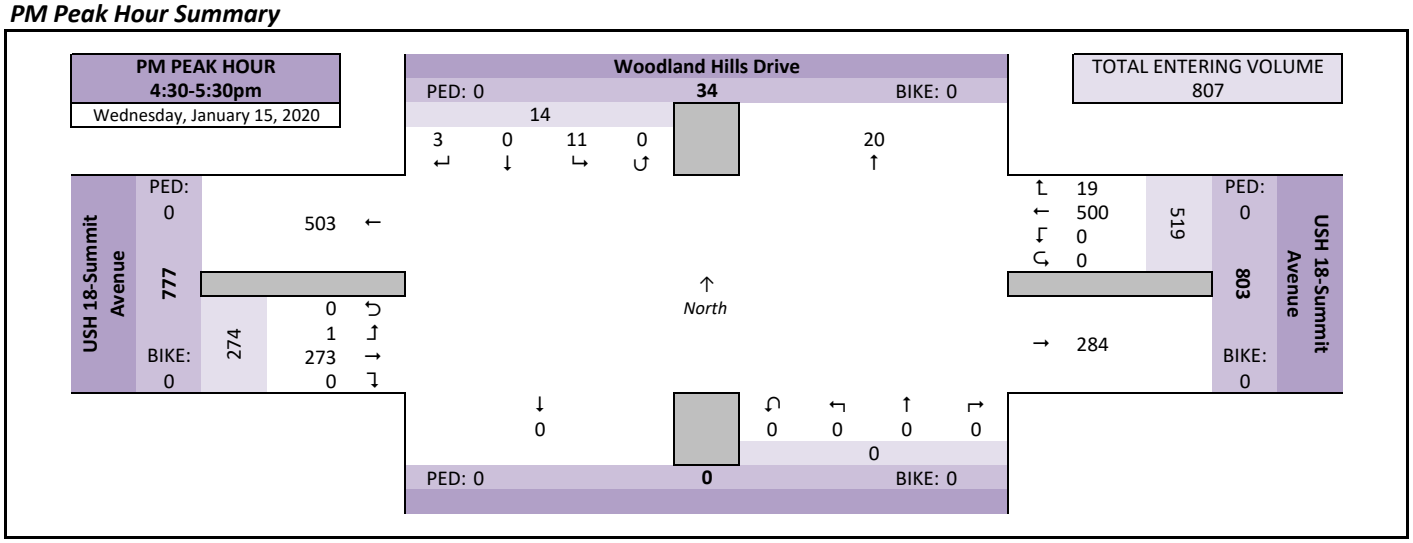
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Wednesday, January 15, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

Peak Hour Volume Summary

Woodland Hills Drive and USH 18-Summit Avenue

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Wednesday, January 15, 2020		From North					From East					From South					From West					
	AM Peak Hour	Woodland Hills Drive					USH 18-Summit Avenue										USH 18-Summit Avenue					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:00 AM	3	0	13	0	16	2	42	0	0	44	0	0	0	0	0	0	108	1	0	109	169
	7:15 AM	1	0	4	0	5	3	44	0	0	47	0	0	0	0	0	0	154	0	0	154	206
	7:30 AM	0	0	6	0	6	1	52	0	0	53	0	0	0	0	0	0	145	1	0	146	205
	7:45 AM	1	0	6	0	7	4	49	0	0	53	0	0	0	0	0	0	129	1	0	130	190
	Peak Hour Volume	5	0	29	0	34	10	187	0	0	197	0	0	0	0	0	0	536	3	0	539	770
	Rounded Hourly Volume	5	0	30	0	35	10	185	0	0	195	0	0	0	0	0	0	535	5	0	540	770
	% Single Unit Trucks	20.0	0.0	0.0	0.0	2.9	40.0	3.7	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	1.5	33.3	0.0	1.7	2.7
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.4
	% Trucks (Total)	20.0	0.0	0.0	0.0	2.9	40.0	4.3	0.0	0.0	6.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9	33.3	0.0	2.0	3.1
	Peak Hour Factor (PHF)	0.42	0.00	0.56	0.00	0.53	0.62	0.90	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.87	0.75	0.00	0.87	0.93

N/A		From North					From East					From South					From West					
	MD Peak Hour	Woodland Hills Drive					USH 18-Summit Avenue										USH 18-Summit Avenue					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Wednesday, January 15, 2020		From North					From East					From South					From West					
	PM Peak Hour	Woodland Hills Drive					USH 18-Summit Avenue										USH 18-Summit Avenue					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:30 PM	1	0	3	0	4	1	117	0	0	118	0	0	0	0	0	0	72	0	0	72	194
	4:45 PM	0	0	0	0	0	4	129	0	0	133	0	0	0	0	0	0	53	1	0	54	187
	5:00 PM	1	0	2	0	3	9	133	0	0	142	0	0	0	0	0	0	68	0	0	68	213
	5:15 PM	1	0	6	0	7	5	121	0	0	126	0	0	0	0	0	0	80	0	0	80	213
	Peak Hour Volume	3	0	11	0	14	19	500	0	0	519	0	0	0	0	0	0	273	1	0	274	807
	Rounded Hourly Volume	5	0	10	0	15	20	500	0	0	520	0	0	0	0	0	0	275	0	0	275	810
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.5
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.5
	Peak Hour Factor (PHF)	0.75	0.00	0.46	0.00	0.50	0.53	0.94	0.00	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.25	0.00	0.86	0.95

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Woodland Hills Drive			USH 18-Summit Avenue						USH 18-Summit Avenue			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics		*Page 5 of 13*
Start Date: Wednesday, January 15, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

All Motor Vehicles

Woodland Hills Drive and USH 18-Summit Avenue

15-Minute Motor Vehicle Data

15-Minute Time Period		From North (↓) Woodland Hills Drive					From East (←) USH 18-Summit Avenue					From South (↑)					From West (→) USH 18-Summit Avenue					15-Min	Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum	PHF
AM Peak Period	6:00 AM	0	0	1	0	1	2	11	0	0	13	0	0	0	0	0	0	47	0	0	47	61	448	0.65
	6:15 AM	0	0	2	0	2	0	23	0	0	23	0	0	0	0	0	0	54	0	0	54	79	556	0.80
	6:30 AM	1	0	1	0	2	5	32	0	0	37	0	0	0	0	0	0	96	0	0	96	135	683	0.83
	6:45 AM	0	0	2	0	2	3	57	0	0	60	0	0	0	0	0	0	111	0	0	111	173	753	0.91
	7:00 AM	3	0	13	0	16	2	42	0	0	44	0	0	0	0	0	0	108	1	0	109	169	770	0.93
	7:15 AM	1	0	4	0	5	3	44	0	0	47	0	0	0	0	0	0	154	0	0	154	206	751	0.91
	7:30 AM	0	0	6	0	6	1	52	0	0	53	0	0	0	0	0	0	145	1	0	146	205	707	0.86
	7:45 AM	1	0	6	0	7	4	49	0	0	53	0	0	0	0	0	0	129	1	0	130	190	645	0.85
	8:00 AM	2	0	4	0	6	4	38	0	0	42	0	0	0	0	0	0	101	1	0	102	150	582	0.90
	8:15 AM	2	0	8	0	10	1	47	0	0	48	0	0	0	0	0	0	103	1	0	104	162		
	8:30 AM	0	0	5	0	5	4	45	0	0	49	0	0	0	0	0	0	88	1	0	89	143		
	8:45 AM	0	0	9	0	9	4	29	0	0	33	0	0	0	0	0	0	85	0	0	85	127		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	1	0	2	0	3	1	106	0	0	107	0	0	0	0	0	0	65	0	0	65	175	747	0.94
	3:15 PM	2	0	4	0	6	7	95	0	0	102	0	0	0	0	0	0	70	1	0	71	179	757	0.95
	3:30 PM	0	0	3	0	3	9	118	0	0	127	0	0	0	0	0	0	68	1	0	69	199	784	0.95
	3:45 PM	1	0	4	0	5	7	100	0	0	107	0	0	0	0	0	0	82	0	0	82	194	779	0.95
	4:00 PM	1	0	5	0	6	5	104	0	0	109	0	0	0	0	0	0	68	2	0	70	185	772	0.94
	4:15 PM	0	0	5	0	5	4	128	0	0	132	0	0	0	0	0	0	67	2	0	69	206	800	0.94
	4:30 PM	1	0	3	0	4	1	117	0	0	118	0	0	0	0	0	0	72	0	0	72	194	807	0.95
	4:45 PM	0	0	0	0	0	4	129	0	0	133	0	0	0	0	0	0	53	1	0	54	187	784	0.92
	5:00 PM	1	0	2	0	3	9	133	0	0	142	0	0	0	0	0	0	68	0	0	68	213	792	0.93
	5:15 PM	1	0	6	0	7	5	121	0	0	126	0	0	0	0	0	0	80	0	0	80	213		
	5:30 PM	1	0	2	0	3	7	108	0	0	115	0	0	0	0	0	0	53	0	0	53	171		
	5:45 PM	0	0	1	0	1	6	129	0	0	135	0	0	0	0	0	0	59	0	0	59	195		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		19	0	98	0	117	98	1857	0	0	1955	0	0	0	0	0	0	2026	13	0	2039	4111		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		From North (↓) Woodland Hills Drive					From East (←) USH 18-Summit Avenue					From South (↑)					From West (→) USH 18-Summit Avenue					Total Hourly	
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume	PHF
AM	7:00 AM	5	0	29	0	34	10	187	0	0	197	0	0	0	0	0	0	536	3	0	539	770	0.93
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	4:30 PM	3	0	11	0	14	19	500	0	0	519	0	0	0	0	0	0	273	1	0	274	807	0.95

Intersection Traffic Volume Report

Count Basics			*Page 9 of 13*
Start Date:	Wednesday, January 15, 2020	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

Woodland Hills Drive and USH 18-Summit Avenue

15-Minute Heavy Vehicle Data

15-Minute Time Period		From North (↓) Woodland Hills Drive					From East (←) USH 18-Summit Avenue					From South (↑)					From West (→) USH 18-Summit Avenue					15-Min	Hourly
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	22
	6:30 AM	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	3	0	0	3	8	24
	6:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7	25
	7:00 AM	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	2	1	0	3	6	24
	7:15 AM	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3	25
	7:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9	30
	7:45 AM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	3	0	0	3	6	28
	8:00 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6	0	0	6	7	29
	8:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	8	
	8:30 AM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	7	
	8:45 AM	0	0	1	0	1	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	7	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	20
	3:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4	19
	3:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6	20
	3:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6	16
	4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	10
	4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5	8
	4:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	5:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		2	0	2	0	4	10	39	0	0	49	0	0	0	0	0	0	47	2	0	49	102	

Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period		From North (↓) Woodland Hills Drive					From East (←) USH 18-Summit Avenue					From South (↑)					From West (→) USH 18-Summit Avenue					Total Hourly
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:00 AM	1	0	0	0	1	4	8	0	0	12	0	0	0	0	0	0	10	1	0	11	24
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4

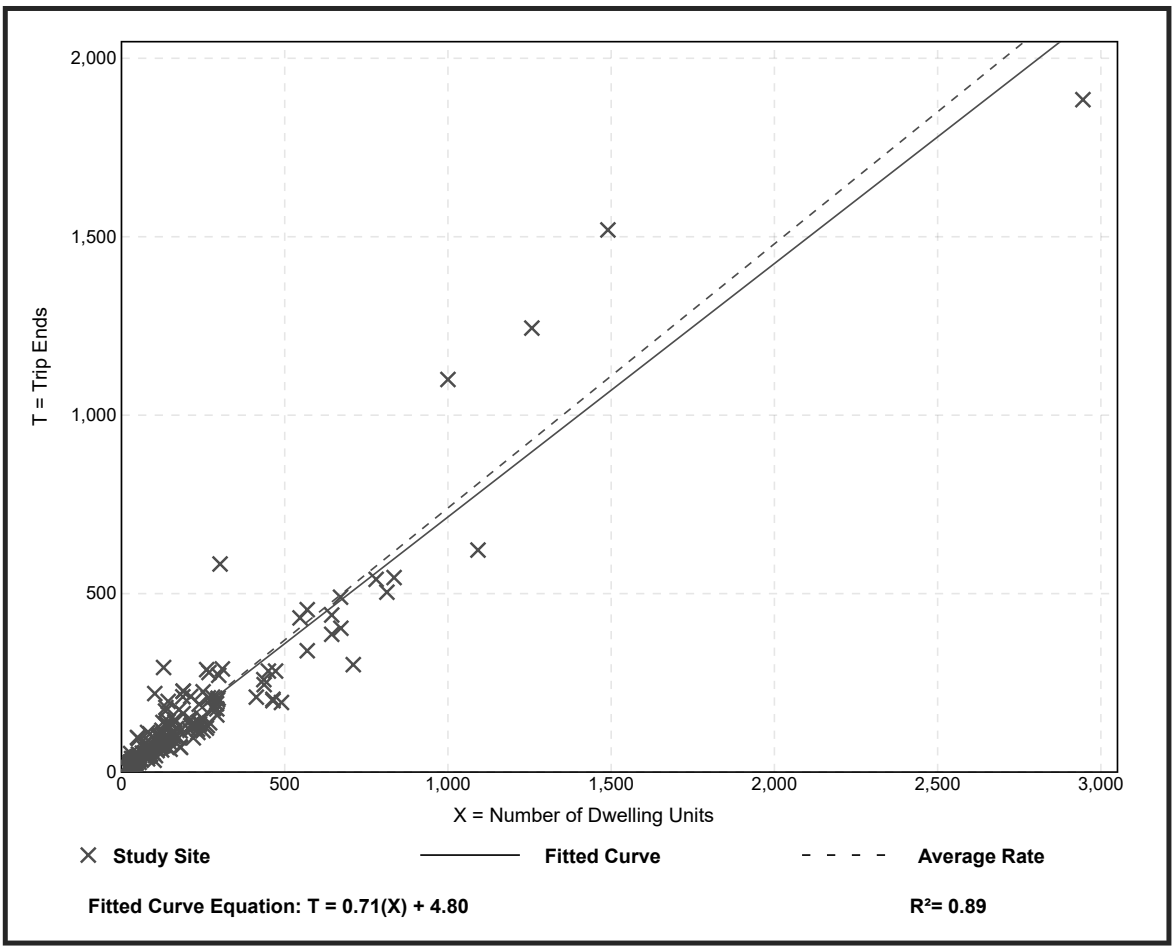
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



Fitted Curve Equation: T = 0.71(X) + 4.80

R^2= 0.89

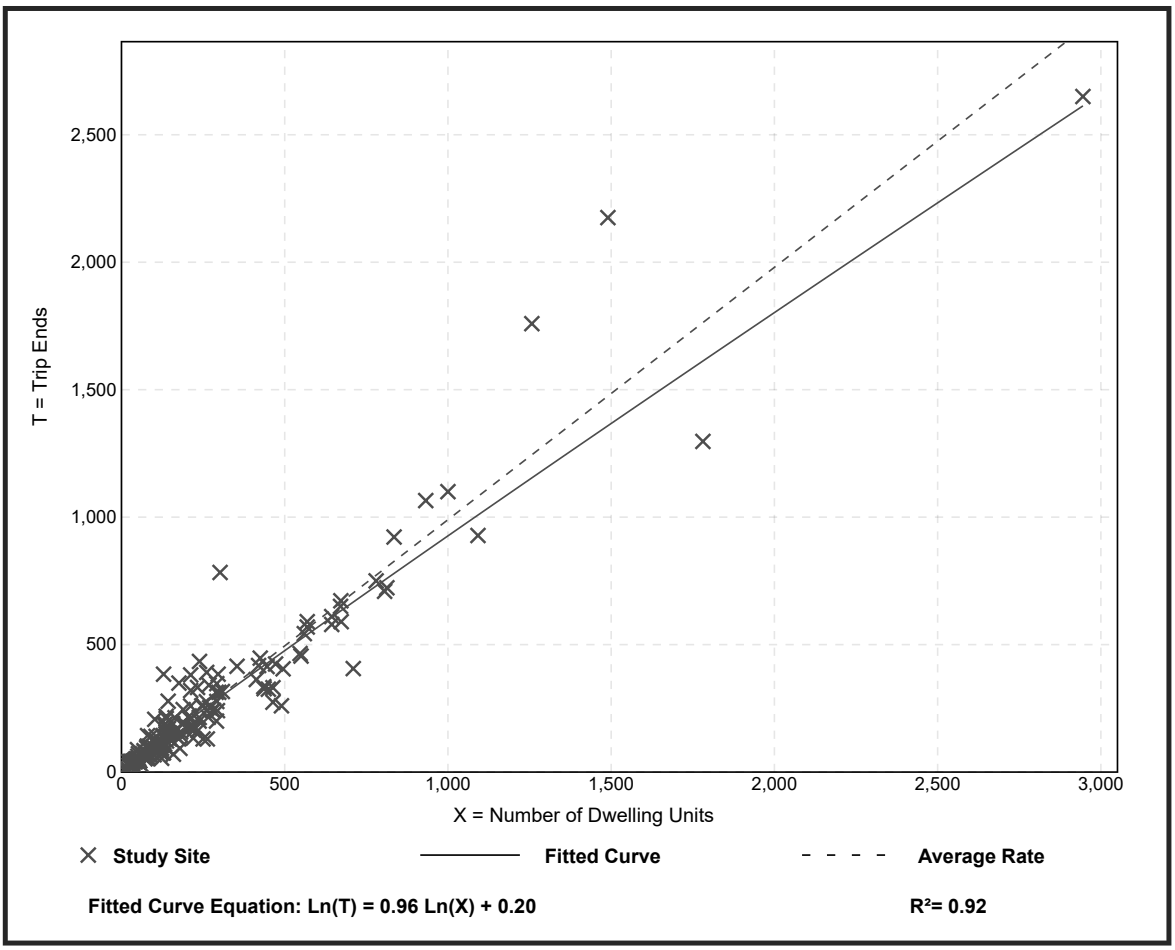
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 190
Avg. Num. of Dwelling Units: 242
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Single-Family Detached Housing
(210)

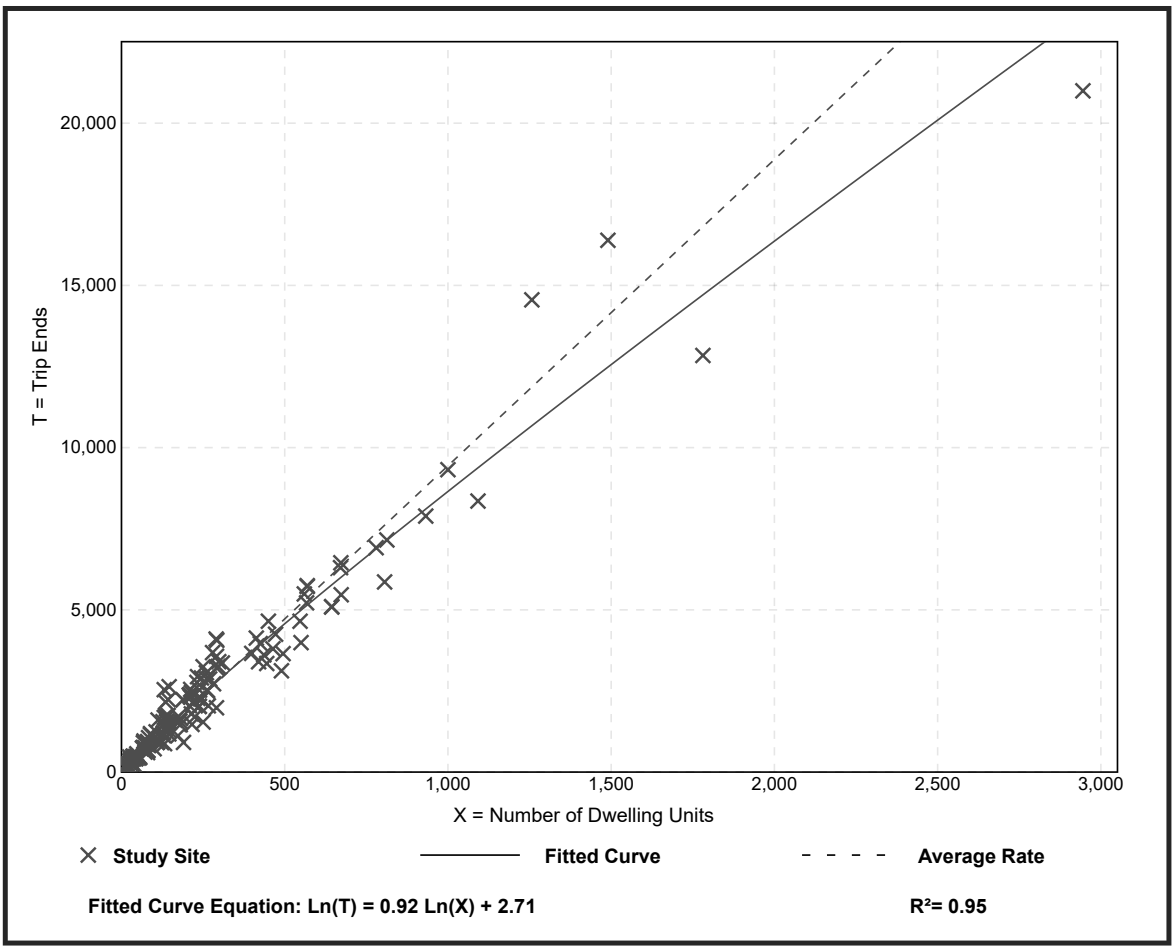
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.71 **R^2= 0.95**

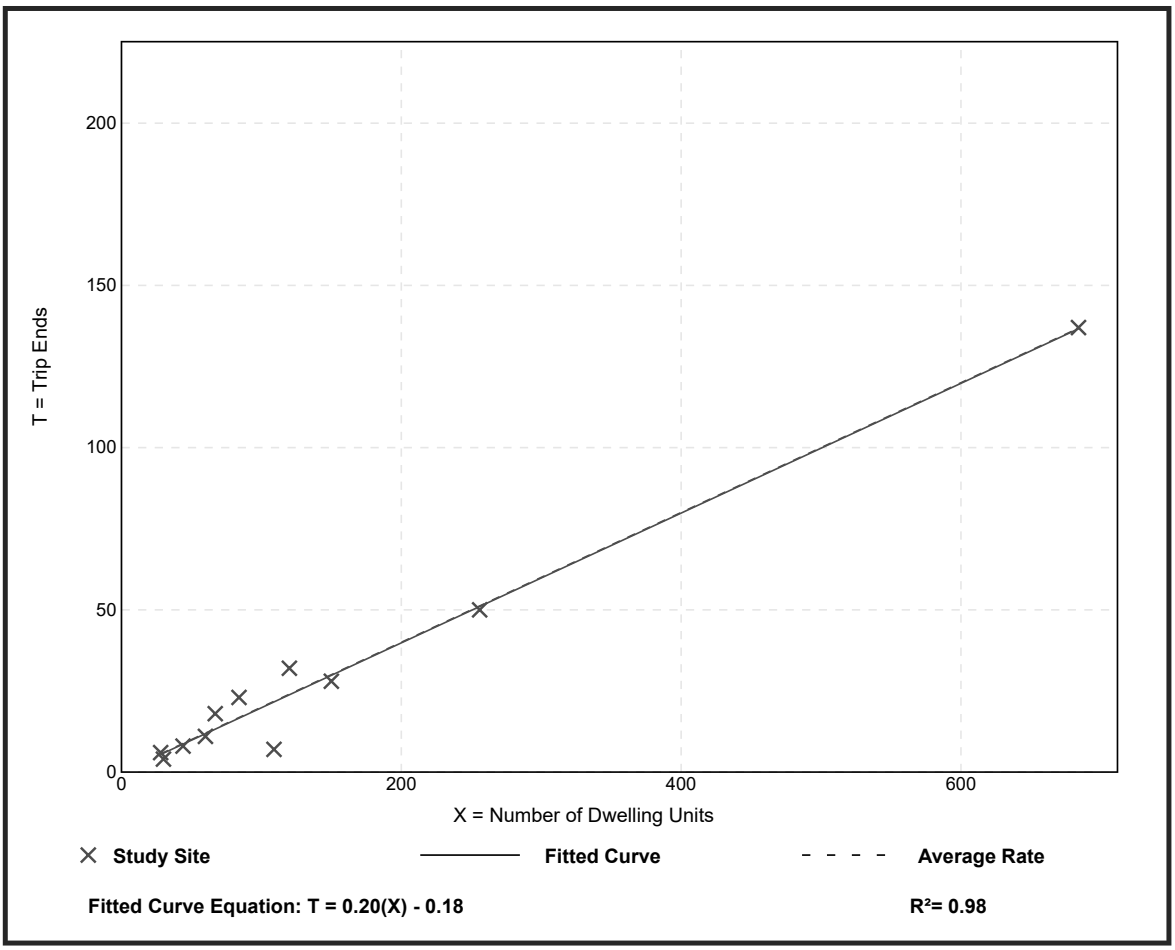
Senior Adult Housing - Attached
(252)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	11
Avg. Num. of Dwelling Units:	148
Directional Distribution:	35% entering, 65% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.20	0.06 - 0.27	0.05

Data Plot and Equation



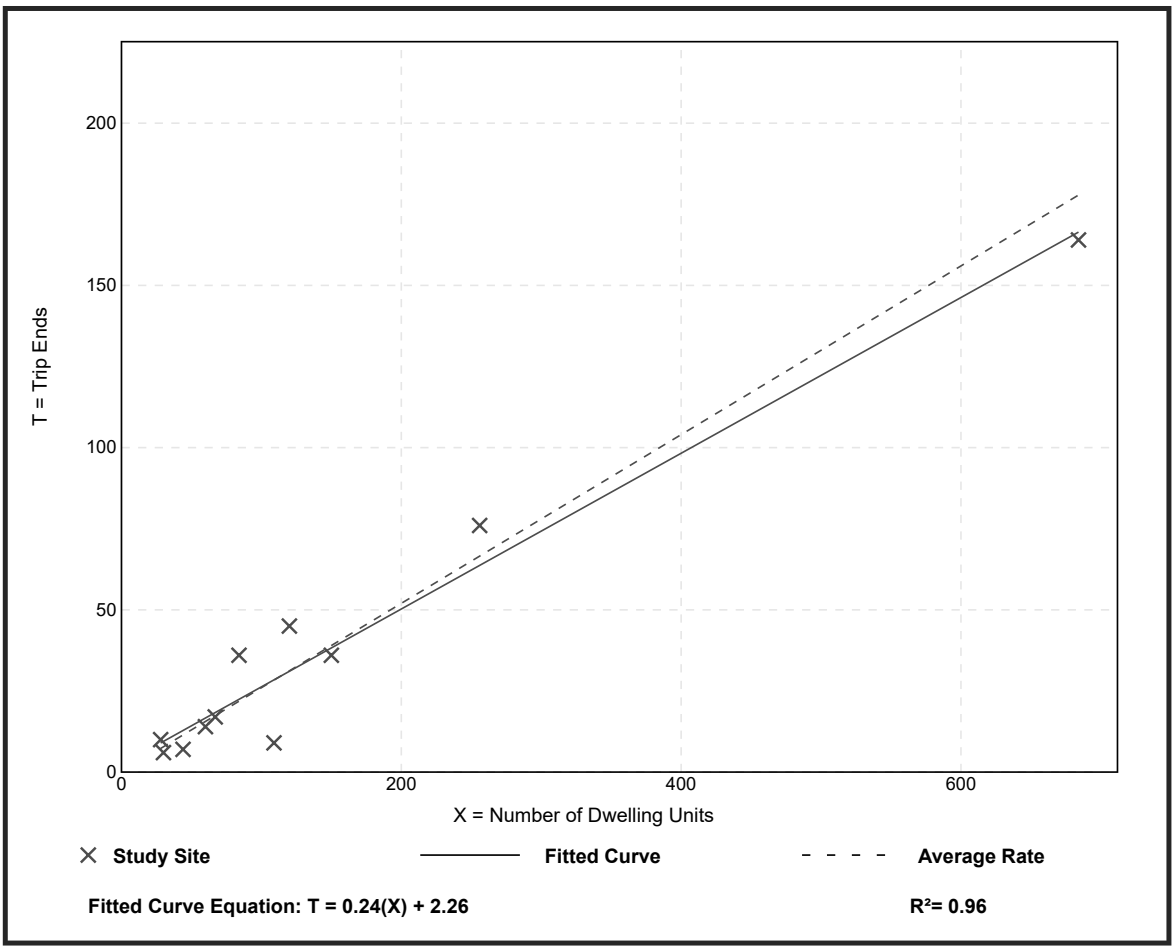
Senior Adult Housing - Attached
(252)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	11
Avg. Num. of Dwelling Units:	148
Directional Distribution:	55% entering, 45% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.26	0.08 - 0.43	0.08

Data Plot and Equation



Senior Adult Housing - Attached
(252)

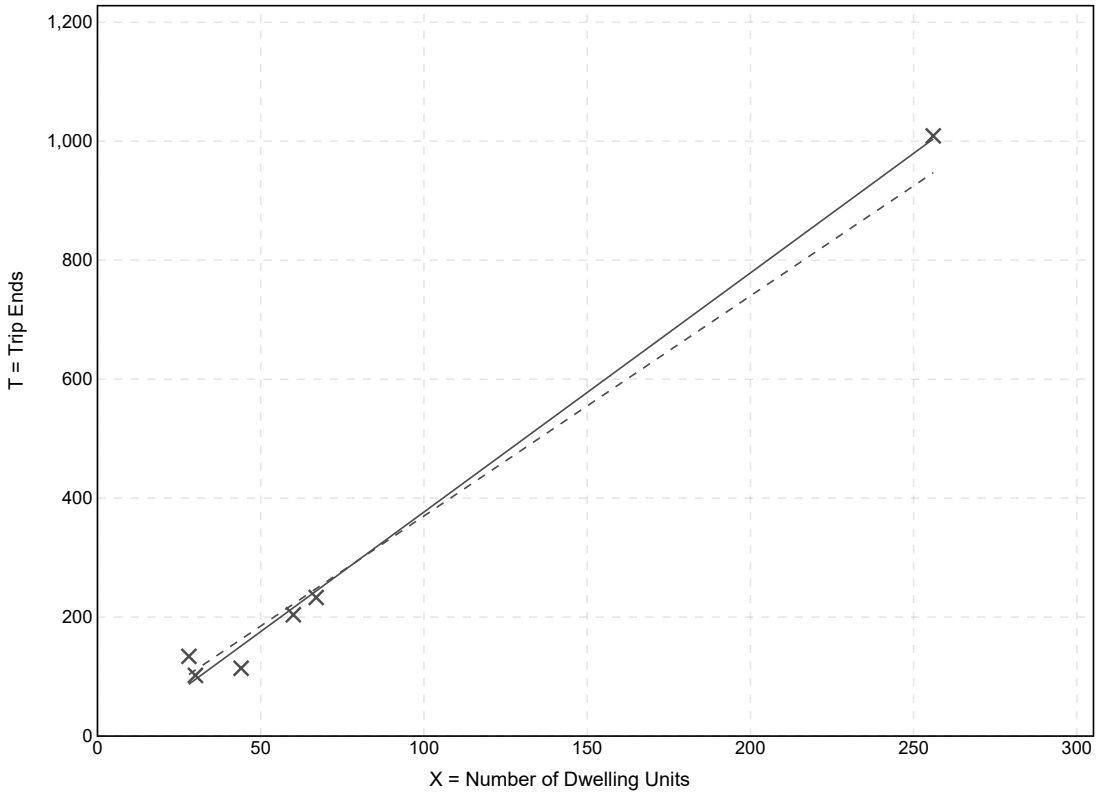
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Dwelling Units: 81
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.70	2.59 - 4.79	0.53

Data Plot and Equation



Fitted Curve Equation: T = 4.02(X) - 25.37

R^2= 0.99

APPENDIX B

Peak Hour Capacity Analysis
Synchro Worksheets

Left-Turn/Right-Turn Warrants

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	475	5	10	175	10	25
Future Vol, veh/h	475	5	10	175	10	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	120	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	4	4	3	3
Mvmt Flow	540	6	11	199	11	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	546	0	761	540
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	221	-
Critical Hdwy	-	-	4.14	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.236	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1013	-	372	540
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1013	-	368	540
Mov Cap-2 Maneuver	-	-	-	-	368	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	804	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	368	540	-	-	1013	-
HCM Lane V/C Ratio	0.031	0.053	-	-	0.011	-
HCM Control Delay (s)	15.1	12	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	495	180	10	30	5
Future Vol, veh/h	5	495	180	10	30	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	220	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	6	6	3	3
Mvmt Flow	5	532	194	11	32	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	205	0	-	0	736	194
Stage 1	-	-	-	-	194	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	4.12	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.218	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1366	-	-	-	385	845
Stage 1	-	-	-	-	836	-
Stage 2	-	-	-	-	581	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1366	-	-	-	383	845
Mov Cap-2 Maneuver	-	-	-	-	383	-
Stage 1	-	-	-	-	833	-
Stage 2	-	-	-	-	581	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1366	-	-	-	383	845
HCM Lane V/C Ratio	0.004	-	-	-	0.084	0.006
HCM Control Delay (s)	7.6	-	-	-	15.3	9.3
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	235	5	10	490	5	10
Future Vol, veh/h	235	5	10	490	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	115	120	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	247	5	11	516	5	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	252	0	785	247
Stage 1	-	-	-	-	247	-
Stage 2	-	-	-	-	538	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1319	-	364	797
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1319	-	361	797
Mov Cap-2 Maneuver	-	-	-	-	361	-
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	584	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	361	797	-	-	1319	-
HCM Lane V/C Ratio	0.015	0.013	-	-	0.008	-
HCM Control Delay (s)	15.1	9.6	-	-	7.8	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	245	495	20	10	5
Future Vol, veh/h	1	245	495	20	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	220	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	1	258	521	21	11	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	542	0	-	0	781	521
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1032	-	-	-	366	559
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1032	-	-	-	366	559
Mov Cap-2 Maneuver	-	-	-	-	366	-
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	788	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1032	-	-	-	366	559
HCM Lane V/C Ratio	0.001	-	-	-	0.029	0.009
HCM Control Delay (s)	8.5	-	-	-	15.1	11.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0

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	5	485	5	10	190	15	10	0	25	45	0	15
Future Vol, veh/h	5	485	5	10	190	15	10	0	25	45	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	115	100	-	100	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	2	2	2
Mvmt Flow	6	551	6	11	216	17	11	0	28	51	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	233	0	0	557	0	0	818	818	551	818	807	216
Stage 1	-	-	-	-	-	-	563	563	-	238	238	-
Stage 2	-	-	-	-	-	-	255	255	-	580	569	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.518	4.018	3.318
Pot Cap-1 Maneuver	1335	-	-	1004	-	-	294	309	532	295	315	824
Stage 1	-	-	-	-	-	-	509	507	-	765	708	-
Stage 2	-	-	-	-	-	-	747	695	-	500	506	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1335	-	-	1004	-	-	285	304	532	276	310	824
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	304	-	276	310	-
Stage 1	-	-	-	-	-	-	507	505	-	762	700	-
Stage 2	-	-	-	-	-	-	724	687	-	471	504	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	13.8	18.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	285	532	1335	-	-	1004	-	-	276	824
HCM Lane V/C Ratio	0.04	0.053	0.004	-	-	0.011	-	-	0.185	0.021
HCM Control Delay (s)	18.2	12.1	7.7	-	-	8.6	-	-	21	9.5
HCM Lane LOS	C	B	A	-	-	A	-	-	C	A
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0	-	-	0.7	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	540	195	20	75	20
Future Vol, veh/h	15	540	195	20	75	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	220	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	6	6	3	3
Mvmt Flow	16	581	210	22	81	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	232	0	-	0	823	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	613	-
Critical Hdwy	4.12	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.218	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1336	-	-	-	342	828
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	539	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1336	-	-	-	338	828
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1336	-	-	-	338	828
HCM Lane V/C Ratio	0.012	-	-	-	0.239	0.026
HCM Control Delay (s)	7.7	-	-	-	19	9.5
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0	-	-	-	0.9	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	250	5	10	505	50	5	0	10	30	0	10
Future Vol, veh/h	20	250	5	10	505	50	5	0	10	30	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	115	100	-	100	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	2	2	2
Mvmt Flow	21	263	5	11	532	53	5	0	11	32	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	585	0	0	268	0	0	891	912	263	867	864	532
Stage 1	-	-	-	-	-	-	305	305	-	554	554	-
Stage 2	-	-	-	-	-	-	586	607	-	313	310	-
Critical Hdwy	4.11	-	-	4.11	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.209	-	-	2.209	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	995	-	-	1302	-	-	265	276	781	273	292	547
Stage 1	-	-	-	-	-	-	709	666	-	517	514	-
Stage 2	-	-	-	-	-	-	500	489	-	698	659	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	995	-	-	1302	-	-	254	268	781	263	284	547
Mov Cap-2 Maneuver	-	-	-	-	-	-	254	268	-	263	284	-
Stage 1	-	-	-	-	-	-	694	652	-	506	510	-
Stage 2	-	-	-	-	-	-	486	485	-	674	645	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	13	18.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	254	781	995	-	-	1302	-	-	263	547
HCM Lane V/C Ratio	0.021	0.013	0.021	-	-	0.008	-	-	0.12	0.019
HCM Control Delay (s)	19.5	9.7	8.7	-	-	7.8	-	-	20.5	11.7
HCM Lane LOS	C	A	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0	0.1	-	-	0	-	-	0.4	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	275	545	70	40	20
Future Vol, veh/h	15	275	545	70	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	220	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	16	289	574	74	42	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	648	0	-	0	895	574
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	321	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	943	-	-	-	314	522
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	740	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	943	-	-	-	309	522
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	740	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	943	-	-	-	309	522
HCM Lane V/C Ratio	0.017	-	-	-	0.136	0.04
HCM Control Delay (s)	8.9	-	-	-	18.5	12.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5	0.1

OPERATIONAL WARRANTS FOR LEFT-TURN LANES AT INTERSECTIONS ON TWO-LANE HIGHWAYS

Project: Skyline Development TIA
Scenario: Year 2020 Build
Analyst: TADI - TSC
Date: 1/21/2020

Location	Operating Speed (mph)	Opposing Volume (veh/hr)	Advancing Volume (veh/hr)	Left-Turn Volume (veh/hr)	Calculated Left-Turn Percentage**	Advancing Volume Threshold* (veh/hr)	Is Advancing Volume Threshold Met?	By How Much?
WB Summit at Skyline Drive (AM)	50	485	215	10	4.7%			
WB Summit at Skyline Drive (PM)	50	255	560	10	1.8%			
EB Summit at Skyline Drive (AM)	50	205	490	5	1.0%			
EB Summit at Skyline Drive (AM)	50	550	275	20	7.3%	326	NO	short 51 veh/hr

** Advanced volume threshold based on exponential trendlines fit to the data in WisDOT FDM 11-25 Table 5.1. As a result, thresholds may differ slightly from data provided in Table 5.1.*

*** Calculated left-turn percentage must be between 5 and 40 percent to provide threshold.*

Notes

Operating speed is posted speed limit plus 5-mph.
Opposing volume = Opposing Through and Right
Advancing Volume = Advancing Left, Through, and Right

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	560
Right-turn volume, veh/h:	45

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	35
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.