965 SULLIVAN AVENUE, SOUTH WINDSOR, CONNECTICUT

Traffic Impact Study

Prepared for:

Prospect Enterprises, LLC

SLR #141.16353.00002

February 22, 2021

February 22, 2021

Mr. Gregg Nanni
Prospect Enterprises, LLC
231 Farmington Avenue
Farmington, CT 06032

Re: Proposed Mixed-Use Development
965 Sullivan Avenue
South Windsor, Connecticut
SLR #141.16353.00002

Dear Mr. Nanni:

At your request, SLR International Corporation (SLR) has completed a traffic impact study for the proposed mixed-use development at 965 Sullivan Avenue, the existing Geissler's shopping center in South Windsor, Connecticut. The proposed development will include residential, retail, and restaurant spaces with an expansion to the existing Geissler's grocery store. Figure 1 shows the location of the site.

This traffic study involved a number of tasks, including data collection, the determination of future background traffic, an estimation of site traffic volumes for the proposed development, capacity analyses, and an evaluation of safety as well as expected traffic impacts. This report summarizes our data collection, analyses, and findings.

Proposed Development

The proposed development will be located on the south side of Route 194 (Sullivan Avenue) in South Windsor, Connecticut. This multiuse development will consist of 125 apartment units, 1,984 square feet of convenience store, a 2,476-square-foot fast food restaurant with drive-thru, 28,280 square feet of retail and services, and a 1,568-square-foot expansion of the existing Geissler's grocery store.

Study Area Roadway and Site Environs

S.R. 194 (Sullivan Avenue) is classified as an urban principal arterial, running from west to east along the site's north frontage. In the vicinity of the site, the roadway is characterized by one travel lane in each direction with a range of 2-foot- to 9-foot-wide shoulders on either side. Sidewalks are mostly present on Sullivan Avenue; however, there are no sidewalks on the south side of Sullivan Avenue along the site frontage. The posted speed limit on Sullivan Avenue is 40 miles per hour (mph).

For the purpose of this traffic study, the following intersections were included in the study area for analysis:

- S.R. 194 (Sullivan Avenue) at Troy Road
- S.R. 194 (Sullivan Avenue) at Morgan Farms Road
- S.R. 194 (Sullivan Avenue) at Hillside Drive and 925 Sullivan Avenue Driveway
- S.R. 194 (Sullivan Avenue) at 965 Sullivan Avenue Driveway
- S.R. 194 (Sullivan Avenue) at Ayers Road

Intersection Sight Distance

Visibility from the site driveway for the proposed development was reviewed using minimum intersection sight distance (ISD) guidelines from the Connecticut Department of Transportation (CTDOT). For the posted speed limit of 40 mph, the CTDOT minimum ISD guideline is 445 feet. The sight distances looking left and right from the location of the site driveway exceed the 445-foot ISD guidelines.

Crash Data

Traffic crash data for the latest 3-year period on record, February 15, 2017, through February 15, 2020, for the study intersections were obtained from the University of Connecticut's Connecticut Crash Data Repository. The 3-year period reported from 2017 to 2020 is reflective of crash history and typical crash patterns observed prior to the COVID-19 pandemic. The crash data collected for this 3-year period, depicted in Table 1, is summarized by intersection, crash severity, and collision type.

TABLE 1
Crash Summary

LOCATION	CRASH SEVERITY					TYPE OF COLLISION							
	SERIOUS INJURY	SUSPECTED MINOR INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	**TOTAL**	Angle	Fixed-objects, Post, Pole, and Supports	Front-Front	Front-Rear	Sideswipe, same direction	Sideswipe, opposite direction	Visual Obstruction	**TOTAL**
February 15, 2017, to February 15, 2020													
S.R. 194 (Sullivan Avenue) at Troy Road	0	3	1	6	**10**	4	0	0	3	2	0	1	**10**
S.R. 194 (Sullivan Avenue) at Morgan Farms Road	0	0	5	12	**17**	2	0	0	12	3	0	0	**17**
S.R. 194 (Sullivan Avenue) at Hillside Drive and Private Drive	2	2	5	14	**23**	8	0	1	12	1	1	0	**23**
S.R. 194 (Sullivan Avenue) at 965 Sullivan Avenue	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
S.R. 194 (Sullivan Avenue) at Ayers Road	0	1	3	7	**11**	0	0	0	11	0	0	0	**11**
TOTAL	**2**	**6**	**14**	**39**	**61**	**14**	**0**	**1**	**38**	**6**	**1**	**1**	**61**

Source: University of Connecticut's Connecticut Crash Data Repository from February 15, 2017, to February 15, 2020

A total of 61 crashes were reported during the 3-year period at the intersections within the study area. Sixty-four percent of reported collisions resulted in property damage only, with the remaining 36 percent resulting in suspected serious (two crashes), minor (six crashes), or possible injury (14 crashes). There were no fatalities reported. The most common collision type was rear-end (front-rear) collisions, accounting for 62 percent of all collisions, followed by angled collisions and same direction side-swipe collisions at 23 percent and 10 percent, respectively. No pedestrians or cyclists were involved with any of the reported crashes. No crashes were reported at the proposed development site driveway.

Existing Traffic Volumes

Traffic monitoring data was obtained from CTDOT for Route 194 (Sullivan Avenue), south east of Troy Road. The Average Daily Traffic volume on Sullivan Avenue in 2019 was reported to be 12,200 vehicles,

with two-way peak traffic volumes of 790 and 1,096 vehicles during the morning peak hour and afternoon peak hour, respectively. Table 2 summarizes the historic state traffic monitoring data on Sullivan Avenue in the vicinity of the proposed development.

TABLE 2
CTDOT Traffic Data Summary

LOCATION	STATION	YEAR	NUMBER OF VEHICLES		
			AVERAGE DAILY TRAFFIC	MORNING PEAK HOUR	AFTERNOON PEAK HOUR
Sullivan Avenue South East of Troy Road	SWIN-106	2019	12,200	790	1,096
		2016	12,200	813	1,090
		2013	14,700	1,048	1,517

Manual turning movement traffic counts were conducted at the study intersections on Thursday, February 4, 2021, and Saturday, January 30, 2021, for a 2-hour period during the weekday morning (7:00 a.m. to 9:00 a.m.), afternoon (4:00 p.m. to 6:00 p.m.), and the Saturday midday (11:00 a.m. to 1:00 p.m.) peak periods.

The peak hours were found to be 7:45 a.m. to 8:45 a.m., 4:15 p.m. to 5:15 p.m., and 12:00 p.m. to 1:00 p.m. for the weekday morning, weekday afternoon, and Saturday midday peak hours, respectively.

Due to the impact of the COVID-19 pandemic on traffic volumes, the turning movement counts collected were found to be lower than typical peak-hour traffic volumes within the study area. Based on CTDOT 2019 ADT data, existing traffic volumes were 4.7 percent and 7.8 percent lower for the weekday morning and weekday afternoon peak hours, respectively. The 2021 turning movement traffic counts were therefore adjusted to reflect more typical traffic volumes for analysis.

Figures 2, 3, and 4 illustrate existing weekday morning, weekday afternoon, and Saturday midday peak-hour traffic volumes, respectively.

New Site Traffic

The site traffic for the proposed mixed-use development was estimated using standard statistical data published by the Institute of Transportation Engineers (ITE)[1] and applying an adjustment factor for internally captured trips and pass-by trips. "Internally captured trips" are trips to the proposed

[1] *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017

development from another destination on the same site, including visits to other land uses on site. These trips are not new vehicles trips to the site directly impacting the adjacent roadway network. A 10 percent reduction factor was used to account for internally captured trips. "Pass-by trips" refer to site trips made by patrons who were already on the roadway with an original destination other than to the site. Based on CTDOT guidelines, a 20 percent pass-by trip reduction in total vehicle trips was applied. Table 3 summarizes the anticipated new site traffic to be generated by the proposed mixed-use development.

TABLE 3
New Site Traffic – 965 Sullivan Avenue, South Windsor, Connecticut

LAND USE	NUMBER OF VEHICLE TRIPS								
	WEEKDAY MORNING PEAK HOUR			WEEKDAY AFTERNOON PEAK HOUR			SATURDAY MIDDAY PEAK HOUR		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Multifamily Housing (Low-Rise) (125 Units)	15	43	58	34	21	55	29	30	59
Convenience Store (1,984 SF)	63	62	125	50	48	98	79	79	158
Restaurant with Drive-Thru (2,476 SF)	51	49	100	43	39	82	70	67	137
Supermarket/Grocery Expansion (1,568 SF)	4	2	6	7	7	14	8	8	16
Retail (28,280 SF)	17	10	27	55	54	109	61	67	128
Total Trips:	***150***	***166***	***316***	***189***	***169***	***358***	***247***	***251***	***498***
Internal Capture (10%)	*-15*	*-10*	*-25*	*-15*	*-15*	*-30*	*-20*	*-20*	*-40*
Pass-by (20%)	*-25*	*-25*	*-50*	*-30*	*-30*	*-60*	*-45*	*-45*	*-90*
New Net Trips – Adjusted (70%)	***110***	***131***	***241***	***144***	***124***	***268***	***182***	***186***	***368***

Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017 (ITE #221 – Multifamily Housing [Mid-Rise])
Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017 (ITE #820 – Shopping Center [Retail])
Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017 (ITE #850 – Supermarket/ Grocery Store Expansion)
Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017 (ITE #851 – Convenience Store)
Trip Generation, 10th Edition, Institute of Transportation Engineers, 2017 (ITE #934 – Fast Food Restaurant (with Drive-Thru)

After adjusting for internally captured and expected pass-by trips, it is estimated that the proposed development would generate approximately 241 total new vehicle trips (110 entering and 131 exiting) during the morning peak hour, 268 total new vehicle trips (144 entering and 124 exiting) during the afternoon peak hour, and 368 total new vehicle trips (182 entering and 186 exiting) during the Saturday midday peak hour.

New Site Traffic Distribution

The anticipated directional distribution of site-generated traffic was based on the review of census data and travel patterns observed from existing traffic volumes. It is anticipated that approximately 50 percent of the new site traffic would approach/depart the site to the east and 50 percent to/from the west.

Figure 5 illustrates the site traffic distribution for the proposed development. Figures 6, 7, and 8 show the assignment of the anticipated site traffic on the adjacent road network during the weekday morning, weekday afternoon, and Saturday midday peak hours, respectively.

Future Background Traffic

For the purpose of this study, a future horizon year of 2026 was used for analysis. It is anticipated that the mixed-use development will be completed by this time. The existing traffic volumes were projected to the year 2026 using an annual growth rate of 1.1 percent as suggested by CTDOT. Discussions with CTDOT and the town indicated that there are no other approved significant developments within the study area at this time to include in background traffic volumes. The future background (no-build) volumes for the weekday morning, weekday afternoon, and Saturday midday peak periods are shown in Figures 9, 10, and 11, respectively.

Future Combined Traffic

The estimated site traffic volumes were then added to the 2026 background traffic volumes to derive the future combined (build) traffic volumes. The combined traffic volumes constitute future volumes with the mixed-use development in place. Figures 12, 13, and 14 depict the future 2026 combined traffic volumes at the study intersections for the weekday morning, weekday afternoon, and Saturday midday peak hours, respectively.

Traffic Impact

The study intersections were evaluated by means of capacity analysis techniques. Levels of Service (LOS) were then determined, which are qualitative measures of the efficiency of operations in terms of delay and inconvenience to motorists. A description of the various LOS designations, A through F, is given in the Appendix. LOS A describes operations with very short average control delay per vehicle while LOS F describes operations with longer than average delays. LOS D is generally considered acceptable.

Table 4 summarizes the findings of LOS at the study intersections under future (2026) conditions without (background) and with (combined) the estimated new site traffic generated by the proposed development. As shown, all signalized intersections are anticipated to operate at an acceptable overall LOS C or better during peak hours with the development in place. The northbound left turn movement at the site driveway is expected to operate at LOS D under both the no build and build conditions during peak hours. This LOS D is acceptable; therefore, no further mitigation will be required.

TABLE 4
Capacity Analysis Summary

INTERSECTION	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR		SATURDAY MIDDAY PEAK HOUR	
	BACKGROUND	COMBINED	BACKGROUND	COMBINED	BACKGROUND	COMBINED
SIGNALIZED						
S.R. 194 (Sullivan Avenue) at Troy Road						
Eastbound Left	A	A	A	A	A	A
Eastbound Through	A	A	A	A	A	A
Westbound Through/Right	B	B	B	B	B	B
Southbound Left/Right	B	C	C	C	C	C
Overall	**B**	**B**	**B**	**B**	**B**	**B**
S.R. 194 (Sullivan Avenue) at Site Driveway/Private Driveway						
Eastbound Left	A	B	B	B	B	B
Eastbound Through/Right	A	B	C	D	B	C
Westbound Left	A	A	A	B	A	B
Westbound Through/Right	A	A	A	A	A	A
Northbound Left/Through	C	D	C	D	D	D
Northbound Right	A	A	A	A	A	A
Southbound Left/Through	C	C	C	C	D	C
Southbound Right	A	A	A	A	A	A
Overall	**A**	**B**	**B**	**C**	**B**	**C**
S.R. 194 (Sullivan Avenue) at Ayers Road						
Eastbound Left	A	A	A	A	A	A
Eastbound Through	A	A	A	A	A	A
Westbound Through	C	C	C	C	C	C
Westbound Right	A	A	A	A	A	A
Southbound Left	C	C	D	D	D	D
Southbound Right	A	A	A	A	A	A
Overall	**B**	**B**	**B**	**B**	**B**	**B**
UNSIGNALIZED						
Sullivan Avenue at Morgan Farms Road						
Eastbound Left	A	A	A	A	A	A
Southbound Approach	C	C	D	E	C	D
Sullivan Avenue at Hillside Drive and 925 Sullivan Avenue Driveway						
Eastbound Left	A	A	A	A	A	A
Westbound Left	A	A	A	A	A	A
Northbound Approach	C	C	E	E	C	D
Southbound Approach	C	C	E	F	C	D

Summary and Conclusions

A study was conducted to assess the traffic impacts of the proposed mixed-use development on Sullivan Avenue at the existing 965 Sullivan Avenue Geissler's Shopping Center in South Windsor, Connecticut. Traffic generated by the planned development was estimated based on a review of industry standards. Future traffic conditions were estimated with and without the mixed-use development in place, and capacity analysis of future scenarios was performed.

Based on our analysis, it is our opinion that the surrounding roadway system would be able to accommodate traffic that would be generated by the proposed development. Additionally, there are no significant traffic safety concerns associated with the proposed development.

We hope this report is useful to you and the Town of South Windsor in assessing the traffic and safety impacts from this development. If you have any questions or need any further information, please do not hesitate to contact me.

Sincerely,

SLR International Corporation

Kwesi Brown, PE, PTOE
US Manager of Transportation Engineering

Enclosures

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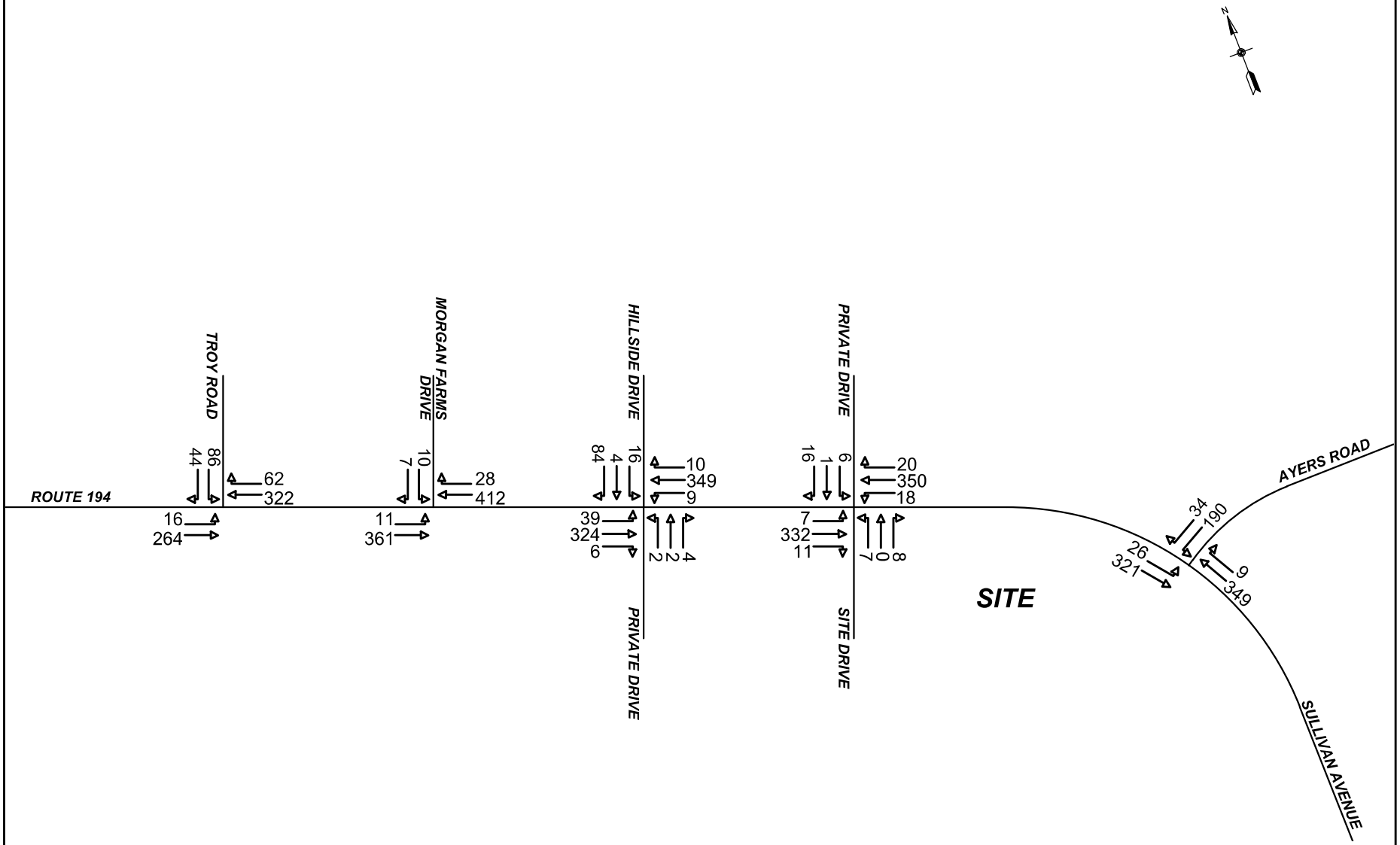
SITE LOCATION
965 Sullivan Avenue
South Windsor, Connecticut

SLR

FIGURE 1



EXISTING TRAFFIC VOLUMES

WEEKDAY MORNING PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 02

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99 REALTY DRIVE
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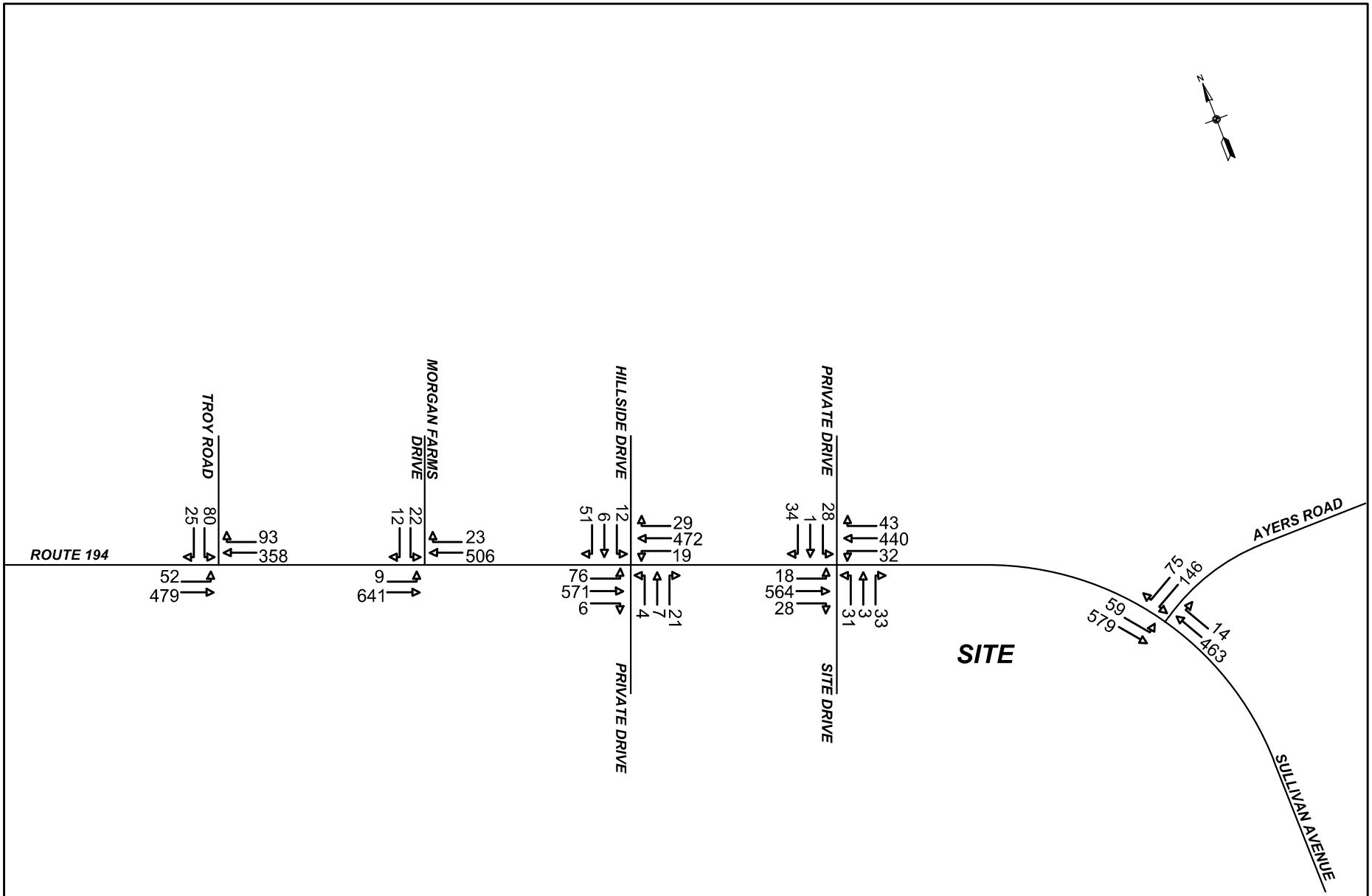

EXISTING TRAFFIC VOLUMES

WEEKDAY AFTERNOON PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 03

SLR

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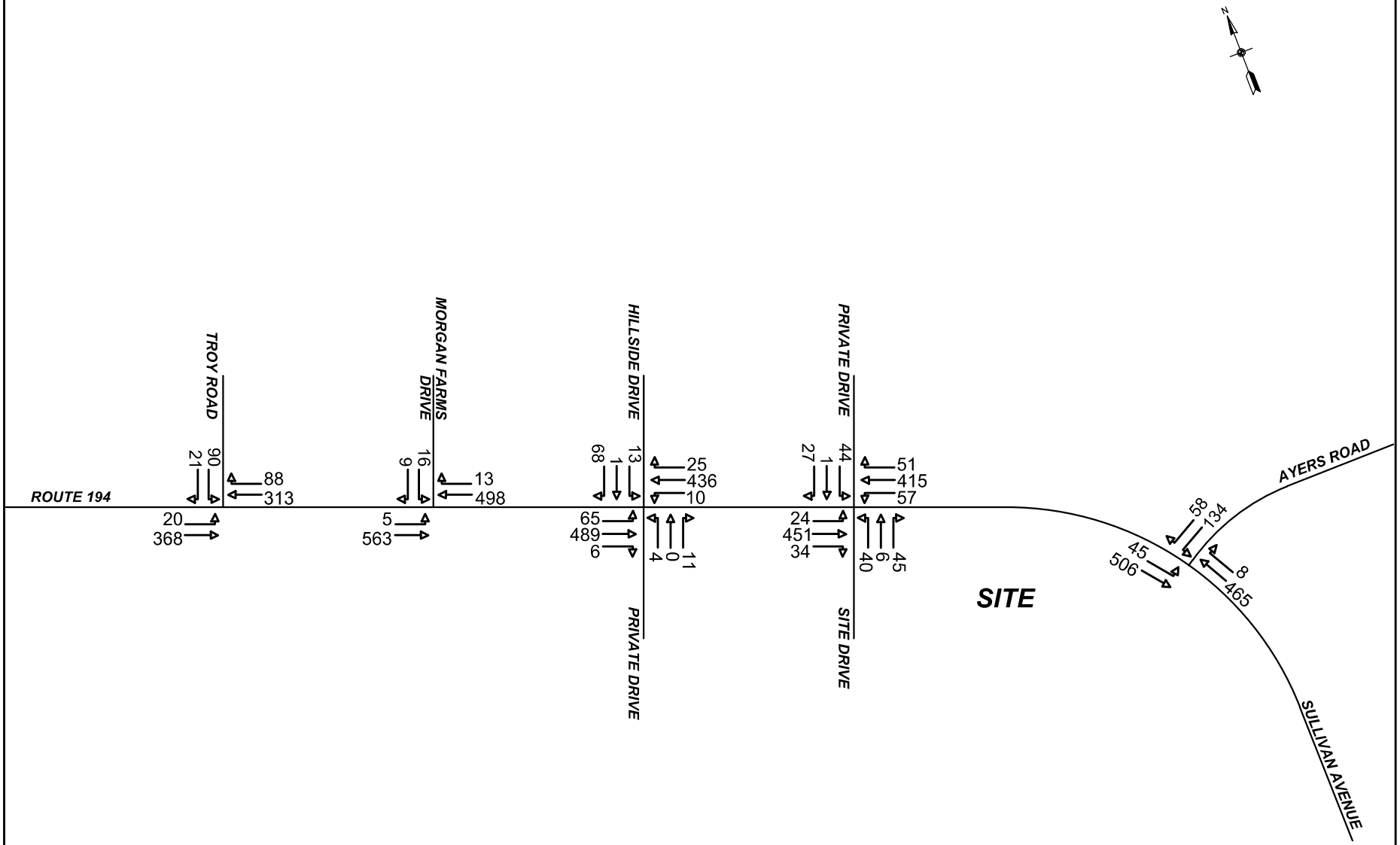

EXISTING TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 04

SLR

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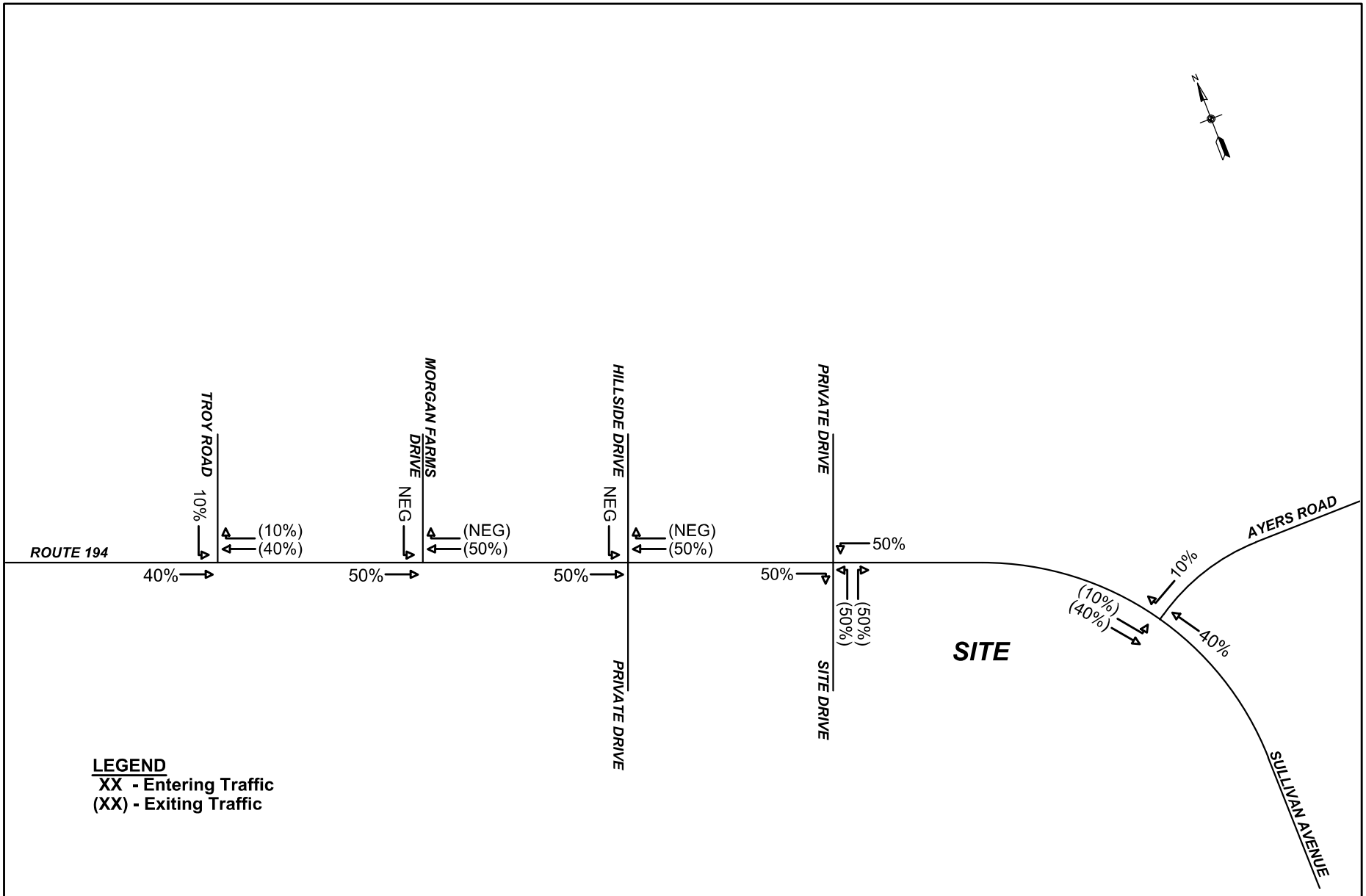

SITE GENERATED TRAFFIC DISTRIBUTION

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 05

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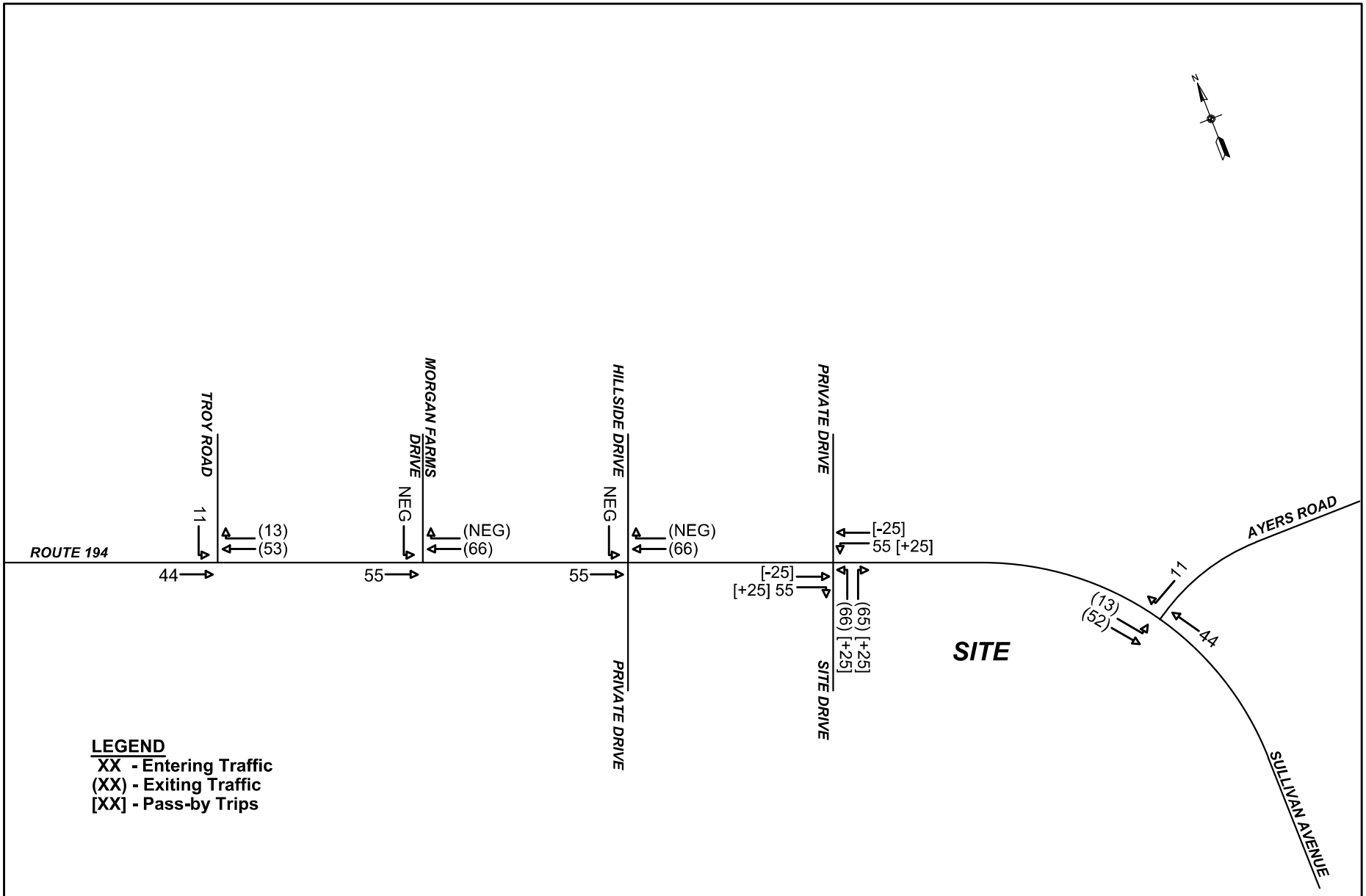

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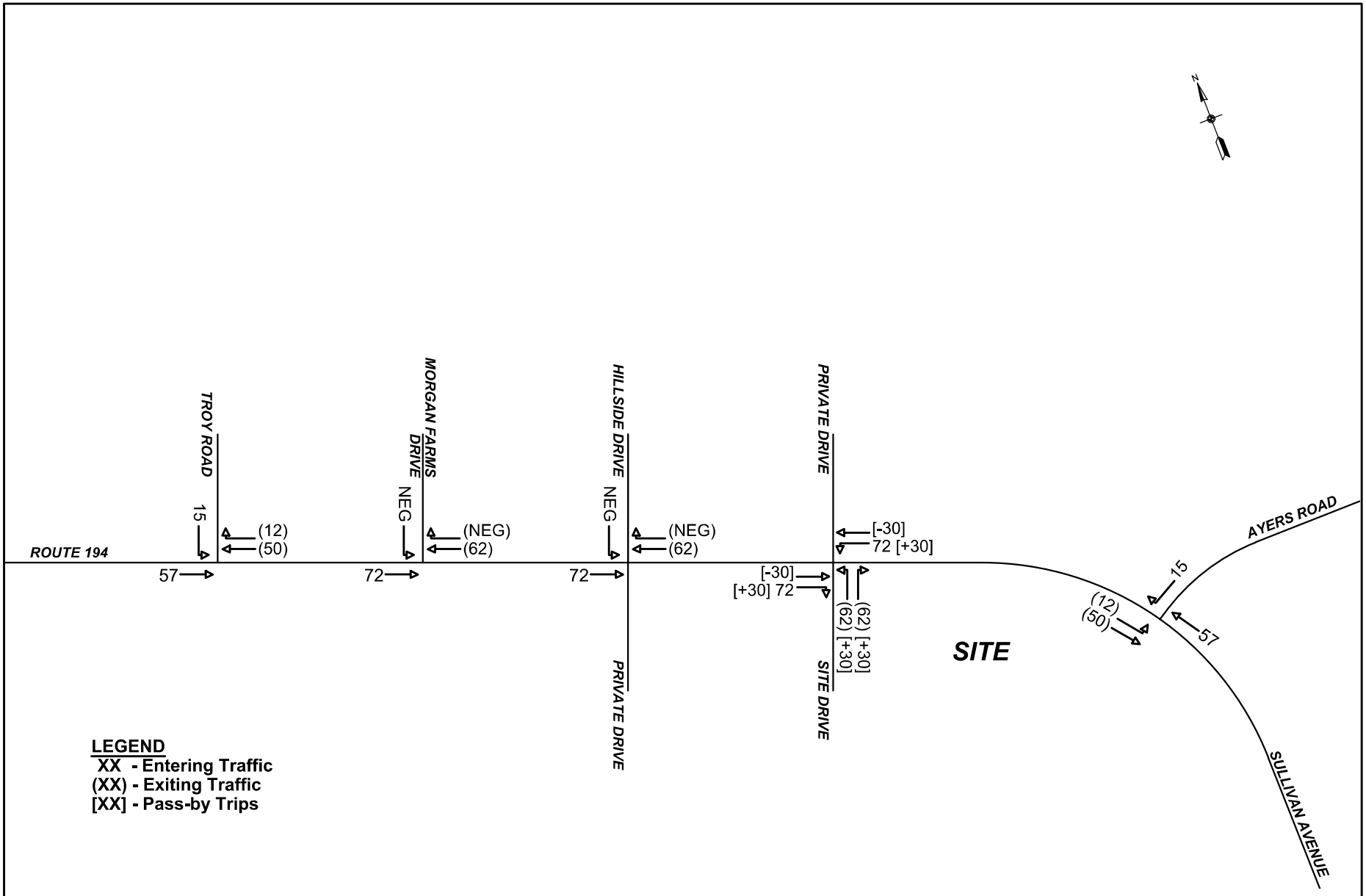
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR
965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 06



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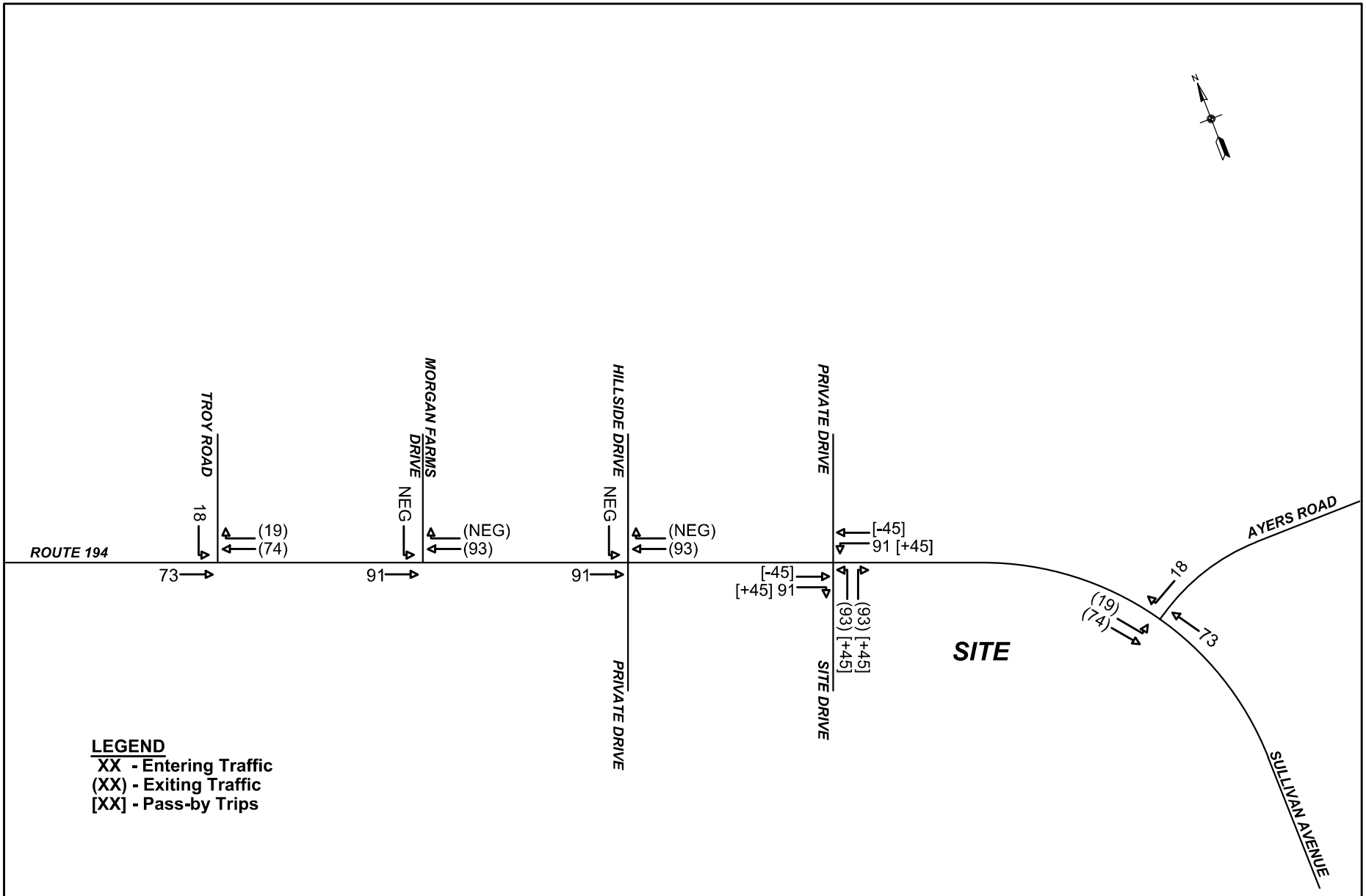
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR
965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 07



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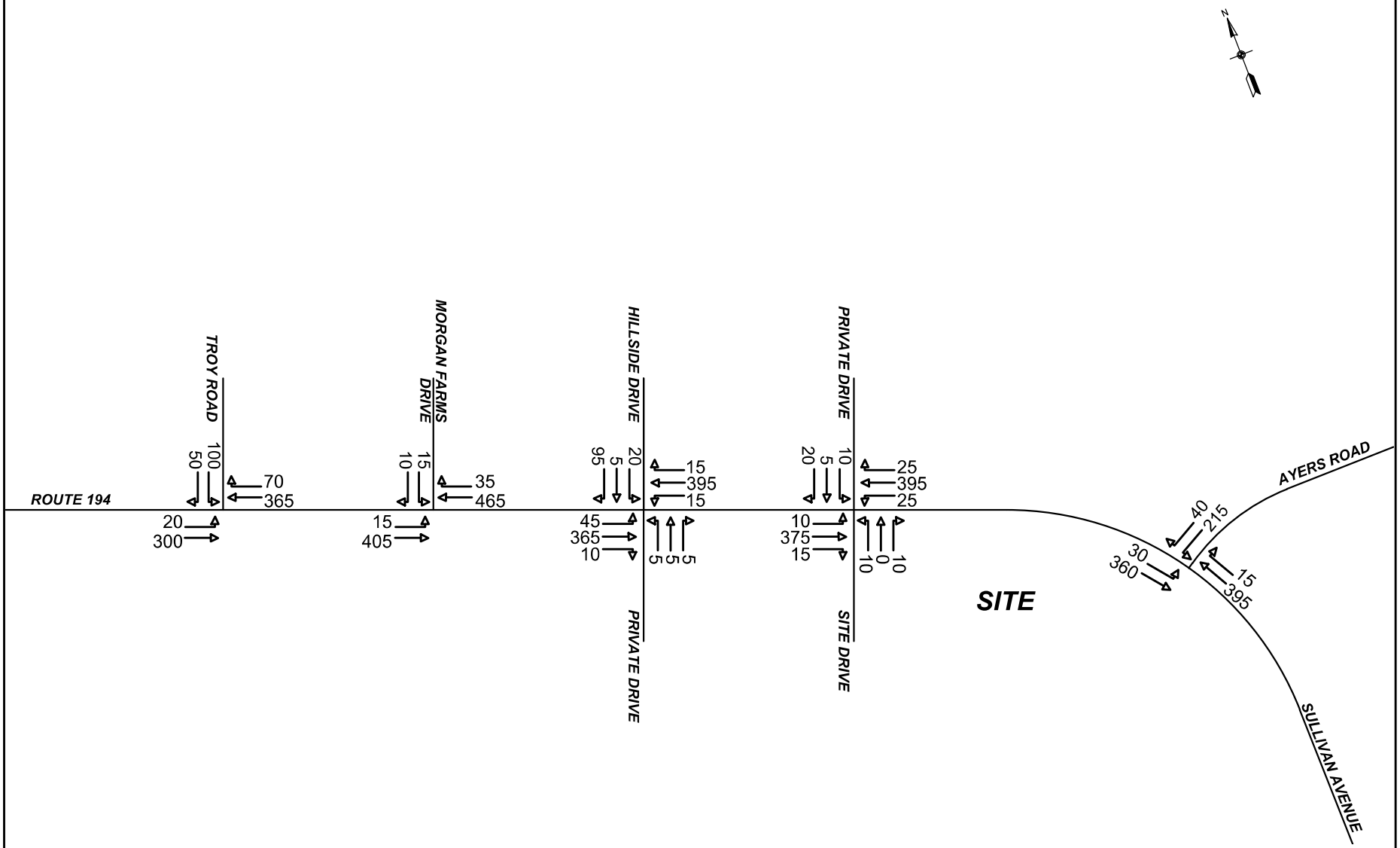
SITE GENERATED TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR
965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 08



2026 BACKGROUND TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 09

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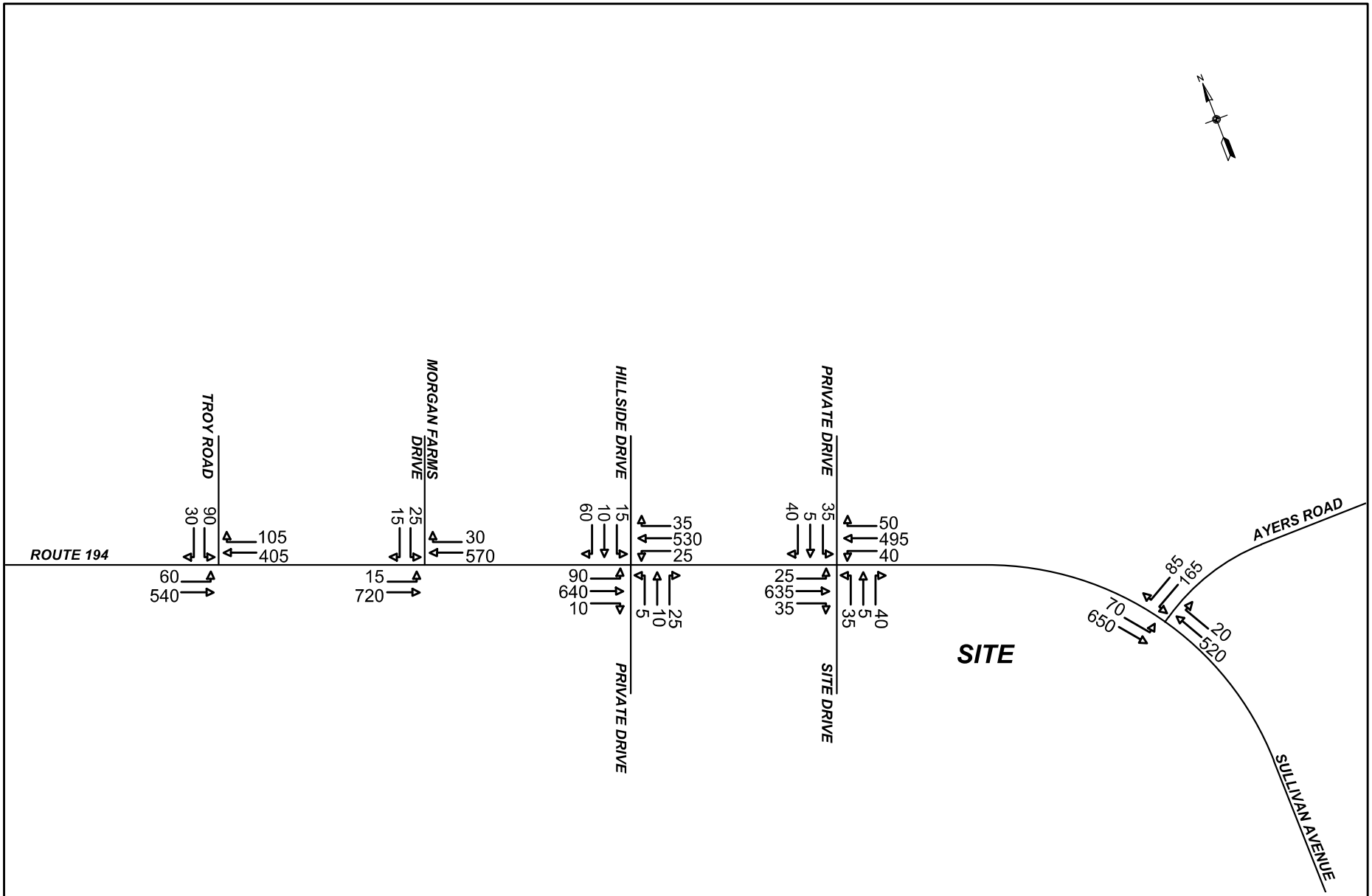

2026 BACKGROUND TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 10

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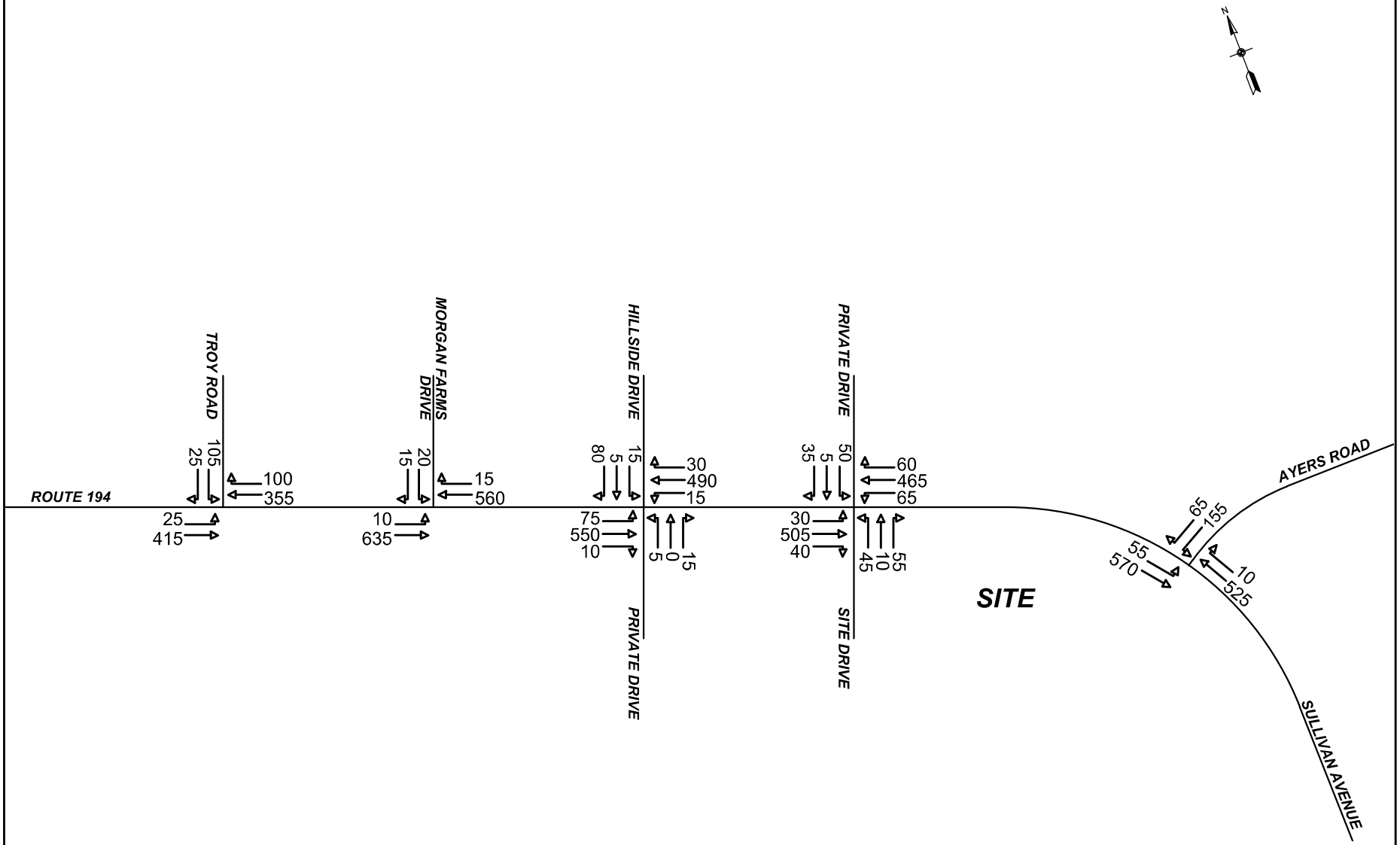

2026 BACKGROUND TRAFFIC VOLUMES

SATURDAY MIDDAY PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 11

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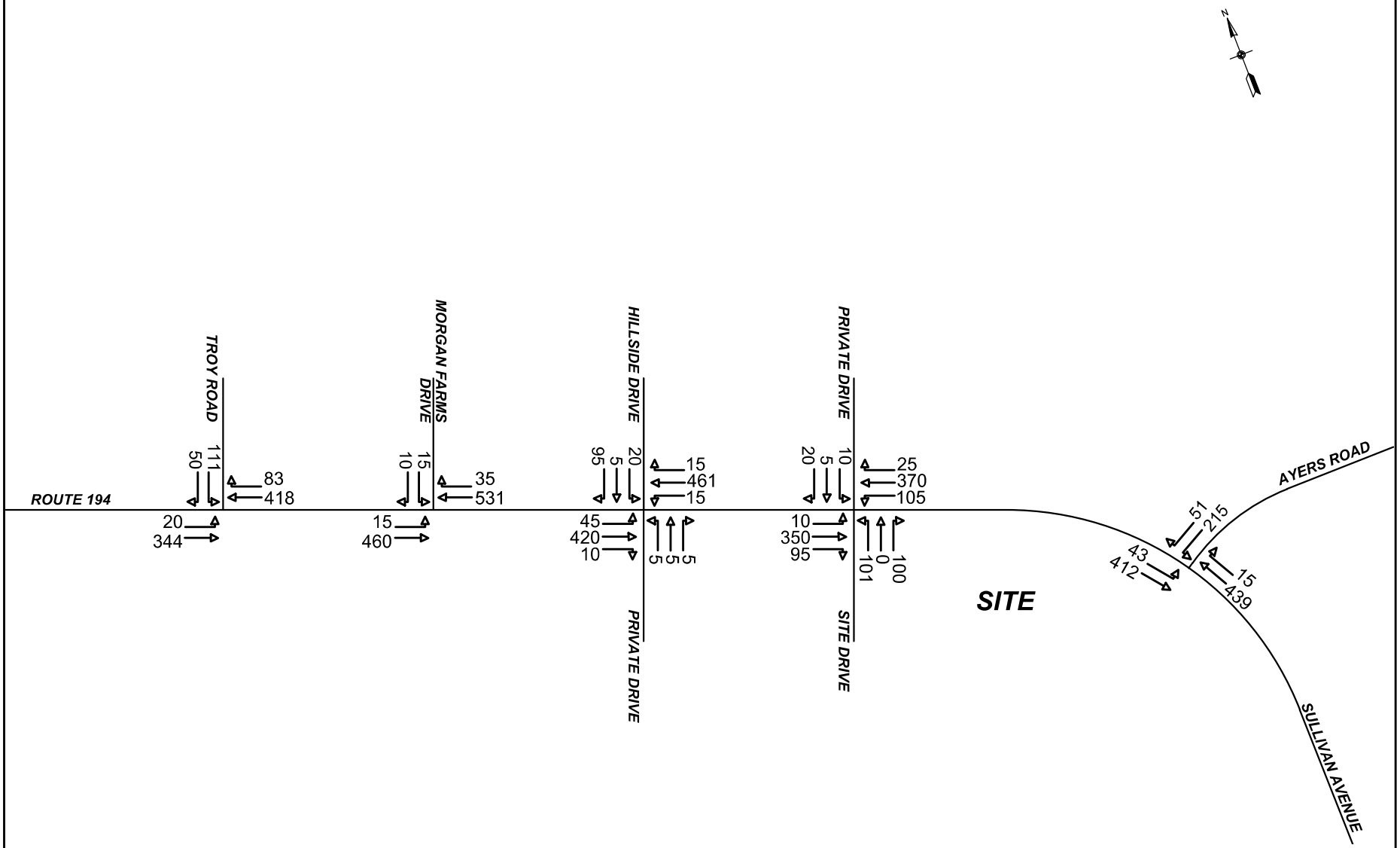

FUTURE 2026 COMBINED TRAFFIC VOLUMES
WEEKDAY MORNING PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 12

SLR
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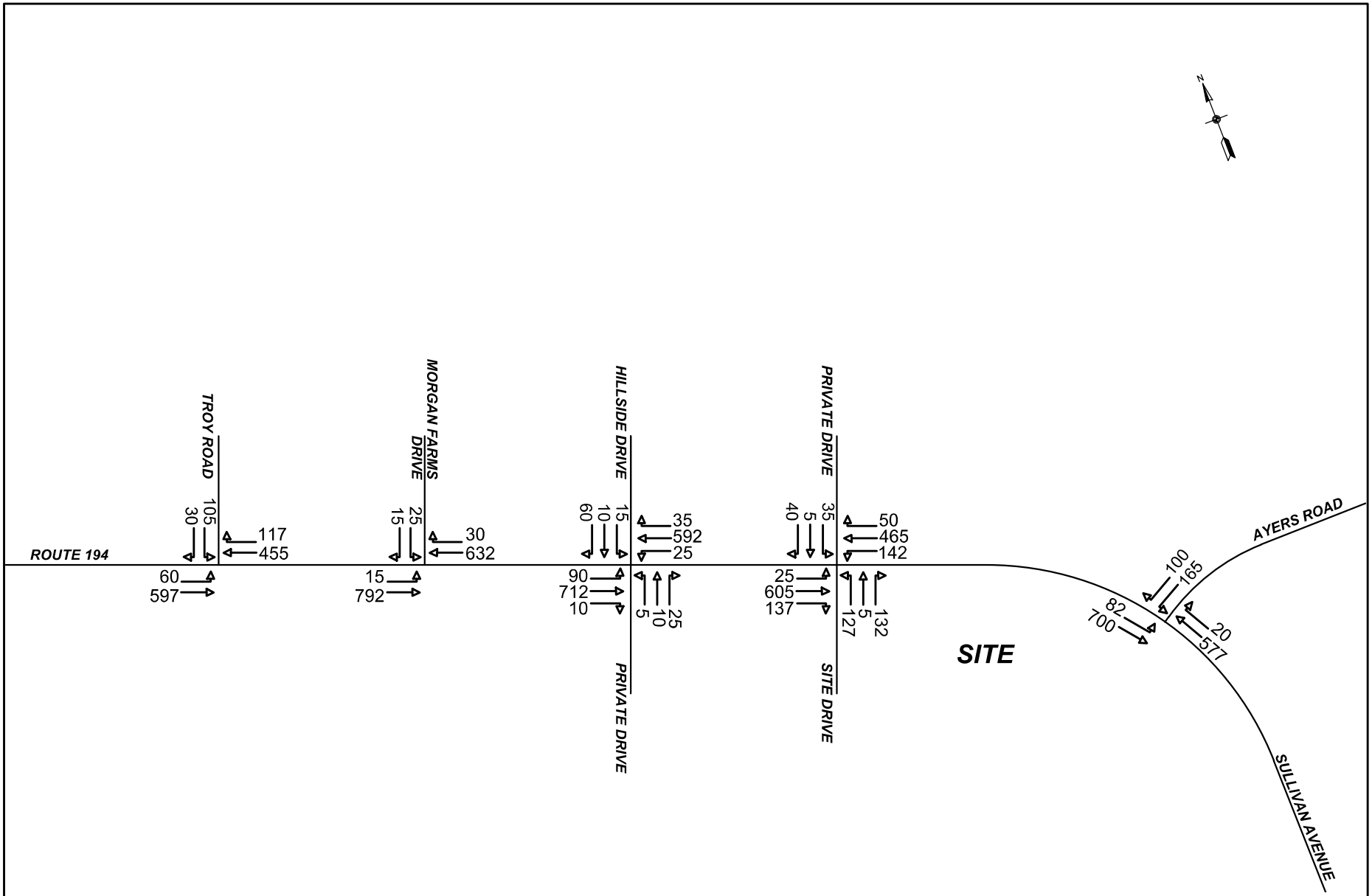

FUTURE 2026 COMBINED TRAFFIC VOLUMES
WEEKDAY AFTERNOON PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

FIGURE 13

SLR
99 REALTY DRIVE
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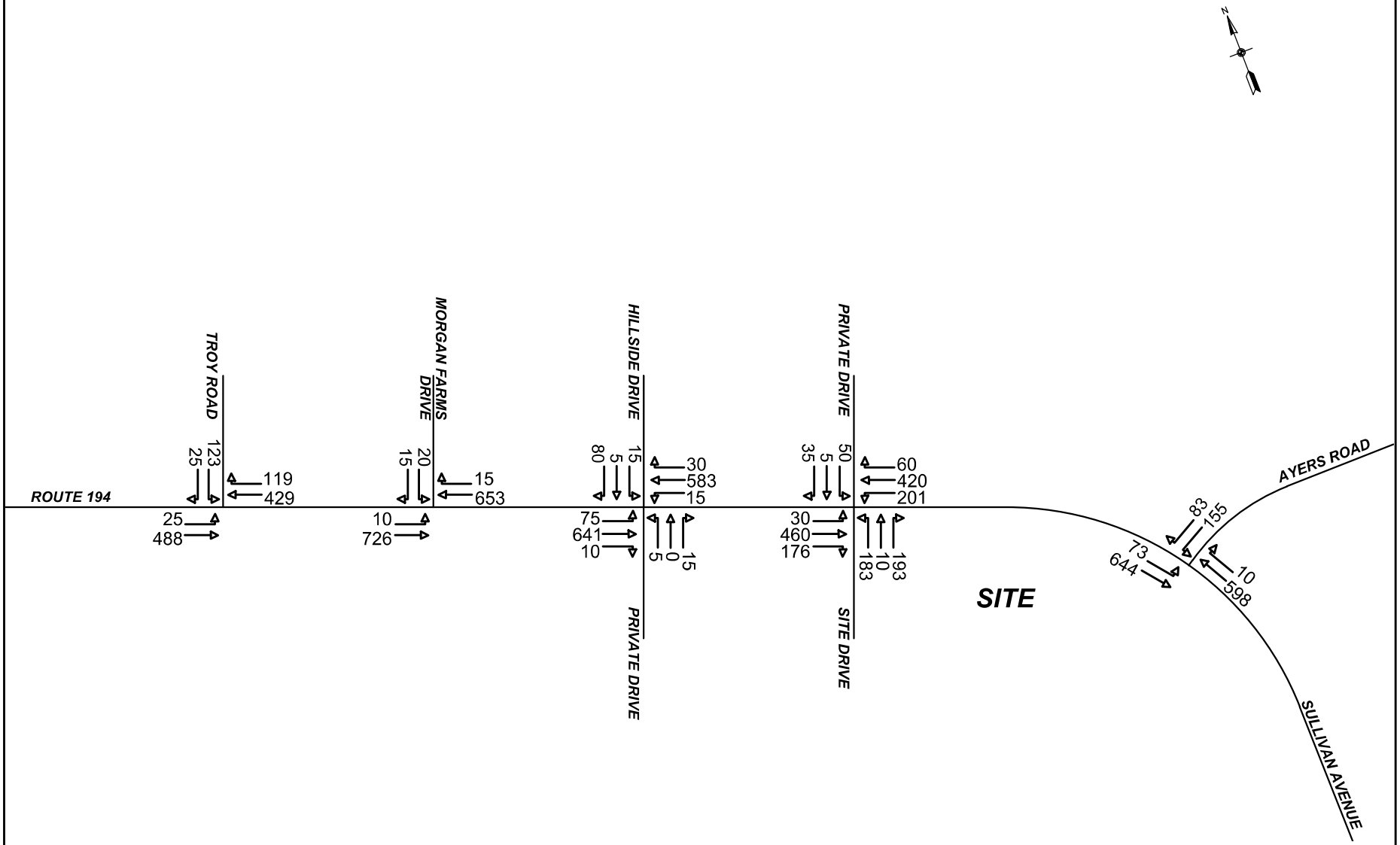

FUTURE 2026 COMBINED TRAFFIC VOLUMES

SATURDAY MIDDAY PEAK HOUR

965 Sullivan Avenue
South Windsor, Connecticut

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FIGURE 14

APPENDIX

LEVEL OF SERVICE
FOR
SIGNALIZED INTERSECTIONS
(MOTORIZED VEHICLE MODE)

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-min analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. The criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS
MOTORIZED VEHICLE MODE

LOS By Volume-to-Capacity Ratio[1]		CONTROL DELAY (s/veh)
v/c ≤ 1.0	v/c > 1.0	
A	F	≤ 10
B	F	> 10 AND ≤ 20
C	F	> 20 AND ≤ 35
D	F	> 35 AND ≤ 55
E	F	> 55 AND ≤ 80
F	F	> 80

[1] For approach-based and intersection-wide assessments, LOS is defined solely by control delay.

Specific descriptions of each LOS for signalized intersections are provided below:

Level of Service A describes operations with a control delay of 10 s/veh and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of Service B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

Level of Service C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. 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 at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of Service D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

Level of Service E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

Level of Service F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when 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.

Reference: Highway Capacity Manual 6, Transportation Research Board, 2016.

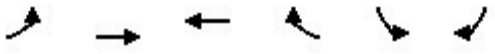
LEVEL OF SERVICE
FOR TWO-WAY
STOP SIGN CONTROLLED INTERSECTIONS

The level of service for a TWSC (two-way stop controlled) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS criteria are given in the Table**.** LOS criteria are given below:

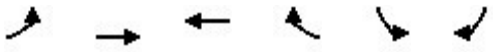
LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LOS[1]	**CONTROL DELAY (s/veh)**
A	**≤ 10**
B	**> 10 AND ≤ 15**
C	**> 15 AND ≤ 25**
D	**> 25 AND ≤ 35**
E	**> 35 AND ≤ 50**
F	**> 50**

Note: LOS criteria apply to each lane on a given approach and to each approach on the minor street.
LOS is not calculated for major-street approaches or for the intersection as a whole.
LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	300	365	70	100	50
Future Volume (vph)	20	300	365	70	100	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978		0.955	
Flt Protected	0.950				0.968	
Satd. Flow (prot)	1770	1863	1822	0	1722	0
Flt Permitted	0.412				0.968	
Satd. Flow (perm)	767	1863	1822	0	1722	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			17		32	
Link Speed (mph)		30	30		30	
Link Distance (ft)		391	1632		537	
Travel Time (s)		8.9	37.1		12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	326	397	76	109	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	326	473	0	163	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		3	
Detector Template						
Leading Detector (ft)	0	0	0		30	
Trailing Detector (ft)	0	0	0		-10	
Detector 1 Position(ft)	0	0	0		-10	
Detector 1 Size(ft)	20	6	6		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					10	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Detector 3 Position(ft)					24	
Detector 3 Size(ft)					6	
Detector 3 Type					Cl+Ex	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)					0.0	
Turn Type	D.P+P	NA	NA		Prot	
Protected Phases	1	1 2	2		4	
Permitted Phases	2					
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	
Minimum Split (s)	9.0		34.0		13.0	
Total Split (s)	9.0		42.0		24.0	
Total Split (%)	12.0%		56.0%		32.0%	
Maximum Green (s)	5.0		35.2		20.0	
Yellow Time (s)	3.0		4.2		3.0	
All-Red Time (s)	1.0		2.6		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		6.8		4.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	0.2		4.0		3.0	
Recall Mode	Max		Min		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					2.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	28.1	33.8	19.6		9.8	
Actuated g/C Ratio	0.59	0.71	0.41		0.21	
v/c Ratio	0.04	0.25	0.62		0.43	
Control Delay	4.1	4.6	15.6		19.7	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	4.1	4.6	15.6		19.7	
LOS	A	A	B		B	
Approach Delay		4.6	15.6		19.7	
Approach LOS		A	B		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 47.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

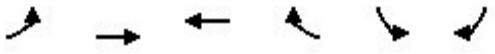
Splits and Phases: 1: Sullivan Avenue & Troy Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	375	15	25	395	25	10	0	10	10	5	20
Future Volume (vph)	10	375	15	25	395	25	10	0	10	10	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	300		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.991				0.850			0.850
Flt Protected	0.950			0.950				0.950			0.967	
Satd. Flow (prot)	1770	1852	0	1770	1846	0	0	1770	1583	0	1801	1583
Flt Permitted	0.500			0.502				0.952			0.804	
Satd. Flow (perm)	931	1852	0	935	1846	0	0	1773	1583	0	1498	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			9				137			137
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		536			925			146			223	
Travel Time (s)		12.2			21.0			3.3			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	408	16	27	429	27	11	0	11	11	5	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	424	0	27	456	0	0	11	11	0	16	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	0	0		36	0		20	28	28	20	28	28
Trailing Detector (ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Position(ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Size(ft)	20	6		6	6		20	6	20	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				16				8	8		8	8
Detector 2 Size(ft)				6				6	6		6	6
Detector 2 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0				0.0	0.0		0.0	0.0
Detector 3 Position(ft)				30				22	22		22	22
Detector 3 Size(ft)				6				6	6		6	6
Detector 3 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Channel												
Detector 3 Extend (s)				0.0				0.0	0.0		0.0	0.0
Turn Type	Perm	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	1 2			4			4	
Permitted Phases	2			2			4		4	4		4
Detector Phase	2	2		1	1 2		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	27.0	27.0		3.0			7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	35.0	35.0		7.0			14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	35.0	35.0		13.0			22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%		18.6%			31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
Maximum Green (s)	27.2	27.2		9.0			18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	4.2	4.2		3.0			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	3.6		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0				0.0	0.0		0.0	0.0
Total Lost Time (s)	7.8	7.8		4.0				4.0	4.0		4.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		2.0			1.5	1.5	1.5	1.5	1.5	1.5
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)							7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)							3.0	3.0	3.0	3.0	3.0	3.0
Pedestrian Calls (#/hr)							0	0	0	0	0	0
Act Effct Green (s)	42.9	42.9		55.4	61.0			7.0	7.0		7.0	7.0
Actuated g/C Ratio	0.61	0.61		0.79	0.87			0.10	0.10		0.10	0.10
v/c Ratio	0.02	0.37		0.03	0.28			0.06	0.04		0.11	0.08
Control Delay	8.8	9.9		0.5	0.9			29.5	0.3		30.5	0.6
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	8.8	9.9		0.5	0.9			29.5	0.3		30.5	0.6
LOS	A	A		A	A			C	A		C	A
Approach Delay		9.9			0.9			14.9			13.2	
Approach LOS		A			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 40 (57%), Referenced to phase 2:EBWB and 6:, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 47.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Site Drive/Private Drive & Sullivan Avenue

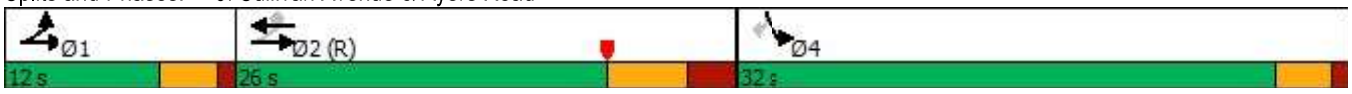


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	30	360	395	15	215	40
Future Volume (vph)	30	360	395	15	215	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260			325	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.420				0.950	
Satd. Flow (perm)	782	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				16		43
Link Speed (mph)		30	30		30	
Link Distance (ft)		925	1028		520	
Travel Time (s)		21.0	23.4		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	391	429	16	234	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	391	429	16	234	43
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	3	0	0	0	1	3
Detector Template						
Leading Detector (ft)	28	0	0	0	28	24
Trailing Detector (ft)	-6	0	0	0	22	-10
Detector 1 Position(ft)	-6	0	0	0	22	-10
Detector 1 Size(ft)	6	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	8					4
Detector 2 Size(ft)	6					6
Detector 2 Type	Cl+Ex					Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Detector 3 Position(ft)	22					18
Detector 3 Size(ft)	6					6
Detector 3 Type	Cl+Ex					Cl+Ex

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)	0.0					0.0
Turn Type	D.P+P	NA	NA	Perm	Prot	Perm
Protected Phases	1	1 2	2		4	
Permitted Phases	2			2		4
Detector Phase	1	1 2	2	2	4	4
Switch Phase						
Minimum Initial (s)	3.0		5.0	5.0	5.0	5.0
Minimum Split (s)	7.0		26.0	26.0	11.0	11.0
Total Split (s)	12.0		26.0	26.0	32.0	32.0
Total Split (%)	17.1%		37.1%	37.1%	45.7%	45.7%
Maximum Green (s)	8.0		19.2	19.2	28.0	28.0
Yellow Time (s)	3.0		4.2	4.2	3.0	3.0
All-Red Time (s)	1.0		2.6	2.6	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.8	6.8	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.5		0.2	0.2	2.0	2.0
Recall Mode	None		C-Max	C-Max	None	None
Act Effct Green (s)	44.0	48.0	30.6	30.6	14.0	14.0
Actuated g/C Ratio	0.63	0.69	0.44	0.44	0.20	0.20
v/c Ratio	0.05	0.31	0.53	0.02	0.66	0.12
Control Delay	1.2	4.0	21.1	9.0	34.4	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.2	4.0	21.1	9.0	34.4	7.8
LOS	A	A	C	A	C	A
Approach Delay		3.8	20.7		30.3	
Approach LOS		A	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 16.8		Intersection LOS: B	
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Sullivan Avenue & Ayers Road



Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	405	465	35	15	10
Future Vol, veh/h	15	405	465	35	15	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	440	505	38	16	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	543	0	-	0	996	524
Stage 1	-	-	-	-	524	-
Stage 2	-	-	-	-	472	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1026	-	-	-	271	553
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	628	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1026	-	-	-	265	553
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	628	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	16.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1026	-	-	-	335
HCM Lane V/C Ratio	0.016	-	-	-	0.081
HCM Control Delay (s)	8.6	0	-	-	16.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

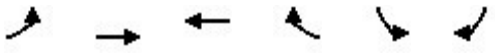
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	45	365	10	15	395	15	5	5	5	20	5	95
Future Vol, veh/h	45	365	10	15	395	15	5	5	5	20	5	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	397	11	16	429	16	5	5	5	22	5	103

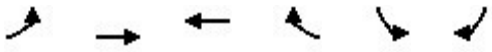
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	445	0	0	408	0	0	1024	978	403	975	975	437
Stage 1	-	-	-	-	-	-	501	501	-	469	469	-
Stage 2	-	-	-	-	-	-	523	477	-	506	506	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1115	-	-	1151	-	-	214	250	647	231	251	620
Stage 1	-	-	-	-	-	-	552	543	-	575	561	-
Stage 2	-	-	-	-	-	-	537	556	-	549	540	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1115	-	-	1151	-	-	165	231	647	212	232	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	165	231	-	212	232	-
Stage 1	-	-	-	-	-	-	521	512	-	542	550	-
Stage 2	-	-	-	-	-	-	435	545	-	508	509	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.3	20.3	16.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	251	1115	-	-	1151	-	-	446
HCM Lane V/C Ratio	0.065	0.044	-	-	0.014	-	-	0.292
HCM Control Delay (s)	20.3	8.4	0	-	8.2	0	-	16.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	1.2



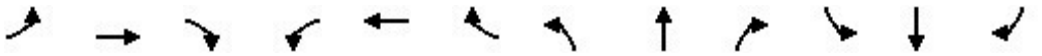
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	60	540	405	105	90	30
Future Volume (vph)	60	540	405	105	90	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.972		0.966	
Flt Protected	0.950				0.964	
Satd. Flow (prot)	1770	1863	1811	0	1735	0
Flt Permitted	0.327				0.964	
Satd. Flow (perm)	609	1863	1811	0	1735	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			25		18	
Link Speed (mph)		30	30		30	
Link Distance (ft)		391	1632		537	
Travel Time (s)		8.9	37.1		12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	587	440	114	98	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	587	554	0	131	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		3	
Detector Template						
Leading Detector (ft)	0	0	0		30	
Trailing Detector (ft)	0	0	0		-10	
Detector 1 Position(ft)	0	0	0		-10	
Detector 1 Size(ft)	20	6	6		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					10	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Detector 3 Position(ft)					24	
Detector 3 Size(ft)					6	
Detector 3 Type					Cl+Ex	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)					0.0	
Turn Type	D.P+P	NA	NA		Prot	
Protected Phases	1	1 2	2		4	
Permitted Phases	2					
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	
Minimum Split (s)	9.0		32.0		13.0	
Total Split (s)	12.0		52.0		19.0	
Total Split (%)	14.5%		62.7%		22.9%	
Maximum Green (s)	8.0		45.2		15.0	
Yellow Time (s)	3.0		4.2		3.0	
All-Red Time (s)	1.0		2.6		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		6.8		4.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	0.2		4.0		3.0	
Recall Mode	Max		Min		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					2.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	36.6	42.5	24.8		9.8	
Actuated g/C Ratio	0.65	0.76	0.44		0.18	
v/c Ratio	0.11	0.42	0.68		0.41	
Control Delay	3.7	5.0	17.1		25.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.7	5.0	17.1		25.9	
LOS	A	A	B		C	
Approach Delay		4.9	17.1		25.9	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 56			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 12.0		Intersection LOS: B	
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Sullivan Avenue & Troy Road

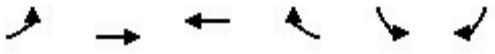


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	635	35	40	495	50	35	5	40	35	5	40
Future Volume (vph)	25	635	35	40	495	50	35	5	40	35	5	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	300		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.986				0.850			0.850
Flt Protected	0.950			0.950				0.958			0.958	
Satd. Flow (prot)	1770	1848	0	1770	1837	0	0	1785	1583	0	1785	1583
Flt Permitted	0.441			0.228				0.720			0.720	
Satd. Flow (perm)	821	1848	0	425	1837	0	0	1341	1583	0	1341	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			14				137			137
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		536			925			146			223	
Travel Time (s)		12.2			21.0			3.3			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	690	38	43	538	54	38	5	43	38	5	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	728	0	43	592	0	0	43	43	0	43	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	0	0		36	0		20	28	28	20	28	28
Trailing Detector (ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Position(ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Size(ft)	20	6		6	6		20	6	20	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				16				8	8		8	8
Detector 2 Size(ft)				6				6	6		6	6
Detector 2 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0				0.0	0.0		0.0	0.0
Detector 3 Position(ft)				30				22	22		22	22
Detector 3 Size(ft)				6				6	6		6	6
Detector 3 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Channel												
Detector 3 Extend (s)				0.0				0.0	0.0		0.0	0.0
Turn Type	Perm	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	1 2			4			4	
Permitted Phases	2			2			4		4	4		4
Detector Phase	2	2		1	1 2		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	27.0	27.0		3.0			7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	35.0	35.0		7.0			14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	35.0	35.0		13.0			22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%		18.6%			31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
Maximum Green (s)	27.2	27.2		9.0			18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	4.2	4.2		3.0			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	3.6		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0				0.0	0.0		0.0	0.0
Total Lost Time (s)	7.8	7.8		4.0				4.0	4.0		4.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		2.0			1.5	1.5	1.5	1.5	1.5	1.5
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)							7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)							3.0	3.0	3.0	3.0	3.0	3.0
Pedestrian Calls (#/hr)							0	0	0	0	0	0
Act Effct Green (s)	37.3	37.3		52.7	57.5			7.5	7.5		7.5	7.5
Actuated g/C Ratio	0.53	0.53		0.75	0.82			0.11	0.11		0.11	0.11
v/c Ratio	0.06	0.74		0.08	0.39			0.30	0.15		0.30	0.15
Control Delay	12.1	22.4		1.0	0.8			34.5	1.1		34.5	1.1
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	12.1	22.4		1.0	0.8			34.5	1.1		34.5	1.1
LOS	B	C		A	A			C	A		C	A
Approach Delay		22.0			0.8			17.8			17.8	
Approach LOS		C			A			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 36 (51%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 60.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 2: Site Drive/Private Drive & Sullivan Avenue



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	70	650	520	20	165	85
Future Volume (vph)	70	650	520	20	165	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260			325	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.289				0.950	
Satd. Flow (perm)	538	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				22		92
Link Speed (mph)		30	30		30	
Link Distance (ft)		925	1028		520	
Travel Time (s)		21.0	23.4		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	707	565	22	179	92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	707	565	22	179	92
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	3	0	0	0	1	3
Detector Template						
Leading Detector (ft)	28	0	0	0	28	24
Trailing Detector (ft)	-6	0	0	0	22	-10
Detector 1 Position(ft)	-6	0	0	0	22	-10
Detector 1 Size(ft)	6	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	8					4
Detector 2 Size(ft)	6					6
Detector 2 Type	Cl+Ex					Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Detector 3 Position(ft)	22					18
Detector 3 Size(ft)	6					6
Detector 3 Type	Cl+Ex					Cl+Ex

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)	0.0					0.0
Turn Type	D.P+P	NA	NA	Perm	Prot	Perm
Protected Phases	1	1 2	2		4	
Permitted Phases	2			2		4
Detector Phase	1	1 2	2	2	4	4
Switch Phase						
Minimum Initial (s)	3.0		5.0	5.0	5.0	5.0
Minimum Split (s)	7.0		26.0	26.0	11.0	11.0
Total Split (s)	12.0		34.0	34.0	24.0	24.0
Total Split (%)	17.1%		48.6%	48.6%	34.3%	34.3%
Maximum Green (s)	8.0		27.2	27.2	20.0	20.0
Yellow Time (s)	3.0		4.2	4.2	3.0	3.0
All-Red Time (s)	1.0		2.6	2.6	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.8	6.8	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.5		0.2	0.2	2.0	2.0
Recall Mode	None		C-Max	C-Max	None	None
Act Effct Green (s)	46.4	50.4	30.8	30.8	11.6	11.6
Actuated g/C Ratio	0.66	0.72	0.44	0.44	0.17	0.17
v/c Ratio	0.13	0.53	0.69	0.03	0.61	0.27
Control Delay	1.2	3.2	23.1	6.3	35.5	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.2	3.2	23.1	6.3	35.5	8.0
LOS	A	A	C	A	D	A
Approach Delay		3.0	22.5		26.1	
Approach LOS		A	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 52.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Sullivan Avenue & Ayers Road

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	720	570	30	25	15
Future Vol, veh/h	15	720	570	30	25	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	783	620	33	27	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	653	0	-	0	1452	637
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	934	-	-	-	144	477
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	934	-	-	-	140	477
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	435	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	29.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	934	-	-	-	190
HCM Lane V/C Ratio	0.017	-	-	-	0.229
HCM Control Delay (s)	8.9	0	-	-	29.5
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

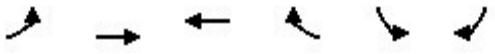
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	90	640	10	25	530	35	5	10	25	15	10	60
Future Vol, veh/h	90	640	10	25	530	35	5	10	25	15	10	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	696	11	27	576	38	5	11	27	16	11	65

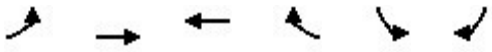
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	614	0	0	707	0	0	1585	1566	702	1566	1552	595
Stage 1	-	-	-	-	-	-	898	898	-	649	649	-
Stage 2	-	-	-	-	-	-	687	668	-	917	903	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	965	-	-	891	-	-	88	111	438	90	113	504
Stage 1	-	-	-	-	-	-	334	358	-	458	466	-
Stage 2	-	-	-	-	-	-	437	456	-	326	356	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	965	-	-	891	-	-	59	88	438	65	90	504
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	88	-	65	90	-
Stage 1	-	-	-	-	-	-	278	298	-	381	445	-
Stage 2	-	-	-	-	-	-	354	435	-	245	296	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.4	36.5	42.8
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	157	965	-	-	891	-	-	184
HCM Lane V/C Ratio	0.277	0.101	-	-	0.03	-	-	0.502
HCM Control Delay (s)	36.5	9.2	0	-	9.2	0	-	42.8
HCM Lane LOS	E	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	1.1	0.3	-	-	0.1	-	-	2.5



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	415	355	100	105	25
Future Volume (vph)	25	415	355	100	105	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.970		0.974	
Flt Protected	0.950				0.961	
Satd. Flow (prot)	1770	1863	1807	0	1744	0
Flt Permitted	0.393				0.961	
Satd. Flow (perm)	732	1863	1807	0	1744	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			29		16	
Link Speed (mph)		30	30		30	
Link Distance (ft)		391	1632		537	
Travel Time (s)		8.9	37.1		12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	451	386	109	114	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	451	495	0	141	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		3	
Detector Template						
Leading Detector (ft)	0	0	0		30	
Trailing Detector (ft)	0	0	0		-10	
Detector 1 Position(ft)	0	0	0		-10	
Detector 1 Size(ft)	20	6	6		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					10	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Detector 3 Position(ft)					24	
Detector 3 Size(ft)					6	
Detector 3 Type					Cl+Ex	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)					0.0	
Turn Type	D.P+P	NA	NA		Prot	
Protected Phases	1	1 2	2		4	
Permitted Phases	2					
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	
Minimum Split (s)	9.0		32.0		13.0	
Total Split (s)	9.0		42.0		19.0	
Total Split (%)	12.9%		60.0%		27.1%	
Maximum Green (s)	5.0		35.2		15.0	
Yellow Time (s)	3.0		4.2		3.0	
All-Red Time (s)	1.0		2.6		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		6.8		4.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	0.2		4.0		3.0	
Recall Mode	Max		Min		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					2.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	28.8	34.7	20.1		9.6	
Actuated g/C Ratio	0.60	0.72	0.42		0.20	
v/c Ratio	0.05	0.33	0.64		0.39	
Control Delay	3.8	4.9	15.2		21.7	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.8	4.9	15.2		21.7	
LOS	A	A	B		C	
Approach Delay		4.8	15.2		21.7	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 48			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

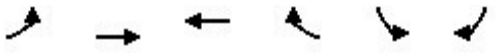
Splits and Phases: 1: Sullivan Avenue & Troy Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	505	40	65	465	60	45	10	55	50	5	35
Future Volume (vph)	30	505	40	65	465	60	45	10	55	50	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	300		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.983				0.850			0.850
Flt Protected	0.950			0.950				0.961			0.956	
Satd. Flow (prot)	1770	1842	0	1770	1831	0	0	1790	1583	0	1781	1583
Flt Permitted	0.450			0.335				0.725			0.701	
Satd. Flow (perm)	838	1842	0	624	1831	0	0	1350	1583	0	1306	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			18				137			137
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		536			925			146			223	
Travel Time (s)		12.2			21.0			3.3			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	549	43	71	505	65	49	11	60	54	5	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	592	0	71	570	0	0	60	60	0	59	38
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	0	0		36	0		20	28	28	20	28	28
Trailing Detector (ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Position(ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Size(ft)	20	6		6	6		20	6	20	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				16				8	8		8	8
Detector 2 Size(ft)				6				6	6		6	6
Detector 2 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0				0.0	0.0		0.0	0.0
Detector 3 Position(ft)				30				22	22		22	22
Detector 3 Size(ft)				6				6	6		6	6
Detector 3 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex

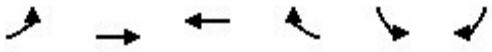
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Channel												
Detector 3 Extend (s)				0.0				0.0	0.0		0.0	0.0
Turn Type	Perm	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	1 2			4			4	
Permitted Phases	2			2			4		4	4		4
Detector Phase	2	2		1	1 2		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	27.0	27.0		3.0			7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	35.0	35.0		7.0			14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	35.0	35.0		13.0			22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%		18.6%			31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
Maximum Green (s)	27.2	27.2		9.0			18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	4.2	4.2		3.0			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	3.6		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0				0.0	0.0		0.0	0.0
Total Lost Time (s)	7.8	7.8		4.0				4.0	4.0		4.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		2.0			1.5	1.5	1.5	1.5	1.5	1.5
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)							7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)							3.0	3.0	3.0	3.0	3.0	3.0
Pedestrian Calls (#/hr)							0	0	0	0	0	0
Act Effct Green (s)	37.1	37.1		52.2	57.0			8.0	8.0		8.0	8.0
Actuated g/C Ratio	0.53	0.53		0.75	0.81			0.11	0.11		0.11	0.11
v/c Ratio	0.07	0.60		0.11	0.38			0.39	0.20		0.40	0.13
Control Delay	12.3	18.0		1.0	0.7			35.9	1.5		36.5	0.9
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	12.3	18.0		1.0	0.7			35.9	1.5		36.5	0.9
LOS	B	B		A	A			D	A		D	A
Approach Delay		17.7			0.8			18.7			22.5	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 36 (51%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Site Drive/Private Drive & Sullivan Avenue



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	55	570	525	10	155	65
Future Volume (vph)	55	570	525	10	155	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260			325	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.297				0.950	
Satd. Flow (perm)	553	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				11		71
Link Speed (mph)		30	30		30	
Link Distance (ft)		925	1028		520	
Travel Time (s)		21.0	23.4		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	620	571	11	168	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	60	620	571	11	168	71
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	3	0	0	0	1	3
Detector Template						
Leading Detector (ft)	28	0	0	0	28	24
Trailing Detector (ft)	-6	0	0	0	22	-10
Detector 1 Position(ft)	-6	0	0	0	22	-10
Detector 1 Size(ft)	6	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	8					4
Detector 2 Size(ft)	6					6
Detector 2 Type	Cl+Ex					Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Detector 3 Position(ft)	22					18
Detector 3 Size(ft)	6					6
Detector 3 Type	Cl+Ex					Cl+Ex



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)	0.0					0.0
Turn Type	D.P+P	NA	NA	Perm	Prot	Perm
Protected Phases	1	1 2	2		4	
Permitted Phases	2			2		4
Detector Phase	1	1 2	2	2	4	4
Switch Phase						
Minimum Initial (s)	3.0		5.0	5.0	5.0	5.0
Minimum Split (s)	7.0		26.0	26.0	11.0	11.0
Total Split (s)	12.0		34.0	34.0	24.0	24.0
Total Split (%)	17.1%		48.6%	48.6%	34.3%	34.3%
Maximum Green (s)	8.0		27.2	27.2	20.0	20.0
Yellow Time (s)	3.0		4.2	4.2	3.0	3.0
All-Red Time (s)	1.0		2.6	2.6	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.8	6.8	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.5		0.2	0.2	2.0	2.0
Recall Mode	None		C-Max	C-Max	None	None
Act Effct Green (s)	46.8	50.8	32.1	32.1	11.2	11.2
Actuated g/C Ratio	0.67	0.73	0.46	0.46	0.16	0.16
v/c Ratio	0.10	0.46	0.67	0.02	0.60	0.23
Control Delay	1.1	2.4	21.9	7.5	35.4	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.1	2.4	21.9	7.5	35.4	8.5
LOS	A	A	C	A	D	A
Approach Delay		2.3	21.6		27.4	
Approach LOS		A	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 51.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Sullivan Avenue & Ayers Road

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	635	560	15	20	15
Future Vol, veh/h	10	635	560	15	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	690	609	16	22	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	625	0	-	0	1329	617
Stage 1	-	-	-	-	617	-
Stage 2	-	-	-	-	712	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	956	-	-	-	171	490
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	956	-	-	-	168	490
Mov Cap-2 Maneuver	-	-	-	-	168	-
Stage 1	-	-	-	-	528	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	23.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	956	-	-	-	234
HCM Lane V/C Ratio	0.011	-	-	-	0.163
HCM Control Delay (s)	8.8	0	-	-	23.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6

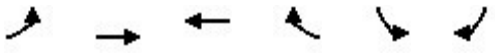
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	75	550	10	15	490	30	5	0	15	15	5	80
Future Vol, veh/h	75	550	10	15	490	30	5	0	15	15	5	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	598	11	16	533	33	5	0	16	16	5	87

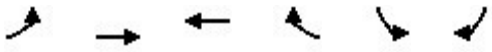
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	566	0	0	609	0	0	1396	1366	604	1358	1355	550
Stage 1	-	-	-	-	-	-	768	768	-	582	582	-
Stage 2	-	-	-	-	-	-	628	598	-	776	773	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1006	-	-	970	-	-	119	147	498	126	149	535
Stage 1	-	-	-	-	-	-	394	411	-	499	499	-
Stage 2	-	-	-	-	-	-	471	491	-	390	409	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1006	-	-	970	-	-	86	126	498	108	128	535
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	126	-	108	128	-
Stage 1	-	-	-	-	-	-	346	360	-	438	487	-
Stage 2	-	-	-	-	-	-	381	479	-	331	359	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.2	22.5	23.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	1006	-	-	970	-	-	305
HCM Lane V/C Ratio	0.096	0.081	-	-	0.017	-	-	0.356
HCM Control Delay (s)	22.5	8.9	0	-	8.8	0	-	23.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0.1	-	-	1.6



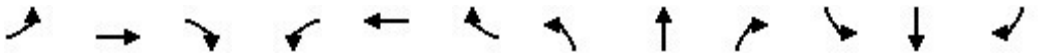
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	344	418	83	111	50
Future Volume (vph)	20	344	418	83	111	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978		0.958	
Flt Protected	0.950				0.967	
Satd. Flow (prot)	1770	1863	1822	0	1726	0
Flt Permitted	0.347				0.967	
Satd. Flow (perm)	646	1863	1822	0	1726	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			18		29	
Link Speed (mph)		30	30		30	
Link Distance (ft)		391	1632		537	
Travel Time (s)		8.9	37.1		12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	374	454	90	121	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	374	544	0	175	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		3	
Detector Template						
Leading Detector (ft)	0	0	0		30	
Trailing Detector (ft)	0	0	0		-10	
Detector 1 Position(ft)	0	0	0		-10	
Detector 1 Size(ft)	20	6	6		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					10	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Detector 3 Position(ft)					24	
Detector 3 Size(ft)					6	
Detector 3 Type					Cl+Ex	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)					0.0	
Turn Type	D.P+P	NA	NA		Prot	
Protected Phases	1	1 2	2		4	
Permitted Phases	2					
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	
Minimum Split (s)	9.0		34.0		13.0	
Total Split (s)	9.0		42.0		24.0	
Total Split (%)	12.0%		56.0%		32.0%	
Maximum Green (s)	5.0		35.2		20.0	
Yellow Time (s)	3.0		4.2		3.0	
All-Red Time (s)	1.0		2.6		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		6.8		4.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	0.2		4.0		3.0	
Recall Mode	Max		Min		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					2.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	31.4	37.2	22.8		10.7	
Actuated g/C Ratio	0.61	0.72	0.44		0.21	
v/c Ratio	0.04	0.28	0.67		0.46	
Control Delay	4.2	4.8	16.4		22.1	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	4.2	4.8	16.4		22.1	
LOS	A	A	B		C	
Approach Delay		4.8	16.4		22.1	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 51.5			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 45.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Sullivan Avenue & Troy Road

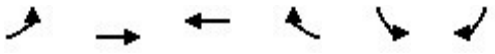


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	350	95	105	370	25	101	0	100	10	5	20
Future Volume (vph)	10	350	95	105	370	25	101	0	100	10	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	300		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.991				0.850			0.850
Flt Protected	0.950			0.950				0.950			0.967	
Satd. Flow (prot)	1770	1803	0	1770	1846	0	0	1770	1583	0	1801	1583
Flt Permitted	0.513			0.424				0.747			0.799	
Satd. Flow (perm)	956	1803	0	790	1846	0	0	1391	1583	0	1488	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			9				137			137
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		536			925			146			223	
Travel Time (s)		12.2			21.0			3.3			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	380	103	114	402	27	110	0	109	11	5	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	483	0	114	429	0	0	110	109	0	16	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	0	0		36	0		20	28	28	20	28	28
Trailing Detector (ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Position(ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Size(ft)	20	6		6	6		20	6	20	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				16				8	8		8	8
Detector 2 Size(ft)				6				6	6		6	6
Detector 2 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0				0.0	0.0		0.0	0.0
Detector 3 Position(ft)				30				22	22		22	22
Detector 3 Size(ft)				6				6	6		6	6
Detector 3 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Channel												
Detector 3 Extend (s)				0.0				0.0	0.0		0.0	0.0
Turn Type	Perm	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	1 2			4			4	
Permitted Phases	2			2			4		4	4		4
Detector Phase	2	2		1	1 2		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	27.0	27.0		3.0			7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	35.0	35.0		7.0			14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	35.0	35.0		13.0			22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%		18.6%			31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
Maximum Green (s)	27.2	27.2		9.0			18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	4.2	4.2		3.0			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	3.6		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0				0.0	0.0		0.0	0.0
Total Lost Time (s)	7.8	7.8		4.0				4.0	4.0		4.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		2.0			1.5	1.5	1.5	1.5	1.5	1.5
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)							7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)							3.0	3.0	3.0	3.0	3.0	3.0
Pedestrian Calls (#/hr)							0	0	0	0	0	0
Act Effct Green (s)	36.9	36.9		50.1	54.9			10.1	10.1		10.1	10.1
Actuated g/C Ratio	0.53	0.53		0.72	0.78			0.14	0.14		0.14	0.14
v/c Ratio	0.02	0.50		0.16	0.30			0.55	0.32		0.08	0.06
Control Delay	12.3	15.1		1.9	1.0			37.8	5.8		24.7	0.3
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	12.3	15.1		1.9	1.0			37.8	5.8		24.7	0.3
LOS	B	B		A	A			D	A		C	A
Approach Delay		15.0			1.2			21.8			10.6	
Approach LOS		B			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 40 (57%), Referenced to phase 2:EBWB and 6:, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 68.9%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Site Drive/Private Drive & Sullivan Avenue

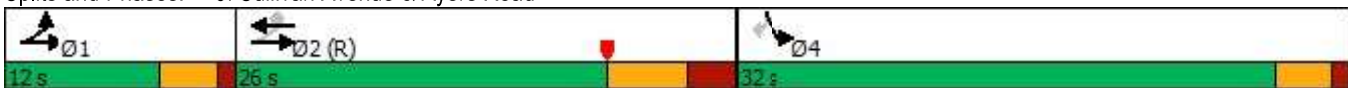


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	412	439	15	215	51
Future Volume (vph)	43	412	439	15	215	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260			325	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.364				0.950	
Satd. Flow (perm)	678	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				16		55
Link Speed (mph)		30	30		30	
Link Distance (ft)		925	1028		520	
Travel Time (s)		21.0	23.4		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	448	477	16	234	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	47	448	477	16	234	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	3	0	0	0	1	3
Detector Template						
Leading Detector (ft)	28	0	0	0	28	24
Trailing Detector (ft)	-6	0	0	0	22	-10
Detector 1 Position(ft)	-6	0	0	0	22	-10
Detector 1 Size(ft)	6	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	8					4
Detector 2 Size(ft)	6					6
Detector 2 Type	Cl+Ex					Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Detector 3 Position(ft)	22					18
Detector 3 Size(ft)	6					6
Detector 3 Type	Cl+Ex					Cl+Ex

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)	0.0					0.0
Turn Type	D.P+P	NA	NA	Perm	Prot	Perm
Protected Phases	1	1 2	2		4	
Permitted Phases	2			2		4
Detector Phase	1	1 2	2	2	4	4
Switch Phase						
Minimum Initial (s)	3.0		5.0	5.0	5.0	5.0
Minimum Split (s)	7.0		26.0	26.0	11.0	11.0
Total Split (s)	12.0		26.0	26.0	32.0	32.0
Total Split (%)	17.1%		37.1%	37.1%	45.7%	45.7%
Maximum Green (s)	8.0		19.2	19.2	28.0	28.0
Yellow Time (s)	3.0		4.2	4.2	3.0	3.0
All-Red Time (s)	1.0		2.6	2.6	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.8	6.8	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.5		0.2	0.2	2.0	2.0
Recall Mode	None		C-Max	C-Max	None	None
Act Effct Green (s)	44.0	48.0	29.8	29.8	14.0	14.0
Actuated g/C Ratio	0.63	0.69	0.43	0.43	0.20	0.20
v/c Ratio	0.08	0.35	0.60	0.02	0.66	0.15
Control Delay	1.7	2.2	23.6	9.1	34.4	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	2.2	23.6	9.1	34.4	7.4
LOS	A	A	C	A	C	A
Approach Delay		2.1	23.1		29.3	
Approach LOS		A	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 50.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Sullivan Avenue & Ayers Road



Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	460	531	35	15	10
Future Vol, veh/h	15	460	531	35	15	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	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	500	577	38	16	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	615	0	-	0	1128	596
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	532	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	965	-	-	-	226	504
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	965	-	-	-	221	504
Mov Cap-2 Maneuver	-	-	-	-	221	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	589	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	965	-	-	-	285
HCM Lane V/C Ratio	0.017	-	-	-	0.095
HCM Control Delay (s)	8.8	0	-	-	19
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

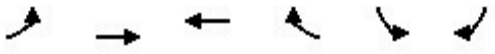
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	45	365	10	15	461	15	5	5	5	20	5	95
Future Vol, veh/h	45	365	10	15	461	15	5	5	5	20	5	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	397	11	16	501	16	5	5	5	22	5	103

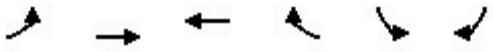
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	517	0	0	408	0	0	1096	1050	403	1047	1047	509
Stage 1	-	-	-	-	-	-	501	501	-	541	541	-
Stage 2	-	-	-	-	-	-	595	549	-	506	506	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1049	-	-	1151	-	-	191	227	647	206	228	564
Stage 1	-	-	-	-	-	-	552	543	-	525	521	-
Stage 2	-	-	-	-	-	-	491	516	-	549	540	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1049	-	-	1151	-	-	144	209	647	188	210	564
Mov Cap-2 Maneuver	-	-	-	-	-	-	144	209	-	188	210	-
Stage 1	-	-	-	-	-	-	519	510	-	494	511	-
Stage 2	-	-	-	-	-	-	389	506	-	506	508	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.2	22.2	18.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	226	1049	-	-	1151	-	-	402
HCM Lane V/C Ratio	0.072	0.047	-	-	0.014	-	-	0.324
HCM Control Delay (s)	22.2	8.6	0	-	8.2	0	-	18.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	1.4



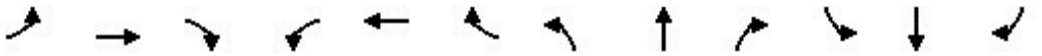
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	60	597	455	117	105	30
Future Volume (vph)	60	597	455	117	105	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.972		0.970	
Flt Protected	0.950				0.963	
Satd. Flow (prot)	1770	1863	1811	0	1740	0
Flt Permitted	0.284				0.963	
Satd. Flow (perm)	529	1863	1811	0	1740	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			24		15	
Link Speed (mph)		30	30		30	
Link Distance (ft)		391	1632		537	
Travel Time (s)		8.9	37.1		12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	649	495	127	114	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	649	622	0	147	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		3	
Detector Template						
Leading Detector (ft)	0	0	0		30	
Trailing Detector (ft)	0	0	0		-10	
Detector 1 Position(ft)	0	0	0		-10	
Detector 1 Size(ft)	20	6	6		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					10	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Detector 3 Position(ft)					24	
Detector 3 Size(ft)					6	
Detector 3 Type					Cl+Ex	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)					0.0	
Turn Type	D.P+P	NA	NA		Prot	
Protected Phases	1	1 2	2		4	
Permitted Phases	2					
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	
Minimum Split (s)	9.0		32.0		13.0	
Total Split (s)	12.0		52.0		19.0	
Total Split (%)	14.5%		62.7%		22.9%	
Maximum Green (s)	8.0		45.2		15.0	
Yellow Time (s)	3.0		4.2		3.0	
All-Red Time (s)	1.0		2.6		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		6.8		4.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	0.2		4.0		3.0	
Recall Mode	Max		Min		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					2.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	41.2	47.0	29.5		10.5	
Actuated g/C Ratio	0.67	0.77	0.48		0.17	
v/c Ratio	0.12	0.45	0.70		0.47	
Control Delay	3.7	5.3	17.5		29.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	3.7	5.3	17.5		29.9	
LOS	A	A	B		C	
Approach Delay		5.2	17.5		29.9	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 83			
Actuated Cycle Length: 61.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Sullivan Avenue & Troy Road

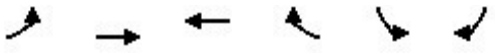


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	605	137	142	465	50	127	5	132	35	5	40
Future Volume (vph)	25	605	137	142	465	50	127	5	132	35	5	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	300		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.986				0.850			0.850
Flt Protected	0.950			0.950				0.954			0.958	
Satd. Flow (prot)	1770	1811	0	1770	1837	0	0	1777	1583	0	1785	1583
Flt Permitted	0.455			0.127				0.702			0.707	
Satd. Flow (perm)	848	1811	0	237	1837	0	0	1308	1583	0	1317	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			15				143			137
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		536			925			146			223	
Travel Time (s)		12.2			21.0			3.3			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	658	149	154	505	54	138	5	143	38	5	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	807	0	154	559	0	0	143	143	0	43	43
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	0	0		36	0		20	28	28	20	28	28
Trailing Detector (ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Position(ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Size(ft)	20	6		6	6		20	6	20	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				16				8	8		8	8
Detector 2 Size(ft)				6				6	6		6	6
Detector 2 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0				0.0	0.0		0.0	0.0
Detector 3 Position(ft)				30				22	22		22	22
Detector 3 Size(ft)				6				6	6		6	6
Detector 3 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex

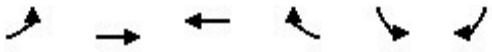
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Channel												
Detector 3 Extend (s)				0.0				0.0	0.0		0.0	0.0
Turn Type	Perm	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	1 2			4			4	
Permitted Phases	2			2			4		4	4		4
Detector Phase	2	2		1	1 2		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	27.0	27.0		3.0			7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	35.0	35.0		7.0			14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	35.0	35.0		13.0			22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%		18.6%			31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
Maximum Green (s)	27.2	27.2		9.0			18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	4.2	4.2		3.0			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	3.6		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0				0.0	0.0		0.0	0.0
Total Lost Time (s)	7.8	7.8		4.0				4.0	4.0		4.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		2.0			1.5	1.5	1.5	1.5	1.5	1.5
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)							7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)							3.0	3.0	3.0	3.0	3.0	3.0
Pedestrian Calls (#/hr)							0	0	0	0	0	0
Act Effct Green (s)	31.6	31.6		46.1	50.1			11.9	11.9		11.9	11.9
Actuated g/C Ratio	0.45	0.45		0.66	0.72			0.17	0.17		0.17	0.17
v/c Ratio	0.07	0.98		0.39	0.42			0.64	0.37		0.19	0.11
Control Delay	13.9	49.3		12.5	1.2			39.8	7.4		25.0	0.6
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	13.9	49.3		12.5	1.2			39.8	7.4		25.0	0.6
LOS	B	D		B	A			D	A		C	A
Approach Delay		48.2			3.7			23.6			12.8	
Approach LOS		D			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 36 (51%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 77.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Site Drive/Private Drive & Sullivan Avenue



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	82	700	577	20	165	100
Future Volume (vph)	82	700	577	20	165	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260			325	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.225				0.950	
Satd. Flow (perm)	419	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				22		109
Link Speed (mph)		30	30		30	
Link Distance (ft)		925	1028		520	
Travel Time (s)		21.0	23.4		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	761	627	22	179	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	89	761	627	22	179	109
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	3	0	0	0	1	3
Detector Template						
Leading Detector (ft)	28	0	0	0	28	24
Trailing Detector (ft)	-6	0	0	0	22	-10
Detector 1 Position(ft)	-6	0	0	0	22	-10
Detector 1 Size(ft)	6	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	8					4
Detector 2 Size(ft)	6					6
Detector 2 Type	Cl+Ex					Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Detector 3 Position(ft)	22					18
Detector 3 Size(ft)	6					6
Detector 3 Type	Cl+Ex					Cl+Ex



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)	0.0					0.0
Turn Type	D.P+P	NA	NA	Perm	Prot	Perm
Protected Phases	1	1 2	2		4	
Permitted Phases	2			2		4
Detector Phase	1	1 2	2	2	4	4
Switch Phase						
Minimum Initial (s)	3.0		5.0	5.0	5.0	5.0
Minimum Split (s)	7.0		26.0	26.0	11.0	11.0
Total Split (s)	12.0		34.0	34.0	24.0	24.0
Total Split (%)	17.1%		48.6%	48.6%	34.3%	34.3%
Maximum Green (s)	8.0		27.2	27.2	20.0	20.0
Yellow Time (s)	3.0		4.2	4.2	3.0	3.0
All-Red Time (s)	1.0		2.6	2.6	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.8	6.8	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.5		0.2	0.2	2.0	2.0
Recall Mode	None		C-Max	C-Max	None	None
Act Effct Green (s)	46.4	50.4	30.4	30.4	11.6	11.6
Actuated g/C Ratio	0.66	0.72	0.43	0.43	0.17	0.17
v/c Ratio	0.17	0.57	0.78	0.03	0.61	0.31
Control Delay	2.0	2.3	27.2	6.3	35.5	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.0	2.3	27.2	6.3	35.5	7.8
LOS	A	A	C	A	D	A
Approach Delay		2.2	26.4		25.0	
Approach LOS		A	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Sullivan Avenue & Ayers Road

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	792	632	30	25	15
Future Vol, veh/h	15	792	632	30	25	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	861	687	33	27	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	720	0	-	0	1597	704
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	893	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	882	-	-	-	117	437
Stage 1	-	-	-	-	490	-
Stage 2	-	-	-	-	400	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	882	-	-	-	113	437
Mov Cap-2 Maneuver	-	-	-	-	113	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	400	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	36.5
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	882	-	-	-	157
HCM Lane V/C Ratio	0.018	-	-	-	0.277
HCM Control Delay (s)	9.2	0	-	-	36.5
HCM Lane LOS	A	A	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1

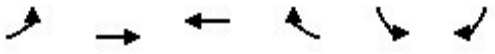
Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	90	712	10	25	592	35	5	10	25	15	10	60
Future Vol, veh/h	90	712	10	25	592	35	5	10	25	15	10	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	774	11	27	643	38	5	11	27	16	11	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	681	0	0	785	0	0	1730	1711	780	1711	1697	662
Stage 1	-	-	-	-	-	-	976	976	-	716	716	-
Stage 2	-	-	-	-	-	-	754	735	-	995	981	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	912	-	-	834	-	-	69	91	395	71	92	462
Stage 1	-	-	-	-	-	-	302	329	-	421	434	-
Stage 2	-	-	-	-	-	-	401	425	-	295	328	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	834	-	-	43	70	395	48	71	462
Mov Cap-2 Maneuver	-	-	-	-	-	-	43	70	-	48	71	-
Stage 1	-	-	-	-	-	-	244	266	-	341	411	-
Stage 2	-	-	-	-	-	-	318	403	-	213	265	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.4	48.9	64.7
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	124	912	-	-	834	-	-	146
HCM Lane V/C Ratio	0.351	0.107	-	-	0.033	-	-	0.633
HCM Control Delay (s)	48.9	9.4	0	-	9.5	0	-	64.7
HCM Lane LOS	E	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.4	0.4	-	-	0.1	-	-	3.4



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	488	429	119	123	25
Future Volume (vph)	25	488	429	119	123	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	110			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.971		0.977	
Flt Protected	0.950				0.960	
Satd. Flow (prot)	1770	1863	1809	0	1747	0
Flt Permitted	0.307				0.960	
Satd. Flow (perm)	572	1863	1809	0	1747	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			29		13	
Link Speed (mph)		30	30		30	
Link Distance (ft)		391	1632		537	
Travel Time (s)		8.9	37.1		12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	530	466	129	134	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	530	595	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	0	0	0		3	
Detector Template						
Leading Detector (ft)	0	0	0		30	
Trailing Detector (ft)	0	0	0		-10	
Detector 1 Position(ft)	0	0	0		-10	
Detector 1 Size(ft)	20	6	6		6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	
Detector 2 Position(ft)					10	
Detector 2 Size(ft)					6	
Detector 2 Type					Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)					0.0	
Detector 3 Position(ft)					24	
Detector 3 Size(ft)					6	
Detector 3 Type					Cl+Ex	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)					0.0	
Turn Type	D.P+P	NA	NA		Prot	
Protected Phases	1	1 2	2		4	
Permitted Phases	2					
Detector Phase	1	1 2	2		4	
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	
Minimum Split (s)	9.0		32.0		13.0	
Total Split (s)	9.0		42.0		19.0	
Total Split (%)	12.9%		60.0%		27.1%	
Maximum Green (s)	5.0		35.2		15.0	
Yellow Time (s)	3.0		4.2		3.0	
All-Red Time (s)	1.0		2.6		1.0	
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	4.0		6.8		4.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	0.2		4.0		3.0	
Recall Mode	Max		Min		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					2.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	32.9	38.9	24.2		10.5	
Actuated g/C Ratio	0.62	0.74	0.46		0.20	
v/c Ratio	0.06	0.39	0.70		0.45	
Control Delay	4.0	5.3	16.8		24.9	
Queue Delay	0.0	0.0	0.0		0.0	
Total Delay	4.0	5.3	16.8		24.9	
LOS	A	A	B		C	
Approach Delay		5.3	16.8		24.9	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 52.9			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

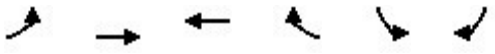
Splits and Phases: 1: Sullivan Avenue & Troy Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	460	176	201	420	60	183	10	193	50	5	35
Future Volume (vph)	30	460	176	201	420	60	183	10	193	50	5	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	300		0	0		0	0		0
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.981				0.850			0.850
Flt Protected	0.950			0.950				0.955			0.956	
Satd. Flow (prot)	1770	1786	0	1770	1827	0	0	1779	1583	0	1781	1583
Flt Permitted	0.471			0.174				0.694			0.602	
Satd. Flow (perm)	877	1786	0	324	1827	0	0	1293	1583	0	1121	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			20				210			137
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		536			925			146			223	
Travel Time (s)		12.2			21.0			3.3			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	500	191	218	457	65	199	11	210	54	5	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	691	0	218	522	0	0	210	210	0	59	38
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	0	0		3	0		1	3	3	1	3	3
Detector Template							Left			Left		
Leading Detector (ft)	0	0		36	0		20	28	28	20	28	28
Trailing Detector (ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Position(ft)	0	0		-4	0		0	-6	-6	0	-6	-6
Detector 1 Size(ft)	20	6		6	6		20	6	20	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)				16				8	8		8	8
Detector 2 Size(ft)				6				6	6		6	6
Detector 2 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)				0.0				0.0	0.0		0.0	0.0
Detector 3 Position(ft)				30				22	22		22	22
Detector 3 Size(ft)				6				6	6		6	6
Detector 3 Type				Cl+Ex				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex

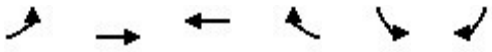
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Channel												
Detector 3 Extend (s)				0.0				0.0	0.0		0.0	0.0
Turn Type	Perm	NA		D.P+P	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		1	1 2			4			4	
Permitted Phases	2			2			4		4	4		4
Detector Phase	2	2		1	1 2		4	4	4	4	4	4
Switch Phase												
Minimum Initial (s)	27.0	27.0		3.0			7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	35.0	35.0		7.0			14.0	14.0	14.0	14.0	14.0	14.0
Total Split (s)	35.0	35.0		13.0			22.0	22.0	22.0	22.0	22.0	22.0
Total Split (%)	50.0%	50.0%		18.6%			31.4%	31.4%	31.4%	31.4%	31.4%	31.4%
Maximum Green (s)	27.2	27.2		9.0			18.0	18.0	18.0	18.0	18.0	18.0
Yellow Time (s)	4.2	4.2		3.0			3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.6	3.6		1.0			1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0				0.0	0.0		0.0	0.0
Total Lost Time (s)	7.8	7.8		4.0				4.0	4.0		4.0	4.0
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		2.0			1.5	1.5	1.5	1.5	1.5	1.5
Recall Mode	C-Min	C-Min		None			None	None	None	None	None	None
Walk Time (s)							7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)							3.0	3.0	3.0	3.0	3.0	3.0
Pedestrian Calls (#/hr)							0	0	0	0	0	0
Act Effct Green (s)	30.1	30.1		43.5	47.5			14.5	14.5		14.5	14.5
Actuated g/C Ratio	0.43	0.43		0.62	0.68			0.21	0.21		0.21	0.21
v/c Ratio	0.09	0.88		0.55	0.42			0.79	0.43		0.25	0.09
Control Delay	14.4	34.7		13.4	1.4			46.4	6.4		24.5	0.4
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	14.4	34.7		13.4	1.4			46.4	6.4		24.5	0.4
LOS	B	C		B	A			D	A		C	A
Approach Delay		33.7			4.9			26.4			15.1	
Approach LOS		C			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 36 (51%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Site Drive/Private Drive & Sullivan Avenue



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	73	644	598	10	155	83
Future Volume (vph)	73	644	598	10	155	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	260			325	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1863	1863	1583	1770	1583
Flt Permitted	0.215				0.950	
Satd. Flow (perm)	400	1863	1863	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				11		90
Link Speed (mph)		30	30		30	
Link Distance (ft)		925	1028		520	
Travel Time (s)		21.0	23.4		11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	700	650	11	168	90
Shared Lane Traffic (%)						
Lane Group Flow (vph)	79	700	650	11	168	90
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	3	0	0	0	1	3
Detector Template						
Leading Detector (ft)	28	0	0	0	28	24
Trailing Detector (ft)	-6	0	0	0	22	-10
Detector 1 Position(ft)	-6	0	0	0	22	-10
Detector 1 Size(ft)	6	6	6	20	6	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	8					4
Detector 2 Size(ft)	6					6
Detector 2 Type	Cl+Ex					Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)	0.0					0.0
Detector 3 Position(ft)	22					18
Detector 3 Size(ft)	6					6
Detector 3 Type	Cl+Ex					Cl+Ex



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector 3 Channel						
Detector 3 Extend (s)	0.0					0.0
Turn Type	D.P+P	NA	NA	Perm	Prot	Perm
Protected Phases	1	1 2	2		4	
Permitted Phases	2			2		4
Detector Phase	1	1 2	2	2	4	4
Switch Phase						
Minimum Initial (s)	3.0		5.0	5.0	5.0	5.0
Minimum Split (s)	7.0		26.0	26.0	11.0	11.0
Total Split (s)	12.0		34.0	34.0	24.0	24.0
Total Split (%)	17.1%		48.6%	48.6%	34.3%	34.3%
Maximum Green (s)	8.0		27.2	27.2	20.0	20.0
Yellow Time (s)	3.0		4.2	4.2	3.0	3.0
All-Red Time (s)	1.0		2.6	2.6	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0		6.8	6.8	4.0	4.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	1.5		0.2	0.2	2.0	2.0
Recall Mode	None		C-Max	C-Max	None	None
Act Effct Green (s)	46.8	50.8	31.2	31.2	11.2	11.2
Actuated g/C Ratio	0.67	0.73	0.45	0.45	0.16	0.16
v/c Ratio	0.15	0.52	0.78	0.02	0.60	0.27
Control Delay	2.1	2.3	27.4	7.5	35.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.1	2.3	27.4	7.5	35.4	8.3
LOS	A	A	C	A	D	A
Approach Delay		2.2	27.1		26.0	
Approach LOS		A	C		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 1 (1%), Referenced to phase 2:EBWB, Start of Yellow			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 15.5		Intersection LOS: B	
Intersection Capacity Utilization 56.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 3: Sullivan Avenue & Ayers Road

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	726	653	15	20	15
Future Vol, veh/h	10	726	653	15	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	789	710	16	22	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	726	0	-	0	1529	718
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	811	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	877	-	-	-	129	429
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	437	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	877	-	-	-	126	429
Mov Cap-2 Maneuver	-	-	-	-	126	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	437	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	30.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	877	-	-	-	181
HCM Lane V/C Ratio	0.012	-	-	-	0.21
HCM Control Delay (s)	9.2	0	-	-	30.1
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	75	641	10	15	583	30	5	0	15	15	5	80
Future Vol, veh/h	75	641	10	15	583	30	5	0	15	15	5	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	697	11	16	634	33	5	0	16	16	5	87

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	667	0	0	708	0	0	1596	1566	703	1558	1555	651
Stage 1	-	-	-	-	-	-	867	867	-	683	683	-
Stage 2	-	-	-	-	-	-	729	699	-	875	872	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	923	-	-	891	-	-	86	111	438	91	113	469
Stage 1	-	-	-	-	-	-	348	370	-	439	449	-
Stage 2	-	-	-	-	-	-	414	442	-	344	368	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	923	-	-	891	-	-	58	92	438	76	94	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	92	-	76	94	-
Stage 1	-	-	-	-	-	-	297	316	-	374	436	-
Stage 2	-	-	-	-	-	-	323	429	-	283	314	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.2	29.9	32.4
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	166	923	-	-	891	-	-	237
HCM Lane V/C Ratio	0.131	0.088	-	-	0.018	-	-	0.459
HCM Control Delay (s)	29.9	9.3	0	-	9.1	0	-	32.4
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0.1	-	-	2.2