TRAFFIC IMPACT STUDY

For

PN Restaurants
Proposed Popeye's Restaurant with Drive-Thru

Property Located at:

197 South Plank Road (NYS Route 52)
Parcel 60-3-6.1
Town of Newburgh, Orange County, NY

Prepared by:

DYNAMIC TRAFFIC

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INTRODUCTION

It is proposed to construct a Popeye's restaurant with drive-thru on a parcel of land currently developed with a Dairy Queen, located on the southwest corner of the intersection of Union Avenue (NYS Route 300) and South Plank Road (NYS Route 52) in the Town of Newburgh, Orange County, New York (see Figure 1 in Appendix A). The site is designated as Parcel 60 – 3 - 6.1 on the Town of Newburgh Tax Maps. The existing use consists of a building with a 2,342 SF Dairy Queen. It is proposed to raze the existing site and construct a 2,537 SF Popeye's Restaurant ("The Project"). The site is located within the Zone B – Business Zone. Access to the site is currently provided via an enter only driveway along South Plank Road (NYS Route 52) and a full movement driveway along Union Avenue (NYS Route 300). It is proposed to close the existing access points and provide access to the site via a new full movement driveway along Union Avenue (NYS Route 300) and a right-turn in/right-turn driveway along South Plank Road (NYS Route 52).

Dynamic Traffic LLC has been retained to prepare this study to assess the traffic impact associated with the construction of The Project on the adjacent roadway network. This study documents the methodology, analyses, findings and conclusions of our study and includes:

- A detailed field inspection was conducted to obtain an inventory of existing roadway geometry, traffic control, and location and geometry of existing driveways and intersections.

- Existing traffic data was collected via manual turning movement (MTM) counts during the weekday PM, and Saturday midday peak periods at the intersection of South Plank Road (NYS Route 52) and Union Avenue (NYS Route 300).

- Projections of traffic to be generated by the proposed development were prepared utilizing trip generation data as published by the Institute of Transportation Engineers. Site traffic was then assigned to the adjacent street system based upon the anticipated directional distribution.

- Capacity analyses were conducted for the Existing, No Build, and Build conditions for the study intersections.

- The proposed points of ingress and egress were inspected for adequacy of geometric design, spacing and/or alignment to streets and driveways on the opposite side of the street, relationship to other driveways adjacent to the development, and conformance with accepted design standards.

- The site plan as designed was reviewed for sufficiency in accommodating large wheel base vehicles such as delivery trucks, refuse trucks, and emergency vehicles.

- The parking layout and supply was assessed based on accepted design standards, local requirements, and demand experienced at similar developments.

EXISTING CONDITIONS

A review of the existing roadway conditions near the proposed site was conducted to provide the basis for assessing the traffic impact of the development. This included field investigations of the surrounding roadways and intersections, collection of traffic volume data, and extensive analyses.

Existing Roadway Conditions

The following are descriptions of the roadways in the study area:

Union Avenue (NYS Route 300) is an Urban Minor Arterial roadway under NYSDOT jurisdiction with a general north/south orientation. In the vicinity of the site the posted speed limit is 40 MPH and the roadway provides one travel lane in each direction with a two-way center left-turn lane south of the intersection with South Plank Road (NYS Route 52). On-street parking is not permitted. Curb and sidewalk are provided in the vicinity of the intersection with South Plank Road (NYS Route 52). Union Avenue (NYS Route 300) provides a straight horizontal alignment along the site frontage and a general downgrade from north to south. The land uses along Union Avenue (NYS Route 300) in the vicinity of The Project are primarily commercial.

South Plank Road (NYS Route 52) is an Urban Minor Arterial roadway under NYSDOT jurisdiction with a general east/west orientation. In the vicinity of the site the posted speed limit is 40 MPH and the roadway provides one travel lane in each direction. On-street parking is not permitted. Curb and sidewalk are provided in the vicinity of the intersection with Union Avenue (NYS Route 300). South Plank Road (NYS Route 52) provides a straight horizontal alignment along the site frontage and a relatively flat vertical alignment. The land uses along South Plank Road (NYS Route 52) in the vicinity of The Project are primarily commercial.

Existing Traffic Volumes

Manual turning movement (MTM) counts were conducted on Thursday, October 20, 2022 from 4:30 to 6:30 PM as well as on Saturday, October 22, 2022 from 11:00 AM to 2:00 PM at the intersection of South Plank Road (NYS Route 52) and Union Avenue (NYS Route 300).

Review of the collected traffic data reveals that the weekday evening PSH occurs between 4:45 - 5:45 PM and the Saturday PSH occurs between 12:30 PM - 1:30 PM. Figure 2, located in Appendix A, shows the existing peak hour traffic volumes at the study intersections. All traffic counts are contained in Appendix B.

Existing Capacity Analysis

The methodology utilized in the capacity analyses is described in the *Highway Capacity Manual*, published by the Transportation Research Board. In general, the term Level of Service (LOS) is used to provide a "qualitative" evaluation of capacity based upon certain "quantitative" calculations related to empirical values, such as traffic volume and intersection control.

At signalized intersections, factors that affect the various approach capacities include width of approach, number of lanes, signal "green time", turning percentages, truck volumes, etc. However, delays cannot be related to capacity in a simple one-to-one fashion. For example, it is possible to have delays in the Level of Service "F" range without exceeding roadway capacity. Substantial delays can exist without exceeding capacity if one or more of the following conditions exist: long signal cycle lengths; a particular traffic movement experiences a long red time; or progressive movement for a particular lane group is poor. Table I describes the level of service ranges for signalized intersections.

An unsignalized (STOP sign controlled) driveway or side street along a through route is seldom critical from an overall capacity standpoint, however, it may be of great significance to the capacity of the minor cross-route, and it may influence the quality of traffic flow on both. When analyzing an unsignalized intersection, it is assumed that both the major street through and right turn movements are unimpeded and have the right-of-way over all side street traffic and left turns from the major street. All other turning movements in the intersection cross, merge with, or are otherwise impeded by major street movements. Traffic delays at unsignalized intersections are determined by sequentially processing these impeded movements. Table II describes the level of service ranges for unsignalized (stop controlled) intersections.

Table I
Level of Service Criteria
for Signalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
A	0.0 to 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	greater than 80.0

Table II
Level of Service Criteria
for Unsignalized Intersections

Level of Service	Average Control Delay (seconds per vehicle)
a	0.0 to 10.0
b	10.1 to 15.0
c	15.1 to 25.0
d	25.1 to 35.0
e	35.1 to 50.0
f	greater than 50.0

It should be noted that the analyses within the *Highway Capacity Manual* assume a random arrival for all the movements, which may not be the case if an adjacent traffic signal is present that platoons vehicles, such as the signalized intersection of Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52).

All capacity analyses were performed utilizing Synchro 11 software. It should be noted that the existing percentage of trucks and peak hour factors were used in the existing analysis. Table III summarizes the existing levels of service (LOS) and delays. All capacity analysis calculation worksheets are contained in Appendix C.

Table III
Existing Levels of Service

Intersection	Direction/ Movement		PM PSH		SAT PSH	
			LOS	V/C	LOS	V/C
South Plank Road (NYS Route 52) & Union Avenue (NYS Route 300)	EB	LTR	E (62.5)	0.96	D (39.6)	0.79
	WB	LT	C (31.7)	0.63	C (29.8)	0.43
		R	A (9.3)	0.14	A (6.6)	0.14
	NB	L	C (30.5)	0.77	C (33.9)	0.76
		TR	C (32.3)	0.77	C (27.2)	0.68
	SB	L	B (15.2)	0.34	B (12.6)	0.25
		TR	D (36.1)	0.79	D (40.7)	0.86
	Overall		**D (37.6)**	**0.97**	**C (33.0)**	**0.86**

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

The following are discussions pertaining to each of the existing intersections analyzed.

Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)

South Plank Road (NYS Route 52) intersects Union Avenue (NYS Route 300) to form a four-leg intersection controlled by a traffic signal. The signal timing directive was obtained from NYS DOT which indicates that a three-phase cycle is utilized with a 115-second cycle length during both peak hours. The eastbound approach of South Plank Road (NYS Route 52) provides a shared left turn/through/right turn lane while the westbound approach provides a shared left turn/through lane and a dedicated right turn lane. The northbound and southbound approaches of Union Avenue (NYS Route 300) both provide a dedicated left turn lane and a shared through/right turn lane. The traffic signal permit plan and timing directive are contained in Appendix B.

A review of the existing analysis reveals that the intersection operates at levels of service "D" or better and all movements operate at levels of service "E" or better during the analyzed peak periods. See Table III for the individual movement levels of service and delays.

FUTURE CONDITIONS

Traffic volumes and operational analyses were developed for both the 2026 No Build and 2026 Build conditions. The No Build conditions provide a baseline for assessing the impact of the site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. A growth rate of 2.0% per year was applied to the study area intersections.

Through consultation with the Town of Newburgh Planning Board staff, there are eleven other developments in the vicinity of the site that have been approved but not yet constructed that are identified as potential significant traffic generators.

- A residential development consisting of 246 units known as the Polo Club, located at 1582 Union Avenue (NYS Route 300), has been approved and is currently under construction. Projections of the associated traffic volumes were developed utilizing data from *Traffic Impact Study*, prepared by Maser Consulting and dated December 9, 2019. It should be noted that this study only includes traffic projections for the weekday morning and evening peak hours. As such, traffic projections for the Saturday midday peak hour were developed utilizing the Institute of Transportation Engineers' (ITE) Land Use Code (LUC) 220 – Multi-Family Housing. The Adjacent Development Traffic Volumes are shown on Figure 3.

- A development consisting of a 290,000 SF warehouse, located along South Plank Road (NYS Route 52) just north of Jeanne Drive, has been approved but not yet constructed. Projections of the associated traffic volumes were developed utilizing data from *Traffic Study*, prepared by JMC Project 18156 and dated December 3, 2020. It should be noted that this study only includes traffic projections for the weekday morning and evening peak hours. As such, traffic projections for the Saturday midday peak hour were developed utilizing the Institute of Transportation Engineers' (ITE) Land Use Code (LUC) 150 – Warehousing. The Adjacent Development Traffic Volumes are shown on Figure 4.

- A development consisting of a 100-unit senior adult housing facility and a 3,150 SF bank known as Monarch Woods, located at 25 Monarch Drive, has been approved but not yet constructed. Projections of the associated traffic volumes were developed by utilizing the Institute of Transportation Engineers' (ITE) Land Use Code (LUC) 252 – Senior Adult Housing and LUC 912 – Drive-In Bank. The Adjacent Development Traffic Volumes are shown on Figure 5.

- A development consisting of two warehouse buildings totaling 1,142,200 SF known as Matrix Logistics Center, located opposite the Newburgh Mall, has been approved and is currently under construction. Projections of the associated traffic volumes were developed utilizing data published within the *Traffic Impact Study*, prepared by Langan Engineering and dated May 14, 2021. It should be noted that this study only includes traffic projections for the weekday morning and evening peak hours. As such, traffic projections for the Saturday midday peak hour were developed utilizing the Institute of Transportation Engineers' (ITE) Land Use Code (LUC) 150 – Warehousing. The Adjacent Development Traffic Volumes are shown on Figure 6.

- A residential development consisting of 246 apartments known as The Enclave, located at 1565 Union Avenue (NYS Route 300), has been approved and not yet constructed. Projections of the associated traffic volumes were developed using ITE LUC 220 – Multifamily Housing. The Adjacent Development Traffic Volumes are shown on Figure 7.

- A development known as Resorts World Casino, located within the Newburgh Mall, has been approved and opened. Projections of the associated traffic volumes were developed utilizing data published within a memo by Maser Consulting dated February 12, 2021. Traffic projections for the weekday PM peak hour and Saturday peak hour were developed utilizing the traffic generation as shown in the aforementioned memo through ITE LUC 473 – Casino/Video Lottery Establishment. The Adjacent Development Traffic Volumes are shown on Figure 8.

- A development consisting of a 20,000 SF office and retail known as MJKC, located off of NYS Route 32 has been approved but not yet constructed. Projections of the associated traffic volumes were developed using ITE LUC 822 – Strip Retail Plaza (<40K). The Adjacent Traffic Volumes are shown on Figure 9.

- A development consisting of a 173,000 SF warehouse known as MKJ Park Warehouse, located off of NYS Route 32, has been approved but not yet constructed. Projections of the associated traffic volumes were developed using data published within the *Traffic Impact Study*, prepared by Colliers Engineering & Design, dated April 6, 2023. It should be noted that this study only includes traffic projections for the weekday morning and evening peak hours. As such, traffic projections for the Saturday midday peak hour were developed using ITE LUC 150 – Warehouse. The Adjacent Development Traffic Volumes are shown in Figure 10.

- A development consisting of a 56,000 SF warehouse known as Fabulous Events, located along NYS Route 32, has been approved but not yet constructed. Projections of the associated traffic volumes were developed using data published within the *Traffic Impact Study*, prepared by Colliers Engineering & Design, dated May 26, 2023. It should be noted that this study only includes traffic projections for the weekday morning and evening peak hours. As such, traffic projections for the Saturday midday peak hour were developed using ITE LUC 150 – Warehouse. The Adjacent Development Traffic Volumes are shown in Figure 11.

- A development consisting of a 3,515 SF clinic known as WellNow, located at 1425 Route 300, has been constructed but not yet filled. Projections of the associated traffic volumes were developed using ITE LUC 720 – Medical-Dental Office Building – Stand Alone. The Adjacent Traffic Volumes are shown on Figure 12.

- A development consisting of an 85,000 SF self-storage known as SAM Newburgh, located at 1420 Route 300, is still under review. Projections of the associated traffic volumes were developed using ITE LUC 151 – Mini-Warehouse. The Adjacent Traffic Volumes are shown on Figure 13.

Future No Build traffic volumes were developed by applying the background growth rate of 2.0% for two (2) years to the study area roadways existing traffic volumes. Figure 14, in Appendix A, shows the No Build traffic volumes.

Traffic Generation

Trip generation projections for The Project were prepared utilizing trip generation research data as published under Land Use Code 934 – Fast-Food Restaurant with Drive-Through Window in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, 11th Edition.* This publication sets forth trip generation rates based on empirical traffic count data conducted at numerous research sites.

According to studies conducted by ITE, traffic associated with LUC 934 is not 100% newly generated. Rather, a portion of the traffic is diverted from the existing traffic stream on the adjacent roadway network. This is because the Popeye's is not exclusively a destination land use, instead patrons stop on their way to/from other locations such as home or work. ITE identifies a 55% passby traffic percentage, and was used during the evening peak hour. It should be noted that there will be passby traffic during the Saturday midday peak period and this passby rate was set at 50%, consistent with the weekday morning peak hour. Table IV below details the traffic volumes associated with the subject project taking into account internal capture and the passby credits.

Table IV
Trip Generation Considering Passby Traffic

Land Use	Trip Type	PM PSH			SAT PSH		
		In	Out	Total	In	Out	Total
2,537 SF Fast-Food Restaurant with Drive-Through Window	Total	44	40	84	71	69	140
	Passby	24	22	46	36	34	70
	New (Primary)	**20**	**18**	**38**	**35**	**35**	**70**

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of new traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Figures 15-19, located in Appendix A, illustrate the Primary Traffic Trip Distribution, Primary Site Generated Volumes, Passby Traffic Trip Distribution, Passby Site Generated Volumes, and the Total Site Generated Volumes, respectively. The Total Site Generated Volumes assigned to the study area network were added to the No Build traffic volumes to generate the Build traffic volumes, which are shown in Figure 20.

Trip Generation Comparison

As previously noted, the site is currently occupied by a Dairy Queen which has an existing trip generation. As counts were not conducted at the existing Dairy Queen driveways, trip generation research data as published under Land Use Code 934 – Fast-Food Restaurant with Drive-Through Window in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, 11th Edition* was utilized. Table V below provides a comparison between the trips associated with the existing site and the trips projected for the proposed redevelopment.

Table V
Existing vs. Proposed Trip Generation Comparison

Land Use	PM PSH			SAT PSH		
	In	Out	Total	In	Out	Total
Fast-Food Restaurant with Drive-Through Window – Dairy Queen *(Existing)*	40	37	77	66	63	129
Fast-Food Restaurant with Drive-Through Window – Popeye's *(Proposed)*	44	40	84	71	69	140
Difference	**+4**	**+3**	**+7**	**+5**	**+6**	**+11**

As shown in the table above, it is anticipated that 7 additional trips during the weekday evening peak hour and 11 additional trips during the Saturday midday peak hour are anticipated to access the site from the adjacent roadway network with the proposed redevelopment.

Future Capacity Analysis

Operational conditions at the study intersections were analyzed under the No Build and Build conditions and are summarized in Table VI below.

Table VI
Future Levels of Service

Intersection	Direction/ Movement		PM PSH						SAT PSH					
			No Build		Build		Build w/ Mit.		No Build		Build		Build w/ Mit.	
			LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C
South Plank Road (NYS Route 52) & Union Avenue (NYS Route 300)	EB	LTR	F (412.4)	1.83	F (443.5)	1.90	F (419.4)	1.85	F (156.2)	1.23	F (177.3)	1.28	F (158.6)	1.24
	WB	LT	D (54.5)	0.86	E (65.6)	0.93	E (62.5)	0.91	D (40.6)	0.61	D (46.3)	0.70	D (43.9)	0.67
		R	B (11.6)	0.21	B (11.8)	0.21	B (11.4)	0.21	A (6.2)	0.20	A (6.2)	0.20	A (5.9)	0.20
	NB	L	F (96.7)	1.06	F (110.1)	1.10	F (110.6)	1.10	F (137.5)	1.15	F (165.5)	1.23	F (147.3)	1.18
		TR	D (43.2)	0.91	D (43.4)	0.91	D (45.4)	0.92	C (32.5)	.080	C (32.6)	0.80	C (34.7)	0.81
	SB	L	C (23.1)	0.52	C (23.4)	0.52	C (23.3)	0.52	B (18.2)	0.47	B (18.2)	0.47	C (20.8)	0.49
		TR	D (39.6)	0.86	D (39.8)	0.87	D (43.5)	0.89	D (47.5)	0.93	D (47.9)	0.93	D (53.9)	0.95
	Overall		**F (118.8)**	**1.84**	**F (127.9)**	**1.90**	**F (124.2)**	**1.85**	**E (70.1)**	**1.24**	**E (78.1)**	**1.29**	**E (74.6)**	**1.24**
Union Avenue (NYS Route 300) & Site Driveway	EB	LR	-	-	c (25.1)	0.163	-	-	-	-	d (28.8)	0.287	-	-
	NB	LT	-	-	a (10.0)	0.025	-	-	-	-	b (10.5)	0.045	-	-
	Overall		**-**	**-**	**a (0.5)**	**-**	**-**	**-**	**-**	**-**	**a (1.0)**	**-**	**-**	**-**
South Plank Road (NYS Route 52) & Site Driveway	NB	R	-	-	b (12.5)	0.017	-	-	-	-	b (11.9)	0.023	-	-
	Overall		**-**	**-**	**a (0.1)**	**-**	**-**	**-**	**-**	**-**	**a (0.1)**	**-**	**-**	**-**

a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)
A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)

South Plank Road (NYS Route 52) & Union Avenue (NYS Route 300)

With the addition of site generated traffic, the intersection is anticipated to operate at overall intersection No Build levels of service "F" during the analyzed peak hours. Additionally, each movement is anticipated to operate at No Build levels of service.

Revised signal timings were investigated based on the new traffic volumes for both peak hours. Specifically, the reallocation of one (1) second from the northbound/southbound ROW (phase 1 and 5) to the northbound/southbound lead lefts (phase 2 and 6), in addition to one (1) second from the northbound/southbound ROW (phase 1 and 5) to the eastbound/westbound ROW (phase 3) is recommended during the weekday evening peak hour. Additionally, the reallocation of one (1) second from the northbound/southbound ROW (phase 1 and 5) to the northbound /southbound lead lefts (phase 2 and 6), in addition to two (2) seconds from the northbound/southbound ROW (phase 1 and 5) to the eastbound/westbound ROW (phase 3) is recommended during the Saturday peak hour. It should be noted that with these signal timing modifications, the intersection anticipated to operate at similar or better than No Build levels of service. See Table VI for the individual movement levels of service and delays.

Union Avenue (NYS Route 300) & Site Driveway

The site driveway is proposed to intersect Union Avenue (NYS Route 300) to form an unsignalized T-intersection with the eastbound approach of the site driveway operating under stop control. The eastbound approach of the site driveway is proposed to provide a shared left turn/right turn lane. The northbound approach of Union Avenue (NYS Route 300) is proposed to provide a dedicated left turn lane via the existing two-way center left-turn lane and a dedicated through lane. The southbound approach of Union Avenue (NYS Route 300) is proposed to provide a shared through/right turn lane. As designed, the driveway is anticipated to operate at levels of service "D" or better during the studied peak hours. See Table VI for the individual movement levels of service and delays.

South Plank Road (NYS Route 52) & Site Driveway

The site driveway is proposed to intersect South Plank Road (NYS Route 52) to form an unsignalized T-intersection with the northbound approach of the site driveway operating under stop control. The eastbound approach of South Plank Road (NYS Route 52) is proposed to provide a shared through/right turn lane. The westbound approach of South Plank Road (NYS Route 52) is proposed to provide a dedicated through lane. The northbound approach of the site driveway is proposed to provide a dedicated right turn lane.

As designed, the driveway is anticipated to operate at levels of service "B" during the studied peak hours. See Table VI for the individual movement levels of service and delays.

SITE PLAN

Site Access and Circulation

The site plan was reviewed with respect to the site access and on-site circulation design. As noted previously, access to The Project will be provided via a new full movement driveway along Union Avenue (NYS Route 300) and a new full movement driveway along South Plank Road (NYS Route 52).

The parking lot will be serviced by parking aisles with widths of 18', which will allow for one way circulation and 60 degree parking.

The drive-thru lanes will operate in a counter clockwise direction with the ability to stack fourteen (14) cars in the drive-thru lane. Drive-thru counts conducted by this firm for three Popeye's locations in New Jersey found an average maximum queue length of eight (8) vehicles within the drive-thru and a maximum queue length of ten (10) vehicles. Therefore, the proposed drive-thru design will provide adequate stacking for the maximum anticipated demand. A bypass lane is also be provided to ensure adequate and efficient circulation and to ensure that drive-thru queues do not impact on site circulation for patrons who park and walk in to the restaurant.

Parking

The Town of Newburgh Ordinance sets forth a parking requirement of 1 parking space per 4 seats for restaurants and fast food establishments. The Ordinance also states a requirement of 1 space per 40 SF. This equates to a parking requirement of 6 spaces for the proposed 24-seat Popeye's restaurant. The site as proposed provides 22 spaces and as such, the Ordinance requirement is met.

An Operational Characteristics Study has been conducted by Dynamic Traffic for Popeye's sites which identified a maximum parking demand of 6.48 spaces per 1,000 SF, and equates to a parking demand of 16 spaces for the proposed 2,537 SF Popeye's (inclusive of employees). Consequently, the proposed 22 parking spaces will be sufficient to support the anticipated demand of the project.

It is proposed to provide parking stalls with dimensions of 9'x18', which satisfy the Ordinance minimum requirement of 9'x18'.

FINDINGS & CONCLUSIONS

Findings

Based upon the detailed analyses as documented herein, the following findings are noted:

- The proposed 2,537 SF Popeye's Restaurant is projected to generate 20 entering trips and 18 exiting trips during the evening peak hour, and 35 entering trips and 35 exiting trips during the Saturday peak hour that are "new" to the adjacent roadway network.

- Access to the site is proposed to be provided via a right-turn in/right-turn out driveway along South Plank Road (NYS Route 52) and a new full movement driveway along Union Avenue (NYS Route 300).

- With the addition of site generated traffic and proposed signal retiming, the intersection of Union Avenue (NYS Route 300) and South Plank Road (NYS Route 52) is anticipated to operate at overall No Build intersection level of service "F" during the peak hours studied.

- As designed, the intersection of Union Avenue (NYS Route 300) and the site driveway is anticipated to operate at levels of service "D" or better during the peak hours studied.

- As designed, the intersection of South Plank Road (NYS Route 52) and the site driveway is anticipated to operate at levels of service "B" during the peak hours studied.

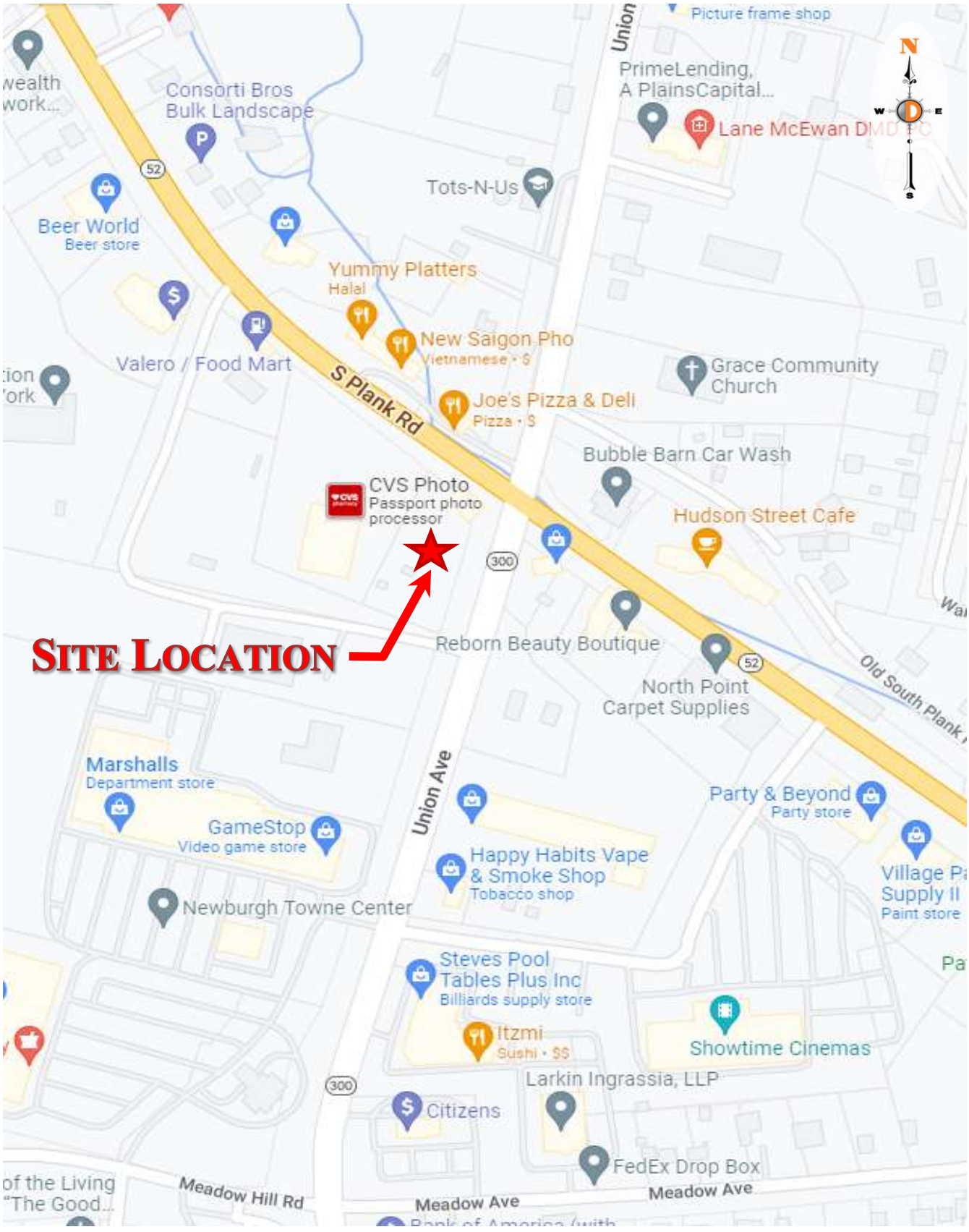
- As proposed, The Project's site driveways and internal circulation have been designed to provide for safe and efficient movement of automobiles and large wheel base vehicles.

- The proposed parking supply and design is sufficient to support the projected demand and satisfies the Ordinance requirements.

Conclusions

Based upon our Traffic Impact Study as detailed in the body of this report, it is the professional opinion of Dynamic Traffic LLC that the adjacent street system of the Town of Newburgh and NYSDOT will not experience any significant degradation in operating conditions with the construction of The Project. The site driveways are located to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for good circulation throughout the site and provides adequate parking to accommodate The Project's needs.

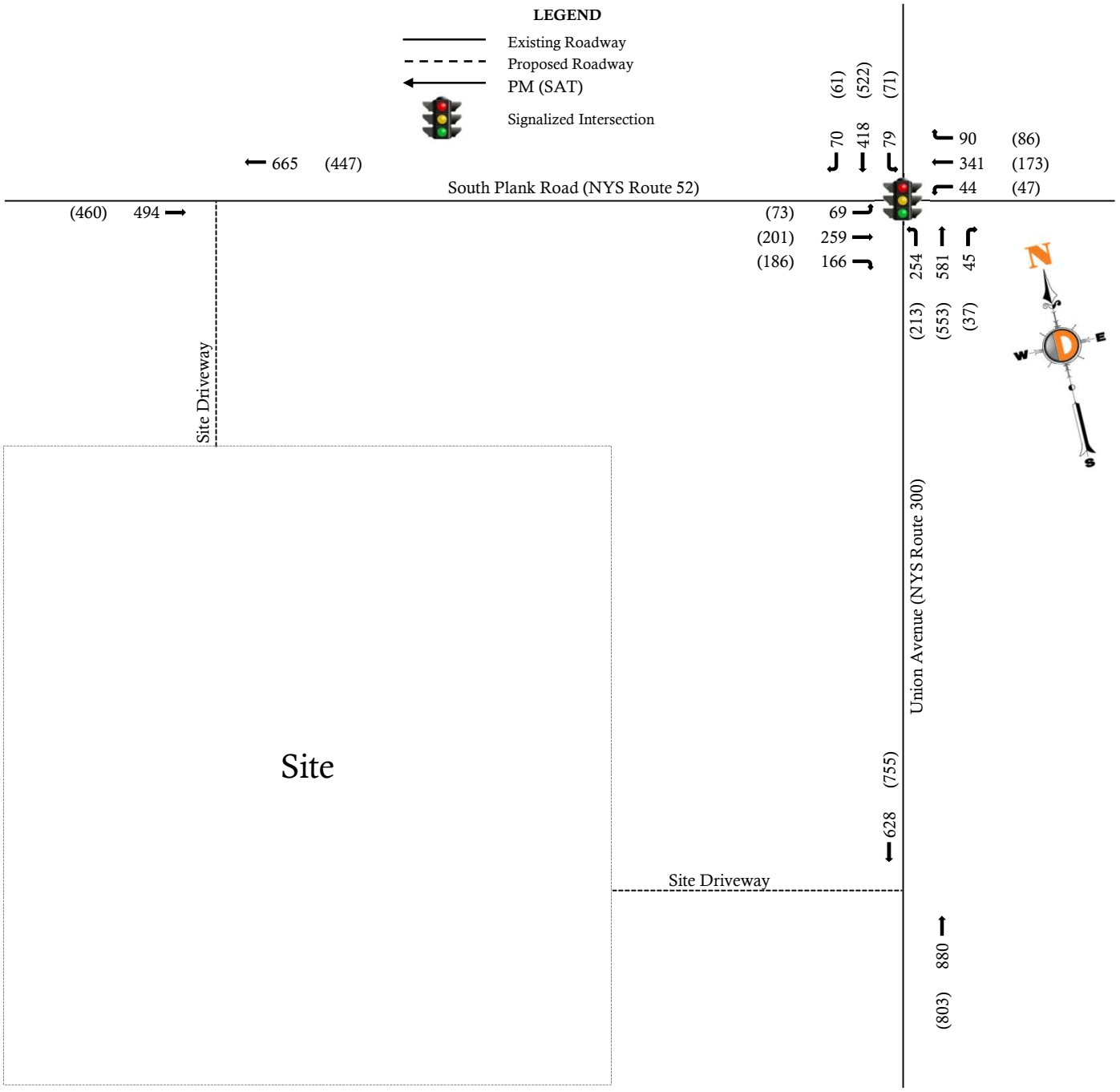
Appendix A
Traffic Volume Figures



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 1

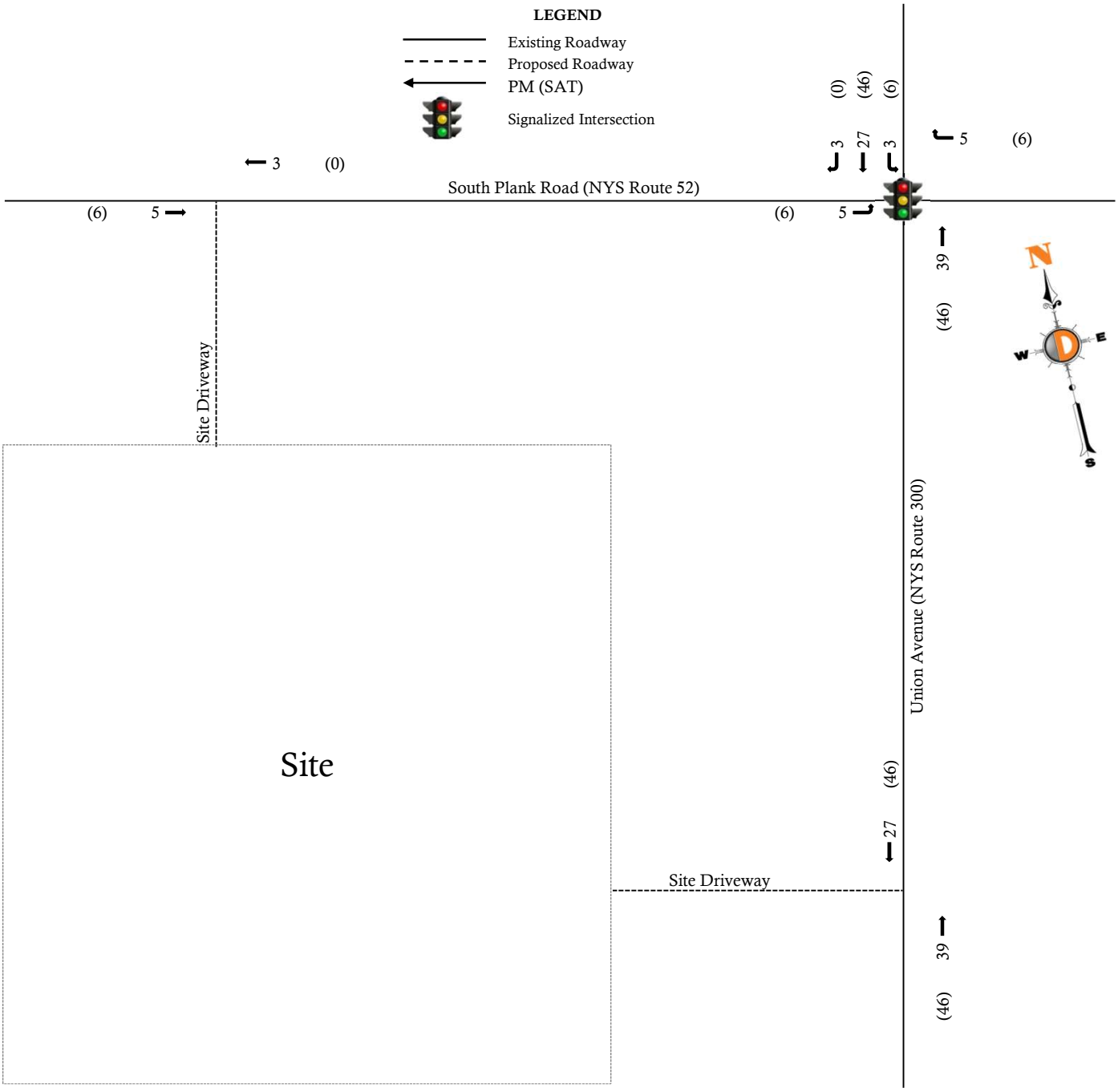
Site Location Map



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 2

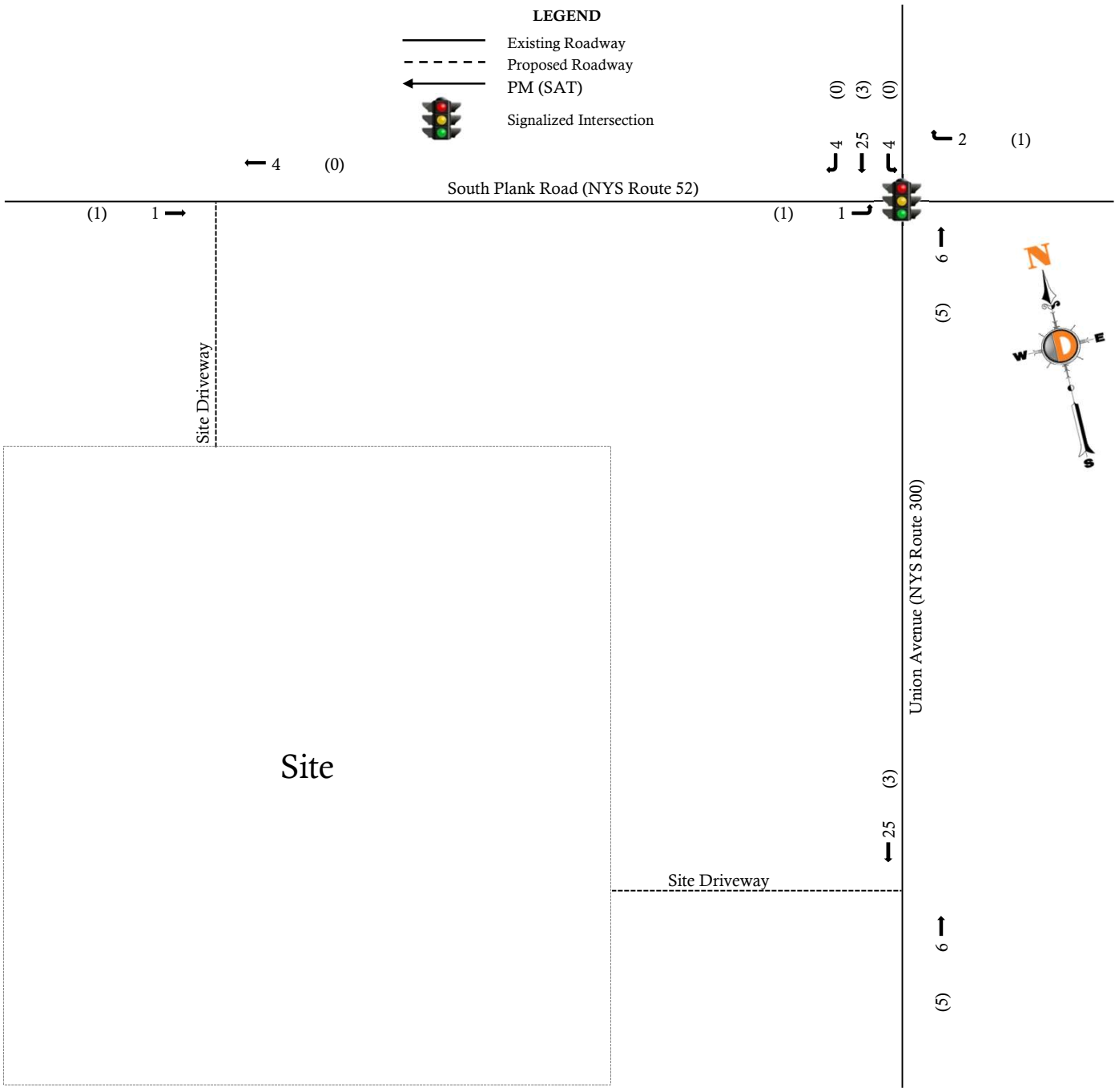
Existing Traffic Volumes



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 3

Adjacent Development Traffic Volumes
[The Polo Club - 1582 Route 300]



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 4

Adjacent Development Traffic Volumes [Farrell Industrial Park]

Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

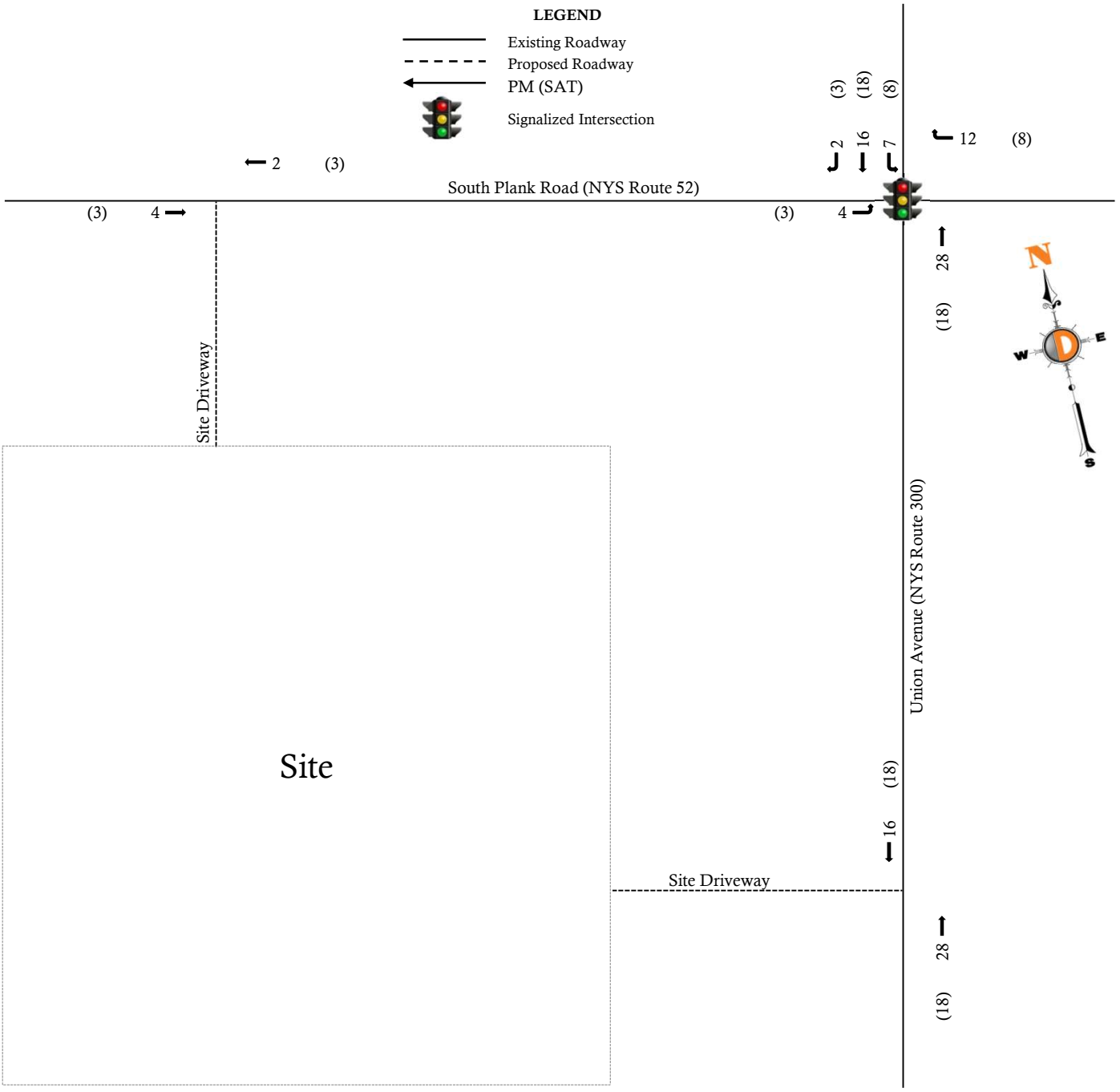
Figure 5

Adjacent Development Traffic Volumes
[Monarch Woods - 25 Monarch Dr]

Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 6

Adjacent Development Traffic Volumes
[Matrix Logistics Center - Opposite Newburgh Mall]



Proposed Popeye's Development
Traffic Impact Study
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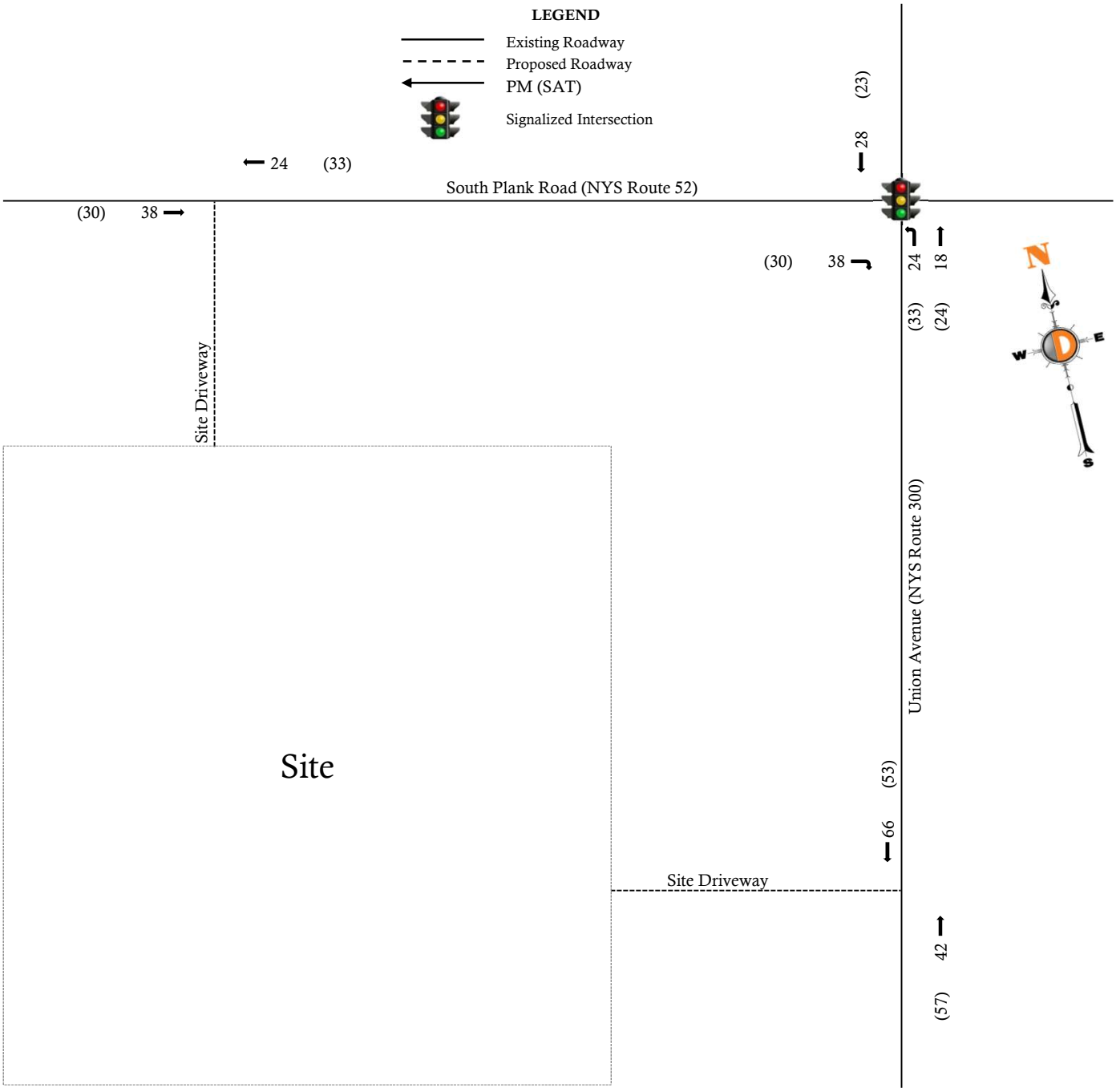
Figure 7

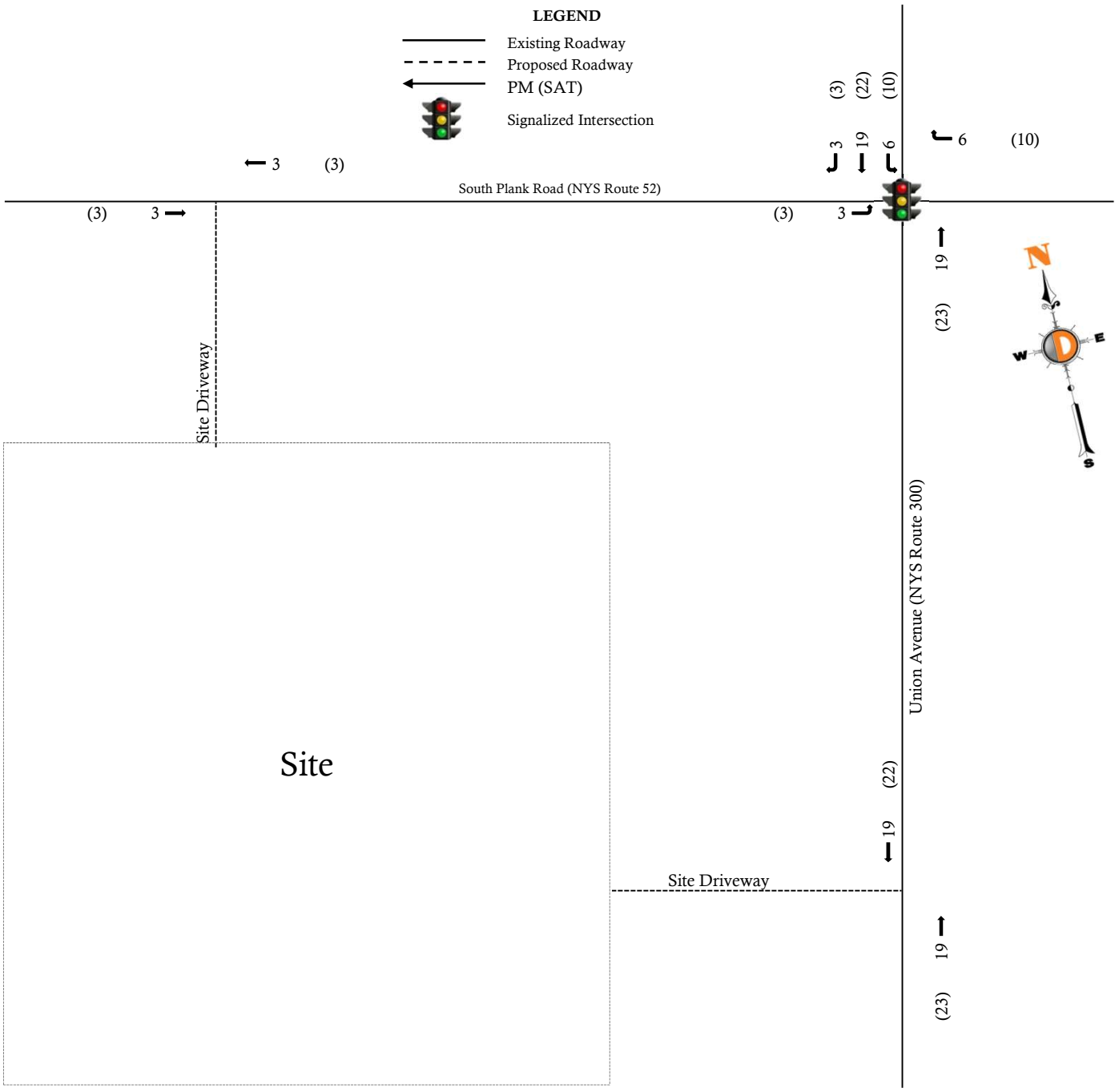
Adjacent Development Traffic Volumes
[The Enclave - 1565 Route 300]



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 8

Adjacent Development Traffic Volumes
[Resorts World Casino - Newburgh Mall]



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 9

Adjacent Development Traffic Volume [MJKC - Office/Retail]

Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

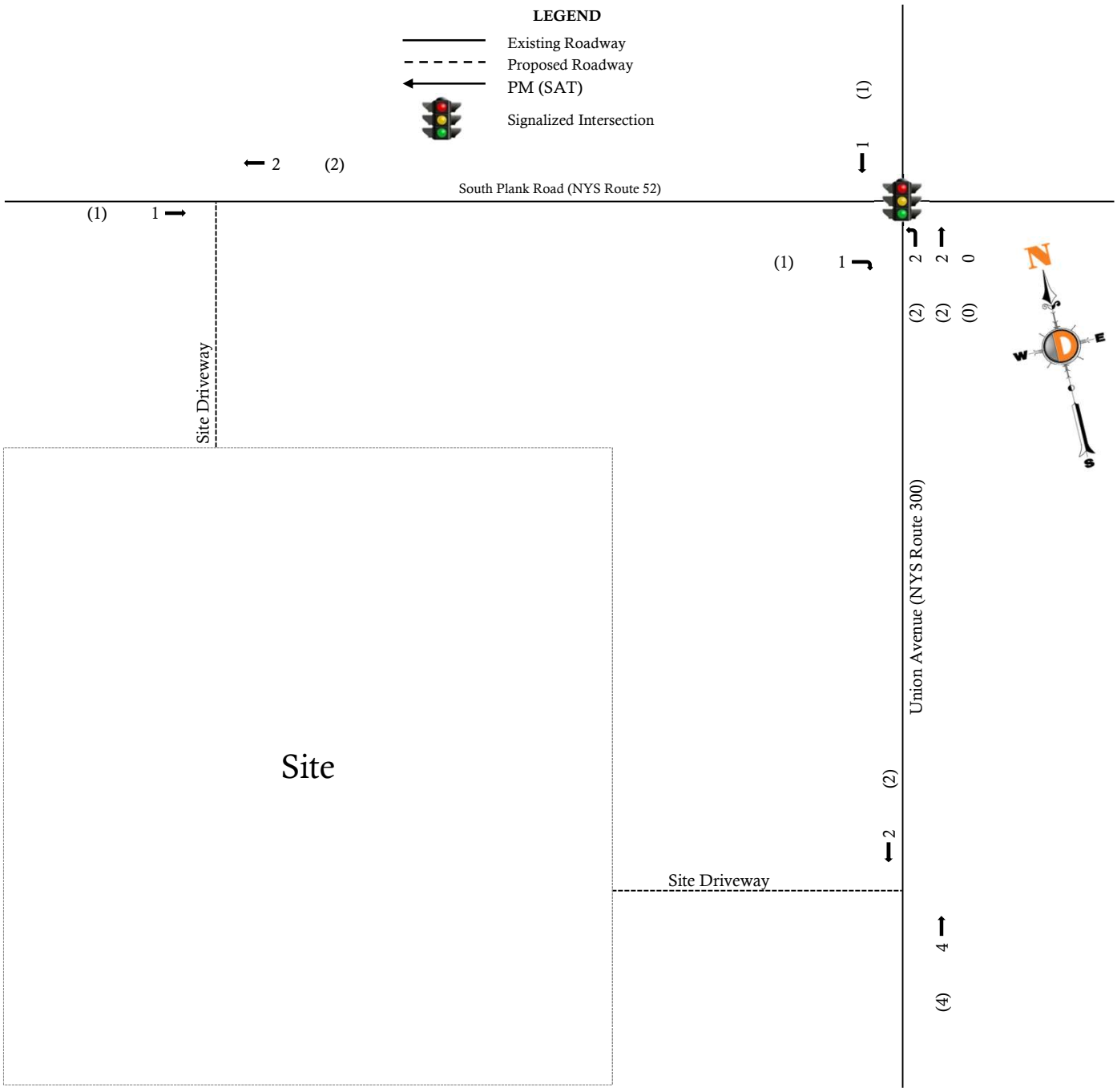
Figure 10

Adjacent Development Traffic Volumes [MKJ Park Warehouse]

Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 11

Adjacent Development Traffic Volume [Fabulous Events - Warehouse]



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

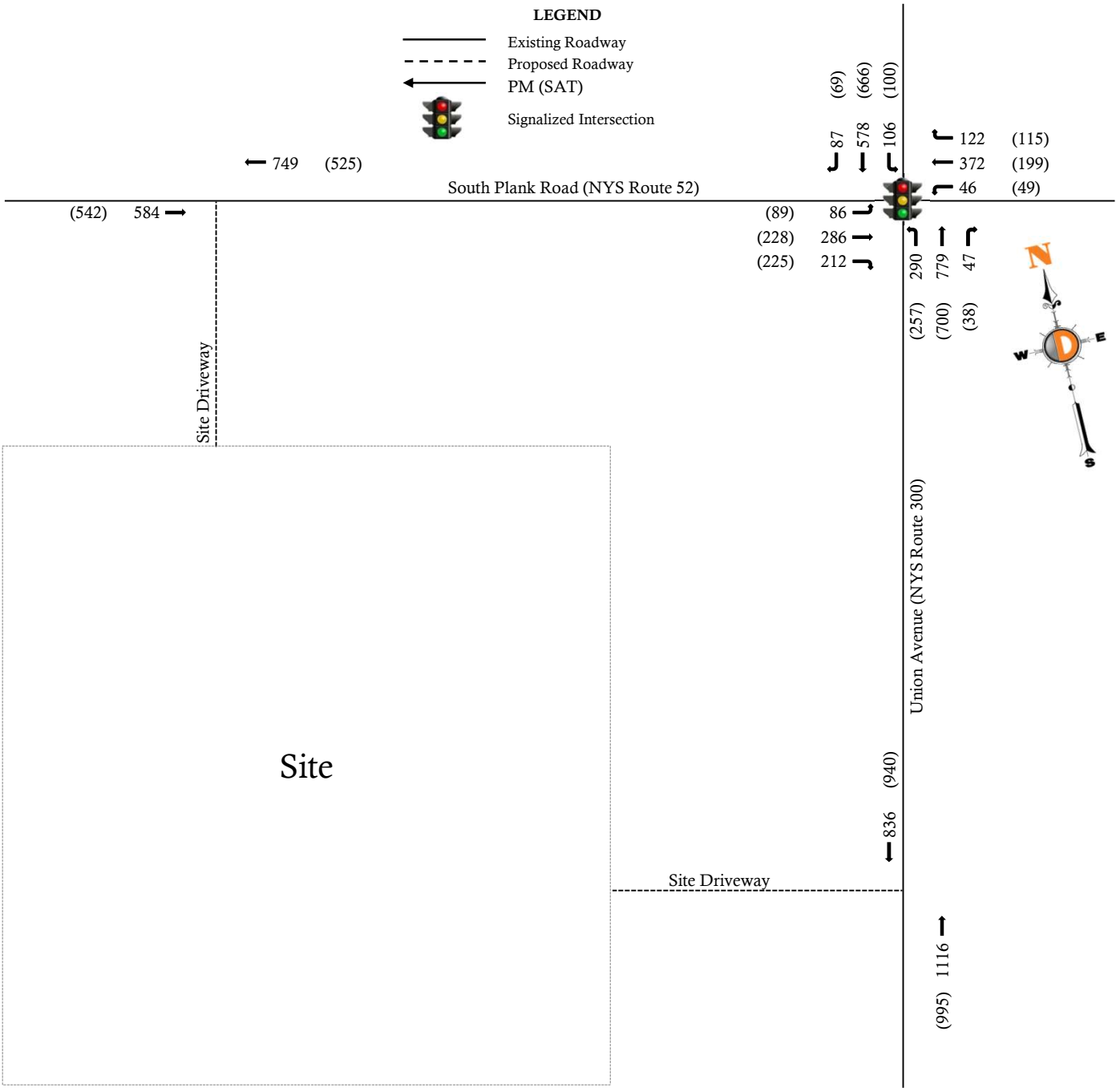
Figure 12

Adjacent Development Traffic Volume [WellNow]

Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 13

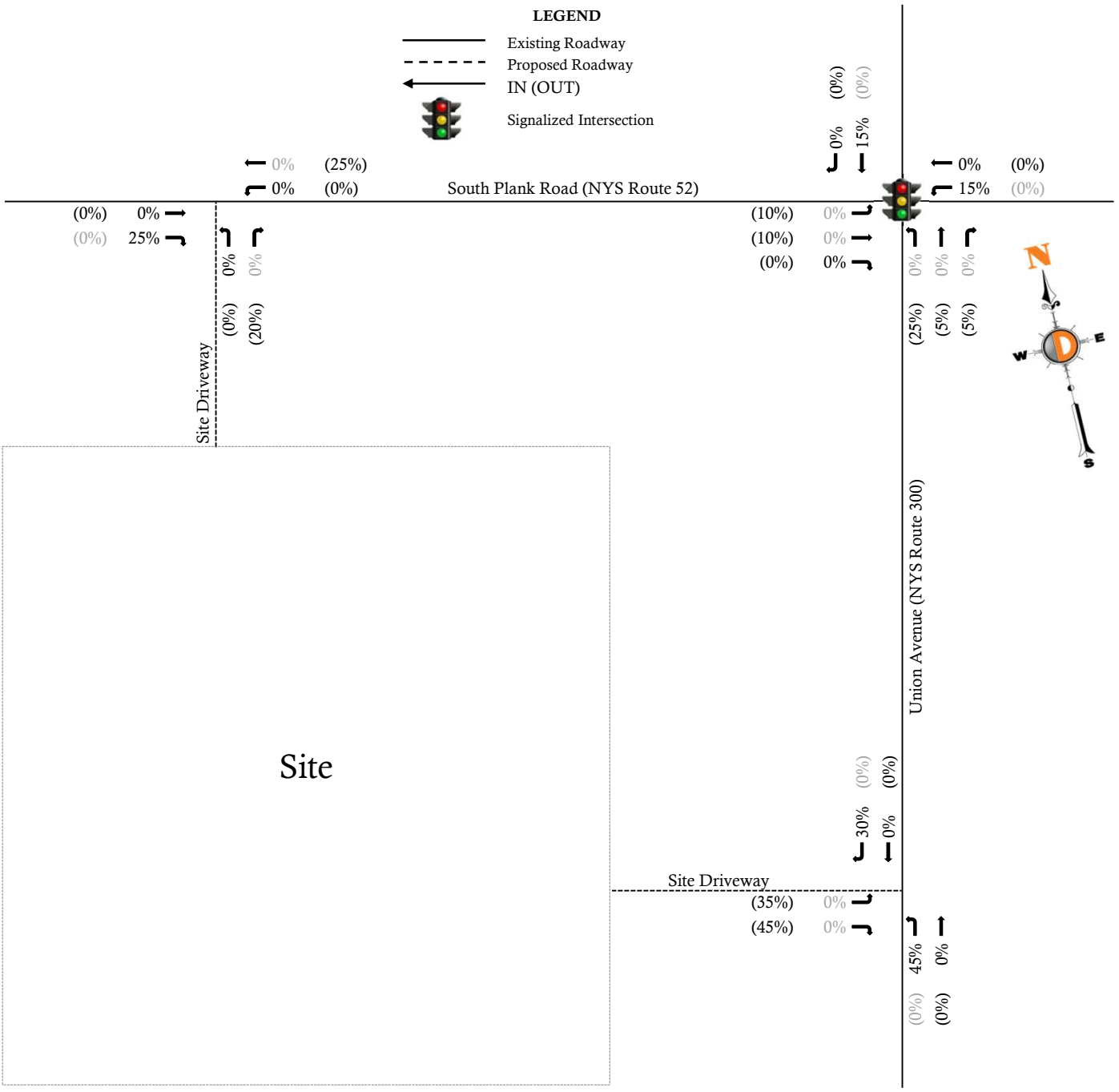
Adjacent Development Traffic Volume [SAM Newburgh]



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 14

No Build Traffic Volumes



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

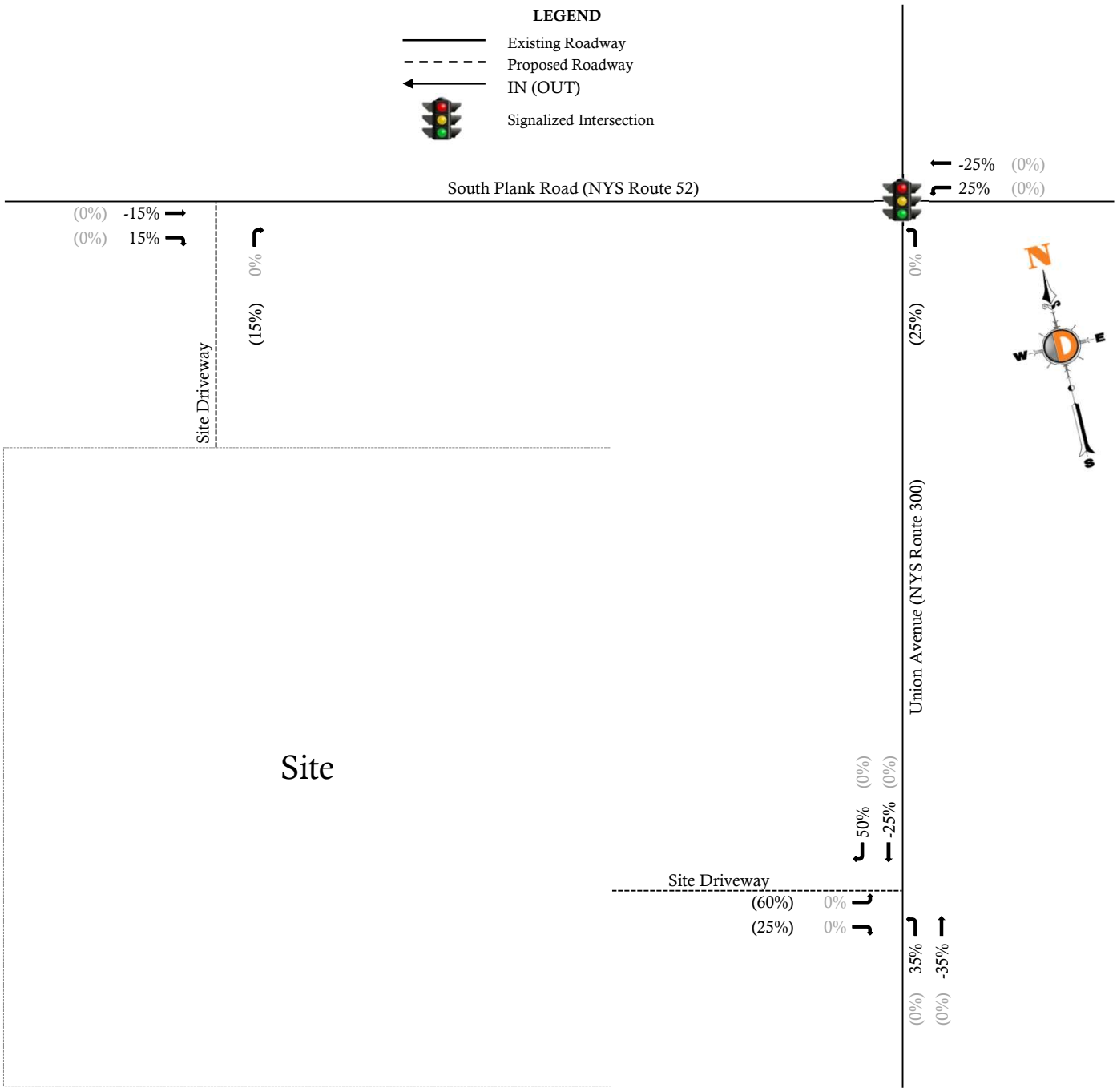
Figure 15

Percent Distribution (Primary Trips)

Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 16

Primary Site Generated Trips



Proposed Popeye's Development
Traffic Impact Study
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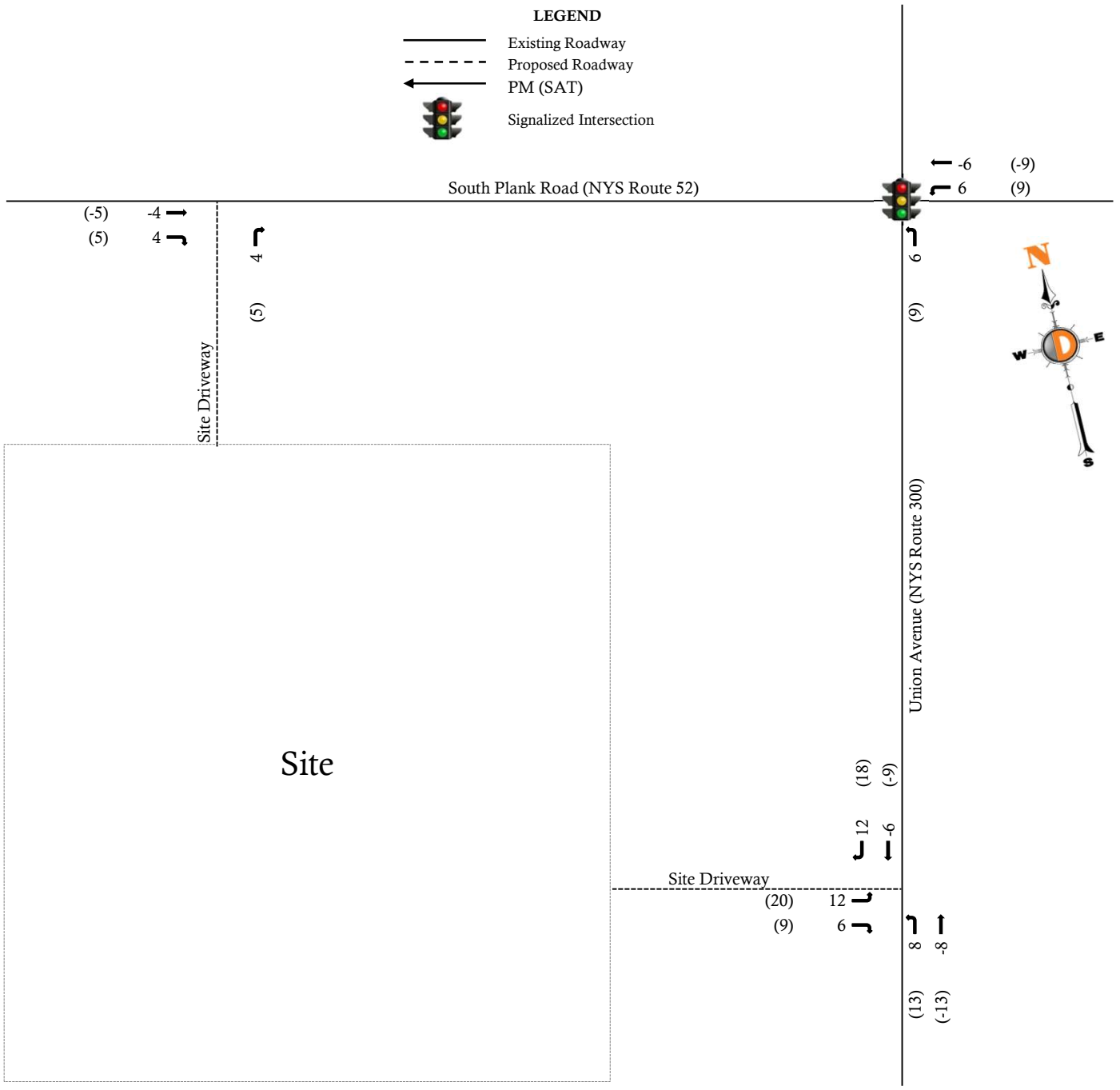
Figure 17

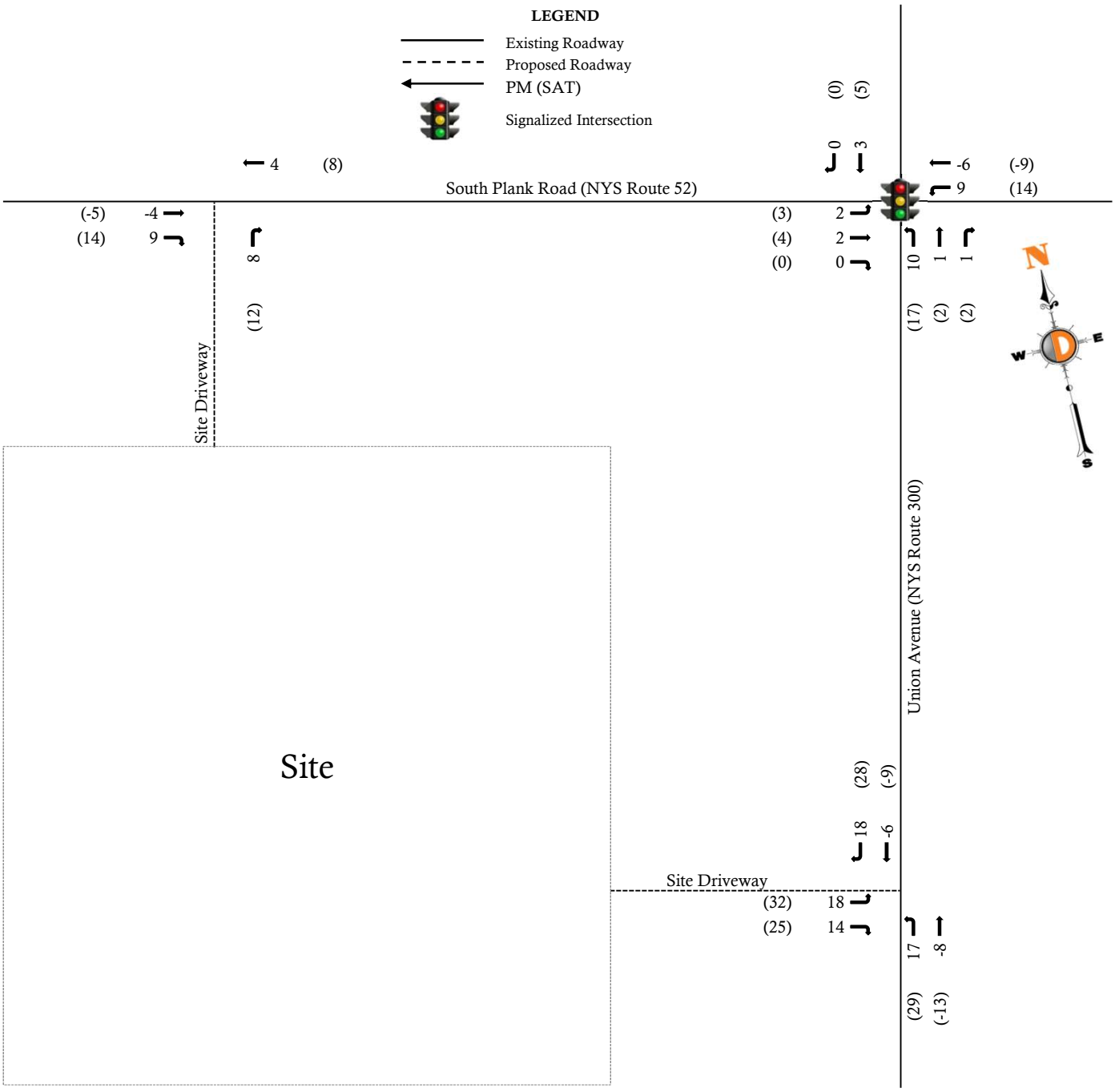
Percent Distribution (Passby Trips)



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 18

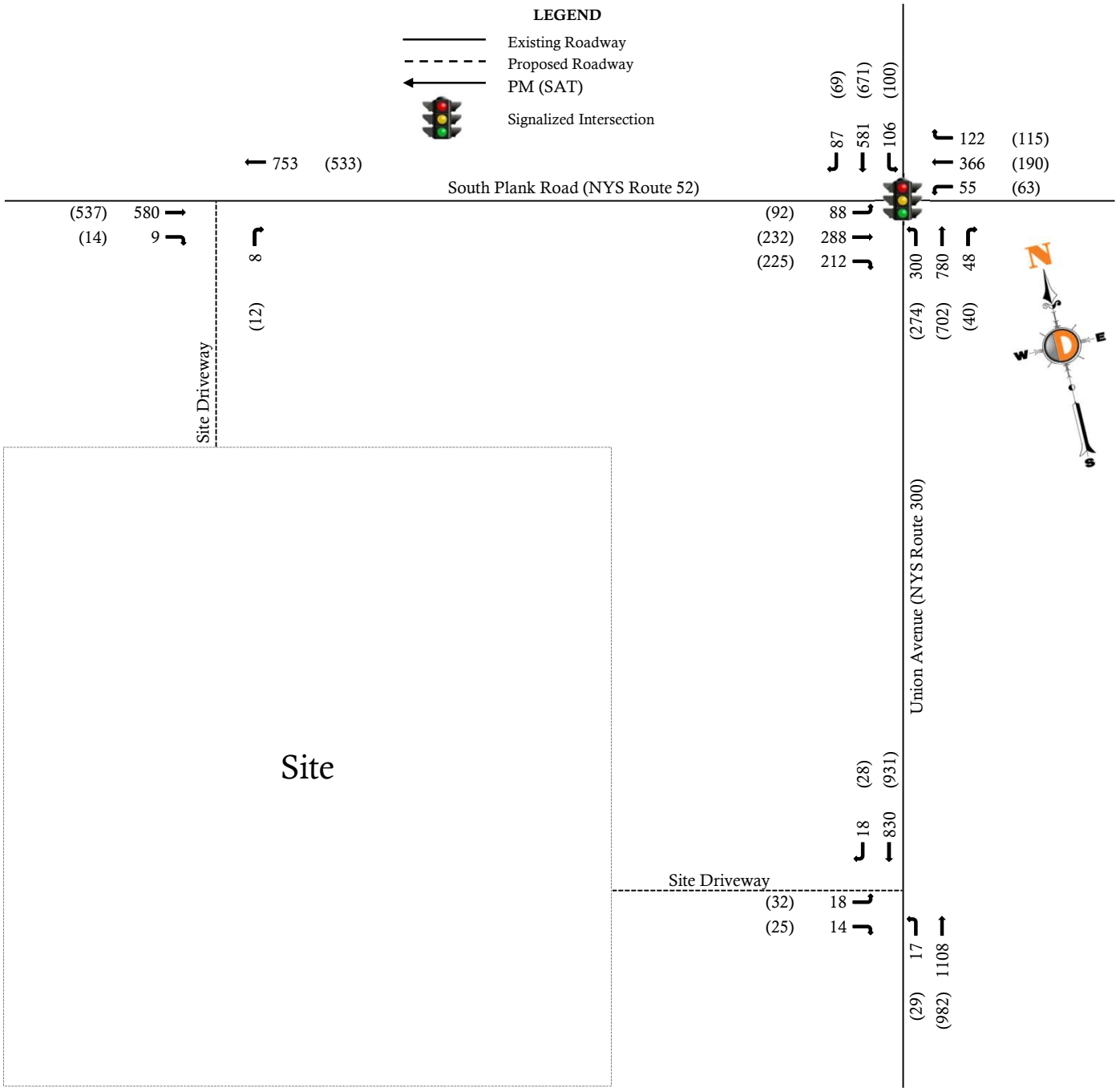
Passby Site Generated Trips



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 19

Total Site Generated Trips



Proposed Popeye's Development
Traffic Impact Study
1021-22-01537

Figure 20

Build Traffic Volumes

Appendix B
Project Information

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite #110, Chester, NJ 07930
732-681-0760

E/W: South Plank Rd
N/S: Union Ave
Town/County: Newburgh/Orange
Job #: 1021-22-01537

File Name : South Plank Rd & Union Ave - PM
Site Code : 00000000
Start Date : 10/20/2022
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

	South Plank Road Eastbound					South Plank Road Westbound					Union Avenue Northbound					Union Avenue Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:30 PM	22	59	30	0	111	12	86	23	0	121	60	122	8	0	190	19	111	30	0	160	582
04:45 PM	17	50	40	0	107	11	91	30	0	132	61	137	11	0	209	22	120	23	0	165	613
Total	39	109	70	0	218	23	177	53	0	253	121	259	19	0	399	41	231	53	0	325	1195
05:00 PM	17	78	39	0	134	16	100	27	1	144	49	132	15	0	196	16	97	14	0	127	601
05:15 PM	11	68	47	0	126	9	71	14	0	94	65	172	6	0	243	19	109	14	0	142	605
05:30 PM	24	63	40	0	127	8	79	19	0	106	79	140	13	0	232	22	92	20	0	134	599
05:45 PM	15	54	37	0	106	5	72	21	0	98	52	123	22	0	197	22	117	24	0	163	564
Total	67	263	163	0	493	38	322	81	1	442	245	567	56	0	868	79	415	72	0	566	2369
06:00 PM	9	57	31	0	97	8	63	12	0	83	66	133	12	0	211	14	110	14	0	138	529
06:15 PM	15	44	28	0	87	7	70	18	0	95	59	119	14	0	192	20	97	18	0	135	509
Grand Total	130	473	292	0	895	76	632	164	1	873	491	1078	101	0	1670	154	853	157	0	1164	4602
Apprch %	14.5	52.8	32.6	0		8.7	72.4	18.8	0.1		29.4	64.6	6	0		13.2	73.3	13.5	0		
Total %	2.8	10.3	6.3	0	19.4	1.7	13.7	3.6	0	19	10.7	23.4	2.2	0	36.3	3.3	18.5	3.4	0	25.3	
Cars	129	462	286	0	877	74	626	161	1	862	483	1065	100	0	1648	150	842	152	0	1144	4531
% Cars	99.2	97.7	97.9	0	98	97.4	99.1	98.2	100	98.7	98.4	98.8	99	0	98.7	97.4	98.7	96.8	0	98.3	98.5
Trucks (SU)	1	11	3	0	15	2	5	2	0	9	3	11	1	0	15	2	9	4	0	15	54
% Trucks (SU)	0.8	2.3	1	0	1.7	2.6	0.8	1.2	0	1	0.6	1	1	0	0.9	1.3	1.1	2.5	0	1.3	1.2
Trucks (TT)	0	0	3	0	3	0	1	1	0	2	5	2	0	0	7	2	2	1	0	5	17
% Trucks (TT)	0	0	1	0	0.3	0	0.2	0.6	0	0.2	1	0.2	0	0	0.4	1.3	0.2	0.6	0	0.4	0.4

	South Plank Road Eastbound					South Plank Road Westbound					Union Avenue Northbound					Union Avenue Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	17	50	40	0	107	11	91	30	0	132	61	137	11	0	209	22	120	23	0	165	613
05:00 PM	17	78	39	0	134	16	100	27	1	144	49	132	15	0	196	16	97	14	0	127	601
05:15 PM	11	68	47	0	126	9	71	14	0	94	65	172	6	0	243	19	109	14	0	142	605
05:30 PM	24	63	40	0	127	8	79	19	0	106	79	140	13	0	232	22	92	20	0	134	599
Total Volume	69	259	166	0	494	44	341	90	1	476	254	581	45	0	880	79	418	71	0	568	2418
% App. Total	14	52.4	33.6	0		9.2	71.6	18.9	0.2		28.9	66	5.1	0		13.9	73.6	12.5	0		
PHF	.719	.830	.883	.000	.922	.688	.853	.750	.250	.826	.804	.844	.750	.000	.905	.898	.871	.772	.000	.861	.986
Cars	68	250	165	0	483	43	337	89	1	470	251	573	44	0	868	77	411	70	0	558	2379
% Cars	98.6	96.5	99.4	0	97.8	97.7	98.8	98.9	100	98.7	98.8	98.6	97.8	0	98.6	97.5	98.3	98.6	0	98.2	98.4
Trucks (SU)	1	9	0	0	10	1	3	0	0	4	1	6	1	0	8	2	6	1	0	9	31
% Trucks (SU)	1.4	3.5	0	0	2.0	2.3	0.9	0	0	0.8	0.4	1.0	2.2	0	0.9	2.5	1.4	1.4	0	1.6	1.3
Trucks (TT)	0	0	1	0	1	0	1	1	0	2	2	2	0	0	4	0	1	0	0	1	8
% Trucks (TT)	0	0	0.6	0	0.2	0	0.3	1.1	0	0.4	0.8	0.3	0	0	0.5	0	0.2	0	0	0.2	0.3

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite #110, Chester, NJ 07930
732-681-0760

E/W: South Plank Rd
N/S: Union Ave
Town/County: Newburgh/Orange
Job #: 1021-22-01537

File Name : South Plank Rd & Union Ave - SAT
Site Code : 00000000
Start Date : 10/22/2022
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

	South Plank Road Eastbound					South Plank Road Westbound					Union Avenue Northbound					Union Avenue Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	16	54	51	1	122	8	47	20	0	75	53	109	19	0	181	14	114	21	0	149	527
11:15 AM	25	52	44	0	121	11	33	16	0	60	53	130	12	0	195	22	113	25	0	160	536
11:30 AM	16	59	57	0	132	12	62	26	0	100	43	127	12	0	182	22	126	14	0	162	576
11:45 AM	15	40	48	0	103	6	36	16	0	58	32	145	17	0	194	24	132	22	0	178	533
Total	72	205	200	1	478	37	178	78	0	293	181	511	60	0	752	82	485	82	0	649	2172
12:00 PM	13	41	61	0	115	12	59	21	0	92	60	117	15	0	192	16	115	11	0	142	541
12:15 PM	14	43	37	0	94	8	41	21	0	70	56	140	21	0	217	17	125	16	0	158	539
12:30 PM	19	35	49	0	103	13	38	21	0	72	57	139	11	0	207	21	142	19	0	182	564
12:45 PM	20	54	49	0	123	14	46	26	0	86	56	129	7	0	192	19	119	4	0	142	543
Total	66	173	196	0	435	47	184	89	0	320	229	525	54	0	808	73	501	50	0	624	2187
01:00 PM	22	64	35	0	121	8	43	18	0	69	44	136	11	0	191	16	124	22	0	162	543
01:15 PM	12	48	53	0	113	12	46	21	0	79	56	149	8	0	213	15	137	16	0	168	573
01:30 PM	18	44	43	2	107	7	46	20	0	73	52	153	17	0	222	20	99	13	0	132	534
01:45 PM	18	48	37	0	103	8	54	10	0	72	40	119	12	0	171	17	111	13	0	141	487
Total	70	204	168	2	444	35	189	69	0	293	192	557	48	0	797	68	471	64	0	603	2137
Grand Total	208	582	564	3	1357	119	551	236	0	906	602	1593	162	0	2357	223	1457	196	0	1876	6496
Apprch %	15.3	42.9	41.6	0.2		13.1	60.8	26	0		25.5	67.6	6.9	0		11.9	77.7	10.4	0		
Total %	3.2	9	8.7	0	20.9	1.8	8.5	3.6	0	13.9	9.3	24.5	2.5	0	36.3	3.4	22.4	3	0	28.9	
Cars	206	579	560	3	1348	118	548	235	0	901	598	1587	161	0	2346	223	1446	192	0	1861	6456
% Cars	99	99.5	99.3	100	99.3	99.2	99.5	99.6	0	99.4	99.3	99.6	99.4	0	99.5	100	99.2	98	0	99.2	99.4
Trucks (SU)	1	2	3	0	6	1	1	1	0	3	4	4	1	0	9	0	9	3	0	12	30
% Trucks (SU)	0.5	0.3	0.5	0	0.4	0.8	0.2	0.4	0	0.3	0.7	0.3	0.6	0	0.4	0	0.6	1.5	0	0.6	0.5
Trucks (TT)	1	1	1	0	3	0	2	0	0	2	0	2	0	0	2	0	2	1	0	3	10
% Trucks (TT)	0.5	0.2	0.2	0	0.2	0	0.4	0	0	0.2	0	0.1	0	0	0.1	0	0.1	0.5	0	0.2	0.2

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite #110, Chester, NJ 07930
732-681-0760

E/W: South Plank Rd
N/S: Union Ave
Town/County: Newburgh/Orange
Job #: 1021-22-01537

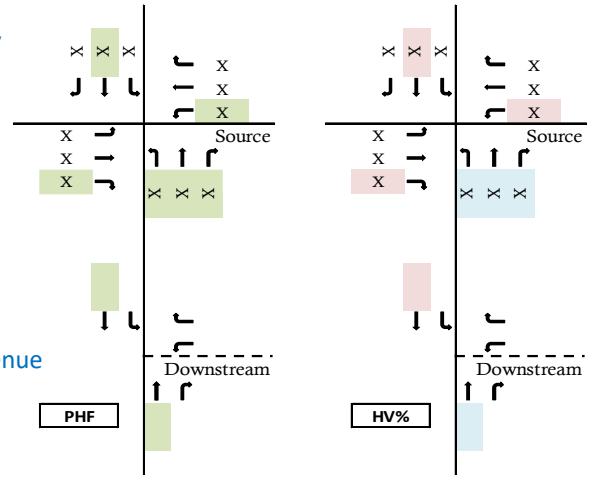
File Name : South Plank Rd & Union Ave - SAT
Site Code : 00000000
Start Date : 10/22/2022
Page No : 2

	South Plank Road Eastbound					South Plank Road Westbound					Union Avenue Northbound					Union Avenue Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	19	35	49	0	103	13	38	21	0	72	57	139	11	0	207	21	142	19	0	182	564
12:45 PM	20	54	49	0	123	14	46	26	0	86	56	129	7	0	192	19	119	4	0	142	543
01:00 PM	22	64	35	0	121	8	43	18	0	69	44	136	11	0	191	16	124	22	0	162	543
01:15 PM	12	48	53	0	113	12	46	21	0	79	56	149	8	0	213	15	137	16	0	168	573
Total Volume	73	201	186	0	460	47	173	86	0	306	213	553	37	0	803	71	522	61	0	654	2223
% App. Total	15.9	43.7	40.4	0		15.4	56.5	28.1	0		26.5	68.9	4.6	0		10.9	79.8	9.3	0		
PHF	.830	.785	.877	.000	.935	.839	.940	.827	.000	.890	.934	.928	.841	.000	.942	.845	.919	.693	.000	.898	.970
Cars	73	200	183	0	456	47	171	86	0	304	211	550	37	0	798	71	519	59	0	649	2207
% Cars	100	99.5	98.4	0	99.1	100	98.8	100	0	99.3	99.1	99.5	100	0	99.4	100	99.4	96.7	0	99.2	99.3
Trucks (SU)	0	1	2	0	3	0	0	0	0	0	2	2	0	0	4	0	3	1	0	4	11
% Trucks (SU)	0	0.5	1.1	0	0.7	0	0	0	0	0	0.9	0.4	0	0	0.5	0	0.6	1.6	0	0.6	0.5
Trucks (TT)	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	5
% Trucks (TT)	0	0	0.5	0	0.2	0	1.2	0	0	0.7	0	0.2	0	0	0.1	0	0	1.6	0	0.2	0.2

Downstream Intersection PHF & HV% Calculations

Downstream Intersection: Union Avenue & Site Driveway
Prepared By: AMC
Date: 1/18/2024
Job #: 1021-22-01537

Peak Hour: PM
Source Intersection: South Plank Road & Union Avenue
Source Count Date: Thursday, October 20, 2022



Peak Hour Factor Calculation

Source Intersection Traffic Volumes													
Interval	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
0 - 15 min.			40	11			61	137	11		120		380
15 - 30 min.			39	16			49	132	15		97		348
30 - 45 min.			47	9			65	172	6		109		408
45 - 60 min.			40	8			79	140	13		92		372
Total	-	-	166	44	-	-	254	581	45	-	418	-	1508
												Downstream Intersection Peak 15-min Volume:	408
												Downstream Intersection PHF:	0.92

Heavy Vehicle Percentage Calculations

Direction: Northbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	166	44	-	-	254	581	45	-	418	-	1508
Heavy Vehicles			1	1			3	8	1		7		21
	-	-	0.6%	2.3%	-	-	1.2%	1.4%	2.2%	-	1.7%	-	
												HV %	1.4%

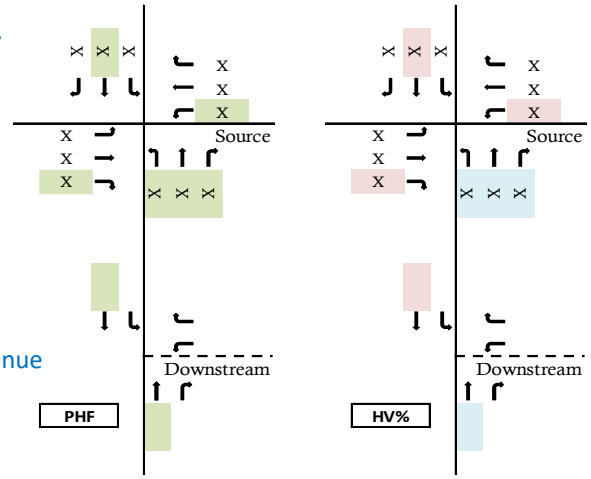
Direction: Southbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy Vehicles													-
	-	-	-	-	-	-	-	-	-	-	-	-	
												HV %	-

Downstream Intersection PHF & HV% Calculations

Downstream Intersection: Union Avenue & Site Driveway
Prepared By: AMC
Date: 1/18/2024
Job #: 1021-22-01537

Peak Hour: SAT
Source Intersection: South Plank Road & Union Avenue
Source Count Date: Saturday, October 22, 2022



Peak Hour Factor Calculation

Source Intersection Traffic Volumes													
Interval	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
0 - 15 min.			49	13			57	139	11		142		411
15 - 30 min.			49	14			56	129	7		119		374
30 - 45 min.			35	8			44	136	11		124		358
45 - 60 min.			53	12			56	149	8		137		415
Total	-	-	186	47	-	-	213	553	37	-	522	-	1558
												Downstream Intersection Peak 15-min Volume:	415
												Downstream Intersection PHF:	0.94

Heavy Vehicle Percentage Calculations

Direction: Northbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	186	-	-	-	213	553	-	-	522	-	1474
Heavy Vehicles			3				2	3			3		11
	-	-	1.6%	-	-	-	0.9%	0.5%	-	-	0.6%	-	
												HV %	0.7%

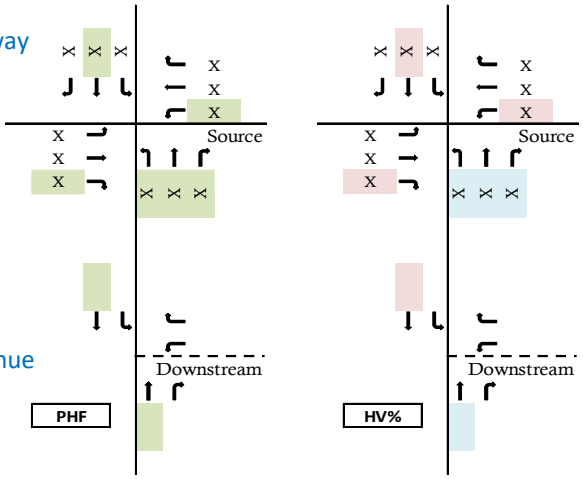
Direction: Southbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy Vehicles													-
	-	-	-	-	-	-	-	-	-	-	-	-	
												HV %	-

Downstream Intersection PHF & HV% Calculations

Downstream Intersection: South Plank Road & Site Driveway
Prepared By: AMC
Date: 1/18/2024
Job #: 1021-22-01537

Peak Hour: PM
Source Intersection: South Plank Road & Union Avenue
Source Count Date: Thursday, October 20, 2022



Peak Hour Factor Calculation

Source Intersection Traffic Volumes													
Interval	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
0 - 15 min.	17	50	40		91		61					23	282
15 - 30 min.	17	78	39		100		49					14	297
30 - 45 min.	11	68	47		71		65					14	276
45 - 60 min.	24	63	40		79		79					20	305
Total	69	259	166	-	341	-	254	-	-	-	-	71	1160
											Downstream Intersection Peak 15-min Volume:		305
											Downstream Intersection PHF:		0.95

Heavy Vehicle Percentage Calculations

Direction: Northbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	69	259	166	-	341	-	254	-	-	-	-	71	1160
Heavy Vehicles	1	9	1		4		3					1	19
	1.4%	3.5%	0.6%	-	1.2%	-	1.2%	-	-	-	-	1.4%	
											HV %	1.6%	

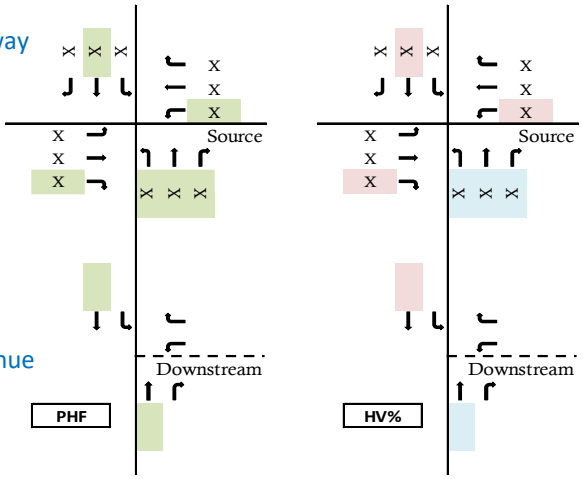
Direction: Southbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy Vehicles													-
	-	-	-	-	-	-	-	-	-	-	-	-	
											HV %	-	

Downstream Intersection PHF & HV% Calculations

Downstream Intersection: South Plank Road & Site Driveway
Prepared By: AMC
Date: 1/18/2024
Job #: 1021-22-01537

Peak Hour: SAT
Source Intersection: South Plank Road & Union Avenue
Source Count Date: Saturday, October 22, 2022



Peak Hour Factor Calculation

Source Intersection Traffic Volumes													
Interval	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
0 - 15 min.	19	35	49		38		57					19	217
15 - 30 min.	20	54	49		46		56					4	229
30 - 45 min.	22	64	35		43		44					22	230
45 - 60 min.	12	48	53		46		56					16	231
Total	73	201	186	-	173	-	213	-	-	-	-	61	907
											Downstream Intersection Peak 15-min Volume:		231
											Downstream Intersection PHF:		0.98

Heavy Vehicle Percentage Calculations

Direction: Northbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy Vehicles													-
	-	-	-	-	-	-	-	-	-	-	-	-	
											HV %	-	

Direction: Southbound

Source Intersection Traffic Volumes													
60-min. Volume	EB			WB			NB			SB			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Heavy Vehicles													-
	-	-	-	-	-	-	-	-	-	-	-	-	
											HV %	-	

TE 4d(3/91) STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS

STUDY:
CONTRACT:
PIN:
FILE:

43 SIGNAL NO(S). Orange COUNTY PAGE 1 OF 19 PAGES

INTERSECTION Route 52 at Route 300

☐ City, ☐ Village, ☒ Town of Newburgh

Department Order filed _____ (Date) as Section 2033.33 Subdivision (d)

Prior specifications hereby superceded: ☐ None ☒ June.3 19 87

Purpose: Install presence loop detection

These specifications will be effective upon the ☒ installation, ☐ modification of the necessary traffic control device(s) required by and conforming to the State Manual of Uniform Traffic Control Devices.

I. This Signal shall:

A. Operate in accordance with the Table of Operations and/or Change Intervals as shown on page(s) 2 as a:
- ☐ Pretimed signal
- ☐ Semi-traffic actuated signal
- ☒ Full-traffic actuated signal
- ☐ Pedestrian actuated signal
- ☐ Other _____

B.
- ☒ Display vehicular indications
- ☐ Display pedestrian indications
- ☒ Be equipped with vehicle detectors
- ☐ Be equipped with Pedestrian push buttons

as shown in the ☒ schematic, ☐ scaled drawing on page 3.

C. Be equipped with ☐ pre-emption, ☐ interconnection and/or coordination which are described as follows:

9-1-93 (Date) M.J. Mignosa (Signature) RTE (Title)

cc:
- ☒ Main Office (2)
- ☒ Region 8 Traffic Engineer
- ☒ F. Haalck (3)
- ☒ M. Glover

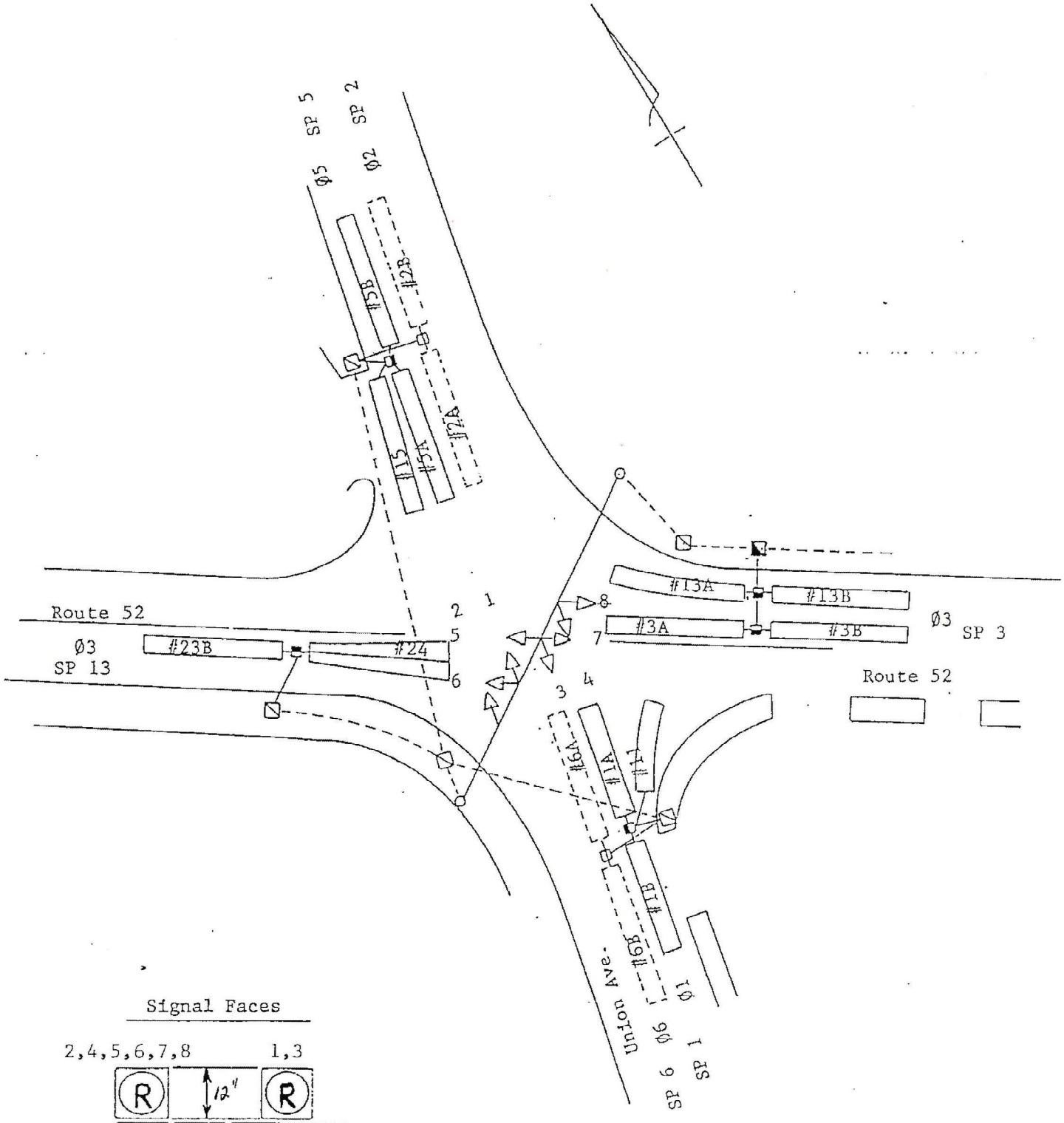
Installation Date _____

Modification Date 4-26-93

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS (CONTINUED)

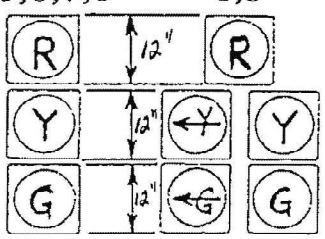
Study:
Contract:
PIN:
File:

43 SIGNAL NO(S). | Orange COUNTY | 4-26-93 DATE | PAGE 3 OF 19 PAGES



Signal Faces

2,4,5,6,7,8 1,3



STD8

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green	2	2	2		2	2		
Gap, Ext	2	2	2		2	2		
Max 1	40	15	40		40	15		
Max 2								
Yel Clearance	4	4	4		4	4		
Red Clearance	1	1	1		1	1		
Walk								
Ped Clearance								
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								
Options [1.1.2]	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Enable	On	On	On		On	On		
Min Recall	On				On			
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry								
Auto Flash Exit								
Dual Entry		On		On		On		On
Enable Simul Gap	On	On	On	On	On	On	On	On
Gaurantee Passag								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								
Options+ [1.1.3]	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Reservice								
PedClr Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Call Phase								
Conflicting Phase								
Omit Yellow								
Ped Delay								
Grn/Ped Delay								

ID: 3043 RTE 52 @ UNION AVE (RTE 300)

Coordination Patterns [2.4] and Coordination Split Tables [2.7.1]

Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq	Pat#	Cyc	Off	Split	Seq
1	0	0	1	4	13	0	0	13	1	25	0	0	0	1	37	0	0	0	1
2	0	0	2	4	14	0	0	14	1	26	0	0	0	1	38	0	0	0	1
3			3	1	15	0	0	15	1	27	0	0	0	1	39	0	0	0	1
4			4	1	16	0	0	16	1	28	0	0	0	1	40	0	0	0	1
5			5	1	17	0	0	17	1	29	0	0	0	1	41	0	0	0	1
6			6	1	18	0	0	18	1	30	0	0	0	1	42	0	0	0	1
7			7	1	19	0	0	19	1	31	0	0	0	1	43	0	0	0	1
8			8	1	20	0	0	20	1	32	0	0	0	1	44	0	0	0	1
9			9	1	21	0	0	21	1	33	0	0	0	1	45	0	0	0	1
10			10	1	22	0	0	22	1	34	0	0	0	1	46	0	0	0	1
11			11	1	23	0	0	23	1	35	0	0	0	1	47	0	0	0	1
12			12	1	24	0	0	24	1	36	0	0	0	1	48	0	0	0	1

Split		1	2	3	4	5	6	7	8	Split		1	2	3	4	5	6	7	8
1	Coor	40	15	40		40	15			13	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
2	Coor	60	15	40		60	15			14	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
3	Coor									15	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
4	Coor									16	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
5	Coor									17	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
6	Coor									18	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
7	Coor									19	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
8	Coor									20	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
9	Coor									21	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
10	Coor									22	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
11	Coor									23	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON
12	Coor									24	Coor	0	0	0	0	0	0	0	0
												NON	NON	NON	NON	NON	NON	NON	NON

Page#	
1	8 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
1A&1B	16 Phase Times/Options; Patterns/Splits; Ring Startup; Coord/Flash Mode; Unit Param
2	Overlaps; Channel Settings; Coord Alt Table+ (values not associated with time-of-day)
3	Detection; Sample Time and Unit Parameters related to detection
4	Preemption and Alternate Phase Time and Phase Options
5	Annual Schedule
6	Day Plans; Action Tables; Coord Alt Table+ (values varied by time-of-day)
7	Communications; Secutiry; I/O Setup
8	Misc - Events/Alarms; Call/Inhibit/Redirect; P/OLAP Auto Flash; CIC; Misc Unit Param

Ring/Startup [1.1.4]

Phs	Ring	Start	Enable
1	1	GREEN	On
2	1	RED	On
3	1	RED	On
4	1	RED	Off
5	2	GREEN	On
6	2	RED	On
7	2	RED	Off
8	2	RED	Off

Coord Modes [2.1]

Test OpMode	0
Correction	SHRT/LNG
Maximum	MAX 1
Force-Off	FLOAT
Closed Loop	ON
Stop-in-Walk	OFF
Auto Reset	ON
Expand Splt	OFF
Ped Recycle	NO_RECYCLE
Before	TIMED
After	TIMED

Auto Flash [1.4.1]

Auto Flash	PH OVER
Flash Yel	45
Flash Red	0

Unit Params [1.2.1]

Phase Mode	STD8
IO Mode	USER
Loc Flsh Start	ON
Start Flash(s)	0
Start AllRed(s)	0
Yellow < 3"	OFF
Display Time	20
Red Revert	0
MCE Timeout	0
Feature Profile	0
Free Ring Seq	1
Auxswitch	STOPTM
SDLC Retry	0
TS2 Det Faults	ON
Auto Ped Clear	OFF
SDLC Retry	0

09/26/17 **Page 1**

Overlap 1-16 Program Parms & Parm+ [1.5.2.1] [1.5.2.2]

Overlap Conflict Lock	OFF	Overlap Lock Inhibit	OFF	Parent Ph Clearance	ON	Extra Included Ph	OFF

1	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
A	Conflict Olap									Red	1.5
	Conflict Ped									LG	
2	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
B	Conflict Olap									Red	1.5
	Conflict Ped									LG	
3	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
C	Conflict Olap									Red	1.5
	Conflict Ped									LG	
4	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
D	Conflict Olap									Red	1.5
	Conflict Ped									LG	
5	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
E	Conflict Olap									Red	1.5
	Conflict Ped									LG	
6	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
F	Conflict Olap									Red	1.5
	Conflict Ped									LG	
7	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
G	Conflict Olap									Red	1.5
	Conflict Ped									LG	
8	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
H	Conflict Olap									Red	1.5
	Conflict Ped									LG	

9	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
I	Conflict Olap									Red	1.5
	Conflict Ped									LG	
10	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
J	Conflict Olap									Red	1.5
	Conflict Ped									LG	
11	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
K	Conflict Olap									Red	1.5
	Conflict Ped									LG	
12	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
L	Conflict Olap									Red	1.5
	Conflict Ped									LG	
13	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
M	Conflict Olap									Red	1.5
	Conflict Ped									LG	
14	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
N	Conflict Olap									Red	1.5
	Conflict Ped									LG	
15	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
O	Conflict Olap									Red	1.5
	Conflict Ped									LG	
16	Included Ø									NORMAL	
	Modifier Ø									Grn	
	Conflict Ø									Yel	3.5
P	Conflict Olap									Red	1.5
	Conflict Ped									LG	

Channel Settings [1.8.1]

……Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Phase / Olap #	1	2	3		5	6							3											
Channel Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH
Channel Flash	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Alt Hz																								

Channel+ Settings [1.8.4]

……Channel ->>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Flash Red+																								
Flash Yellow+																								
Flash Green+																								
Flash Inh Red+																								
Olap Ovrd																								

Coord Transition, CoorPhs [2.5]

Pat#	Short	Long	Dwell	No Shortway Ø	E-Yld	Offset	RetHld	Float	Min Veh Perm	Min Ped Perm
1	12	22				EndGRN				
2	12	22				EndGRN				
3	12	22				EndGRN				
4	12	22				EndGRN				
5	12	22				EndGRN				
6	12	22				EndGRN				
7	12	22				EndGRN				
8	12	22				EndGRN				
9	12	22				EndGRN				
10	12	22				EndGRN				
11	12	22				EndGRN				
12	12	22				EndGRN				
13	12	22				EndGRN				
14	12	22				EndGRN				
15	12	22				EndGRN				
16	12	22				EndGRN				
17	12	22				EndGRN				
18	12	22				EndGRN				
19	12	22				EndGRN				
20	12	22				EndGRN				
21	12	22				EndGRN				
22	12	22				EndGRN				
23	12	22				EndGRN				
24	12	22				EndGRN				
25						BegGRN				
26						BegGRN				
27						BegGRN				
28						BegGRN				
29						BegGRN				
30						BegGRN				
31						BegGRN				
32						BegGRN				
33						BegGRN				
34						BegGRN				
35						BegGRN				
36						BegGRN				
37						BegGRN				
38						BegGRN				
39						BegGRN				
40						BegGRN				
41						BegGRN				
42						BegGRN				
43						BegGRN				
44						BegGRN				
45						BegGRN				
46						BegGRN				
47						BegGRN				
48						BegGRN				

Channel Params[1.8.3]

C1 IO Mode USER BIU Map SINGLE Invert Rail Input OFF

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
1	1		5				45	50	10
2	2	5	1				45	50	25
3	3		3				45	50	25
4									
5	5						45	50	10
6	6	1	5				45	50	25
7									
8									
9									
10									
11									
12	2	5	5				45	50	25
13	3		15				45	50	25
14									
15									
16	6	1	5				45	50	25
17									
18									
19									
20									
21									
22									
23	3						45	50	25
24	3						45	50	25
25									
26									
27									
28									
29									
30									
31									
32									

Veh Par 1-64 [5.1]

Det #	Call Ø	Swi Ø	Dlay	Ext	Que	No Act	Max Pres	Err Cnt	Fail Time
33							45	50	
34							45	50	
35							45	50	
36							45	50	
37							45	50	
38							45	50	
39							45	50	
40							45	50	
41							45	50	
42							45	50	
43							45	50	
44							45	50	
45							45	50	
46							45	50	
47							45	50	
48							45	50	
49							45	50	
50							45	50	
51							45	50	
52							45	50	
53							45	50	
54							45	50	
55							45	50	
56							45	50	
57							45	50	
58							45	50	
59							45	50	
60							45	50	
61							45	50	
62							45	50	
63							45	50	
64							45	50	

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add Init	Red Lock	Yell Lock	occ	vol
1	On	On		On				
2	On	On		On				
3	On	On		On				
4	On	On		On				
5	On	On		On				
6	On	On		On				
7	On	On		On				
8	On	On		On				
9	On	On		On				
10	On	On		On				
11	On	On		On				
12	On	On		On				
13	On	On		On				
14	On	On		On				
15	On	On		On				
16	On	On		On				
17	On	On		On				
18	On	On		On				
19	On	On		On				
20	On	On		On				
21	On	On		On				
22	On	On		On				
23	On	On		On				
24	On	On		On				
25	On	On		On				
26	On	On		On				
27	On	On		On				
28	On	On		On				
29	On	On		On				
30	On	On		On				
31	On	On		On				
32	On	On		On				

Vehicle Options 1-64 [5.2]

Det #	Call	Ext	Que	Add AddIni	Red Lock	Yell Lock	occ	vol
33	On	On		On				
34	On	On		On				
35	On	On		On				
36	On	On		On				
37	On	On		On				
38	On	On		On				
39	On	On		On				
40	On	On		On				
41	On	On		On				
42	On	On		On				
43	On	On		On				
44	On	On		On				
45	On	On		On				
46	On	On		On				
47	On	On		On				
48	On	On		On				
49	On	On		On				
50	On	On		On				
51	On	On		On				
52	On	On		On				
53	On	On		On				
54	On	On		On				
55	On	On		On				
56	On	On		On				
57	On	On		On				
58	On	On		On				
59	On	On		On				
60	On	On		On				
61	On	On		On				
62	On	On		On				
63	On	On		On				
64	On	On		On				

Parameters+ 1-64 [5.3]

Det #	oc G	oc Y	oc R	Dlay 1	Dlay 2	Type	Src
1						NORM	
2						NORM	
3						NORM	
4						NORM	
5						NORM	
6						NORM	
7						NORM	
8						NORM	
9						NORM	
10						NORM	
11						NORM	
12						NORM	
13						NORM	
14						NORM	
15						NORM	
16						NORM	
17						NORM	
18						NORM	
19						NORM	
20						NORM	
21						NORM	
22						NORM	
23						NORM	
24						NORM	
25						NORM	
26						NORM	
27						NORM	
28						NORM	
29						NORM	
30						NORM	
31						NORM	
32						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
33						NORM	
34						NORM	
35						NORM	
36						NORM	
37						NORM	
38						NORM	
39						NORM	
40						NORM	
41						NORM	
42						NORM	
43						NORM	
44						NORM	
45						NORM	
46						NORM	
47						NORM	
48						NORM	
49						NORM	
50						NORM	
51						NORM	
52						NORM	
53						NORM	
54						NORM	

Parameters+ 1-64 [5.3]

Det #	occ Grn	occ Yell	occ Red	Dlay 1	Dlay 2	Type	Src
55						NORM	
56						NORM	
57						NORM	
58						NORM	
59						NORM	
60						NORM	
61						NORM	
62						NORM	
63						NORM	
64						NORM	

Ped Det Parms [5.4]

Det #	Call Ø	No Act	Max Pres	Err Cnt
1			15	
2			15	
3			15	
4			15	
5			15	
6			15	
7			15	
8			15	

Unit Paramters [1.2.1]

TS2 Det Faults	ON

Vol/Occ Report Parm [1.5.8]

Vol/Occ Period Minutes	15
Vol/Occ Period Minutes	0

Preemption Times [3.1], Options+ [3.6]

Pre #	Enable	Type	Output	Delay	MinDura
1	ON	RAIL	DWELL		
2	ON	RAIL	DWELL		
3	ON	EMERG	DWELL		
4	ON	EMERG	DWELL		
5	ON	EMERG	DWELL		
6	ON	EMERG	DWELL		

Pre #	MaxPres	MinGrn	MinWlk	PedClr	Co+Pre
1					ON
2					ON
3					ON
4					ON
5					ON
6					ON

Pre #	Track Grn	Min Dwell	Ext Dwell	PedClr+	Yel
1		2			
2		2			
3		2			
4		2			
5		2			
6		2			

Pre #	Red	Pattern	Skip
1			OFF
2			OFF
3			OFF
4			OFF
5			OFF
6			OFF

Low Priority Preempts

Pre #	Type	Min	Max		
7	OFF				
8	OFF				
9	OFF				
10	OFF				

Unit Parameters [1.2.1]

Stop Timer Over Preempt	OFF
Preempt or Ext Output	PRE
Max Seek Track Time	
Max Seek Dwell Time	

Channel Parameters [1.8.3]

D Conn Mappings	NONE
Pre Invert Rail Input	OFF

Track Clear Phases [3.2], Track Clear Overlaps+ [3.5]

Pre #	Track Phases															
	Track Overlaps															
1																
2																
3																
4																
5																
6																

Dwell Phases [3.2] and Overlaps+ [3.5]

Pre #														
1	Phases													
	Overlaps													
	Peds													
2	Phases													
	Overlaps													
	Peds													
3	Phases													
	Overlaps													
	Peds													
4	Phases													
	Overlaps													
	Peds													
5	Phases													
	Overlaps													
	Peds													
6	Phases													
	Overlaps													
	Peds													

Exit Phases [3.2]

Pre #	Exit Phase			
1				
2				
3				
4				
5				
6				

Preemption Options+ [3.6]

Pre #	Lock	Override Auto Flsh		Override Higher		Flsh Dwel	Link
1	ON	ON		ON		OFF	
2	ON	ON		ON		OFF	
3	ON	ON		ON		OFF	
4	ON	ON		ON		OFF	
5	ON	ON		ON		OFF	
6	ON	ON		ON		OFF	

Alt# 1 Times Table [1.1.6.1.2]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 2 Times Table [1.1.6.1.2]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 3 Times Table [1.1.6.1.3]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Ø								
Min Grn								
Gap, Ext								
Max 1								
Max 2								
Yel Clr								
Red Clr								
Walk								
Ped Clr								

Alt# 1 Options Table [1.1.6.2.1]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	On	On	On	On	On	On	On	On
Soft Recall								
Dual Entry								
Enabl SimGap	On	On	On	On	On	On	On	On
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 1 Veh Parameters [5.5.1.1]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Swiitch																
Delay																
Extend																
Queue																
No Activity																
Max Presence																
Erratic Count																
Fail Time																

Alt# 1 Veh Options [5.5.1.2]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Extend																
Queue																
Added Initial																
Red Lock																
Yellow Lock																
Occupancy																
Volume																

Alt# 1 Veh Parameters+ [5.5.1.3]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Occ-on-green																
Occ-on-yellow																
Occ-on-red																
Delay Phase 1																
Delay Phase 2																
Detector Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Source																

Alt# 1 Ped Parameters+ [5.5.1.4]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Det#								
Call								
No Activity								
Max Presence								
Erratic Count								

Alt# 2 Options Table [1.1.6.2.2]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	On	On	On	On	On	On	On	On
Soft Recall								
Dual Entry								
Enabl SimGap	On	On	On	On	On	On	On	On
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 3 Options Table [1.1.6.2.3]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	On	On	On	On	On	On	On	On
Soft Recall								
Dual Entry								
Enabl SimGap	On	On	On	On	On	On	On	On
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 4 Options Table [1.1.6.2.4]

Column # ->	1	2	3	4	5	6	7	8
Assign Ø								
Lock Calls	On	On	On	On	On	On	On	On
Soft Recall								
Dual Entry								
Enabl SimGap	On	On	On	On	On	On	On	On
Guar Passage								
Rest In Walk								
Cond Service								
Reservice								
Non-Act 1								
Red Rest								
Max2								
Ped Delay								
Conflicting Ø1								

Alt# 2 Veh Parameters [5.5.2.1]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Swiitch																
Delay																
Extend																
Queue																
No Activity																
Max Presence																
Erratic Count																
Fail Time																

Alt# 2 Veh Options [5.5.2.2]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Call																
Extend																
Queue																
Added Initial																
Red Lock																
Yellow Lock																
Occupancy																
Volume																

Alt# 2 Veh Parameters+ [5.5.2.3]

Column#..... ->	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assign Det#																
Occ-on-green																
Occ-on-yellow																
Occ-on-red																
Delay Phase 1																
Delay Phase 2																
Detector Mode	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM	NORM
Source																

Alt# 2 Ped Parameters+ [5.5.2.4]

Column#..... ->	1	2	3	4	5	6	7	8
Assign Det#								
Call								
No Activity								
Max Presence								
Erratic Count								

Annual Schedule [4.3] Month of Year													Day of Week							Date																													DayLink	
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Plan	To
1	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	1	
2	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
3	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
4	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
5	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
6	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
7	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
8	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
9	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
10	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
11	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
12	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
13	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
14	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
15	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
16	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
17	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
18	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
19	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
20	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
21	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
22	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
23	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	
24	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
																																																	1	

Day Plans [4.4]

Day Plan 1

	Hour	Min	Act		Hour	Min	Act
1	0	0	1	9			
2	6	0	2	10			
3	9	0	1	11			
4	15	0	2	12			
5	18	0	1	13			
6				14			
7				15			
8				16			

Day Plan 2

	Hour	Min	Act		Hour	Min	Act
1				9			
2				10			
3				11			
4				12			
5				13			
6				14			
7				15			
8				16			

Day Plan 3

	Hour	Min	Act		Hour	Min	Act
1				9			
2				10			
3				11			
4				12			
5				13			
6				14			
7				15			
8				16			

Day Plan 4

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 5

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 6

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 7

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 8

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 9

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 10

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 11

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 12

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 13

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 14

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Day Plan 15

	Hour	Min	Act		Hour	Min	Act
1	0	0	0	9	0	0	0
2	0	0	0	10	0	0	0
3	0	0	0	11	0	0	0
4	0	0	0	12	0	0	0
5	0	0	0	13	0	0	0
6	0	0	0	14	0	0	0
7	0	0	0	15	0	0	0
8	0	0	0	16	0	0	0

Action Table [4.5]

Act#	Pat#	A1	A2	A3	S1	S2	S3	S4	S5	S6	S7	S8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25												
26												
27												
28												
29												
30												
31												
32												
33												
34												
35												
36												
37												
38												
39												
40												
48												
98												
99												
100	255											

Coord Alternate Tables - Pat+ [2.6]

Pat#	ØOpt	ØTime	DetG	Call Irh	CIC	CNA1	Overlap Off 1	2	3	4	5	6	7	8	Dia	Max2
1															DFT	
2															DFT	
3															DFT	
4															DFT	
5															DFT	
6															DFT	
7															DFT	
8															DFT	
9															DFT	
10															DFT	
11															DFT	
12															DFT	
13															DFT	
14															DFT	
15															DFT	
16															DFT	
17															DFT	
18															DFT	
19															DFT	
20															DFT	
21															DFT	
22															DFT	
23															DFT	
24															DFT	
25															DFT	
26															DFT	
27															DFT	
28															DFT	
29															DFT	
30															DFT	
31															DFT	
32															DFT	
33															DFT	
34															DFT	
35															DFT	
36															DFT	
37															DFT	
38															DFT	
39															DFT	
40															DFT	
41															DFT	
42															DFT	
43															DFT	
44															DFT	
45															DFT	
46															DFT	
47															DFT	
48															DFT	

C1-USER IO Map [1.8.9.1 In]

I1-1	1	Veh Call 1
I1-2	2	Veh Call 2
I1-3	3	Veh Call 3
I1-4	189	Unused
I1-5	5	Veh Call 5
I1-6	6	Veh Call 6
I1-7	189	Unused
I1-8	189	Unused
I2-1	189	Unused
I2-2	189	Unused
I2-3	189	Unused
I2-4	12	Veh Call 12
I2-5	13	Veh Call 13
I2-6	189	Unused
I2-7	189	Unused
I2-8	16	Veh Call 16
I3-1	189	Unused
I3-2	189	Unused
I3-3	189	Unused
I3-4	189	Unused
I3-5	189	Unused
I3-6	189	Unused
I3-7	23	Veh Call 23
I3-8	24	Veh Call 24
I4-1	C11S Connector	
I4-2		
I4-3		
I4-4		
I4-5	189	Unused
I4-6	189	Unused
I4-7	229	33xCMUStop
I4-8	228	33xFlashSns
I5-1	189	Unused
I5-2	189	Unused
I5-3	189	Unused
I5-4	189	Unused
I5-5	189	Unused
I5-6	189	Unused
I5-7	189	Unused
I5-8	189	Unused
I6-1	189	Unused
I6-2	189	Unused
I6-3	189	Unused
I6-4	189	Unused
I6-5	189	Unused
I6-6	189	Unused
I6-7	189	Unused
I6-8	189	Unused

C1-USER IO Map [1.8.9.2 Out]

O1-1	1	Ch1 Red
O1-2	49	Ch1 Green
O1-3	2	Ch2 Red
O1-4	26	Ch2 Yellow
O1-5	50	Ch2 Green
O1-6	3	Ch3 Red
O1-7	27	Ch3 Yellow
O1-8	51	Ch3 Green
O2-1	4	Ch4 Red
O2-2	52	Ch4 Green
O2-3	5	Ch5 Red
O2-4	29	Ch5 Yellow
O2-5	53	Ch5 Green
O2-6	6	Ch6 Red
O2-7	30	Ch6 Yellow
O2-8	54	Ch6 Green
O3-1	7	Ch7 Red
O3-2	55	Ch7 Green
O3-3	8	Ch8 Red
O3-4	32	Ch8 Yellow
O3-5	56	Ch8 Green
O3-6	9	Ch9 Red
O3-7	33	Ch9 Yellow
O3-8	57	Ch9 Green
O4-1	10	Ch10 Red
O4-2	58	Ch10 Green
O4-3	11	Ch11 Red
O4-4	35	Ch11 Yellow
O4-5	59	Ch11 Green
O4-6	12	Ch12 Red
O4-7	36	Ch12 Yellow
O4-8	60	Ch12 Green
O5-1	28	Ch4 Yellow
O5-2	34	Ch10 Yellow
O5-3	25	Ch1 Yellow
O5-4	31	Ch7 Yellow
O5-5	115	Not Used
O5-6	115	Not Used
O5-7	115	Not Used
O5-8	114	Watchdog
O6-1	115	Not Used
O6-2	115	Not Used
O6-3	13	Ch13 Red
O6-4	37	Ch13 Yellow
O6-5	61	Ch13 Green
O6-6	14	Ch14 Red
O6-7	38	Ch14 Yellow
O6-8	62	Ch14 Green

C1-USER IO Map [1.8.9.2 Out]

O7-1	115	Not Used
O7-2	115	Not Used
O7-3	115	Not Used
O7-4	115	Not Used
O7-5	115	Not Used
O7-6	115	Not Used
O7-7	115	Not Used
O7-8	115	Not Used

C11S-USER IO Map [1.8.9.1 In]

I4-1	189	Unused
I4-2	189	Unused
I4-3	189	Unused
I4-4	189	Unused
I7-1	189	Unused
I7-2	189	Unused
I7-3	189	Unused
I7-4	189	Unused
I7-5	189	Unused
I7-6	189	Unused
I7-7	189	Unused
I7-8	189	Unused
I8-1	189	Unused
I8-2	189	Unused
I8-3	189	Unused
I8-4	189	Unused
I8-5	189	Unused
I8-6	189	Unused
I8-7	189	Unused
I8-8	189	Unused

C11S-USER IO Map [1.8.9.2 Out]

O8-1	115	Not Used
O8-2	115	Not Used
O8-3	115	Not Used
O8-4	115	Not Used
O8-5	115	Not Used
O8-6	115	Not Used
O8-7	115	Not Used
O8-8	115	Not Used

IO Logic [1.8.7]

Result				Fcn	Oper		Fcn	Oper		Fcn Timer		
O	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY
I	0	=	I	----	0	I	----	0	I	----	0	DLY

Security Access Levels [8.2]

1	SWLOAD	22	NONE	43	NONE
2	SECURE	23	NONE	44	NONE
3	NONE	24	NONE	45	NONE
4	NONE	25	NONE	46	NONE
5	NONE	26	NONE	47	NONE
6	NONE	27	NONE	48	NONE
7	NONE	28	NONE	49	NONE
8	NONE	29	NONE	50	NONE
9	NONE	30	NONE	51	NONE
10	NONE	31	NONE	52	NONE
11	NONE	32	NONE	53	NONE
12	NONE	33	NONE	54	NONE
13	NONE	34	NONE	55	NONE
14	NONE	35	NONE	56	NONE
15	NONE	36	NONE	57	NONE
16	NONE	37	NONE	58	NONE
17	NONE	38	NONE	59	NONE
18	NONE	39	NONE	60	NONE
19	NONE	40	NONE	61	NONE
20	NONE	41	NONE	62	NONE
21	NONE	42	NONE	63	NONE
				64	NONE

Com Parameters [6.1]

Station ID	3043
Group ID	
Master ID	0
Backup Time	0

SysUp Modem [6.1]

Enable Modem	OFF
Idle Time	0
Dial Time	0
Tel:	#N/A
Alt:	#N/A

2070 Port Parms [6.2]

Port	Baud Rate	FCM
SP1	9600	MODE 6
SP2	9600	MODE 6
SP3	19200	MODE 6
SP4	38400	MODE 6
SP5	1200	AUTO
SP6	1200	AUTO
SP7	1200	AUTO
SP8	1200	AUTO

2070 IP 1 Addressing [6.5]

	Addressing			
Addr	0	0	0	0
Mask	0	0	0	0
Brdcst	0	0	0	0
GtWay	0	0	0	0
Port	0			

2070 IP 2 Addressing [6.5]

	Addressing			
Addr	0	0	0	0
Mask	0	0	0	0
Brdcst	0	0	0	0
GtWay	0	0	0	0
Port	0			

2070 Port Binding Ports [6.6]

	Port	Echo	Mode
ASYNC1	SP1	OFF	0
ASYNC2	SP2	OFF	0
ASYNC3	SP3	OFF	0
ASYNC4	SP4	OFF	0
SYNC1	SP5S	SYNC3	OFF
SYNC2	OFF	SYNC4	OFF

2070 Port Binding Functions [6.6]

Function	Channel	Function	Channel
TS2/CVM	NONE	SYSUp	ASYNC2
CMU/MMU	NONE	SYSDown	ASYNC1
Opticom	NONE	Shell	NONE
Loop Det.	NONE		
GPS	NONE		

#	Event / Alarm	Ev	Alr
1	Power Up Alarm.	On	On
2	Stop Timing	On	On
3	TS1 Cabinet Door		
4	Coordination Failure	On	On
5	External Alarm # 1	On	On
6	External Alarm # 2	On	On
7	External Alarm # 3		
8	External Alarm # 4		
9	Closed Loop Disabled		On
10	External Alarm # 5		
11	External Alarm # 6		
12	Manual Control Enable	On	On
13	Coord Free Input		
14	Local Flash Input	On	On
15	MMU Flash		
16	CMU Flash		
17	Cycle Fault		On
18	Cycle Failure		On
19	Coordination Fault		On
20	Controller Fault	On	On
21	Detector SDLC Failure		
22	MMU SDLC Failure		
23	Critical SDLC Failure		
24	Reserved		
25	EEPROM CRC Fault	On	On
26	Detector Diagnostic Failur		
27	BIU Detector Failure	On	On
28	Queue detector alarm		On
29	Ped Detector Fault		On
30	Coord Diagnostic Fault		
41	TempAlert Probe Ch. A		
42	TempAlert Probe Ch. B		
47	Coord Active		
48	Preempt Active		On
49	Preempt 1 Input		On
50	Preempt 2 Input		On
51	Preempt 3 Input		On
52	Preempt 4 Input		On
53	Preempt 5 Input		On
54	Preempt 6 Input		On
55	Preempt 7 Input		On
56	Preempt 8 Input		On
57	Preempt 9 Input		On
58	Preempt 10 Input		On
61	In Transition		On
81	FIO Status Alarm		

Call Phases[1.1.5]

Ø	Phases Called By Ø
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	

Redirect Phases[1.1.5]

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Inhibit Phases[1.1.5]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																

Alt Call & Redirect # 1 [1.1.6.3]

Col	Ø	Phases Called By Ø
1		
2		
3		
4		
5		
6		
7		
8		

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 1 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Alt Call & Redirect # 2 [1.1.6.3]

Col	Ø	Phases Called By Ø
1		
2		
3		
4		
5		
6		
7		
8		

	From	To	From	To	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Alt Inhibit Phases # 2 [1.1.6.3]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1																
2																
3																
4																
5																
6																
7																
8																

Coord, CIC Plans [2.3]

CIC	CoØ	Grow	1	2	3	4	5	6	7	8
1	OFF									
2	OFF									
3	OFF									
4	OFF									

Auto Flash Phase/Olap Settings [1.4.2]

Yel Ø								
Yel (olaps)								

Unit Parameters [1.2.1]

Allow Skip Yellow	OFF	Max Cycle Time	
TOD Dim Enable	OFF	Cycle Fault Action	ALARM
Tone Disable	OFF		
Diamond Mode	4Ph		
Backup Time (s)	900		
Disable Init Ped	OFF		
Cycle Fault Action	ALARM		
Enable Run Timer	ON		

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____

SIGNAL # 0-43 COUNTY # Orange DATE 4-26-93

TABLE OF SWITCH PACKS

SWITCH PACK	FUNCTION	INDICATIONS	FACE	TERMINAL WIRING BOARD		FACE	TERMINAL WIRING BOARD	
				TERMINAL	WIRE COLOR CODE		TERMINAL	WIRE COLOR CODE
1	ϕ1	RED YELLOW GREEN Ground Wire	3	SP 1 R SP 1 Y SP 1 G Gnd Bus		4	SP 1 R SP 1 Y SP 1 G Gnd Bus	
2	ϕ2	← ← Ground Wire	1	SP 2 R SP 2 Y SP 2 G Gnd Bus			SP 2 R SP 2 Y SP 2 G Gnd Bus	
3	ϕ3	RED YELLOW GREEN Ground Wire	5	SP 3 R SP 3 Y SP 3 G Gnd Bus		6	SP 3 R SP 3 Y SP 3 G Gnd Bus	
4		Ground Wire		SP 4 R SP 4 Y SP 4 G Gnd Bus			SP 4 R SP 4 Y SP 4 G Gnd Bus	
5	ϕ5	RED YELLOW GREEN Ground Wire	1	SP 5 R SP 5 Y SP 5 G Gnd Bus		2	SP 5 R SP 5 Y SP 5 G Gnd Bus	
6	ϕ6	← ← Ground Wire	3	SP 6 R SP 6 Y SP 6 G Gnd Bus			SP 6 R SP 6 Y SP 6 G Gnd Bus	
7		Ground Wire		SP 7 R SP 7 Y SP 7 G Gnd Bus			SP 7 R SP 7 Y SP 7 G Gnd Bus	
8		Ground Wire		SP 8 R SP 8 Y SP 8 G Gnd Bus			SP 8 R SP 8 Y SP 8 G Gnd Bus	
9		Ground Wire		SP 9 R SP 9 Y SP 9 G Gnd Bus			SP 9 R SP 9 Y SP 9 G Gnd Bus	
10		Ground Wire		SP 10 R SP 10 Y SP 10 G Gnd Bus			SP 10 R SP 10 Y SP 10 G Gnd Bus	
11		Ground Wire		SP 11 R SP 11 Y SP 11 G Gnd Bus			SP 11 R SP 11 Y SP 11 G Gnd Bus	
12		Ground Wire		SP 12 R SP 12 Y SP 12 G Gnd Bus			SP 12 R SP 12 Y SP 12 G Gnd Bus	
13	ϕ3	RED YELLOW GREEN Ground Wire	7	SP 13 R SP 13 Y SP 13 G Gnd Bus		8	SP 13 R SP 13 Y SP 13 G Gnd Bus	
14		Ground Wire		SP 14 R SP 14 Y SP 14 G Gnd Bus			SP 14 R SP 14 Y SP 14 G Gnd Bus	

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	934 Fast-Food Restaurant with Drive-Through Window
Setting:	General Urban/Suburban
Size:	2.342 KSF
Prepared By:	AMC
Date:	11/8/2022
Job #:	1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	71	3	50%	50%
AM Peak Street Hour	96	4	51%	49%
PM Peak Street Hour	190	3	52%	48%
AM Generator	118	3	52%	48%
PM Generator	135	3	51%	49%
Saturday	17	3	50%	50%
Saturday Generator	53	4	51%	49%
Sunday	15	3	50%	50%
Sunday Generator	10	3	48%	52%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	98.89	467.48	1137.66	238.62	548	547	1095	x
AM Peak Street Hour	1.05	44.61	164.25	27.14	53	51	104	x
PM Peak Street Hour	8.77	33.03	117.22	17.59	40	37	77	x
AM Generator	7.28	50.57	164.25	25.99	61	57	118	x
PM Generator	13.36	50.94	159.07	24.91	61	58	119	x
Saturday	218.91	616.12	1410.88	320.90	722	721	1443	x
Saturday Generator	11.25	55.25	122.92	24.62	66	63	129	x
Sunday	213.45	472.58	953.97	215.31	554	553	1107	x
Sunday Generator	26.55	55.15	98.15	23.88	62	67	129	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total
Weekday	*Not Given*		-	-	-	-
AM Peak Street Hour	*Not Given*		-	-	-	-
PM Peak Street Hour	*Not Given*		-	-	-	-
AM Generator	*Not Given*		-	-	-	-
PM Generator	*Not Given*		-	-	-	-
Saturday	*Not Given*		-	-	-	-
Saturday Generator	*Not Given*		-	-	-	-
Sunday	*Not Given*		-	-	-	-
Sunday Generator	*Not Given*		-	-	-	-

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	934 Fast-Food Restaurant with Drive-Through Window
Setting:	General Urban/Suburban
Size:	2.342 KSF
Prepared By:	AMC
Date:	11/8/2022
Job #:	1021-22-01537

Calculation of Passby Trips

Trip Type	Passby %		ITE Average Rates: Trip Generation In	Out	Total	ITE Equations: Trip Generation In	Out	Total
AM Peak Street Hour								
Total	50%	x	53	51	104	-	-	-
Passby			27	25	52	-	-	-
New (Primary)			26	26	52	-	-	-
PM Peak Street Hour								
Total	55%	x	40	37	77	-	-	-
Passby			22	20	42	-	-	-
New (Primary)			18	17	35	-	-	-
AM Generator								
Total	50%	x	61	57	118	-	-	-
Passby			31	28	59	-	-	-
New (Primary)			30	29	59	-	-	-
PM Generator								
Total	55%	x	61	58	119	-	-	-
Passby			34	31	65	-	-	-
New (Primary)			27	27	54	-	-	-
Saturday Generator								
Total	50%	x	66	63	129	-	-	-
Passby			33	32	65	-	-	-
New (Primary)			33	31	64	-	-	-

Passby Comments: Saturday peak hour passby % approved by NJDOT.

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	934 Fast-Food Restaurant with Drive-Through Window
Setting:	General Urban/Suburban
Size:	2.537 KSF
Prepared By:	AMC
Date:	11/8/2022
Job #:	1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	71	3	50%	50%
AM Peak Street Hour	96	4	51%	49%
PM Peak Street Hour	190	3	52%	48%
AM Generator	118	3	52%	48%
PM Generator	135	3	51%	49%
Saturday	17	3	50%	50%
Saturday Generator	53	4	51%	49%
Sunday	15	3	50%	50%
Sunday Generator	10	3	48%	52%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	98.89	467.48	1137.66	238.62	593	593	1186	x
AM Peak Street Hour	1.05	44.61	164.25	27.14	58	55	113	x
PM Peak Street Hour	8.77	33.03	117.22	17.59	44	40	84	x
AM Generator	7.28	50.57	164.25	25.99	67	61	128	x
PM Generator	13.36	50.94	159.07	24.91	66	63	129	x
Saturday	218.91	616.12	1410.88	320.90	782	781	1563	x
Saturday Generator	11.25	55.25	122.92	24.62	71	69	140	x
Sunday	213.45	472.58	953.97	215.31	600	599	1199	x
Sunday Generator	26.55	55.15	98.15	23.88	67	73	140	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total
Weekday	*Not Given*		-	-	-	-
AM Peak Street Hour	*Not Given*		-	-	-	-
PM Peak Street Hour	*Not Given*		-	-	-	-
AM Generator	*Not Given*		-	-	-	-
PM Generator	*Not Given*		-	-	-	-
Saturday	*Not Given*		-	-	-	-
Saturday Generator	*Not Given*		-	-	-	-
Sunday	*Not Given*		-	-	-	-
Sunday Generator	*Not Given*		-	-	-	-

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	934 Fast-Food Restaurant with Drive-Through Window
Setting:	General Urban/Suburban
Size:	2.537 KSF
Prepared By:	AMC
Date:	11/8/2022
Job #:	1021-22-01537

Calculation of Passby Trips

Trip Type	Passby %		ITE Average Rates: Trip Generation In	Out	Total	ITE Equations: Trip Generation In	Out	Total
AM Peak Street Hour								
Total	50%	x	58	55	113	-	-	-
Passby			29	28	57	-	-	-
New (Primary)			29	27	56	-	-	-
PM Peak Street Hour								
Total	55%	x	44	40	84	-	-	-
Passby			24	22	46	-	-	-
New (Primary)			20	18	38	-	-	-
AM Generator								
Total	50%	x	67	61	128	-	-	-
Passby			34	30	64	-	-	-
New (Primary)			33	31	64	-	-	-
PM Generator								
Total	55%	x	66	63	129	-	-	-
Passby			36	35	71	-	-	-
New (Primary)			30	28	58	-	-	-
Saturday Generator								
Total	50%	x	71	69	140	-	-	-
Passby			36	34	70	-	-	-
New (Primary)			35	35	70	-	-	-

Passby Comments: Saturday peak hour passby % approved by NJDOT.

Trip Generation Worksheet, *ITE Trip Generation 10th Edition*

DYNAMIC TRAFFIC

Land Use Code: 220 Multifamily Housing (Low-Rise) (Dwelling Units)
Size: 246 Dwelling Units
Prepared By: ARF
Date: 12/2/2022
Job #: 1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	29	168	50%	50%
AM Peak Street Hour	42	199	23%	77%
PM Peak Street Hour	50	187	63%	37%
AM Generator	36	161	28%	72%
PM Generator	35	146	59%	41%
Saturday	5	89	50%	50%
Saturday Generator	5	89	0%	0%
Sunday	5	89	50%	50%
Sunday Generator	5	89		

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total
Weekday	4.45	7.32	10.97	1.31	901	900	1801
AM Peak Street Hour	0.18	0.46	0.74	0.12	26	87	113
PM Peak Street Hour	0.18	0.56	1.25	0.16	87	51	138
AM Generator	0.34	0.56	0.97	0.15	39	99	138
PM Generator	0.41	0.67	1.25	0.14	97	68	165
Saturday	3.36	8.14	11.40	2.94	1001	1001	2002
Saturday Generator	0.41	0.70	0.93	0.20	-	-	172
Sunday	2.61	6.28	8.22	1.96	773	772	1545
Sunday Generator	0.36	0.67	0.93	0.22	-	-	165

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 7.56(X) - 40.86	0.96	7.39	910	909	1819	x
AM Peak Street Hour	Ln(T) = 0.95 Ln(X) - 0.51	0.90	0.46	26	86	112	x
PM Peak Street Hour	Ln(T) = 0.89 Ln(X) - 0.02	0.86	0.54	83	49	132	x
AM Generator	Ln(T) = 0.94 Ln(X) - 0.29	0.91	0.54	37	95	132	x
PM Generator	T = 0.66(X) + 1.41	0.94	0.67	97	67	164	x
Saturday	T = 14.01(X) - 521.69	0.93	11.89	1463	1462	2925	x
Saturday Generator	T = 1.08(X) - 33.24	0.92	0.94	-	-	232	x
Sunday	T = 10.13(X) - 341.89	0.96	8.74	1075	1075	2150	x
Sunday Generator	T = 1.12(X) - 40.41	0.93	0.96	-	-	235	x

DTraffic Comments: For all Weekend Trip Generation (Saturday, Saturday Generator, Sunday, Sunday Generator), use Rates if <90 Units and use Equation if >=90 Units.

Trip Generation Worksheet, *ITE Trip Generation 10th Edition*

DYNAMIC TRAFFIC

Land Use Code: 150 Warehousing (KSF)
Size: 290 KSF
Prepared By: ARF
Date: 12/2/2022
Job #: 1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	29	285	50%	50%
AM Peak Street Hour	34	451	77%	23%
PM Peak Street Hour	47	400	27%	73%
AM Generator	23	274	65%	35%
PM Generator	25	275	24%	76%
Saturday	3	226	50%	50%
Saturday Generator	2	129	64%	36%
Sunday	3	226	50%	50%
Sunday Generator	2	129	52%	48%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	0.15	1.74	16.93	1.55	253	252	505	
AM Peak Street Hour	0.02	0.17	1.93	0.20	38	11	49	
PM Peak Street Hour	0.01	0.19	1.80	0.18	15	40	55	
AM Generator	0.02	0.22	2.08	0.28	42	22	64	
PM Generator	0.02	0.24	1.80	0.24	17	53	70	
Saturday	0.01	0.15	1.58	1.12	22	22	44	x
Saturday Generator	0.01	0.05	0.22		10	5	15	x
Sunday	0.03	0.06	0.32	0.23	9	8	17	x
Sunday Generator	0.02	0.04	0.11		6	6	12	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 1.58(X) + 45.54	0.93	1.74	252	252	504	x
AM Peak Street Hour	T = 0.12(X) + 25.32	0.69	0.21	46	14	60	x
PM Peak Street Hour	T = 0.12(X) + 27.82	0.65	0.22	17	46	63	x
AM Generator	T = 0.11(X) + 30.07	0.85	0.21	40	22	62	x
PM Generator	T = 0.15(X) + 22.52	0.91	0.23	16	50	66	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

DTraffic Comments: Generally accepted as warehouse if < 10% office use & if office use is ancillary to warehouse use

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	252 Senior Adult Housing - Multifamily
Setting:	General Urban/Suburban
Size:	100.000 Dwelling Units
Prepared By:	ARF
Date:	12/2/2022
Job #:	1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	6	72	50%	50%
AM Peak Street Hour	9	73	34%	66%
PM Peak Street Hour	9	73	56%	44%
AM Generator	10	79	45%	55%
PM Generator	10	79	54%	46%
Saturday	8	76	50%	50%
Saturday Generator	9	84	54%	46%
Sunday	8	76	50%	50%
Sunday Generator	8	76	51%	49%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total
Weekday	2.59	3.24	4.79	0.53	162	162	324
AM Peak Street Hour	0.13	0.20	0.27	0.04	7	13	20
PM Peak Street Hour	0.16	0.25	0.36	0.06	14	11	25
AM Generator	0.19	0.29	0.64	0.10	13	16	29
PM Generator	0.24	0.30	0.46	0.06	16	14	30
Saturday	1.84	2.74	4.07	0.62	137	137	274
Saturday Generator	0.23	0.32	0.50	0.09	17	15	32
Sunday	2.15	2.70	4.25	0.62	135	135	270
Sunday Generator	0.25	0.34	0.55	0.11	17	17	34

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 2.89(X) + 24.82	0.99	3.14	157	157	314	x
AM Peak Street Hour	T = 0.19(X) + 0.90	0.85	0.20	7	13	20	x
PM Peak Street Hour	T = 0.25(X) + 0.07	0.84	0.25	14	11	25	x
AM Generator	T = 0.19(X) + 8.01	0.85	0.27	12	15	27	x
PM Generator	T = 0.29(X) + 0.82	0.93	0.30	16	14	30	x
Saturday	T = 2.33(X) + 31.21	0.90	2.64	132	132	264	x
Saturday Generator	Ln(T) = 0.93 Ln(X) - 0.81	0.87	0.32	17	15	32	x
Sunday	T = 2.01(X) + 52.51	0.91	2.54	127	127	254	x
Sunday Generator	Ln(T) = 0.78 Ln(X) - 0.08	0.80	0.34	17	17	34	x

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	912 Drive-in Bank
Setting:	General Urban/Suburban
Size:	3.150 KSF
Prepared By:	ARF
Date:	12/2/2022
Job #:	1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	19	6	50%	50%
AM Peak Street Hour	44	5	58%	42%
PM Peak Street Hour	114	4	50%	50%
AM Generator	51	5	53%	47%
PM Generator	57	5	50%	50%
Saturday	5	3	50%	50%
Saturday Generator	41	4	51%	49%
Sunday	5	3	50%	50%
Sunday Generator	5	3	0%	0%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	32.67	100.35	408.42	66.62	158	158	316	x
AM Peak Street Hour	2.12	9.95	29.47	6.00	18	13	31	x
PM Peak Street Hour	3.04	21.01	109.91	15.13	33	33	66	x
AM Generator	4.18	14.78	47.03	9.60	25	22	47	x
PM Generator	4.54	20.92	68.50	13.57	33	33	66	x
Saturday	42.46	86.48	171.78	38.92	136	136	272	x
Saturday Generator	7.18	26.35	107.00	15.32	42	41	83	x
Sunday	23.41	31.96	69.31	15.99	51	50	101	x
Sunday Generator	3.68	4.79	7.43	1.21	-	-	15	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total
Weekday	*Not Given*		-	-	-	-
AM Peak Street Hour	*Not Given*		-	-	-	-
PM Peak Street Hour	*Not Given*		-	-	-	-
AM Generator	*Not Given*		-	-	-	-
PM Generator	*Not Given*		-	-	-	-
Saturday	*Not Given*		-	-	-	-
Saturday Generator	*Not Given*		-	-	-	-
Sunday	*Not Given*		-	-	-	-
Sunday Generator	*Not Given*		-	-	-	-

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	912 Drive-in Bank
Setting:	General Urban/Suburban
Size:	3.15 KSF
Prepared By:	ARF
Date:	12/2/2022
Job #:	1021-22-01537

Calculation of Passby Trips

Trip Type	Passby %		ITE Average Rates: Trip Generation In	Out	Total	ITE Equations: Trip Generation In	Out	Total
AM Peak Street Hour								
Total	29%	x	18	13	31	-	-	-
Passby			5	4	9	-	-	-
New (Primary)			13	9	22	-	-	-
PM Peak Street Hour								
Total	35%	x	33	33	66	-	-	-
Passby			12	11	23	-	-	-
New (Primary)			21	22	43	-	-	-
AM Generator								
Total	29%	x	25	22	47	-	-	-
Passby			7	7	14	-	-	-
New (Primary)			18	15	33	-	-	-
PM Generator								
Total	35%	x	33	33	66	-	-	-
Passby			12	11	23	-	-	-
New (Primary)			21	22	43	-	-	-
Saturday Generator								
Total	38%	x	42	41	83	-	-	-
Passby			16	16	32	-	-	-
New (Primary)			26	25	51	-	-	-

Passby Comments: -

Trip Generation Worksheet, *ITE Trip Generation 10th Edition*

DYNAMIC TRAFFIC

Land Use Code: 150 Warehousing (KSF)
Size: 927.00 KSF
Prepared By: ARF
Date: 12/2/2022
Job #: 1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	29	285	50%	50%
AM Peak Street Hour	34	451	77%	23%
PM Peak Street Hour	47	400	27%	73%
AM Generator	23	274	65%	35%
PM Generator	25	275	24%	76%
Saturday	3	226	50%	50%
Saturday Generator	2	129	64%	36%
Sunday	3	226	50%	50%
Sunday Generator	2	129	52%	48%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	0.15	1.74	16.93	1.55	807	806	1613	
AM Peak Street Hour	0.02	0.17	1.93	0.20	122	36	158	
PM Peak Street Hour	0.01	0.19	1.80	0.18	48	128	176	
AM Generator	0.02	0.22	2.08	0.28	133	71	204	
PM Generator	0.02	0.24	1.80	0.24	53	169	222	
Saturday	0.01	0.15	1.58	1.12	70	69	139	x
Saturday Generator	0.01	0.05	0.22		29	17	46	x
Sunday	0.03	0.06	0.32	0.23	28	28	56	x
Sunday Generator	0.02	0.04	0.11		19	18	37	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 1.58(X) + 45.54	0.93	1.63	755	755	1510	x
AM Peak Street Hour	T = 0.12(X) + 25.32	0.69	0.15	105	32	137	x
PM Peak Street Hour	T = 0.12(X) + 27.82	0.65	0.15	38	101	139	x
AM Generator	T = 0.11(X) + 30.07	0.85	0.14	86	46	132	x
PM Generator	T = 0.15(X) + 22.52	0.91	0.17	39	123	162	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

DTraffic Comments: Generally accepted as warehouse if < 10% office use & if office use is ancillary to warehouse use

Trip Generation Worksheet, *ITE Trip Generation 10th Edition*

DYNAMIC TRAFFIC

Land Use Code: 150 Warehousing (KSF)
Size: 215.20 KSF
Prepared By: ARF
Date: 12/2/2022
Job #: 1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	29	285	50%	50%
AM Peak Street Hour	34	451	77%	23%
PM Peak Street Hour	47	400	27%	73%
AM Generator	23	274	65%	35%
PM Generator	25	275	24%	76%
Saturday	3	226	50%	50%
Saturday Generator	2	129	64%	36%
Sunday	3	226	50%	50%
Sunday Generator	2	129	52%	48%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	0.15	1.74	16.93	1.55	187	187	374	
AM Peak Street Hour	0.02	0.17	1.93	0.20	28	9	37	
PM Peak Street Hour	0.01	0.19	1.80	0.18	11	30	41	
AM Generator	0.02	0.22	2.08	0.28	31	16	47	
PM Generator	0.02	0.24	1.80	0.24	12	40	52	
Saturday	0.01	0.15	1.58	1.12	16	16	32	x
Saturday Generator	0.01	0.05	0.22		7	4	11	x
Sunday	0.03	0.06	0.32	0.23	7	6	13	x
Sunday Generator	0.02	0.04	0.11		5	4	9	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 1.58(X) + 45.54	0.93	1.79	193	193	386	x
AM Peak Street Hour	T = 0.12(X) + 25.32	0.69	0.24	39	12	51	x
PM Peak Street Hour	T = 0.12(X) + 27.82	0.65	0.25	15	39	54	x
AM Generator	T = 0.11(X) + 30.07	0.85	0.25	35	19	54	x
PM Generator	T = 0.15(X) + 22.52	0.91	0.26	13	42	55	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

DTraffic Comments: Generally accepted as warehouse if < 10% office use & if office use is ancillary to warehouse use

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	220 Multifamily Housing (Low-Rise) Not Close to Rail Transit
Setting:	General Urban/Suburban
Size:	246.000 Dwelling Units
Prepared By:	ARF
Date:	12/2/2022
Job #:	1021-22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	22	229	50%	50%
AM Peak Street Hour	49	249	24%	76%
PM Peak Street Hour	59	241	63%	37%
AM Generator	40	234	24%	76%
PM Generator	38	231	62%	38%
Saturday	1	282	50%	50%
Saturday Generator	1	282		
Sunday	1	282	50%	50%
Sunday Generator	1	282		

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	2.46	6.74	12.50	1.79	829	829	1658	
AM Peak Street Hour	0.13	0.40	0.73	0.12	24	74	98	
PM Peak Street Hour	0.08	0.51	1.04	0.15	79	46	125	
AM Generator	0.25	0.47	0.98	0.16	28	88	116	
PM Generator	0.25	0.57	1.26	0.20	87	53	140	
Saturday	4.55	4.55	4.55		560	559	1119	x
Saturday Generator	0.41	0.41	0.41		-	-	101	x
Sunday	3.86	3.86	3.86		475	475	950	x
Sunday Generator	0.36	0.36	0.36		-	-	89	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 6.41(X) + 75.31	0.86	6.72	826	826	1652	x
AM Peak Street Hour	T = 0.31(X) + 22.85	0.79	0.40	24	75	99	x
PM Peak Street Hour	T = 0.43(X) + 20.55	0.84	0.51	79	47	126	x
AM Generator	T = 0.35(X) + 28.13	0.76	0.46	27	87	114	x
PM Generator	T = 0.42(X) + 34.78	0.80	0.56	86	52	138	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

ITE Land Use Subcategory Description and/or DTraffic Comments:

A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station is 1/2 mile or less.

It should also be noted that the Resorts World New York City study provides hourly volume data that indicates that the peak hours of traffic for the facility generally occur on Friday and Saturday between 8 PM and 10 PM. Somewhat similar evening peak traffic periods are expected for the proposed Newburgh facility. It is important to note that Newburgh Mall currently closes at 8PM therefore traffic generation of the remainder of the mall would be minimal during the expected highest peaks of the proposed facility.

Comparison of Existing Retail Use to Proposed Video Lottery Use

A comparison of the existing traffic generation of the existing 90,000 sq. ft. of retail space to that for the proposed 1,400 VLT entertainment use during peak hours is summarized in Table No. 4 below based on the information contained Tables No. 2 and 3 above.

TABLE NO. 4
COMPARISON OF TRAFFIC GENERATION VOLUMES
EXISTING RETAIL USE VS. PROPOSED VIDEO LOTTERY USE

TIME PERIOD	ENTRY	EXIT	TOTAL
EXISTING 90,000 SQ. FT. RETAIL SPACE[1]			
WEEKDAY PM PEAK	165	179	343
SATURDAY AFTERNOON PEAK	218	201	419
PROPSOED 1,400 VIDEO LOTTERY TERMINAL FACILITY[2]			
WEEKDAY PM PEAK	189	121	310
SATURDAY AFTERNOON PEAK	151	163	314
SATURDAY EVENING PEAK	234	177	411

NOTES:
1. TRAFFIC GENERATION FOR EXISTING 90,000 SQ. FT. RETAIL SPACES BASED ON 2019 TRAFFIC VOLUME DATA ESTIMATES AS CONTAINED IN TABLE NO. 2.
2. TRAFFIC GENERATION FOR PROPOSED 1,400 VIDEO LOTTERY TERMINAL FACILITY BASED ON RESORTS WORLD NYC DATA ESTIMATES AS CONTAINED IN TABLE NO. 3.

As indicated in the table above, the level of peak hour traffic generation for the proposed VLT use is anticipated to be comparable to the peak hour traffic generation associated with the existing 90,000 sq. ft. of retail space that will be converted for the proposed VLT use. As noted previously, the peak hour of traffic associated with the proposed Resorts World VLT use will occur after the closing of the remainder of the Mall and therefore occur when the other Site related traffic as well as background traffic volumes along the area roadways are significantly lower and thus the anticipated peak traffic of the video lottery facility will be more easily accommodated. Based on the traffic generation comparison between the existing and proposed

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	822 Strip Retail Plaza (<40K)
Setting:	General Urban/Suburban
Size:	20.000 KSF
Prepared By:	OSS
Date:	11/13/2023
Job #:	1021 22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	4	19	50%	50%
AM Peak Street Hour	5	18	60%	40%
PM Peak Street Hour	25	21	50%	50%
AM Generator	6	16	50%	50%
PM Generator	5	16	54%	46%
Saturday	0	0	0%	0%
Saturday Generator	12	27	51%	49%
Sunday	0	0	0%	0%
Sunday Generator	0	0	0%	0%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	47.86	54.45	65.07	7.81	545	544	1089	
AM Peak Street Hour	1.60	2.36	3.73	0.94	28	19	47	x
PM Peak Street Hour	2.81	6.59	15.20	2.94	66	66	132	
AM Generator	2.40	7.60	21.30	6.45	76	76	152	x
PM Generator	6.27	13.24	24.11	7.40	143	122	265	x
Saturday					-	-		x
Saturday Generator	1.88	6.57	14.23	3.45	67	64	131	x
Sunday					-	-		x
Sunday Generator					-	-		x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 42.20(X) + 229.68	0.96	53.70	537	537	1074	x
AM Peak Street Hour	Ln(T) = 0.66 Ln(X) + 1.84	0.57	2.25	27	18	45	
PM Peak Street Hour	Ln(T) = 0.71 Ln(X) + 2.72	0.56	6.35	64	63	127	x
AM Generator	*Not Given*	*0.00*	*0.05*	1	0	*1*	
PM Generator	*Not Given*	*0.00*	*0.05*	1	0	*1*	
Saturday	*Not Given*	*0.00*	*0.05*	-	-	*1*	
Saturday Generator	*Not Given*	*0.00*	*0.05*	1	0	*1*	
Sunday	*Not Given*	*0.00*	*0.05*	-	-	*1*	
Sunday Generator	*Not Given*		-	-	-	-	

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code: 150 Warehousing
Setting: General Urban/Suburban
Size: 173.000 KSF
Prepared By: OSS
Date: 11/13/2023
Job #: 1021 22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	31	292	50%	50%
AM Peak Street Hour	36	448	77%	23%
PM Peak Street Hour	49	400	28%	72%
AM Generator	25	284	66%	34%
PM Generator	27	284	24%	76%
Saturday	3	226	50%	50%
Saturday Generator	2	129	64%	36%
Sunday	3	226	50%	50%
Sunday Generator	2	129	52%	48%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	0.15	1.71	16.93	1.48	148	148	296	
AM Peak Street Hour	0.02	0.17	1.93	0.19	22	7	29	
PM Peak Street Hour	0.01	0.18	1.80	0.18	9	22	31	
AM Generator	0.02	0.21	2.06	0.26	24	12	36	
PM Generator	0.02	0.23	1.80	0.23	10	30	40	
Saturday	0.01	0.15	1.58	0.53	13	13	26	x
Saturday Generator	0.01	0.05	0.22		6	3	9	x
Sunday	0.03	0.06	0.32	0.10	5	5	10	x
Sunday Generator	0.02	0.04	0.11		4	3	7	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 1.58(X) + 38.29	0.92	1.80	156	156	312	x
AM Peak Street Hour	T = 0.12(X) + 23.62	0.69	0.25	34	10	44	x
PM Peak Street Hour	T = 0.12(X) + 26.48	0.65	0.27	13	34	47	x
AM Generator	T = 0.11(X) + 28.55	0.85	0.28	32	16	48	x
PM Generator	T = 0.15(X) + 20.47	0.90	0.27	11	35	46	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code: 150 Warehousing
Setting: General Urban/Suburban
Size: 56.000 KSF
Prepared By: OSS
Date: 11/13/2023
Job #: 1021 22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	31	292	50%	50%
AM Peak Street Hour	36	448	77%	23%
PM Peak Street Hour	49	400	28%	72%
AM Generator	25	284	66%	34%
PM Generator	27	284	24%	76%
Saturday	3	226	50%	50%
Saturday Generator	2	129	64%	36%
Sunday	3	226	50%	50%
Sunday Generator	2	129	52%	48%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	0.15	1.71	16.93	1.48	48	48	96	
AM Peak Street Hour	0.02	0.17	1.93	0.19	8	2	10	
PM Peak Street Hour	0.01	0.18	1.80	0.18	3	7	10	
AM Generator	0.02	0.21	2.06	0.26	8	4	12	
PM Generator	0.02	0.23	1.80	0.23	3	10	13	
Saturday	0.01	0.15	1.58	0.53	4	4	8	x
Saturday Generator	0.01	0.05	0.22		2	1	3	x
Sunday	0.03	0.06	0.32	0.10	2	1	3	x
Sunday Generator	0.02	0.04	0.11		1	1	2	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 1.58(X) + 38.29	0.92	2.27	64	63	127	x
AM Peak Street Hour	T = 0.12(X) + 23.62	0.69	0.54	23	7	30	x
PM Peak Street Hour	T = 0.12(X) + 26.48	0.65	0.59	9	24	33	x
AM Generator	T = 0.11(X) + 28.55	0.85	0.63	23	12	35	x
PM Generator	T = 0.15(X) + 20.47	0.90	0.52	7	22	29	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

ITE Land Use Subcategory Description and/or DTraffic Comments:

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code:	720 Medical-Dental Office Building - Stand Alone
Setting:	General Urban/Suburban
Size:	3.515 KSF
Prepared By:	OSS
Date:	1/16/2024
Job #:	1021 22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	18	15	50%	50%
AM Peak Street Hour	24	25	79%	21%
PM Peak Street Hour	30	23	30%	70%
AM Generator	21	15	59%	41%
PM Generator	22	18	40%	60%
Saturday	3	31	50%	50%
Saturday Generator	2	34	57%	43%
Sunday	2	34	50%	50%
Sunday Generator	2	34	52%	48%

Trip Generation using ITE Average Rates

Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	14.52	36.00	100.75	13.38	64	63	127	
AM Peak Street Hour	0.87	3.10	14.30	1.49	9	2	11	
PM Peak Street Hour	0.62	3.93	8.86	1.86	4	10	14	
AM Generator	1.21	3.74	19.28	2.14	8	5	13	
PM Generator	1.88	4.79	15.55	1.62	7	10	17	
Saturday	5.24	13.78	21.93	9.26	24	24	48	x
Saturday Generator	1.33	3.02	4.02		6	5	11	x
Sunday	0.39	1.14	1.58		2	2	4	x
Sunday Generator	0.12	0.22	0.28		1	0	1	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	T = 42.97(X) - 108.01	0.92	12.23	22	21	43	x
AM Peak Street Hour	Ln(T) = 0.90 Ln(X) + 1.34	0.80	3.41	9	3	12	x
PM Peak Street Hour	T = 4.07(X) - 3.17	0.77	3.13	3	8	11	x
AM Generator	T = 3.56(X) + 2.66	0.74	4.27	9	6	15	x
PM Generator	T = 5.36(X) - 10.42	0.95	2.28	3	5	8	x
Saturday	*Not Given*		-	-	-	-	
Saturday Generator	*Not Given*		-	-	-	-	
Sunday	*Not Given*		-	-	-	-	
Sunday Generator	*Not Given*		-	-	-	-	

ITE Land Use Subcategory Description and/or DTraffic Comments:

Per ITE, "Analysis of medical-dental office building data found that trip generation rates are measurably different for sites located within or adjacent to a hospital campus and sites that are stand-alone."

Trip Generation Worksheet, *ITE Trip Generation 11th Edition*

DYNAMIC TRAFFIC

Land Use Code: 151 Mini-Warehouse
Setting: General Urban/Suburban
Size: 85.000 KSF
Prepared By: OSS
Date: 1/16/2024
Job #: 1021 22-01537

ITE Study Information

Peak Hour	# Studies	Avg. Variable	Distribution In	Distribution Out
Weekday	16	55	50%	50%
AM Peak Street Hour	13	70	59%	41%
PM Peak Street Hour	18	59	47%	53%
AM Generator	11	66	51%	49%
PM Generator	16	56	51%	49%
Saturday	6	43	50%	50%
Saturday Generator	3	90	62%	38%
Sunday	5	40	50%	50%
Sunday Generator	2	79	45%	55%

Trip Generation using ITE Average Rates

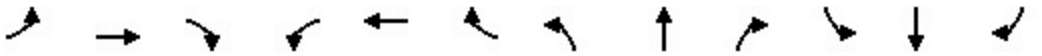
Peak Hour	Rate Min.	Rate Avg.	Rate Max.	Rate S.D.	Trip Generation In	Trip Generation Out	Trip Generation Total	
Weekday	0.38	1.45	3.25	0.92	62	61	123	x
AM Peak Street Hour	0.04	0.09	0.17	0.05	5	3	8	x
PM Peak Street Hour	0.02	0.15	0.64	0.14	6	7	13	x
AM Generator	0.07	0.18	0.79	0.16	8	7	15	x
PM Generator	0.06	0.18	1.05	0.14	8	7	15	x
Saturday	1.21	1.77	3.29	0.76	75	75	150	x
Saturday Generator	0.04	0.17	0.31	0.14	9	5	14	x
Sunday	0.69	1.50	3.70	1.01	64	64	128	x
Sunday Generator	0.16	0.20	0.23		8	9	17	x

Trip Generation using ITE Equations

Peak Hour	Equation	R^2 value	Effective Rate	Trip Generation In	Trip Generation Out	Trip Generation Total
Weekday	*Not Given*		-	-	-	-
AM Peak Street Hour	*Not Given*		-	-	-	-
PM Peak Street Hour	*Not Given*		-	-	-	-
AM Generator	*Not Given*		-	-	-	-
PM Generator	*Not Given*		-	-	-	-
Saturday	T = 1.00(X) + 33.19	0.57	1.39	59	59	118
Saturday Generator	*Not Given*		-	-	-	-
Sunday	*Not Given*		-	-	-	-
Sunday Generator	*Not Given*		-	-	-	-

ITE Land Use Subcategory Description and/or DTraffic Comments:

Appendix C
Capacity Analysis



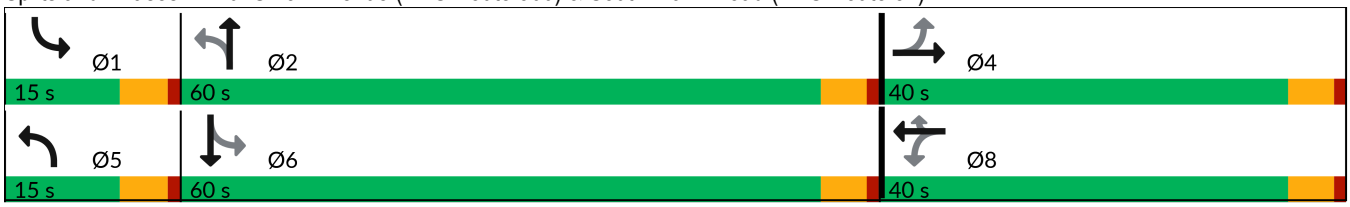
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	259	166	44	341	90	254	581	45	79	418	70
Future Volume (vph)	69	259	166	44	341	90	254	581	45	79	418	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.955				0.850		0.989			0.978	
Flt Protected		0.993			0.994		0.950			0.950		
Satd. Flow (prot)	0	1774	0	0	1797	1538	1762	2023	0	1702	1772	0
Flt Permitted		0.741			0.891		0.204			0.145		
Satd. Flow (perm)	0	1324	0	0	1610	1538	378	2023	0	260	1772	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				70		5			10	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	4%	1%	2%	1%	1%	1%	1%	2%	3%	2%	1%
Adj. Flow (vph)	70	262	168	44	344	91	257	587	45	80	422	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	500	0	0	388	91	257	632	0	80	493	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	15.0	60.0		15.0	60.0	
Total Split (%)	34.8%	34.8%		34.8%	34.8%	34.8%	13.0%	52.2%		13.0%	52.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		35.4			35.4	35.4	45.0	37.2		40.2	32.4	
Actuated g/C Ratio		0.38			0.38	0.38	0.48	0.40		0.43	0.35	
v/c Ratio		0.96			0.63	0.14	0.77	0.77		0.34	0.79	
Control Delay (s/veh)		62.5			31.7	9.3	30.5	32.3		15.2	36.1	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		62.5			31.7	9.3	30.5	32.3		15.2	36.1	
LOS		E			C	A	C	C		B	D	
Approach Delay (s/veh)		62.5			27.5			31.8			33.2	

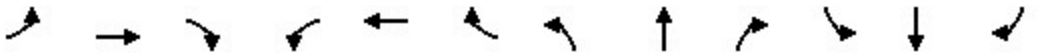
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		E			C			C			C	
Queue Length 50th (ft)		269			180	8	82	328		23	250	
Queue Length 95th (ft)		#606			#360	47	#156	474		44	363	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		518			612	628	333	1211		275	1063	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.97			0.63	0.14	0.77	0.52		0.29	0.46	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 93.1			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay (s/veh): 37.6		Intersection LOS: D	
Intersection Capacity Utilization 104.9%		ICU Level of Service G	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)

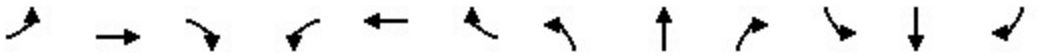




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	259	166	44	341	90	254	581	45	79	418	70
Future Volume (veh/h)	69	259	166	44	341	90	254	581	45	79	418	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1964	1919	1964	1864	1879	1879	2042	2124	2108	1894	1909	1924
Adj Flow Rate, veh/h	70	262	168	44	344	91	257	587	45	80	422	71
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	4	1	2	1	1	1	1	2	3	2	1
Cap, veh/h	101	311	183	92	594	625	367	732	56	259	497	84
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.11	0.38	0.38	0.05	0.31	0.31
Sat Flow, veh/h	130	792	466	109	1514	1593	1945	1948	149	1804	1593	268
Grp Volume(v), veh/h	500	0	0	388	0	91	257	0	632	80	0	493
Grp Sat Flow(s),veh/h/ln	1388	0	0	1622	0	1593	1945	0	2097	1804	0	1861
Q Serve(g_s), s	15.1	0.0	0.0	0.0	0.0	3.0	6.8	0.0	21.8	2.4	0.0	20.1
Cycle Q Clear(g_c), s	28.6	0.0	0.0	13.5	0.0	3.0	6.8	0.0	21.8	2.4	0.0	20.1
Prop In Lane	0.14		0.34	0.11		1.00	1.00		0.07	1.00		0.14
Lane Grp Cap(c), veh/h	595	0	0	686	0	625	367	0	788	259	0	581
V/C Ratio(X)	0.84	0.00	0.00	0.57	0.00	0.15	0.70	0.00	0.80	0.31	0.00	0.85
Avail Cap(c_a), veh/h	658	0	0	752	0	687	392	0	1421	397	0	1261
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	0.0	18.9	0.0	15.9	18.2	0.0	22.6	19.4	0.0	26.1
Incr Delay (d2), s/veh	8.8	0.0	0.0	0.8	0.0	0.1	5.1	0.0	2.0	0.7	0.0	3.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.0	0.0	5.2	0.0	1.0	3.2	0.0	10.1	1.0	0.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.8	0.0	0.0	19.7	0.0	16.0	23.3	0.0	24.6	20.0	0.0	29.7
LnGrp LOS	C			B		B	C		C	C		C
Approach Vol, veh/h		500			479			889			573	
Approach Delay, s/veh		32.8			19.0			24.2			28.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	35.5		36.9	14.0	30.3		36.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	55.0		35.0	10.0	55.0		35.0				
Max Q Clear Time (g_c+I1), s	4.4	23.8		30.6	8.8	22.1		15.5				
Green Ext Time (p_c), s	0.1	4.4		1.3	0.2	3.2		2.7				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			25.9									
HCM 6th LOS			C									



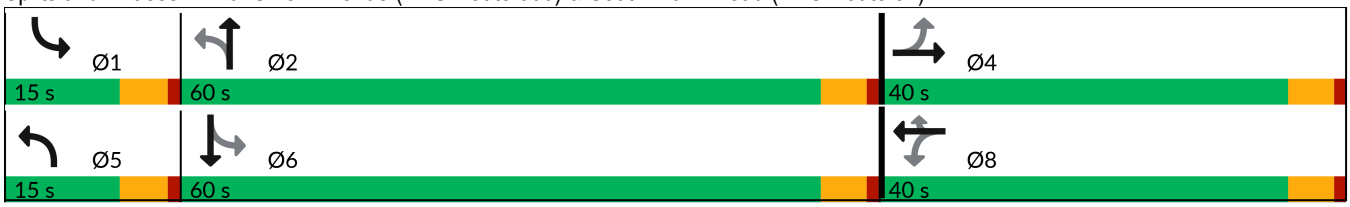
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	201	186	47	173	86	213	553	37	71	522	61
Future Volume (vph)	73	201	186	47	173	86	213	553	37	71	522	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.945				0.850		0.991			0.984	
Flt Protected		0.992			0.989		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1793	1553	1762	2030	0	1754	1795	0
Flt Permitted		0.903			0.800		0.140			0.213		
Satd. Flow (perm)	0	1617	0	0	1451	1553	260	2030	0	393	1795	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31				89		4			7	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	0%	1%	0%	1%	1%	0%	0%	1%	3%
Adj. Flow (vph)	75	207	192	48	178	89	220	570	38	73	538	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	474	0	0	226	89	220	608	0	73	601	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	15.0	60.0		15.0	60.0	
Total Split (%)	34.8%	34.8%		34.8%	34.8%	34.8%	13.0%	52.2%		13.0%	52.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		35.4			35.4	35.4	50.8	43.0		45.6	38.0	
Actuated g/C Ratio		0.36			0.36	0.36	0.52	0.44		0.46	0.39	
v/c Ratio		0.79			0.43	0.14	0.76	0.68		0.25	0.86	
Control Delay (s/veh)		39.6			29.8	6.6	33.9	27.2		12.6	40.7	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		39.6			29.8	6.6	33.9	27.2		12.6	40.7	
LOS		D			C	A	C	C		B	D	
Approach Delay (s/veh)		39.7			23.3			29.1			37.7	

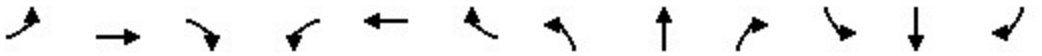
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		D			C			C			D	
Queue Length 50th (ft)		245			105	0	68	309		21	335	
Queue Length 95th (ft)		#525			218	37	#181	440		40	472	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		600			520	614	287	1147		331	1015	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.79			0.43	0.14	0.77	0.53		0.22	0.59	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 98.6			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 33.0		Intersection LOS: C	
Intersection Capacity Utilization 97.3%		ICU Level of Service F	
Analysis Period (min) 15			

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)

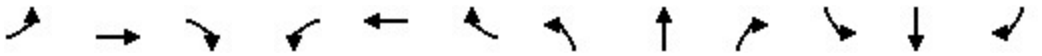




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	201	186	47	173	86	213	553	37	71	522	61
Future Volume (veh/h)	73	201	186	47	173	86	213	553	37	71	522	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1964	1949	1894	1879	1894	2042	2124	2140	1939	1924	1894
Adj Flow Rate, veh/h	75	207	192	48	178	89	220	570	38	73	538	63
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	2	0	1	0	1	1	0	0	1	3
Cap, veh/h	119	261	220	128	435	532	354	844	56	336	632	74
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.10	0.43	0.43	0.04	0.37	0.37
Sat Flow, veh/h	191	786	665	211	1313	1605	1945	1969	131	1847	1691	198
Grp Volume(v), veh/h	474	0	0	226	0	89	220	0	608	73	0	601
Grp Sat Flow(s),veh/h/ln	1642	0	0	1524	0	1605	1945	0	2100	1847	0	1889
Q Serve(g_s), s	13.6	0.0	0.0	0.0	0.0	3.0	4.9	0.0	17.5	1.8	0.0	22.0
Cycle Q Clear(g_c), s	20.5	0.0	0.0	6.9	0.0	3.0	4.9	0.0	17.5	1.8	0.0	22.0
Prop In Lane	0.16		0.41	0.21		1.00	1.00		0.06	1.00		0.10
Lane Grp Cap(c), veh/h	599	0	0	563	0	532	354	0	900	336	0	706
V/C Ratio(X)	0.79	0.00	0.00	0.40	0.00	0.17	0.62	0.00	0.68	0.22	0.00	0.85
Avail Cap(c_a), veh/h	823	0	0	775	0	747	427	0	1537	506	0	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	0.0	19.1	0.0	17.8	15.9	0.0	17.3	14.7	0.0	21.6
Incr Delay (d2), s/veh	3.7	0.0	0.0	0.5	0.0	0.1	2.0	0.0	0.9	0.3	0.0	3.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	0.0	2.8	0.0	1.0	2.0	0.0	7.6	0.7	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.3	0.0	0.0	19.6	0.0	17.9	17.9	0.0	18.2	15.0	0.0	24.6
LnGrp LOS	C			B		B	B		B	B		C
Approach Vol, veh/h		474			315			828			674	
Approach Delay, s/veh		27.3			19.1			18.1			23.6	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	37.2		29.9	12.2	33.1		29.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	55.0		35.0	10.0	55.0		35.0				
Max Q Clear Time (g_c+I1), s	3.8	19.5		22.5	6.9	24.0		8.9				
Green Ext Time (p_c), s	0.1	4.2		2.4	0.3	4.1		1.9				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			21.8									
HCM 6th LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	286	212	46	372	122	290	779	47	106	578	87
Future Volume (vph)	86	286	212	46	372	122	290	779	47	106	578	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.951				0.850		0.992			0.980	
Flt Protected		0.993			0.995		0.950			0.950		
Satd. Flow (prot)	0	1769	0	0	1798	1538	1762	2029	0	1702	1776	0
Flt Permitted		0.517			0.817		0.130			0.087		
Satd. Flow (perm)	0	921	0	0	1477	1538	241	2029	0	156	1776	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				87		4			9	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	4%	1%	2%	1%	1%	1%	1%	2%	3%	2%	1%
Adj. Flow (vph)	87	289	214	46	376	123	293	787	47	107	584	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	590	0	0	422	123	293	834	0	107	672	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	15.0	60.0		15.0	60.0	
Total Split (%)	34.8%	34.8%		34.8%	34.8%	34.8%	13.0%	52.2%		13.0%	52.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		35.3			35.3	35.3	57.8	47.7		54.8	46.2	
Actuated g/C Ratio		0.33			0.33	0.33	0.54	0.45		0.51	0.43	
v/c Ratio		1.83			0.86	0.21	1.06	0.91		0.52	0.86	
Control Delay (s/veh)		412.4			54.5	11.6	96.7	43.2		23.1	39.6	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		412.4			54.5	11.6	96.7	43.2		23.1	39.6	
LOS		F			D	B	F	D		C	D	
Approach Delay (s/veh)		412.4			44.9			57.2			37.4	

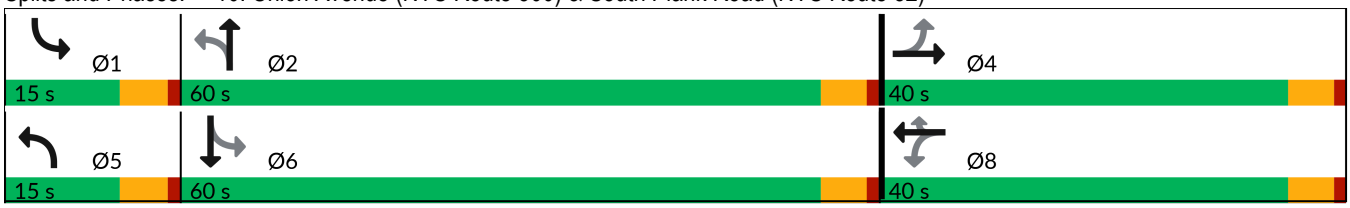
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		F			D			E			D	
Queue Length 50th (ft)		~638			285	18	~146	516		31	400	
Queue Length 95th (ft)		#898			#502	65	#331	#776		73	564	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		321			488	566	274	1056		228	927	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.84			0.86	0.22	1.07	0.79		0.47	0.72	

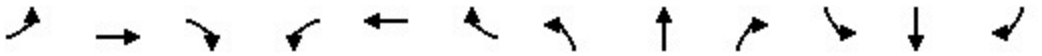
Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 106.7			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.84			
Intersection Signal Delay (s/veh): 118.8		Intersection LOS: F	
Intersection Capacity Utilization 123.3%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)

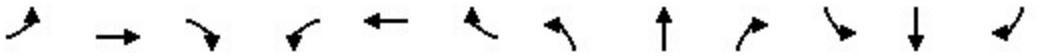




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	286	212	46	372	122	290	779	47	106	578	87
Future Volume (veh/h)	86	286	212	46	372	122	290	779	47	106	578	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1964	1919	1964	1864	1879	1879	2042	2124	2108	1894	1909	1924
Adj Flow Rate, veh/h	87	289	214	46	376	123	293	787	47	107	584	88
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	4	1	2	1	1	1	1	2	3	2	1
Cap, veh/h	68	154	103	77	492	557	319	887	53	224	649	98
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.10	0.45	0.45	0.05	0.40	0.40
Sat Flow, veh/h	75	440	293	105	1406	1593	1945	1984	118	1804	1621	244
Grp Volume(v), veh/h	590	0	0	422	0	123	293	0	834	107	0	672
Grp Sat Flow(s),veh/h/ln	808	0	0	1510	0	1593	1945	0	2103	1804	0	1865
Q Serve(g_s), s	11.4	0.0	0.0	0.0	0.0	5.4	8.6	0.0	36.4	3.4	0.0	33.8
Cycle Q Clear(g_c), s	35.0	0.0	0.0	23.6	0.0	5.4	8.6	0.0	36.4	3.4	0.0	33.8
Prop In Lane	0.15		0.36	0.11		1.00	1.00		0.06	1.00		0.13
Lane Grp Cap(c), veh/h	324	0	0	568	0	557	319	0	940	224	0	747
V/C Ratio(X)	1.82	0.00	0.00	0.74	0.00	0.22	0.92	0.00	0.89	0.48	0.00	0.90
Avail Cap(c_a), veh/h	324	0	0	568	0	557	319	0	1156	308	0	1025
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	0.0	28.0	0.0	22.9	21.9	0.0	25.3	21.9	0.0	28.1
Incr Delay (d2), s/veh	381.5	0.0	0.0	5.2	0.0	0.2	30.5	0.0	7.4	1.6	0.0	8.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	42.2	0.0	0.0	9.2	0.0	2.0	6.2	0.0	18.6	1.4	0.0	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	418.0	0.0	0.0	33.2	0.0	23.1	52.4	0.0	32.7	23.4	0.0	36.5
LnGrp LOS	F			C		C	D		C	C		D
Approach Vol, veh/h		590			545			1127			779	
Approach Delay, s/veh		418.0			30.9			37.8			34.7	
Approach LOS		F			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	49.7		40.0	15.0	45.1		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	55.0		35.0	10.0	55.0		35.0				
Max Q Clear Time (g_c+I1), s	5.4	38.4		37.0	10.6	35.8		25.6				
Green Ext Time (p_c), s	0.2	5.4		0.0	0.0	4.3		2.3				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			109.6									
HCM 6th LOS			F									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	228	225	49	199	115	257	700	38	100	666	69
Future Volume (vph)	89	228	225	49	199	115	257	700	38	100	666	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.944				0.850		0.992			0.986	
Flt Protected		0.992			0.990		0.950			0.950		
Satd. Flow (prot)	0	1775	0	0	1795	1553	1762	2031	0	1754	1799	0
Flt Permitted		0.751			0.717		0.078			0.101		
Satd. Flow (perm)	0	1344	0	0	1300	1553	145	2031	0	186	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				119		3			6	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	0%	1%	0%	1%	1%	0%	0%	1%	3%
Adj. Flow (vph)	92	235	232	51	205	119	265	722	39	103	687	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	559	0	0	256	119	265	761	0	103	758	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	15.0	60.0		15.0	60.0	
Total Split (%)	34.8%	34.8%		34.8%	34.8%	34.8%	13.0%	52.2%		13.0%	52.2%	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		35.2			35.2	35.2	61.1	51.1		57.7	49.3	
Actuated g/C Ratio		0.32			0.32	0.32	0.56	0.47		0.53	0.45	
v/c Ratio		1.23			0.61	0.20	1.15	0.80		0.47	0.93	
Control Delay (s/veh)		156.2			40.6	6.2	137.5	32.5		18.2	47.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		156.2			40.6	6.2	137.5	32.5		18.2	47.5	
LOS		F			D	A	F	C		B	D	
Approach Delay (s/veh)		156.3			29.7			59.7			44.1	

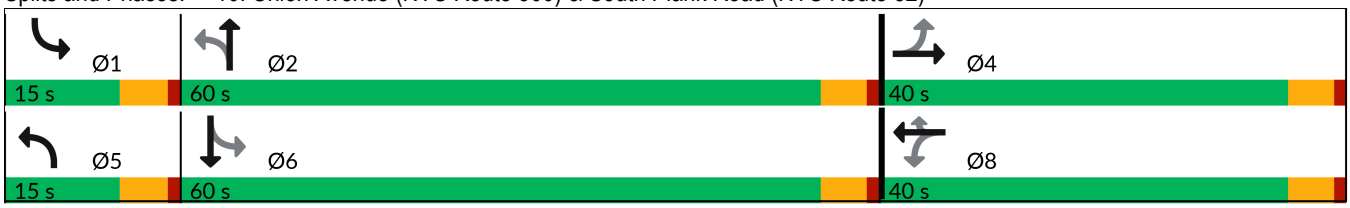
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		F			C			E			D	
Queue Length 50th (ft)		~515			164	0	~180	442		30	487	
Queue Length 95th (ft)		#735			259	42	#354	622		55	#736	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		452			416	578	229	1032		244	909	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.24			0.62	0.21	1.16	0.74		0.42	0.83	

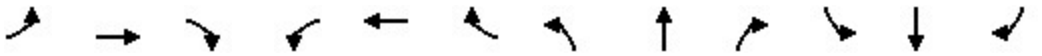
Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 109.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.24			
Intersection Signal Delay (s/veh): 70.1		Intersection LOS: E	
Intersection Capacity Utilization 114.0%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	228	225	49	199	115	257	700	38	100	666	69
Future Volume (veh/h)	89	228	225	49	199	115	257	700	38	100	666	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1979	1964	1949	1894	1879	1894	2042	2124	2140	1939	1924	1894
Adj Flow Rate, veh/h	92	235	232	51	205	119	265	722	39	103	687	71
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	2	0	1	0	1	1	0	0	1	3
Cap, veh/h	92	184	168	97	365	529	296	961	52	294	747	77
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.09	0.48	0.48	0.05	0.44	0.44
Sat Flow, veh/h	159	558	509	171	1109	1605	1945	1997	108	1847	1715	177
Grp Volume(v), veh/h	559	0	0	256	0	119	265	0	761	103	0	758
Grp Sat Flow(s),veh/h/ln	1227	0	0	1280	0	1605	1945	0	2105	1847	0	1892
Q Serve(g_s), s	20.7	0.0	0.0	0.0	0.0	5.7	8.1	0.0	31.2	3.2	0.0	40.1
Cycle Q Clear(g_c), s	35.0	0.0	0.0	14.3	0.0	5.7	8.1	0.0	31.2	3.2	0.0	40.1
Prop In Lane	0.16		0.42	0.20		1.00	1.00		0.05	1.00		0.09
Lane Grp Cap(c), veh/h	443	0	0	462	0	529	296	0	1013	294	0	824
V/C Ratio(X)	1.26	0.00	0.00	0.55	0.00	0.23	0.90	0.00	0.75	0.35	0.00	0.92
Avail Cap(c_a), veh/h	443	0	0	462	0	529	296	0	1089	378	0	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	28.0	0.0	25.8	24.6	0.0	22.4	18.8	0.0	28.3
Incr Delay (d2), s/veh	134.4	0.0	0.0	1.4	0.0	0.2	27.7	0.0	2.8	0.7	0.0	12.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.0	0.0	0.0	5.2	0.0	2.1	5.6	0.0	15.1	1.4	0.0	19.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	173.8	0.0	0.0	29.4	0.0	26.0	52.2	0.0	25.2	19.5	0.0	40.4
LnGrp LOS	F			C		C	D		C	B		D
Approach Vol, veh/h		559			375			1026			861	
Approach Delay, s/veh		173.8			28.3			32.2			37.9	
Approach LOS		F			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	56.1		40.0	15.0	51.3		40.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	55.0		35.0	10.0	55.0		35.0				
Max Q Clear Time (g_c+I1), s	5.2	33.2		37.0	10.1	42.1		16.3				
Green Ext Time (p_c), s	0.1	5.3		0.0	0.0	4.2		2.1				

Intersection Summary			
HCM 6th Ctrl Delay, s/veh		61.5	
HCM 6th LOS		E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	288	212	55	366	122	300	780	48	106	581	87
Future Volume (vph)	88	288	212	55	366	122	300	780	48	106	581	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.951				0.850		0.991			0.980	
Flt Protected		0.993			0.993		0.950			0.950		
Satd. Flow (prot)	0	1769	0	0	1794	1538	1762	2027	0	1702	1776	0
Flt Permitted		0.502			0.767		0.129			0.086		
Satd. Flow (perm)	0	894	0	0	1386	1538	239	2027	0	154	1776	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25				86		4			9	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	4%	1%	2%	1%	1%	1%	1%	2%	3%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	594	0	0	426	123	303	836	0	107	675	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	15.0	60.0		15.0	60.0	
Total Split (%)	34.8%	34.8%		34.8%	34.8%	34.8%	13.0%	52.2%		13.0%	52.2%	
Maximum Green (s)	35.0	35.0		35.0	35.0	35.0	10.0	55.0		10.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		35.3			35.3	35.3	58.0	47.9		54.9	46.3	
Actuated g/C Ratio		0.33			0.33	0.33	0.54	0.45		0.51	0.43	
v/c Ratio		1.90			0.93	0.21	1.10	0.91		0.52	0.87	
Control Delay (s/veh)		443.5			65.6	11.8	110.1	43.4		23.4	39.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		443.5			65.6	11.8	110.1	43.4		23.4	39.8	
LOS		F			E	B	F	D		C	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		443.5			53.6			61.2			37.6	
Approach LOS		F			D			E			D	
Queue Length 50th (ft)		~654			298	18	~163	518		31	402	
Queue Length 95th (ft)		#910			#529	65	#350	#780		74	569	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		312			457	565	273	1053		227	926	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.90			0.93	0.22	1.11	0.79		0.47	0.73	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 106.8			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.90			
Intersection Signal Delay (s/veh): 127.9		Intersection LOS: F	
Intersection Capacity Utilization 124.4%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
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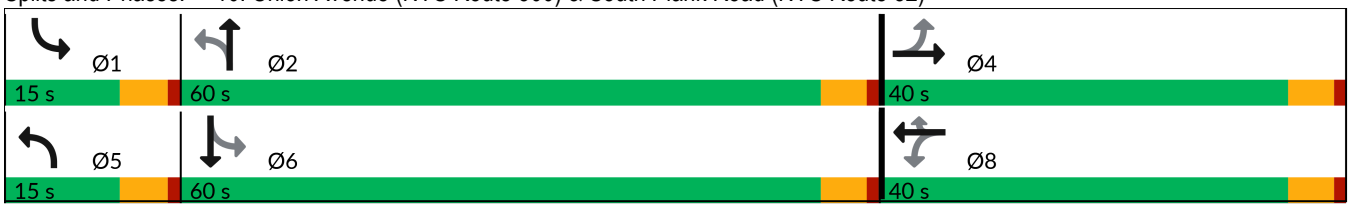
Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	232	225	63	190	115	274	702	40	100	671	69
Future Volume (vph)	92	232	225	63	190	115	274	702	40	100	671	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.945				0.850		0.992			0.986	
Flt Protected		0.992			0.988		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1792	1553	1762	2031	0	1754	1799	0
Flt Permitted		0.732			0.639		0.078			0.100		
Satd. Flow (perm)	0	1311	0	0	1159	1553	145	2031	0	185	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31				119		3			6	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	0%	1%	0%	1%	1%	0%	0%	1%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	566	0	0	261	119	282	765	0	103	763	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	15.0	60.0		15.0	60.0	
Total Split (%)	34.8%	34.8%		34.8%	34.8%	34.8%	13.0%	52.2%		13.0%	52.2%	
Maximum Green (s)	35.0	35.0		35.0	35.0	35.0	10.0	55.0		10.0	55.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		35.1			35.1	35.1	61.4	51.4		58.0	49.7	
Actuated g/C Ratio		0.32			0.32	0.32	0.56	0.47		0.53	0.45	
v/c Ratio		1.28			0.70	0.20	1.23	0.80		0.47	0.93	
Control Delay (s/veh)		177.3			46.3	6.2	165.5	32.6		18.2	47.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		177.3			46.3	6.2	165.5	32.6		18.2	47.9	
LOS		F			D	A	F	C		B	D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		177.4			33.8			68.4			44.5	
Approach LOS		F			C			E			D	
Queue Length 50th (ft)		~535			173	0	~207	446		30	493	
Queue Length 95th (ft)		#757			#297	42	#384	626		56	#744	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		440			370	577	228	1029		244	906	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.29			0.71	0.21	1.24	0.74		0.42	0.84	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 109.9			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.29			
Intersection Signal Delay (s/veh): 78.1		Intersection LOS: E	
Intersection Capacity Utilization 115.9%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
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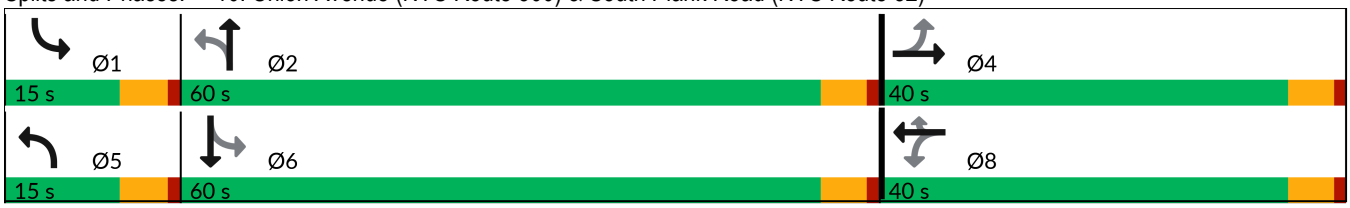
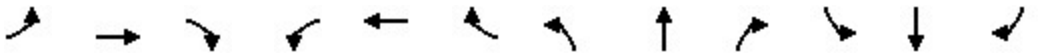
Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)





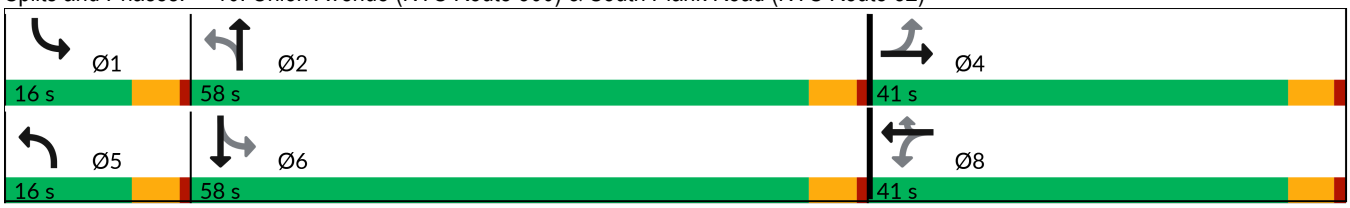
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	288	212	55	366	122	300	780	48	106	581	87
Future Volume (vph)	88	288	212	55	366	122	300	780	48	106	581	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.951				0.850		0.991			0.980	
Flt Protected		0.993			0.993		0.950			0.950		
Satd. Flow (prot)	0	1769	0	0	1794	1538	1762	2027	0	1702	1776	0
Flt Permitted		0.510			0.770		0.115			0.087		
Satd. Flow (perm)	0	908	0	0	1391	1538	213	2027	0	156	1776	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				87		4			9	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	1%	4%	1%	2%	1%	1%	1%	1%	2%	3%	2%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	594	0	0	426	123	303	836	0	107	675	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	41.0	41.0		41.0	41.0	41.0	16.0	58.0		16.0	58.0	
Total Split (%)	35.7%	35.7%		35.7%	35.7%	35.7%	13.9%	50.4%		13.9%	50.4%	
Maximum Green (s)	36.0	36.0		36.0	36.0	36.0	11.0	53.0		11.0	53.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		36.2			36.2	36.2	59.2	48.1		54.8	45.9	
Actuated g/C Ratio		0.33			0.33	0.33	0.55	0.44		0.51	0.42	
v/c Ratio		1.85			0.91	0.21	1.10	0.92		0.52	0.89	
Control Delay (s/veh)		419.4			62.5	11.4	110.6	45.4		23.3	43.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		419.4			62.5	11.4	110.6	45.4		23.3	43.5	
LOS		F			E	B	F	D		C	D	

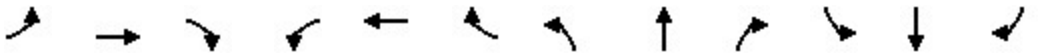
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		419.5			51.1			62.8			40.8	
Approach LOS		F			D			E			D	
Queue Length 50th (ft)		~659			302	18	~175	528		32	418	
Queue Length 95th (ft)		#900			#519	64	#363	#808		74	590	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		321			465	572	274	1002		240	879	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.85			0.92	0.22	1.11	0.83		0.45	0.77	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.3			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.85			
Intersection Signal Delay (s/veh): 124.2		Intersection LOS: F	
Intersection Capacity Utilization 124.4%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	232	225	63	190	115	274	702	40	100	671	69
Future Volume (vph)	92	232	225	63	190	115	274	702	40	100	671	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	11	11	14	14	11	11	11
Grade (%)		-2%			1%			-4%			-1%	
Storage Length (ft)	0		0	0		140	256		0	260		0
Storage Lanes	0		0	0		1	1		0	1		0
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		0.945				0.850		0.992			0.986	
Flt Protected		0.992			0.988		0.950			0.950		
Satd. Flow (prot)	0	1777	0	0	1792	1553	1762	2031	0	1754	1799	0
Flt Permitted		0.740			0.647		0.077			0.092		
Satd. Flow (perm)	0	1325	0	0	1174	1553	143	2031	0	170	1799	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32				119		3			6	
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		155			698			257			538	
Travel Time (s)		2.6			11.9			4.4			9.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	0%	1%	0%	1%	1%	0%	0%	1%	3%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	566	0	0	261	119	282	765	0	103	763	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Split (s)	8.0	8.0		8.0	8.0	8.0	8.0	8.0		8.0	8.0	
Total Split (s)	42.0	42.0		42.0	42.0	42.0	16.0	57.0		16.0	57.0	
Total Split (%)	36.5%	36.5%		36.5%	36.5%	36.5%	13.9%	49.6%		13.9%	49.6%	
Maximum Green (s)	37.0	37.0		37.0	37.0	37.0	11.0	52.0		11.0	52.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		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)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Act Effct Green (s)		37.1			37.1	37.1	63.2	52.2		58.6	49.9	
Actuated g/C Ratio		0.33			0.33	0.33	0.56	0.46		0.52	0.44	
v/c Ratio		1.24			0.67	0.20	1.18	0.81		0.49	0.95	
Control Delay (s/veh)		158.6			43.9	5.9	147.3	34.7		20.8	53.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		158.6			43.9	5.9	147.3	34.7		20.8	53.9	
LOS		F			D	A	F	C		C	D	

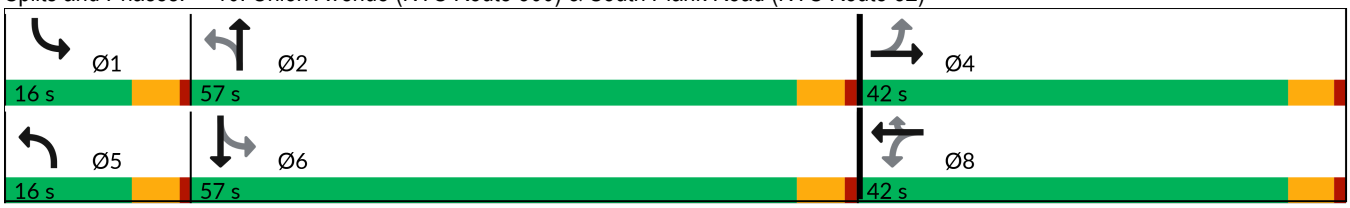
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay (s/veh)		158.6			32.0			65.1			50.0	
Approach LOS		F			C			E			D	
Queue Length 50th (ft)		~513			168	0	~200	463		31	520	
Queue Length 95th (ft)		#735			269	41	#379	661		65	#782	
Internal Link Dist (ft)		75			618			177			458	
Turn Bay Length (ft)						140	256			260		
Base Capacity (vph)		456			384	589	238	961		245	832	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		1.24			0.68	0.20	1.18	0.80		0.42	0.92	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 113			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.24			
Intersection Signal Delay (s/veh): 74.6		Intersection LOS: E	
Intersection Capacity Utilization 115.9%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Union Avenue (NYS Route 300) & South Plank Road (NYS Route 52)



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	14	17	1108	830	18
Future Vol, veh/h	18	14	17	1108	830	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	6	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	1	2	2
Mvmt Flow	20	15	18	1204	902	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2152	912	922	0	-	0
Stage 1	912	-	-	-	-	-
Stage 2	1240	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	53	332	741	-	-	-
Stage 1	392	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	52	332	741	-	-	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	383	-	-	-	-	-
Stage 2	273	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	25.1	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	741	-	214	-	-
HCM Lane V/C Ratio	0.025	-	0.163	-	-
HCM Control Delay (s/veh)	10	-	25.1	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q (veh)	0.1	-	0.6	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	25	29	982	931	28
Future Vol, veh/h	32	25	29	982	931	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-1	6	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	1	0	2
Mvmt Flow	34	27	31	1045	990	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2112	1005	1020	0	-	0
Stage 1	1005	-	-	-	-	-
Stage 2	1107	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	56	293	680	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	53	293	680	-	-	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	338	-	-	-	-	-
Stage 2	316	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	28.8	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	680	-	211	-	-
HCM Lane V/C Ratio	0.045	-	0.287	-	-
HCM Control Delay (s/veh)	10.5	-	28.8	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q (veh)	0.1	-	1.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	580	9	0	753	0	8
Future Vol, veh/h	580	9	0	753	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-1	-	-	3	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	2	2	1	2	2
Mvmt Flow	611	9	0	793	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	616
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	491
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	491
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	491	-	-	-
HCM Lane V/C Ratio	0.017	-	-	-
HCM Control Delay (s/veh)	12.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	537	14	0	533	0	12
Future Vol, veh/h	537	14	0	533	0	12
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, %	-1	-	-	3	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	1	2	2	1	2	2
Mvmt Flow	548	14	0	544	0	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	555
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	531
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	531
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	531	-	-	-
HCM Lane V/C Ratio	0.023	-	-	-
HCM Control Delay (s/veh)	11.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.1	-	-	-