



Engineering
& Design

Traffic Impact Study


April 11, 2022

Underhill Farm Redevelopment
Town of Yorktown, Westchester County, New York

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Project No. 20006297A

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I. Introduction

A. Project Description and Location

(Figure No. 1)

This report has been prepared to evaluate the potential traffic impacts associated with the proposed Underhill Farm Development, which is planned to be developed on the property of the former Soundview Prep. The site is situated on Underhill Avenue between Glenrock Street and NYS Route 118 in the Town of Yorktown, Westchester County, New York. The site is proposed to consist of a variety of multifamily housing units including rentals and condominiums totaling 148 dwelling units along with associated parking and a clubhouse and pool. The existing mansion building is planned to be redeveloped/refurbished to contain an 8-room Inn with a high-quality restaurant. An ancillary retail/office space of 11,000 square feet is also planned and will be on the ground floor of the apartment building. The project will be developed in phases with Phase 1 consisting of 64 apartments, as well as the renovation and refurbishment of the existing mansion. As part of the development, the site improvements will include the roadway and pedestrian connection to Beaver Ridge as well as the enhancements and pedestrian improvements around the existing pond and other offsite traffic and pedestrian improvements. Parking will also be provided for the new senior center, which is proposed at Beaver Ridge in the vicinity of the cross-access connection.

The Phase 2 development will include the 84 dwelling units of condominiums/townhouses. As shown on Figure No. 1, access to the development is proposed via one existing and one proposed access drive on Underhill Avenue as well as the connection to the existing Beaver Ridge development, which will be provided for cross traffic movements, pedestrians, and emergency vehicle access.

A Design Year of 2025 has been utilized in completing the traffic analysis in order to evaluate future traffic conditions associated with the completed and occupied development. It should also be noted that the development of this site was also considered as part of the SEQRA review of the Yorktown Heights Overlay District, which was recently approved by the Town of Yorktown Town Board. Also, as discussed in Section G, an additional evaluation which considers traffic from other significant potential developments in the area was undertaken to identify potential longer-term traffic improvements.

B. Scope of Study

This study has been prepared to identify current and future traffic operating conditions on the surrounding roadway network and to assess the potential traffic impacts of the Project.

All available traffic count data for the study area intersections were obtained from previous reports prepared by our office. These data were supplemented with new traffic counts collected by representatives of Colliers Engineering & Design CT, P.C (formerly Maser Consulting). These data were also compared to count data obtained from the New York State Department of Transportation (NYSDOT) which was used to adjust them for the effects of the Covid-19

Pandemic on traffic. Additional traffic/pedestrian counts were also collected in November 2021. Together these data were utilized to establish the Year 2021 Existing Traffic Volumes representing existing traffic conditions in the vicinity of the site.

The Year 2021 Existing Traffic Volumes were then projected to the 2025 Design Year to take into account background traffic growth. In addition, traffic for other specific potential or approved developments in the area were estimated and then added to the Projected Traffic Volumes to obtain the Year 2025 No-Build Traffic Volumes.

Estimates were then made of the potential traffic that the proposed development would generate during each of the peak hours (see Section III-C for further discussion). The resulting site generated traffic volumes were then added to the roadway system and combined with the Year 2025 No-Build Traffic Volumes resulting in the Year 2025 Build Traffic Volumes.

The Existing, No-Build and Build Traffic Volumes were then compared to roadway capacities based on the procedures from the Highway Capacity Manual to determine existing and future Levels of Service and operating conditions. Recommendations for improvements were made where necessary to serve the existing and/or future traffic volumes.

II. Existing Roadway and Traffic Descriptions

A. Description of Existing Roadways

As shown on Figure No. 1, the proposed residential development will be accessed via one existing and one new access connection to Underhill Avenue and a cross connection the existing Beaver Ridge development. The following is a brief description of the roadways located within the study area. In addition, Section III-F provides a further description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service and any recommended improvements for each of the study area intersections. Appendix "D" contains copies of the capacity analyses which indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

1. Underhill Avenue

Underhill Avenue is a two-lane roadway former County road, which is under Town jurisdiction. This roadway originates at a "T" intersection with NYS Route 129 and continues in a northeasterly direction intersecting with the Taconic State Parkway at a modified diamond interchange. The roadway continues in a northeasterly direction intersecting with NYS Route 118 at a full movement signalized intersection. The roadway also intersects with Glenrock Street and French Hill Road west of the site. The speed limit on this roadway is posted at 40 MPH. There are existing sidewalks present on the south side of Underhill Avenue extending from the Rochambeau Drive Multi-Family Residential Complex past the Cardinal Court intersection and connecting to the intersection with NYS Route 118. The sidewalks also continue on the west side of NYS Route 118 past Town Hall. There are also sidewalks on the north side of the roadway between NYS Route 118 and extending to the Courtyard at Underhill Complex and there is a bus stop located in the vicinity of the Coldwell Banker driveway.

2. Glenrock Street

Glenrock Street is a narrow two-lane Town roadway that generally traverses in a north/south direction between an unsignalized stop sign controlled intersection with Underhill Avenue and extends north and connects with Giordano Drive at a "stop" controlled intersection. The roadway generally serves single-family residential land uses. No access connection to the site is proposed to this roadway. The roadway has no sidewalks and has an unposted speed limit.

3. Rochambeau Drive

Rochambeau Drive is a Town roadway which originates at a stop-sign controlled "T" intersection with Underhill Avenue. The roadway extends in a southerly direction providing access to existing multi-family developments. The roadway has an asphalt sidewalk on the west side of the roadway between Underhill Avenue and Woods View Court. Under existing conditions, sight distance exiting Rochambeau Drive is somewhat limited looking to the west

and as recommended in Section III-H, some clearing of vegetation and grading should be completed to improve the sight distance at this intersection.

4. NYS Route 118 (Saw Mill River Road)

NYS Route 118 (Saw Mill River Road) is a State highway which runs in a generally north/south direction. The roadway originates at signalized controlled "T" intersection with NYS Route 129. The roadway traverses in a northerly direction generally consistent of one-lane per direction plus paved shoulders and it intersects with both Underhill Avenue and Kear Street/Allan Avenue at signalized intersections. The speed limit is posted at 55 MPH in the southern portion of this roadway, which is reduced to 40 MPH approaching Underhill Avenue. The roadway continues north intersecting with NYS Route 35/US Route 202 and continues as a combined route into the Town of Somers. In the vicinity of the site, sidewalks are present on the east side of the roadway between Underhill Avenue and the Route 35/202 intersection.

5. Allan Avenue

Allan Avenue, in the vicinity of the site, is a two-lane Town roadway which has a signalized intersection with NYS Route 118 opposite Kear Street. The roadway serves residential land uses in this area and it terminates at a stop-sign controlled intersection with Baldwin Road. There are limited sidewalks in the vicinity of NYS Route 118 and the Beaver Ridge complex. The roadway has a posted speed limit of 30 MPH. It also has a weight limit of 25 tons.

6. Kear Street

Kear Street is a two-lane Town roadway which originates at a signalized intersection with NYS Route 118 opposite Allan Avenue. Sidewalks and crosswalks are provided on three of the four legs of the intersection. The roadway continues southeasterly intersecting with the access to the Brookside Office Park and also the Caremont building and intersects with Underhill Avenue and Commerce Street at a signalized full movement intersection.

B. 2021 Existing Traffic Volumes

(Figures No. 2 and 3)

Manual traffic and pedestrian counts were collected by representatives of Colliers Engineering & Design on December 3, 2020 and supplemented on January 6, 2021 and November 16, 2021 (NYS Route 118 and Underhill Avenue Only) during the AM and PM Peak Hours to determine the existing traffic and pedestrian volume conditions at the study area intersections. These traffic counts were then compared to traffic volume data from previous traffic studies conducted by our office and to traffic volume data available from the New York State Department of Transportation (NYSDOT) for the NYS Route 118 Corridor. Based on this information, the traffic counts were adjusted to account for the effects of the Covid-19 Pandemic and the resulting adjusted Year 2021 Existing Traffic Volumes were established for the Weekday Peak AM and Weekday Peak PM Hours at the following study area intersections.

- Rochambeau Drive and Underhill Avenue
- Glenrock Street and Underhill Avenue
- Underhill Avenue and NYS Route 118 (Saw Mill River Road)
- Allan Avenue/Kear Street and NYS Route 118

Based upon a review of the traffic counts, the peak hours were generally identified as follows:

- | | |
|------------------------|-------------------|
| ▪ Weekday Peak AM Hour | 7:30 AM – 8:30 AM |
| ▪ Weekday Peak PM Hour | 5:00 PM – 6:00 PM |

The resulting Year 2021 Existing Traffic Volumes are shown on Figures No. 2 and 3 for the Weekday Peak AM Hour and Weekday Peak PM Hour, respectively.

C. Accident Data

(Table A and Appendix E)

Accident data for the area roadways was obtained from the NYSDOT for the latest three-year period. Table A summarizes the data by type, severity, and other factors. A copy of the Table A is contained in Appendix "E".

III. Evaluation of Future Traffic Conditions

A. 2025 No-Build Traffic Volumes

(Figure No. 4 through 9)

The Year 2021 Existing Traffic Volumes were increased by a growth factor of 1% per year to account for general background growth resulting in the Year 2025 Projected Traffic Volumes which are shown on Figures No. 4 and 5 for each of the Peak Hours. In addition, traffic from other specific potential developments in the area including the Pied Piper Expansion, the balance of the Caremont development, and the Weyant Residential Development were accounted for. The resulting traffic volumes associated with these other developments are shown on Figures No. 6 and 7 for each of the peak hours. These volumes were added to the 2025 Projected Traffic Volumes resulting in the Year 2025 No-Build Traffic Volumes which are shown on Figures No. 8 and 9 for the Weekday Peak AM and Weekday Peak PM Hours, respectively.

See also Section G for an additional analysis that considers the traffic from other potential developments in the area including the Roma Redevelopment, the redevelopment of the vacant former K-Mart and Food Emporium buildings, as well as the Commerce Street Hotel.

B. Site Generated Traffic Volumes

(Table No. 1 and 1A)

Estimates of the amount of traffic to be generated by the proposed residential development during each of the peak hours were developed based on information published by the Institute of Transportation Engineers (ITE) as contained in the report entitled "Trip Generation", 11th Edition, 2021, based on Land Use Category – 220 Multi-Family Residential Development (Table No. 1). Note that the Phase 2 development may include approximately 30 dwelling units allocated for active seniors; however, no reduction in the peak hour trip generation was included in the analysis. Table No. 1A summarizes the trip generation rates and corresponding site generated traffic volumes potential future build out conditions for the Weekday Peak AM and Weekday Peak PM Hours.

C. Arrival/Departure Distribution

(Figures No. 10 and 11)

It was necessary to establish arrival and departure distributions to assign the site generated traffic volumes to the surrounding roadway network. Based on a review of the Existing Traffic Volumes and the expected travel patterns on the surrounding roadway network, the distributions were identified. The anticipated arrival and departure distributions are shown on Figures No. 10 and 11, respectively.

D. 2025 Build Conditions Traffic Volumes

(Figures No. 12 through 15)

The site generated traffic volumes were assigned to the roadway network based on the arrival and departure distributions referenced above. The resulting site generated traffic volumes for each of the study area intersections are shown on Figures No. 12 and 13 for each of the peak hours, respectively. The site generated traffic volumes were then added to the Year 2025 No-Build Traffic Volumes to obtain the Year 2025 Build Traffic Volumes. The resulting Year 2025 Build Traffic Volumes are shown on Figures No. 14 and 15 for the Weekday Peak AM and Weekday Peak PM Hours, respectively.

E. Description of Analysis Procedures

It was necessary to perform capacity analyses in order to determine existing and future traffic operating conditions at the study area intersections. The following is a brief description of the analysis method utilized in this report:

1. Signalized Intersection Capacity Analysis

The capacity analysis for a signalized intersection was performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016, published by the Transportation Research Board. The terminology used in identifying traffic flow conditions is Levels of Service. A Level of Service "A" represents the best condition and a Level of Service "F" represents the worst condition. A Level of Service "C" is generally used as a design standard while a Level of Service "D" is acceptable during peak periods. A Level of Service "E" represents an operation near capacity. In order to identify an intersection's Level of Service, the average amount of vehicle delay is computed for each approach to the intersection as well as for the overall intersection.

2. Unsignalized Intersection Capacity Analysis

The unsignalized intersection capacity analysis method utilized in this report was also performed in accordance with the procedures described in the Highway Capacity Manual, 6th Edition, dated 2016. The procedure is based on total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. The average total delay for any particular critical movement is a function of the service rate or capacity of the approach and the degree of saturation. In order to identify the Level of Service, the average amount of vehicle delay is computed for each critical movement to the intersection.

Additional information concerning signalized and unsignalized Levels of Service can be found in Appendix "C" of this report.

F. Results of Analysis

(Table No. 2)

Capacity analyses which take into consideration appropriate truck percentages, pedestrian activity, roadway grades and other factors were performed at the study area intersections utilizing the procedures described above to determine the Levels of Service and average vehicle

delays. Summarized below are a description of the existing geometrics, traffic control and a summary of the existing and future Levels of Service as well as any recommended improvements.

Table No. 2 summarizes the results of the capacity analysis for the 2021 Existing, 2025 No-Build and 2025 Build Conditions. Appendix "D" contains copies of the capacity analysis which also indicate the existing geometrics (including lane widths) and other characteristics for each of the individual intersections studied.

1. Underhill Avenue and NYS Route 118 (Saw Mill River Road (Signal W-213))

NYS Route 118 and Underhill Avenue intersects at a signalized four-way intersection. The approaches generally consist of one lane. On the eastbound approach of Underhill Avenue there is a channelized right turn movement at the intersection and on the NYS Route 118 southbound approach there is a wide paved shoulder, which is currently used by right turning vehicles. The intersection is controlled by an actuated traffic signal with an advance left turn phase for the eastbound Underhill Avenue approach. Note that a push button controlled pedestrian crosswalk across the south leg of NYS Route 118 is provided at this location.

The capacity analysis for this intersection indicates that under current conditions, an overall intersection Level of Service "D" or better is experienced at this location. However, during the PM peak hour, eastbound traffic on Underhill Avenue currently experiences some long delays and queues during this period due to heavy commuter volumes. The intersection was reanalyzed for future No-Build and Build conditions. A review of the analysis indicates that the Levels of Service will be reduced under the future No-Build condition.

As part of the proposed development, certain traffic signal upgrades including the implementation of some traffic signal timing adjustments, provision of a signal communication modem, and improved vehicle detection (camera) at NYS Route 118 and Underhill Avenue will be completed to improve the efficiency of the operation and to offset any increased traffic from the development. It should be noted that the project generated traffic through this intersection during the PM Peak Hour equates to approximately three to four percent (3 - 4%) of the volume at this intersection.

As discussed in more detail in Section G, to help accommodate traffic on a long-term basis resulting from the traffic from other potential developments, the Applicant will contribute funding to the Town for additional future traffic improvements at this location. This could be used towards improvement plans to construct turning lanes and other related improvements, including signal replacement/upgrades and pedestrian accommodations, to accommodate the other potential traffic increases in the area.

2. Allan Avenue/Kear Street (Signal W-384) and NYS Route 118

Allan Avenue intersects with NYS Route 118 (Saw Mill River Road) at a signalized, full movement intersection which aligns opposite Kear Street. The approaches generally consist of one lane, although the Kear Street approach widens at the intersection. Note that on NYS

Route 118, there are full shoulders on either side. Pedestrian crossings are provided across Allan Avenue and Kear Street, as well as the northerly leg of NYS Route 118. Pedestrian push buttons are also provided.

The capacity analysis conducted at this intersection indicates that overall Levels of Service "C" or better are currently experienced at this location. The intersection was reanalyzed for future conditions under the No-Build and Build scenarios. A review of the analysis indicates that with some signal timing adjustments, overall Levels of Service "C" or better will be maintained at this intersection. Traffic signal communication modems and related equipment will be provided at this location as part of the improvements.

3. Underhill Avenue and Existing Easterly Access Driveway

The site is currently served by an existing driveway connection to Underhill Avenue, which served the former Soundview School. This driveway is located approximately midway between NYS Route 118 and Rochambeau Drive. The driveway is proposed to be upgraded as part of the site development (see also discussion in Section H).

Capacity analysis was conducted for this intersection utilizing the 2021 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at Level of Service "C" or better during the AM and PM Peak Hours.

The capacity analysis was recomputed using the 2025 No-Build and Build Traffic volumes. These results indicate that the intersection is expected to experience Levels of Service "D" or better during the AM and PM Peak Hours under future conditions for traffic exiting the side road approaches. Also, as previously noted, the queues that occur during the PM Peak Hour extend past this intersection (see also Section H for improvement recommendations).

4. Underhill Avenue and Rochambeau Drive/Proposed Site Access

Rochambeau Drive intersects with Underhill Avenue at a stop-sign controlled "T" intersection. As part of the development, a new access drive will be constructed opposite this road to create a 4-way intersection. The new access should consist of one entering and one exiting lane and should also be stop-controlled.

Capacity analysis was conducted for this intersection utilizing the 2021 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at Level of Service "C" or better during the AM and PM Peak Hours.

The capacity analysis was recomputed using the 2025 No-Build and Build Traffic volumes. These results indicate that the intersection is expected to experience Levels of Service "D" or better during the AM and PM Peak Hours under future conditions (see also discussion on recommended improvements in Section H).

5. Glenrock Street and Underhill Avenue

Glenrock Street intersections with Underhill Avenue at a stop-sign controlled "T" intersection. All approaches consist of a single lane.

Capacity analysis was conducted for this intersection utilizing the 2021 Existing Traffic Volumes. The analysis results indicate that the intersection is currently operating at an overall Level of Service "C" during the AM and PM Peak Hours (see Section H for further discussion).

The capacity analysis was recomputed using the 2025 No-Build and Build Traffic volumes. The intersection is expected to continue to experience Levels of Service "C" or better during the AM and PM Peak Hours under future conditions. Note that some vegetative clearing along the site frontage will need to be completed as part of the development to maximize available sight distances at this location.

G. Consideration of Other Potential Area Developments

In addition to the traffic conditions associated with the Underhill Farm project, a separate evaluation of future traffic conditions was completed, which accounts for the other potential significant developments that have not proceeded but could affect overall traffic conditions in the area. These other potential projects include the Roma Redevelopment, the Commerce Street Hotel, the redevelopment of the former Kmart space, and net increases of the shift of the Food Emporium space with the Uncle Giuseppe's project. Copies of the corresponding figures, tables and analysis for these potential conditions are contained in Appendix "G" of this report.

The analysis of this future condition indicates that during peak periods, traffic conditions will require additional improvements to accommodate expected traffic flows and we have identified such improvements for the intersection of NYS Route 118 and Underhill Avenue.

These include two (2) potential improvement plans. The first would be the provision of a separate left turn lanes on the Underhill Avenue approaches to the intersection to alleviate increased left turn conflicts and improve the overall capacity. This improvement would also involve reconstruction of the additional pedestrian crossings, replacement of the traffic signal, and installation of new current ADA compliant pedestrian crossings on all four corners. A second improvement plan would provide even further capacity improvements but would involve additional work along the NYS Route 118 corridor. This plan concept includes the provision of separate left turn lanes on NYS Route 118, maintaining the right turn from NYS Route 118 onto Underhill Avenue, together with the other related improvements.

These improvements would have to be advanced if and when other potential development occurs in the area. As part of the Underhill Farm project, a financial contribution towards these future improvements would be made as well as the dedication of any lands necessary to effectuate the improvements shown on these drawings.

H. Summary of Recommended Improvements

Based upon a review of the field inspections, existing traffic conditions, and traffic analysis results, the following is a summary of recommendations relative to the proposed development.

1. The intersection of the proposed access opposite Rochambeau Drive should be constructed to consist of one entering and one exiting lane and be stop-sign controlled. In addition, sight distances should be improved for both the driveway and Rochambeau Drive approaches by clearing vegetation and some regrading within the Underhill Avenue right-of-way. A painted stop bar should be added on each of these side road approaches to the intersection. These will have to be coordinated with the Town Highway Superintendent.
2. The existing driveway connection to the site, which served the former Soundview Prep School, will be upgraded as part of the development. As shown on Drawing SK-1, a Rapid Flashing Beacon (RFB), together with a striped crosswalk, is proposed to allow pedestrians to access the sidewalk on the south side of Underhill Avenue and for any pedestrians from the Rochambeau area to access the site as well as to the Senior Center. Also, "Do Not Block the Box" signing and pavement markings are also recommended. These improvements will be coordinated with the Town Highway Superintendent as part of the final site plan conditions.

An emergency access connection and a localized through traffic and pedestrian connection to the Beaver Ridge Development is proposed as part of the development. Some traffic calming measures may be necessary in association with the final site plan to ensure limited local traffic utilization and to limit vehicle speeds through this area. Related pedestrian/sidewalk improvements should be coordinated accordingly with the Town and Beaver Ridge as part of the development.

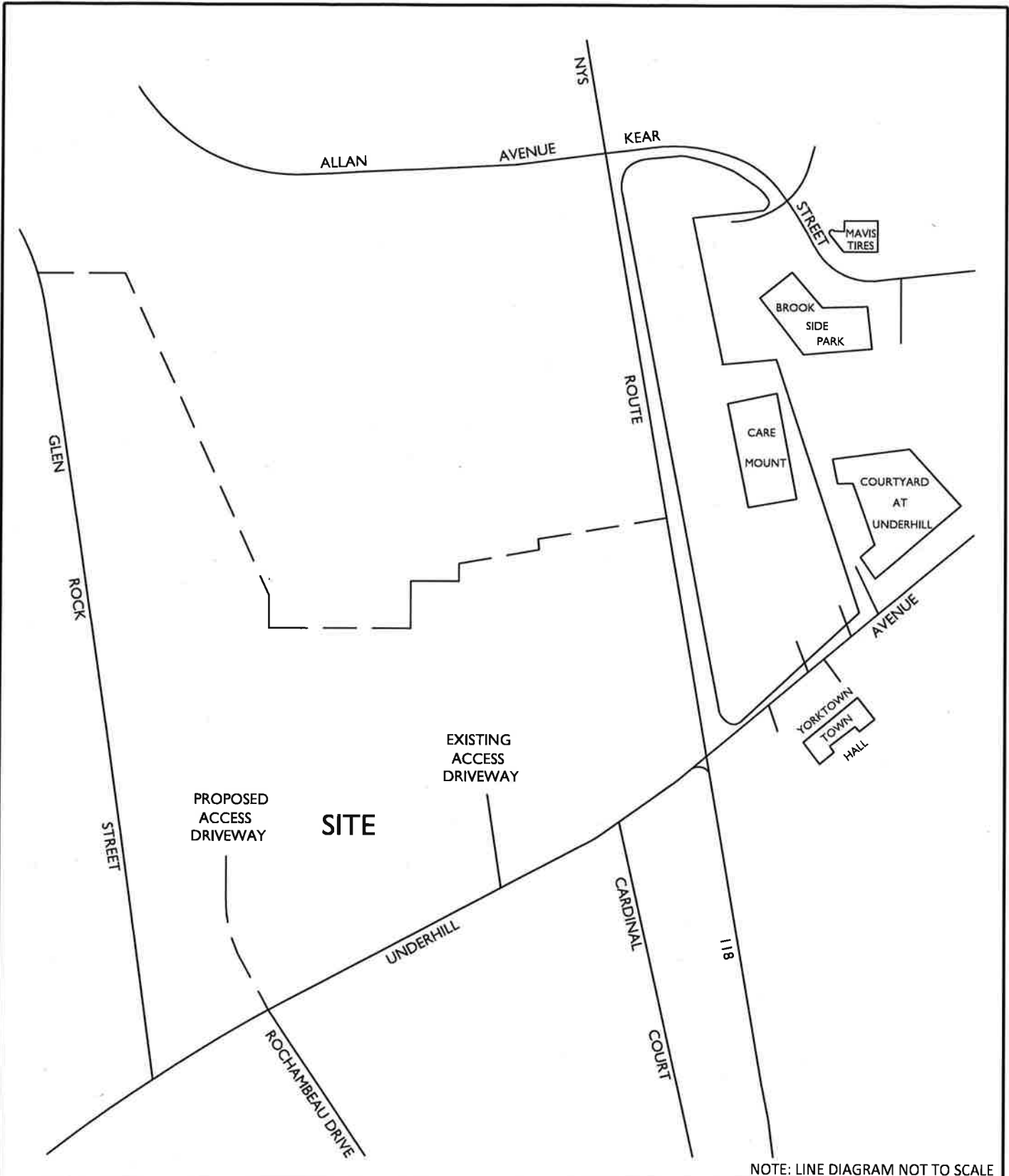
3. Vegetative pruning to improve/maintain sight distances at several area intersections, including Underhill Avenue at Rochambeau Drive and Underhill Avenue at French Hill Road, are recommended regardless of this development.
4. As part of the Phase 1 improvements, certain traffic signal upgrades at NYS Route 118 and Underhill Avenue will be completed to improve the efficiency of the operation and to offset any increased traffic. These will include the installation of a communications modem, upgraded vehicle detection in the form of camera actuation, adaptive software per NYSDOT direction, and signal timing improvements. As noted in the Level of Service table, with these improvements, conditions would be improved significantly at the intersection reducing the excess queues that occur and providing safer and more efficient operations overall.
5. Based on field observations, vehicle speeds on Underhill Avenue approaching this area from the southwest during certain periods are in excess of 45 MPH. The Applicant will work with the Town on implementing additional signing and other measures to help reduce travel speeds approaching this area.
6. As indicated in Section G above, to accommodate other potential traffic increases in the area on a long-term basis, the Applicant will contribute funds to the Town towards such improvement plans to construct turning lanes and other improvements, including signal replacement/upgrades and pedestrian accommodations, will be required.

IV. Summary and Conclusion

Based on the above analysis, with the completion of the access and signal improvements, similar Levels of Service and delays will be experienced at the area intersections under the future No-Build and future Build Conditions. With the completion of these improvements, the Underhill Farm Redevelopment traffic is not expected to cause any significant impact in overall operations. In addition, the certain other longer-term improvements have been identified including provision of turning lanes, signal upgrades, and pedestrian improvements, to accommodate traffic from other potential developments in the area. The Applicant has agreed to provide funds to the Town towards these other improvements.

Traffic Impact Study

Appendix A | Traffic Figures



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NOTE: LINE DIAGRAM NOT TO SCALE



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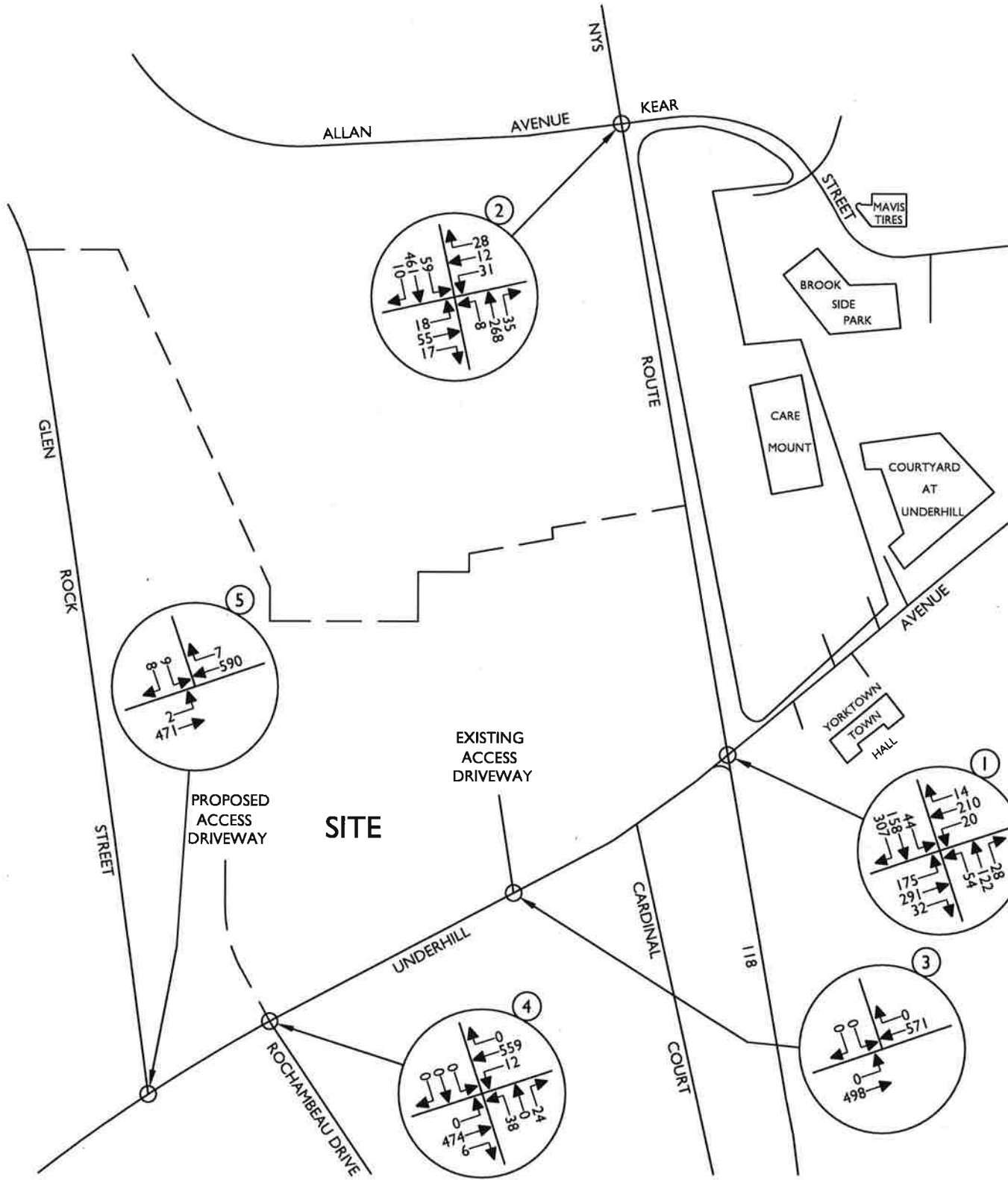
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AS SHOWN	4/8/22	R.H.	P.J.G.
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SHEET TITLE:
SITE LOCATION MAP

SHEET NUMBER:
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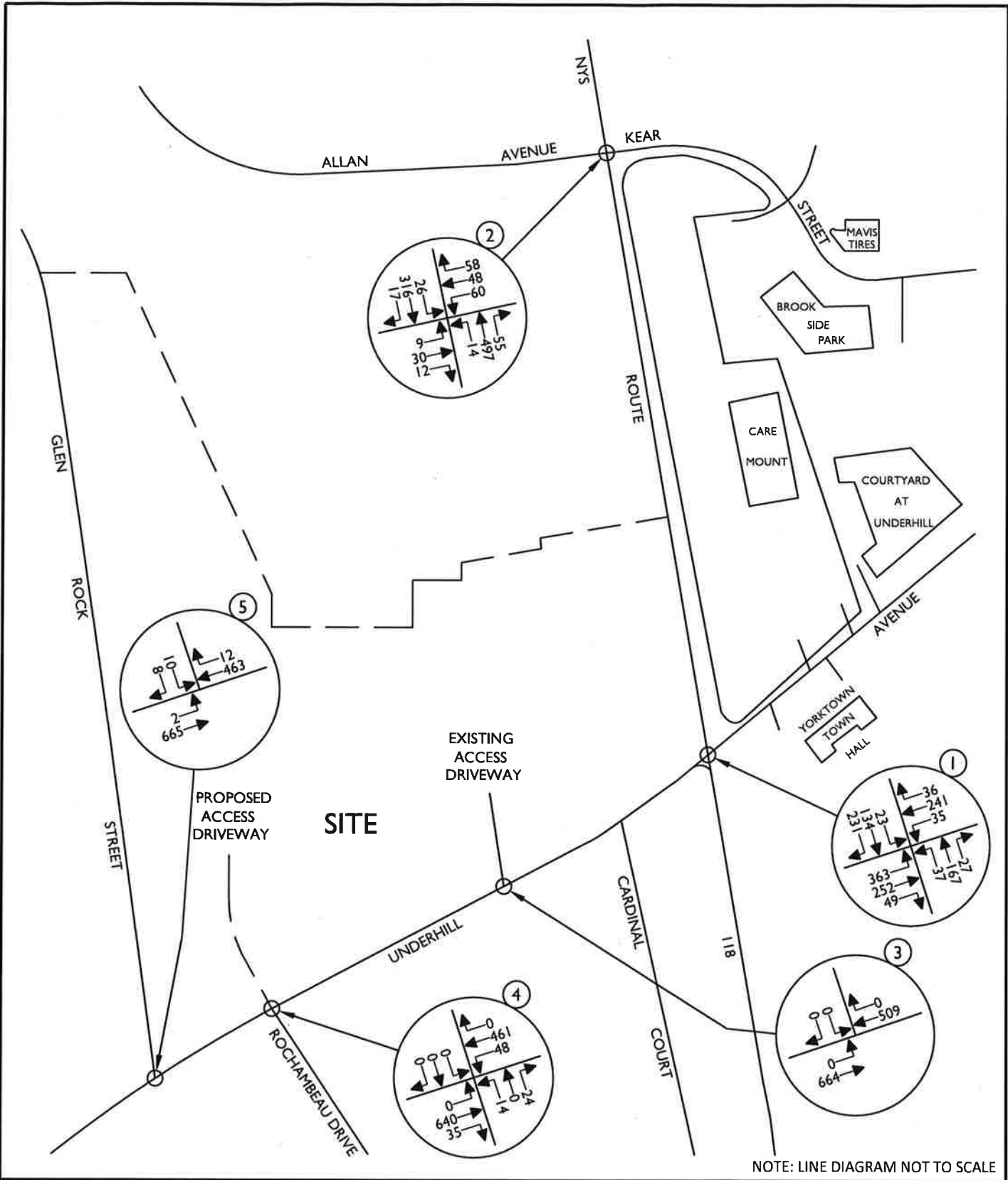
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SHEET TITLE:	2021 EXISTING TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR
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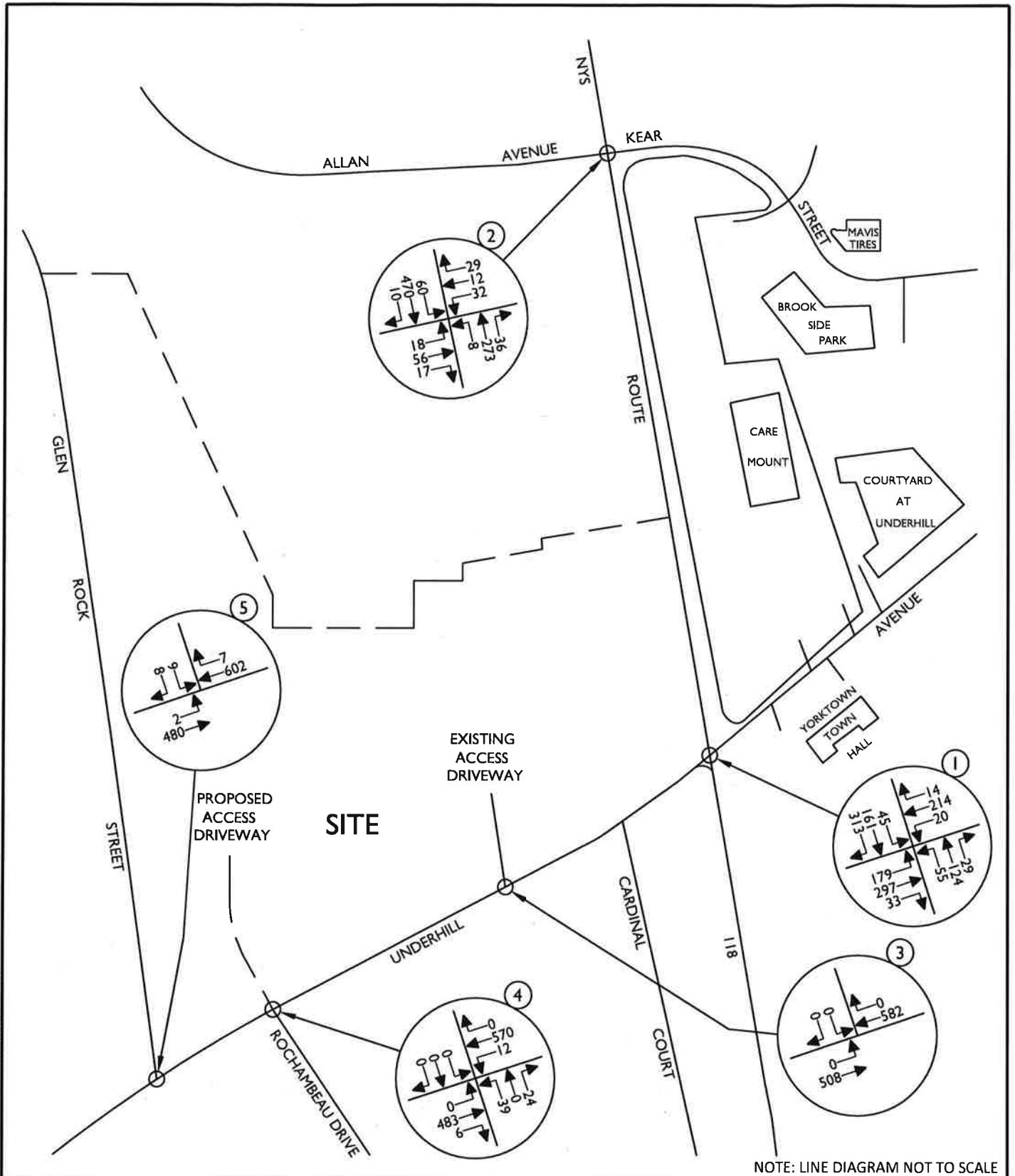
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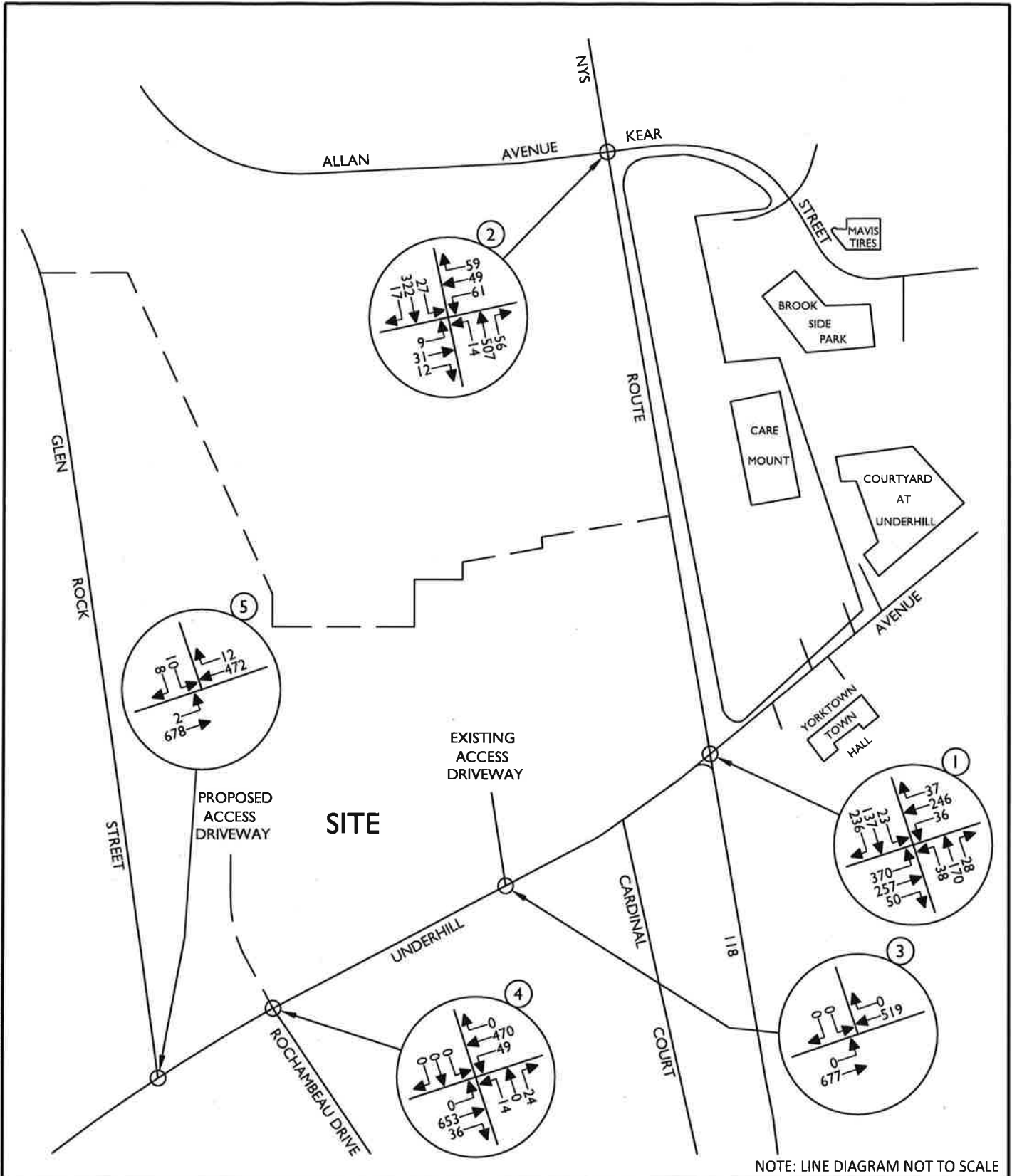
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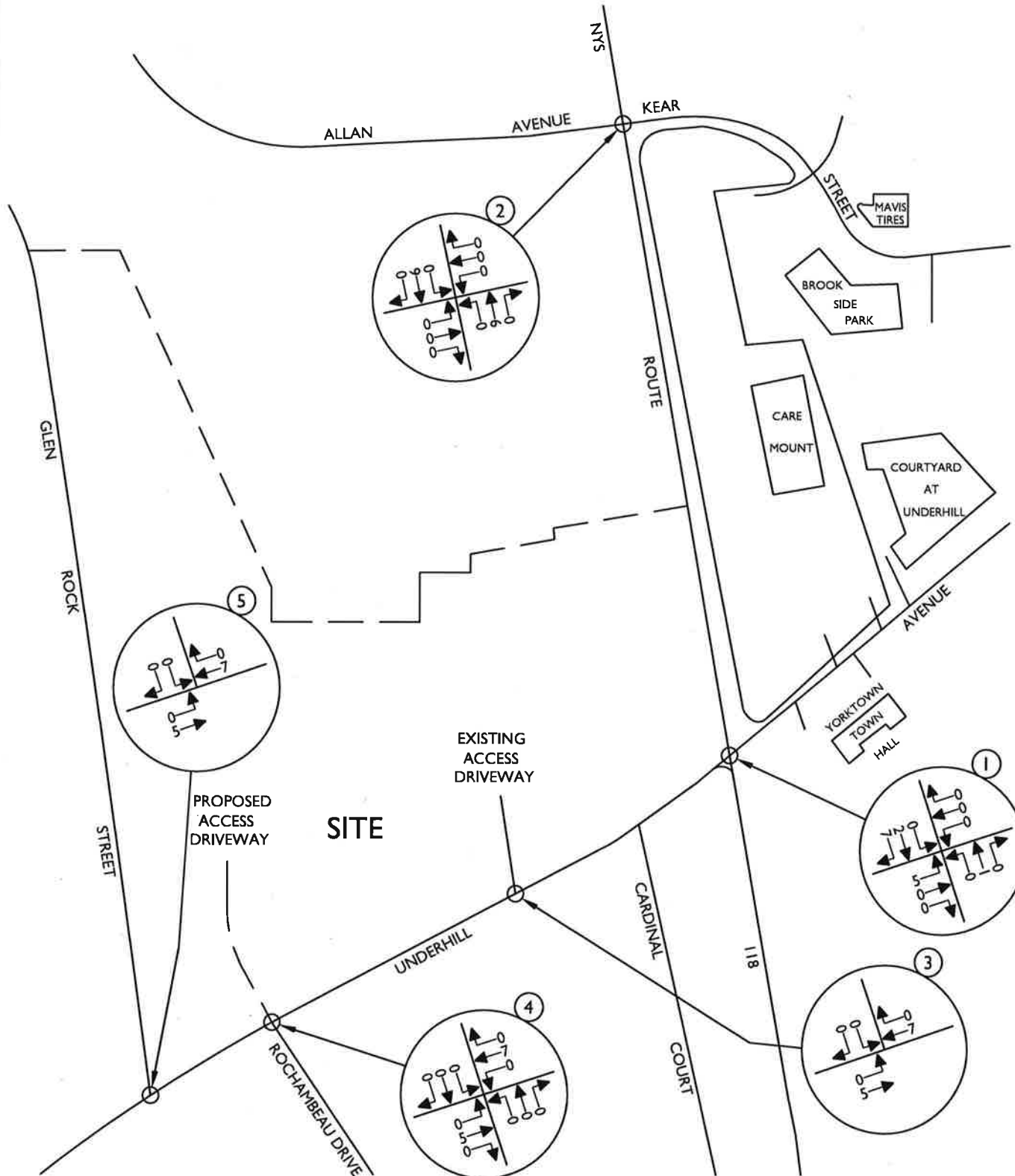
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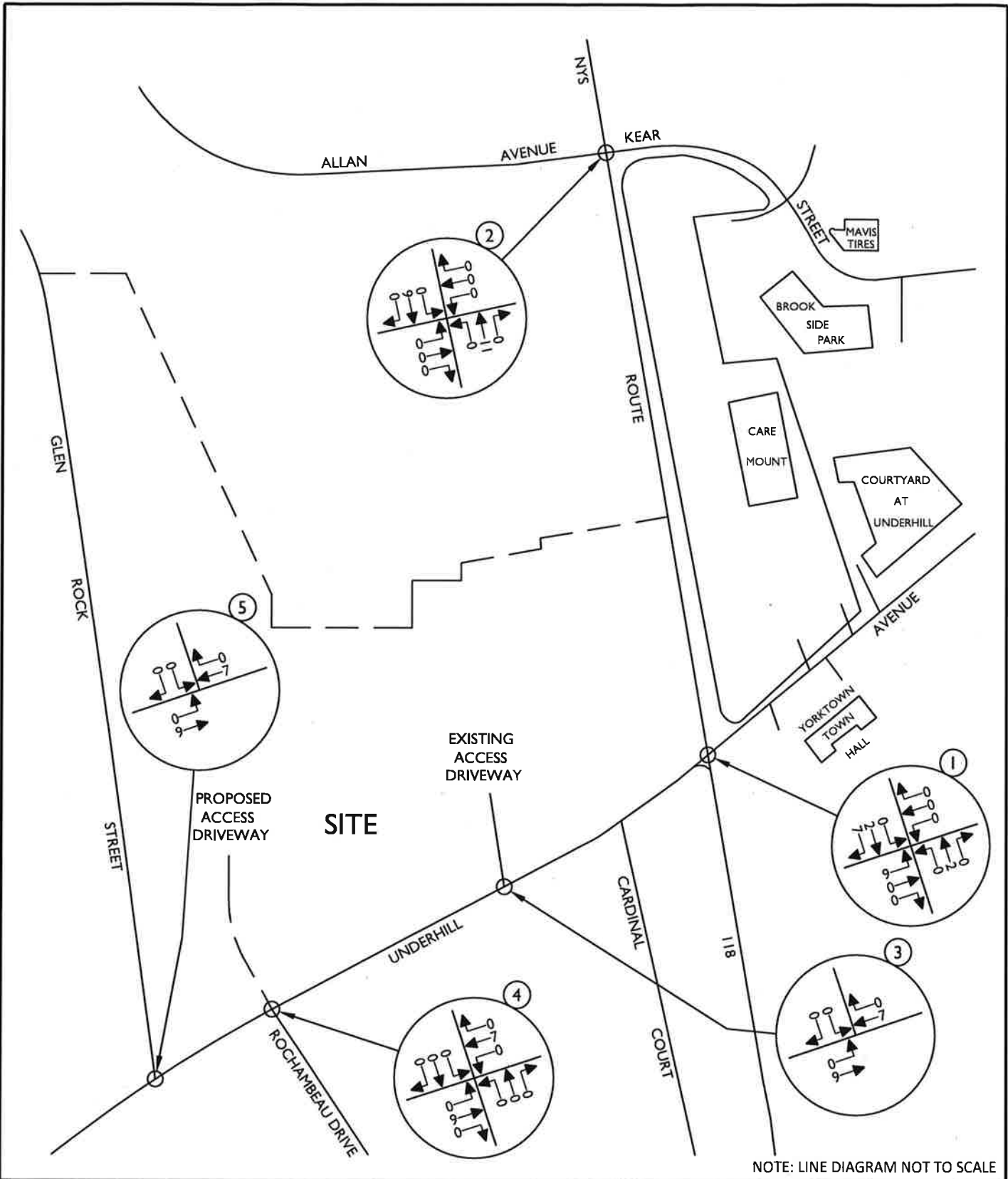
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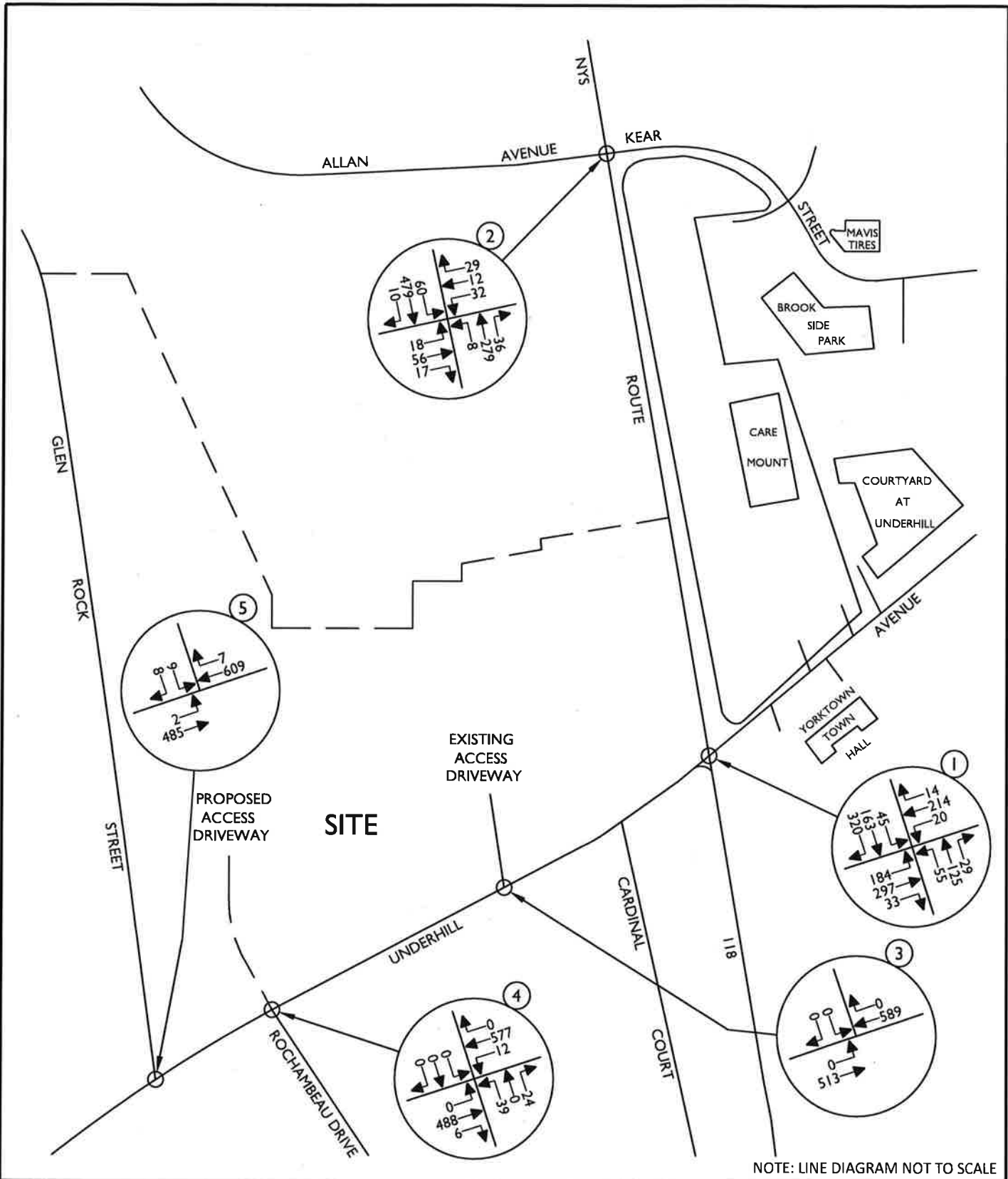
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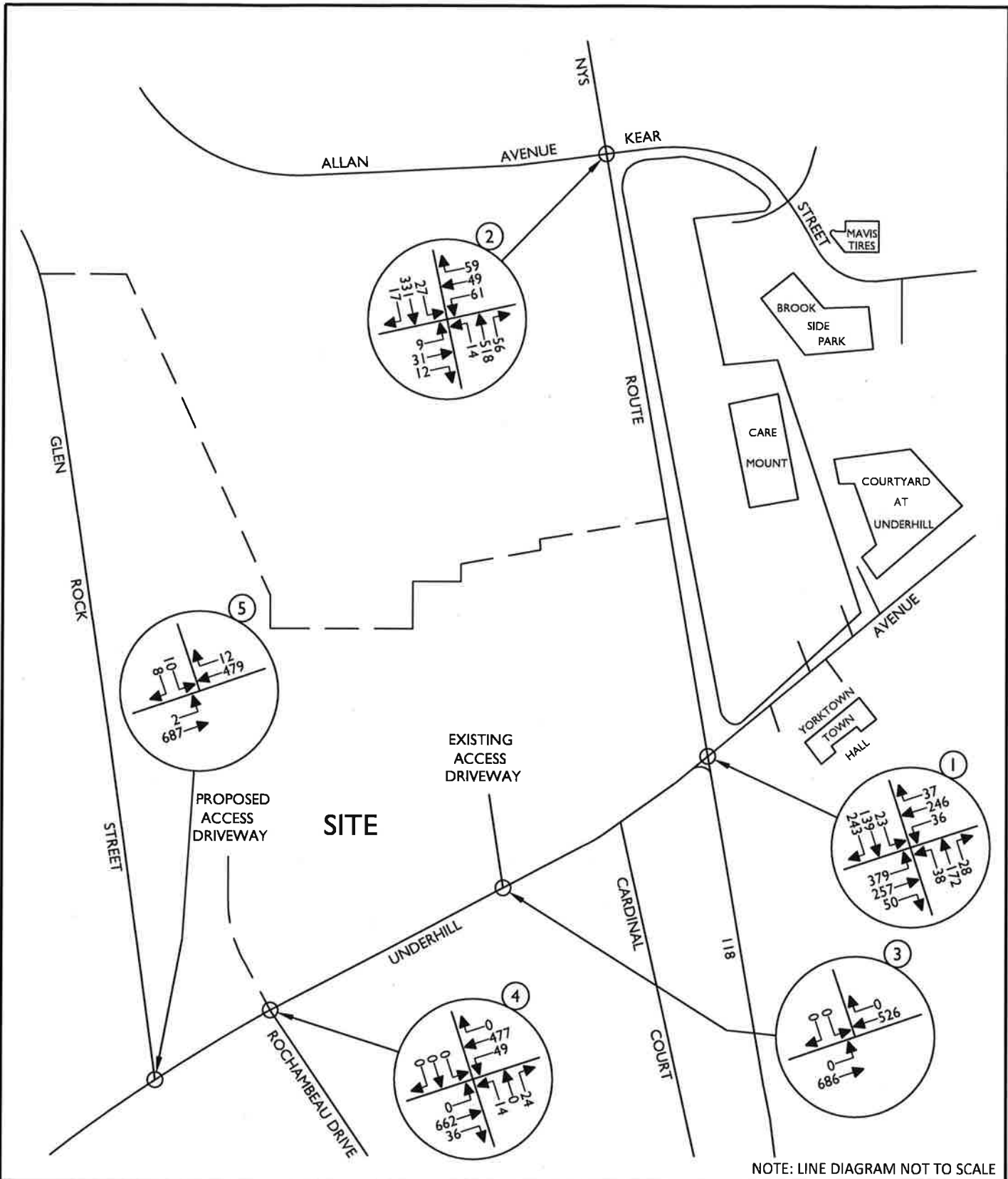
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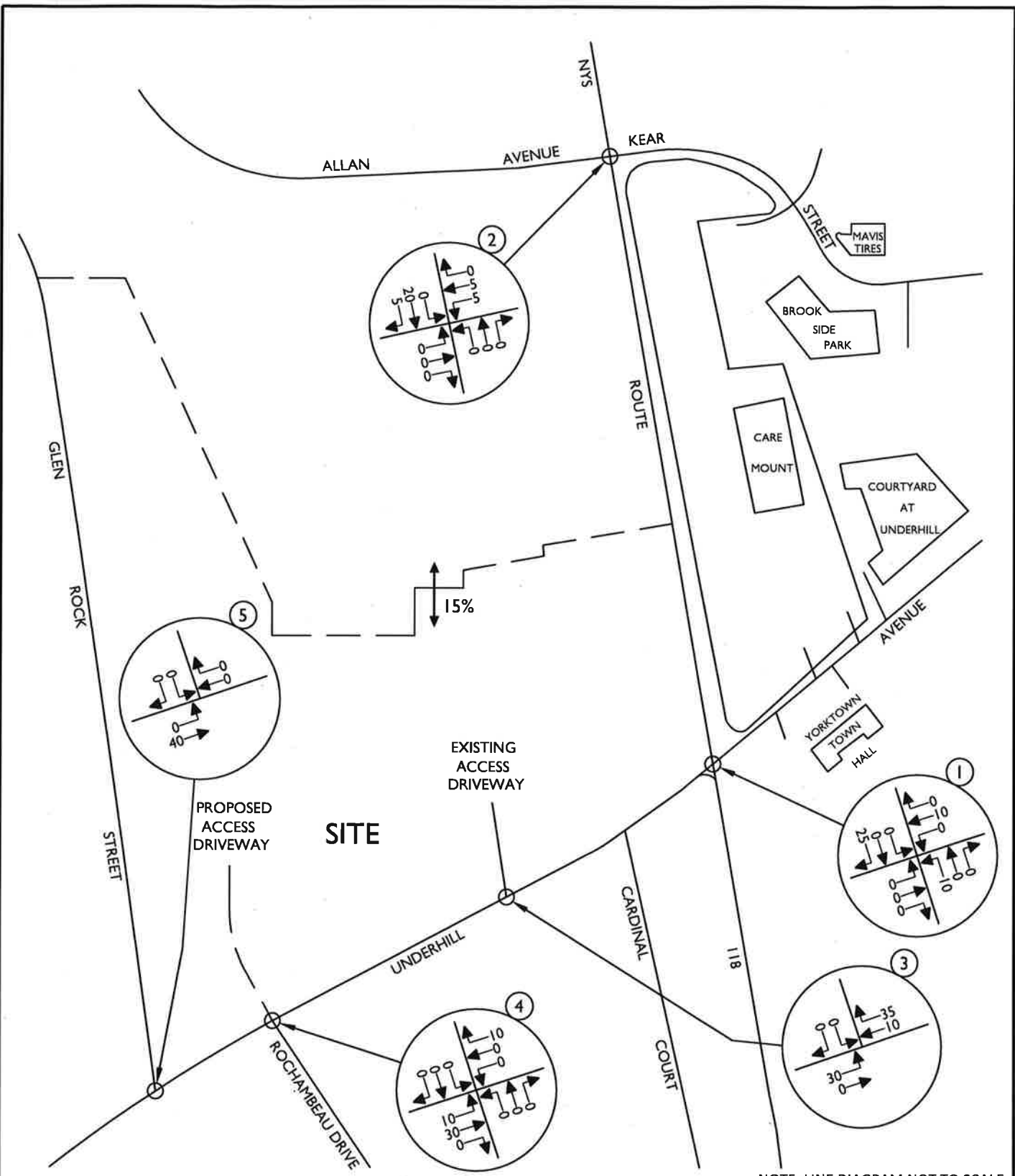
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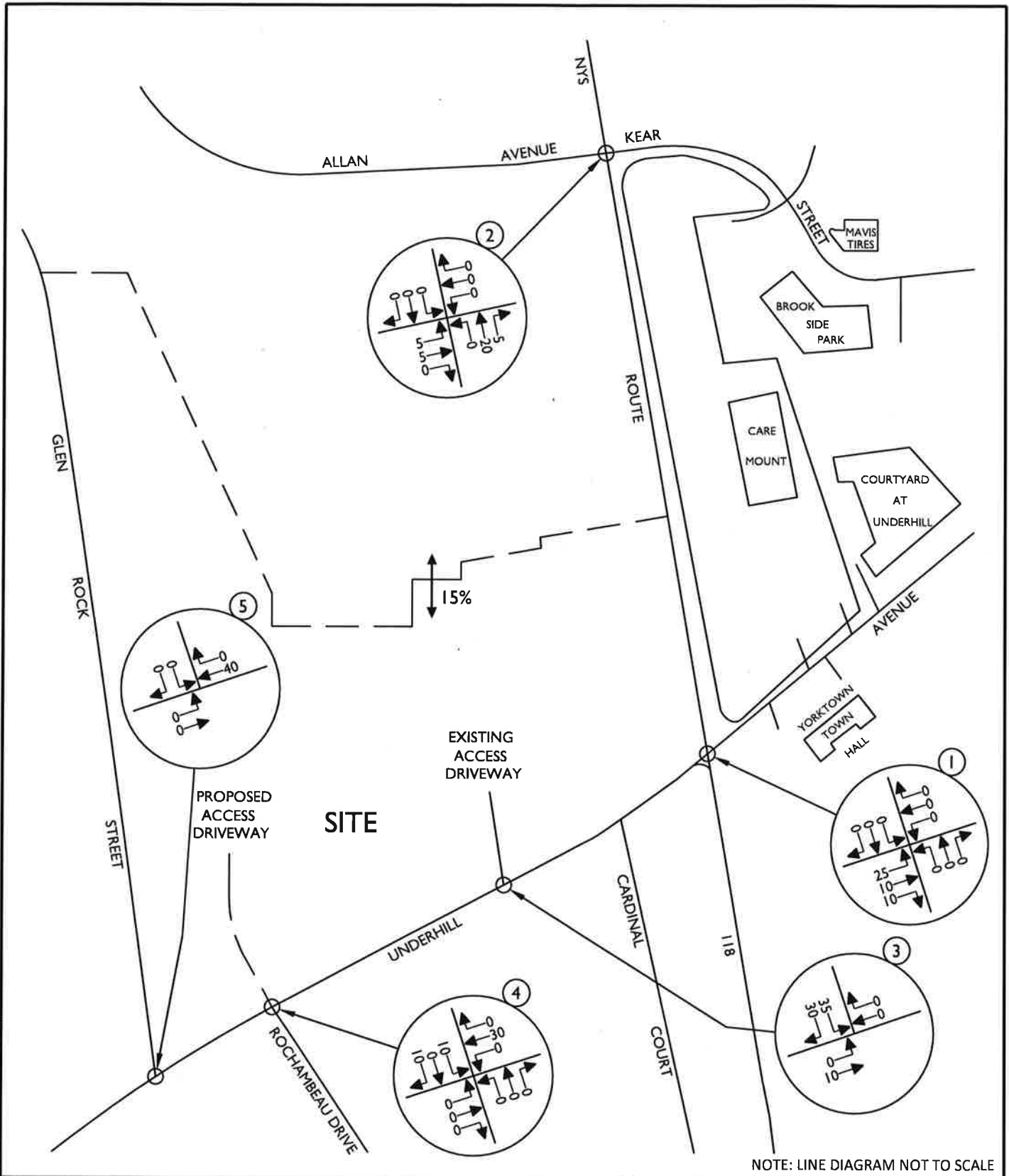
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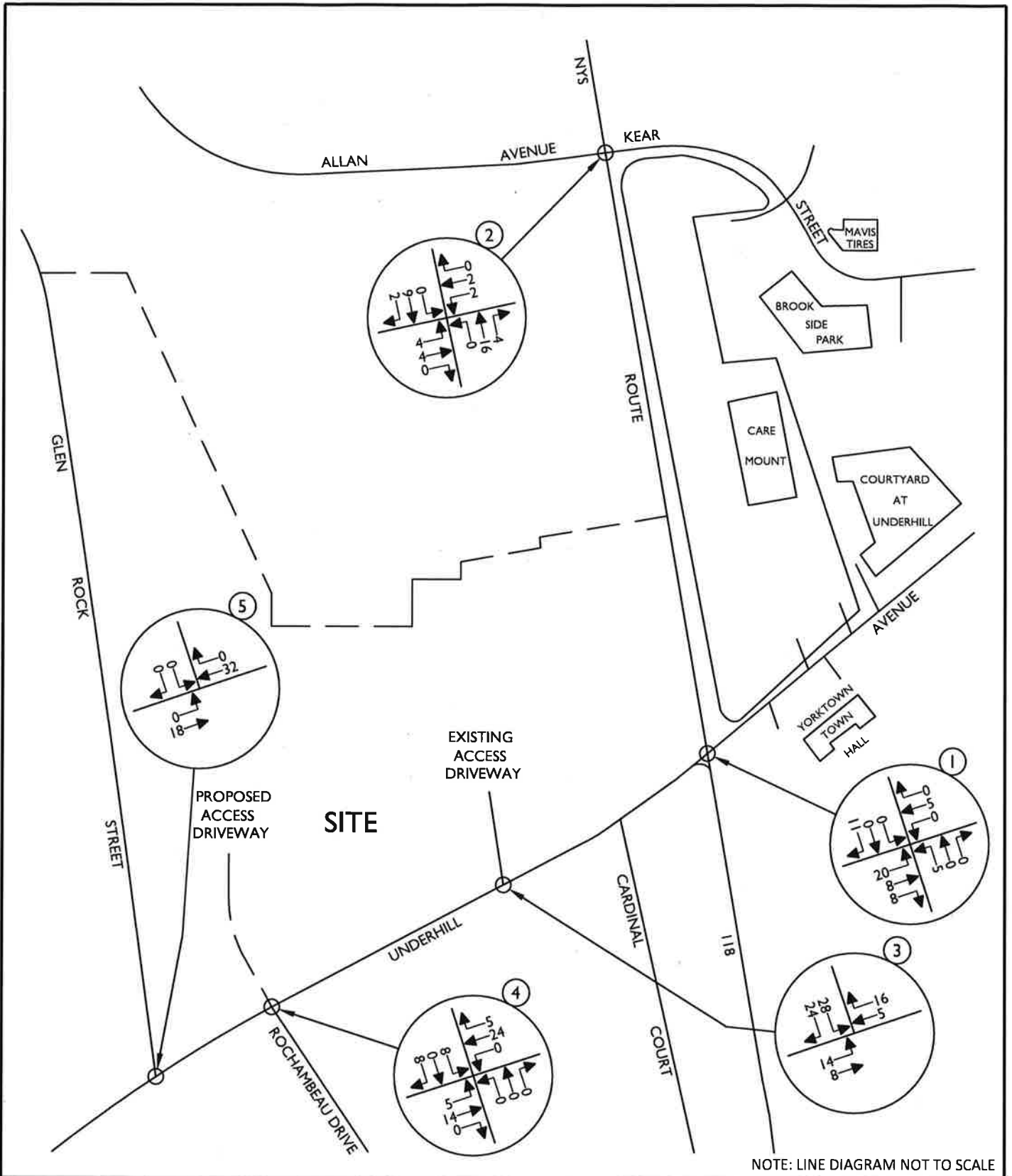
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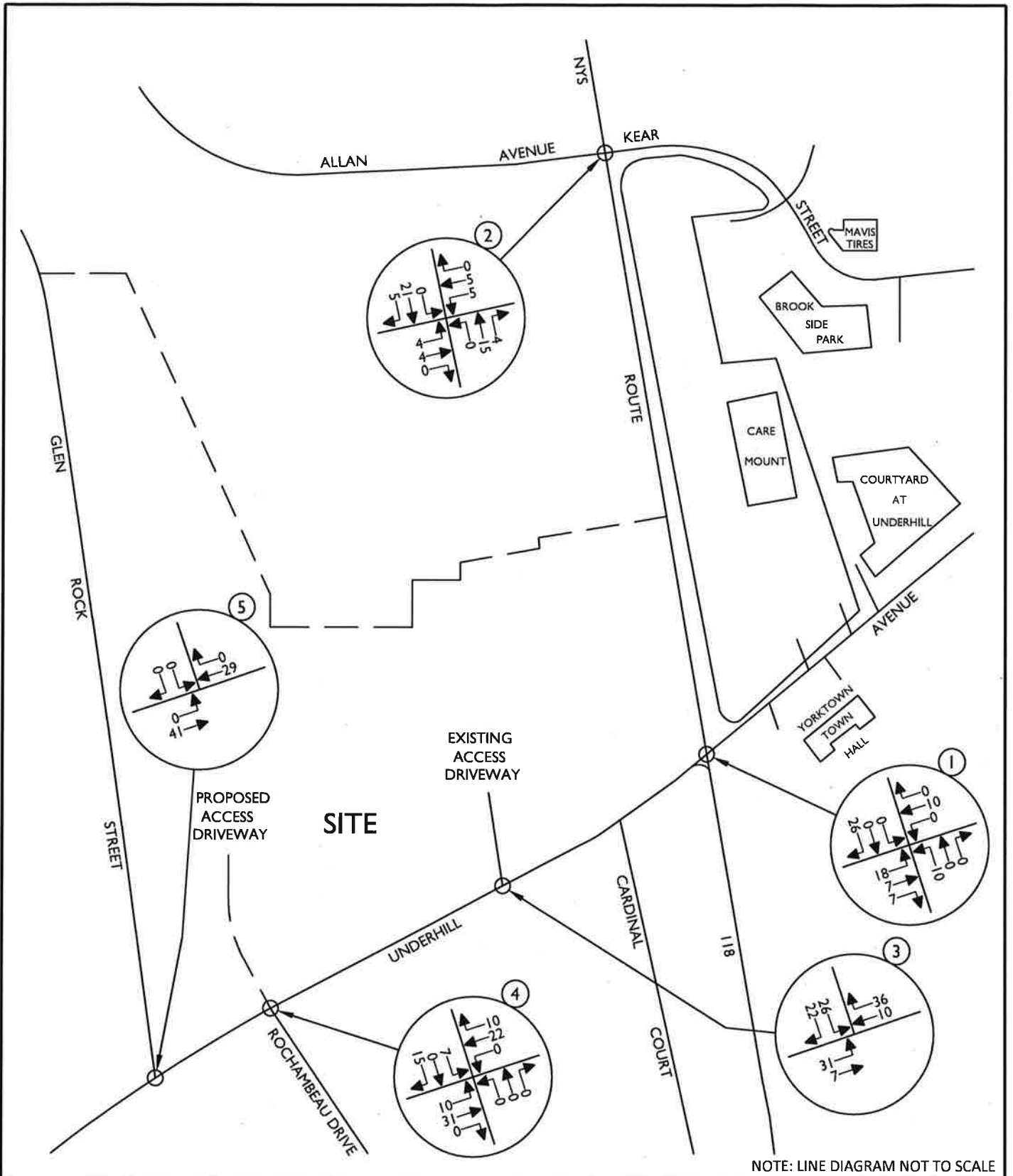
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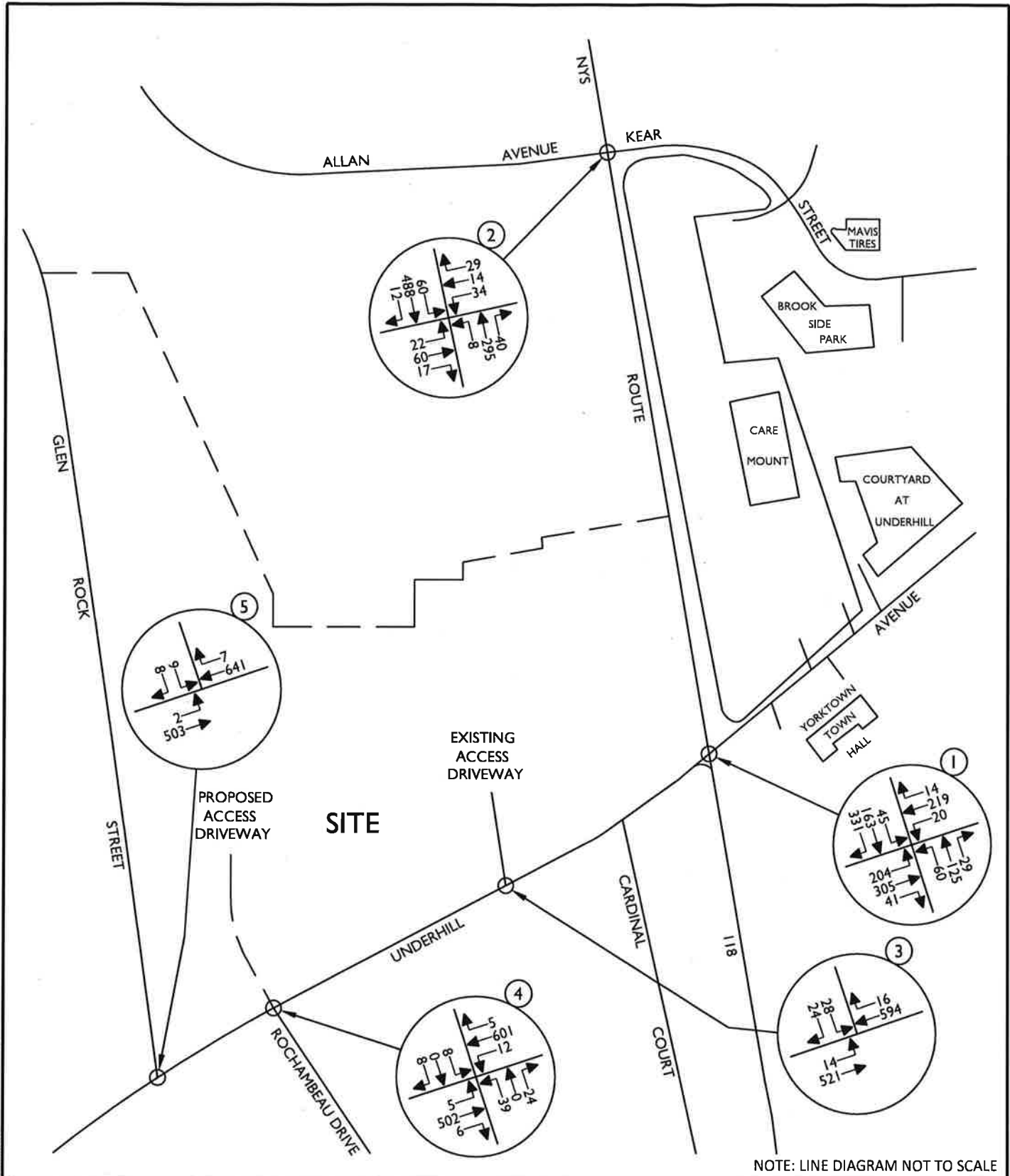
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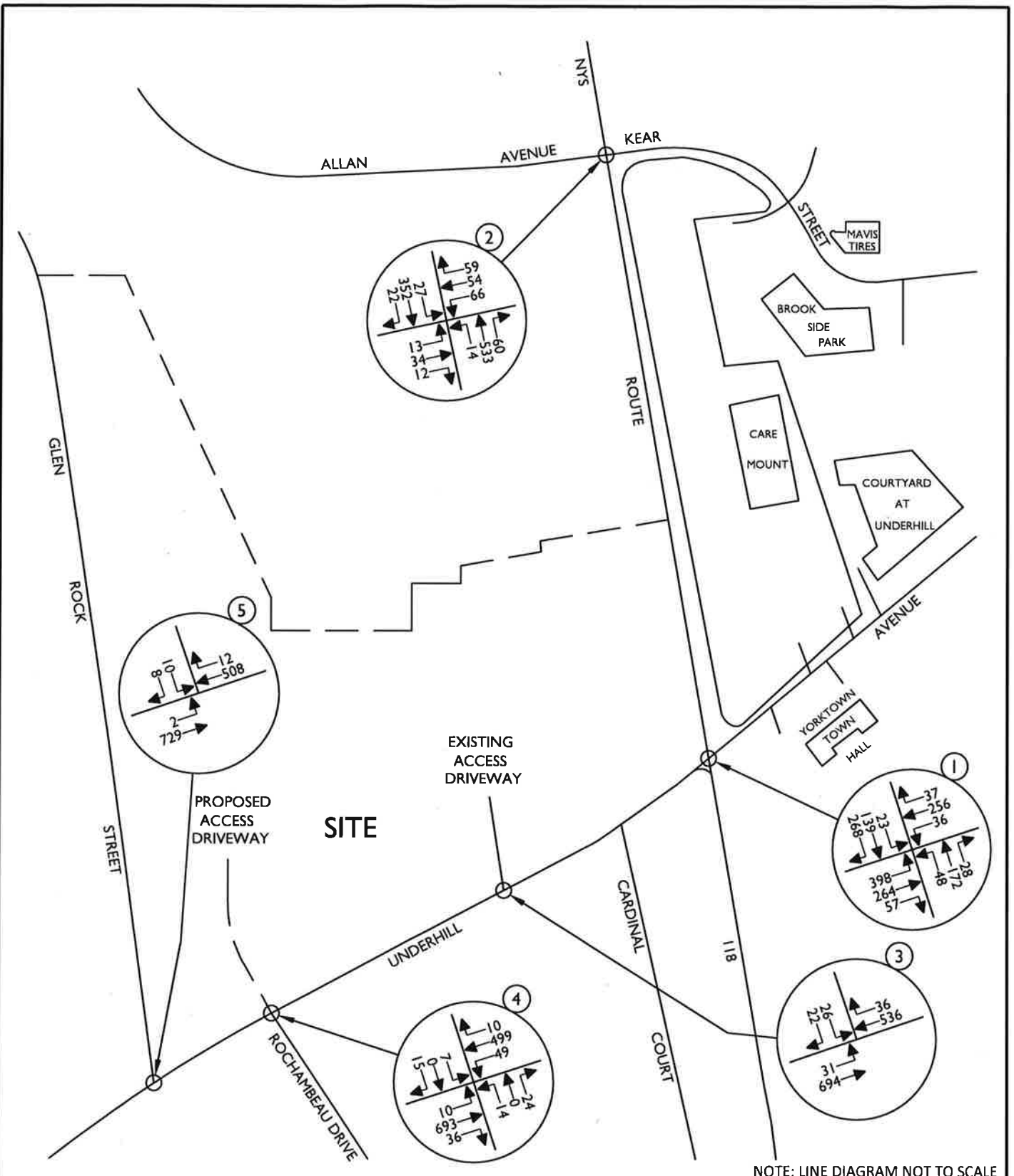
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Traffic Impact Study

Appendix B | Tables

**Table No. 1-FB
Hourly Trip Generation Rates (HTGR) and
Anticipated Site Generated Traffic Volumes**

Underhill Farm Yorktown, NY	Entry			Exit		
	HTGR ¹	Volume	New Trips ²	HTGR ¹	Volume	New Trips ²
Apartments/Condominiums/Townhouses (148 Units)						
Peak AM Hour	0.13	19	19	0.41	61	61
Peak PM Hour	0.41	60	60	0.25	37	37
Commercial - Office (5,500 Sq. Ft.)						
Peak AM Hour	1.57	9	9	1.04	6	6
Peak PM Hour	0.73	4	4	1.43	8	8
Commercial - Retail (5,500 Sq. Ft.)						
Peak AM Hour	1.41	12	7	2.36	8	5
Peak PM Hour	4.63	25	15	4.63	25	15
Inn (8 Rooms)						
Peak AM Hour	0.23	2	2	0.23	2	2
Peak PM Hour	0.33	3	3	0.27	3	3
Quality Restaurant (5,000 Sq. Ft.)						
Peak AM Hour	0.44	2	2	0.30	2	2
Peak PM Hour	5.23	26	20	2.57	13	10
Total						
Peak AM Hour		44	39		79	76
Peak PM Hour		121	102		87	73

NOTES:

1) THE HOURLY TRIP GENERATION RATES (HTGR) ARE BASED ON DATA PUBLISHED BY THE INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) AS CONTAINED IN THE TRIP GENERATION HANDBOOK, 11TH EDITION, 2021. ITE LAND USE CODE - 220 - MULTIFAMILY HOUSING (MID-RISE), ITE LAND USE CODE - 931 - QUALITY RESTAURANT, ITE LAND USE CODE - 712 - SMALL OFFICE, ITE LAND USE CODE - 822 - RETAIL AND ITE LAND USE CODE - 310 - HOTEL.

2) "NEW TRIPS" INCLUDE A 40% PASS-BY/DIVERTED LINK TRIP CREDIT FOR THE RETAIL AND 25% FOR THE RESTAURANT AS WELL AS FOR THE RESTAURANT USE.

TABLE NO. 2 AM
LEVEL OF SERVICE SUMMARY TABLE

				2021 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				AM	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	
1	UNDERHILL AVENUE & NYS ROUTE 118	SIGNALIZED											
	UNDERHILL AVENUE	EB LTR	0.70	C	21.8	0.73	C	23.5	0.80	C	27.4	3.9	
	UNDERHILL AVENUE	WB LTR	0.71	D	44.5	0.69	D	43.5	0.68	D	43.1	-0.4	
	NYS ROUTE 118	NB LTR	0.50	C	27.0	0.52	C	28.0	0.54	C	29.1	1.1	
	NYS ROUTE 118	SB LTR	0.87	D	39.5	0.89	D	42.0	0.89	D	42.5	0.5	
		OVERALL	-	C	32.5	-	C	33.9	-	D	35.4	1.5	
2	NYS ROUTE 118 & ALLAN AVENUE/ KEAR STREET	SIGNALIZED											
	ALLEN AVENUE	EB LTR	0.38	C	30.6	0.38	C	30.6	0.40	C	31.4	0.8	
	KEAR STREET	WB LTR	0.28	C	23.1	0.29	C	23.4	0.30	C	24.4	1.0	
	NYS ROUTE 118	NB LTR	0.25	A	4.6	0.26	A	4.7	0.28	A	4.9	0.2	
	NYS ROUTE 118	SB LTR	0.46	A	6.4	0.47	A	6.7	0.48	A	6.9	0.2	
		OVERALL	-	A	9.2	-	A	9.3	-	A	9.8	0.5	
3	UNDERHILL AVENUE & EXISTING SITE ACCESS	UNSIGNALIZED											
		EB LT	-	-	-	-	-	-	0.02	A	9.0	-	
		SB LR	-	-	-	-	-	-	0.23	C	23.9	-	
4	UNDERHILL AVENUE & ROCHAMBEAU DRIVE/ PROPOSED SITE ACCESS (2)	UNSIGNALIZED											
	UNDERHILL AVENUE	EB LTR	-	-	-	-	-	-	0.01	A	8.8	-	
	UNDERHILL AVENUE	WB LTR	0.01	A	8.7	0.01	A	8.7	0.01	A	8.8	0.1	
	ROCHAMBEAU DRIVE	NB LTR	0.16	C	15.3	0.17	C	15.8	0.21	C	19.6	3.8	
	SITE ACCESS	SB LTR	-	-	-	-	-	-	0.08	C	22.2	-	
5	UNDERHILL AVENUE & GLEN ROCK STREET	UNSIGNALIZED											
		EB LT	0.00	A	8.9	0.00	A	8.9	0.00	A	9.1	0.2	
		SB LR	0.07	C	18.7	0.07	C	19.4	0.07	C	20.5	1.1	

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) NOTE THAT LEFT TURN EXISTING MOVEMENTS ALSO BENEFIT FROM GAPS CREATED BY THE TRAFFIC SIGNAL AT THE NYS ROUTE 118 INTERSECTION.
- 3) THE INTERSECTION OF UNDERHILL AVENUE & NYS ROUTE 118 HAS QUEING ON THE EB APPROACH.

TABLE NO. 2 PM
LEVEL OF SERVICE SUMMARY TABLE

				2021 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				PM	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	
1	UNDERHILL AVENUE & NYS ROUTE 118	SIGNALIZED											
	UNDERHILL AVENUE	EB	LTR	1.02	E	58.8	1.09	E	79.7	1.19	F	122.5	42.8
	UNDERHILL AVENUE	WB	LTR	0.53	C	20.5	0.55	C	21.5	0.58	C	23.5	2.0
	NYS ROUTE 118	NB	LTR	0.63	C	28.7	0.63	C	28.3	0.69	C	30.9	2.6
	NYS ROUTE 118	SB	LTR	0.81	C	30.3	0.82	C	30.8	0.84	C	31.8	1.0
		OVERALL		-	D	40.0	-	D	49.0	-	E	67.9	18.9
	W/ SIGNAL UPGRADES & TIMING IMPROVEMENTS												
	UNDERHILL AVENUE	EB	LTR	-	-	-	-	-	-	1.06	E	71.1	-8.6
	UNDERHILL AVENUE	WB	LTR	-	-	-	-	-	-	0.46	C	20.4	-1.1
	NYS ROUTE 118	NB	LTR	-	-	-	-	-	-	0.76	D	45.6	17.3
	NYS ROUTE 118	SB	LTR	-	-	-	-	-	-	0.88	D	46.4	15.6
		OVERALL		-	-	-	-	-	-	-	D	51.6	2.6
2	NYS ROUTE 118 & ALLAN AVENUE/ KEAR STREET	SIGNALIZED											
	ALLEN AVENUE	EB	LTR	0.19	C	23.3	0.19	C	23.3	0.22	C	24.7	1.4
	KEAR STREET	WB	LTR	0.59	C	33.6	0.59	C	33.8	0.61	C	34.5	0.7
	NYS ROUTE 118	NB	LTR	0.51	A	8.4	0.53	A	8.8	0.55	A	9.4	0.6
	NYS ROUTE 118	SB	LTR	0.34	A	6.6	0.35	A	6.8	0.38	A	7.2	0.4
		OVERALL		-	B	12.2	-	B	12.4	-	B	13.0	0.6
3	UNDERHILL AVENUE & EXISTING SITE ACCESS	UNSIGNALIZED											
		EB	LT	-	-	-	-	-	-	0.04	A	8.9	-
		SB	LR	-	-	-	-	-	-	0.27	D	29.3	-
4	UNDERHILL AVENUE & ROCHAMBEAU DRIVE/ PROPOSED SITE ACCESS (2)	UNSIGNALIZED											
	UNDERHILL AVENUE	EB	LTR	-	-	-	-	-	-	0.01	A	8.5	-
	UNDERHILL AVENUE	WB	LTR	0.06	A	9.3	0.06	A	9.4	0.06	A	9.5	0.1
	ROCHAMBEAU DRIVE	NB	LTR	0.10	C	15.4	0.11	C	15.8	0.14	C	19.2	3.4
	SITE ACCESS	SB	LTR	-	-	-	-	-	-	0.10	C	22.9	-
5	UNDERHILL AVENUE & GLEN ROCK STREET	UNSIGNALIZED											
		EB	LT	0.00	A	8.4	0.00	A	8.5	0.00	A	8.6	0.1
		SB	LR	0.07	C	19.2	0.08	C	20.0	0.08	C	21.6	1.6

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) NOTE THAT LEFT TURN EXISTING MOVEMENTS ALSO BENEFIT FROM GAPS CREATED BY THE TRAFFIC SIGNAL AT THE NYS ROUTE 118 INTERSECTION.
- 3) THE INTERSECTION OF UNDERHILL AVENUE & NYS ROUTE 118 CURRENTLY EXPERIENCES LONG QUEUES ON THE EB APPROACH DURING THE PM PEAK HOUR. THE SIGNAL TIMING AND RELATED SIGNAL UPGRADES /IMPROVEMENTS WILL HELP ALLEVIATE THIS CONDITION.

Traffic Impact Study

Appendix C | Level of Service Standards

Level of Service Standards

Level of Service for Signalized Intersections

Level of Service (LOS) can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Control delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

- **LOS A** describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
- **LOS B** describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
- **LOS C** describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate.
- **LOS D** describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long.
- **LOS E** describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long.
- **LOS F** describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long.

A lane group can incur a delay less than 80 s/veh when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short, the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that cycle capacity is fully utilized and represents failure from a capacity perspective (just as delay in excess of 80 s/veh represents failure from a delay perspective).

The Level of Service Criteria for signalized intersections are given in Exhibit 19-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 19-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	$v/c \leq 1.0$	$v/c \geq 1.0$
≤ 10	A	F
>10-20	B	F
>20-35	C	F
>35-55	D	F
>55-80	E	F
>80	F	F

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

Level of Service Criteria For Two-Way Stop-Controlled (TWSC) Unsignalized Intersections

Level of Service (LOS) for a two-way stop-controlled (TWSC) intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turns. LOS is not defined for the intersection as a whole or for major-street approaches.

The Level of Service Criteria for TWSC unsignalized intersections are given in Exhibit 20-2 from the Highway Capacity Manual, 6th Edition published by the Transportation Research Board.

Exhibit 20-2 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	$v/c \leq 1.0$	$v/c \geq 1.0$
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F

The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

As Exhibit 20-2 notes, LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

The Level of Service Criteria for unsignalized intersections are somewhat different from the criteria for signalized intersections.

Traffic Impact Study

Level of Service Criteria For All-Way Stop-Controlled (AWSC) Unsignalized Intersections

The Levels of Service (LOS) for all-way stop-controlled (AWSC) intersections are given in Exhibit 21-8. As the exhibit notes, LOS F is assigned if the volume-to-capacity (v/c) ratio of a lane exceeds 1.0, regardless of the control delay. For assessment of LOS at the approach and intersection levels, LOS is based solely on control delay.

The Level of Service Criteria for AWSC unsignalized intersections are given in Exhibit 21-8 from the *Highway Capacity Manual, 6th Edition* published by the Transportation Research Board.

Exhibit 21-8 LOS by Volume-to-Capacity Ratio

Control Delay (s/veh)	$v/c \leq 1.0$	$v/c \geq 1.0$
0-10	A	F
>10-15	B	F
>15-25	C	F
>25-35	D	F
>35-50	E	F
>50	F	F













For approaches and intersection wide assessment, LOS is defined solely by control delay.

Traffic Impact Study

Appendix D | Capacity Analysis

2021 Existing Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔				↔			↔			↔	
Traffic Volume (vph)	175	291	32	20	210	14	54	122	28	44	158	307
Future Volume (vph)	175	291	32	20	210	14	54	122	28	44	158	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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		0.991			0.992			0.981			0.919	
Flt Protected		0.983			0.996			0.987			0.996	
Satd. Flow (prot)	0	1984	0	0	1804	0	0	1777	0	0	1714	0
Flt Permitted		0.525			0.926			0.684			0.952	
Satd. Flow (perm)	0	1060	0	0	1677	0	0	1231	0	0	1638	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			8			78	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	186	310	34	21	223	15	57	130	30	47	168	327
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	530	0	0	259	0	0	217	0	0	542	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	26.0	57.0		31.0	31.0		46.0	46.0		46.0	46.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2021 Existing Traffic Volumes
1: NYS Route 118 & Underhill Avenue

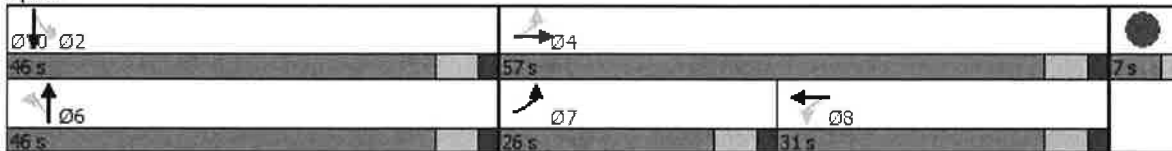
Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	51.8%		28.2%	28.2%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	20.0	51.0		25.0	25.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	0											
Act Effct Green (s)		46.4			19.6			31.6			31.6	
Actuated g/C Ratio		0.51			0.22			0.35			0.35	
v/c Ratio		0.70			0.71			0.50			0.87	
Control Delay		21.8			44.5			27.0			39.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.8			44.5			27.0			39.5	
LOS		C			D			C			D	
Approach Delay		21.8			44.5			27.0			39.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)		199			139			100			270	
Queue Length 95th (ft)		328			239			169			#423	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		828			480			565			789	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.64			0.54			0.38			0.69	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 90.3
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 32.5
 Intersection Capacity Utilization 86.8%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.













Splits and Phases: 1: NYS Route 118 & Underhill Avenue



Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2021 Existing Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	18	55	17	31	12	28	8	268	35	59	461	10
Future Volume (vph)	18	55	17	31	12	28	8	268	35	59	461	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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		0.975			0.947			0.985			0.997	
Flt Protected		0.990			0.979			0.999			0.994	
Satd. Flow (prot)	0	1747	0	0	1908	0	0	1754	0	0	1767	0
Flt Permitted		0.933			0.858			0.985			0.927	
Satd. Flow (perm)	0	1646	0	0	1672	0	0	1730	0	0	1648	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			25			6			1	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	59	18	33	13	30	9	285	37	63	490	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	76	0	0	331	0	0	564	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

2021 Existing Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
 03/14/2022

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2021 Existing Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.6			10.6			52.7			52.7	
Actuated g/C Ratio		0.15			0.15			0.75			0.75	
v/c Ratio		0.38			0.28			0.25			0.46	
Control Delay		30.6			23.1			4.6			6.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.6			23.1			4.6			6.4	
LOS		C			C			A			A	
Approach Delay		30.6			23.1			4.6			6.4	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		36			20			45			95	
Queue Length 95th (ft)		78			56			84			175	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		712			733			1300			1237	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.13			0.10			0.25			0.46	

Intersection Summary

Area Type: Other
 Cycle Length: 125
 Actuated Cycle Length: 70.2
 Natural Cycle: 105
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.46
 Intersection Signal Delay: 9.2
 Intersection Capacity Utilization 69.0%
 Analysis Period (min) 15

Intersection LOS: A
ICU Level of Service C

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

↑ Ø2 57 s	→ Ø4 35 s	⤴ Ø10 33 s
↓ Ø6 57 s	← Ø8 35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2021 Existing Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak AM Hour
03/14/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Volume (vph)	474	6	12	559	38	24
Future Volume (vph)	474	6	12	559	38	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	-6%			6%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.948	
Flt Protected				0.999	0.970	
Satd. Flow (prot)	1806	0	0	1766	1826	0
Flt Permitted				0.999	0.970	
Satd. Flow (perm)	1806	0	0	1766	1826	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	220			425	323	
Travel Time (s)	5.0			9.7	7.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	20%	17%	4%	6%	5%
Adj. Flow (vph)	499	6	13	588	40	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	505	0	0	601	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	1.04	1.04	0.88	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.3%			ICU Level of Service A		
Analysis Period (min)	15					

2021 Existing Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak AM Hour
03/14/2022

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	474	6	12	559	38	24
Future Vol, veh/h	474	6	12	559	38	24
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, %	-6	-	-	6	-7	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	20	17	4	6	5
Mvmt Flow	499	6	13	588	40	25

Major/Minor

	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	505	0	1116
Stage 1	-	-	-	-	502
Stage 2	-	-	-	-	614
Critical Hdwy	-	-	4.27	-	5.06
Critical Hdwy Stg 1	-	-	-	-	4.06
Critical Hdwy Stg 2	-	-	-	-	4.06
Follow-up Hdwy	-	-	2.353	-	3.554
Pot Cap-1 Maneuver	-	-	987	-	348
Stage 1	-	-	-	-	729
Stage 2	-	-	-	-	678
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	987	-	341
Mov Cap-2 Maneuver	-	-	-	-	341
Stage 1	-	-	-	-	729
Stage 2	-	-	-	-	662

Approach

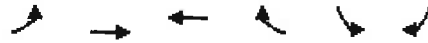
	EB	WB	NB
HCM Control Delay, s	0	0.2	15.3
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	413	-	-	987	-
HCM Lane V/C Ratio	0.158	-	-	0.013	-
HCM Control Delay (s)	15.3	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

2021 Existing Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	2	471	590	7	9	8
Future Volume (vph)	2	471	590	7	9	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.936	
Flt Protected					0.974	
Satd. Flow (prot)	0	1804	1769	0	1501	0
Flt Permitted					0.974	
Satd. Flow (perm)	0	1804	1769	0	1501	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	8%	4%	2%	2%	14%
Adj. Flow (vph)	2	518	648	8	10	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	520	656	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 41.5% ICU Level of Service A
 Analysis Period (min) 15

2021 Existing Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
03/14/2022

Intersection

Int Delay, s/veh 0.3

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	471	590	7	9	8
Future Vol, veh/h	2	471	590	7	9	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, %	-	-5	6	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	8	4	2	2	14
Mvmt Flow	2	518	648	8	10	9

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	656	0	-	0	1174	652
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	522	-
Critical Hdwy	4.12	-	-	-	6.42	6.34
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.426
Pot Cap-1 Maneuver	931	-	-	-	212	447
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	931	-	-	-	211	447
Mov Cap-2 Maneuver	-	-	-	-	211	-
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	595	-

Approach EB WB SB

HCM Control Delay, s	0	0	18.7
HCM LOS			C

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	931	-	-	-	281
HCM Lane V/C Ratio	0.002	-	-	-	0.066
HCM Control Delay (s)	8.9	0	-	-	18.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2021 Existing Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	363	252	49	35	241	36	37	167	27	23	134	231
Future Volume (vph)	363	252	49	35	241	36	37	167	27	23	134	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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		0.990			0.984			0.984			0.920	
Flt Protected		0.973			0.994			0.992			0.997	
Satd. Flow (prot)	0	1962	0	0	1786	0	0	1791	0	0	1717	0
Flt Permitted		0.549			0.879			0.802			0.971	
Satd. Flow (perm)	0	1107	0	0	1579	0	0	1448	0	0	1672	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			5			8			95	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	382	265	52	37	254	38	39	176	28	24	141	243
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	699	0	0	329	0	0	243	0	0	408	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	16.0	43.0		27.0	27.0		60.0	60.0		60.0	60.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Fr _t	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2021 Existing Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022



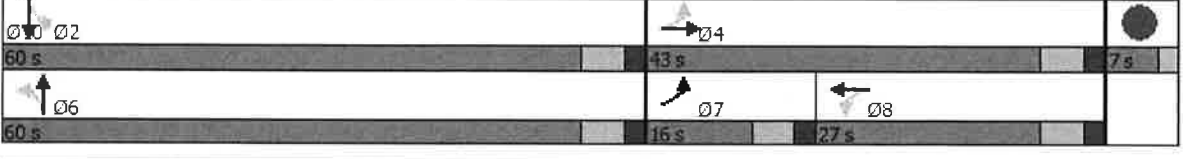
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.5%	39.1%		24.5%	24.5%		54.5%	54.5%		54.5%	54.5%	
Maximum Green (s)	10.0	37.0		21.0	21.0		54.0	54.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effct Green (s)		37.2			26.2			17.4			17.4	
Actuated g/C Ratio		0.56			0.39			0.26			0.26	
v/c Ratio		1.02			0.53			0.63			0.81	
Control Delay		58.8			20.5			28.7			30.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		58.8			20.5			28.7			30.3	
LOS		E			C			C			C	
Approach Delay		58.8			20.5			28.7			30.3	
Approach LOS		E			C			C			C	
Queue Length 50th (ft)		~185			97			84			119	
Queue Length 95th (ft)		#594			203			150			213	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		684			622			1180			1379	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.02			0.53			0.21			0.30	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 66.7
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 40.0
 Intersection Capacity Utilization 93.0%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F

~ 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: 1: NYS Route 118 & Underhill Avenue



Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2021 Existing Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	9	30	12	60	48	58	14	497	55	26	316	17
Future Volume (vph)	9	30	12	60	48	58	14	497	55	26	316	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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
Flt		0.967			0.953			0.987			0.994	
Flt Protected		0.992			0.982			0.999			0.996	
Satd. Flow (prot)	0	1736	0	0	1926	0	0	1758	0	0	1765	0
Flt Permitted		0.951			0.859			0.988			0.942	
Satd. Flow (perm)	0	1664	0	0	1685	0	0	1738	0	0	1669	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			20			5			2	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	32	13	63	51	61	15	523	58	27	333	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	54	0	0	175	0	0	596	0	0	378	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2021 Existing Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
 03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		12.5			12.5			50.1			50.1	
Actuated g/C Ratio		0.17			0.17			0.67			0.67	
v/c Ratio		0.19			0.59			0.51			0.34	
Control Delay		23.3			33.6			8.4			6.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.3			33.6			8.4			6.6	
LOS		C			C			A			A	
Approach Delay		23.3			33.6			8.4			6.6	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		17			66			113			61	
Queue Length 95th (ft)		46			126			221			123	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		677			690			1168			1120	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.08			0.25			0.51			0.34	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 74.6

Natural Cycle: 105

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 12.2






Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

 Ø2	 Ø4	 Ø10
57 s	35 s	33 s
 Ø6	 Ø8	
57 s	35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2021 Existing Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak PM Hour
03/14/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↗	↘	
Traffic Volume (vph)	640	35	48	461	14	24
Future Volume (vph)	640	35	48	461	14	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	-6%			6%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.916	
Flt Protected				0.995	0.982	
Satd. Flow (prot)	1905	0	0	1798	1816	0
Flt Permitted				0.995	0.982	
Satd. Flow (perm)	1905	0	0	1798	1816	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	220			425	323	
Travel Time (s)	5.0			9.7	7.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%
Adj. Flow (vph)	674	37	51	485	15	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	711	0	0	536	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	1.04	1.04	0.88	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	74.2%			ICU Level of Service D		
Analysis Period (min)	15					

2021 Existing Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak PM Hour
03/14/2022

Intersection

Int Delay, s/veh 0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	↕
Traffic Vol, veh/h	640	35	48	461	14	24
Future Vol, veh/h	640	35	48	461	14	24
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, %	-6	-	-	6	-7	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	5
Mvmt Flow	674	37	51	485	15	25

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	711	0	1280 693
Stage 1	-	-	-	-	693 -
Stage 2	-	-	-	-	587 -
Critical Hdwy	-	-	4.12	-	5.02 5.55
Critical Hdwy Sta 1	-	-	-	-	4.02 -
Critical Hdwy Stg 2	-	-	-	-	4.02 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.345
Pot Cap-1 Maneuver	-	-	888	-	301 501
Stage 1	-	-	-	-	650 -
Stage 2	-	-	-	-	698 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	888	-	277 501
Mov Cap-2 Maneuver	-	-	-	-	277 -
Stage 1	-	-	-	-	650 -
Stage 2	-	-	-	-	643 -

Approach

	EB	WB	NB
HCM Control Delay, s	0	0.9	15.4
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	386	-	-	888	-
HCM Lane V/C Ratio	0.104	-	-	0.057	-
HCM Control Delay (s)	15.4	-	-	9.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-

2021 Existing Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak PM Hour
03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	2	665	463	12	10	8
Future Volume (vph)	2	665	463	12	10	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997		0.939	
Flt Protected					0.973	
Satd. Flow (prot)	0	1909	1801	0	1588	0
Flt Permitted					0.973	
Satd. Flow (perm)	0	1909	1801	0	1588	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	723	503	13	11	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	725	516	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.6%
ICU Level of Service	A
Analysis Period (min)	15

2021 Existing Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak PM Hour
03/14/2022

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	665	463	12	10	8
Future Vol, veh/h	2	665	463	12	10	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, %	-	-5	6	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	723	503	13	11	9

















Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	516	0	-	0	1237 510
Stage 1	-	-	-	-	510 -
Stage 2	-	-	-	-	727 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1050	-	-	-	194 563
Stage 1	-	-	-	-	603 -
Stage 2	-	-	-	-	478 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1050	-	-	-	193 563
Mov Cap-2 Maneuver	-	-	-	-	193 -
Stage 1	-	-	-	-	601 -
Stage 2	-	-	-	-	478 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1050	-	-	-	273
HCM Lane V/C Ratio	0.002	-	-	-	0.072
HCM Control Delay (s)	8.4	0	-	-	19.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
04/08/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	297	33	20	214	14	55	125	29	45	163	320
Future Volume (vph)	184	297	33	20	214	14	55	125	29	45	163	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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		0.991			0.992			0.981			0.918	
Flt Protected		0.982			0.996			0.987			0.996	
Satd. Flow (prot)	0	1982	0	0	1804	0	0	1777	0	0	1712	0
Flt Permitted		0.525			0.927			0.668			0.952	
Satd. Flow (perm)	0	1060	0	0	1679	0	0	1202	0	0	1636	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			8			79	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	196	316	35	21	228	15	59	133	31	48	173	340
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	0	0	264	0	0	223	0	0	561	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	26.0	57.0		31.0	31.0		46.0	46.0		46.0	46.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

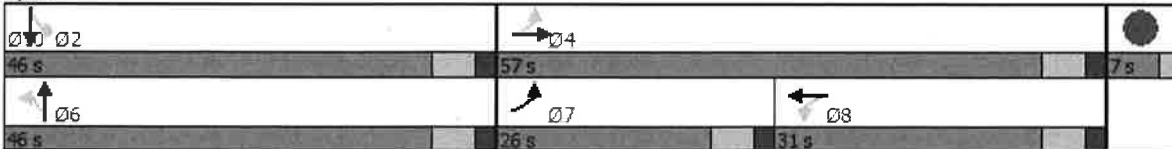
Peak AM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	51.8%		28.2%	28.2%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	20.0	51.0		25.0	25.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	0											
Act Effct Green (s)		47.8			21.2			33.1			33.1	
Actuated g/C Ratio		0.51			0.23			0.36			0.36	
v/c Ratio		0.73			0.69			0.52			0.89	
Control Delay		23.5			43.5			28.0			42.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.5			43.5			28.0			42.0	
LOS		C			D			C			D	
Approach Delay		23.5			43.5			28.0			42.0	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)		221			147			104			286	
Queue Length 95th (ft)		342			244			176			#475	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		796			462			531			761	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.69			0.57			0.42			0.74	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 93.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 33.9
 Intersection LOS: C
 Intersection Capacity Utilization 89.1%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 118 & Underhill Avenue



Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	18	56	17	32	12	29	8	279	36	60	479	10
Future Volume (vph)	18	56	17	32	12	29	8	279	36	60	479	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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		0.975			0.946			0.985			0.997	
Flt Protected		0.990			0.979			0.999			0.995	
Satd. Flow (prot)	0	1747	0	0	1906	0	0	1754	0	0	1768	0
Flt Permitted		0.934			0.856			0.985			0.926	
Satd. Flow (perm)	0	1648	0	0	1667	0	0	1730	0	0	1646	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			25			6			1	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	19	60	18	34	13	31	9	297	38	64	510	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	0	78	0	0	344	0	0	585	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

2025 No-Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
 04/08/2022

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 No-Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
 04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.6			10.6			52.5			52.5	
Actuated g/C Ratio		0.15			0.15			0.75			0.75	
v/c Ratio		0.38			0.29			0.26			0.47	
Control Delay		30.6			23.4			4.7			6.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.6			23.4			4.7			6.7	
LOS		C			C			A			A	
Approach Delay		30.6			23.4			4.7			6.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		36			21			47			101	
Queue Length 95th (ft)		79			58			88			187	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		716			734			1300			1235	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.14			0.11			0.26			0.47	

Intersection Summary

Area Type: Other
 Cycle Length: 125
 Actuated Cycle Length: 70
 Natural Cycle: 105
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.47
 Intersection Signal Delay: 9.3
 Intersection Capacity Utilization 70.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

Ø2 57 s	Ø4 35 s	Ø10 33 s
Ø6 57 s	Ø8 35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak AM Hour
04/08/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↗
Traffic Volume (vph)	488	6	12	577	39	24
Future Volume (vph)	488	6	12	577	39	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	-6%			6%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998				0.949	
Flt Protected				0.999	0.970	
Satd. Flow (prot)	1806	0	0	1766	1828	0
Flt Permitted				0.999	0.970	
Satd. Flow (perm)	1806	0	0	1766	1828	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	220			425	323	
Travel Time (s)	5.0			9.7	7.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	20%	17%	4%	6%	5%
Adj. Flow (vph)	514	6	13	607	41	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	520	0	0	620	66	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	1.04	1.04	0.88	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	50.3%			ICU Level of Service A		
Analysis Period (min)	15					

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak AM Hour
04/08/2022

Intersection						
Int Delay, s/veh	1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↘	↙
Traffic Vol, veh/h	488	6	12	577	39	24
Future Vol, veh/h	488	6	12	577	39	24
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, %	-6	-	-	6	-7	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	20	17	4	6	5
Mvmt Flow	514	6	13	607	41	25

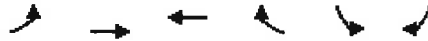
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	520	0	1150 517
Stage 1	-	-	-	-	517 -
Stage 2	-	-	-	-	633 -
Critical Hdwy	-	-	4.27	-	5.06 5.55
Critical Hdwy Stg 1	-	-	-	-	4.06 -
Critical Hdwy Stg 2	-	-	-	-	4.06 -
Follow-up Hdwy	-	-	2.353	-	3.554 3.345
Pot Cap-1 Maneuver	-	-	974	-	337 611
Stage 1	-	-	-	-	722 -
Stage 2	-	-	-	-	667 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	974	-	330 611
Mov Cap-2 Maneuver	-	-	-	-	330 -
Stage 1	-	-	-	-	722 -
Stage 2	-	-	-	-	654 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	400	-	-	974	-
HCM Lane V/C Ratio	0.166	-	-	0.013	-
HCM Control Delay (s)	15.8	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

2025 No-Build Traffic Volumes
 5: Underhill Avenue & Glen Rock Street

Peak AM Hour
 04/08/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Volume (vph)	2	485	609	7	9	8
Future Volume (vph)	2	485	609	7	9	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.936	
Flt Protected					0.974	
Satd. Flow (prot)	0	1804	1769	0	1501	0
Flt Permitted					0.974	
Satd. Flow (perm)	0	1804	1769	0	1501	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	8%	4%	2%	2%	14%
Adj. Flow (vph)	2	533	669	8	10	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	535	677	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 42.5% ICU Level of Service A
 Analysis Period (min) 15

2025 No-Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
04/08/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	485	609	7	9	8
Future Vol, veh/h	2	485	609	7	9	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, %	-	-5	6	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	8	4	2	2	14
Mvmt Flow	2	533	669	8	10	9

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	677	0	0 1210 673
Stage 1	-	-	- 673 -
Stage 2	-	-	- 537 -
Critical Hdwy	4.12	-	- 6.42 6.34
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.426
Pot Cap-1 Maneuver	915	-	- 202 435
Stage 1	-	-	- 507 -
Stage 2	-	-	- 586 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	915	-	- 201 435
Mov Cap-2 Maneuver	-	-	- 201 -
Stage 1	-	-	- 505 -
Stage 2	-	-	- 586 -

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	915	-	-	-	269
HCM Lane V/C Ratio	0.002	-	-	-	0.069
HCM Control Delay (s)	8.9	0	-	-	19.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	379	257	50	36	246	37	38	172	28	23	139	243
Future Volume (vph)	379	257	50	36	246	37	38	172	28	23	139	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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		0.990			0.984			0.984			0.919	
Flt Protected		0.973			0.994			0.992			0.997	
Satd. Flow (prot)	0	1962	0	0	1786	0	0	1791	0	0	1715	0
Flt Permitted		0.539			0.873			0.799			0.972	
Satd. Flow (perm)	0	1087	0	0	1568	0	0	1443	0	0	1672	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			5			8			97	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	399	271	53	38	259	39	40	181	29	24	146	256
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	723	0	0	336	0	0	250	0	0	426	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	16.0	43.0		27.0	27.0		60.0	60.0		60.0	60.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.5%	39.1%		24.5%	24.5%		54.5%	54.5%		54.5%	54.5%	
Maximum Green (s)	10.0	37.0		21.0	21.0		54.0	54.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effct Green (s)		37.2		26.2			18.2			18.2		
Actuated g/C Ratio		0.55		0.39			0.27			0.27		
v/c Ratio		1.09		0.55			0.63			0.82		
Control Delay		79.7		21.5			28.3			30.8		
Queue Delay		0.0		0.0			0.0			0.0		
Total Delay		79.7		21.5			28.3			30.8		
LOS		E		C			C			C		
Approach Delay		79.7		21.5			28.3			30.8		
Approach LOS		E		C			C			C		
Queue Length 50th (ft)		-232		103			87			127		
Queue Length 95th (ft)		#638		215			154			224		
Internal Link Dist (ft)		310		219			381			978		
Turn Bay Length (ft)												
Base Capacity (vph)		666		610			1162			1364		
Starvation Cap Reductn		0		0			0			0		
Spillback Cap Reductn		0		0			0			0		
Storage Cap Reductn		0		0			0			0		
Reduced v/c Ratio		1.09		0.55			0.22			0.31		

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 67.5
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 49.0
 Intersection LOS: D
 Intersection Capacity Utilization 95.6%
 ICU Level of Service F
 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: 1: NYS Route 118 & Underhill Avenue

02	04	06	07	08
60 s	43 s	60 s	16 s	27 s

Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
04/08/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	31	12	61	49	59	14	518	56	27	331	17
Future Volume (vph)	9	31	12	61	49	59	14	518	56	27	331	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.968			0.953			0.987			0.994	
Flt Protected		0.992			0.982			0.999			0.996	
Satd. Flow (prot)	0	1738	0	0	1926	0	0	1758	0	0	1765	0
Flt Permitted		0.952			0.858			0.988			0.940	
Satd. Flow (perm)	0	1668	0	0	1683	0	0	1738	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			20			5			2	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	33	13	64	52	62	15	545	59	28	348	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	178	0	0	619	0	0	394	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		CI+Ex			CI+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 No-Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
 04/08/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		12.6			12.6			50.1			50.1	
Actuated g/C Ratio		0.17			0.17			0.67			0.67	
v/c Ratio		0.19			0.59			0.53			0.35	
Control Delay		23.3			33.8			8.8			6.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.3			33.8			8.8			6.8	
LOS		C			C			A			A	
Approach Delay		23.3			33.8			8.8			6.8	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		17			68			120			65	
Queue Length 95th (ft)		46			128			237			131	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		677			688			1166			1116	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.08			0.26			0.53			0.35	

Intersection Summary

Area Type: Other
 Cycle Length: 125
 Actuated Cycle Length: 74.7
 Natural Cycle: 105
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 12.4
 Intersection Capacity Utilization 60.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

Ø2 57 s	Ø4 35 s	Ø10 33 s
Ø6 57 s	Ø8 35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak PM Hour
04/08/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↘	
Traffic Volume (vph)	662	36	49	477	14	24
Future Volume (vph)	662	36	49	477	14	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	-6%			6%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.916	
Flt Protected				0.995	0.982	
Satd. Flow (prot)	1905	0	0	1798	1816	0
Flt Permitted				0.995	0.982	
Satd. Flow (perm)	1905	0	0	1798	1816	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	220			425	323	
Travel Time (s)	5.0			9.7	7.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%
Adj. Flow (vph)	697	38	52	502	15	25
Shared Lane Traffic (%)						
Lane Group Flow (vph)	735	0	0	554	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	1.04	1.04	0.88	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 75.9% ICU Level of Service D
 Analysis Period (min) 15

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak PM Hour
04/08/2022

Intersection

Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↘	↙
Traffic Vol, veh/h	662	36	49	477	14	24
Future Vol, veh/h	662	36	49	477	14	24
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, %	-6	-	-	6	-7	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	5
Mvmt Flow	697	38	52	502	15	25

Major/Minor

	Major1		Major2		Minor1	
Conflicting Flow All	0	0	735	0	1322	716
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	-	-	4.12	-	5.02	5.55
Critical Hdwy Stg 1	-	-	-	-	4.02	-
Critical Hdwy Stg 2	-	-	-	-	4.02	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.345
Pot Cap-1 Maneuver	-	-	870	-	288	489
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	689	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	870	-	264	489
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	632	-

Approach

	EB	WB	NB
HCM Control Delay, s	0	0.9	15.8
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	372	-	-	870	-
HCM Lane V/C Ratio	0.108	-	-	0.059	-
HCM Control Delay (s)	15.8	-	-	9.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

2025 No-Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak PM Hour
04/08/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (vph)	2	687	479	12	10	8
Future Volume (vph)	2	687	479	12	10	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997		0.939	
Flt Protected					0.973	
Satd. Flow (prot)	0	1909	1801	0	1588	0
Flt Permitted					0.973	
Satd. Flow (perm)	0	1909	1801	0	1588	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	747	521	13	11	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	749	534	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 47.7% ICU Level of Service A
 Analysis Period (min) 15

2025 No-Build Traffic Volumes
 5: Underhill Avenue & Glen Rock Street

Peak PM Hour
 04/08/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	687	479	12	10	8
Future Vol, veh/h	2	687	479	12	10	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, %	-	-5	6	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	747	521	13	11	9

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	534	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1034	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1034	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	20
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1034	-	-	-	259
HCM Lane V/C Ratio	0.002	-	-	-	0.076
HCM Control Delay (s)	8.5	0	-	-	20
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	204	305	41	20	219	14	60	125	29	45	163	331
Future Volume (vph)	204	305	41	20	219	14	60	125	29	45	163	331
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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
Flt		0.990			0.992			0.982			0.917	
Flt Protected		0.982			0.996			0.986			0.996	
Satd. Flow (prot)	0	1980	0	0	1804	0	0	1777	0	0	1710	0
Flt Permitted		0.518			0.925			0.639			0.952	
Satd. Flow (perm)	0	1044	0	0	1675	0	0	1151	0	0	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			8			82	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	217	324	44	21	233	15	64	133	31	48	173	352
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	585	0	0	269	0	0	228	0	0	573	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	26.0	57.0		31.0	31.0		46.0	46.0		46.0	46.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	51.8%		28.2%	28.2%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	20.0	51.0		25.0	25.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	0											
Act Effct Green (s)		49.0			22.7			34.7			34.7	
Actuated g/C Ratio		0.51			0.24			0.36			0.36	
v/c Ratio		0.80			0.68			0.54			0.89	
Control Delay		27.4			43.1			29.1			42.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.4			43.1			29.1			42.5	
LOS		C			D			C			D	
Approach Delay		27.4			43.1			29.1			42.5	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)		254			155			108			294	
Queue Length 95th (ft)		#415			249			184			#492	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		762			444			490			737	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.77			0.61			0.47			0.78	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 95.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 35.4
 Intersection Capacity Utilization 91.7%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 118 & Underhill Avenue

46 s	57 s	7 s	
46 s	26 s	31 s	

Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	22	60	17	34	14	29	8	295	40	60	488	12
Future Volume (vph)	22	60	17	34	14	29	8	295	40	60	488	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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		0.977			0.949			0.984			0.997	
Flt Protected		0.989			0.979			0.999			0.995	
Satd. Flow (prot)	0	1749	0	0	1912	0	0	1752	0	0	1768	0
Flt Permitted		0.927			0.840			0.986			0.925	
Satd. Flow (perm)	0	1639	0	0	1641	0	0	1730	0	0	1644	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			23			6			1	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	23	64	18	36	15	31	9	314	43	64	519	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	0	82	0	0	366	0	0	596	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		CI+Ex			CI+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.8			10.8			52.2			52.2	
Actuated g/C Ratio		0.15			0.15			0.75			0.75	
v/c Ratio		0.40			0.30			0.28			0.48	
Control Delay		31.4			24.4			4.9			6.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		31.4			24.4			4.9			6.9	
LOS		C			C			A			A	
Approach Delay		31.4			24.4			4.9			6.9	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		40			24			51			104	
Queue Length 95th (ft)		85			61			98			198	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		716			725			1296			1230	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.15			0.11			0.28			0.48	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 69.8

Natural Cycle: 105

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 9.8






Intersection LOS: A

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

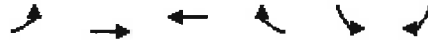
Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

 02	 04	 010
57 s	35 s	33 s
 06	 08	
57 s	35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
 3: Underhill Avenue & Site Access

Peak AM Hour
 04/08/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (vph)	14	521	594	16	28	24
Future Volume (vph)	14	521	594	16	28	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-5%	5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.937	
Flt Protected		0.999			0.974	
Satd. Flow (prot)	0	1804	1775	0	1700	0
Flt Permitted		0.999			0.974	
Satd. Flow (perm)	0	1804	1775	0	1700	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		425	390		188	
Travel Time (s)		9.7	8.9		4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	4%	2%	2%	2%
Adj. Flow (vph)	16	579	660	18	31	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	595	678	0	58	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 48.7%

ICU Level of Service A

Analysis Period (min) 15

2025 Build Traffic Volumes
3: Underhill Avenue & Site Access

Peak AM Hour
04/08/2022

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	14	521	594	16	28	24
Future Vol, veh/h	14	521	594	16	28	24
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, %	-	-5	5	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	8	4	2	2	2
Mvmt Flow	16	579	660	18	31	27

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	678	0	0	1280	669
Stage 1	-	-	-	669	-
Stage 2	-	-	-	611	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	914	-	-	183	458
Stage 1	-	-	-	509	-
Stage 2	-	-	-	542	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	914	-	-	178	458
Mov Cap-2 Maneuver	-	-	-	178	-
Stage 1	-	-	-	496	-
Stage 2	-	-	-	542	-

Approach













	EB	WB	SB
HCM Control Delay, s	0.2	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	914	-	-	-	248
HCM Lane V/C Ratio	0.017	-	-	-	0.233
HCM Control Delay (s)	9	0	-	-	23.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

2025 Build Traffic Volumes
 4: Rochambeau Drive/Site Access & Underhill Avenue

Peak AM Hour
 04/08/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	5	502	6	12	601	5	39	0	24	8	0	8
Future Volume (vph)	5	502	6	12	601	5	39	0	24	8	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	14	12	12	12	12
Grade (%)		-6%			6%			-7%			0%	
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
Flt		0.998			0.999			0.949			0.932	
Flt Protected					0.999			0.970			0.976	
Satd. Flow (prot)	0	1807	0	0	1764	0	0	1828	0	0	1694	0
Flt Permitted					0.999			0.970			0.976	
Satd. Flow (perm)	0	1807	0	0	1764	0	0	1828	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		220			425			323			173	
Travel Time (s)		5.0			9.7			7.3			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	8%	20%	17%	4%	2%	6%	2%	5%	2%	2%	2%
Adj. Flow (vph)	5	528	6	13	633	5	41	0	25	8	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	539	0	0	651	0	0	66	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	0.96	1.04	1.04	1.04	0.96	0.88	0.96	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	51.0%
ICU Level of Service	A
Analysis Period (min)	15

2025 Build Traffic Volumes
4: Rochambeau Drive/Site Access & Underhill Avenue

Peak AM Hour
04/08/2022

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	5	502	6	12	601	5	39	0	24	8	0	8
Future Vol, veh/h	5	502	6	12	601	5	39	0	24	8	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	6	-	-	-7	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	8	20	17	4	2	6	2	5	2	2	2
Mvmt Flow	5	528	6	13	633	5	41	0	25	8	0	8

Major/Minor

	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	638	0	0	534	0	0	1207	1205	531	1216	1206	636
Stage 1	-	-	-	-	-	-	541	541	-	662	662	-
Stage 2	-	-	-	-	-	-	666	664	-	554	544	-
Critical Hdwy	4.12	-	-	4.27	-	-	5.76	5.12	5.55	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	4.76	4.12	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4.76	4.12	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.353	-	-	3.554	4.018	3.345	3.518	4.018	3.318
Pot Cap-1 Maneuver	946	-	-	962	-	-	251	294	601	158	184	478
Stage 1	-	-	-	-	-	-	639	643	-	451	459	-
Stage 2	-	-	-	-	-	-	573	593	-	517	519	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	946	-	-	962	-	-	241	285	601	148	179	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	285	-	148	179	-
Stage 1	-	-	-	-	-	-	634	638	-	447	449	-
Stage 2	-	-	-	-	-	-	551	581	-	491	515	-

Approach

	EB		WB		NB		SB
HCM Control Delay, s	0.1		0.2		19.6		22.2
HCM LOS					C		C

Minor Lane/Major Mvmt

	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	312	946	-	-	962	-	-	226
HCM Lane V/C Ratio	0.213	0.006	-	-	0.013	-	-	0.075
HCM Control Delay (s)	19.6	8.8	0	-	8.8	0	-	22.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0.2

2025 Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
04/08/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	2	503	641	7	9	8
Future Volume (vph)	2	503	641	7	9	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.936	
Flt Protected					0.974	
Satd. Flow (prot)	0	1804	1769	0	1501	0
Flt Permitted					0.974	
Satd. Flow (perm)	0	1804	1769	0	1501	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	8%	4%	2%	2%	14%
Adj. Flow (vph)	2	553	704	8	10	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	555	712	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.2%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
04/08/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	2	503	641	7	9	8
Future Vol, veh/h	2	503	641	7	9	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, %	-	-5	6	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	8	4	2	2	14
Mvmt Flow	2	553	704	8	10	9

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	712	0	0	1265	708
Stage 1	-	-	-	708	-
Stage 2	-	-	-	557	-
Critical Hdwy	4.12	-	-	6.42	6.34
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.426
Pot Cap-1 Maneuver	888	-	-	187	415
Stage 1	-	-	-	488	-
Stage 2	-	-	-	574	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	888	-	-	186	415
Mov Cap-2 Maneuver	-	-	-	186	-
Stage 1	-	-	-	487	-
Stage 2	-	-	-	574	-

Approach













	EB	WB	SB
HCM Control Delay, s	0	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	888	-	-	-	251
HCM Lane V/C Ratio	0.002	-	-	-	0.074
HCM Control Delay (s)	9.1	0	-	-	20.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
04/08/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	398	264	57	36	256	37	48	172	28	23	139	268
Future Volume (vph)	398	264	57	36	256	37	48	172	28	23	139	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	11	12	12	11	12
Grade (%)		-5%			4%			3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.985			0.985			0.916	
Flt Protected		0.973			0.995			0.990			0.997	
Satd. Flow (prot)	0	1960	0	0	1789	0	0	1730	0	0	1653	0
Flt Permitted		0.523			0.870			0.742			0.971	
Satd. Flow (perm)	0	1053	0	0	1564	0	0	1296	0	0	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			5			8			107	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	419	278	60	38	269	39	51	181	29	24	146	282
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	757	0	0	346	0	0	261	0	0	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.07	1.02	0.99	1.04	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	16.0	43.0		27.0	27.0		60.0	60.0		60.0	60.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Flt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.5%	39.1%		24.5%	24.5%		54.5%	54.5%		54.5%	54.5%	
Maximum Green (s)	10.0	37.0		21.0	21.0		54.0	54.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effct Green (s)		37.3			26.2			20.0			20.0	
Actuated g/C Ratio		0.54			0.38			0.29			0.29	
v/c Ratio		1.19			0.58			0.69			0.84	
Control Delay		122.5			23.5			30.9			31.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		122.5			23.5			30.9			31.8	
LOS		F			C			C			C	
Approach Delay		122.5			23.5			30.9			31.8	
Approach LOS		F			C			C			C	
Queue Length 50th (ft)		-316			112			94			137	
Queue Length 95th (ft)		#720			236			167			242	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		634			594			1018			1286	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.19			0.58			0.26			0.35	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 69.4
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.19
 Intersection Signal Delay: 67.9
 Intersection LOS: E
 Intersection Capacity Utilization 100.8%
 ICU Level of Service G
 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: 1: NYS Route 118 & Underhill Avenue

--

Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	13	34	12	66	54	59	14	533	60	27	352	22
Future Volume (vph)	13	34	12	66	54	59	14	533	60	27	352	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.955			0.987			0.993	
Flt Protected		0.989			0.982			0.999			0.997	
Satd. Flow (prot)	0	1740	0	0	1930	0	0	1758	0	0	1765	0
Flt Permitted		0.924			0.853			0.988			0.941	
Satd. Flow (perm)	0	1625	0	0	1677	0	0	1738	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			19			5			3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	36	13	69	57	62	15	561	63	28	371	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	188	0	0	639	0	0	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		CI+Ex			CI+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
 04/08/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.1			13.1			50.1			50.1	
Actuated g/C Ratio		0.17			0.17			0.67			0.67	
v/c Ratio		0.22			0.61			0.55			0.38	
Control Delay		24.7			34.5			9.4			7.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		24.7			34.5			9.4			7.2	
LOS		C			C			A			A	
Approach Delay		24.7			34.5			9.4			7.2	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		21			73			131			73	
Queue Length 95th (ft)		53			136			257			146	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		654			680			1158			1109	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.10			0.28			0.55			0.38	

Intersection Summary

Area Type: Other
 Cycle Length: 125
 Actuated Cycle Length: 75.2
 Natural Cycle: 105
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 13.0
 Intersection Capacity Utilization 62.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

Ø2 57 s	Ø4 35 s	Ø10 33 s
Ø6 57 s	Ø8 35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
 3: Underhill Avenue & Site Access

Peak PM Hour
 04/08/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	31	694	536	36	26	22
Future Volume (vph)	31	694	536	36	26	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-5%	5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.992		0.939	
Fl _t Protected		0.998			0.973	
Satd. Flow (prot)	0	1905	1802	0	1702	0
Fl _t Permitted		0.998			0.973	
Satd. Flow (perm)	0	1905	1802	0	1702	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		425	390		188	
Travel Time (s)		9.7	8.9		4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	771	596	40	29	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	805	636	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 71.7% ICU Level of Service C
 Analysis Period (min) 15

2025 Build Traffic Volumes
3: Underhill Avenue & Site Access

Peak PM Hour
04/08/2022

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	31	694	536	36	26	22
Future Vol, veh/h	31	694	536	36	26	22
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, %	-	-5	5	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	771	596	40	29	24

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	636	0	0	1455	616
Stage 1	-	-	-	616	-
Stage 2	-	-	-	839	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	947	-	-	143	491
Stage 1	-	-	-	539	-
Stage 2	-	-	-	424	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	947	-	-	134	491
Mov Cap-2 Maneuver	-	-	-	134	-
Stage 1	-	-	-	505	-
Stage 2	-	-	-	424	-

Approach













	EB	WB	SB
HCM Control Delay, s	0.4	0	29.3
HCM LOS			D

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	947	-	-	-	201
HCM Lane V/C Ratio	0.036	-	-	-	0.265
HCM Control Delay (s)	8.9	0	-	-	29.3
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1

2025 Build Traffic Volumes
4: Rochambeau Drive/Site Access & Underhill Avenue

Peak PM Hour
04/08/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	10	693	36	49	499	10	14	0	24	7	0	15
Future Volume (vph)	10	693	36	49	499	10	14	0	24	7	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	14	12	12	12	12
Grade (%)		-6%			6%			-7%			0%	
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		0.993			0.997			0.916			0.906	
Flt Protected		0.999			0.996			0.982			0.985	
Satd. Flow (prot)	0	1903	0	0	1794	0	0	1816	0	0	1662	0
Flt Permitted		0.999			0.996			0.982			0.985	
Satd. Flow (perm)	0	1903	0	0	1794	0	0	1816	0	0	1662	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		220			425			323			150	
Travel Time (s)		5.0			9.7			7.3			3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%
Adj. Flow (vph)	11	729	38	52	525	11	15	0	25	7	0	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	778	0	0	588	0	0	40	0	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	0.96	1.04	1.04	1.04	0.96	0.88	0.96	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	66.6%
ICU Level of Service	C
Analysis Period (min)	15

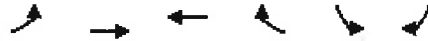
2025 Build Traffic Volumes
4: Rochambeau Drive/Site Access & Underhill Avenue

Peak PM Hour
04/08/2022

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	10	693	36	49	499	10	14	0	24	7	0	15
Future Vol, veh/h	10	693	36	49	499	10	14	0	24	7	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	6	-	-	-7	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	5	2	2	2
Mvmt Flow	11	729	38	52	525	11	15	0	25	7	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	536	0	0	767	0	0	1413	1410	748	1418	1424	531
Stage 1	-	-	-	-	-	-	770	770	-	635	635	-
Stage 2	-	-	-	-	-	-	643	640	-	783	789	-
Critical Hdwy	4.12	-	-	4.12	-	-	5.72	5.12	5.55	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	4.72	4.12	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4.72	4.12	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.345	3.518	4.018	3.318
Pot Cap-1 Maneuver	1032	-	-	847	-	-	200	239	471	114	136	548
Stage 1	-	-	-	-	-	-	531	553	-	467	472	-
Stage 2	-	-	-	-	-	-	593	603	-	387	402	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1032	-	-	847	-	-	179	214	471	99	122	548
Mov Cap-2 Maneuver	-	-	-	-	-	-	179	214	-	99	122	-
Stage 1	-	-	-	-	-	-	521	542	-	458	430	-
Stage 2	-	-	-	-	-	-	525	550	-	359	394	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			19.2			22.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	294	1032	-	-	847	-	-	224				
HCM Lane V/C Ratio	0.136	0.01	-	-	0.061	-	-	0.103				
HCM Control Delay (s)	19.2	8.5	0	-	9.5	0	-	22.9				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.3				

2025 Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak PM Hour
04/08/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	2	729	508	12	10	8
Future Volume (vph)	2	729	508	12	10	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997		0.939	
Flt Protected					0.973	
Satd. Flow (prot)	0	1909	1801	0	1588	0
Flt Permitted					0.973	
Satd. Flow (perm)	0	1909	1801	0	1588	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	792	552	13	11	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	794	565	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 50.0% ICU Level of Service A
 Analysis Period (min) 15

2025 Build Traffic Volumes
 5: Underhill Avenue & Glen Rock Street

Peak PM Hour
 04/08/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	729	508	12	10	8
Future Vol, veh/h	2	729	508	12	10	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, %	-	-5	6	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	792	552	13	11	9

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	565	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Sta 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1007	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1007	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	21.6
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1	SBR
Capacity (veh/h)	1007	-	-	-	-	237
HCM Lane V/C Ratio	0.002	-	-	-	-	0.083
HCM Control Delay (s)	8.6	0	-	-	-	21.6
HCM Lane LOS	A	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	-	0.3

2025 Build Traffic Volumes (W/ Timing Changes #1)
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	398	264	57	36	256	37	48	172	28	23	139	268
Future Volume (vph)	398	264	57	36	256	37	48	172	28	23	139	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	11	12	12	11	12
Grade (%)		-5%			4%			3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.985			0.985			0.916	
Flt Protected		0.973			0.995			0.990			0.997	
Satd. Flow (prot)	0	1960	0	0	1789	0	0	1730	0	0	1653	0
Flt Permitted		0.563			0.874			0.687			0.974	
Satd. Flow (perm)	0	1134	0	0	1572	0	0	1200	0	0	1615	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			5			6			79	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	419	278	60	38	269	39	51	181	29	24	146	282
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	757	0	0	346	0	0	261	0	0	452	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.07	1.02	0.99	1.04	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	40.0	63.0		23.0	23.0		40.0	40.0		40.0	40.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 Build Traffic Volumes (W/ Timing Changes #1)
 1: NYS Route 118 & Underhill Avenue

Peak PM Hour
 04/08/2022

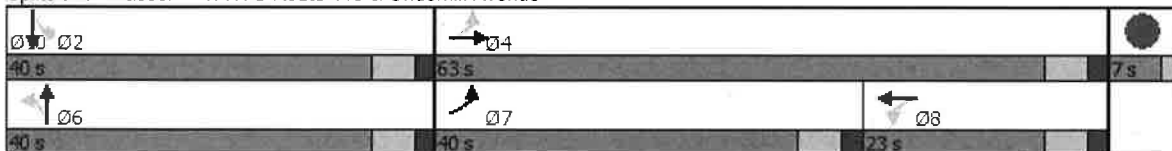


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	36.4%	57.3%		20.9%	20.9%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	34.0	57.0		17.0	17.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effct Green (s)		57.3			46.2			27.4			27.4	
Actuated g/C Ratio		0.59			0.48			0.28			0.28	
v/c Ratio		1.06			0.46			0.76			0.88	
Control Delay		71.1			20.4			45.6			46.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		71.1			20.4			45.6			46.4	
LOS		E			C			D			D	
Approach Delay		71.1			20.4			45.6			46.4	
Approach LOS		E			C			D			D	
Queue Length 50th (ft)		~354			139			142			222	
Queue Length 95th (ft)		#814			238			235			#358	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		717			753			427			621	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.06			0.46			0.61			0.73	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 96.7
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 51.6
 Intersection LOS: D
 Intersection Capacity Utilization 100.8%
 ICU Level of Service G
 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: 1: NYS Route 118 & Underhill Avenue



Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Traffic Impact Study

Appendix E | Accident Data

TABLE A
 ACCIDENT SUMMARY - TOWN ACCIDENT DATA
 VARIOUS INTERSECTIONS IN THE TOWN OF YORKTOWN

Node/Link	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	# of Vehicles Injuries	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	09/22/19	04:30pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	OTHER	TURNING IMPROPER
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	07/24/19	12:45pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	OVERTAKING	PASSING OR LANE USAGE IMPROPERLY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	03/03/19	08:30am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	RIGHT ANGLE	TRAFFIC CONTROL DEVICES DISREGARDED
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	05/21/16	11:20am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLOUDY	UNKNOWN	NOT ENTERED
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	11/30/19	11:02pm	TRAFFIC SIGNAL	N/R	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	06/03/19	04:45pm	TRAFFIC SIGNAL	I	2-1	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	10/30/18	06:24am	TRAFFIC SIGNAL	PDO	2-0	DAWN	DRY	CLEAR	RN (AGAINST OTI)	FAILURE TO YIELD RIGHT OF WAY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	12/05/16	06:10pm	TRAFFIC SIGNAL	PDO & I	2-4	DARK-ROAD UNLIGHTED	DRY	CLOUDY	REAR END	DRIVER INATTENTION
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	11/14/19	08:23am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	10/18/19	03:32pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	HEAD ON	TURNING IMPROPER
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	09/27/19	07:35am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	12/14/18	04:06pm	TRAFFIC SIGNAL	PDO & I	2-1	DUSK	WET	CLOUDY	RN (AGAINST OTI)	FAILURE TO YIELD RIGHT OF WAY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	10/07/18	04:30am	TRAFFIC SIGNAL	PDO	1-0	DARK-ROAD LIGHTED	WET	RAIN	OTHER	UNSAFE SPEED
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	09/09/18	01:45pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLOUDY	OTHER	TURNING IMPROPER
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	06/22/18	08:38am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLOUDY	REAR END	FOLLOWING TOO CLOSELY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	01/26/18	12:07pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	RN (AGAINST OTI)	FAILURE TO YIELD RIGHT OF WAY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	01/03/18	08:11am	TRAFFIC SIGNAL	PDO	3-0	DAYLIGHT	DRY	CLEAR	OTHER	FOLLOWING TOO CLOSELY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	02/21/17	04:15pm	UNKNOWN	PDO	1-0	UNKNOWN	UNKNOWN	UNKNOWN	OTHER	NOT ENTERED
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	03/14/16	12:00am	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	WET	CLOUDY	REAR END	NOT ENTERED
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ UNDERHILL AVE	118 87011037	01/05/16	05:02pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	RIGHT ANGLE	UNSAFE SPEED
ROUTE 118/SAW MILL RIVER ROAD	SAW MILL RIVER RD	118 87011038	09/24/17	04:29pm	TRAFFIC SIGNAL	PDO & I	2-3	DAYLIGHT	DRY	CLEAR	UNKNOWN	FAILURE TO YIELD RIGHT OF WAY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ ALLAN AVE	118 87011039	11/11/16	03:36pm	TRAFFIC SIGNAL	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	UNKNOWN	TURNING IMPROPER
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ ALLAN AVE	118 87011039	09/26/19	05:55pm	TRAFFIC SIGNAL	PDO & I	2-1	DAYLIGHT	WET	CLEAR	OTHER	PASSING OR LANE USAGE IMPROPERLY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ KEAR ST	118 87011039	01/08/18	06:06pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD UNLIGHTED	WET	THAIL/FREEZING	REAR END	NOT APPLICABLE
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ ALLAN AVE	118 87011039	01/01/18	10:18pm	NONE	PDO & I	1-1	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	FATIGUED/DROWSY
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ ALLAN AVE	118 87011039	10/20/17	11:45am	TRAFFIC SIGNAL	I	2-1	DAYLIGHT	DRY	CLEAR	UNKNOWN	OTHER (VEHICLE)
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ ALLAN AVE	118 87011039	01/18/17	06:19pm	TRAFFIC SIGNAL	PDO & I	1-1	DARK-ROAD UNLIGHTED	WET	CLOUDY	OTHER	NOT APPLICABLE
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ KEAR ST	118 87011039	12/16/16	09:10pm	TRAFFIC SIGNAL	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	URN WITH OTH	NOT APPLICABLE
ROUTE 118/SAW MILL RIVER ROAD	AT INT. W/ ALLAN AVE	118 87011039	02/27/16	02:00pm	TRAFFIC SIGNAL	PDO & I	2-2	DAYLIGHT	WET	RAIN	RIGHT ANGLE	NOT ENTERED

TABLE A (Continued)
 ACCIDENT SUMMARY - TOWN ACCIDENT DATA
 VARIOUS INTERSECTIONS IN THE TOWN OF YORKTOWN

Node/Link	Location	Mile Marker	Date	Time	Traffic Control	Accident Class	# of Vehicles Injured	Light Condition	Road Condition	Weather	Manner of Collision	Apparent Contributing Factors
OVERHILL ST	OVERHILL ST		08/01/20	08:00pm	NONE	N/R	1-0	DAYLIGHT	DRY	CLEAR	OTHER	TURNING IMPROPER
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		11/24/19	11:22am	NONE	PDO	2-0	DAYLIGHT	WET	RAIN	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ CARDINAL CT		08/22/19	02:52pm	TRAFFIC SIGNAL	N/R	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		06/30/19	02:53pm	NONE	PDO & I	2-1	DAYLIGHT	WET	RAIN	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ CARDINAL CT		05/22/19	03:34pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		03/05/19	04:48pm	TRAFFIC SIGNAL	PDO	2-0	DUSK	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		01/10/19	04:17pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	RN (AGAINST OTI)	GLARE
UNDERHILL AVE	AT INT. W/ FRENCH HILL RD		09/05/18	05:35pm	STOP SIGN	PDO & I	2-1	DAYLIGHT	DRY	CLEAR	RN (AGAINST OTI)	FAILURE TO YIELD RIGHT OF WAY
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		06/29/18	06:58pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ FRENCH HILL RD		06/12/18	06:18pm	NONE	PDO & I	3-1	DAYLIGHT	DRY	CLEAR	OTHER	DRIVER INATTENTION
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		03/09/18	08:40pm	NONE	PDO	2-0	DARK-ROAD UNLIGHTED	WET	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		12/22/17	05:25pm	NONE	PDO	3-0	DARK-ROAD LIGHTED	WET	CLOUDY	OTHER	ALCOHOL INVOLVEMENT
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		09/26/17	03:32pm	NONE	PDO & I	3-1	DAYLIGHT	DRY	CLEAR	OTHER	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		05/30/17	03:58pm	NO PASSING ZONE	PDO & I	3-3	DAYLIGHT	DRY	CLEAR	OTHER	NOT APPLICABLE
UNDERHILL AVE	AT INT. W/ OVERHILL ST		05/17/17	03:55pm	NOT ENTERED	N/R	2-0	NOT ENTERED	NOT ENTERED	NOT ENTERED	NOT ENTERED	UNKNOWN
UNDERHILL AVE	AT INT. W/ ROCHAMBEAU DR		02/04/17	12:46pm	NONE	PDO	3-0	DAYLIGHT	DRY	CLEAR	OTHER	FOLLOWING TOO CLOSELY
UNDERHILL AVE	AT INT. W/ OVERHILL ST		11/18/16	08:40pm	NONE	PDO	2-0	DARK-ROAD LIGHTED	DRY	CLEAR	UNKNOWN	PASSING OR LANE USAGE IMPROPERLY
UNDERHILL AVE	AT INT. W/ FRENCH HILL RD		10/18/16	01:50pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	RN (AGAINST OTI)	NOT ENTERED
UNDERHILL AVE	AT INT. W/ CARDINAL CT		03/03/16	04:52pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	UNDERHILL AVE		01/16/20	04:44pm	TRAFFIC SIGNAL	PDO	3-0	DARK-ROAD UNLIGHTED	DRY	CLEAR	OTHER	NOT APPLICABLE
UNDERHILL AVE	UNDERHILL AVE		10/04/19	03:20pm	NONE	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	UNDERHILL AVE		01/09/18	04:31pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	WET	CLEAR	REAR END	FOLLOWING TOO CLOSELY
UNDERHILL AVE	UNDERHILL AVE		02/14/17	02:00pm	TRAFFIC SIGNAL	PDO	2-0	DAYLIGHT	DRY	CLEAR	REAR END	DRIVER INATTENTION
UNDERHILL AVE	UNDERHILL AVE		04/15/16	04:25pm	TRAFFIC SIGNAL	PDO & I	3-1	DAYLIGHT	DRY	CLEAR	OTHER	NOT ENTERED

Accident Location Information System(ALIS)Date:
11/19/2020
11:15:51 AM**Accident Verbal Description**

17720_VDR

Date in this report covers the period - 1/1/2016-11/18/2020

Complete Accident data from NYS DMV is only available thru 1/31/2020 12:00:00 AM

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
AT INTERSECTION WITH [Route] 118

1/5/2016 Tue 17:02 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2016-36068501
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: RIGHT ANGLE Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3571 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 44 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT ENTERED, NOT ENTERED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3873 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 19 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT ENTERED, UNSAFE SPEED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
AT INTERSECTION WITH ALLAN AVE

2/27/2016 Sat 14:00 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: BC Case: 2016-36132694
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: SUFFOLK CO PD YAPHANK Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: RIGHT ANGLE Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4235 State of Registration: NY
 Num of Occupants: 6 Driver's Age: 67 Sex: M Citation Issued: Y
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: TRAFFIC CONTROL DEVICES DISREGARDED, FAILURE TO YIELD RIGHT OF WAY

Veh :1 CAR/VAN/PICKUP Registered Weight: 5093 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 44 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT ENTERED, NOT ENTERED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
AT INTERSECTION WITH [Route] 118

3/14/2016 Mon 00:00 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2016-36155970
 Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 OTHER Registered Weight: State of Registration: -3
 Num of Occupants: 1 Driver's Age: 38 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER

Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT ENTERED, NOT ENTERED

Veh :1 CAR/VAN/PICKUP Registered Weight: 4584 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 49 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT ENTERED, NOT ENTERED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: [Route] 118
 AT INTERSECTION WITH UNDERHILL AVE

5/21/2016 Sat 11:20 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2016-36316333
 Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: UNKNOWN Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3345 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 32 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: NOT ENTERED, NOT ENTERED

Veh :2 CAR/VAN/PICKUP Registered Weight: 3350 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 74 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT ENTERED, NOT ENTERED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: [Route] 118
 AT INTERSECTION WITH ALLAN AVE

11/11/2016 Fri 15:36 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C Case: 2016-36484530
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: UNKNOWN Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3235 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 54 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, NOT ENTERED

Veh :1 CAR/VAN/PICKUP Registered Weight: 2687 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 19 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: TURNING IMPROPER, NOT ENTERED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: STATE HWY 118
 AT INTERSECTION WITH UNDERHILL AVE

12/5/2016 Mon 18:10 PM Persons Killed: 0 Persons Injured: 4 Extent of Injuries: CCCC Case: 2016-36525240
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: TARRYTOWN VILLAGE PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3310 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 54 Sex: F Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER

Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: DRIVER INATTENTION, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3640 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 58 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
 AT INTERSECTION WITH Kear St

12/16/2016 Fri 21:10 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2016-36561778
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: RIGHT TURN (WITH OTHER CAR) Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3032 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 78 Sex: F Citation Issued: Y
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING RIGHT TURN
 Apparent Factors: NOT APPLICABLE, TURNING IMPROPER

Veh :1 CAR/VAN/PICKUP Registered Weight: 4285 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 56 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
 AT INTERSECTION WITH ALLAN AVE

1/18/2017 Wed 18:19 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: A Case: 2017-36584832
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 1
 Type Of Accident: COLLISION WITH PEDESTRIAN Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: PED/BICYCLIST AT INTERSECTION Action of Ped/Bicycle: CROSSING/NO SIGNAL OR CROSSWALK

Veh :2 PEDESTRIAN Registered Weight: State of Registration: -3
 Num of Occupants: 1 Driver's Age: 32 Sex: F Citation Issued: N
 Direction of Travel: NOT APPLICABLE Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: NOT APPLICABLE
 Apparent Factors: NOT APPLICABLE, PEDESTRIAN'S ERROR/CONFUSION

Veh :1 CAR/VAN/PICKUP Registered Weight: 3030 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 69 Sex: M Citation Issued: N
 Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
 AT INTERSECTION WITH [Route] 118

2/21/2017 Tue 16:15 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2017-36645999
 Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
 Type Of Accident: COLLISION WITH DEER Traffic Control: UNKNOWN
 Manner of Collision: OTHER Weather: UNKNOWN
 Road Surface Condition: UNKNOWN Road Char.: UNKNOWN Light Condition: UNKNOWN
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4237 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 62 Sex: F Citation Issued: N

Direction of Travel: UNKNOWN Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: SLOWED OR STOPPING
 Apparent Factors: NOT ENTERED, NOT ENTERED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011038 Street: SAW MILL RIVER RD
 122 Meters North of Underhill Ave

9/24/2017 Sun 16:29 PM Persons Killed: 0 Persons Injured: 3 Extent of Injuries: BCC **Case: 2017-36907054**
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: UNKNOWN Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2864 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 33 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3830 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 61 Sex: M Citation Issued: N
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
 AT INTERSECTION WITH ALLAN AVE

10/20/2017 Fri 11:45 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: A **Case: 2017-36949337**
 Accident Class: INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: UNKNOWN Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3180 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 26 Sex: F Citation Issued: N
 Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: OTHER (VEHICLE), NOT APPLICABLE

Veh :2 MOTORCYCLE Registered Weight: 498 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 29 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: OVERTAKING
 Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, TRAFFIC CONTROL DEVICES DISREGARDED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
 AT INTERSECTION WITH KEAR ST

1/8/2018 Mon 18:06 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37102950**
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: SLEET/HAIL/FREEZING RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 TRUCK Registered Weight: 19500 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 30 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: UNKNOWN
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3384 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 20 Sex: M Citation Issued: N

Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
 AT INTERSECTION WITH SAW MILL RIVER RD

1/3/2018 Wed 08:11 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2018-37104713
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 3
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT/GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :3 CAR/VAN/PICKUP Registered Weight: 4268 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 38 Sex: F Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
 Num of Occupants: 2 Driver's Age: 48 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: MN
 Num of Occupants: 1 Driver's Age: 55 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
 AT INTERSECTION WITH ALLAN AVE

1/1/2018 Mon 22:18 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: B Case: 2018-37116460
 Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: YONKERS CITY PD Num of Veh: 1
 Type Of Accident: COLLISION WITH TREE Traffic Control: NONE
 Manner of Collision: OTHER Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4233 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 21 Sex: M Citation Issued: N
 Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FATIGUED/DROWSY, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
 AT INTERSECTION WITH SAW MILL RIVER RD

1/26/2018 Fri 12:07 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2018-37129498
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLEAR
 Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 5308 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 43 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2448 State of Registration: NY

Num of Occupants: 1 Driver's Age: 69 Sex: F Citation Issued: N
 Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
 AT INTERSECTION WITH [Route] 118

6/22/2018 Fri 08:38 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37343983**
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: REAR END Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3605 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 27 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3147 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 55 Sex: F Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
 AT INTERSECTION WITH [Route] 118

9/9/2018 Sun 13:45 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37471083**
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
 Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: OTHER Weather: CLOUDY
 Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3513 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 84 Sex: F Citation Issued: N
 Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: MAKING LEFT TURN
 Apparent Factors: TURNING IMPROPER, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4169 State of Registration: NY
 Num of Occupants: 2 Driver's Age: 41 Sex: M Citation Issued: N
 Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: STOPPED IN TRAFFIC
 Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
 AT INTERSECTION WITH [Route] 118

10/7/2018 Sun 04:30 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37518828**
 Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 1
 Type Of Accident: COLL. W/LIGHT SUPPORT/UTILITY POLE Traffic Control: TRAFFIC SIGNAL
 Manner of Collision: OTHER Weather: RAIN
 Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DARK-ROAD LIGHTED
 Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3208 State of Registration: NY
 Num of Occupants: 1 Driver's Age: 26 Sex: M Citation Issued: N
 Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
 Pre-Accd Action: GOING STRAIGHT AHEAD
 Apparent Factors: UNSAFE SPEED, PAVEMENT SLIPPERY

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: SAW MILL RIVER RD
AT INTERSECTION WITH UNDERHILL AVE

10/30/2018 Tue 06:24 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2018-37558731**
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAWN
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3929 State of Registration: NY
Num of Occupants: 1 Driver's Age: 38 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 1 Driver's Age: 21 Sex: M Citation Issued: Y
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
AT INTERSECTION WITH SAW MILL RIVER RD

12/14/2018 Fri 16:06 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: B **Case: 2018-37645644**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
Road Surface Condition: WET Road Char.: STRAIGHT/ GRADE Light Condition: DUSK
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3360 State of Registration: NY
Num of Occupants: 1 Driver's Age: 67 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4322 State of Registration: NY
Num of Occupants: 2 Driver's Age: 63 Sex: F Citation Issued: N
Direction of Travel: NORTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, FAILURE TO YIELD RIGHT OF WAY

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: [Route] 118
AT INTERSECTION WITH UNDERHILL AVE

3/3/2019 Sun 08:30 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-37793596**
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 52 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT ENTERED, NOT ENTERED

Veh :1 CAR/VAN/PICKUP Registered Weight: 3015 State of Registration: NY
Num of Occupants: 1 Driver's Age: 67 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: TRAFFIC CONTROL DEVICES DISREGARDED, NOT ENTERED

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: SAW MILL RIVER RD
AT INTERSECTION WITH UNDERHILL AVE

6/3/2019 Mon 16:45 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2019-37912565**
Accident Class: INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3292 State of Registration: NY
Num of Occupants: 1 Driver's Age: 18 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3135 State of Registration: NY
Num of Occupants: 2 Driver's Age: 26 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: [Route] 118
AT INTERSECTION WITH UNDERHILL AVE

7/24/2019 Wed 12:45 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-37993043**
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OVERTAKING Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3758 State of Registration: NY
Num of Occupants: 1 Driver's Age: 70 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STARTING IN TRAFFIC
Apparent Factors: NOT APPLICABLE, PASSING OR LANE USAGE IMPROPERLY

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NJ
Num of Occupants: 1 Driver's Age: 51 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: [Route] 118
AT INTERSECTION WITH UNDERHILL AVE

9/22/2019 Sun 16:30 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-38088324**
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2697 State of Registration: NY
Num of Occupants: 1 Driver's Age: 28 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3846 State of Registration: NY
Num of Occupants: 1 Driver's Age: 73 Sex: F Citation Issued: N
Direction of Travel: SOUTH-EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN

Apparent Factors: NOT APPLICABLE, TURNING IMPROPER

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011039 Street: SAW MILL RIVER RD
AT INTERSECTION WITH ALLAN AVE

9/26/2019 Thu 17:55 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C Case: 2019-38092114
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3475 State of Registration: NY
Num of Occupants: 1 Driver's Age: 23 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, PASSING OR LANE USAGE IMPROPERLY

Veh :2 CAR/VAN/PICKUP Registered Weight: 2612 State of Registration: NY
Num of Occupants: 1 Driver's Age: 46 Sex: F Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
AT INTERSECTION WITH [Route] 118

9/27/2019 Fri 07:35 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2019-38098075
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3368 State of Registration: NY
Num of Occupants: 1 Driver's Age: 57 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3556 State of Registration: NY
Num of Occupants: 1 Driver's Age: 51 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
AT INTERSECTION WITH [Route] 118

10/18/2019 Fri 15:32 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: Case: 2019-38130226
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: HEAD ON Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4101 State of Registration: NY
Num of Occupants: 1 Driver's Age: 63 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 TRUCK Registered Weight: 54000 State of Registration: NY
Num of Occupants: 1 Driver's Age: 53 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: MAKING LEFT TURN

Apparent Factors: NOT APPLICABLE, TURNING IMPROPER

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: UNDERHILL AVE
AT INTERSECTION WITH SAW MILL RIVER RD

11/14/2019 Thu 08:23 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-38171817**
Accident Class: PROPERTY DAMAGE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT/ GRADE Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3589 State of Registration: NY
Num of Occupants: 1 Driver's Age: 51 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4237 State of Registration: NY
Num of Occupants: 1 Driver's Age: 22 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: FOLLOWING TOO CLOSELY, NOT APPLICABLE

County: Westchester Muni: Yorktown(T) Ref. Marker: 118 87011037 Street: SAW MILL RIVER RD
AT INTERSECTION WITH UNDERHILL AVE

11/30/2019 Sat 23:02 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2019-38201765**
Accident Class: NON-REPORTABLE Police Agency: YORKTOWN TOWN PD Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 4 Driver's Age: 44 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 24 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: OTHER School Bus Involved: OTHER
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, FOLLOWING TOO CLOSELY

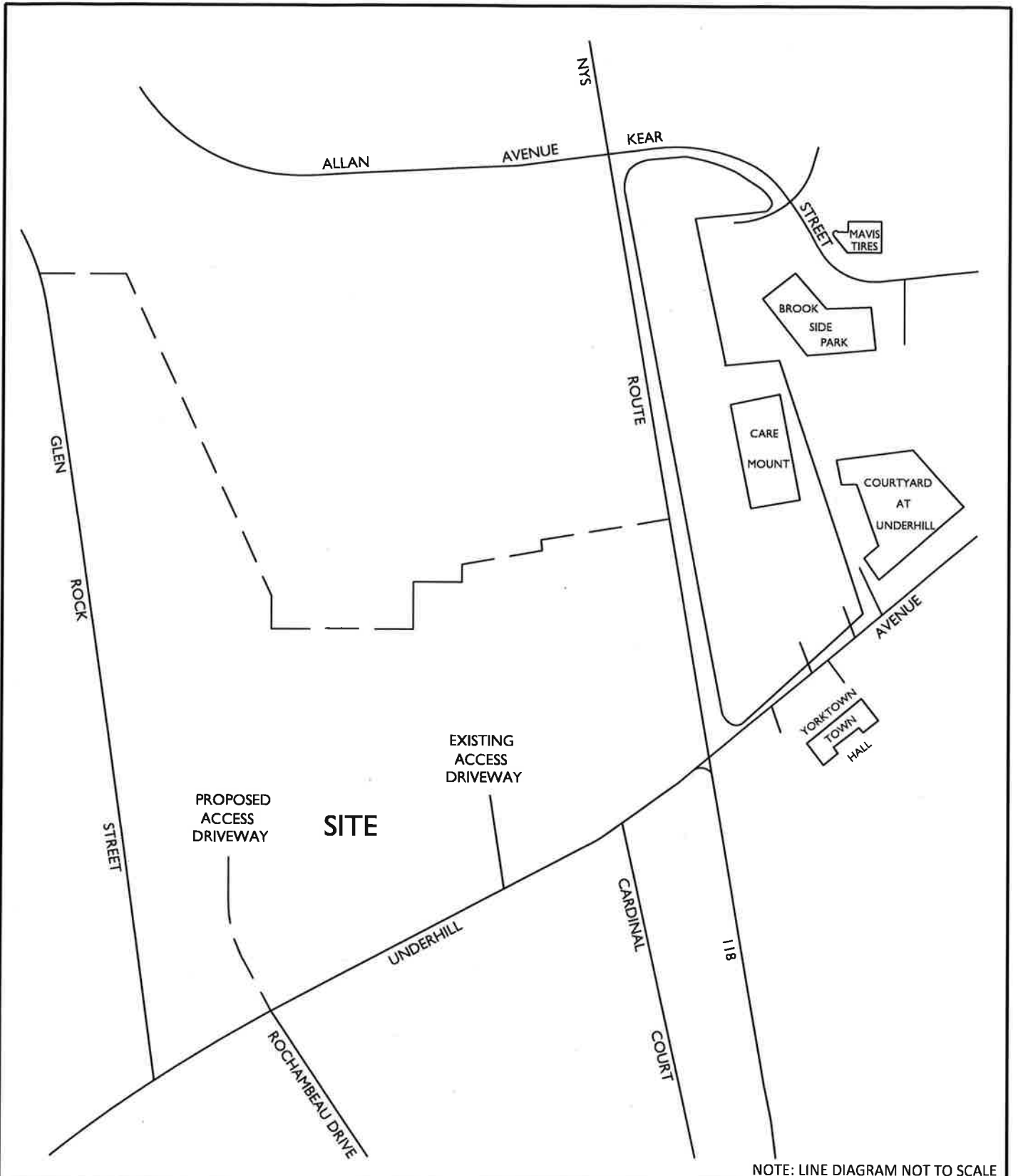
Traffic Impact Study

Appendix F | Proposed Traffic and Pedestrian Improvement Plans

Traffic Impact Study

Appendix G | Potential Future Intersection Improvement Plans

With Potential Other Development Traffic



NOTE: LINE DIAGRAM NOT TO SCALE

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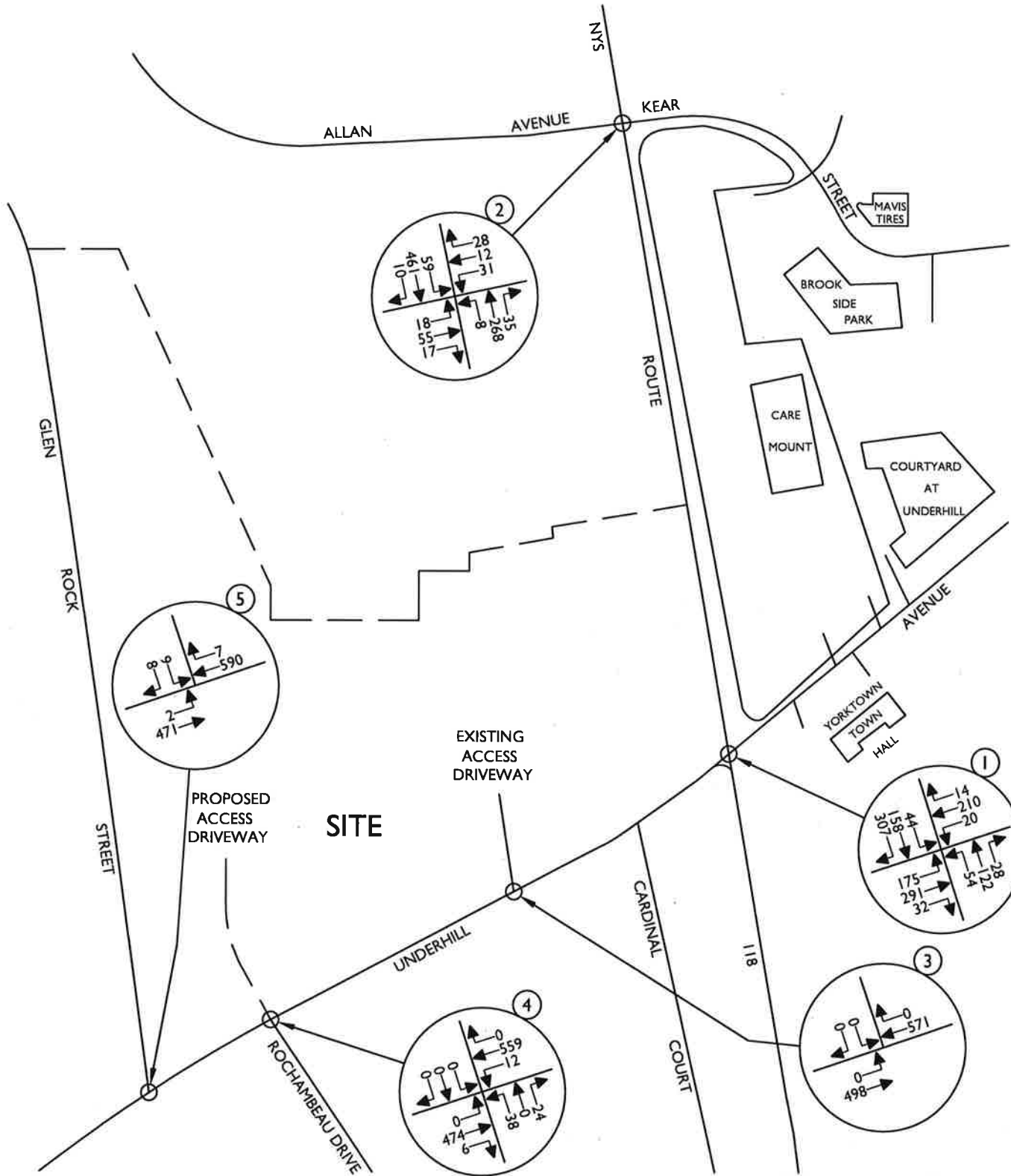
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SITE LOCATION MAP

SHEET NUMBER:
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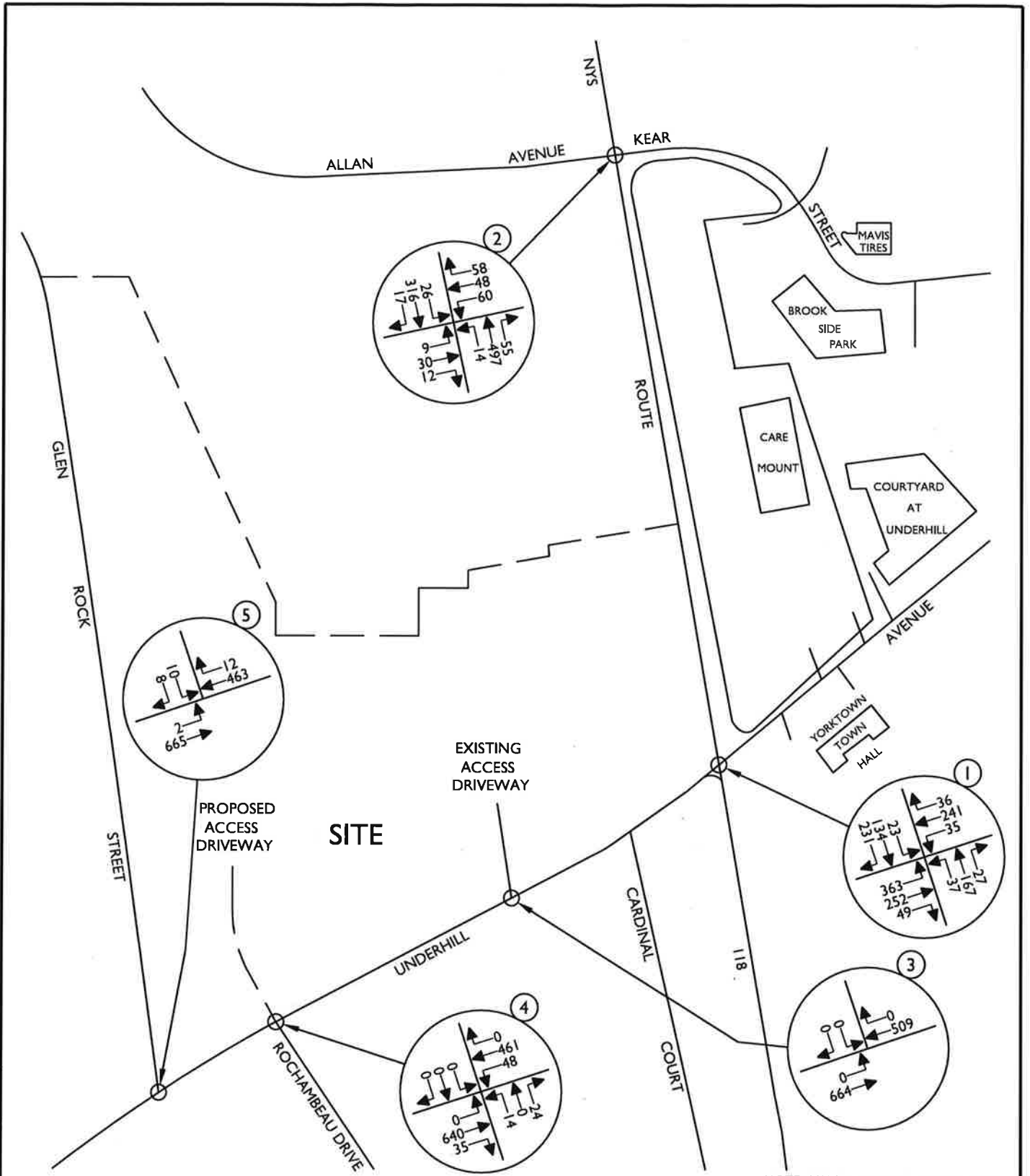
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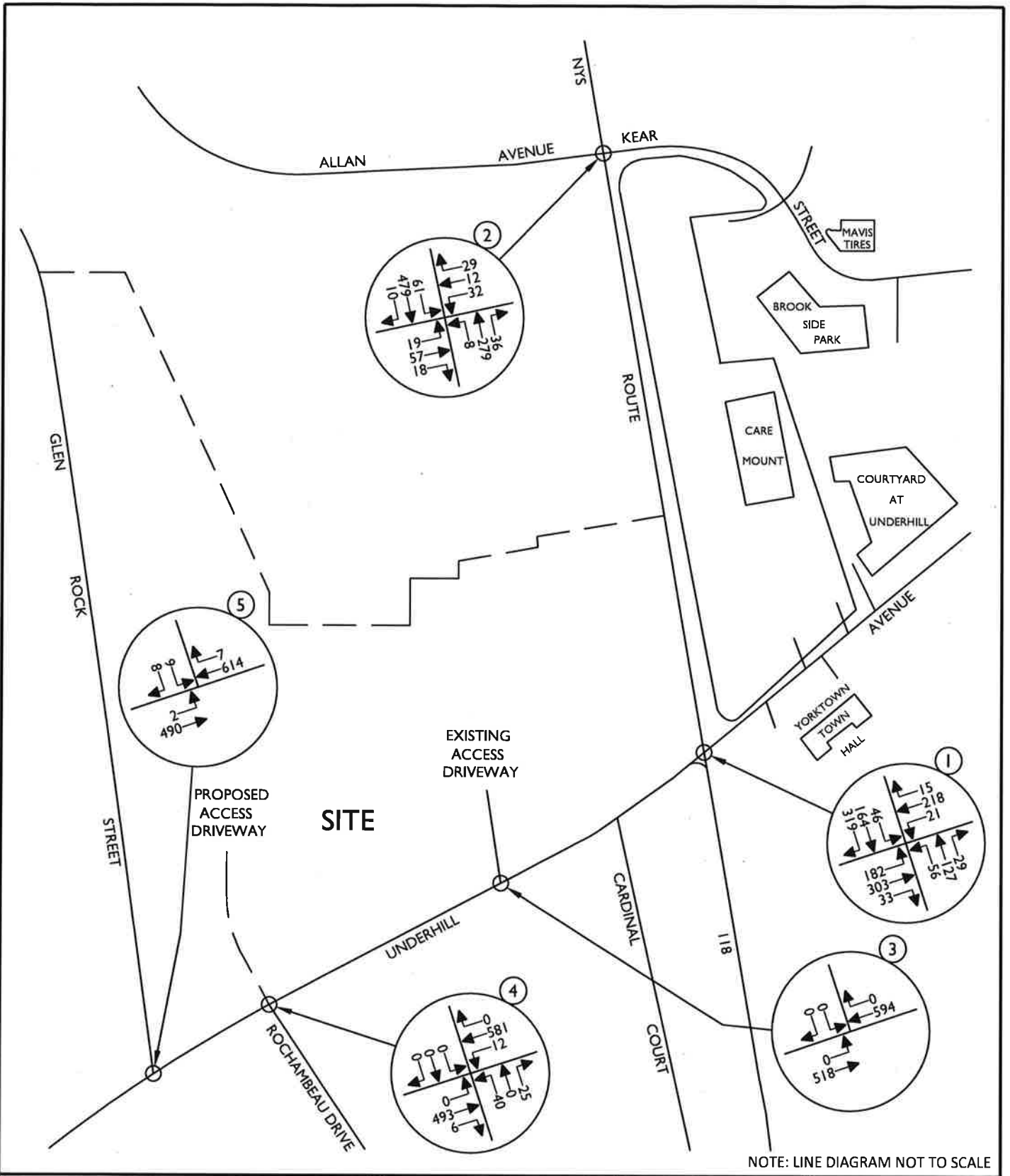
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SHEET NUMBER: 3			



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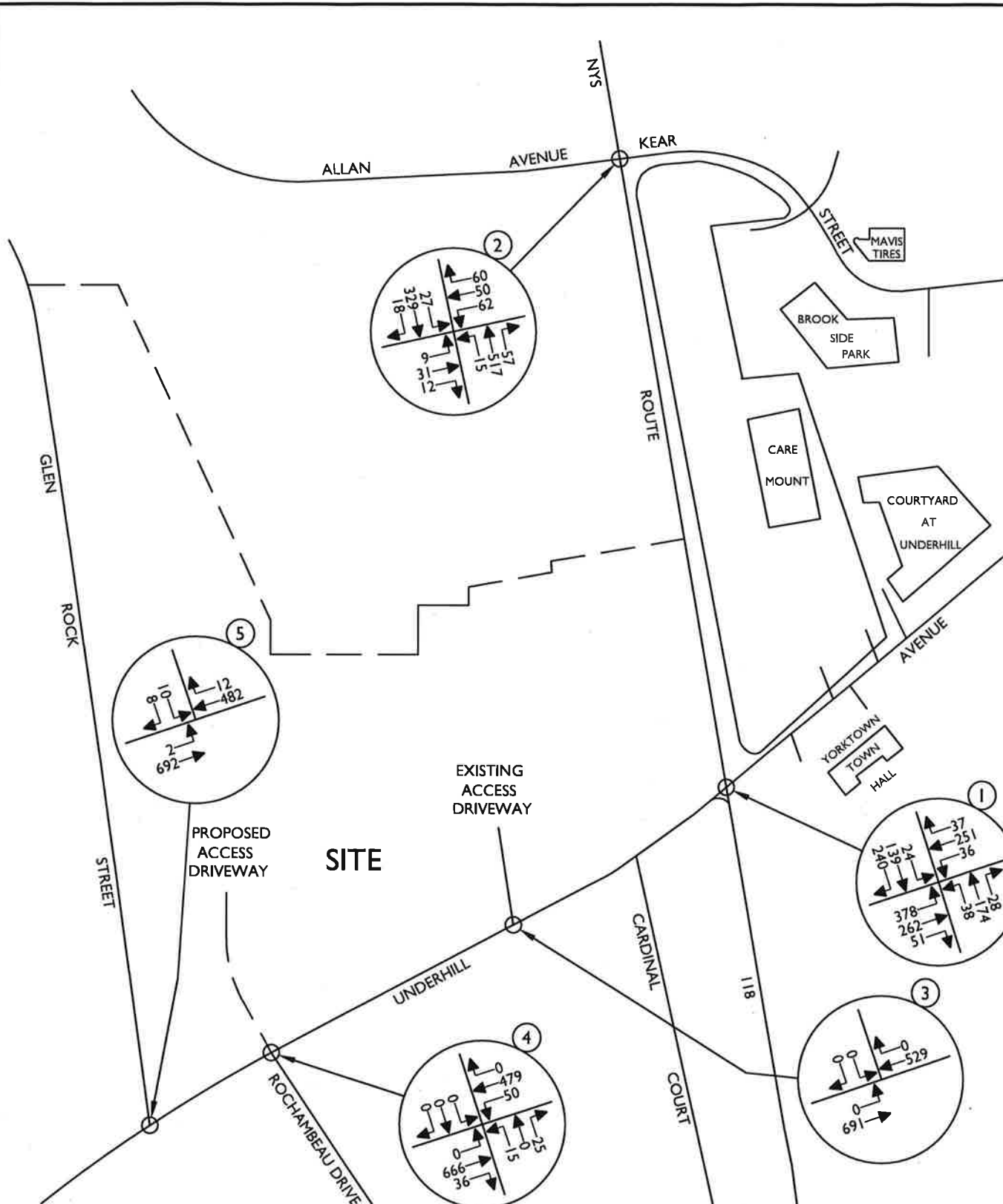
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**2025 PROJECTED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
4



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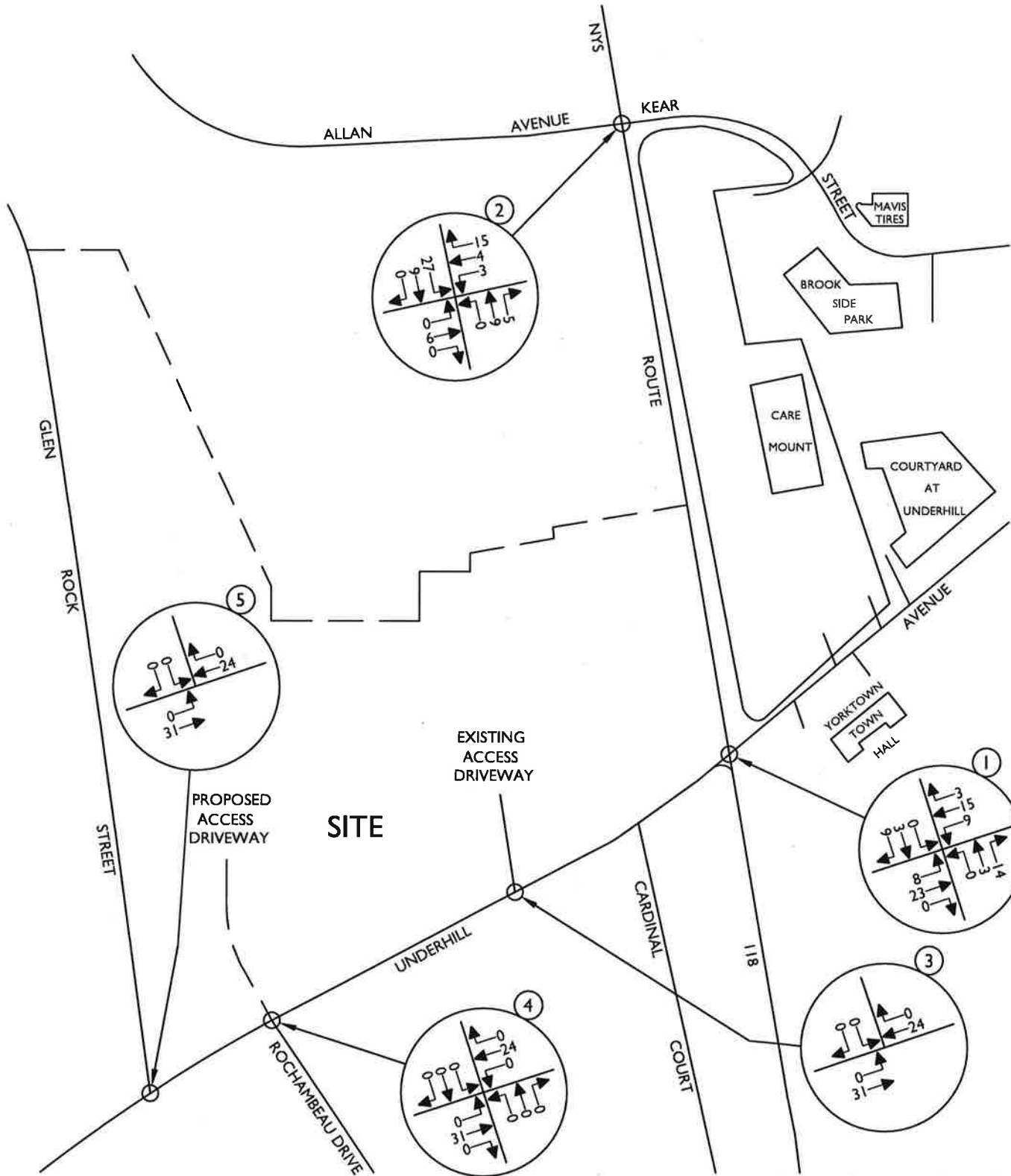
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SHEET NUMBER: 5

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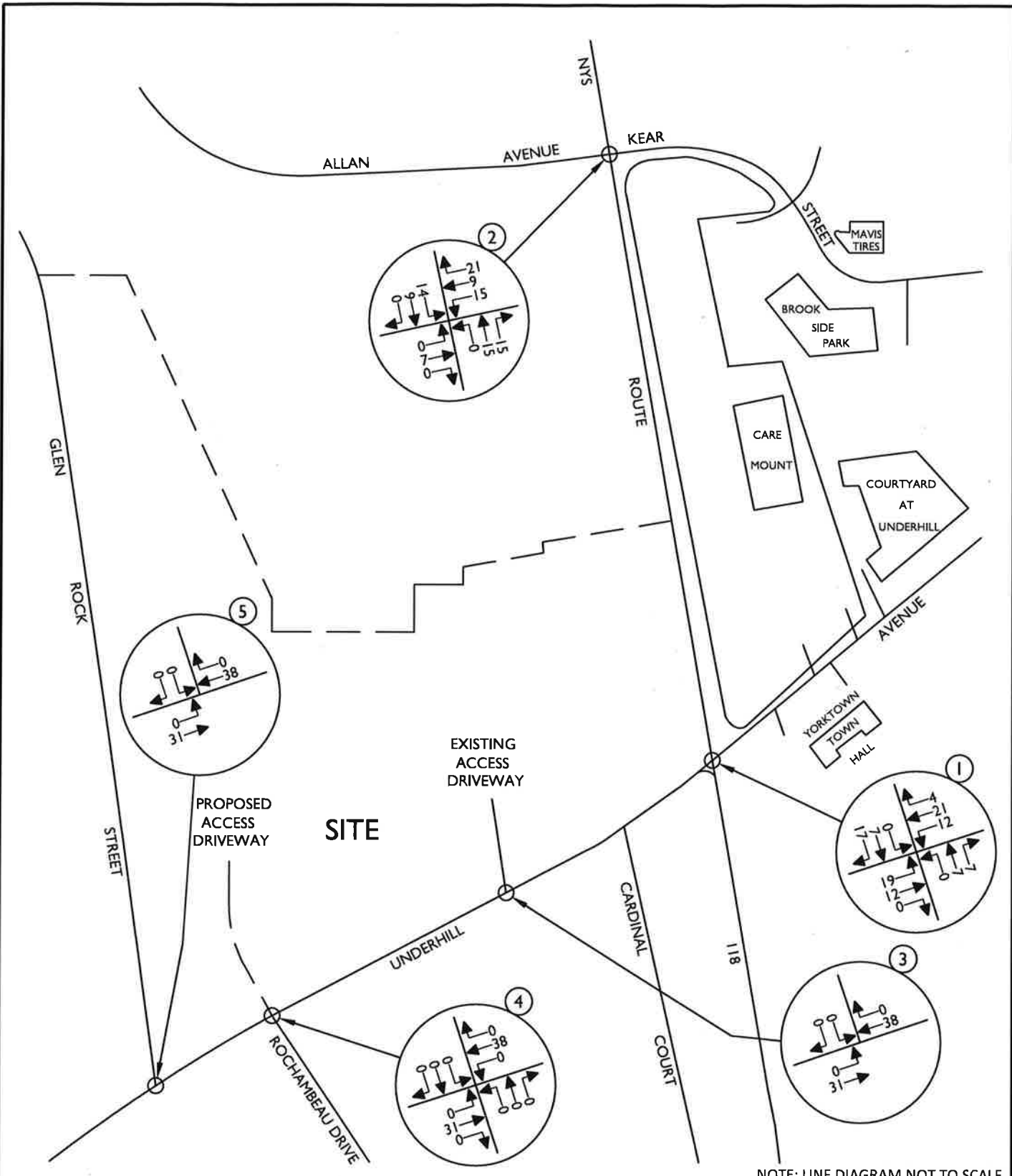
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PROJECT NUMBER:	DRAWING NAME:		
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**OTHER DEVELOPMENT
TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:

6

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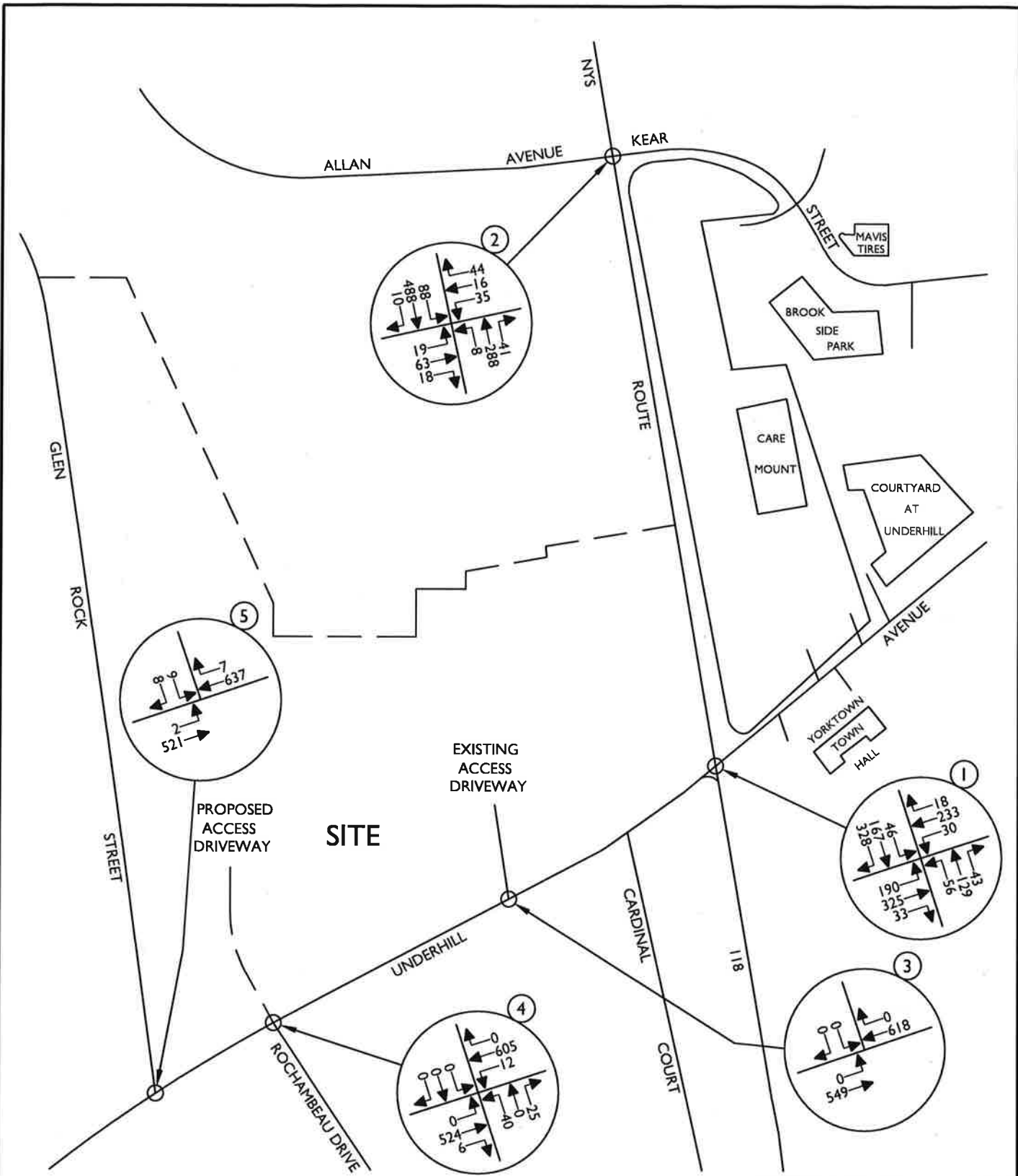
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OTHER DEVELOPMENT TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR

SHEET NUMBER:
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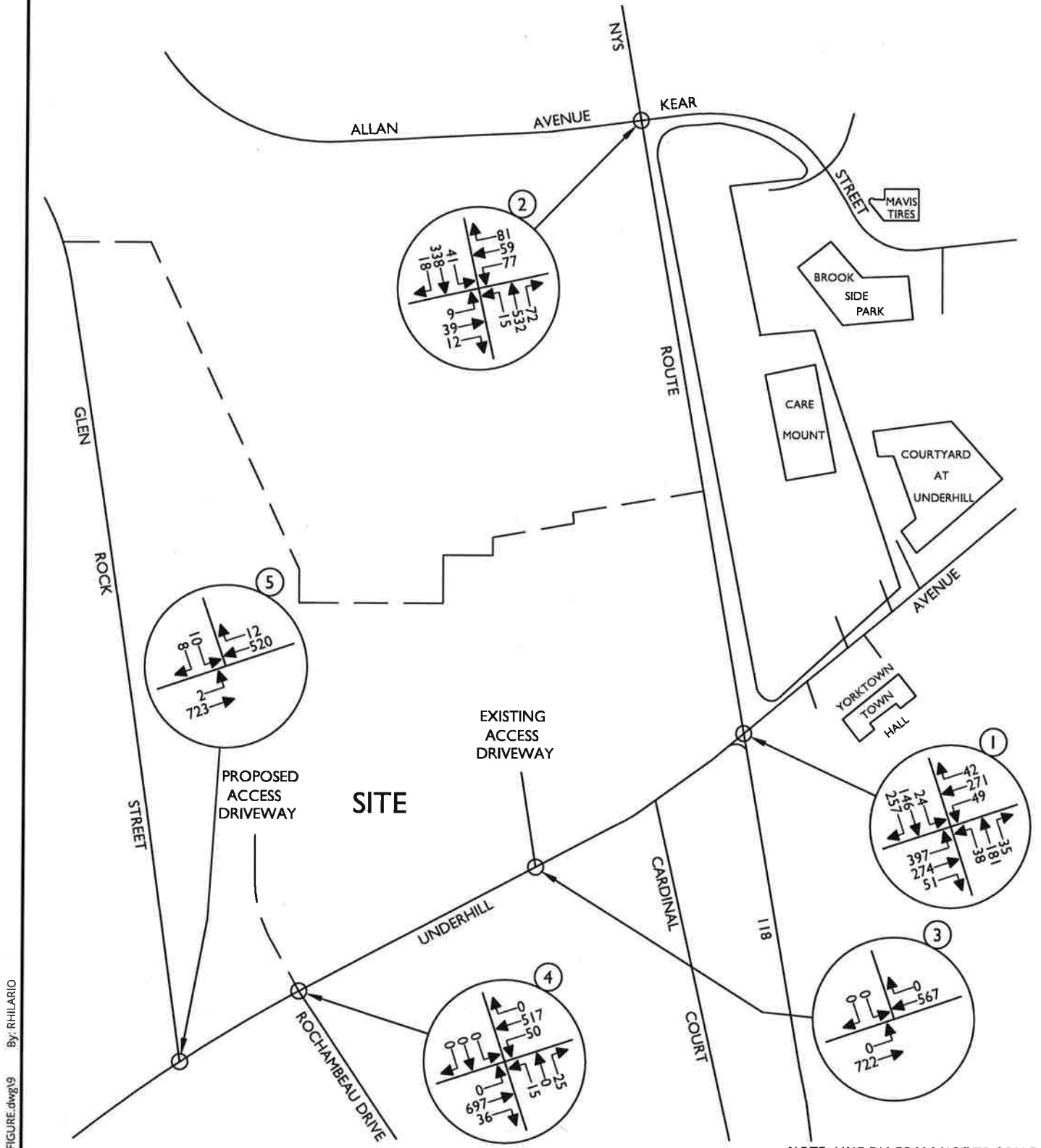
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TRAFFIC IMPACT STUDY			
SCALE AS SHOWN	DATE: 3/11/22	DRAWN BY: R.H.	CHECKED BY: P.J.G.
PROJECT NUMBER: 20006297A	DRAWING NAME: 220311RH_FIGURE		
SHEET TITLE: 2025 NO-BUILD TRAFFIC VOLUMES WEEKDAY PEAK AM HOUR			
SHEET NUMBER: 8			



NOTE: LINE DIAGRAM NOT TO SCALE

6297A\Reports\Traffic\Figures\220311RH_FIGURE.dwg 9 By: R.HILARIO

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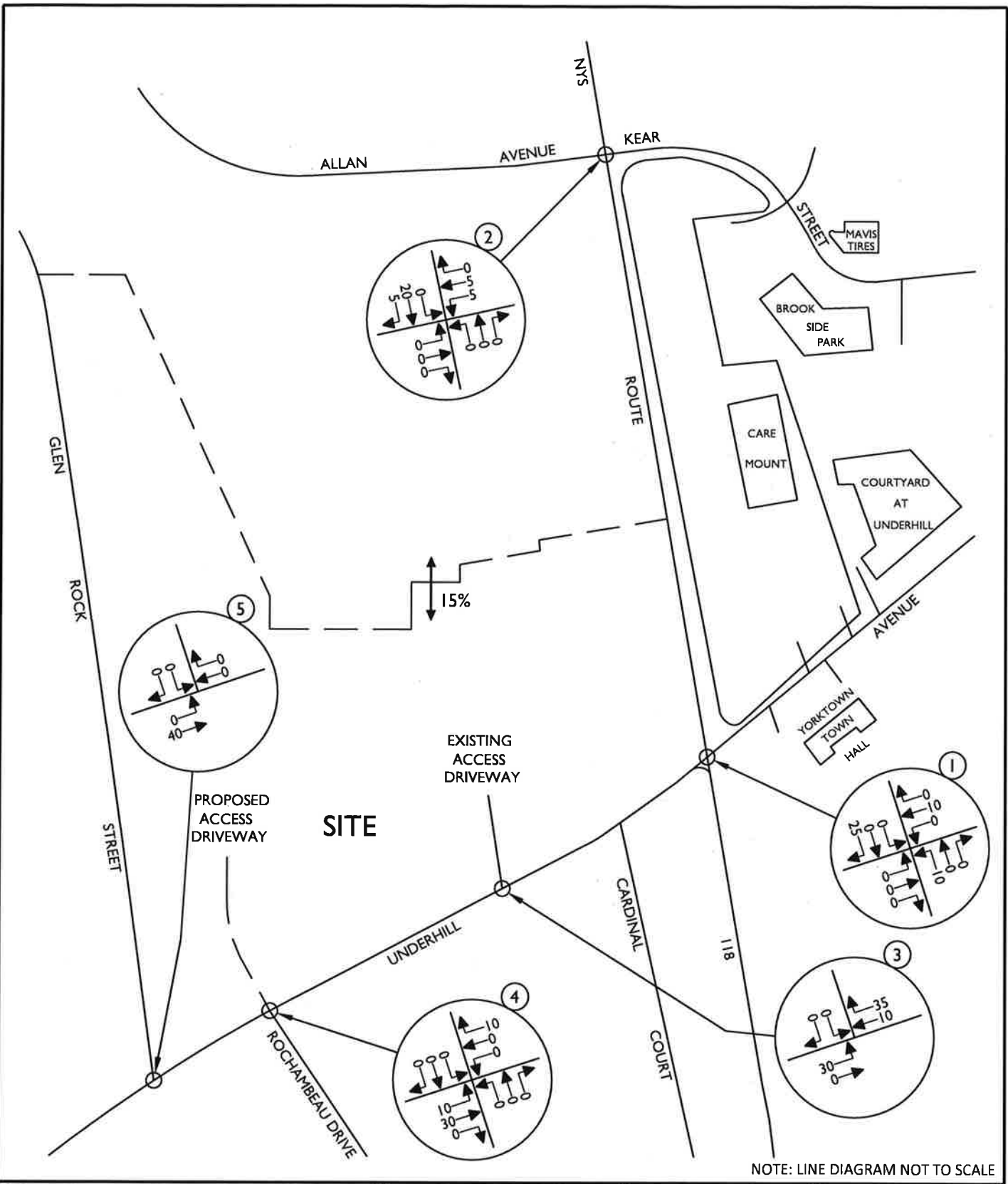
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PROJECT NUMBER:		DRAWING NAME:	
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SHEET TITLE:			
2025 NO-BUILD TRAFFIC VOLUMES WEEKDAY PEAK PM HOUR			
SHEET NUMBER:			
9			



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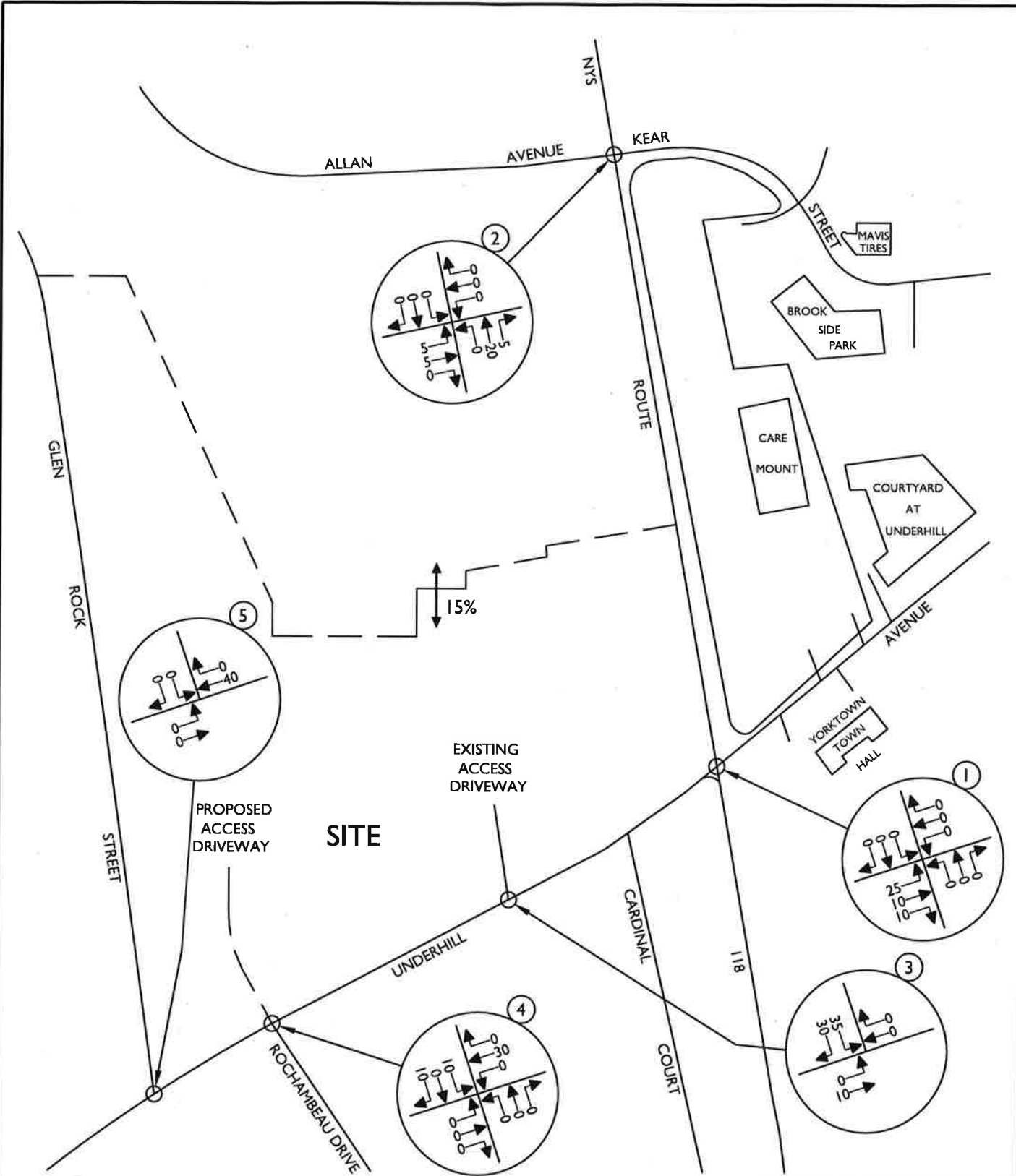
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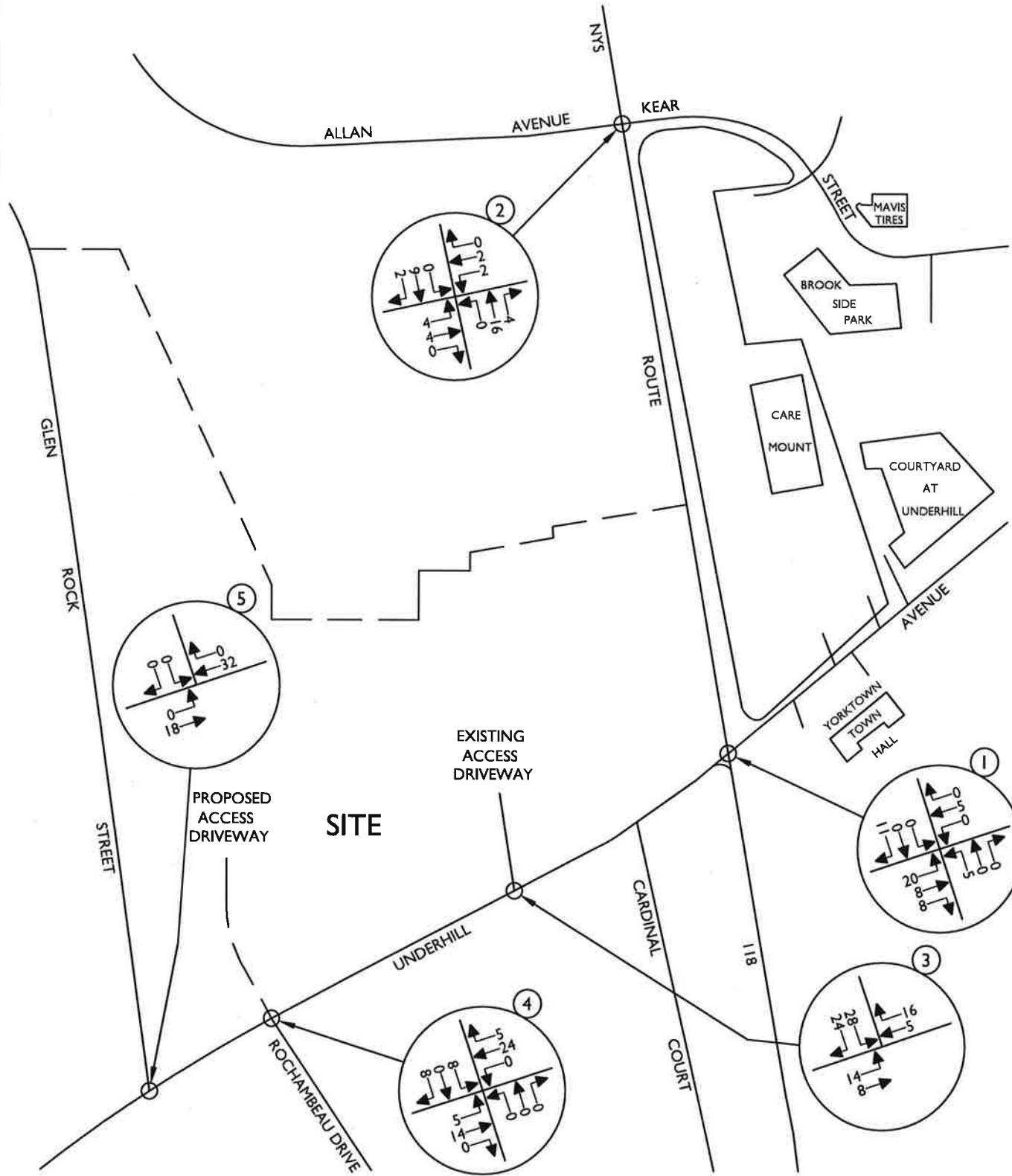
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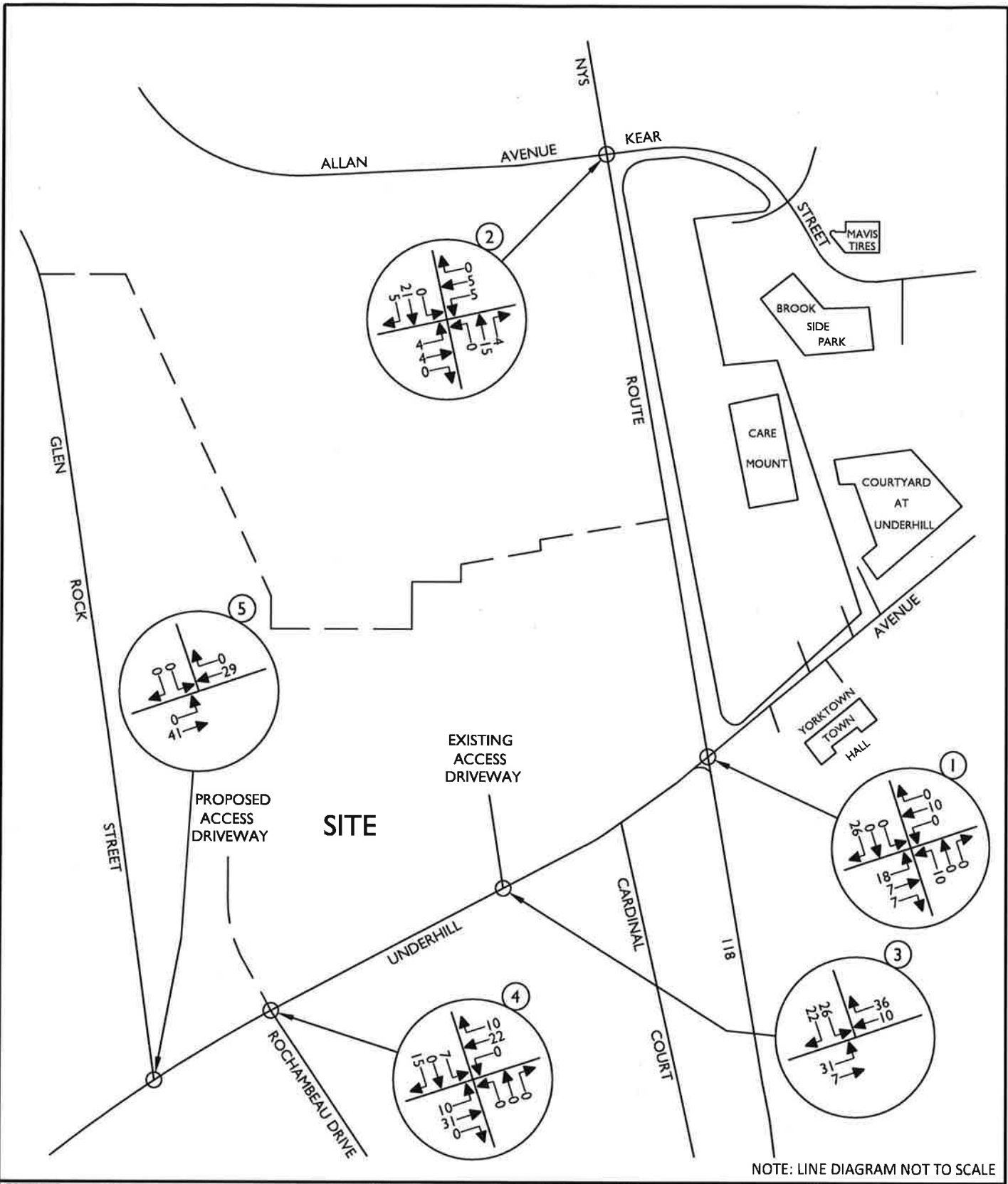
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PROJECT NUMBER:	DRAWING NAME:		
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SHEET TITLE:
SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR

SHEET NUMBER:
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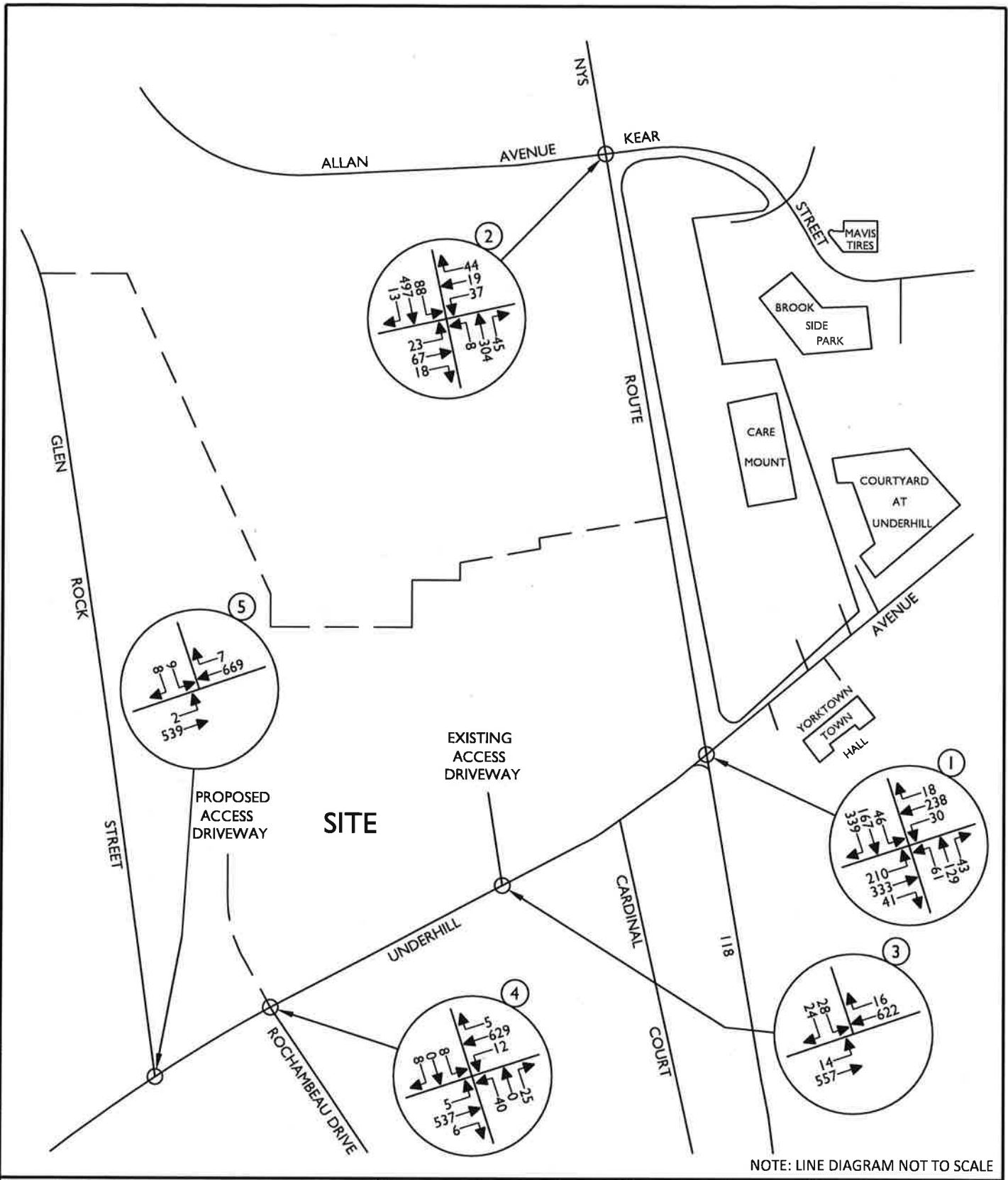
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PROJECT NUMBER: 20006297A		DRAWING NAME: 220311RH_FIGURE	

SHEET TITLE:
**SITE GENERATED TRAFFIC VOLUMES
WEEKDAY PEAK PM HOUR**

SHEET NUMBER:
13

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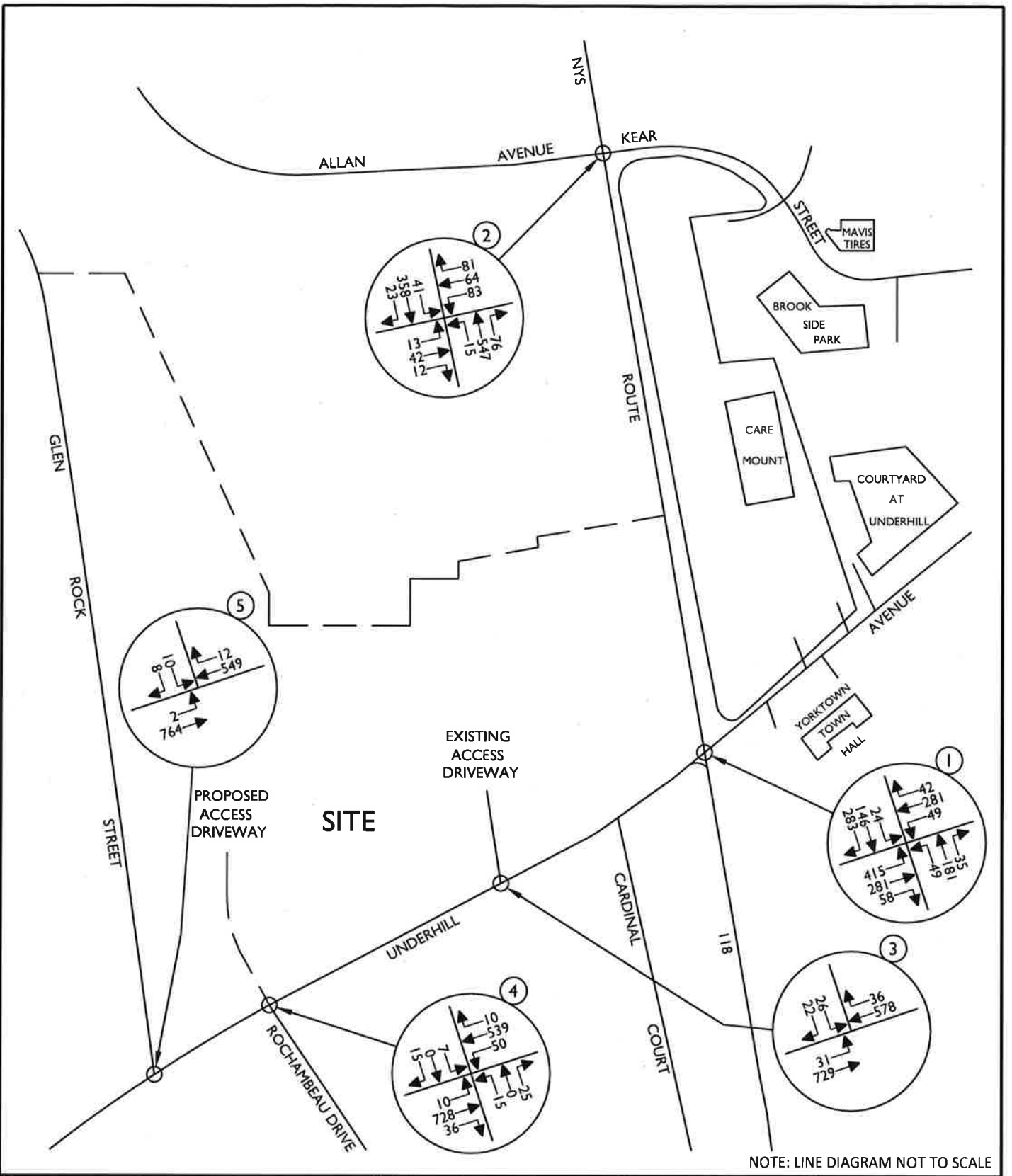
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SHEET TITLE:
**2025 BUILD TRAFFIC VOLUMES
WEEKDAY PEAK AM HOUR**

SHEET NUMBER:
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SHEET NUMBER:			
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TABLE NO. 2 AM
LEVEL OF SERVICE SUMMARY TABLE

				2021 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD
				AM	V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	
1	UNDERHILL AVENUE & NYS ROUTE 118	SIGNALIZED											
	UNDERHILL AVENUE	EB	LTR	0.70	C	21.8	0.80	C	27.5	0.85	C	31.5	4.0
	UNDERHILL AVENUE	WB	LTR	0.71	D	44.5	0.78	D	50.6	0.75	D	47.5	-3.1
	NYS ROUTE 118	NB	LTR	0.50	C	27.0	0.54	C	28.4	0.59	C	30.7	2.3
	NYS ROUTE 118	SB	LTR	0.87	D	39.5	0.89	D	43.0	0.91	D	46.1	3.1
	OVERALL			-	C	32.5	-	D	36.9	-	D	39.0	2.1
2	NYS ROUTE 118 & ALLAN AVENUE/ KEAR STREET	SIGNALIZED											
	ALLEN AVENUE	EB	LTR	0.38	C	30.6	0.41	C	31.4	0.45	C	32.3	0.9
	KEAR STREET	WB	LTR	0.28	C	23.1	0.35	C	24.0	0.39	C	25.2	1.2
	NYS ROUTE 118	NB	LTR	0.25	A	4.6	0.28	A	4.9	0.32	A	5.6	0.7
	NYS ROUTE 118	SB	LTR	0.46	A	6.4	0.53	A	7.6	0.59	A	9.1	1.5
	OVERALL			-	A	9.2	-	B	10.3	-	B	11.5	1.2
3	UNDERHILL AVENUE & EXISTING SITE ACCESS	UNSIGNALIZED											
		EB	LT	-	-	-	-	-	-	0.02	A	9.1	-
		SB	LR	-	-	-	-	-	-	0.25	D	25.9	-
4	UNDERHILL AVENUE & ROCHAMBEAU DRIVE/ PROPOSED SITE ACCESS (2)	UNSIGNALIZED											
	UNDERHILL AVENUE	EB	LTR	-	-	-	-	-	-	0.01	A	8.9	-
	UNDERHILL AVENUE	WB	LTR	0.01	A	8.7	0.01	A	8.9	0.01	A	8.9	0.0
	ROCHAMBEAU DRIVE	NB	LTR	0.16	C	15.3	0.18	C	16.7	0.24	C	21.1	4.4
	SITE ACCESS	SB	LTR	-	-	-	-	-	-	0.08	C	24.1	-
5	UNDERHILL AVENUE & GLEN ROCK STREET	UNSIGNALIZED											
		EB	LT	0.00	A	8.9	0.00	A	9.1	0.00	A	9.2	0.1
		SB	LR	0.07	C	18.7	0.08	C	20.7	0.08	C	22	1.3

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) NOTE THAT LEFT TURN EXISTING MOVEMENTS ALSO BENEFIT FROM GAPS CREATED BY THE TRAFFIC SIGNAL AT THE NYS ROUTE 118 INTERSECTION.
- 3) THE INTERSECTION OF UNDERHILL AVENUE & NYS ROUTE 118 HAS QUEUING ON THE EB APPROACH.

TABLE NO. 2 PM
LEVEL OF SERVICE SUMMARY TABLE

1	PM	2021 EXISTING			2025 NO-BUILD			2025 BUILD			CHANGE IN DELAY NO-BUILD TO BUILD		
		V/C	LOS	DELAY	V/C	LOS	DELAY	V/C	LOS	DELAY			
1	UNDERHILL AVENUE & NYS ROUTE 118		SIGNALIZED										
	UNDERHILL AVENUE	EB	LTR	1.02	E	58.8	1.22	F	130.8	1.34	F	183.3	52.5
	UNDERHILL AVENUE	WB	LTR	0.53	C	20.5	0.66	C	26.0	0.71	C	29.9	3.9
	NYS ROUTE 118	NB	LTR	0.63	C	28.7	0.64	C	27.6	0.69	C	30.2	2.6
	NYS ROUTE 118	SB	LTR	0.81	C	30.3	0.83	C	31.4	0.85	C	32.5	1.1
			OVERALL		D	40.0		E	70.5		F	93.3	22.8
	W/ TIMING IMPROVEMENTS												
	UNDERHILL AVENUE	EB	LTR	-	-	-	-	-	-	1.17	F	115.4	-15.4
	UNDERHILL AVENUE	WB	LTR	-	-	-	-	-	-	0.56	C	23.4	-2.6
	NYS ROUTE 118	NB	LTR	-	-	-	-	-	-	0.77	D	45.9	18.3
	NYS ROUTE 118	SB	LTR	-	-	-	-	-	-	0.89	D	48.2	16.8
			OVERALL	-	-	-	-	-	-		E	70.3	-0.2
	W/ TURNING LANES ON UNDERHILL AVENUE												
	UNDERHILL AVENUE	EB	L	-	-	-	-	-	-	0.66	B	15.9	-
			TR	-	-	-	-	-	-	0.35	B	13.3	-
	UNDERHILL AVENUE	WB	L	-	-	-	-	-	-	0.14	B	11.4	-
			TR	-	-	-	-	-	-	0.81	D	46.3	-
	NYS ROUTE 118	NB	LTR	-	-	-	-	-	-	0.76	D	44.4	-
	NYS ROUTE 118	SB	LT	-	-	-	-	-	-	0.47	C	33.5	-
			R	-	-	-	-	-	-	0.28	A	2.3	-
			OVERALL	-	-	-	-	-	-		C	24.3	-
	W/ TURNING LANES ON ALL APPROACHES												
	UNDERHILL AVENUE	EB	L	-	-	-	-	-	-	0.68	B	14.4	-
			TR	-	-	-	-	-	-	0.36	B	12.2	-
	UNDERHILL AVENUE	WB	L	-	-	-	-	-	-	0.13	A	8.2	-
		TR	-	-	-	-	-	-	0.76	C	35.0	-	
NYS ROUTE 118	NB	L	-	-	-	-	-	-	0.22	C	26.7	-	
		TR	-	-	-	-	-	-	0.61	C	32.2	-	
NYS ROUTE 118	SB	L	-	-	-	-	-	-	0.12	C	25.4	-	
		LT	-	-	-	-	-	-	0.44	C	29.0	-	
		R	-	-	-	-	-	-	0.29	A	2.0	-	
		OVERALL	-	-	-	-	-	-		B	19.3	-	
2	NYS ROUTE 118 & ALLAN AVENUE/ KEAR STREET		SIGNALIZED										
	ALLEN AVENUE	EB	LTR	0.19	C	23.3	0.19	C	23.7	0.22	C	24.7	1.0
	KEAR STREET	WB	LTR	0.59	C	33.6	0.68	D	36.3	0.68	D	36.4	0.1
	NYS ROUTE 118	NB	LTR	0.51	A	8.4	0.58	B	10.6	0.60	B	11.4	0.8
	NYS ROUTE 118	SB	LTR	0.34	A	6.6	0.4	A	8.3	0.43	A	8.9	0.6
			OVERALL	-	B	12.2	-	B	14.8	-	B	15.5	0.7
3	UNDERHILL AVENUE & EXISTING SITE ACCESS		UNSIGNALIZED										
		EB	LT	-	-	-	-	-	-	0.04	A	9.1	-
		SB	LR	-	-	-	-	-	0.30	D	33.4	-	
4	UNDERHILL AVENUE & ROCHAMBEAU DRIVE/ PROPOSED SITE ACCESS (2)		UNSIGNALIZED										
	UNDERHILL AVENUE	EB	LTR	-	-	-	-	-	-	0.01	A	8.7	-
	UNDERHILL AVENUE	WB	LTR	0.06	A	9.3	0.06	A	9.6	0.06	A	9.7	0.1
	ROCHAMBEAU DRIVE	NB	LTR	0.10	C	15.4	0.12	C	16.8	0.16	C	20.9	4.1
	SITE ACCESS	SB	LTR	-	-	-	-	-	-	0.12	D	25.2	-
5	UNDERHILL AVENUE & GLEN ROCK STREET		UNSIGNALIZED										
		EB	LT	0.00	A	8.4	0.00	A	8.6	0.00	A	8.7	0.1
		SB	LR	0.07	C	19.2	0.08	C	21.9	0.09	C	23.6	1.7

NOTES:

- 1) THE ABOVE REPRESENTS THE LEVEL OF SERVICE AND VEHICLE DELAY IN SECONDS, C [16.2], FOR EACH KEY APPROACH OF THE UNSIGNALIZED INTERSECTIONS AS WELL AS FOR EACH APPROACH AND THE OVERALL INTERSECTION FOR THE SIGNALIZED INTERSECTIONS. SEE APPENDIX "C" FOR A DESCRIPTION OF THE LEVELS OF SERVICE.
- 2) NOTE THAT LEFT TURN EXISTING MOVEMENTS ALSO BENEFIT FROM GAPS CREATED BY THE TRAFFIC SIGNAL AT THE NYS ROUTE 118 INTERSECTION.
- 3) THE INTERSECTION OF UNDERHILL AVENUE & NYS ROUTE 118 CURRENTLY EXPERIENCES LONG QUEUES ON THE EB APPROACH DURING THE PM PEAK HOUR. THE SIGNAL TIMING IMPROVEMENTS WILL HELP ALLEVIATE THIS CONDITION.

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	190	325	33	30	233	18	56	129	43	46	167	328
Future Volume (vph)	190	325	33	30	233	18	56	129	43	46	167	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.992			0.991			0.974			0.918	
Flt Protected		0.983			0.995			0.988			0.996	
Satd. Flow (prot)	0	1986	0	0	1800	0	0	1766	0	0	1712	0
Flt Permitted		0.516			0.889			0.676			0.950	
Satd. Flow (perm)	0	1042	0	0	1608	0	0	1208	0	0	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			12			79	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	202	346	35	32	248	19	60	137	46	49	178	349
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	583	0	0	299	0	0	243	0	0	576	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	26.0	57.0		31.0	31.0		46.0	46.0		46.0	46.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

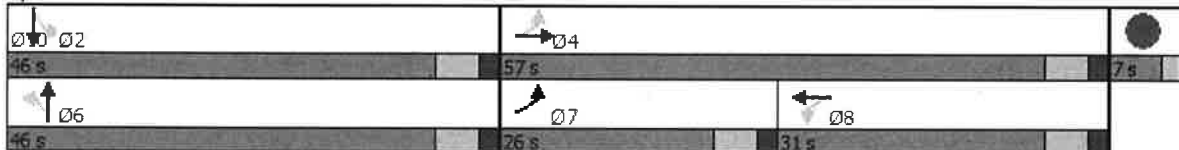
Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	51.8%		28.2%	28.2%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	20.0	51.0		25.0	25.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag								
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	0											
Act Effct Green (s)		49.0			22.7			35.1			35.1	
Actuated g/C Ratio		0.51			0.24			0.36			0.36	
v/c Ratio		0.80			0.78			0.54			0.89	
Control Delay		27.5			50.6			28.4			43.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.5			50.6			28.4			43.0	
LOS		C			D			C			D	
Approach Delay		27.5			50.6			28.4			43.0	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)		257			180			114			299	
Queue Length 95th (ft)		#411			#307			192			#499	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		759			424			515			732	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.77			0.71			0.47			0.79	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 96.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 36.9
 Intersection LOS: D
 Intersection Capacity Utilization 93.8%
 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: 1: NYS Route 118 & Underhill Avenue



Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (vph)	19	63	18	35	16	44	8	288	41	88	488	10
Future Volume (vph)	19	63	18	35	16	44	8	288	41	88	488	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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		0.976			0.937			0.983			0.998	
Flt Protected		0.991			0.982			0.999			0.993	
Satd. Flow (prot)	0	1750	0	0	1894	0	0	1751	0	0	1767	0
Flt Permitted		0.932			0.860			0.985			0.888	
Satd. Flow (perm)	0	1646	0	0	1659	0	0	1726	0	0	1580	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			33			7			1	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	20	67	19	37	17	47	9	306	44	94	519	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	106	0	0	101	0	0	359	0	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 No-Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
 03/14/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.8			10.8			52.2			52.2	
Actuated g/C Ratio		0.15			0.15			0.75			0.75	
v/c Ratio		0.41			0.35			0.28			0.53	
Control Delay		31.4			24.0			4.9			7.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		31.4			24.0			4.9			7.6	
LOS		C			C			A			A	
Approach Delay		31.4			24.0			4.9			7.6	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		41			28			49			115	
Queue Length 95th (ft)		85			69			96			223	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		719			739			1293			1182	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.15			0.14			0.28			0.53	

Intersection Summary

Area Type: Other
 Cycle Length: 125
 Actuated Cycle Length: 69.8
 Natural Cycle: 105
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 10.3
 Intersection Capacity Utilization 75.0%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

Ø2	Ø4	Ø10
57 s	35 s	33 s
Ø6	Ø8	
57 s	35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak AM Hour
03/14/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↗	
Traffic Volume (vph)	524	6	12	605	40	25
Future Volume (vph)	524	6	12	605	40	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	-6%			6%	-7%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.948	
Flt Protected				0.999	0.970	
Satd. Flow (prot)	1808	0	0	1766	1826	0
Flt Permitted				0.999	0.970	
Satd. Flow (perm)	1808	0	0	1766	1826	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	220			425	323	
Travel Time (s)	5.0			9.7	7.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	8%	20%	17%	4%	6%	5%
Adj. Flow (vph)	552	6	13	637	42	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	558	0	0	650	68	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	14	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.96	0.96	1.04	1.04	0.88	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	51.9%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	524	6	12	605	40	25
Future Vol, veh/h	524	6	12	605	40	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-6	-	-	6	-7	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	8	20	17	4	6	5
Mvmt Flow	552	6	13	637	42	26

Major/Minor

	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	558	0	1218
Stage 1	-	-	-	-	555
Stage 2	-	-	-	-	663
Critical Hdwy	-	4.27	-	5.06	5.55
Critical Hdwy Sta 1	-	-	-	4.06	-
Critical Hdwy Stg 2	-	-	-	4.06	-
Follow-up Hdwy	-	2.353	-	3.554	3.345
Pot Cap-1 Maneuver	-	942	-	314	585
Stage 1	-	-	-	704	-
Stage 2	-	-	-	654	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	942	-	307	585
Mov Cap-2 Maneuver	-	-	-	307	-
Stage 1	-	-	-	704	-
Stage 2	-	-	-	640	-

Approach

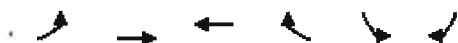
	EB	WB	NB
HCM Control Delay, s	0	0.2	16.7
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	376	-	-	942	-
HCM Lane V/C Ratio	0.182	-	-	0.013	-
HCM Control Delay (s)	16.7	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0	-

2025 No-Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	2	521	637	7	9	8
Future Volume (vph)	2	521	637	7	9	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.998		0.936	
Frt Protected					0.974	
Satd. Flow (prot)	0	1804	1769	0	1501	0
Frt Permitted					0.974	
Satd. Flow (perm)	0	1804	1769	0	1501	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	8%	4%	2%	2%	14%
Adj. Flow (vph)	2	573	700	8	10	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	575	708	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.0%
Analysis Period (min)	15
	ICU Level of Service A

2025 No-Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
03/14/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	2	521	637	7	9	8
Future Vol, veh/h	2	521	637	7	9	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, %	-	-5	6	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	8	4	2	2	14
Mvmt Flow	2	573	700	8	10	9

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	708	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Sta 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	891	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	891	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach













	EB	WB	SB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	891	-	-	-	248
HCM Lane V/C Ratio	0.002	-	-	-	0.075
HCM Control Delay (s)	9.1	0	-	-	20.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	397	274	51	47	271	42	38	181	35	24	146	257
Future Volume (vph)	397	274	51	47	271	42	38	181	35	24	146	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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		0.990			0.984			0.981			0.919	
Flt Protected		0.973			0.994			0.993			0.997	
Satd. Flow (prot)	0	1962	0	0	1786	0	0	1787	0	0	1715	0
Flt Permitted		0.510			0.840			0.813			0.971	
Satd. Flow (perm)	0	1028	0	0	1509	0	0	1463	0	0	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			5			10			97	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	418	288	54	49	285	44	40	191	37	25	154	271
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	760	0	0	378	0	0	268	0	0	450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	16.0	43.0		27.0	27.0		60.0	60.0		60.0	60.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 No-Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.5%	39.1%		24.5%	24.5%		54.5%	54.5%		54.5%	54.5%	
Maximum Green (s)	10.0	37.0		21.0	21.0		54.0	54.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effect Green (s)		37.3			26.2			19.6			19.6	
Actuated g/C Ratio		0.54			0.38			0.28			0.28	
v/c Ratio		1.22			0.66			0.64			0.83	
Control Delay		130.8			26.0			27.6			31.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		130.8			26.0			27.6			31.4	
LOS		F			C			C			C	
Approach Delay		130.8			26.0			27.6			31.4	
Approach LOS		F			C			C			C	
Queue Length 50th (ft)		~321			125			94			139	
Queue Length 95th (ft)		#717			#291			163			241	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		625			576			1156			1339	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.22			0.66			0.23			0.34	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 68.9

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.22

Intersection Signal Delay: 70.5

Intersection LOS: E

Intersection Capacity Utilization 101.4%

ICU Level of Service G

Analysis Period (min) 15

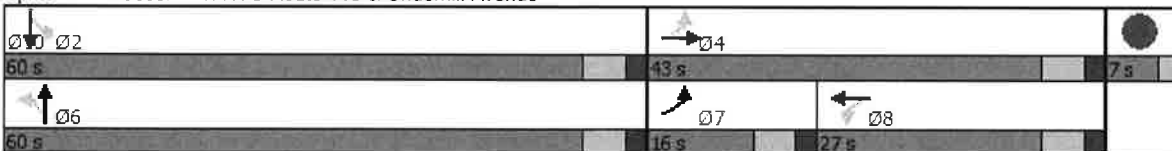
~ Volume exceeds capacity, queue is theoretically infinite.

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: 1: NYS Route 118 & Underhill Avenue



Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
 03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	9	39	12	77	59	81	15	532	72	41	338	18
Future Volume (vph)	9	39	12	77	59	81	15	532	72	41	338	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.950			0.984			0.994	
Flt Protected		0.993			0.983			0.999			0.995	
Satd. Flow (prot)	0	1747	0	0	1922	0	0	1752	0	0	1763	0
Flt Permitted		0.954			0.857			0.987			0.898	
Satd. Flow (perm)	0	1678	0	0	1676	0	0	1731	0	0	1591	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			23			6			2	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	41	13	81	62	85	16	560	76	43	356	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	63	0	0	228	0	0	652	0	0	418	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 No-Build Traffic Volumes
 2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
 03/14/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
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		7.0	7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		14.6		14.6			50.1			50.1		50.1
Actuated g/C Ratio		0.19		0.19			0.65			0.65		0.65
v/c Ratio		0.19		0.68			0.58			0.40		0.40
Control Delay		23.7		36.3			10.6			8.3		8.3
Queue Delay		0.0		0.0			0.0			0.0		0.0
Total Delay		23.7		36.3			10.6			8.3		8.3
LOS		C		D			B			A		A
Approach Delay		23.7		36.3			10.6			8.3		8.3
Approach LOS		C		D			B			A		A
Queue Length 50th (ft)		21		91			147			80		80
Queue Length 95th (ft)		52		161			292			164		164
Internal Link Dist (ft)		269		289			978			263		263
Turn Bay Length (ft)												
Base Capacity (vph)		663		670			1132			1039		1039
Starvation Cap Reductn		0		0			0			0		0
Spillback Cap Reductn		0		0			0			0		0
Storage Cap Reductn		0		0			0			0		0
Reduced v/c Ratio		0.10		0.34			0.58			0.40		0.40

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 76.7

Natural Cycle: 105

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.8

Intersection LOS: B

Intersection Capacity Utilization 68.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

 Ø2 57 s	 Ø4 35 s	 Ø10 33 s
 Ø6 57 s	 Ø8 35 s	

Lane Group	Ø10
Total Split (%)	28%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak PM Hour
03/14/2022

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↗		↘
Traffic Volume (vph)	697	36	50	517	15	25
Future Volume (vph)	697	36	50	517	15	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	14	12
Grade (%)	-6%			6%		-7%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993			0.916		
Flt Protected				0.996	0.981	
Satd. Flow (prot)	1905	0	0	1800	1815	0
Flt Permitted				0.996	0.981	
Satd. Flow (perm)	1905	0	0	1800	1815	0
Link Speed (mph)	30			30		30
Link Distance (ft)	220			425		323
Travel Time (s)	5.0			9.7		7.3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	5%
Adj. Flow (vph)	734	38	53	544	16	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	772	0	0	597	42	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0		14
Link Offset(ft)	0			0		0
Crosswalk Width(ft)	16			16		16
Two way Left Turn Lane						
Headway Factor	0.96	0.96	1.04	1.04	0.88	0.96
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	78.7%			ICU Level of Service D		
Analysis Period (min)	15					

2025 No-Build Traffic Volumes
4: Rochambeau Drive & Underhill Avenue

Peak PM Hour
03/14/2022

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↘	↙
Traffic Vol, veh/h	697	36	50	517	15	25
Future Vol, veh/h	697	36	50	517	15	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	-6	-	-	6	-7	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	5
Mvmt Flow	734	38	53	544	16	26

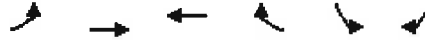
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	772	0	1403
Stage 1	-	-	-	-	753
Stage 2	-	-	-	-	650
Critical Hdwy	-	-	4.12	-	5.02
Critical Hdwy Stg 1	-	-	-	-	4.02
Critical Hdwy Stg 2	-	-	-	-	4.02
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	843	-	266
Stage 1	-	-	-	-	624
Stage 2	-	-	-	-	669
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	843	-	242
Mov Cap-2 Maneuver	-	-	-	-	242
Stage 1	-	-	-	-	624
Stage 2	-	-	-	-	609

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	347	-	-	843	-
HCM Lane V/C Ratio	0.121	-	-	0.062	-
HCM Control Delay (s)	16.8	-	-	9.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

2025 No-Build Traffic Volumes
 5: Underhill Avenue & Glen Rock Street

Peak PM Hour
 03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	2	723	520	12	10	8
Future Volume (vph)	2	723	520	12	10	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997		0.939	
Flt Protected					0.973	
Satd. Flow (prot)	0	1909	1801	0	1588	0
Flt Permitted					0.973	
Satd. Flow (perm)	0	1909	1801	0	1588	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	786	565	13	11	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	788	578	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 0.3

Movement EBL EBT WBT WBR SBL SBR

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	2	723	520	12	10	8
Future Vol, veh/h	2	723	520	12	10	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, %	-	-5	6	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	786	565	13	11	9

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	578	0	-	0	1362	572
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	790	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	996	-	-	-	163	520
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	447	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	996	-	-	-	162	520
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	447	-

Approach EB WB SB

HCM Control Delay, s	0	0	21.9
HCM LOS			C

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	996	-	-	-	233
HCM Lane V/C Ratio	0.002	-	-	-	0.084
HCM Control Delay (s)	8.6	0	-	-	21.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	210	333	41	30	238	18	61	129	43	46	167	339
Future Volume (vph)	210	333	41	30	238	18	61	129	43	46	167	339
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
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		0.990			0.992			0.975			0.917	
Flt Protected		0.982			0.995			0.987			0.996	
Satd. Flow (prot)	0	1980	0	0	1802	0	0	1766	0	0	1710	0
Flt Permitted		0.521			0.887			0.635			0.952	
Satd. Flow (perm)	0	1050	0	0	1606	0	0	1136	0	0	1634	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			12			82	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	223	354	44	32	253	19	65	137	46	49	178	361
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	621	0	0	304	0	0	248	0	0	588	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		16.0	16.0		16.0	16.0	
Total Split (s)	26.0	57.0		31.0	31.0		46.0	46.0		46.0	46.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak AM Hour
03/14/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	23.6%	51.8%		28.2%	28.2%		41.8%	41.8%		41.8%	41.8%	
Maximum Green (s)	20.0	51.0		25.0	25.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Max	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0											
Flash Dont Walk (s)	12.0											
Pedestrian Calls (#/hr)	0											
Act Effct Green (s)		51.2		25.1			35.9			35.9		
Actuated g/C Ratio		0.52		0.25			0.36			0.36		
v/c Ratio		0.85		0.75			0.59			0.91		
Control Delay		31.5		47.5			30.7			46.1		
Queue Delay		0.0		0.0			0.0			0.0		
Total Delay		31.5		47.5			30.7			46.1		
LOS		C		D			C			D		
Approach Delay		31.5		47.5			30.7			46.1		
Approach LOS		C		D			C			D		
Queue Length 50th (ft)		286		186			119			308		
Queue Length 95th (ft)		#493		#317			202			#515		
Internal Link Dist (ft)		310		219			381			978		
Turn Bay Length (ft)												
Base Capacity (vph)		733		408			467			710		
Starvation Cap Reductn		0		0			0			0		
Spillback Cap Reductn		0		0			0			0		
Storage Cap Reductn		0		0			0			0		
Reduced v/c Ratio		0.85		0.75			0.53			0.83		

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 99.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 39.0
 Intersection LOS: D
 Intersection Capacity Utilization 96.4%
 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: 1: NYS Route 118 & Underhill Avenue

46 s	57 s	26 s	31 s

Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak AM Hour
03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	67	18	37	19	44	8	304	45	88	497	13
Future Volume (vph)	23	67	18	37	19	44	8	304	45	88	497	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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		0.977			0.940			0.983			0.997	
Flt Protected		0.990			0.982			0.999			0.993	
Satd. Flow (prot)	0	1750	0	0	1900	0	0	1751	0	0	1765	0
Flt Permitted		0.930			0.853			0.985			0.885	
Satd. Flow (perm)	0	1644	0	0	1650	0	0	1726	0	0	1573	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			30			7			1	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	24	71	19	39	20	47	9	323	48	94	529	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	106	0	0	380	0	0	637	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		Cl+Ex			Cl+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street






Peak AM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NET	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		11.0			11.0			50.0			50.0	
Actuated g/C Ratio		0.15			0.15			0.68			0.68	
v/c Ratio		0.45			0.39			0.32			0.59	
Control Delay		32.3			25.2			5.6			9.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		32.3			25.2			5.6			9.1	
LOS		C			C			A			A	
Approach Delay		32.3			25.2			5.6			9.1	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)		44			31			53			119	
Queue Length 95th (ft)		91			74			105			239	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		680			696			1184			1078	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.17			0.15			0.32			0.59	

Intersection Summary

Area Type: Other
 Cycle Length: 125
 Actuated Cycle Length: 73
 Natural Cycle: 105
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 11.5
 Intersection Capacity Utilization 76.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

		
57 s	35 s	33 s
		
57 s	35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
3: Underhill Avenue & Site Access

Peak AM Hour
03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	14	557	622	16	28	24
Future Volume (vph)	14	557	622	16	28	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-5%	5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.997		0.937	
Flt Protected		0.999			0.974	
Satd. Flow (prot)	0	1804	1777	0	1700	0
Flt Permitted		0.999			0.974	
Satd. Flow (perm)	0	1804	1777	0	1700	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		425	390		188	
Travel Time (s)		9.7	8.9		4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	8%	4%	2%	2%	2%
Adj. Flow (vph)	16	619	691	18	31	27
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	635	709	0	58	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.6%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
 3: Underhill Avenue & Site Access

Peak AM Hour
 03/14/2022

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Vol, veh/h	14	557	622	16	28	24
Future Vol, veh/h	14	557	622	16	28	24
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, %	-	-5	5	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	8	4	2	2	2
Mvmt Flow	16	619	691	18	31	27

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	709	0	0	1351	700
Stage 1	-	-	-	700	-
Stage 2	-	-	-	651	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	890	-	-	166	439
Stage 1	-	-	-	493	-
Stage 2	-	-	-	519	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	890	-	-	162	439
Mov Cap-2 Maneuver	-	-	-	162	-
Stage 1	-	-	-	480	-
Stage 2	-	-	-	519	-

Approach

















	EB	WB	SB
HCM Control Delay, s	0.2	0	25.9
HCM LOS			D

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	890	-	-	-	229
HCM Lane V/C Ratio	0.017	-	-	-	0.252
HCM Control Delay (s)	9.1	0	-	-	25.9
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1

2025 Build Traffic Volumes
 4: Rochambeau Drive/Site Access & Underhill Avenue

Peak AM Hour
 03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	537	6	12	629	5	40	0	25	8	0	8
Future Volume (vph)	5	537	6	12	629	5	40	0	25	8	0	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	14	12	12	12	12
Grade (%)		-6%			6%			-7%			0%	
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
Flt		0.999			0.999			0.948			0.932	
Flt Protected					0.999			0.970			0.976	
Satd. Flow (prot)	0	1809	0	0	1765	0	0	1826	0	0	1694	0
Flt Permitted					0.999			0.970			0.976	
Satd. Flow (perm)	0	1809	0	0	1765	0	0	1826	0	0	1694	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		220			425			323			173	
Travel Time (s)		5.0			9.7			7.3			3.9	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	8%	20%	17%	4%	2%	6%	2%	5%	2%	2%	2%
Adj. Flow (vph)	5	565	6	13	662	5	42	0	26	8	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	576	0	0	680	0	0	68	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	0.96	1.04	1.04	1.04	0.96	0.88	0.96	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.8%
Analysis Period (min)	15
	ICU Level of Service A

2025 Build Traffic Volumes
4: Rochambeau Drive/Site Access & Underhill Avenue

Peak AM Hour
03/14/2022

Intersection												
Int Delay, s/veh	1.5											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕		↕		↕		↕		↕		↕	
Traffic Vol, veh/h	5	537	6	12	629	5	40	0	25	8	0	8
Future Vol, veh/h	5	537	6	12	629	5	40	0	25	8	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	6	-	-	-7	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	8	20	17	4	2	6	2	5	2	2	2
Mvmt Flow	5	565	6	13	662	5	42	0	26	8	0	8

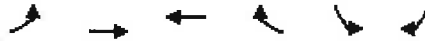
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	667	0	0	571	0	0	1273	1271	568	1282	1272	665
Stage 1	-	-	-	-	-	-	578	578	-	691	691	-
Stage 2	-	-	-	-	-	-	695	693	-	591	581	-
Critical Hdwy	4.12	-	-	4.27	-	-	5.76	5.12	5.55	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	4.76	4.12	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4.76	4.12	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.353	-	-	3.554	4.018	3.345	3.518	4.018	3.318
Pot Cap-1 Maneuver	923	-	-	931	-	-	232	275	577	142	168	460
Stage 1	-	-	-	-	-	-	619	627	-	435	446	-
Stage 2	-	-	-	-	-	-	558	582	-	493	500	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	923	-	-	931	-	-	222	267	577	132	163	460
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	267	-	132	163	-
Stage 1	-	-	-	-	-	-	614	622	-	432	436	-
Stage 2	-	-	-	-	-	-	536	569	-	467	496	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	21.1	24.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	291	923	-	-	931	-	-	205
HCM Lane V/C Ratio	0.235	0.006	-	-	0.014	-	-	0.082
HCM Control Delay (s)	21.1	8.9	0	-	8.9	0	-	24.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0.3

2025 Build Traffic Volumes
 5: Underhill Avenue & Glen Rock Street

Peak AM Hour
 03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Volume (vph)	2	539	669	7	9	8
Future Volume (vph)	2	539	669	7	9	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.936	
Flt Protected					0.974	
Satd. Flow (prot)	0	1804	1771	0	1501	0
Flt Permitted					0.974	
Satd. Flow (perm)	0	1804	1771	0	1501	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	8%	4%	2%	2%	14%
Adj. Flow (vph)	2	592	735	8	10	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	594	743	0	19	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	45.6%
ICU Level of Service	A
Analysis Period (min)	15

2025 Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak AM Hour
03/14/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	2	539	669	7	9	8
Future Vol, veh/h	2	539	669	7	9	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, %	-	-5	6	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	8	4	2	2	14
Mvmt Flow	2	592	735	8	10	9

Major/Minor

	Major1	Major2	Minor2		
Conflicting Flow All	743	0	0	1335	739
Stage 1	-	-	-	739	-
Stage 2	-	-	-	596	-
Critical Hdwy	4.12	-	-	6.42	6.34
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.426
Pot Cap-1 Maneuver	864	-	-	169	398
Stage 1	-	-	-	472	-
Stage 2	-	-	-	550	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	864	-	-	168	398
Mov Cap-2 Maneuver	-	-	-	168	-
Stage 1	-	-	-	471	-
Stage 2	-	-	-	550	-

Approach

	EB	WB	SB
HCM Control Delay, s	0	0	22
HCM LOS			C

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	864	-	-	-	231
HCM Lane V/C Ratio	0.003	-	-	-	0.081
HCM Control Delay (s)	9.2	0	-	-	22
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Future Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	11	12	12	11	12
Grade (%)		-5%			4%			3%			-1%	
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		0.990			0.985			0.982			0.916	
Flt Protected		0.973			0.993			0.991			0.997	
Satd. Flow (prot)	0	1962	0	0	1786	0	0	1726	0	0	1653	0
Flt Permitted		0.494			0.826			0.752			0.970	
Satd. Flow (perm)	0	996	0	0	1485	0	0	1310	0	0	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			5			10			107	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	296	61	52	296	44	52	191	37	25	154	298
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	794	0	0	392	0	0	280	0	0	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.07	1.02	0.99	1.04	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	16.0	43.0		27.0	27.0		60.0	60.0		60.0	60.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 Build Traffic Volumes
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	14.5%	39.1%		24.5%	24.5%		54.5%	54.5%		54.5%	54.5%	
Maximum Green (s)	10.0	37.0		21.0	21.0		54.0	54.0		54.0	54.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag								
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effct Green (s)		37.3			26.2			21.5			21.5	
Actuated g/C Ratio		0.53			0.37			0.30			0.30	
v/c Ratio		1.34			0.71			0.69			0.85	
Control Delay		183.3			29.9			30.2			32.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		183.3			29.9			30.2			32.5	
LOS		F			C			C			C	
Approach Delay		183.3			29.9			30.2			32.5	
Approach LOS		F			C			C			C	
Queue Length 50th (ft)		-415			140			102			151	
Queue Length 95th (ft)		#804			#332			178			260	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		594			552			1008			1259	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.34			0.71			0.28			0.38	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 71
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 93.3
 Intersection LOS: F
 Intersection Capacity Utilization 106.3%
 ICU Level of Service G
 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: 1: NYS Route 118 & Underhill Avenue

--

Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	13	42	12	83	64	81	15	547	76	41	358	23
Future Volume (vph)	13	42	12	83	64	81	15	547	76	41	358	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	11	12	12	11	12
Grade (%)		-1%			5%			2%			2%	
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		0.975			0.952			0.984			0.993	
Flt Protected		0.990			0.982			0.999			0.995	
Satd. Flow (prot)	0	1747	0	0	1924	0	0	1752	0	0	1761	0
Flt Permitted		0.923			0.865			0.987			0.900	
Satd. Flow (perm)	0	1629	0	0	1695	0	0	1731	0	0	1593	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			21			6			3	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		349			369			1058			343	
Travel Time (s)		7.9			8.4			18.0			5.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	44	13	87	67	85	16	576	80	43	377	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	71	0	0	239	0	0	672	0	0	444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.99	1.04	0.99	1.03	0.88	1.03	1.01	1.06	1.01	1.01	1.06	1.01
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	1		1	1	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	0		20	0	
Trailing Detector (ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Position(ft)	0	-5		0	-5		0	0		0	0	
Detector 1 Size(ft)	20	40		20	40		20	0		20	0	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43							
Detector 2 Size(ft)		40			40							
Detector 2 Type		CI+Ex			CI+Ex							
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0							
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	15.0	15.0		15.0	15.0		57.0	57.0		57.0	57.0	
Total Split (s)	35.0	35.0		35.0	35.0		57.0	57.0		57.0	57.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	33.0
Total Split (s)	33.0

2025 Build Traffic Volumes
2: NYS Route 118 & Allen Avenue/Kear Street

Peak PM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	28.0%	28.0%		28.0%	28.0%		45.6%	45.6%		45.6%	45.6%	
Maximum Green (s)	30.0	30.0		30.0	30.0		50.0	50.0		50.0	50.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.3			15.3			50.1			50.1	
Actuated g/C Ratio		0.20			0.20			0.65			0.65	
v/c Ratio		0.22			0.68			0.60			0.43	
Control Delay		24.7			36.4			11.4			8.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		24.7			36.4			11.4			8.9	
LOS		C			D			B			A	
Approach Delay		24.7			36.4			11.4			8.9	
Approach LOS		C			D			B			A	
Queue Length 50th (ft)		26			98			160			90	
Queue Length 95th (ft)		59			170			318			183	
Internal Link Dist (ft)		269			289			978			263	
Turn Bay Length (ft)												
Base Capacity (vph)		637			670			1122			1031	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.11			0.36			0.60			0.43	

Intersection Summary

Area Type: Other

Cycle Length: 125

Actuated Cycle Length: 77.4

Natural Cycle: 105

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 15.5






Intersection LOS: B

Intersection Capacity Utilization 70.8%

ICU Level of Service C

Analysis Period (min) 15

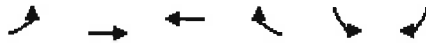
Splits and Phases: 2: NYS Route 118 & Allen Avenue/Kear Street

 Ø2	 Ø4	 Ø10
57 s	35 s	33 s
 Ø6	 Ø8	
57 s	35 s	

Lane Group	Ø10
Total Split (%)	26%
Maximum Green (s)	29.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	8.0
Flash Dont Walk (s)	21.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2025 Build Traffic Volumes
 3: Underhill Avenue & Site Access

Peak PM Hour
 03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	31	729	578	36	26	22
Future Volume (vph)	31	729	578	36	26	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-5%	5%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.992		0.939	
Flt Protected		0.998			0.973	
Satd. Flow (prot)	0	1905	1802	0	1702	0
Flt Permitted		0.998			0.973	
Satd. Flow (perm)	0	1905	1802	0	1702	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		425	390		188	
Travel Time (s)		9.7	8.9		4.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	810	642	40	29	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	844	682	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	73.5%
Analysis Period (min)	15
	ICU Level of Service D

2025 Build Traffic Volumes
 3: Underhill Avenue & Site Access

Peak PM Hour
 03/14/2022

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	31	729	578	36	26	22
Future Vol, veh/h	31	729	578	36	26	22
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, %	-	-5	5	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	810	642	40	29	24

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	682	0	0
Stage 1	-	-	662
Stage 2	-	-	878
Critical Hdwy	4.12	-	6.42
Critical Hdwy Sta 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	911	-	127
Stage 1	-	-	513
Stage 2	-	-	400
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	911	-	118
Mov Cap-2 Maneuver	-	-	118
Stage 1	-	-	478
Stage 2	-	-	406

Approach

















	EB	WB	SB
HCM Control Delay, s	0.4	0	33.4
HCM LOS			D

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	911	-	-	-	179
HCM Lane V/C Ratio	0.038	-	-	-	0.298
HCM Control Delay (s)	9.1	0	-	-	33.4
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

2025 Build Traffic Volumes
 4: Rochambeau Drive/Site Access & Underhill Avenue

Peak PM Hour
 03/14/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	728	36	50	539	10	15	0	25	7	0	15
Future Volume (vph)	10	728	36	50	539	10	15	0	25	7	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	14	12	12	12	12
Grade (%)		-6%			6%			-7%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.998			0.916			0.906	
Flt Protected		0.999			0.996			0.981			0.985	
Satd. Flow (prot)	0	1905	0	0	1796	0	0	1815	0	0	1662	0
Flt Permitted		0.999			0.996			0.981			0.985	
Satd. Flow (perm)	0	1905	0	0	1796	0	0	1815	0	0	1662	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		220			425			323			150	
Travel Time (s)		5.0			9.7			7.3			3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%
Adj. Flow (vph)	11	766	38	53	567	11	16	0	26	7	0	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	815	0	0	631	0	0	42	0	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	0.96	1.04	1.04	1.04	0.96	0.88	0.96	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 69.6%

ICU Level of Service C

Analysis Period (min) 15

2025 Build Traffic Volumes
4: Rochambeau Drive/Site Access & Underhill Avenue

Peak PM Hour
03/14/2022

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	10	728	36	50	539	10	15	0	25	7	0	15
Future Vol, veh/h	10	728	36	50	539	10	15	0	25	7	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	-6	-	-	6	-	-	-7	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	5	2	2	2
Mvmt Flow	11	766	38	53	567	11	16	0	26	7	0	16

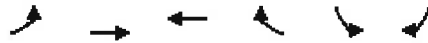
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	578	0	0	804	0	0	1494	1491	785	1499	1505	573
Stage 1	-	-	-	-	-	-	807	807	-	679	679	-
Stage 2	-	-	-	-	-	-	687	684	-	820	826	-
Critical Hdwy	4.12	-	-	4.12	-	-	5.72	5.12	5.55	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	4.72	4.12	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4.72	4.12	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.345	3.518	4.018	3.318
Pot Cap-1 Maneuver	996	-	-	820	-	-	181	221	452	101	121	519
Stage 1	-	-	-	-	-	-	514	540	-	441	451	-
Stage 2	-	-	-	-	-	-	571	586	-	369	387	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	996	-	-	820	-	-	160	196	452	87	107	519
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	196	-	87	107	-
Stage 1	-	-	-	-	-	-	504	529	-	432	408	-
Stage 2	-	-	-	-	-	-	501	530	-	341	379	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.8	20.9	25.2
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	268	996	-	-	820	-	-	201
HCM Lane V/C Ratio	0.157	0.011	-	-	0.064	-	-	0.115
HCM Control Delay (s)	20.9	8.7	0	-	9.7	0	-	25.2
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0.2	-	-	0.4

2025 Build Traffic Volumes
5: Underhill Avenue & Glen Rock Street

Peak PM Hour
03/14/2022



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	2	764	549	12	10	8
Future Volume (vph)	2	764	549	12	10	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12
Grade (%)		-5%	6%		0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt			0.997		0.939	
Flt Protected					0.973	
Satd. Flow (prot)	0	1909	1801	0	1588	0
Flt Permitted					0.973	
Satd. Flow (perm)	0	1909	1801	0	1588	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		262	220		392	
Travel Time (s)		6.0	5.0		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	830	597	13	11	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	832	610	0	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		10	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.04	1.04	1.09	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization 51.8% ICU Level of Service A
 Analysis Period (min) 15

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	↕
Traffic Vol, veh/h	2	764	549	12	10	8
Future Vol, veh/h	2	764	549	12	10	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, %	-	-5	6	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	830	597	13	11	9

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	610	0	-	0	1438 604
Stage 1	-	-	-	-	604 -
Stage 2	-	-	-	-	834 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	969	-	-	-	147 498
Stage 1	-	-	-	-	546 -
Stage 2	-	-	-	-	426 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	969	-	-	-	146 498
Mov Cap-2 Maneuver	-	-	-	-	146 -
Stage 1	-	-	-	-	544 -
Stage 2	-	-	-	-	426 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBRn1
Capacity (veh/h)	969	-	-	-	-	213
HCM Lane V/C Ratio	0.002	-	-	-	-	0.092
HCM Control Delay (s)	8.7	0	-	-	-	23.6
HCM Lane LOS	A	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	-	0.3

2025 Build Traffic Volumes (W/ Timing Changes #1)
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Future Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	12	12	12	11	12	12	11	12
Grade (%)		-5%			4%			3%			-1%	
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		0.990			0.985			0.982			0.916	
Flt Protected		0.973			0.993			0.991			0.997	
Satd. Flow (prot)	0	1962	0	0	1786	0	0	1726	0	0	1653	0
Flt Permitted		0.537			0.831			0.694			0.973	
Satd. Flow (perm)	0	1083	0	0	1494	0	0	1209	0	0	1613	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			5			7			79	
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	296	61	52	296	44	52	191	37	25	154	298
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	794	0	0	392	0	0	280	0	0	477	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.89	0.97	1.03	1.03	1.03	1.02	1.07	1.02	0.99	1.04	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	83		20	83		20	83		20	83	
Trailing Detector (ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Position(ft)	0	-5		0	-5		0	-5		0	-5	
Detector 1 Size(ft)	20	40		20	40		20	40		20	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		43			43			43			43	
Detector 2 Size(ft)		40			40			40			40	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			6			2	
Permitted Phases	4			8			6			2		
Detector Phase	7	4		8	8		6	6		2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	22.0		22.0	22.0		16.0	16.0		16.0	16.0	
Total Split (s)	40.0	63.0		23.0	23.0		40.0	40.0		40.0	40.0	

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0

2025 Build Traffic Volumes (W/ Timing Changes #1)
 1: NYS Route 118 & Underhill Avenue

Peak PM Hour
 03/14/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (%)	36.4%	57.3%		20.9%	20.9%		36.4%	36.4%		36.4%	36.4%	
Maximum Green (s)	34.0	57.0		17.0	17.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		6.0			6.0			6.0			6.0	
Lead/Lag	Lead			Lag								
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Recall Mode	Min	None		None	None		Min	Min		Min	Min	
Walk Time (s)		5.0		5.0	5.0							
Flash Dont Walk (s)		11.0		11.0	11.0							
Pedestrian Calls (#/hr)		3		3	3							
Act Effct Green (s)		57.2			46.1			29.1			29.1	
Actuated g/C Ratio		0.58			0.47			0.30			0.30	
v/c Ratio		1.17			0.56			0.77			0.89	
Control Delay		115.4			23.4			45.9			48.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		115.4			23.4			45.9			48.2	
LOS		F			C			D			D	
Approach Delay		115.4			23.4			45.9			48.2	
Approach LOS		F			C			D			D	
Queue Length 50th (ft)		-512			179			155			243	
Queue Length 95th (ft)		#885			286			256			#413	
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)												
Base Capacity (vph)		676			703			423			610	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		1.17			0.56			0.66			0.78	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 98.3

Natural Cycle: 140

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.17

Intersection Signal Delay: 70.3

Intersection LOS: E

Intersection Capacity Utilization 106.3%

ICU Level of Service G

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: 1: NYS Route 118 & Underhill Avenue

Ø2 40 s	Ø4 63 s	Ø6 40 s	Ø7 40 s	Ø8 23 s
------------	------------	------------	------------	------------

Lane Group	Ø10
Total Split (%)	6%
Maximum Green (s)	5.0
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

2024 Build Traffic Volumes (W/ Turning Lanes on Underhill Ave)
1: NYS Route 118 & Underhill Avenue

Peak PM Hour
04/08/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Future Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	12	12	12	12	12	12
Grade (%)		-5%			4%			3%			-1%	
Storage Length (ft)	200		0	0		0	0		0	0		200
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.974			0.981			0.982				0.850
Flt Protected	0.950			0.950				0.991			0.993	
Satd. Flow (prot)	1693	1860	0	1619	1791	0	0	1786	0	0	1859	1591
Flt Permitted	0.265			0.548				0.896			0.902	
Satd. Flow (perm)	472	1860	0	934	1791	0	0	1614	0	0	1689	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			7			7				265
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	296	61	52	296	44	52	191	37	25	154	298
Shared Lane Traffic (%)												
Lane Group Flow (vph)	437	357	0	52	340	0	0	280	0	0	179	298
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.06	0.97	0.97	1.12	1.03	1.03	1.02	1.02	1.02	0.99	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		1	2		1	2	2
Detector Template							Left			Left		
Leading Detector (ft)	83	83		83	83		20	83		20	83	83
Trailing Detector (ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		0	-5		0	-5	-5
Detector 1 Size(ft)	40	40		40	40		20	40		20	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43			43			43	43
Detector 2 Size(ft)	40	40		40	40			40			40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	7	4		3	8			6			2	7
Permitted Phases	4			8			6			2		2
Detector Phase	7	4		3	8		6	6		2	2	7
Switch Phase												

2024 Build Traffic Volumes (W/ Turning Lanes on Underhill Ave)
 1: NYS Route 118 & Underhill Avenue

Peak PM Hour
 04/08/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		4.0	5.0		10.0	10.0		10.0	10.0	5.0
Minimum Split (s)	11.0	22.0		8.0	22.0		16.0	16.0		16.0	16.0	11.0
Total Split (s)	37.0	58.0		15.0	36.0		37.0	37.0		37.0	37.0	37.0
Total Split (%)	33.6%	52.7%		13.6%	32.7%		33.6%	33.6%		33.6%	33.6%	33.6%
Maximum Green (s)	31.0	52.0		11.0	30.0		31.0	31.0		31.0	31.0	31.0
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		3.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Min	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)		5.0			5.0							
Flash Dont Walk (s)		11.0			11.0							
Pedestrian Calls (#/hr)		3			3							
Act Effct Green (s)	48.9	43.1		27.5	18.4		17.9	17.9		17.9	17.9	48.4
Actuated g/C Ratio	0.61	0.54		0.35	0.23		0.22	0.22		0.22	0.22	0.61
v/c Ratio	0.66	0.35		0.14	0.81		0.76	0.76		0.47	0.47	0.28
Control Delay	15.9	13.3		11.4	46.3		44.4	44.4		33.5	33.5	2.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	15.9	13.3		11.4	46.3		44.4	44.4		33.5	33.5	2.3
LOS	B	B		B	D		D	D		C	C	A
Approach Delay		14.7			41.7		44.4	44.4		14.0	14.0	
Approach LOS		B			D		D	D		B	B	
Queue Length 50th (ft)	94	98		8	151		124	124		76	76	6
Queue Length 95th (ft)	258	210		20	315		259	259		166	166	41
Internal Link Dist (ft)		310			219		381	381		978	978	
Turn Bay Length (ft)	200											200
Base Capacity (vph)	800	1313		480	726		676	676		703	703	1222
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.55	0.27		0.11	0.47		0.41	0.41		0.25	0.25	0.24

Intersection Summary






















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 79.7
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 24.3
 Intersection LOS: C
 Intersection Capacity Utilization 83.7%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: NYS Route 118 & Underhill Avenue

↓ Ø2 37 s	↙ Ø3 15 s	→ Ø4 58 s
↑ Ø6 37 s	↘ Ø7 37 s	← Ø8 36 s

2024 Build Traffic Volumes (W/ Turning Lanes on All Approaches)
 1: NYS Route 118 & Underhill Avenue

Peak PM Hour
 04/11/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Future Volume (vph)	415	281	58	49	281	42	49	181	35	24	146	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	10	12	12	11	12	12	11	12	12
Grade (%)		-5%			4%			3%			-1%	
Storage Length (ft)	200		0	0		0	0		0	0		200
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.974			0.981			0.976				0.850
Flt Protected	0.950			0.950			0.950			0.950	0.999	
Satd. Flow (prot)	1693	1860	0	1619	1791	0	1685	1791	0	1633	1777	1591
Flt Permitted	0.292			0.548			0.652			0.523	0.992	
Satd. Flow (perm)	520	1860	0	934	1791	0	1156	1791	0	899	1764	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			7			10				298
Link Speed (mph)		30			30			40				40
Link Distance (ft)		390			299			461			1058	
Travel Time (s)		8.9			6.8			7.9			18.0	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	296	61	52	296	44	52	191	37	25	154	298
Shared Lane Traffic (%)										10%		
Lane Group Flow (vph)	437	357	0	52	340	0	52	228	0	22	157	298
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.06	0.97	0.97	1.12	1.03	1.03	1.07	1.02	1.02	1.04	0.99	0.99
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	2	2		2	2		2	2		2	2	2
Detector Template												
Leading Detector (ft)	83	83		83	83		83	83		83	83	83
Trailing Detector (ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Position(ft)	-5	-5		-5	-5		-5	-5		-5	-5	-5
Detector 1 Size(ft)	40	40		40	40		40	40		40	40	40
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)	43	43		43	43		43	43		43	43	43
Detector 2 Size(ft)	40	40		40	40		40	40		40	40	40
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	pm+ov
Protected Phases	7	4		3	8			6			2	7
Permitted Phases	4			8			6			2		2
Detector Phase	7	4		3	8		6	6		2	2	7
Switch Phase												

2024 Build Traffic Volumes (W/ Turning Lanes on All Approaches)
 1: NYS Route 118 & Underhill Avenue

Peak PM Hour
 04/11/2022

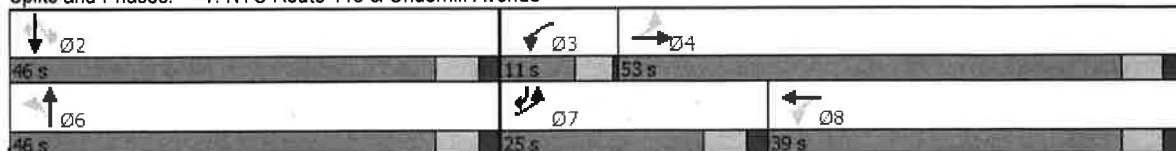


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		4.0	5.0		10.0	10.0		10.0	10.0	5.0
Minimum Split (s)	11.0	22.0		8.0	22.0		16.0	16.0		16.0	16.0	11.0
Total Split (s)	25.0	53.0		11.0	39.0		46.0	46.0		46.0	46.0	25.0
Total Split (%)	22.7%	48.2%		10.0%	35.5%		41.8%	41.8%		41.8%	41.8%	22.7%
Maximum Green (s)	19.0	47.0		7.0	33.0		40.0	40.0		40.0	40.0	19.0
Yellow Time (s)	4.0	4.0		3.5	4.0		4.0	4.0		4.0	4.0	4.0
All-Red Time (s)	2.0	2.0		0.5	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		4.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag							Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							Yes
Vehicle Extension (s)	2.0	2.0		3.0	2.0		2.0	2.0		2.0	2.0	2.0
Recall Mode	Min	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)		5.0			5.0							
Flash Dont Walk (s)		11.0			11.0							
Pedestrian Calls (#/hr)		3			3							
Act Effct Green (s)	42.0	36.1		25.4	16.9		13.9	13.9		13.9	13.9	38.9
Actuated g/C Ratio	0.62	0.53		0.37	0.25		0.20	0.20		0.20	0.20	0.57
v/c Ratio	0.68	0.36		0.13	0.76		0.22	0.61		0.12	0.44	0.29
Control Delay	14.4	12.2		8.2	35.0		26.7	32.2		25.4	29.0	2.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	14.4	12.2		8.2	35.0		26.7	32.2		25.4	29.0	2.0
LOS	B	B		A	C		C	C		C	C	A
Approach Delay		13.4			31.4			31.2			12.0	
Approach LOS		B			C			C			B	
Queue Length 50th (ft)	78	87		6	126		18	83		8	60	0
Queue Length 95th (ft)	#224	177		22	230		52	108		29	129	34
Internal Link Dist (ft)		310			219			381			978	
Turn Bay Length (ft)	200											200
Base Capacity (vph)	654	1315		430	891		694	1079		540	1059	1046
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.67	0.27		0.12	0.38		0.07	0.21		0.04	0.15	0.28

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 68.1
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 19.3
 Intersection LOS: B
 Intersection Capacity Utilization 80.3%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: NYS Route 118 & Underhill Avenue





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