

December 12, 2023



Dr. Nayel Sayegh
c/o Zehy Jereis
944 North Broadway
Yonkers, NY 10701

RE: Traffic Impact Study for Proposed Senior Adult Housing Development, 900 North Broadway, City of Yonkers, Westchester County, New York; CM Project No. 123-207

Dear Dr. Sayegh:

As requested, Creighton Manning Engineering, LLP (CM) has completed a Traffic Impact Study for the proposed senior living facility in the City of Yonkers, Westchester County, NY. This study is based on traffic engineering industry standards and the Site Plan prepared by PS&S Engineering, P.C., dated May 23, 2023, which is included under Attachment A.

1.0 Project Description

The subject site is identified on the City of Yonkers Tax Map as Section 3, Block 3455, Lot 13. The subject site is currently undeveloped. The proposed project consists of a new four-story, 60-unit senior adult housing development. The site will be accessed via an ingress only driveway on the southwestern side of the site, one full-movement driveway on the northwestern side of the site, and a full-movement access on the east side of the site that connects to the neighboring properties. The site will be supported by 31 below-grade parking spaces inclusive of two ADA-accessible spaces, which meets the City of Yonkers Code. It is expected that the project will complete and operational by 2025, but in order to provide a conservative analysis the study herein assumes a design year of 2026 and that all site-generated trips will utilize the driveways on North Broadway. Exhibit 1 depicts the site location and the roadway network.



Exhibit 1 – Site Location

2.0 Existing Conditions

Roadways Serving the Site

North Broadway (US Route 9) is classified as an Urban Principal Arterial-Other roadway under the jurisdiction of the City of Yonkers. The roadway runs primarily north-south from Dudley Street to Larkin Plaza within the City. In the vicinity of the subject site, the roadway provides two 10-foot-wide travel lanes in each direction. Turn lanes are generally provided at intersections. Sidewalks are available on both sides of the road. The posted speed limit is 30 miles per hour.

Study Intersections

Executive Boulevard and North Broadway: This is a three-leg signalized intersection operating under an actuated-coordinated traffic signal control. The westbound Executive Boulevard approach provides one exclusive left-turn lane and one exclusive right-turn lane. The northbound North Broadway approach provides two through lanes and a channelized right-turn lane operating with a yield sign. The southbound North Broadway approach provides one exclusive left-turn lane and one exclusive through lane. Pedestrian signals, countdown timers, ramps and crosswalks are provided to cross the east and north legs of the intersection. Exhibit 2 is a Nearmap image that shows the study intersection.



Exhibit 2 – Executive Blvd/North Broadway Intersection

Gateway Road and North Broadway: This is a three-leg signalized intersection operating under semi-actuated-uncoordinated traffic signal control. The westbound Gateway Road approach provides one shared left/right-turn lane. The northbound North Broadway approach provides one shared through/right-turn lane. The southbound North Broadway approach provides a shared left-turn/through lane. Pedestrian signals, countdown timers, ramps and crosswalks are provided to cross the east and north legs of the intersection. Exhibit 3 is a Nearmap image that shows the study intersection.



Exhibit 3 – Gateway Rd/North Broadway Intersection

Robert Lane and Roberts Avenue and North Broadway: This is a four-leg signalized intersection operating under semi-actuated-uncoordinated traffic signal control. All approaches provide a shared left-turn/through/right-turn lane. Pedestrian signals, countdown timers, and ramps are provided to cross the east, west, and south leg of the intersection. Exhibit 4 is a Nearmap image that shows the study intersection.



Exhibit 4 – North Broadway/Robert Ln/Roberts Ave

Transit

The Westchester *Bee-Line* provides transit service in the area. Route 2 and Route 6 service the Enterprise Boulevard/Odell Terrace stop, which is less than a tenth (0.1) of a mile north of the subject site. Route 2 operates between the South Westchester Executive Park in Yonkers and the Van Cortlandt Park/242 St Station in the Bronx. Route 2 provides bi-directional service to the aforementioned stop during the weekday AM and PM peaks with headway of 15-20 minutes. Route 6 operates between Pleasantville Station and Yonkers Stations. Route 6 provides northbound service during the weekday AM peak and southbound service during the weekday PM peak. During both peaks, Route 6 operates with 20-30 minute headways.

Data Collection

CM conducted Turning Movement Counts (TMCs) at the North Broadway/Executive Road and North Broadway/Robert Lane/Roberts Avenue intersections for the weekday PM peak period (4:00 PM to 6:00 PM) on Wednesday, November 1, 2023, and for the weekday AM peak period (7:00 AM to 9:00 AM) on Thursday, November 2, 2023. CM conducted TMCs for the North Broadway/Gateway Road intersection on Wednesday, November 8, 2023, for both the weekday AM and weekday PM peak periods. These periods were chosen to coincide with the typical peak hours of traffic on North Broadway. The observed peak hours were 7:30 AM to 8:30 AM and 4:30 PM to 5:30 PM. Figure 1-1 shows the 2023 Existing traffic volumes for the study area. The raw TMC data is included under Attachment B.

CM installed an Automatic Traffic Recorder (ATR) on North Broadway proximate to the subject site. The ATR collected bi-directional vehicular speed data from Wednesday, November 1, 2023, to Thursday Wednesday, November 9, 2023. This speed data is discussed in more detail herein under Section 4.0 Sight Distance Evaluation. The raw ATR data is included under Attachment C.

3.0 Traffic Assessment

Trip Generation

Trip generation determines the quantity of traffic expected to travel to and from a given site. The Institute of Transportation Engineers’ (ITE) *Trip Generation Manual*, 11th Edition, is the industry standard used for estimating trip generation for proposed land uses based on data collected at similar uses. Upon review of the *Trip Generation Manual*, Land Use Code (LUC) 252 “Senior Adult Housing - Multifamily” was cited for the proposed development as it aligns with the intended use of the building. The 60 dwelling units that will be part of the development was used as the independent variable for this calculation. Table 1 summarizes the trip generation estimate for the weekday AM peak hour and weekday PM peak hour.

Table 1 – Trip Generation Summary

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Senior Adult Housing - Multifamily – LUC 150	4	8	12	8	7	15

Table 1 shows that the proposed development is expected to generate 12 total trips in the weekday AM peak hour and 15 total trips during the weekday PM peak hour. The magnitude of the new traffic associated with the project is less than the NYSDOT and ITE threshold of the 100-site generated trips on any one intersection approach needing off-site analysis. At the request of the City of Yonkers Planning Board, CM has provided an analysis of the study intersections. It should be noted that no credit is being taken for pass-by trips, which provides a more conservative analysis.

Future Traffic Volumes

To evaluate the impact of the proposed project, traffic projections were prepared for the anticipated year of completion – 2026. Historic traffic volume data along North Broadway indicates that traffic volumes along the roadway have increased by +1.83% annually.¹ To conservatively forecast 2026 traffic volumes, a +2% growth rate was applied to the existing traffic volumes and compounded annually for three years. CM conducted a traffic impact study for an ambulatory surgery center at 225 Corporate Boulevard that when constructed could potentially increase traffic within the study area. The 2026 No-Build traffic volumes shown on Figure 1-2 represent the expected traffic volumes *without* the proposed development.

Traffic generated by the project was distributed on the adjacent roadway based on existing observed travel patterns in the project area. It is anticipated that 50% of trips will be drawn to/from the Saw Mill River Parkway with the remaining 50% of trips coming to/from the north and south along North Broadway. The distribution of the site-generated trips for the proposed development is shown on Figure 2-1, and the associated trip assignments are shown on Figure 2-2. The new trips were then added to the 2026 No-Build traffic volumes, resulting in the 2026 Build traffic volumes, as shown on Figure 3-1.

Traffic Operations

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Intersection evaluations were made using Synchro Version 11 software, which automates the procedures contained in the Highway Capacity Manual. Table 2 summarizes the results of the level of service calculations for the Existing, No-Build, and Build conditions during the weekday AM and weekday PM peak hours. The detailed level of service analyses are included under Attachment D.

Table 2 – Level of Service Summary

Intersection	Control	Weekday AM Peak Hour			Weekday PM Peak Hour		
		2023 Existing	2026 No-Build	2026 Build	2023 Existing	2026 No-Build	2026 Build
North Broadway/Executive Blvd	S						
Executive Blvd, WB L		C (21.7)	C (22.8)	C (22.9)	C (22.4)	C (24.4)	C (24.6)
Executive Blvd, WB R		B (15.8)	B (16.0)	B (16.0)	B (14.2)	B (14.3)	B (14.3)
North Broadway, NB T		C (28.1)	C (28.3)	C (28.3)	C (28.0)	C (28.3)	C (28.3)
North Broadway, SB L		D (50.1)	D (54.8)	D (54.8)	D (46.9)	D (49.8)	D (49.8)
North Broadway, SB T		B (17.0)	B (17.2)	B (17.2)	B (16.6)	B (16.9)	B (16.9)
Overall		C (24.7)	C (25.9)	C (26.0)	C (25.0)	C (26.4)	C (26.5)
North Broadway/Gateway Rd	S						
Gateway Rd, WB LR		C (30.1)	C (29.6)	C (29.6)	C (28.6)	D (36.3)	D (36.5)
North Broadway, NB TR		A (5.8)	A (6.5)	A (6.5)	A (2.6)	A (2.6)	A (2.7)
North Broadway, SB TR		A (4.0)	A (4.3)	A (4.3)	A (3.7)	A (3.9)	A (4.1)
Overall		A (8.4)	A (8.8)	A (8.8)	A (4.7)	A (5.3)	A (5.4)
North Broadway/Robert Ln/Roberts Ave	S						
Robert Ln, EB LTR		D (41.3)	D (42.1)	D (42.1)	D (38.3)	D (38.6)	D (38.6)
Roberts Ave, WB LTR		C (31.0)	C (32.6)	C (32.6)	C (29.1)	C (29.2)	D (29.2)
North Broadway, NB LTR		B (18.6)	C (21.7)	C (21.7)	A (9.8)	B (11.0)	B (11.0)
North Broadway, SB LTR		B (12.9)	B (14.3)	B (14.3)	B (11.6)	B (13.6)	B (13.9)
Overall		C (21.0)	B (23.1)	C (23.1)	B (15.5)	B (16.7)	B (16.8)

¹ Based on NYSDOT ATR Station ID 870049. Study years: 2011, 2014, 2019.

Table 2 cont. – Level of Service Summary

Intersection	Control	Weekday AM Peak Hour			Weekday PM Peak Hour		
		2023 Existing	2026 No-Build	2026 Build	2023 Existing	2026 No-Build	2026 Build
North Broadway/North Driveway	U			C (19.4)	--	--	B (13.7)
North Driveway, WB LR		--	--		--	--	A (8.1)
North Broadway, SB LT		--	--	A (9.4)	--	--	A (8.1)
North Broadway/South Driveway	U			A (9.4)	--	--	A (8.1)
North Broadway, SB LT		--	--		--	--	

U = Unsignalized intersection | S = Signalized intersection
 EB, WB, NB, SB = Eastbound, Westbound, Northbound, and Southbound intersection approaches
 L, T, R = Left-turn, Through, and/or Right-turn movements
 X (Y.Y) = Level of service (Average delay in seconds per vehicle)

The impact of the project can be described by comparing the analysis of the No-Build and Build operating conditions. The following observations are evident from the analysis:

- **North Broadway/Executive Boulevard:** The level of service analysis indicates that the intersection currently operates at an acceptable overall LOS C during the study peak hours and will continue to do so in the Build condition. There is no degradation in LOS for the movements of the intersection between the No-Build and Build conditions. Based on this analysis, the proposed project will not have a significant adverse impact on the roadway network.
- **North Broadway/Gateway Rd:** The level of service analysis indicates that the intersection currently operates at an acceptable overall LOS A during the study peak hours and will continue to do so in the Build condition. There is no degradation in LOS for the movements of the intersection between the No-Build and Build conditions. Based on this analysis, the proposed project will not have a significant adverse impact on the roadway network.
- **North Broadway/Robert Ln/Roberts Ave:** The level of service analysis indicates that the intersection currently operates at an acceptable overall LOS C during the study peak hours, and will continue to do so in the Build condition. There is no degradation in LOS for the movements of the intersection between the No-Build and Build conditions. Based on this analysis, the proposed project will not have a significant adverse impact on the roadway network.
- **North Broadway/North Driveway:** The level of service analysis indicates that the driveway will operate at an acceptable LOS C during the study peak hours. The 95th-percentile queue for the southbound North Broadway approach is less than one vehicle.
- **North Broadway/South Driveway:** The level of service analysis indicates that the southern driveway will operate at an LOS A during the peak study hours. The 95th-percentile queue for the southbound North Broadway approach is less than one vehicle.

Evaluation of North Broadway Left-Turn Lanes

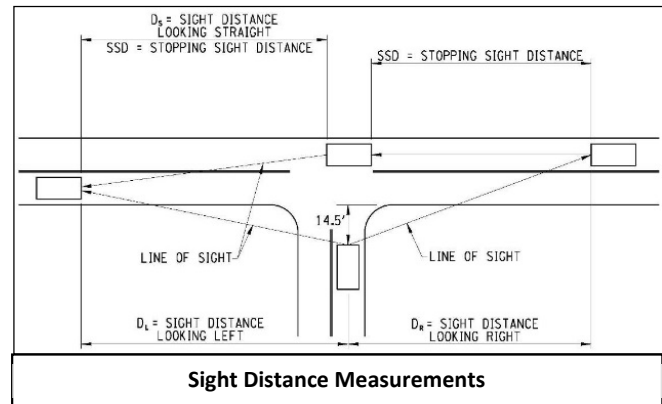
CM evaluated the need for and feasibility of exclusive southbound left-turn lanes on North Broadway at the proposed site driveways. In the American Association of State Highway and Transportation Officials (AASHTO) publication, *A Policy on Geometric Design of Highways and Streets, 2018*, Table 9-24 provides suggested warrant criteria for a left-turn lane on an arterial in an urban area. According to Table 9-24, five left turns during a peak hour is the minimum criteria when the major-road volumes are 450 (veh/h/ln) or higher. The proposed project will generate at most five left turns during a peak hour. While the number of left-turns meets the minimum AASHTO criteria, the level of service analysis for the site driveways indicates that the southbound left-turn movements will operate at LOS A with a queue of no more than one vehicle during both study peak hours, which indicates that the driveways will operate acceptably without a left-turn lane. Finally, the available stopping sight

distances for the southbound North Broadway approaches to both site driveways exceeds the AASHTO recommended guidelines for the operating speed of the roadway. Based on this evaluation, a southbound left-turn lane is not necessary.

The implementation of left-turn lanes would require reallocation of the existing roadway cross section or a widening of the roadway. The existing cross-section of North Broadway along the site’s frontage, which is approximately 40 feet wide, provides one travel lane and on-street, parallel parking in each direction. A left-turn lane is feasible with the reallocation of this existing cross-section; however, it would result in the elimination of a portion of on-street parking along North Broadway.

4.0 Sight Distance Evaluation

A sight distance evaluation was completed at the proposed site driveway intersection with North Broadway. Available intersection sight distance was measured from the perspective of a passenger car exiting the north site driveway and for a passenger car traveling southbound along North Broadway looking straight ahead to turn left into the site driveways. The available intersection sight distance should provide drivers a sufficient view of the intersecting roadway to allow passenger cars to enter or exit the intersection without excessively slowing vehicles traveling at or near the operating speed on the intersecting mainline.



Stopping sight distance was also measured along North Broadway. Stopping sight distance is the length of the roadway ahead that is visible to the driver. The available stopping sight distance on a roadway should be of sufficient length to enable a vehicle traveling at or near the operating speed to stop before reaching a stationary object in its path. The diagram illustrates these sight distance measurements.

The sight distances measured in the field were compared to the guidelines presented in *A Policy on Geometric Design of Highways and Streets, 2018* published by the American Association of State Highway Transportation Officials (AASHTO). CM deployed Automatic Traffic Recorders (ATR) to obtain speed data. The 85th Percentile speed for North Broadway in the study area is 30-mph. The raw ATR data is included under Attachment C. Table 3 summarizes the results of the sight distance evaluation.

Table 3 – Sight Distance Summary (feet)

Intersection		Intersection Sight Distance ¹				Stopping Sight Distance ²	
		Right-Turn from Driveway (D _L)	Left-Turn from Driveway		Left-Turn from North Broadway (D _S)	SSD _{NB}	SSD _{SB}
			Looking Left (D _L)	Looking Right (D _R)			
N Broadway/ N Site Driveway	Available	450	450	300	450+	425+	265
	Recommended ³	290	335	335	245	200	200
N Broadway/ S Site Driveway	Available	N/A	N/A	N/A	600+	575+	300
	Recommended ³	N/A	N/A	N/A	245	200	200

¹ Intersection sight distance is measured at 14.5-ft back from the travel way at an object height of 3.5-ft and an eye height of 3.5-ft for a vehicle.

² Stopping sight distance measured for a 2-ft object located in the path of northbound/southbound vehicles on North Broadway at an eye height of 3.5-ft

³ The operating speed was estimated to be approximately 30-mph.

For both north and south driveways, the intersection sight distance for drivers looking left (south) to make a right-turn out of either site driveway and for drivers looking straight (south) to make a left-turn into the site driveways exceed the AASHTO recommended guidelines. Likewise, the stopping sight distance for both northbound and southbound approaches at the site driveways exceed the AASHTO recommended guidelines. The intersection sight distance for drivers looking right (north) to make a left-turn out of the north site driveway falls short of the AASHTO recommended guidelines due to the vertical curve in the roadway. Regardless, the site driveway is not critically limited as the available intersection sight distance exceeds the AASHTO recommended stopping sight distance guidelines. It is recommended that any site signing be placed a minimum of fifteen feet back from the travel way and that the landscaping plan consider sight lines in order to maintain visibility.

5.0 Site Access, Circulation, and Parking

CM reviewed the site access, site circulation, and parking supply as shown on the Site Plan prepared by PS&S Engineering P.C., dated May 23, 2023. The site will be accessed via an ingress only driveway on the southwestern side of the site, one full-movement driveway on the northwestern side of the site, and a full-movement access on the east side of the site that connects to the neighboring properties. Pedestrian access to the site proposed via a sidewalk network connected to the sidewalk along North Broadway. The sidewalk on site will be six feet wide and provide access to all pedestrian access points of the building.

A southbound left-turn bay on North Broadway is not necessary based on the sight distance evaluation and Synchro analysis. The stopping sight distance for the southbound approaches to the site driveways exceed the AASHTO recommended guidelines, which means that there is more than enough sight distance for an approaching driver to see a vehicle queued to turn left into the site. Furthermore, the Synchro analysis indicates that the southbound approach will not experience a queue greater than one vehicle during the peak hours.

A 20-foot-wide one-way drop off/pick up lane is provided along the front of the building. A 24-foot-wide two-way drive aisle provides access to/from the below grade parking garage entrance at the rear of the building as well as the trash enclosure. There will be 31 below-grade parking spaces inclusive of two ADA-accessible spaces, which meets the City of Yonkers Code.

6.0 Conclusion

The subject site is identified on the City of Yonkers Tax Map as Section 3, Block 3455, Lot 13. The subject site is currently undeveloped. The proposed project consists of a new four-story, 60-unit senior adult housing development. The following is noted regarding the proposed project:

- CM conducted Turning Movement Counts (TMCs) at the study intersections on Wednesday, November 8, 2023, from 7:00AM to 9:00AM and 4:00PM to 7:00PM. The observed peak hours were 7:30 AM to 8:30AM and 4:30PM to 5:30PM
- The proposed development is expected to generate 12 vehicle trips during the weekday AM peak hour and 15 vehicle trips during the PM peak hour. The anticipated site-generated traffic volumes for the development are below the 100-vehicle threshold indicating that a detailed intersection analysis is not needed as the site-generated traffic is expected to be accommodated by the existing roadway network. Regardless, CM conducted an analysis of the aforementioned study intersections.
- The level of service analysis indicates that the proposed project will not have a significant adverse impact on the roadway network.

- Based on suggest criteria from AASHTO, left-turn lanes on North Broadway for the development meet the minimum criteria. However, the level of service results and sight distance evaluations indicate that it is not necessary. The implementation of a left-turn is feasible with the existing roadway cross-section; however, it would result in the elimination of a portion of on-street parking.
- The 95th-percentile queues for the southbound North Broadway approaches at the site driveways are less than one vehicle, which indicates that a left-turn bay for vehicle storage is not necessary.
- The sight distance evaluation indicates that the site driveways are not critically limited.
- The site will be supported by 31 below-grade parking spaces inclusive of two ADA-accessible spaces, which meets the City of Yonkers Code.

Please do not hesitate to call our office if you have any questions or comments, or require additional information.

Respectfully submitted,
Creighton Manning Engineering, LLP



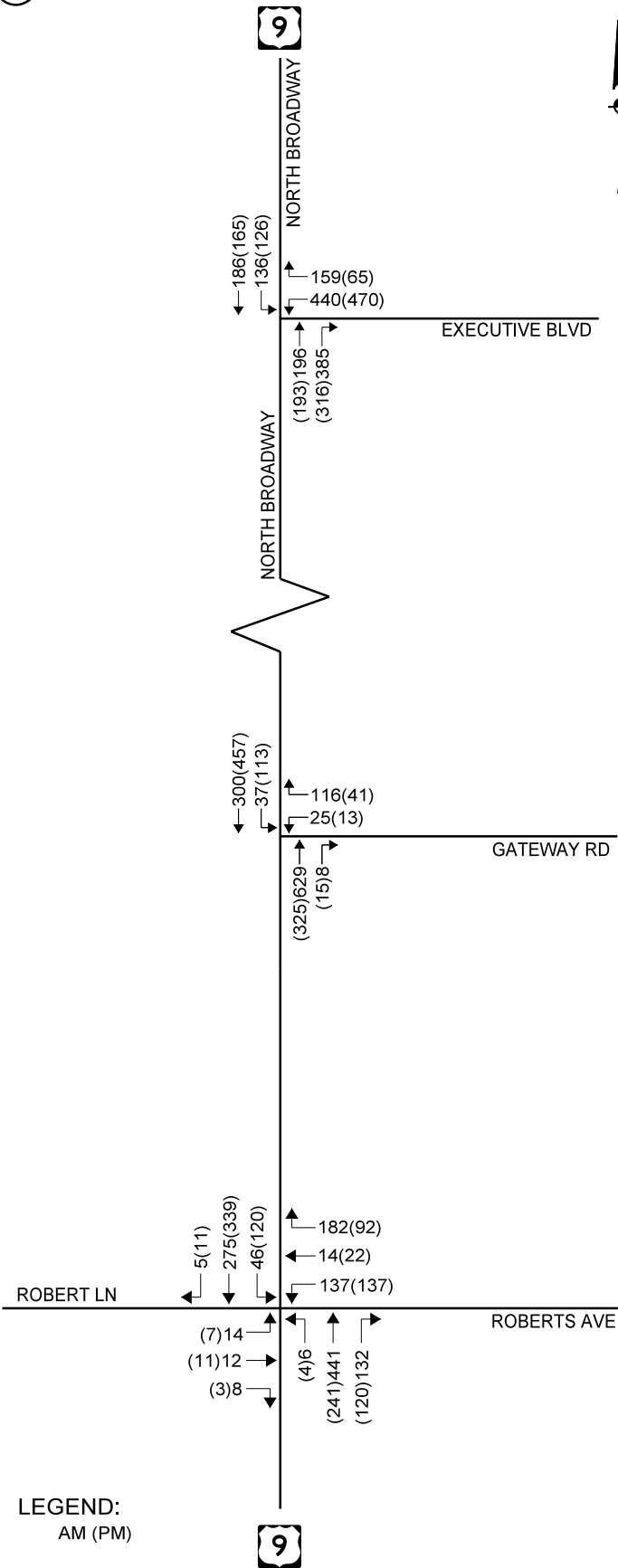
Frank A. Filiciotto, PE
Associate



Starke W. Hipp, PE
Project Engineer

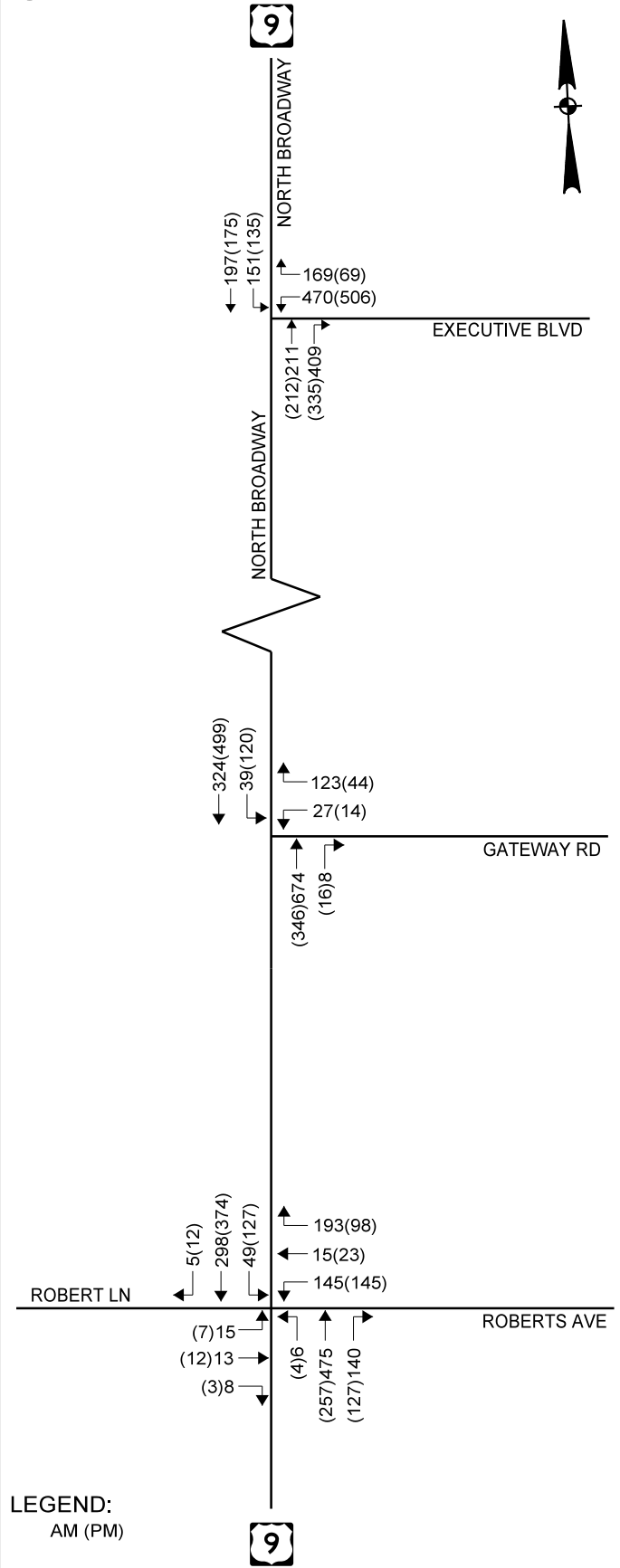
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2023 EXISTING TRAFFIC VOLUMES



2

2026 NO-BUILD TRAFFIC VOLUMES



TRAFFIC FIGURES

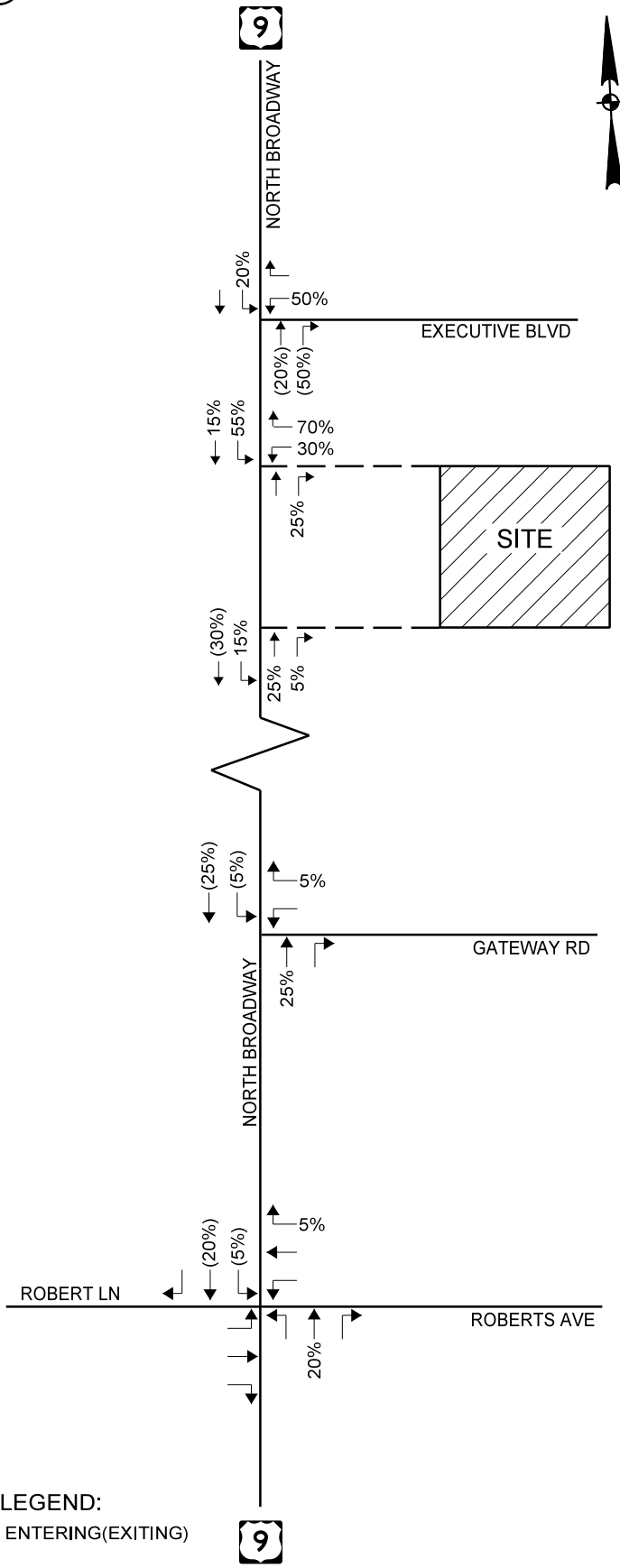
900 NORTH BROADWAY
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK



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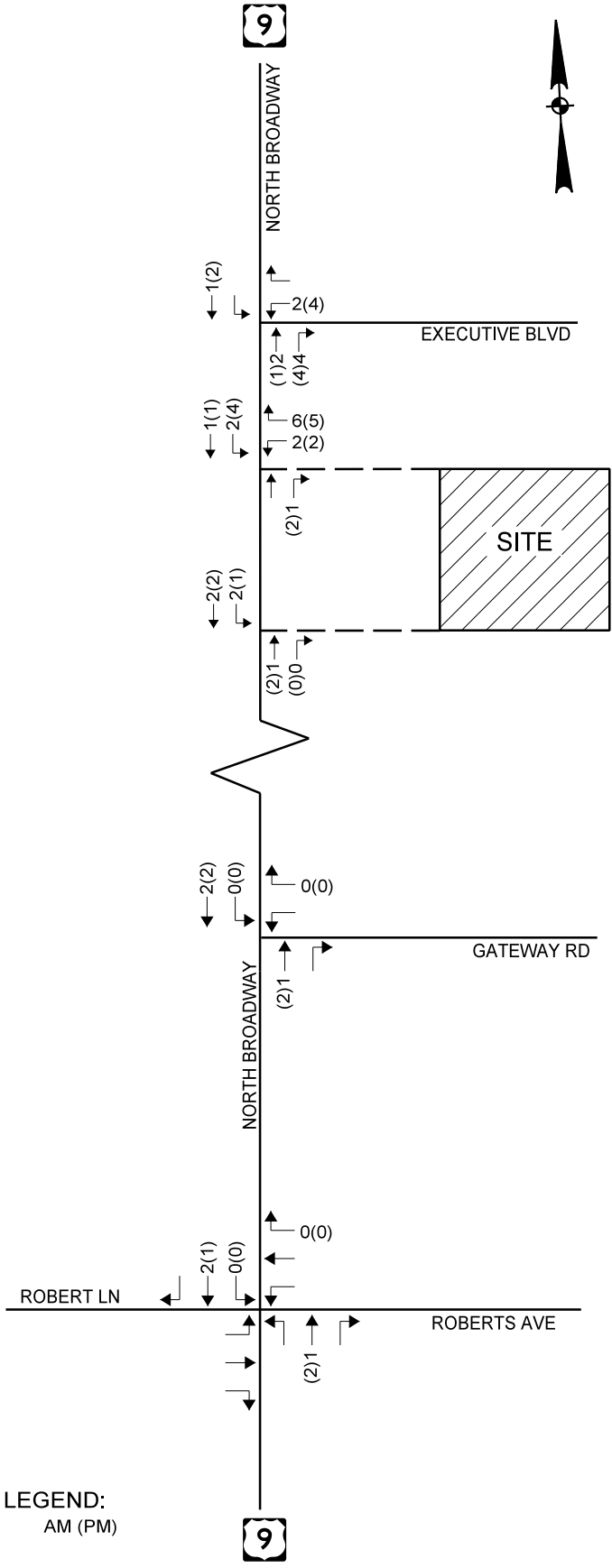
TRIP DISTRIBUTION



LEGEND:
ENTERING(EXITING)

2

TRIP ASSIGNMENT



LEGEND:
AM (PM)

TRAFFIC FIGURES

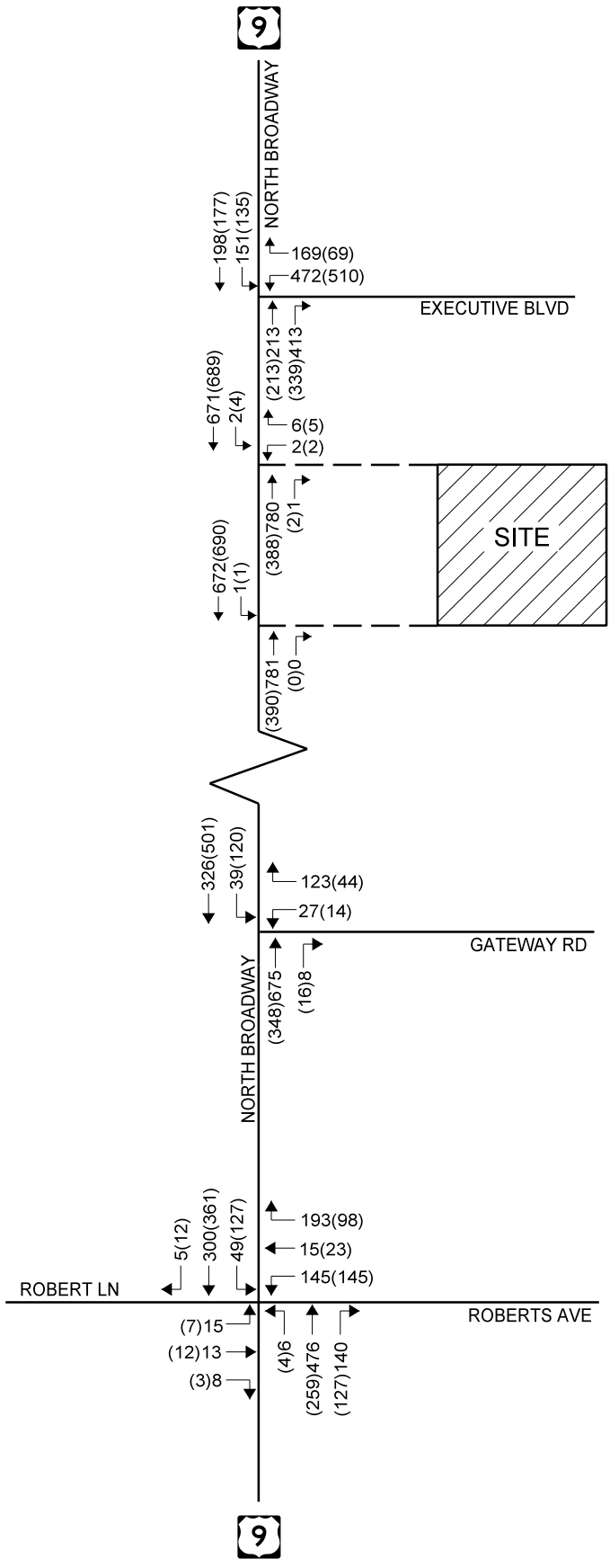
900 NORTH BROADWAY
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK



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2026 BUILD TRAFFIC VOLUMES



LEGEND:
AM (PM)

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<p>TRAFFIC FIGURES</p> <p>900 NORTH BROADWAY CITY OF YONKERS WESTCHESTER COUNTY, NEW YORK</p>	
<p>PROJECT: 123-207 DATE: 11/2023 FIGURE: 3</p>	

ATTACHMENT A
SITE PLAN

900 NORTH BROADWAY
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

ATTACHMENT B
TMC DATA

900 NORTH BROADWAY
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

123-207 Broadway/Executive Wkday AM - TMC

Thu Nov 2, 2023

Full Length (7 AM-9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130429, Location: 40.97338, -73.882751



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Executive Blvd Westbound					N Broadway Northbound					N Broadway Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
2023-11-02 7:00AM	83	18	1	102	0	30	80	0	110	1	29	25	0	54	0	266
7:15AM	87	20	0	107	0	30	95	0	125	0	34	31	0	65	0	297
7:30AM	84	23	0	107	0	43	103	0	146	0	30	53	0	83	0	336
7:45AM	125	43	0	168	0	54	100	0	154	0	26	45	0	71	1	393
Hourly Total	379	104	1	484	0	157	378	0	535	1	119	154	0	273	1	1292
8:00AM	140	52	0	192	0	53	94	0	147	0	35	50	0	85	0	424
8:15AM	91	41	0	132	0	46	88	0	134	0	45	38	0	83	0	349
8:30AM	95	17	0	112	0	50	96	0	146	0	34	41	0	75	0	333
8:45AM	122	23	0	145	1	33	74	0	107	0	32	31	0	63	0	315
Hourly Total	448	133	0	581	1	182	352	0	534	0	146	160	0	306	0	1421
9:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	827	237	1	1065	1	339	730	0	1069	1	265	314	0	579	1	2713
% Approach	77.7%	22.3%	0.1%	-	-	31.7%	68.3%	0%	-	-	45.8%	54.2%	0%	-	-	-
% Total	30.5%	8.7%	0%	39.3%	-	12.5%	26.9%	0%	39.4%	-	9.8%	11.6%	0%	21.3%	-	-
Lights	795	192	1	988	-	315	683	0	998	-	226	294	0	520	-	2506
% Lights	96.1%	81.0%	100%	92.8%	-	92.9%	93.6%	0%	93.4%	-	85.3%	93.6%	0%	89.8%	-	92.4%
Articulated Trucks and Single-Unit Trucks	10	3	0	13	-	9	5	0	14	-	3	8	0	11	-	38
% Articulated Trucks and Single-Unit Trucks	1.2%	1.3%	0%	1.2%	-	2.7%	0.7%	0%	1.3%	-	1.1%	2.5%	0%	1.9%	-	1.4%
Buses	22	42	0	64	-	15	42	0	57	-	36	11	0	47	-	168
% Buses	2.7%	17.7%	0%	6.0%	-	4.4%	5.8%	0%	5.3%	-	13.6%	3.5%	0%	8.1%	-	6.2%
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	1	0	1	-	1
% Bicycles on Road	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.3%	0%	0.2%	-	0%
Pedestrians	-	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Executive Wkday AM - TMC

Thu Nov 2, 2023

Full Length (7 AM-9 AM)

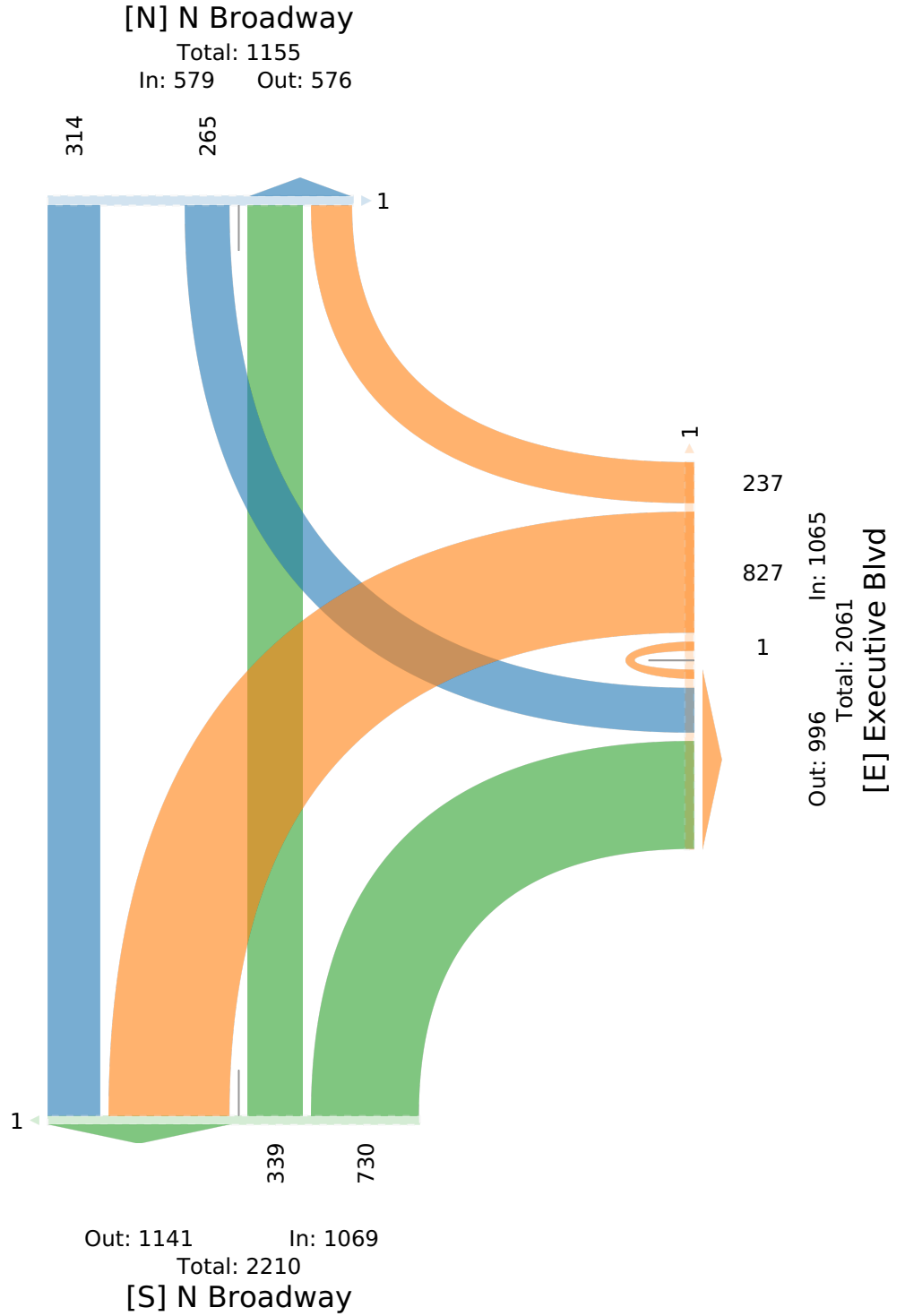
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130429, Location: 40.97338, -73.882751



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Executive Wkday AM - TMC

Thu Nov 2, 2023

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130429, Location: 40.97338, -73.882751



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Executive Blvd Westbound					N Broadway Northbound					N Broadway Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
2023-11-02 7:30AM	84	23	0	107	0	43	103	0	146	0	30	53	0	83	0	336
7:45AM	125	43	0	168	0	54	100	0	154	0	26	45	0	71	1	393
8:00AM	140	52	0	192	0	53	94	0	147	0	35	50	0	85	0	424
8:15AM	91	41	0	132	0	46	88	0	134	0	45	38	0	83	0	349
Total	440	159	0	599	0	196	385	0	581	0	136	186	0	322	1	1502
% Approach	73.5%	26.5%	0%	-	-	33.7%	66.3%	0%	-	-	42.2%	57.8%	0%	-	-	-
% Total	29.3%	10.6%	0%	39.9%	-	13.0%	25.6%	0%	38.7%	-	9.1%	12.4%	0%	21.4%	-	-
PHF	0.786	0.764	-	0.780	-	0.907	0.934	-	0.943	-	0.756	0.877	-	0.947	-	0.886
Lights	424	124	0	548	-	181	363	0	544	-	113	178	0	291	-	1383
% Lights	96.4%	78.0%	0%	91.5%	-	92.3%	94.3%	0%	93.6%	-	83.1%	95.7%	0%	90.4%	-	92.1%
Articulated Trucks and Single-Unit Trucks	5	1	0	6	-	5	2	0	7	-	0	5	0	5	-	18
% Articulated Trucks and Single-Unit Trucks	1.1%	0.6%	0%	1.0%	-	2.6%	0.5%	0%	1.2%	-	0%	2.7%	0%	1.6%	-	1.2%
Buses	11	34	0	45	-	10	20	0	30	-	23	3	0	26	-	101
% Buses	2.5%	21.4%	0%	7.5%	-	5.1%	5.2%	0%	5.2%	-	16.9%	1.6%	0%	8.1%	-	6.7%
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	1
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Executive Wkday AM - TMC

Thu Nov 2, 2023

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

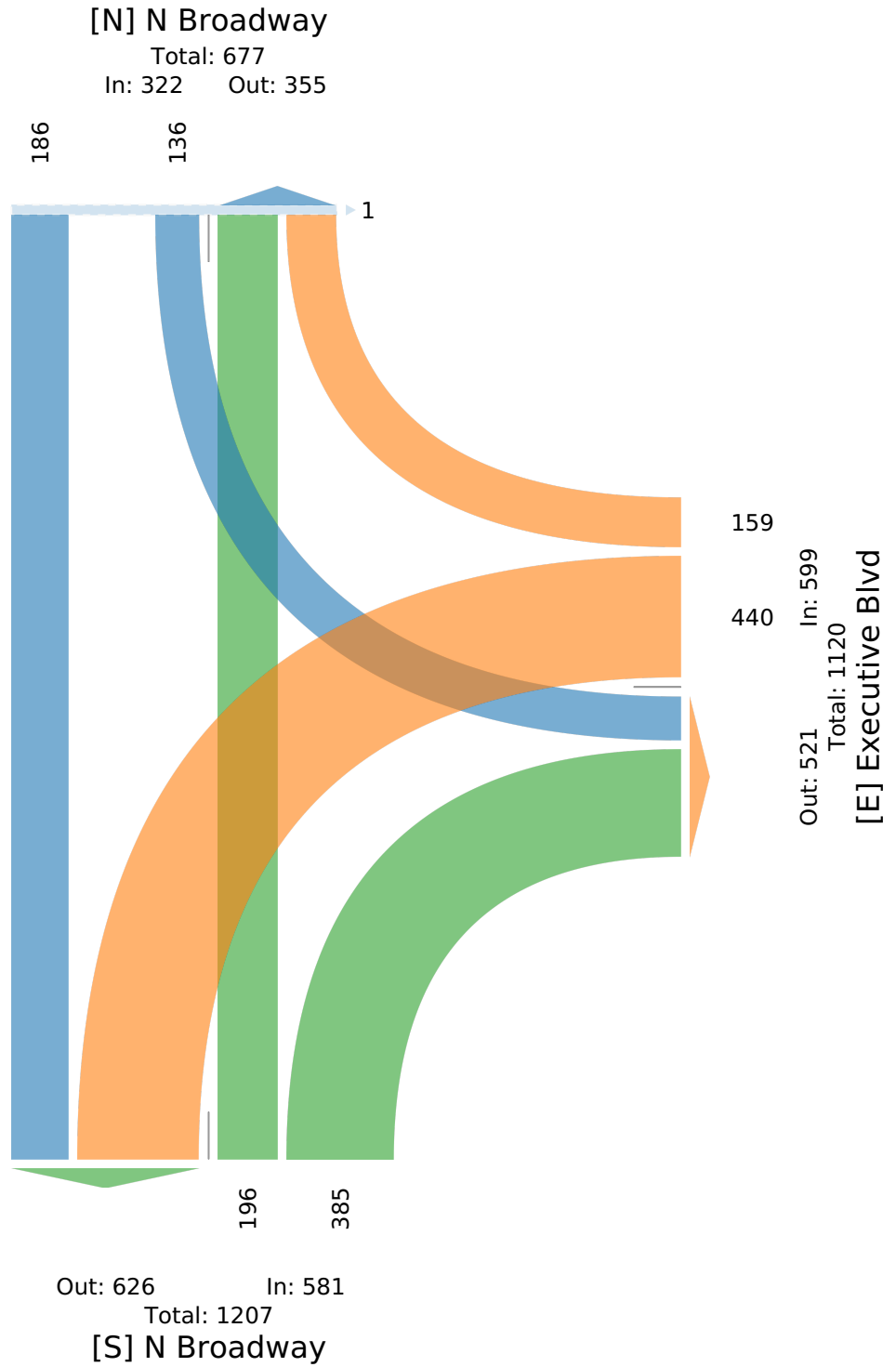
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130429, Location: 40.97338, -73.882751



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Gateway Wkday AM - TMC

Wed Nov 8, 2023

Full Length (7 AM-9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130617, Location: 40.965418, -73.885388



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Gateway Rd Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	R	U	RR	App	Ped*	T	R	U	RR	App	Ped*	L	T	U	App	Ped*		
2023-11-08 7:00AM	6	18	0	15	39	2	103	3	0	0	106	0	10	51	0	61	1	206	
7:15AM	7	16	0	9	32	3	114	5	0	0	119	1	8	61	0	69	3	220	
7:30AM	9	34	0	6	49	2	153	5	0	0	158	0	6	58	0	64	3	271	
7:45AM	6	38	0	4	48	1	154	0	0	0	154	0	9	66	0	75	1	277	
Hourly Total	28	106	0	34	168	8	524	13	0	0	537	1	33	236	0	269	8	974	
8:00AM	5	16	0	12	33	3	162	1	0	0	163	0	12	77	0	89	1	285	
8:15AM	2	28	0	11	41	0	143	2	0	0	145	0	10	66	0	76	0	262	
8:30AM	6	32	0	4	42	0	151	2	0	0	153	0	10	71	0	81	0	276	
8:45AM	3	25	0	3	31	0	171	3	0	0	174	0	6	71	0	77	2	282	
Hourly Total	16	101	0	30	147	3	627	8	0	0	635	0	38	285	0	323	3	1105	
9:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	44	207	0	64	315	11	1151	21	0	0	1172	1	71	521	0	592	11	2079	
% Approach	14.0%	65.7%	0%	20.3%	-	-	98.2%	1.8%	0%	0%	-	-	12.0%	88.0%	0%	-	-	-	
% Total	2.1%	10.0%	0%	3.1%	15.2%	-	55.4%	1.0%	0%	0%	56.4%	-	3.4%	25.1%	0%	28.5%	-	-	
Lights	42	192	0	61	295	-	1085	20	0	0	1105	-	55	486	0	541	-	1941	
% Lights	95.5%	92.8%	0%	95.3%	93.7%	-	94.3%	95.2%	0%	0%	94.3%	-	77.5%	93.3%	0%	91.4%	-	93.4%	
Articulated Trucks and Single-Unit Trucks	0	2	0	1	3	-	13	0	0	0	13	-	2	10	0	12	-	28	
% Articulated Trucks and Single-Unit Trucks	0%	1.0%	0%	1.6%	1.0%	-	1.1%	0%	0%	0%	1.1%	-	2.8%	1.9%	0%	2.0%	-	1.3%	
Buses	2	13	0	2	17	-	53	1	0	0	54	-	14	25	0	39	-	110	
% Buses	4.5%	6.3%	0%	3.1%	5.4%	-	4.6%	4.8%	0%	0%	4.6%	-	19.7%	4.8%	0%	6.6%	-	5.3%	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	1	-	-	-	-	-	11	
% Pedestrians	-	-	-	-	-	90.9%	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	9.1%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

123-207 Broadway/Gateway Wkday AM - TMC

Wed Nov 8, 2023

Full Length (7 AM-9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130617, Location: 40.965418, -73.885388

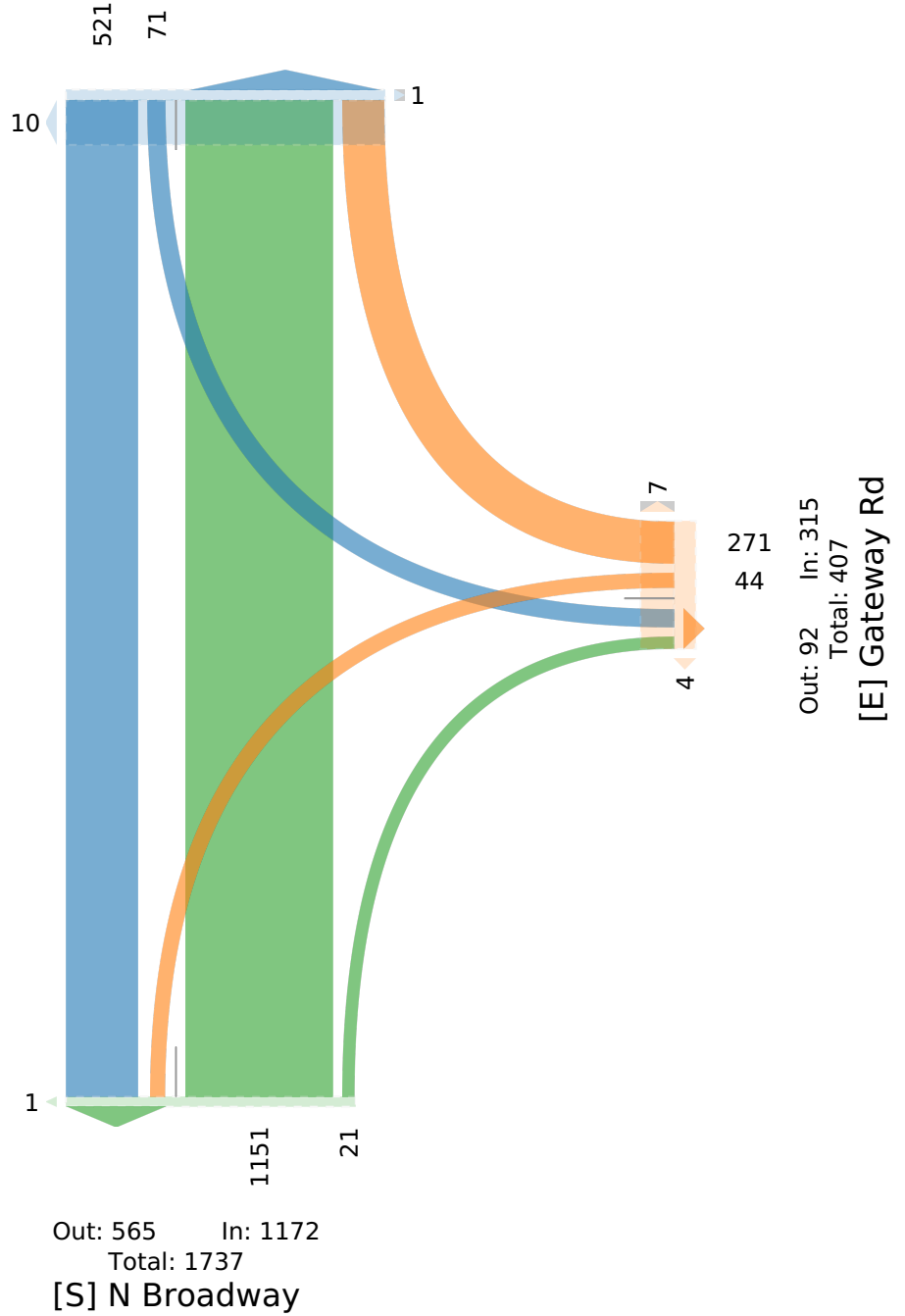


Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

[N] N Broadway

Total: 2014

In: 592 Out: 1422



123-207 Broadway/Gateway Wkday AM - TMC

Wed Nov 8, 2023

Forced Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130617, Location: 40.965418, -73.885388



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Gateway Rd Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	R	U	RR	App	Ped*	T	R	U	RR	App	Ped*	L	T	U	App	Ped*		
2023-11-08 7:30AM	9	34	0	6	49	2	153	5	0	0	158	0	6	58	0	64	3	271	
7:45AM	6	38	0	4	48	1	154	0	0	0	154	0	9	66	0	75	1	277	
8:00AM	5	16	0	12	33	3	162	1	0	0	163	0	12	77	0	89	1	285	
8:15AM	2	28	0	11	41	0	143	2	0	0	145	0	10	66	0	76	0	262	
Total	22	116	0	33	171	6	612	8	0	0	620	0	37	267	0	304	5	1095	
% Approach	12.9%	67.8%	0%	19.3%	-	-	98.7%	1.3%	0%	0%	-	-	12.2%	87.8%	0%	-	-	-	
% Total	2.0%	10.6%	0%	3.0%	15.6%	-	55.9%	0.7%	0%	0%	56.6%	-	3.4%	24.4%	0%	27.8%	-	-	
PHF	0.611	0.763	-	0.688	0.872	-	0.944	0.400	-	-	0.951	-	0.771	0.867	-	0.854	-	0.961	
Lights	22	108	0	32	162	-	568	7	0	0	575	-	30	251	0	281	-	1018	
% Lights	100%	93.1%	0%	97.0%	94.7%	-	92.8%	87.5%	0%	0%	92.7%	-	81.1%	94.0%	0%	92.4%	-	93.0%	
Articulated Trucks and Single-Unit Trucks	0	0	0	0	0	-	7	0	0	0	7	-	0	3	0	3	-	10	
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	0%	-	1.1%	0%	0%	0%	1.1%	-	0%	1.1%	0%	1.0%	-	0.9%	
Buses	0	8	0	1	9	-	37	1	0	0	38	-	7	13	0	20	-	67	
% Buses	0%	6.9%	0%	3.0%	5.3%	-	6.0%	12.5%	0%	0%	6.1%	-	18.9%	4.9%	0%	6.6%	-	6.1%	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

123-207 Broadway/Gateway Wkday AM - TMC

Wed Nov 8, 2023

Forced Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130617, Location: 40.965418, -73.885388

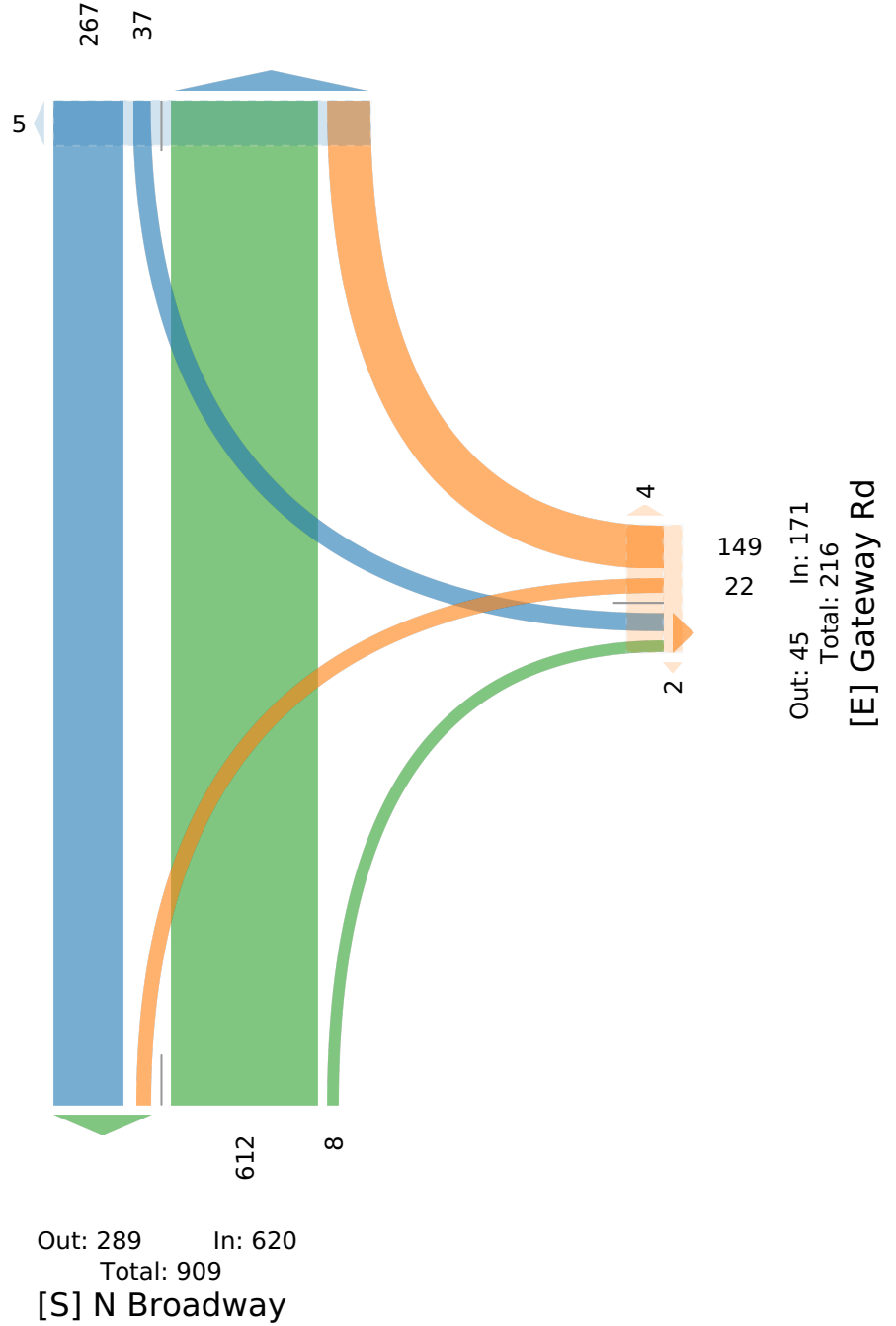


Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

[N] N Broadway

Total: 1065

In: 304 Out: 761



123-207 Broadway/Gateway Wkday AM - TMC

Wed Nov 8, 2023

AM Peak (8 AM - 9 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130617, Location: 40.965418, -73.885388



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Gateway Rd Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	R	U	RR	App	Ped*	T	R	U	RR	App	Ped*	L	T	U	App	Ped*		
2023-11-08 8:00AM	5	16	0	12	33	3	162	1	0	0	163	0	12	77	0	89	1	285	
8:15AM	2	28	0	11	41	0	143	2	0	0	145	0	10	66	0	76	0	262	
8:30AM	6	32	0	4	42	0	151	2	0	0	153	0	10	71	0	81	0	276	
8:45AM	3	25	0	3	31	0	171	3	0	0	174	0	6	71	0	77	2	282	
Total	16	101	0	30	147	3	627	8	0	0	635	0	38	285	0	323	3	1105	
% Approach	10.9%	68.7%	0%	20.4%	-	-	98.7%	1.3%	0%	0%	-	-	11.8%	88.2%	0%	-	-	-	
% Total	1.4%	9.1%	0%	2.7%	13.3%	-	56.7%	0.7%	0%	0%	57.5%	-	3.4%	25.8%	0%	29.2%	-	-	
PHF	0.667	0.789	-	0.625	0.875	-	0.917	0.667	-	-	0.912	-	0.792	0.925	-	0.907	-	0.969	
Lights	16	92	0	28	136	-	593	8	0	0	601	-	28	265	0	293	-	1030	
% Lights	100%	91.1%	0%	93.3%	92.5%	-	94.6%	100%	0%	0%	94.6%	-	73.7%	93.0%	0%	90.7%	-	93.2%	
Articulated Trucks and Single-Unit Trucks	0	1	0	1	2	-	6	0	0	0	6	-	1	4	0	5	-	13	
% Articulated Trucks and Single-Unit Trucks	0%	1.0%	0%	3.3%	1.4%	-	1.0%	0%	0%	0%	0.9%	-	2.6%	1.4%	0%	1.5%	-	1.2%	
Buses	0	8	0	1	9	-	28	0	0	0	28	-	9	16	0	25	-	62	
% Buses	0%	7.9%	0%	3.3%	6.1%	-	4.5%	0%	0%	0%	4.4%	-	23.7%	5.6%	0%	7.7%	-	5.6%	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

123-207 Broadway/Gateway Wkday AM - TMC

Wed Nov 8, 2023

AM Peak (8 AM - 9 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130617, Location: 40.965418, -73.885388

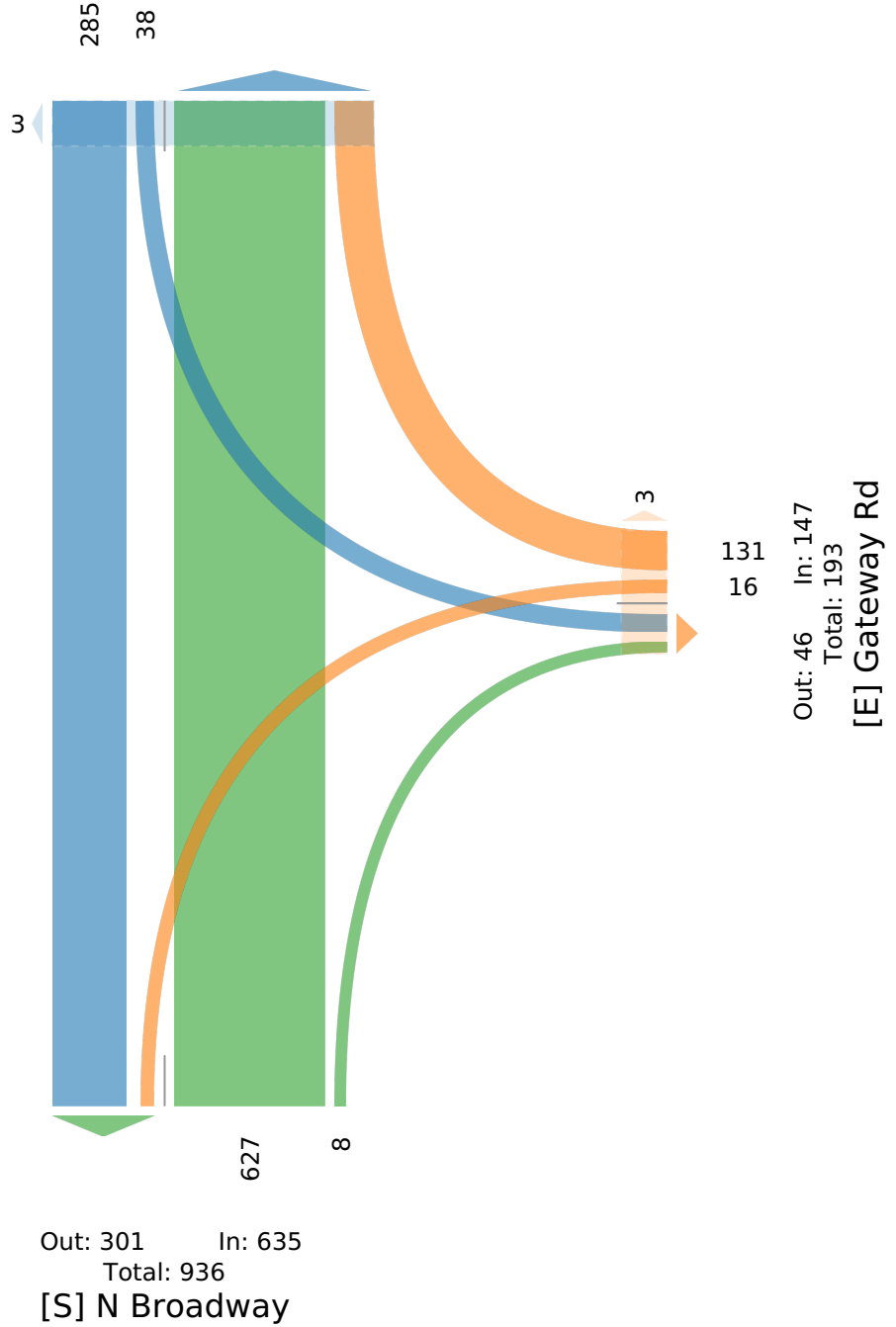


Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

[N] N Broadway

Total: 1081

In: 323 Out: 758



123-207 Broadway/Roberts Wkday AM - TMC

Thu Nov 2, 2023

Full Length (7 AM-9 AM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130430, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Roberts Ln Eastbound						Roberts Ave Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	
2023-11-02 7:00AM	1	5	8	0	14	0	25	0	29	0	54	1	1	60	33	0	94	4	7	50	1	0	58	0	220
7:15AM	3	1	6	0	10	0	22	3	27	0	52	1	0	89	47	0	136	2	5	54	0	0	59	0	257
7:30AM	4	3	1	0	8	0	42	1	41	0	84	0	2	107	42	0	151	3	6	58	1	0	65	0	308
7:45AM	3	5	4	0	12	1	36	3	53	0	92	1	2	135	30	0	167	6	12	75	3	0	90	1	361
Hourly Total	11	14	19	0	44	1	125	7	150	0	282	3	5	391	152	0	548	15	30	237	5	0	272	1	1146
8:00AM	5	2	2	0	9	0	26	6	48	0	80	1	1	117	31	0	149	1	8	74	1	0	83	0	321
8:15AM	2	2	1	0	5	1	33	4	40	0	77	2	1	82	29	0	112	0	20	68	0	0	88	0	282
8:30AM	4	2	3	0	9	1	35	3	47	0	85	0	1	86	38	0	125	3	14	53	3	0	70	0	289
8:45AM	1	7	2	0	10	0	24	2	33	0	59	2	1	99	34	0	134	2	18	62	2	0	82	0	285
Hourly Total	12	13	8	0	33	2	118	15	168	0	301	5	4	384	132	0	520	6	60	257	6	0	323	0	1177
9:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
Total	23	27	27	0	77	3	243	22	318	0	583	8	9	776	284	0	1069	21	90	494	11	0	595	1	2324
% Approach	29.9%	35.1%	35.1%	0%	-	-	41.7%	3.8%	54.5%	0%	-	-	0.8%	72.6%	26.6%	0%	-	-	15.1%	83.0%	1.8%	0%	-	-	-
% Total	1.0%	1.2%	1.2%	0%	3.3%	-	10.5%	0.9%	13.7%	0%	25.1%	-	0.4%	33.4%	12.2%	0%	46.0%	-	3.9%	21.3%	0.5%	0%	25.6%	-	-
Lights	21	27	27	0	75	-	226	19	302	0	547	-	8	729	259	0	996	-	77	460	11	0	548	-	2166
% Lights	91.3%	100%	100%	0%	97.4%	-	93.0%	86.4%	95.0%	0%	93.8%	-	88.9%	93.9%	91.2%	0%	93.2%	-	85.6%	93.1%	100%	0%	92.1%	-	93.2%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	0	-	4	2	5	0	11	-	0	5	1	0	6	-	5	8	0	0	13	-	30
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	0%	-	1.6%	9.1%	1.6%	0%	1.9%	-	0%	0.6%	0.4%	0%	0.6%	-	5.6%	1.6%	0%	0%	2.2%	-	1.3%
Buses	2	0	0	0	2	-	13	1	11	0	25	-	1	42	24	0	67	-	8	26	0	0	34	-	128
% Buses	8.7%	0%	0%	0%	2.6%	-	5.3%	4.5%	3.5%	0%	4.3%	-	11.1%	5.4%	8.5%	0%	6.3%	-	8.9%	5.3%	0%	0%	5.7%	-	5.5%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	8	-	-	-	-	-	21	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Roberts Wkday AM - TMC

Thu Nov 2, 2023

Full Length (7 AM-9 AM)

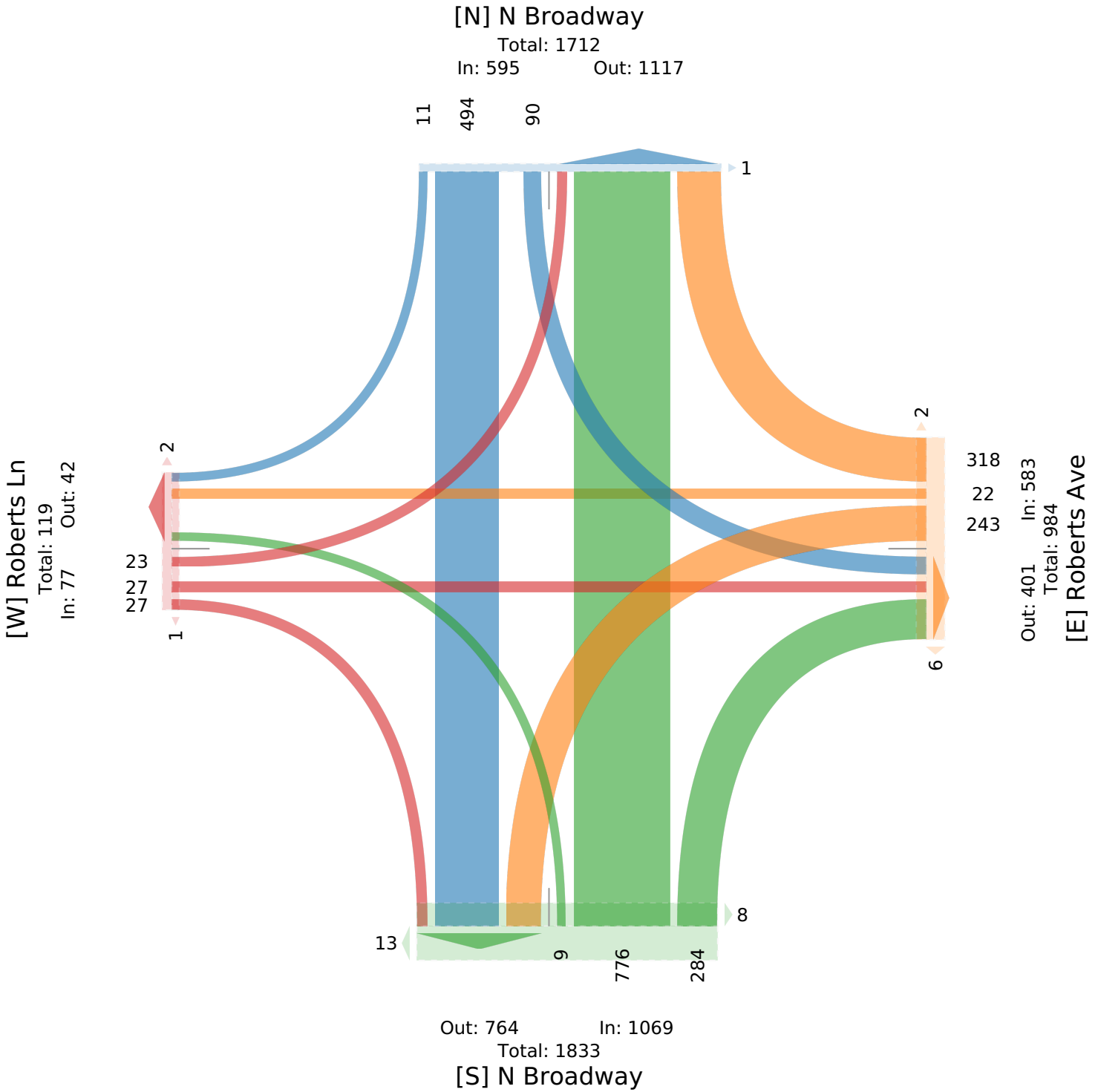
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130430, Location: 40.961006, -73.886229



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Roberts Wkday AM - TMC

Thu Nov 2, 2023

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130430, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Roberts Ln Eastbound						Roberts Ave Westbound						N Broadway Northbound						N Broadway Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2023-11-02 7:30AM	4	3	1	0	8	0	42	1	41	0	84	0	2	107	42	0	151	3	6	58	1	0	65	0	308
7:45AM	3	5	4	0	12	1	36	3	53	0	92	1	2	135	30	0	167	6	12	75	3	0	90	1	361
8:00AM	5	2	2	0	9	0	26	6	48	0	80	1	1	117	31	0	149	1	8	74	1	0	83	0	321
8:15AM	2	2	1	0	5	1	33	4	40	0	77	2	1	82	29	0	112	0	20	68	0	0	88	0	282
Total	14	12	8	0	34	2	137	14	182	0	333	4	6	441	132	0	579	10	46	275	5	0	326	1	1272
% Approach	41.2%	35.3%	23.5%	0%	-	-	41.1%	4.2%	54.7%	0%	-	-	1.0%	76.2%	22.8%	0%	-	-	14.1%	84.4%	1.5%	0%	-	-	-
% Total	1.1%	0.9%	0.6%	0%	2.7%	-	10.8%	1.1%	14.3%	0%	26.2%	-	0.5%	34.7%	10.4%	0%	45.5%	-	3.6%	21.6%	0.4%	0%	25.6%	-	-
PHF	0.700	0.600	0.500	-	0.708	-	0.815	0.583	0.858	-	0.905	-	0.750	0.817	0.786	-	0.867	-	0.575	0.917	0.417	-	0.906	-	0.881
Lights	12	12	8	0	32	-	126	12	173	0	311	-	5	411	120	0	536	-	40	261	5	0	306	-	1185
% Lights	85.7%	100%	100%	0%	94.1%	-	92.0%	85.7%	95.1%	0%	93.4%	-	83.3%	93.2%	90.9%	0%	92.6%	-	87.0%	94.9%	100%	0%	93.9%	-	93.2%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	0	-	3	1	1	0	5	-	0	2	0	0	2	-	2	4	0	0	6	-	13
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	0%	-	2.2%	7.1%	0.5%	0%	1.5%	-	0%	0.5%	0%	0%	0.3%	-	4.3%	1.5%	0%	0%	1.8%	-	1.0%
Buses	2	0	0	0	2	-	8	1	8	0	17	-	1	28	12	0	41	-	4	10	0	0	14	-	74
% Buses	14.3%	0%	0%	0%	5.9%	-	5.8%	7.1%	4.4%	0%	5.1%	-	16.7%	6.3%	9.1%	0%	7.1%	-	8.7%	3.6%	0%	0%	4.3%	-	5.8%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	10	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Roberts Wkday AM - TMC

Thu Nov 2, 2023

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

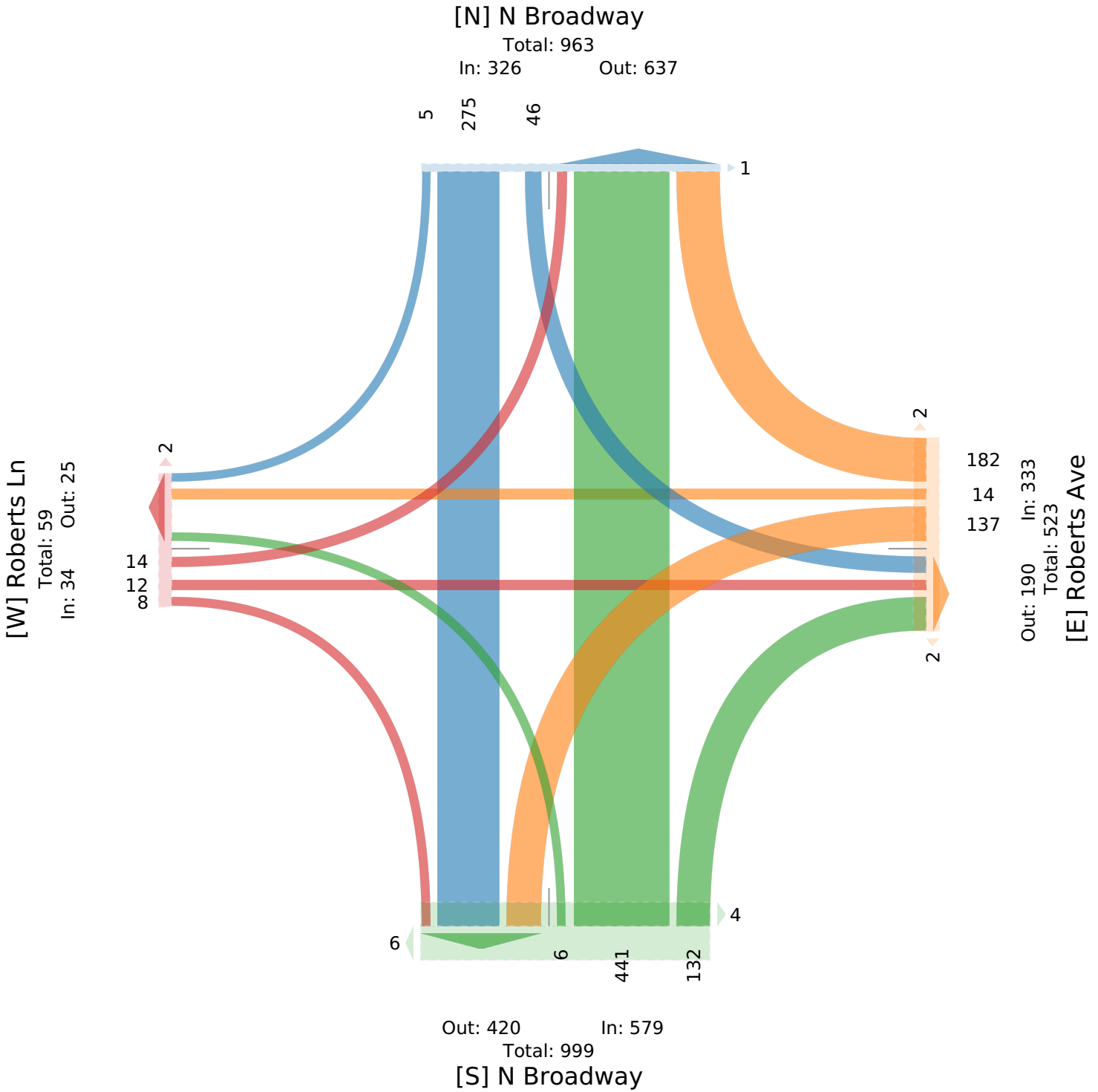
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130430, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Executive Wkday PM - TMC

Wed Nov 1, 2023

Full Length (4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130428, Location: 40.97338, -73.882751



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Executive Blvd Westbound					N Broadway Northbound					N Broadway Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
2023-11-01 4:00PM	88	18	0	106	0	37	138	0	175	0	20	40	0	60	1	341
4:15PM	101	12	0	113	0	49	95	0	144	0	22	31	0	53	0	310
4:30PM	123	12	0	135	1	48	89	0	137	0	25	43	0	68	0	340
4:45PM	114	8	0	122	0	45	72	0	117	0	32	32	0	64	0	303
Hourly Total	426	50	0	476	1	179	394	0	573	0	99	146	0	245	1	1294
5:00PM	122	28	0	150	1	53	80	0	133	0	40	43	0	83	2	366
5:15PM	111	17	0	128	0	47	75	0	122	0	29	47	0	76	0	326
5:30PM	114	10	0	124	0	43	78	0	121	0	27	44	0	71	0	316
5:45PM	113	12	0	125	0	34	64	0	98	0	15	25	0	40	0	263
Hourly Total	460	67	0	527	1	177	297	0	474	0	111	159	0	270	2	1271
6:00PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Hourly Total	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	887	117	0	1004	2	356	691	0	1047	0	210	305	0	515	3	2566
% Approach	88.3%	11.7%	0%	-	-	34.0%	66.0%	0%	-	-	40.8%	59.2%	0%	-	-	-
% Total	34.6%	4.6%	0%	39.1%	-	13.9%	26.9%	0%	40.8%	-	8.2%	11.9%	0%	20.1%	-	-
Lights	868	115	0	983	-	346	668	0	1014	-	200	296	0	496	-	2493
% Lights	97.9%	98.3%	0%	97.9%	-	97.2%	96.7%	0%	96.8%	-	95.2%	97.0%	0%	96.3%	-	97.2%
Articulated Trucks and Single-Unit Trucks	4	1	0	5	-	4	6	0	10	-	4	4	0	8	-	23
% Articulated Trucks and Single-Unit Trucks	0.5%	0.9%	0%	0.5%	-	1.1%	0.9%	0%	1.0%	-	1.9%	1.3%	0%	1.6%	-	0.9%
Buses	14	1	0	15	-	6	17	0	23	-	5	4	0	9	-	47
% Buses	1.6%	0.9%	0%	1.5%	-	1.7%	2.5%	0%	2.2%	-	2.4%	1.3%	0%	1.7%	-	1.8%
Bicycles on Road	1	0	0	1	-	0	0	0	0	-	1	1	0	2	-	3
% Bicycles on Road	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	-	0.5%	0.3%	0%	0.4%	-	0.1%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	3	-
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Executive Wkday PM - TMC

Wed Nov 1, 2023

Full Length (4 PM-6 PM)

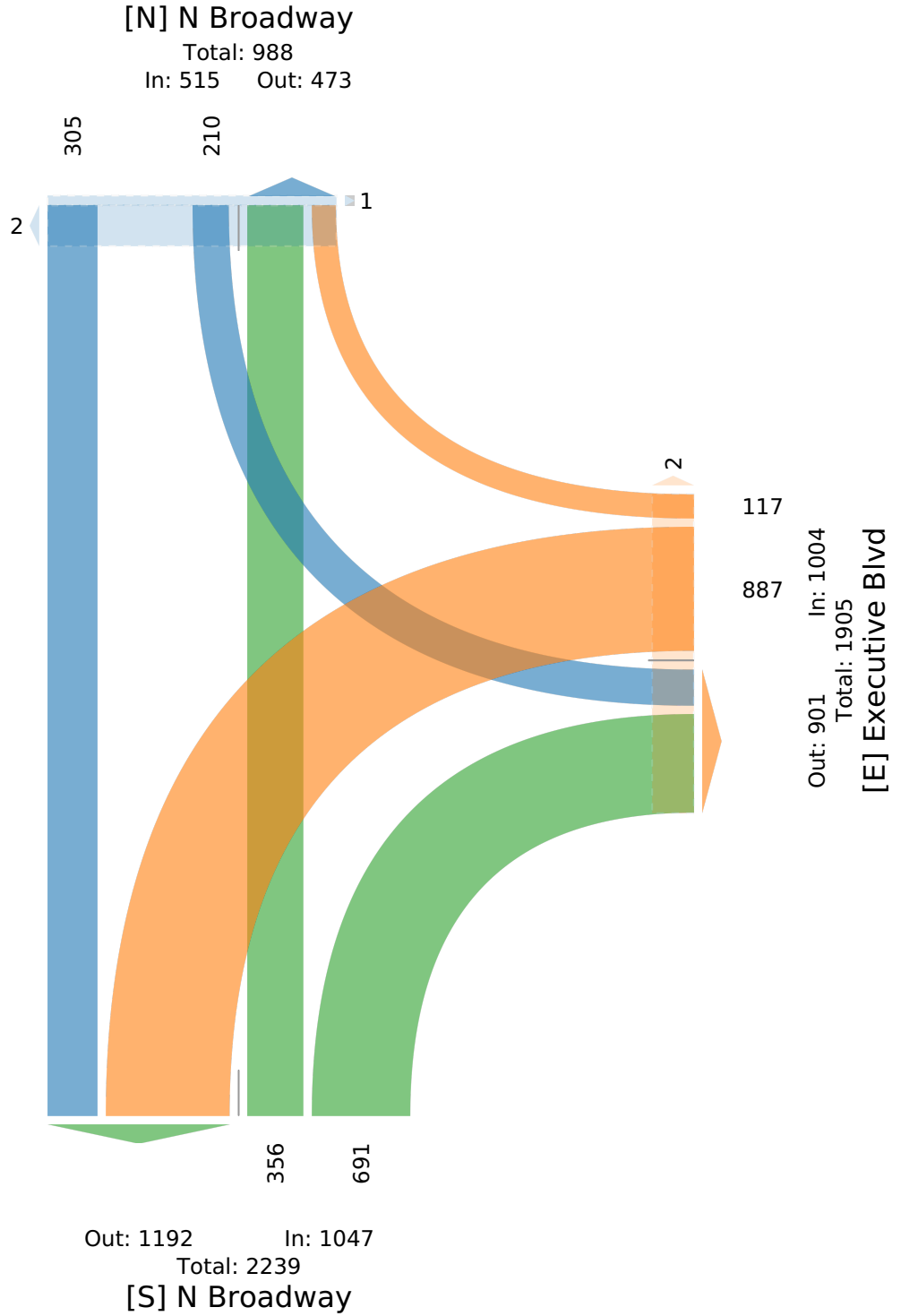
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130428, Location: 40.97338, -73.882751



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Executive Wkday PM - TMC

Wed Nov 1, 2023

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130428, Location: 40.97338, -73.882751



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Executive Blvd Westbound					N Broadway Northbound					N Broadway Southbound					Int
	L	R	U	App	Ped*	T	R	U	App	Ped*	L	T	U	App	Ped*	
2023-11-01 4:30PM	123	12	0	135	1	48	89	0	137	0	25	43	0	68	0	340
4:45PM	114	8	0	122	0	45	72	0	117	0	32	32	0	64	0	303
5:00PM	122	28	0	150	1	53	80	0	133	0	40	43	0	83	2	366
5:15PM	111	17	0	128	0	47	75	0	122	0	29	47	0	76	0	326
Total	470	65	0	535	2	193	316	0	509	0	126	165	0	291	2	1335
% Approach	87.9%	12.1%	0%	-	-	37.9%	62.1%	0%	-	-	43.3%	56.7%	0%	-	-	-
% Total	35.2%	4.9%	0%	40.1%	-	14.5%	23.7%	0%	38.1%	-	9.4%	12.4%	0%	21.8%	-	-
PHF	0.953	0.580	-	0.890	-	0.910	0.888	-	0.929	-	0.788	0.872	-	0.873	-	0.911
Lights	459	65	0	524	-	188	304	0	492	-	122	161	0	283	-	1299
% Lights	97.7%	100%	0%	97.9%	-	97.4%	96.2%	0%	96.7%	-	96.8%	97.6%	0%	97.3%	-	97.3%
Articulated Trucks and Single-Unit Trucks	3	0	0	3	-	3	4	0	7	-	2	1	0	3	-	13
% Articulated Trucks and Single-Unit Trucks	0.6%	0%	0%	0.6%	-	1.6%	1.3%	0%	1.4%	-	1.6%	0.6%	0%	1.0%	-	1.0%
Buses	7	0	0	7	-	2	8	0	10	-	2	2	0	4	-	21
% Buses	1.5%	0%	0%	1.3%	-	1.0%	2.5%	0%	2.0%	-	1.6%	1.2%	0%	1.4%	-	1.6%
Bicycles on Road	1	0	0	1	-	0	0	0	0	-	0	1	0	1	-	2
% Bicycles on Road	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	-	0%	0.6%	0%	0.3%	-	0.1%
Pedestrians	-	-	-	-	2	-	-	-	-	0	-	-	-	-	-	2
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	0%

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Executive Wkday PM - TMC

Wed Nov 1, 2023

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

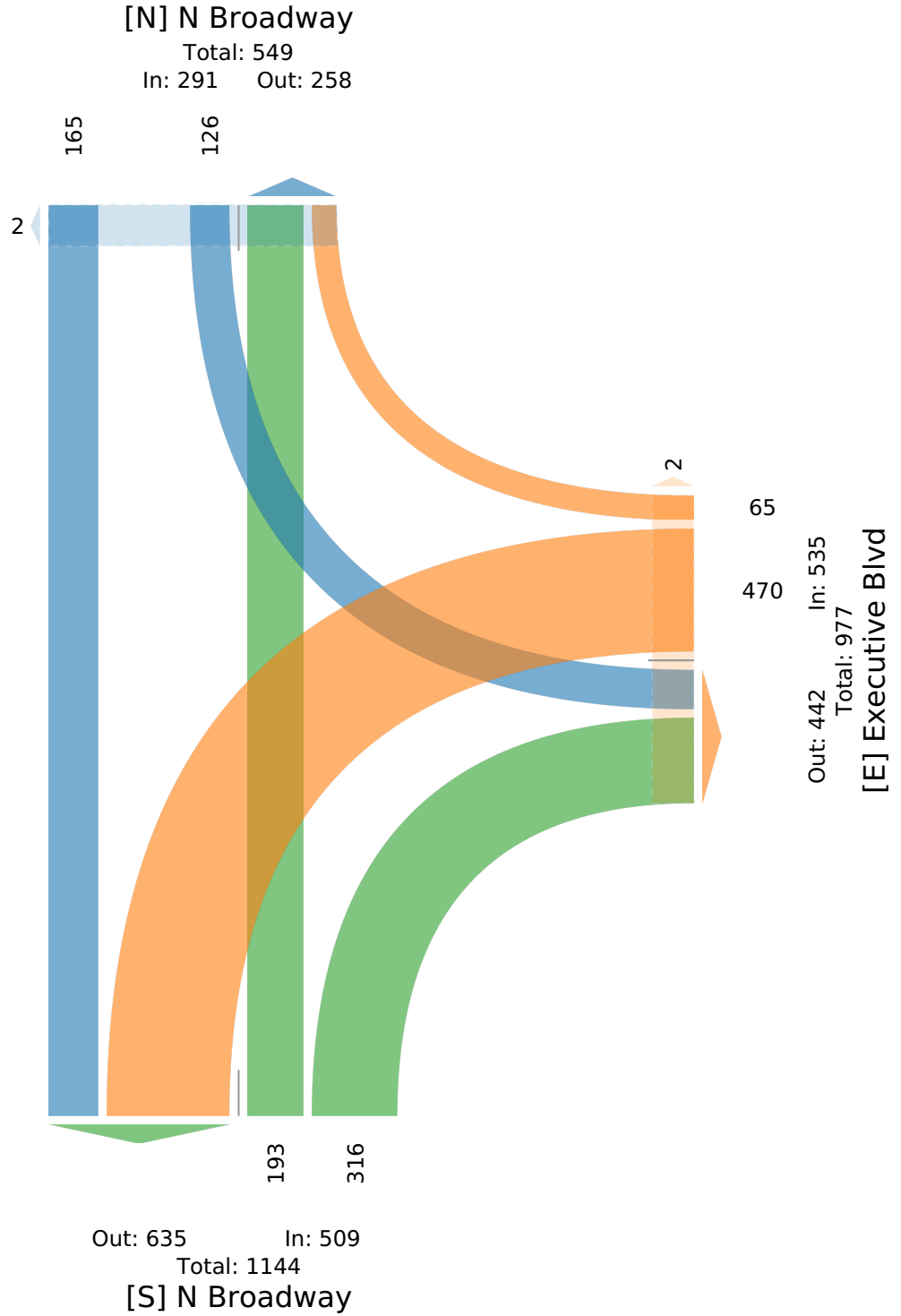
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130428, Location: 40.97338, -73.882751



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Gateway Wkday PM - TMC

Wed Nov 8, 2023

Full Length (4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130619, Location: 40.965418, -73.885388



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Gateway Rd Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	R	U	RR	App	Ped*	T	R	U	RR	App	Ped*	L	T	U	App	Ped*		
2023-11-08 4:00PM	2	4	0	6	12	3	94	3	0	0	97	1	34	124	0	158	1	267	
4:15PM	2	9	0	6	17	2	85	8	0	0	93	0	31	130	0	161	0	271	
4:30PM	0	11	0	5	16	4	89	2	0	0	91	0	25	107	1	133	1	240	
4:45PM	4	4	0	4	12	2	89	0	0	0	89	0	27	100	0	127	1	228	
Hourly Total	8	28	0	21	57	11	357	13	0	0	370	1	117	461	1	579	3	1006	
5:00PM	5	16	0	4	25	3	82	8	0	0	90	0	35	107	0	142	3	257	
5:15PM	3	10	0	6	19	0	64	5	0	0	69	0	26	114	0	140	3	228	
5:30PM	2	14	0	2	18	3	54	2	0	0	56	0	33	100	0	133	0	207	
5:45PM	1	6	0	8	15	2	71	3	0	0	74	0	16	85	0	101	2	190	
Hourly Total	11	46	0	20	77	8	271	18	0	0	289	0	110	406	0	516	8	882	
6:00PM	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	
Hourly Total	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	
Total	19	74	0	41	134	19	629	31	0	0	660	1	227	868	1	1096	11	1890	
% Approach	14.2%	55.2%	0%	30.6%	-	-	95.3%	4.7%	0%	0%	-	-	20.7%	79.2%	0.1%	-	-	-	
% Total	1.0%	3.9%	0%	2.2%	7.1%	-	33.3%	1.6%	0%	0%	34.9%	-	12.0%	45.9%	0.1%	58.0%	-	-	
Lights	19	66	0	39	124	-	616	29	0	0	645	-	220	851	1	1072	-	1841	
% Lights	100%	89.2%	0%	95.1%	92.5%	-	97.9%	93.5%	0%	0%	97.7%	-	96.9%	98.0%	100%	97.8%	-	97.4%	
Articulated Trucks and Single-Unit Trucks	0	0	0	1	1	-	4	0	0	0	4	-	1	10	0	11	-	16	
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	2.4%	0.7%	-	0.6%	0%	0%	0%	0.6%	-	0.4%	1.2%	0%	1.0%	-	0.8%	
Buses	0	8	0	1	9	-	9	2	0	0	11	-	6	7	0	13	-	33	
% Buses	0%	10.8%	0%	2.4%	6.7%	-	1.4%	6.5%	0%	0%	1.7%	-	2.6%	0.8%	0%	1.2%	-	1.7%	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	19	-	-	-	-	-	1	-	-	-	-	-	11	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

123-207 Broadway/Gateway Wkday PM - TMC

Wed Nov 8, 2023

Full Length (4 PM-6 PM)

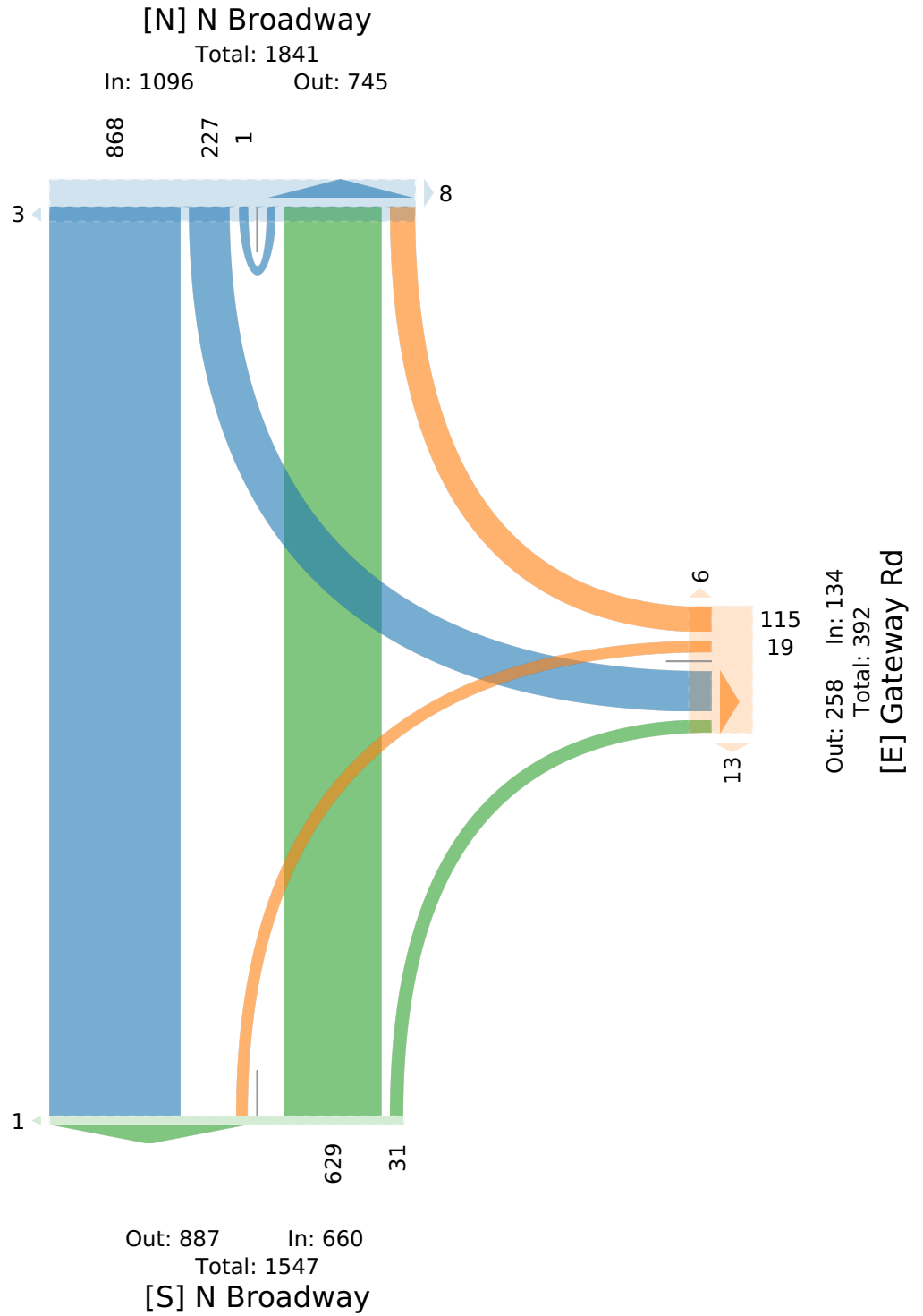
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130619, Location: 40.965418, -73.885388



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Gateway Wkday PM - TMC

Wed Nov 8, 2023

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130619, Location: 40.965418, -73.885388



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Gateway Rd Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	R	U	RR	App	Ped*	T	R	U	RR	App	Ped*	L	T	U	App	Ped*		
2023-11-08 4:00PM	2	4	0	6	12	3	94	3	0	0	97	1	34	124	0	158	1	267	
4:15PM	2	9	0	6	17	2	85	8	0	0	93	0	31	130	0	161	0	271	
4:30PM	0	11	0	5	16	4	89	2	0	0	91	0	25	107	1	133	1	240	
4:45PM	4	4	0	4	12	2	89	0	0	0	89	0	27	100	0	127	1	228	
Total	8	28	0	21	57	11	357	13	0	0	370	1	117	461	1	579	3	1006	
% Approach	14.0%	49.1%	0%	36.8%	-	-	96.5%	3.5%	0%	0%	-	-	20.2%	79.6%	0.2%	-	-	-	
% Total	0.8%	2.8%	0%	2.1%	5.7%	-	35.5%	1.3%	0%	0%	36.8%	-	11.6%	45.8%	0.1%	57.6%	-	-	
PHF	0.500	0.636	-	0.875	0.838	-	0.949	0.406	-	-	0.954	-	0.860	0.887	0.250	0.899	-	0.928	
Lights	8	23	0	19	50	-	348	12	0	0	360	-	113	450	1	564	-	974	
% Lights	100%	82.1%	0%	90.5%	87.7%	-	97.5%	92.3%	0%	0%	97.3%	-	96.6%	97.6%	100%	97.4%	-	96.8%	
Articulated Trucks and Single-Unit Trucks	0	0	0	1	1	-	2	0	0	0	2	-	1	6	0	7	-	10	
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	4.8%	1.8%	-	0.6%	0%	0%	0%	0.5%	-	0.9%	1.3%	0%	1.2%	-	1.0%	
Buses	0	5	0	1	6	-	7	1	0	0	8	-	3	5	0	8	-	22	
% Buses	0%	17.9%	0%	4.8%	10.5%	-	2.0%	7.7%	0%	0%	2.2%	-	2.6%	1.1%	0%	1.4%	-	2.2%	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	11	-	-	-	-	-	1	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

123-207 Broadway/Gateway Wkday PM - TMC

Wed Nov 8, 2023

PM Peak (4 PM - 5 PM) - Overall Peak Hour

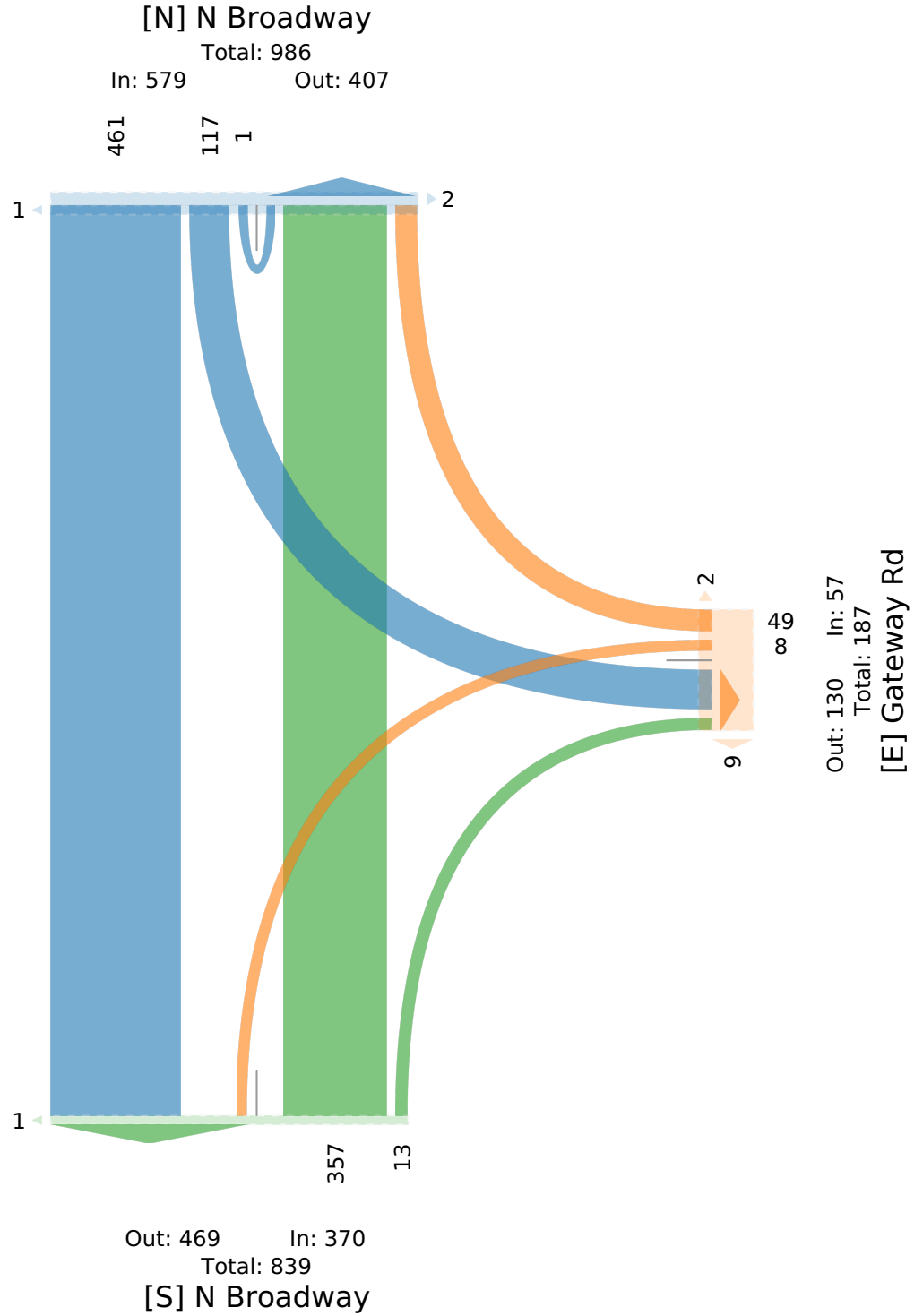
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130619, Location: 40.965418, -73.885388



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Gateway Wkday PM - TMC

Wed Nov 8, 2023

Forced Peak (4:30 PM - 5:30 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130619, Location: 40.965418, -73.885388



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Gateway Rd Westbound							N Broadway Northbound						N Broadway Southbound					Int
	L	R	U	RR	App	Ped*	T	R	U	RR	App	Ped*	L	T	U	App	Ped*		
2023-11-08 4:30PM	0	11	0	5	16	4	89	2	0	0	91	0	25	107	1	133	1	240	
4:45PM	4	4	0	4	12	2	89	0	0	0	89	0	27	100	0	127	1	228	
5:00PM	5	16	0	4	25	3	82	8	0	0	90	0	35	107	0	142	3	257	
5:15PM	3	10	0	6	19	0	64	5	0	0	69	0	26	114	0	140	3	228	
Total	12	41	0	19	72	9	324	15	0	0	339	0	113	428	1	542	8	953	
% Approach	16.7%	56.9%	0%	26.4%	-	-	95.6%	4.4%	0%	0%	-	-	20.8%	79.0%	0.2%	-	-	-	
% Total	1.3%	4.3%	0%	2.0%	7.6%	-	34.0%	1.6%	0%	0%	35.6%	-	11.9%	44.9%	0.1%	56.9%	-	-	
PHF	0.600	0.641	-	0.792	0.720	-	0.910	0.469	-	-	0.931	-	0.807	0.939	0.250	0.954	-	0.927	
Lights	12	38	0	18	68	-	319	14	0	0	333	-	109	419	1	529	-	930	
% Lights	100%	92.7%	0%	94.7%	94.4%	-	98.5%	93.3%	0%	0%	98.2%	-	96.5%	97.9%	100%	97.6%	-	97.6%	
Articulated Trucks and Single-Unit Trucks	0	0	0	1	1	-	2	0	0	0	2	-	1	7	0	8	-	11	
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	5.3%	1.4%	-	0.6%	0%	0%	0%	0.6%	-	0.9%	1.6%	0%	1.5%	-	1.2%	
Buses	0	3	0	0	3	-	3	1	0	0	4	-	3	2	0	5	-	12	
% Buses	0%	7.3%	0%	0%	4.2%	-	0.9%	6.7%	0%	0%	1.2%	-	2.7%	0.5%	0%	0.9%	-	1.3%	
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	8	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

123-207 Broadway/Gateway Wkday PM - TMC

Wed Nov 8, 2023

Forced Peak (4:30 PM - 5:30 PM)

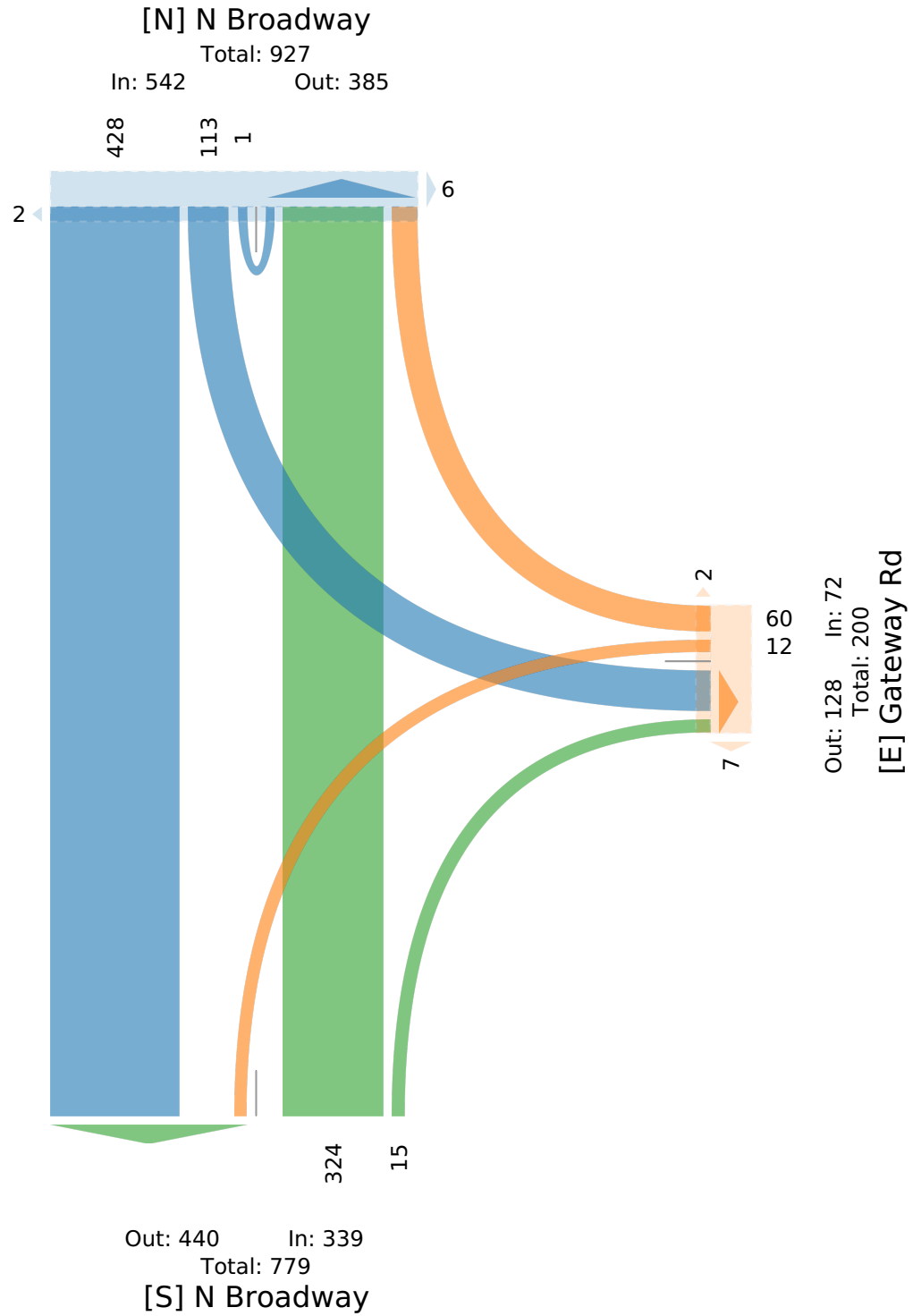
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130619, Location: 40.965418, -73.885388



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Roberts Wkday PM - TMC

Wed Nov 1, 2023

Full Length (4 PM-6 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130427, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Roberts Ln Eastbound						Roberts Ave Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	
2023-11-01 4:00PM	3	1	1	0	5	6	43	5	32	0	80	1	0	60	38	0	98	7	40	76	2	0	118	0	301
4:15PM	1	5	0	0	6	1	29	6	22	0	57	1	1	73	23	0	97	4	28	70	2	0	100	0	260
4:30PM	2	3	0	0	5	0	30	6	23	0	59	3	2	67	26	0	95	0	27	76	4	0	107	0	266
4:45PM	3	2	1	0	6	1	32	4	24	0	60	3	1	62	25	0	88	2	32	75	4	0	111	0	265
Hourly Total	9	11	2	0	22	8	134	21	101	0	256	8	4	262	112	0	378	13	127	297	12	0	436	0	1092
5:00PM	1	4	1	0	6	0	40	8	20	0	68	2	0	48	32	0	80	0	27	87	2	0	116	0	270
5:15PM	1	2	1	0	4	2	35	4	25	0	64	6	1	64	37	0	102	2	34	101	1	0	136	0	306
5:30PM	0	4	0	0	4	1	40	4	16	0	60	6	2	44	40	0	86	4	26	101	2	0	129	0	279
5:45PM	0	4	0	0	4	2	33	4	19	0	56	3	3	52	25	0	80	0	21	70	5	0	96	1	236
Hourly Total	2	14	2	0	18	5	148	20	80	0	248	17	6	208	134	0	348	6	108	359	10	0	477	1	1091
6:00PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	11	25	4	0	40	13	282	41	181	0	504	25	10	470	246	0	726	19	235	656	22	0	913	1	2183
% Approach	27.5%	62.5%	10.0%	0%	-	-	56.0%	8.1%	35.9%	0%	-	-	1.4%	64.7%	33.9%	0%	-	-	25.7%	71.9%	2.4%	0%	-	-	-
% Total	0.5%	1.1%	0.2%	0%	1.8%	-	12.9%	1.9%	8.3%	0%	23.1%	-	0.5%	21.5%	11.3%	0%	33.3%	-	10.8%	30.1%	1.0%	0%	41.8%	-	-
Lights	11	25	3	0	39	-	279	41	178	0	498	-	10	453	238	0	701	-	231	640	21	0	892	-	2130
% Lights	100%	100%	75.0%	0%	97.5%	-	98.9%	100%	98.3%	0%	98.8%	-	100%	96.4%	96.7%	0%	96.6%	-	98.3%	97.6%	95.5%	0%	97.7%	-	97.6%
Articulated Trucks and Single-Unit Trucks	0	0	1	0	1	-	0	0	1	0	1	-	0	6	1	0	7	-	3	4	1	0	8	-	17
% Articulated Trucks and Single-Unit Trucks	0%	0%	25.0%	0%	2.5%	-	0%	0%	0.6%	0%	0.2%	-	0%	1.3%	0.4%	0%	1.0%	-	1.3%	0.6%	4.5%	0%	0.9%	-	0.8%
Buses	0	0	0	0	0	-	3	0	2	0	5	-	0	10	7	0	17	-	0	12	0	0	12	-	34
% Buses	0%	0%	0%	0%	0%	-	1.1%	0%	1.1%	0%	1.0%	-	0%	2.1%	2.8%	0%	2.3%	-	0%	1.8%	0%	0%	1.3%	-	1.6%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	1	0	0	0	1	-	2
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.2%	0%	0%	0.1%	-	0.4%	0%	0%	0%	0.1%	-	0.1%
Pedestrians	-	-	-	-	-	13	-	-	-	-	-	25	-	-	-	-	-	19	-	-	-	-	-	1	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Roberts Wkday PM - TMC

Wed Nov 1, 2023

Full Length (4 PM-6 PM)

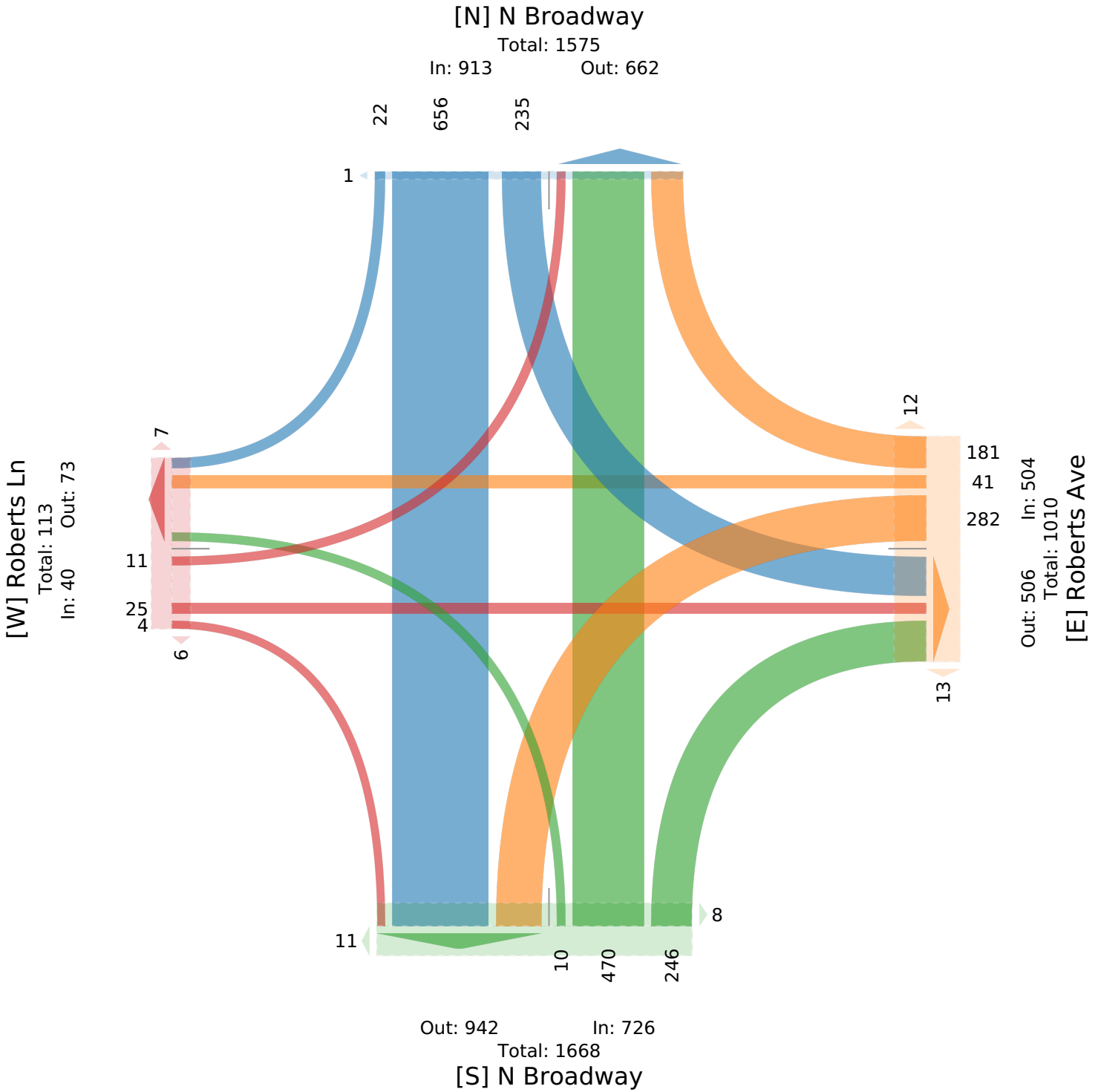
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130427, Location: 40.961006, -73.886229



Provided by: Creighton Manning Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Roberts Wkday PM - TMC

Wed Nov 1, 2023

Forced Peak (4:30 PM - 5:30 PM)

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130427, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Roberts Ln Eastbound						Roberts Ave Westbound						N Broadway Northbound						N Broadway Southbound						Int
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	
2023-11-01 4:30PM	2	3	0	0	5	0	30	6	23	0	59	3	2	67	26	0	95	0	27	76	4	0	107	0	266
4:45PM	3	2	1	0	6	1	32	4	24	0	60	3	1	62	25	0	88	2	32	75	4	0	111	0	265
5:00PM	1	4	1	0	6	0	40	8	20	0	68	2	0	48	32	0	80	0	27	87	2	0	116	0	270
5:15PM	1	2	1	0	4	2	35	4	25	0	64	6	1	64	37	0	102	2	34	101	1	0	136	0	306
Total	7	11	3	0	21	3	137	22	92	0	251	14	4	241	120	0	365	4	120	339	11	0	470	0	1107
% Approach	33.3%	52.4%	14.3%	0%	-	-	54.6%	8.8%	36.7%	0%	-	-	1.1%	66.0%	32.9%	0%	-	-	25.5%	72.1%	2.3%	0%	-	-	-
% Total	0.6%	1.0%	0.3%	0%	1.9%	-	12.4%	2.0%	8.3%	0%	22.7%	-	0.4%	21.8%	10.8%	0%	33.0%	-	10.8%	30.6%	1.0%	0%	42.5%	-	-
PHF	0.583	0.688	0.750	-	0.875	-	0.856	0.688	0.920	-	0.923	-	0.500	0.899	0.811	-	0.895	-	0.882	0.839	0.688	-	0.864	-	0.904
Lights	7	11	2	0	20	-	136	22	91	0	249	-	4	232	119	0	355	-	120	332	11	0	463	-	1087
% Lights	100%	100%	66.7%	0%	95.2%	-	99.3%	100%	98.9%	0%	99.2%	-	100%	96.3%	99.2%	0%	97.3%	-	100%	97.9%	100%	0%	98.5%	-	98.2%
Articulated Trucks and Single-Unit Trucks	0	0	1	0	1	-	0	0	0	0	0	-	0	4	1	0	5	-	0	2	0	0	2	-	8
% Articulated Trucks and Single-Unit Trucks	0%	0%	33.3%	0%	4.8%	-	0%	0%	0%	0%	0%	-	0%	1.7%	0.8%	0%	1.4%	-	0%	0.6%	0%	0%	0.4%	-	0.7%
Buses	0	0	0	0	0	-	1	0	1	0	2	-	0	5	0	0	5	-	0	5	0	0	5	-	12
% Buses	0%	0%	0%	0%	0%	-	0.7%	0%	1.1%	0%	0.8%	-	0%	2.1%	0%	0%	1.4%	-	0%	1.5%	0%	0%	1.1%	-	1.1%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	14	-	-	-	-	-	4	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Roberts Wkday PM - TMC

Wed Nov 1, 2023

Forced Peak (4:30 PM - 5:30 PM)

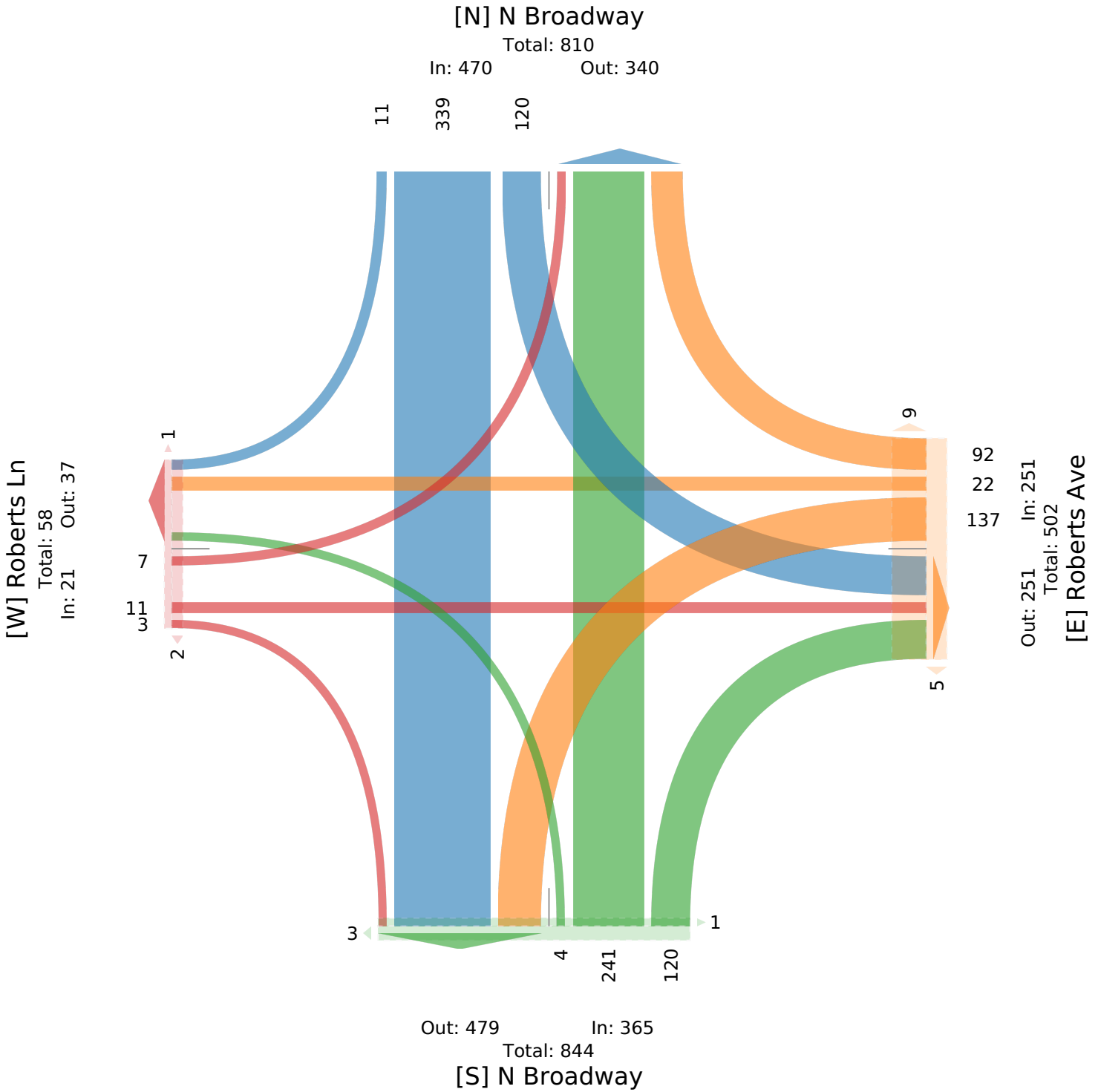
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130427, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



123-207 Broadway/Roberts Wkday PM - TMC

Wed Nov 1, 2023

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130427, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US

Leg Direction	Roberts Ln Eastbound						Roberts Ave Westbound						N Broadway Northbound						N Broadway Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2023-11-01 4:45PM	3	2	1	0	6	1	32	4	24	0	60	3	1	62	25	0	88	2	32	75	4	0	111	0	265
5:00PM	1	4	1	0	6	0	40	8	20	0	68	2	0	48	32	0	80	0	27	87	2	0	116	0	270
5:15PM	1	2	1	0	4	2	35	4	25	0	64	6	1	64	37	0	102	2	34	101	1	0	136	0	306
5:30PM	0	4	0	0	4	1	40	4	16	0	60	6	2	44	40	0	86	4	26	101	2	0	129	0	279
Total	5	12	3	0	20	4	147	20	85	0	252	17	4	218	134	0	356	8	119	364	9	0	492	0	1120
% Approach	25.0%	60.0%	15.0%	0%	-	-	58.3%	7.9%	33.7%	0%	-	-	1.1%	61.2%	37.6%	0%	-	-	24.2%	74.0%	1.8%	0%	-	-	-
% Total	0.4%	1.1%	0.3%	0%	1.8%	-	13.1%	1.8%	7.6%	0%	22.5%	-	0.4%	19.5%	12.0%	0%	31.8%	-	10.6%	32.5%	0.8%	0%	43.9%	-	-
PHF	0.417	0.750	0.750	-	0.833	-	0.919	0.625	0.850	-	0.926	-	0.500	0.852	0.838	-	0.873	-	0.875	0.901	0.563	-	0.904	-	0.915
Lights	5	12	2	0	19	-	146	20	84	0	250	-	4	212	132	0	348	-	118	357	9	0	484	-	1101
% Lights	100%	100%	66.7%	0%	95.0%	-	99.3%	100%	98.8%	0%	99.2%	-	100%	97.2%	98.5%	0%	97.8%	-	99.2%	98.1%	100%	0%	98.4%	-	98.3%
Articulated Trucks and Single-Unit Trucks	0	0	1	0	1	-	0	0	0	0	0	-	0	3	1	0	4	-	1	0	0	0	1	-	6
% Articulated Trucks and Single-Unit Trucks	0%	0%	33.3%	0%	5.0%	-	0%	0%	0%	0%	0%	-	0%	1.4%	0.7%	0%	1.1%	-	0.8%	0%	0%	0%	0.2%	-	0.5%
Buses	0	0	0	0	0	-	1	0	1	0	2	-	0	3	1	0	4	-	0	7	0	0	7	-	13
% Buses	0%	0%	0%	0%	0%	-	0.7%	0%	1.2%	0%	0.8%	-	0%	1.4%	0.7%	0%	1.1%	-	0%	1.9%	0%	0%	1.4%	-	1.2%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	17	-	-	-	-	-	8	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

123-207 Broadway/Roberts Wkday PM - TMC

Wed Nov 1, 2023

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

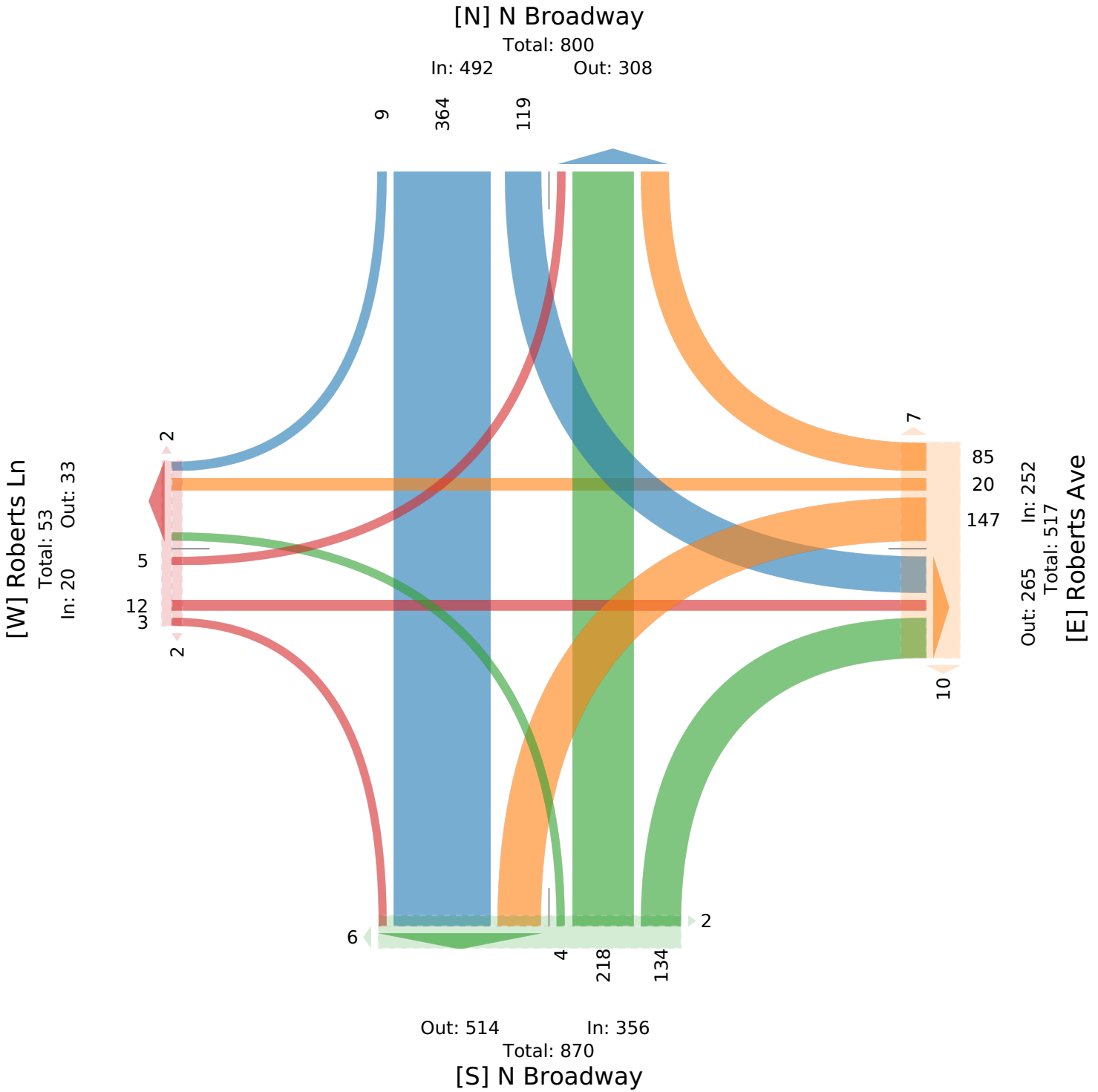
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1130427, Location: 40.961006, -73.886229



Provided by: Creighton Manning
Engineering, LLP
2 Winners Circle,
Albany, NY, 12205, US



ATTACHMENT C
ATR DATA

900 NORTH BROADWAY
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

MetroCount Traffic Executive Speed Statistics

SpeedStat-100 -- English (ENU)

Datasets:

Site: [123-207] FH @ Site Frontage
Attribute: N Broadway
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 1
Survey Duration: 14:37 Wednesday, November 1, 2023 => 15:12 Tuesday, November 14, 2023,
Zone:
File: 123-207 0 2023-11-14 1413.EC1 (Plus)
Identifier: R717H3E2 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.08)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 17:00 Wednesday, November 1, 2023 => 6:00 Thursday, November 9, 2023
(7.54167)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range: 6 - 99 mph.
Direction: North, South (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 328.084 ft
Name: Default Profile
Scheme: Vehicle classification (Scheme F3)
Units: Non metric (ft, mi, ft/s, mph, lb, ton)
In profile: Vehicles = 79423 / 85899 (92.46%)

Speed Statistics

SpeedStat-100

Site: 123-207.1.2NS
Description: FH @ Site Frontage
Filter time: 17:00 Wednesday, November 1, 2023 => 6:00 Thursday, November 9, 2023
Scheme: Vehicle classification (Scheme F3)
Filter: Cls(1-13) Dir(NS) Sp(6,99) Headway(>0) Span(0 - 328.084) Lane(0-16)

Vehicles = 79423

Posted speed limit = 30 mph, Exceeding = 11412 (14.37%), Mean Exceeding = 32.84 mph

Maximum = 86.4 mph, Minimum = 6.2 mph, Mean = 25.3 mph

85% Speed = 29.86 mph, 95% Speed = 32.99 mph, Median = 25.28 mph

12 mph Pace = 19 - 31, Number in Pace = 64498 (81.21%)

Variance = 23.72, Standard Deviation = 4.87 mph

Speed Bins (Partial days)

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 6	0 0.000%	0 0.000%	79423 100.0%	0.00	0.00	0.00
6 - 12	802 1.010%	802 1.010%	78621 98.99%	0.00	0.00	0.00
12 - 19	5356 6.744%	6158 7.753%	73265 92.25%	0.00	0.00	0.00
19 - 25	30346 38.21%	36504 45.96%	42919 54.04%	0.00	0.00	0.00
25 - 31	35081 44.17%	71585 90.13%	7838 9.869%	0.00	0.00	0.00
31 - 37	6994 8.806%	78579 98.94%	844 1.063%	0.00	0.00	0.00
37 - 43	715 0.900%	79294 99.84%	129 0.162%	0.00	0.00	0.00
43 - 50	100 0.126%	79394 100.0%	29 0.037%	0.00	0.00	0.00
50 - 56	25 0.031%	79419 100.0%	4 0.005%	0.00	0.00	0.00
56 - 62	1 0.001%	79420 100.0%	3 0.004%	0.00	0.00	0.00
62 - 68	0 0.000%	79420 100.0%	3 0.004%	0.00	0.00	0.00
68 - 75	0 0.000%	79420 100.0%	3 0.004%	0.00	0.00	0.00
75 - 81	0 0.000%	79420 100.0%	3 0.004%	0.00	0.00	0.00
81 - 87	3 0.004%	79423 100.0%	0 0.000%	0.00	0.00	0.00
87 - 93	0 0.000%	79423 100.0%	0 0.000%	0.00	0.00	0.00
93 - 99	0 0.000%	79423 100.0%	0 0.000%	0.00	0.00	0.00
99 - 106	0 0.000%	79423 100.0%	0 0.000%	0.00	0.00	0.00
106 - 112	0 0.000%	79423 100.0%	0 0.000%	0.00	0.00	0.00
112 - 118	0 0.000%	79423 100.0%	0 0.000%	0.00	0.00	0.00
118 - 124	0 0.000%	79423 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00

Total Moving Energy (Estimated) = 0.00

Speed limit fields (Partial days)

Limit	Below	Above
0 30 (PSL)	68011 85.6%	11412 14.4%

ATTACHMENT D
LOS REPORTS

900 NORTH BROADWAY
CITY OF YONKERS
WESTCHESTER COUNTY, NEW YORK

LOS Definitions

The following is an excerpt from the Highway Capacity Manual, 6th Edition (HCM).

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 surrogate measure of driver discomfort and fuel consumption. The v/c ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following paragraphs describe each LOS.

LOS A describes operations with a control delay of 10 s/veh or less and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c 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 v/c ratio no greater than 1.0. This level is typically assigned when the v/c 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 v/c ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

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

LOS E describes operations with control delay between 55 and 80 s/veh and a v/c ratio no greater than 1.0. This level is typically assigned when the v/c ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operations with control delay exceeding 80 s/veh or a v/c ratio greater than 1.0. This level is typically assigned when the v/c ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 s/veh when the v/c 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 v/c 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).

Average control delay and queue length at roundabout controlled intersections are calculated using SIDRA Intersection. The physical geometry such as entry lane width and approach flare, and traffic volume at the roundabout are factors that influence the intersection's performance. The average delay reported using SIDRA Intersection is based on the signalized HCM Method of Delay for Level-of-Service.

Level of Service Criteria for Unsignalized Intersections

Level of service (LOS) for Two-Way Stop-Controlled (TWSC) intersections 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 by using criteria given in Exhibit 20-2. LOS is not defined for the intersection as a whole or for major-street approaches for three primary reasons: (a) major-street through vehicles are assumed to experience zero delay; (b) the disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and (c) the resulting low delay can mask important LOS deficiencies for minor movements. LOS F is assigned to the movement if the volume-to-capacity (v/c) ratio for the movement exceeds 1.0, regardless of the control delay.

The LOS criteria for TWSC intersections are somewhat different from the criteria used in Chapter 18 for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals, which can reduce users' delay tolerance.

The LOS criteria for All-Way Stop-Controlled (AWSC) intersections are given in Exhibit 21-8. LOS F is assigned if the 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.

**Exhibits 20-2/21-8:
Level-of-Service Criteria for Stop Controlled Intersections**

Control Delay (s/veh)	LOS by Volume-to-Capacity Ratio	
	$v/c \leq 1.0$	$v/c \geq 1.0$
10.0	A	F
>10.0 and ≤ 15.0	B	F
>15.0 and ≤ 25.0	C	F
>25.0 and ≤ 35.0	D	F
>35.0 and ≤ 50.0	E	F
>50.0	F	F

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

1: US 9 & Executive Blvd
 Existing 2023_AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	440	159	196	385	136	186
Future Volume (veh/h)	440	159	196	385	136	186
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1870
Adj Flow Rate, veh/h	494	179	220	0	153	209
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	2	0	3	2
Cap, veh/h	818	728	869		236	810
Arrive On Green	0.46	0.46	0.24	0.00	0.13	0.43
Sat Flow, veh/h	1795	1598	3647	1610	1767	1870
Grp Volume(v), veh/h	494	179	220	0	153	209
Grp Sat Flow(s),veh/h/ln	1795	1598	1777	1610	1767	1870
Q Serve(g_s), s	18.6	6.2	4.5	0.0	7.4	6.4
Cycle Q Clear(g_c), s	18.6	6.2	4.5	0.0	7.4	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	818	728	869		236	810
V/C Ratio(X)	0.60	0.25	0.25		0.65	0.26
Avail Cap(c_a), veh/h	818	728	869		236	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	15.0	27.4	0.0	37.0	16.3
Incr Delay (d2), s/veh	3.3	0.8	0.7	0.0	13.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	2.3	2.0	0.0	4.0	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.7	15.8	28.1	0.0	50.1	17.0
LnGrp LOS	C	B	C		D	B
Approach Vol, veh/h	673		220			362
Approach Delay, s/veh	20.1		28.1			31.0
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	27.0			44.0	46.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	12.0	22.0			39.0	41.0
Max Q Clear Time (g_c+I1), s	9.4	6.5			8.4	20.6
Green Ext Time (p_c), s	0.1	1.0			1.0	3.9

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

2: US 9 & Gateway Rd
 Existing 2023_AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	25	116	629	8	37	300
Future Volume (veh/h)	25	116	629	8	37	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1574	1870	1885	1722	1737	1870
Adj Flow Rate, veh/h	26	121	655	8	39	312
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	22	2	1	12	11	2
Cap, veh/h	32	150	1251	15	150	1083
Arrive On Green	0.13	0.13	0.67	0.67	0.67	0.67
Sat Flow, veh/h	239	1113	1858	23	108	1609
Grp Volume(v), veh/h	148	0	0	663	351	0
Grp Sat Flow(s),veh/h/ln	1362	0	0	1881	1717	0
Q Serve(g_s), s	5.5	0.0	0.0	9.2	0.0	0.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	9.2	3.9	0.0
Prop In Lane	0.18	0.82		0.01	0.11	
Lane Grp Cap(c), veh/h	183	0	0	1266	1233	0
V/C Ratio(X)	0.81	0.00	0.00	0.52	0.28	0.00
Avail Cap(c_a), veh/h	524	0	0	1266	1233	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.9	0.0	0.0	4.3	3.4	0.0
Incr Delay (d2), s/veh	8.2	0.0	0.0	1.6	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	2.4	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.1	0.0	0.0	5.8	4.0	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	148		663		351	
Approach Delay, s/veh	30.1		5.8		4.0	
Approach LOS	C		A		A	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		40.0			40.0	12.0
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		35.0			35.0	20.0
Max Q Clear Time (g_c+I1), s		0.0			0.0	7.5
Green Ext Time (p_c), s		0.0			0.0	0.4

Intersection Summary

HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

3: US 9 & Robert Ln/Roberts Ave
Existing 2023_AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	14	12	8	137	14	182	6	441	132	46	275	5
Future Volume (veh/h)	14	12	8	137	14	182	6	441	132	46	275	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1900	1885	937	1900	1885	1767	1900	1870
Adj Flow Rate, veh/h	16	14	9	156	16	207	7	501	150	52	312	6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	4	0	1	65	0	1	9	0	2
Cap, veh/h	28	24	16	182	19	241	54	689	204	131	740	13
Arrive On Green	0.04	0.04	0.04	0.26	0.26	0.26	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	734	642	413	699	72	927	5	1401	415	150	1505	27
Grp Volume(v), veh/h	39	0	0	379	0	0	658	0	0	370	0	0
Grp Sat Flow(s),veh/h/ln	1789	0	0	1698	0	0	1821	0	0	1682	0	0
Q Serve(g_s), s	1.5	0.0	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	15.1	0.0	0.0	20.4	0.0	0.0	8.8	0.0	0.0
Prop In Lane	0.41		0.23	0.41		0.55	0.01		0.23	0.14		0.02
Lane Grp Cap(c), veh/h	68	0	0	442	0	0	946	0	0	884	0	0
V/C Ratio(X)	0.58	0.00	0.00	0.86	0.00	0.00	0.70	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	251	0	0	715	0	0	946	0	0	884	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.7	0.0	0.0	25.1	0.0	0.0	14.4	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	7.6	0.0	0.0	5.9	0.0	0.0	4.2	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	6.5	0.0	0.0	8.5	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	0.0	0.0	31.0	0.0	0.0	18.6	0.0	0.0	12.9	0.0	0.0
LnGrp LOS	D	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		39			379			658			370	
Approach Delay, s/veh		41.3			31.0			18.6			12.9	
Approach LOS		D			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		7.7		40.0		23.5				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		10.0		35.0		30.0				
Max Q Clear Time (g_c+11), s		0.0		3.5		0.0		17.1				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				21.0								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

1: US 9 & Executive Blvd
 Existing 2023_PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	470	65	193	316	126	165
Future Volume (veh/h)	470	65	193	316	126	165
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1856	1870	1900	1856	1870
Adj Flow Rate, veh/h	516	71	212	0	138	181
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	3	2	0	3	2
Cap, veh/h	818	716	869		236	810
Arrive On Green	0.46	0.46	0.24	0.00	0.13	0.43
Sat Flow, veh/h	1795	1572	3647	1610	1767	1870
Grp Volume(v), veh/h	516	71	212	0	138	181
Grp Sat Flow(s),veh/h/ln	1795	1572	1777	1610	1767	1870
Q Serve(g_s), s	19.8	2.3	4.3	0.0	6.6	5.5
Cycle Q Clear(g_c), s	19.8	2.3	4.3	0.0	6.6	5.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	818	716	869		236	810
V/C Ratio(X)	0.63	0.10	0.24		0.59	0.22
Avail Cap(c_a), veh/h	818	716	869		236	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	14.0	27.3	0.0	36.7	16.0
Incr Delay (d2), s/veh	3.7	0.3	0.7	0.0	10.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.9	1.9	0.0	3.5	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.4	14.2	28.0	0.0	46.9	16.6
LnGrp LOS	C	B	C		D	B
Approach Vol, veh/h	587		212			319
Approach Delay, s/veh	21.4		28.0			29.7
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	27.0			44.0	46.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	12.0	22.0			39.0	41.0
Max Q Clear Time (g_c+I1), s	8.6	6.3			7.5	21.8
Green Ext Time (p_c), s	0.2	0.9			0.9	3.3

Intersection Summary

HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

2: US 9 & Gateway Rd
Existing 2023_PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Volume (veh/h)	13	41	325	15	113	457
Future Volume (veh/h)	13	41	325	15	113	457
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1900	1826	1885	1796	1856	1885
Adj Flow Rate, veh/h	14	44	349	16	122	491
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	5	1	7	3	1
Cap, veh/h	22	70	1312	60	273	1047
Arrive On Green	0.06	0.06	0.73	0.73	0.73	0.73
Sat Flow, veh/h	393	1236	1788	82	249	1427
Grp Volume(v), veh/h	59	0	0	365	613	0
Grp Sat Flow(s),veh/h/ln	1658	0	0	1870	1676	0
Q Serve(g_s), s	1.7	0.0	0.0	3.1	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.1	6.1	0.0
Prop In Lane	0.24	0.75		0.04	0.20	
Lane Grp Cap(c), veh/h	94	0	0	1372	1320	0
V/C Ratio(X)	0.63	0.00	0.00	0.27	0.46	0.00
Avail Cap(c_a), veh/h	695	0	0	1372	1320	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.0	0.0	0.0	2.1	2.5	0.0
Incr Delay (d2), s/veh	6.6	0.0	0.0	0.5	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	0.5	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.6	0.0	0.0	2.6	3.7	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	59		365		613	
Approach Delay, s/veh	28.6		2.6		3.7	
Approach LOS	C		A		A	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		40.0			40.0	7.7
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		35.0			35.0	20.0
Max Q Clear Time (g_c+I1), s		0.0			0.0	3.7
Green Ext Time (p_c), s		0.0			0.0	0.1
Intersection Summary						
HCM 6th Ctrl Delay			4.7			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

3: US 9 & Robert Ln/Roberts Ave
Existing 2023_PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	7	11	3	137	22	92	4	241	120	120	339	11
Future Volume (veh/h)	7	11	3	137	22	92	4	241	120	120	339	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1900	1870	418	1900	1885	1856	1900	1381
Adj Flow Rate, veh/h	8	12	3	152	24	102	4	268	133	133	377	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	4	0	2	100	0	1	3	0	35
Cap, veh/h	17	25	6	189	30	127	58	651	319	251	680	20
Arrive On Green	0.03	0.03	0.03	0.20	0.20	0.20	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	635	952	238	950	150	638	4	1199	588	334	1254	37
Grp Volume(v), veh/h	23	0	0	278	0	0	405	0	0	522	0	0
Grp Sat Flow(s),veh/h/ln	1825	0	0	1738	0	0	1791	0	0	1625	0	0
Q Serve(g_s), s	0.8	0.0	0.0	9.8	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	9.8	0.0	0.0	8.6	0.0	0.0	12.2	0.0	0.0
Prop In Lane	0.35		0.13	0.55		0.37	0.01		0.33	0.25		0.02
Lane Grp Cap(c), veh/h	48	0	0	345	0	0	1028	0	0	952	0	0
V/C Ratio(X)	0.48	0.00	0.00	0.81	0.00	0.00	0.39	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	283	0	0	808	0	0	1028	0	0	952	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.0	0.0	0.0	24.7	0.0	0.0	8.7	0.0	0.0	9.4	0.0	0.0
Incr Delay (d2), s/veh	7.3	0.0	0.0	4.4	0.0	0.0	1.1	0.0	0.0	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	4.2	0.0	0.0	3.1	0.0	0.0	4.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	0.0	29.1	0.0	0.0	9.8	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	D	A	A	C	A	A	A	A	A	B	A	A
Approach Vol, veh/h		23			278			405			522	
Approach Delay, s/veh		38.3			29.1			9.8			11.6	
Approach LOS		D			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		6.7		40.0		17.8				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		10.0		35.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		2.8		0.0		11.8				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.1				
Intersection Summary												
HCM 6th Ctrl Delay				15.5								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

1: US 9 & Executive Blvd
No-Build 2026_AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	470	169	211	409	151	197
Future Volume (veh/h)	470	169	211	409	151	197
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1870
Adj Flow Rate, veh/h	528	190	237	0	170	221
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	2	0	3	2
Cap, veh/h	818	728	869		236	810
Arrive On Green	0.46	0.46	0.24	0.00	0.13	0.43
Sat Flow, veh/h	1795	1598	3647	1610	1767	1870
Grp Volume(v), veh/h	528	190	237	0	170	221
Grp Sat Flow(s),veh/h/ln	1795	1598	1777	1610	1767	1870
Q Serve(g_s), s	20.4	6.6	4.9	0.0	8.3	6.8
Cycle Q Clear(g_c), s	20.4	6.6	4.9	0.0	8.3	6.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	818	728	869		236	810
V/C Ratio(X)	0.65	0.26	0.27		0.72	0.27
Avail Cap(c_a), veh/h	818	728	869		236	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	15.1	27.5	0.0	37.4	16.4
Incr Delay (d2), s/veh	3.9	0.9	0.8	0.0	17.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.2	2.1	0.0	4.7	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.8	16.0	28.3	0.0	54.8	17.2
LnGrp LOS	C	B	C		D	B
Approach Vol, veh/h	718		237			391
Approach Delay, s/veh	21.0		28.3			33.5
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	27.0			44.0	46.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	12.0	22.0			39.0	41.0
Max Q Clear Time (g_c+I1), s	10.3	6.9			8.8	22.4
Green Ext Time (p_c), s	0.1	1.1			1.1	4.1

Intersection Summary

HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

2: US 9 & Gateway Rd
 No-Build 2026_AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			4
Traffic Volume (veh/h)	27	123	674	8	39	324
Future Volume (veh/h)	27	123	674	8	39	324
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1574	1870	1885	1722	1737	1870
Adj Flow Rate, veh/h	28	128	702	8	41	338
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	22	2	1	12	11	2
Cap, veh/h	35	158	1241	14	145	1074
Arrive On Green	0.14	0.14	0.67	0.67	0.67	0.67
Sat Flow, veh/h	243	1110	1860	21	103	1610
Grp Volume(v), veh/h	157	0	0	710	379	0
Grp Sat Flow(s),veh/h/ln	1362	0	0	1881	1713	0
Q Serve(g_s), s	5.9	0.0	0.0	10.6	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	10.6	4.4	0.0
Prop In Lane	0.18	0.82		0.01	0.11	
Lane Grp Cap(c), veh/h	194	0	0	1255	1218	0
V/C Ratio(X)	0.81	0.00	0.00	0.57	0.31	0.00
Avail Cap(c_a), veh/h	519	0	0	1255	1218	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.8	0.0	0.0	4.7	3.7	0.0
Incr Delay (d2), s/veh	7.8	0.0	0.0	1.9	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	2.9	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.6	0.0	0.0	6.5	4.3	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	157		710		379	
Approach Delay, s/veh	29.6		6.5		4.3	
Approach LOS	C		A		A	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		40.0			40.0	12.5
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		35.0			35.0	20.0
Max Q Clear Time (g_c+I1), s		0.0			0.0	7.9
Green Ext Time (p_c), s		0.0			0.0	0.5
Intersection Summary						
HCM 6th Ctrl Delay			8.8			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

3: US 9 & Robert Ln/Roberts Ave
 No-Build 2026_AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	15	13	8	145	15	193	6	475	140	49	298	5
Future Volume (veh/h)	15	13	8	145	15	193	6	475	140	49	298	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1900	1885	937	1900	1885	1767	1900	1870
Adj Flow Rate, veh/h	17	15	9	165	17	219	7	540	159	56	339	6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	4	0	1	65	0	1	9	0	2
Cap, veh/h	29	25	15	190	20	252	53	679	198	124	705	12
Arrive On Green	0.04	0.04	0.04	0.27	0.27	0.27	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	743	656	393	699	72	927	5	1407	410	141	1461	24
Grp Volume(v), veh/h	41	0	0	401	0	0	706	0	0	401	0	0
Grp Sat Flow(s),veh/h/ln	1792	0	0	1698	0	0	1822	0	0	1626	0	0
Q Serve(g_s), s	1.6	0.0	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	0.0	0.0	16.3	0.0	0.0	23.7	0.0	0.0	10.1	0.0	0.0
Prop In Lane	0.41		0.22	0.41		0.55	0.01		0.23	0.14		0.01
Lane Grp Cap(c), veh/h	69	0	0	462	0	0	929	0	0	841	0	0
V/C Ratio(X)	0.59	0.00	0.00	0.87	0.00	0.00	0.76	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	247	0	0	702	0	0	929	0	0	841	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.3	0.0	0.0	25.2	0.0	0.0	15.8	0.0	0.0	12.3	0.0	0.0
Incr Delay (d2), s/veh	7.7	0.0	0.0	7.4	0.0	0.0	5.8	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	7.1	0.0	0.0	10.2	0.0	0.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	0.0	0.0	32.6	0.0	0.0	21.7	0.0	0.0	14.3	0.0	0.0
LnGrp LOS	D	A	A	C	A	A	C	A	A	B	A	A
Approach Vol, veh/h		41			401			706			401	
Approach Delay, s/veh		42.1			32.6			21.7			14.3	
Approach LOS		D			C			C			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		7.8		40.0		24.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		10.0		35.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		3.6		0.0		18.3				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				23.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

1: US 9 & Executive Blvd
 No-Build 2026_PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	506	69	212	335	135	175
Future Volume (veh/h)	506	69	212	335	135	175
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1870
Adj Flow Rate, veh/h	569	78	238	0	152	197
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	2	0	3	2
Cap, veh/h	818	728	869		236	810
Arrive On Green	0.46	0.46	0.24	0.00	0.13	0.43
Sat Flow, veh/h	1795	1598	3647	1610	1767	1870
Grp Volume(v), veh/h	569	78	238	0	152	197
Grp Sat Flow(s),veh/h/ln	1795	1598	1777	1610	1767	1870
Q Serve(g_s), s	22.7	2.5	4.9	0.0	7.3	6.0
Cycle Q Clear(g_c), s	22.7	2.5	4.9	0.0	7.3	6.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	818	728	869		236	810
V/C Ratio(X)	0.70	0.11	0.27		0.65	0.24
Avail Cap(c_a), veh/h	818	728	869		236	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	14.0	27.5	0.0	37.0	16.2
Incr Delay (d2), s/veh	4.9	0.3	0.8	0.0	12.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	0.9	2.1	0.0	4.0	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.4	14.3	28.3	0.0	49.8	16.9
LnGrp LOS	C	B	C		D	B
Approach Vol, veh/h	647		238			349
Approach Delay, s/veh	23.2		28.3			31.2
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	27.0			44.0	46.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	12.0	22.0			39.0	41.0
Max Q Clear Time (g_c+I1), s	9.3	6.9			8.0	24.7
Green Ext Time (p_c), s	0.2	1.1			1.0	3.5

Intersection Summary

HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

2: US 9 & Gateway Rd
No-Build 2026_PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	44	346	16	120	499
Future Volume (veh/h)	14	44	346	16	120	499
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1574	1870	1885	1722	1737	1870
Adj Flow Rate, veh/h	15	46	360	17	125	520
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	22	2	1	12	11	2
Cap, veh/h	20	60	1307	62	265	1045
Arrive On Green	0.06	0.06	0.73	0.73	0.73	0.73
Sat Flow, veh/h	332	1019	1786	84	239	1427
Grp Volume(v), veh/h	62	0	0	377	645	0
Grp Sat Flow(s),veh/h/ln	1374	0	0	1870	1665	0
Q Serve(g_s), s	2.1	0.0	0.0	3.2	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	3.2	6.7	0.0
Prop In Lane	0.24	0.74		0.05	0.19	
Lane Grp Cap(c), veh/h	81	0	0	1369	1309	0
V/C Ratio(X)	0.77	0.00	0.00	0.28	0.49	0.00
Avail Cap(c_a), veh/h	575	0	0	1369	1309	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.2	0.0	0.0	2.1	2.6	0.0
Incr Delay (d2), s/veh	14.1	0.0	0.0	0.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.5	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.3	0.0	0.0	2.6	3.9	0.0
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	62		377		645	
Approach Delay, s/veh	36.3		2.6		3.9	
Approach LOS	D		A		A	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		40.0			40.0	7.8
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		35.0			35.0	20.0
Max Q Clear Time (g_c+I1), s		0.0			0.0	4.1
Green Ext Time (p_c), s		0.0			0.0	0.1
Intersection Summary						
HCM 6th Ctrl Delay			5.3			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

3: US 9 & Robert Ln/Roberts Ave
 No-Build 2026_PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	7	12	3	145	23	98	4	257	127	127	360	12
Future Volume (veh/h)	7	12	3	145	23	98	4	257	127	127	360	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1900	1885	937	1900	1885	1767	1900	1870
Adj Flow Rate, veh/h	8	14	3	165	26	111	5	292	144	144	409	14
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	4	0	1	65	0	1	9	0	2
Cap, veh/h	16	29	6	202	32	136	58	639	311	248	654	21
Arrive On Green	0.03	0.03	0.03	0.21	0.21	0.21	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	586	1025	220	949	150	639	5	1201	585	337	1231	40
Grp Volume(v), veh/h	25	0	0	302	0	0	441	0	0	567	0	0
Grp Sat Flow(s),veh/h/ln	1831	0	0	1738	0	0	1790	0	0	1608	0	0
Q Serve(g_s), s	0.9	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0	10.9	0.0	0.0	10.0	0.0	0.0	15.2	0.0	0.0
Prop In Lane	0.32		0.12	0.55		0.37	0.01		0.33	0.25		0.02
Lane Grp Cap(c), veh/h	51	0	0	369	0	0	1007	0	0	923	0	0
V/C Ratio(X)	0.49	0.00	0.00	0.82	0.00	0.00	0.44	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	278	0	0	792	0	0	1007	0	0	923	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.5	0.0	0.0	24.7	0.0	0.0	9.6	0.0	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.0	0.0	4.5	0.0	0.0	1.4	0.0	0.0	3.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	4.7	0.0	0.0	3.7	0.0	0.0	5.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	0.0	0.0	29.2	0.0	0.0	11.0	0.0	0.0	13.6	0.0	0.0
LnGrp LOS	D	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		25			302			441			567	
Approach Delay, s/veh		38.6			29.2			11.0			13.6	
Approach LOS		D			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		6.8		40.0		19.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		10.0		35.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		2.9		0.0		12.9				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.1				
Intersection Summary												
HCM 6th Ctrl Delay				16.7								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

1: US 9 & Executive Blvd
Build 2026_AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	472	169	213	413	151	198
Future Volume (veh/h)	472	169	213	413	151	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1870
Adj Flow Rate, veh/h	530	190	239	0	170	222
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	2	0	3	2
Cap, veh/h	818	728	869		236	810
Arrive On Green	0.46	0.46	0.24	0.00	0.13	0.43
Sat Flow, veh/h	1795	1598	3647	1610	1767	1870
Grp Volume(v), veh/h	530	190	239	0	170	222
Grp Sat Flow(s),veh/h/ln	1795	1598	1777	1610	1767	1870
Q Serve(g_s), s	20.5	6.6	4.9	0.0	8.3	6.9
Cycle Q Clear(g_c), s	20.5	6.6	4.9	0.0	8.3	6.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	818	728	869		236	810
V/C Ratio(X)	0.65	0.26	0.28		0.72	0.27
Avail Cap(c_a), veh/h	818	728	869		236	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	15.1	27.5	0.0	37.4	16.4
Incr Delay (d2), s/veh	4.0	0.9	0.8	0.0	17.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.2	2.1	0.0	4.7	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.9	16.0	28.3	0.0	54.8	17.2
LnGrp LOS	C	B	C		D	B
Approach Vol, veh/h	720		239			392
Approach Delay, s/veh	21.1		28.3			33.5
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	27.0			44.0	46.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	12.0	22.0			39.0	41.0
Max Q Clear Time (g_c+I1), s	10.3	6.9			8.9	22.5
Green Ext Time (p_c), s	0.1	1.1			1.1	4.1

Intersection Summary

HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

2: US 9 & Gateway Rd
Build 2026_AM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			T
Traffic Volume (veh/h)	27	123	675	8	39	326
Future Volume (veh/h)	27	123	675	8	39	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1574	1870	1885	1722	1737	1870
Adj Flow Rate, veh/h	28	128	703	8	41	340
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	22	2	1	12	11	2
Cap, veh/h	35	158	1241	14	144	1075
Arrive On Green	0.14	0.14	0.67	0.67	0.67	0.67
Sat Flow, veh/h	243	1110	1860	21	102	1612
Grp Volume(v), veh/h	157	0	0	711	381	0
Grp Sat Flow(s),veh/h/ln	1362	0	0	1881	1714	0
Q Serve(g_s), s	5.9	0.0	0.0	10.6	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	10.6	4.5	0.0
Prop In Lane	0.18	0.82		0.01	0.11	
Lane Grp Cap(c), veh/h	194	0	0	1255	1219	0
V/C Ratio(X)	0.81	0.00	0.00	0.57	0.31	0.00
Avail Cap(c_a), veh/h	519	0	0	1255	1219	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.8	0.0	0.0	4.7	3.7	0.0
Incr Delay (d2), s/veh	7.8	0.0	0.0	1.9	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	2.9	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.6	0.0	0.0	6.5	4.3	0.0
LnGrp LOS	C	A	A	A	A	A
Approach Vol, veh/h	157		711		381	
Approach Delay, s/veh	29.6		6.5		4.3	
Approach LOS	C		A		A	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		40.0			40.0	12.5
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		35.0			35.0	20.0
Max Q Clear Time (g_c+I1), s		0.0			0.0	7.9
Green Ext Time (p_c), s		0.0			0.0	0.5
Intersection Summary						
HCM 6th Ctrl Delay			8.8			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

3: US 9 & Robert Ln/Roberts Ave
 Build 2026_AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	15	13	8	145	15	193	6	476	140	49	300	5
Future Volume (veh/h)	15	13	8	145	15	193	6	476	140	49	300	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1900	1885	937	1900	1885	1767	1900	1870
Adj Flow Rate, veh/h	17	15	9	165	17	219	7	541	159	56	341	6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	4	0	1	65	0	1	9	0	2
Cap, veh/h	29	25	15	190	20	252	53	679	198	124	706	12
Arrive On Green	0.04	0.04	0.04	0.27	0.27	0.27	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	743	656	393	699	72	927	5	1407	410	140	1463	24
Grp Volume(v), veh/h	41	0	0	401	0	0	707	0	0	403	0	0
Grp Sat Flow(s),veh/h/ln	1792	0	0	1698	0	0	1822	0	0	1627	0	0
Q Serve(g_s), s	1.6	0.0	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	0.0	0.0	16.3	0.0	0.0	23.7	0.0	0.0	10.1	0.0	0.0
Prop In Lane	0.41		0.22	0.41		0.55	0.01		0.22	0.14		0.01
Lane Grp Cap(c), veh/h	69	0	0	462	0	0	929	0	0	841	0	0
V/C Ratio(X)	0.59	0.00	0.00	0.87	0.00	0.00	0.76	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	247	0	0	702	0	0	929	0	0	841	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.3	0.0	0.0	25.2	0.0	0.0	15.9	0.0	0.0	12.3	0.0	0.0
Incr Delay (d2), s/veh	7.7	0.0	0.0	7.4	0.0	0.0	5.8	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	7.1	0.0	0.0	10.2	0.0	0.0	4.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	0.0	0.0	32.6	0.0	0.0	21.7	0.0	0.0	14.3	0.0	0.0
LnGrp LOS	D	A	A	C	A	A	C	A	A	B	A	A
Approach Vol, veh/h		41			401			707			403	
Approach Delay, s/veh		42.1			32.6			21.7			14.3	
Approach LOS		D			C			C			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		7.8		40.0		24.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		35.0		10.0		35.0		30.0				
Max Q Clear Time (g_c+I1), s		0.0		3.6		0.0		18.3				
Green Ext Time (p_c), s		0.0		0.0		0.0		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				23.1								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	FF		FB			FB
Traffic Vol, veh/h	0	0	781	0	1	672
Future Vol, veh/h	0	0	781	0	1	672
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	0	814	0	1	700

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1516	814	0	0	814
Stage 1	814	-	-	-	-
Stage 2	702	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	133	381	-	-	822
Stage 1	439	-	-	-	-
Stage 2	495	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	133	381	-	-	822
Mov Cap-2 Maneuver	133	-	-	-	-
Stage 1	439	-	-	-	-
Stage 2	494	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	822
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s)	-	-	0	9.4
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑			↑
Traffic Vol, veh/h	2	6	780	1	2	671
Future Vol, veh/h	2	6	780	1	2	671
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	2	6	813	1	2	699

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1517	814	0	0	814
Stage 1	814	-	-	-	-
Stage 2	703	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	133	381	-	-	822
Stage 1	439	-	-	-	-
Stage 2	495	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	132	381	-	-	822
Mov Cap-2 Maneuver	132	-	-	-	-
Stage 1	439	-	-	-	-
Stage 2	493	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	259	822
HCM Lane V/C Ratio	-	-	0.032	0.003
HCM Control Delay (s)	-	-	19.4	9.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

1: US 9 & Executive Blvd
Build 2026_PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	510	69	213	339	135	177
Future Volume (veh/h)	510	69	213	339	135	177
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1870	1900	1856	1870
Adj Flow Rate, veh/h	573	78	239	0	152	199
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	2	0	3	2
Cap, veh/h	818	728	869		236	810
Arrive On Green	0.46	0.46	0.24	0.00	0.13	0.43
Sat Flow, veh/h	1795	1598	3647	1610	1767	1870
Grp Volume(v), veh/h	573	78	239	0	152	199
Grp Sat Flow(s),veh/h/ln	1795	1598	1777	1610	1767	1870
Q Serve(g_s), s	23.0	2.5	4.9	0.0	7.3	6.1
Cycle Q Clear(g_c), s	23.0	2.5	4.9	0.0	7.3	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	818	728	869		236	810
V/C Ratio(X)	0.70	0.11	0.28		0.65	0.25
Avail Cap(c_a), veh/h	818	728	869		236	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	14.0	27.5	0.0	37.0	16.2
Incr Delay (d2), s/veh	5.0	0.3	0.8	0.0	12.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.9	2.1	0.0	4.0	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.6	14.3	28.3	0.0	49.8	16.9
LnGrp LOS	C	B	C		D	B
Approach Vol, veh/h	651		239			351
Approach Delay, s/veh	23.3		28.3			31.2
Approach LOS	C		C			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	27.0			44.0	46.0
Change Period (Y+Rc), s	5.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	12.0	22.0			39.0	41.0
Max Q Clear Time (g_c+I1), s	9.3	6.9			8.1	25.0
Green Ext Time (p_c), s	0.2	1.1			1.0	3.5

Intersection Summary

HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 123-207; 900 N Broadway

2: US 9 & Gateway Rd
 Build 2026_PM



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	14	44	346	16	120	501
Future Volume (veh/h)	14	44	346	16	120	501
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1574	1870	1885	1722	1737	1870
Adj Flow Rate, veh/h	15	47	372	17	129	539
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	22	2	1	12	11	2
Cap, veh/h	19	61	1309	60	263	1043
Arrive On Green	0.06	0.06	0.73	0.73	0.73	0.73
Sat Flow, veh/h	327	1024	1789	82	237	1425
Grp Volume(v), veh/h	63	0	0	389	668	0
Grp Sat Flow(s),veh/h/ln	327	0	0	1870	1662	0
Q Serve(g_s), s	2.2	0.0	0.0	3.4	0.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.0	3.4	7.1	0.0
Prop In Lane	0.24	0.75		0.04	0.19	
Lane Grp Cap(c), veh/h	81	0	0	1369	1306	0
V/C Ratio(X)	0.77	0.00	0.00	0.28	0.51	0.00
Avail Cap(c_a), veh/h	574	0	0	1369	1306	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.2	0.0	0.0	2.2	2.7	0.0
Incr Delay (d2), s/veh	14.3	0.0	0.0	0.5	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	0.5	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.5	0.0	0.0	2.7	4.1	0.0
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	63		389		668	
Approach Delay, s/veh	36.5		2.7		4.1	
Approach LOS	D		A		A	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		40.0			40.0	7.8
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		35.0			35.0	20.0
Max Q Clear Time (g_c+I1), s		0.0			0.0	4.2
Green Ext Time (p_c), s		0.0			0.0	0.2
Intersection Summary						
HCM 6th Ctrl Delay			5.4			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
123-207; 900 N Broadway

3: US 9 & Robert Ln/Roberts Ave
Build 2026_PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	7	12	3	145	23	98	4	259	127	127	375	12
Future Volume (veh/h)	7	12	3	145	23	98	4	259	127	127	375	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1841	1900	1885	937	1900	1885	1767	1900	1870
Adj Flow Rate, veh/h	8	14	3	165	26	111	5	294	144	144	426	14
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	4	0	1	65	0	1	9	0	2
Cap, veh/h	16	29	6	202	32	136	58	640	309	243	662	21
Arrive On Green	0.03	0.03	0.03	0.21	0.21	0.21	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	586	1025	220	949	150	639	5	1204	582	328	1246	39
Grp Volume(v), veh/h	25	0	0	302	0	0	443	0	0	584	0	0
Grp Sat Flow(s),veh/h/ln	1831	0	0	1738	0	0	1791	0	0	1613	0	0
Q Serve(g_s), s	0.9	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0	10.9	0.0	0.0	10.1	0.0	0.0	15.9	0.0	0.0
Prop In Lane	0.32		0.12	0.55		0.37	0.01		0.33	0.25		0.02
Lane Grp Cap(c), veh/h	51	0	0	369	0	0	1007	0	0	926	0	0
V/C Ratio(X)	0.49	0.00	0.00	0.82	0.00	0.00	0.44	0.00	0.00	0.63	0.00	0.00
Avail Cap(c_a), veh/h	278	0	0	792	0	0	1007	0	0	926	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.5	0.0	0.0	24.7	0.0	0.0	9.6	0.0	0.0	10.7	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.0	0.0	4.5	0.0	0.0	1.4	0.0	0.0	3.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	4.7	0.0	0.0	3.7	0.0	0.0	5.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	0.0	0.0	29.2	0.0	0.0	11.0	0.0	0.0	13.9	0.0	0.0
LnGrp LOS	D	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		25		302			443			584		
Approach Delay, s/veh		38.6		29.2			11.0			13.9		
Approach LOS		D		C			B			B		
Timer - Assigned Phs		2		4			6			8		
Phs Duration (G+Y+Rc), s		40.0		6.8			40.0			19.0		
Change Period (Y+Rc), s		5.0		5.0			5.0			5.0		
Max Green Setting (Gmax), s		35.0		10.0			35.0			30.0		
Max Q Clear Time (g_c+I1), s		0.0		2.9			0.0			12.9		
Green Ext Time (p_c), s		0.0		0.0			0.0			1.1		
Intersection Summary												
HCM 6th Ctrl Delay				16.8								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	390	0	1	690
Future Vol, veh/h	0	0	390	0	1	690
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	0	406	0	1	719

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1127	406	0	0	406
Stage 1	406	-	-	-	-
Stage 2	721	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	228	649	-	-	1164
Stage 1	677	-	-	-	-
Stage 2	485	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	228	649	-	-	1164
Mov Cap-2 Maneuver	228	-	-	-	-
Stage 1	677	-	-	-	-
Stage 2	485	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1164
HCM Lane V/C Ratio	-	-	-	0.001
HCM Control Delay (s)	-	-	0	8.1
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑			↑
Traffic Vol, veh/h	2	5	388	2	4	689
Future Vol, veh/h	2	5	388	2	4	689
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	2	5	404	2	4	718

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1131	405	0	0	406	0
Stage 1	405	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	227	650	-	-	1164	-
Stage 1	678	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	226	650	-	-	1164	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	480	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	423	1164
HCM Lane V/C Ratio	-	-	0.017	0.004
HCM Control Delay (s)	-	-	13.7	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0