

Nashoba Satellite Emergency Facility

490 Main Street
Groton, Massachusetts

PREPARED FOR

UMass Memorial Health Care, Inc.
281 Lincoln Street
Worcester, Massachusetts 01605

PREPARED BY



120 Front Street, Suite 500
Worcester, Massachusetts 01608
617.924.1770

June 20, 2025

Table of Contents

	Executive Summary	v
	Project Description.....	v
	Methodology.....	v
	Existing Conditions	vi
	Future Traffic Volumes and Operations.....	vi
	Conclusions.....	vi
1	Introduction	7
	Project Description	7
	Study Methodology	8
2	Existing Conditions.....	10
	Study Area.....	10
	Study Area Roadways	11
	Study Area Intersections.....	11
	Pedestrian, Bicycle, and Transit Facilities	14
	Traffic Volumes	14
	Crash History.....	17
3	Future Conditions	20
	Site Access and Parking.....	20
	Sight Distance Evaluation.....	21
	Background Traffic Growth	22
	Historic Traffic Growth.....	22
	Site-Specific Growth.....	22
	Project-Generated Traffic Volumes.....	25
	Trip Generation.....	25
	Trip Distribution	26
4	Traffic Operation Analysis	31
	Level-of-Service Criteria	31
	Intersection Capacity Analysis.....	32
	Traffic Signal Warrant Analysis	36
5	Conclusions	37

List of Tables

Table No.	Description	Page
Table 1	Automatic Traffic Recorder (ATR) Data.....	15
Table 2	2017-2021 Vehicle Crash Summary.....	18
Table 3	Sight Distance Summary	22
Table 4	Trip Generation Summary.....	26
Table 5	Trip Distribution Summary.....	27
Table 6	Traffic Volume Changes.....	27
Table 7	Level-of-Service Criteria.....	32
Table 8	Intersection Operations Analysis.....	33
Table 9	Traffic Signal Warrant Analysis Summary – Main Street at Mill Street	36

List of Figures

Figure No.	Description	Page
Figure 1	Site Location and Study Area	9
Figure 2	Existing Traffic Control, Lane Usage, and Pedestrian Facilities	13
Figure 3	Main Street ATR Data	15
Figure 4	2025 Existing Conditions Peak Hour Traffic Volumes.....	16
Figure 5	2032 No Build Conditions Peak Hour Traffic Volumes.....	24
Figure 6	Trip Distribution Map.....	28
Figure 7	Peak Hour Project Generated Trips.....	29
Figure 8	2032 Build Conditions Peak Hour Traffic Volumes	30



Executive Summary

On behalf of UMass Memorial Healthcare (the "Proponent"), VHB has prepared this Transportation Impact Assessment (TIA) to evaluate the transportation characteristics of a proposed satellite emergency facility building (the "Current Project") and additional potential medical office space (the "Potential Future Project") to be located at 490 Main Street in Groton, Massachusetts (the Site). In total, the Project will consist of 34,200 sf of building space upon completion of the full build out of the Site.

Project Description

The Project includes the construction of a 18,500-square foot satellite emergency facility (the "Current Project") and a 15,700-square foot potential medical office building (the "Potential Future Project") with associated MedFlight helipad on an approximately 7-acre site.

Access to the Project site will be provided by two new full-access curb cuts on the east side of Main Street. The northern curb cut will be constructed opposite Mill Street and will be operate under stop sign control. The southern curb cut will be provided approximately 525 feet south of Mill Street and will also operate under stop sign control. These curb cuts will require a MassDOT access permit.

A total of 74 parking spaces will be constructed as part of the Current Project and an additional 71 parking spaces will be constructed as part of the Potential Future Project for a total of 145 parking spaces on the site at the completion of the full build out of the Project. A total of 16 parking spaces will be equipped with electric vehicle (EV) charging capabilities as part of the Current Project parking supply.

Methodology

The TIA was conducted in accordance with the Massachusetts Department of Transportation (MassDOT) guidelines for the preparation of traffic impact assessment. Specifically, the TIA includes an assessment of existing traffic conditions in the study area; the development of future traffic conditions; and provides an operations analysis of peak hour traffic conditions.

The TIA reviews traffic operations during the peak morning and afternoon periods of traffic within the study area along Main Street, which is the primary roadway to serve the Project Site. The traffic analysis is based on new traffic counts conducted in April 2025.

Existing Conditions

An evaluation of the existing conditions in the study area was conducted to review roadway geometry, traffic controls, traffic volumes, traffic safety, pedestrian, transit, and bicycle facilities. Peak period traffic volumes were conducted on Wednesday April 13, 2025 at eight intersections along Main Street and daily traffic counts were conducted along Main Street.

A review of existing pedestrian, bicycle, and nearby transit facilities was also conducted. Sidewalks are provided along the west side of Main Street between 525 Main Street and 365 Main Street and on the east side of Main Street south of 356 Main Street. Bicycle activity shares the roadway with passenger vehicles. The Nashua River Rail Trail crosses Main Street via a grade separated crossing immediately south of the intersection of Main Street at Arlington Street. Public transportation services within the Town of Groton are limited to door-to-door transportation services provided by the Groton Council on Aging. The closest MBTA services are provided by the Fitchburg Line of the Commuter Rail system in Ayer, approximately 4 miles south of the Project site.

Future Traffic Volumes and Operations

Independent of the Project, traffic volumes on the roadway network under Future conditions were assumed to include existing traffic and new traffic resulting from background traffic growth. The Future conditions were developed by applying a half-percent annual traffic growth rate and adding traffic volumes from specific projects that were identified by Town of Groton staff.

Peak hour trip generation estimates were calculated using information provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. Estimates were developed for both the Current Project (18,500 sf Satellite Emergency Facility) and the Potential Future Project (15,700 sf Medical Office Building). Based on the estimates, the full build out of the Project is expected to generate a total of 1,030 trips (515 entering and 515 exiting) on a daily basis, 65 trips (45 entering and 20 exiting) during the weekday morning peak hour, and 95 trips (356 entering and 60 exiting) during the weekday evening peak hour.

Conclusions

Overall, the TIA finds that the Project would generate relatively minor volume of new traffic during the peak periods and that the existing roadway infrastructure can support the additional traffic estimated for the Project. Capacity and geometric improvements to public roadways and intersections will not be required to support the development.

1

Introduction

VHB has prepared this Transportation Impact Assessment (the “Study”) on behalf of UMass Memorial Healthcare (the “Proponent”) in support of a proposed satellite emergency facility and medical office building (the “Project”) located at 490 Main Street in Groton, Massachusetts. The location of the Site is shown in Figure 1.

Project Description

The Project includes the construction of a 18,500-square foot satellite emergency facility (the “Current Project”) and a 15,700-square foot medical office building (the “Potential Future Project”) with associated MedFlight helipad on an approximately 7-acre site located at 490 Main Street in Groton, Massachusetts (the “Site,” or “Project Site”).

Access to the Project site will be provided by two new full-access curb cuts on the east side of Main Street. The northern curb cut will be constructed opposite Mill Street and will be operate under stop sign control. The southern curb cut will be provided approximately 525 feet south of Mill Street and will operate under stop sign control. These curb cuts will require a MassDOT access permit.

A total of 74 parking spaces will be constructed as part of the Current Project and an additional 71 parking spaces will be constructed as part of the Potential Future Project for a total of 145 parking spaces on the site at the completion of the full build out of the Project. A total of 16 parking spaces will be equipped with electric vehicle (EV) charging capabilities as part of the Current Project parking supply.

The build out of both the Current Project and the Potential Future Project, is not expected to have noticeable effects to operations along the adjacent roadways and at other study area intersections. Capacity and operational improvements to the study intersections are not necessary to support the Project.

Study Methodology

The study area for the preparation of the TIA was developed based on an understanding of the area transportation network and the characteristics of the Project. Specifically, the study area includes the segment of Main Street (MA Route 119) between Fitchs Bridge Road to the north and Champney Street to the south. The study area selected is consistent with a recent traffic study conducted for a residential project located at 500 Main Street. The Project location and Study area are shown in Figure 1.

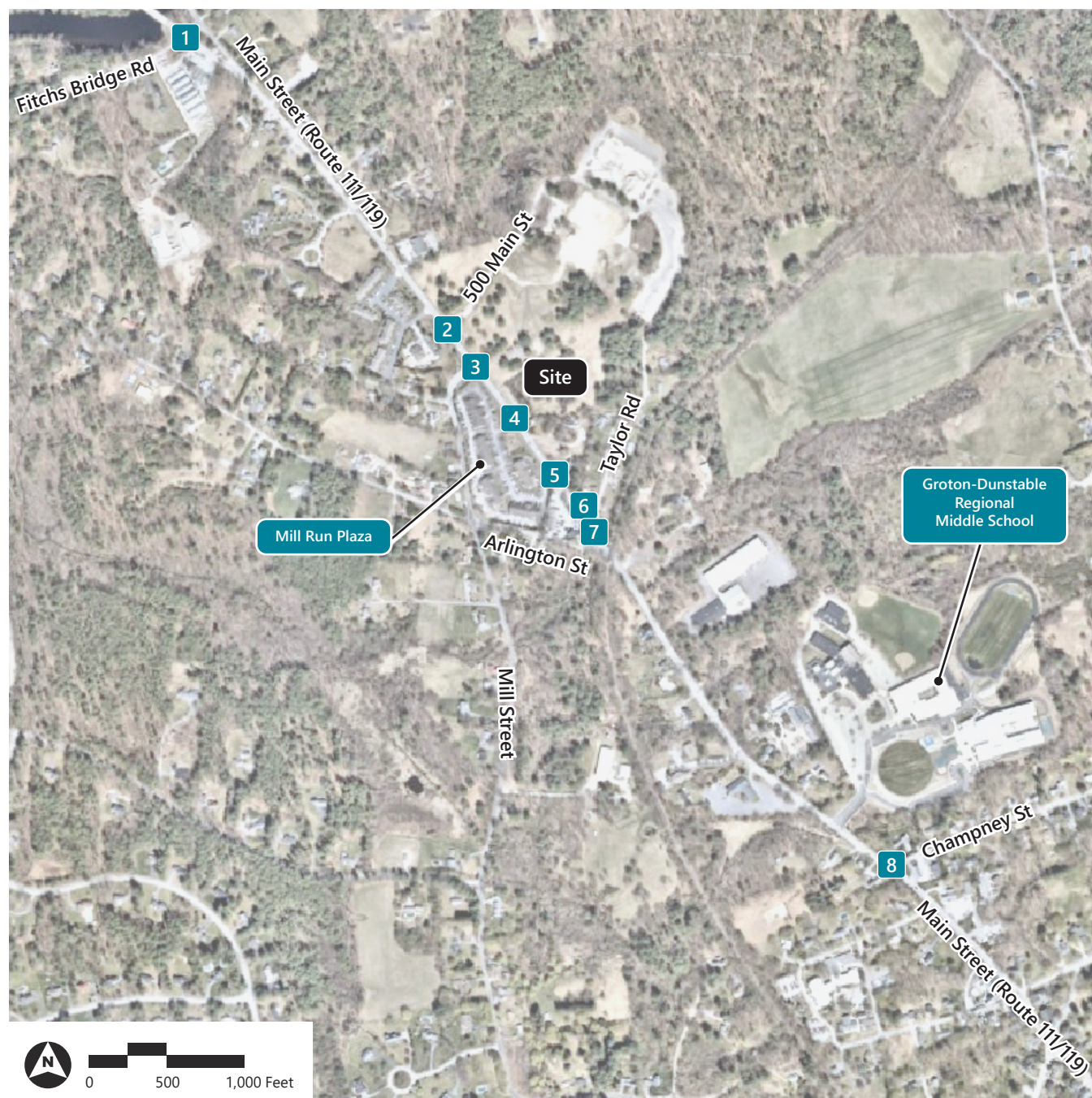
This study was conducted in accordance with the Massachusetts Department of Transportation (MassDOT) Traffic Impact Assessment guidelines.

This Study was conducted in three stages:

- › The first stage involved a review of the Project's transportation characteristics to assist in the development of the study area for the Project.
- › The second stage involved an assessment of existing traffic conditions in the study area and included an inventory of roadway geometry, observations of traffic flow, collection of daily and peak period traffic counts and parking data collection.
- › The third stage involved developing future traffic conditions with and without the Project and were projected to a seven-year planning horizon and analyzed. The future traffic conditions consider a general background growth rate, and traffic expected to be generated by planned development projects in the area. Specific travel demand forecasts were evaluated for the Project along with future traffic demands due to expected traffic growth independent of the Project. The traffic analysis identified existing and projected future roadway capacities, and helped determine that the existing transportation infrastructure in the area can support the Project without the need for any capacity improvements.

Figure 1: Project Location and Study Area

Nashoba Satellite Emergency Facility | Groton, MA



Legend:

- 1 Main Street at Fitchs Bridge Road
- 2 Main Street at 500 Main Street Driveway
- 3 Main Street at Mill Street
- 4 Main Street at Mill Run Plaza North Driveway
- 5 Main Street at Mill Run Plaza South Driveway
- 6 Main Street at Taylor Road
- 7 Main Street at Arlington Street
- 8 Main Street at Champney Street

2

Existing Conditions

Evaluation of the transportation impacts associated with the Project requires a thorough understanding of the existing transportation conditions in the Project study area including roadway geometry, traffic controls, daily and peak hour traffic flow, and traffic safety data. Each of these elements is described in detail below.

Study Area

Based on an understanding of the area roadway network, the expected transportation characteristics of the Project, and a review of traffic studies conducted for recent projects, a study area was defined to encompass roadway segments that would be used the most by Project traffic.

The following intersections were analyzed as part of the primary study area:

- › Main Street (MA Route 119) at Fitchs Bridge Road
- › Main Street at 500 Main Street driveway
- › Main Street at Mill Street and Site driveway
- › Main Street at Mill Run Plaza north driveway
- › Main Street at Mill Run Plaza south driveway
- › Main Street at Arlington Street
- › Main Street at Taylor Road
- › Main Street at Champney Street

The study area intersections are shown in Figure 1.

The existing conditions evaluation consisted of an inventory of the traffic control, roadway, driveway and intersection geometry in the study area, the collection of daily and peak hour traffic volumes, and a review of recent crash history.

Study Area Roadways

Main Street (MA Route 111/119)

Main Street is designated as Massachusetts Routes 111 and 119 and is classified as a principal arterial roadway and is under MassDOT jurisdiction. The speed limit along Main Street is 40 miles per hour (mph). Main Street generally travels in a north-south direction through the study area between the Pepperell town line to the north and Old Ayer Road to the south, where Main Street becomes Boston Road. Main Street consists of a single lane in each direction through the study area. Bicycle activity on Main Street shares the roadway with passenger vehicles within the study area. A sidewalk is provided along the west side of Main Street between 525 Main Street and 365 Main Street and on the east side of Main Street south of 356 Main Street.

Study Area Intersections

The study area intersections are described below. Figure 2 shows lane configuration and traffic control at the study intersections.

Main Street at Fitchs Bridge Road

Fitchs Bridge Road intersects Main Street from the east and west to form this four-legged unsignalized intersection. The Fitchs Bridge Road approaches consist of single travel lanes that operate under stop sign control. The Main Street northbound and southbound approaches consist of single travel lanes. Land uses at the intersection consist of commercial properties and wooded areas.

Main Street at 500 Main Street driveway

The 500 Main Street driveway intersects Main Street from the east to form this three-legged unsignalized intersection. The driveway approach consists of a single lane that operates under stop control although a stop sign is not provided. This driveway will serve a future residential development at 500 Main Street and will be placed under stop sign control. The Main Street northbound and southbound approaches consist of single travel lanes. Land uses at the intersection consist of commercial properties, future residential development, and the Project site.

Main Street at Mill Street and Site driveway

Mill Street intersects Main Street from the west to form this three-legged unsignalized intersection. The Project will construct a driveway on the east side of Main Street, opposite Mill Street to form a four-legged intersection. The Mill Street eastbound approach consists of a single lane under stop sign control. The Main Street northbound and southbound

approaches consist of single travel lanes. The proposed site driveway will operate as a single lane approach under stop sign control. Land use at the intersection consists of commercial properties and the Project site.

Main Street at Mill Run Plaza north driveway

The Mill Run Plaza northern driveway intersects Main Street from the west to form this three-legged unsignalized intersection. The driveway eastbound approach consists of a single lane under stop control although a stop sign is not provided. The Main Street northbound and southbound approaches consist of single travel lanes. Land use at the intersection consists of commercial properties and the Project site.

Main Street at Mill Run Plaza south driveway

The Mill Run Plaza southern driveway intersects Main Street from the west to form this three-legged unsignalized intersection. The driveway eastbound approach consists of a single lane under stop sign control. The Main Street northbound and southbound approaches consist of single travel lanes. Land use at the intersection consists of commercial and residential properties.

Main Street at Taylor Road

Taylor Road intersects Main Street from the east to form this three-legged unsignalized intersection. The Taylor Road westbound approach consists of a single lane under stop sign control. The Main Street northbound and southbound approaches consist of single travel lanes. Land use at the intersection consists of commercial properties and wooded areas.

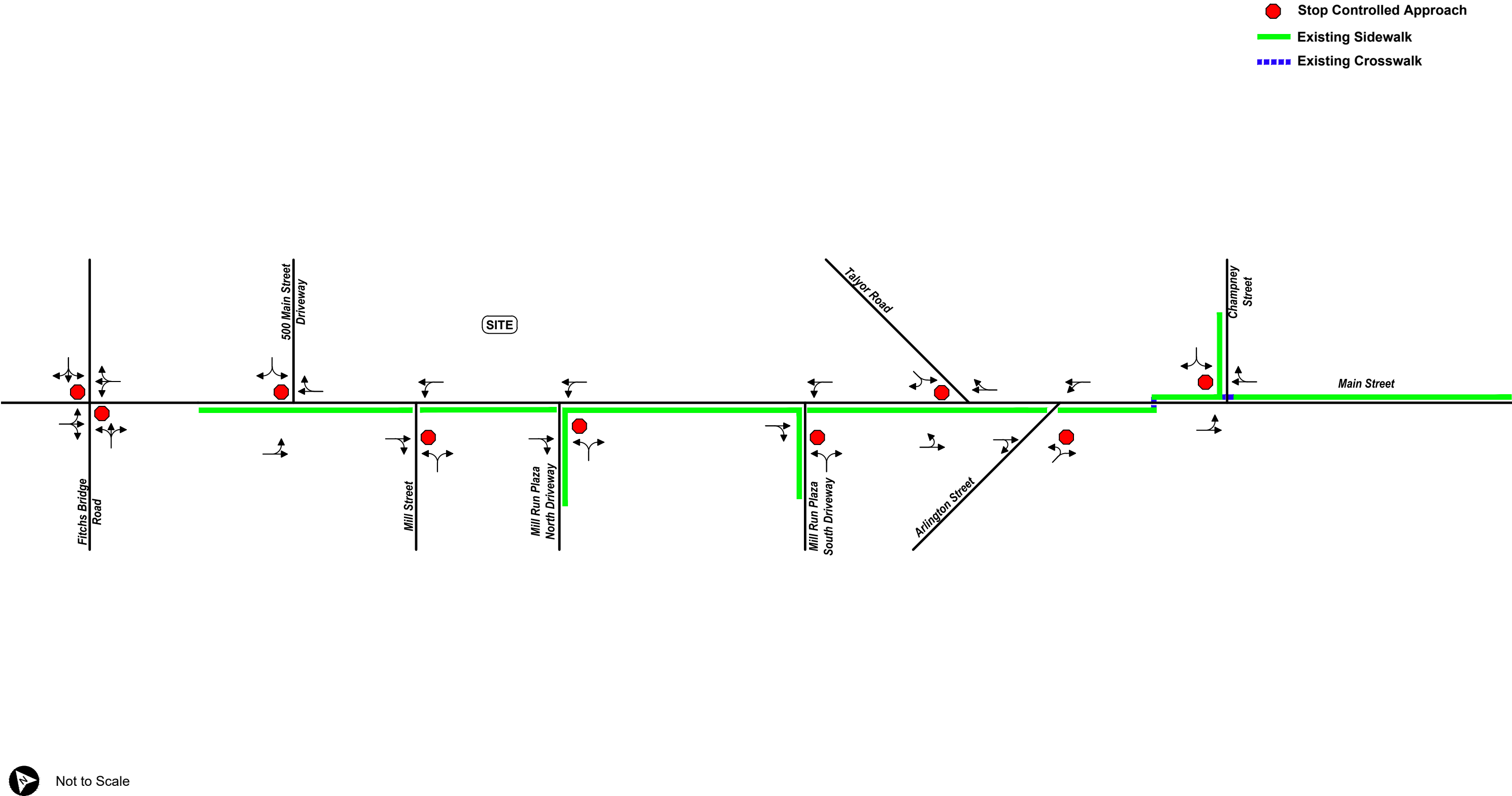
Main Street at Arlington Street

Arlington Street intersects Main Street from the west to form this three-legged unsignalized intersection. The Arlington Street eastbound approach consists of a single lane under stop sign control. The Main Street northbound and southbound approaches consist of single travel lanes. Land use at the intersection consists of commercial properties and wooded areas. The Nashua River Rail Trail crosses Main Street immediately to the south of Arlington Street via a grade separated crossing.

Main Street at Champney Street

Champney Street intersects Main Street from the east to form this three-legged unsignalized intersection. The Champney Street westbound approach consists of a single lane under stop sign control. The Main Street northbound and southbound approaches consist of single travel lanes. Land use at the intersection consists of commercial and residential properties. A sidewalk is provided on the east side of Main Street and a crosswalk is provided across the Champney Street leg of the intersection.

Figure 2: Existing Traffic Control, Lane Usage, and Pedestrian Facilities
Nashoba Satellite Emergency Facility | Groton, MA



Pedestrian, Bicycle, and Transit Facilities

An inventory of pedestrian and bicycle facilities within the study area was conducted in April 2025. In general, there are no marked bicycle accommodations within the study area. Bicycles generally share the roadways with motorists on all study area roadways. The volume of observed bicycle activity as part of the traffic counts conducted for the study was negligible.

Sidewalks are provided along the west side of Main Street between 525 Main Street and 365 Main Street and on the east side of Main Street east of 356 Main Street. Bicycle activity shares the roadway with passenger vehicles. The Nashua River Rail Trail crosses Main Street via a grade separated crossing immediately south of the intersection of Main Street at Arlington Street. Public transportation services within the Town of Groton are limited to door-to-door transportation services provided by the Groton Council on Aging. The closest MBTA services are provided by the Fitchburg Line of the Commuter Rail system in Ayer, approximately 4 miles south of the Project site.

Traffic Volumes

Traffic volumes for the study area roadways and intersections were obtained from new traffic counts conducted in April 2025.

The April 2025 turning movement counts (TMCs) were conducted during the weekday morning (7:00 – 9:00 AM) and weekday evening (4:00 – 6:00 PM) peak periods on Wednesday April 16, 2025, at the study area intersections.

A review of the most recent MassDOT seasonal factors indicates that traffic volumes in April are above average month conditions and as such, no seasonal adjustment factor was applied to the TMCs.

The April 2025 counts include 48-hour automatic traffic recorder (ATR) counts along Main Street, south of Mill Street to capture daily traffic trends. The ATR data for Main Street includes traffic volumes, speed data, and vehicle classification. Based on the detailed ATR counts, the peak hours of traffic on Main Street Cutoff occur between 7:15 – 8:15 AM and 4:00 – 5:00 PM.

The ATR data is presented in Table 1 and Figure 3. The 2025 Existing conditions peak hour traffic volume networks are presented in Figure 4. Detailed traffic data is provided in the Appendix.

Table 1 Automatic Traffic Recorder (ATR) Data

	Daily ^a	Weekday Morning Peak Hour			Weekday Afternoon Peak Hour		
		Volume ^b	K Factor ^c	Dir. Dist. ^d	Volume	K Factor	Dir. Dist.
Main Street, south of Mill Street	13,500	1,095	8%	77% SB	1,200	9%	73% NB

Source: ATR counts collected on April 16, 2025

a Average daily traffic (ADT) volume in vehicles per day

b Peak period traffic volumes in vehicles per hour

c Percentage of daily volume that occurs during the peak hour

d Percentage of vehicles traveling in one direction during the peak hour

Figure 3 Main Street ATR Data

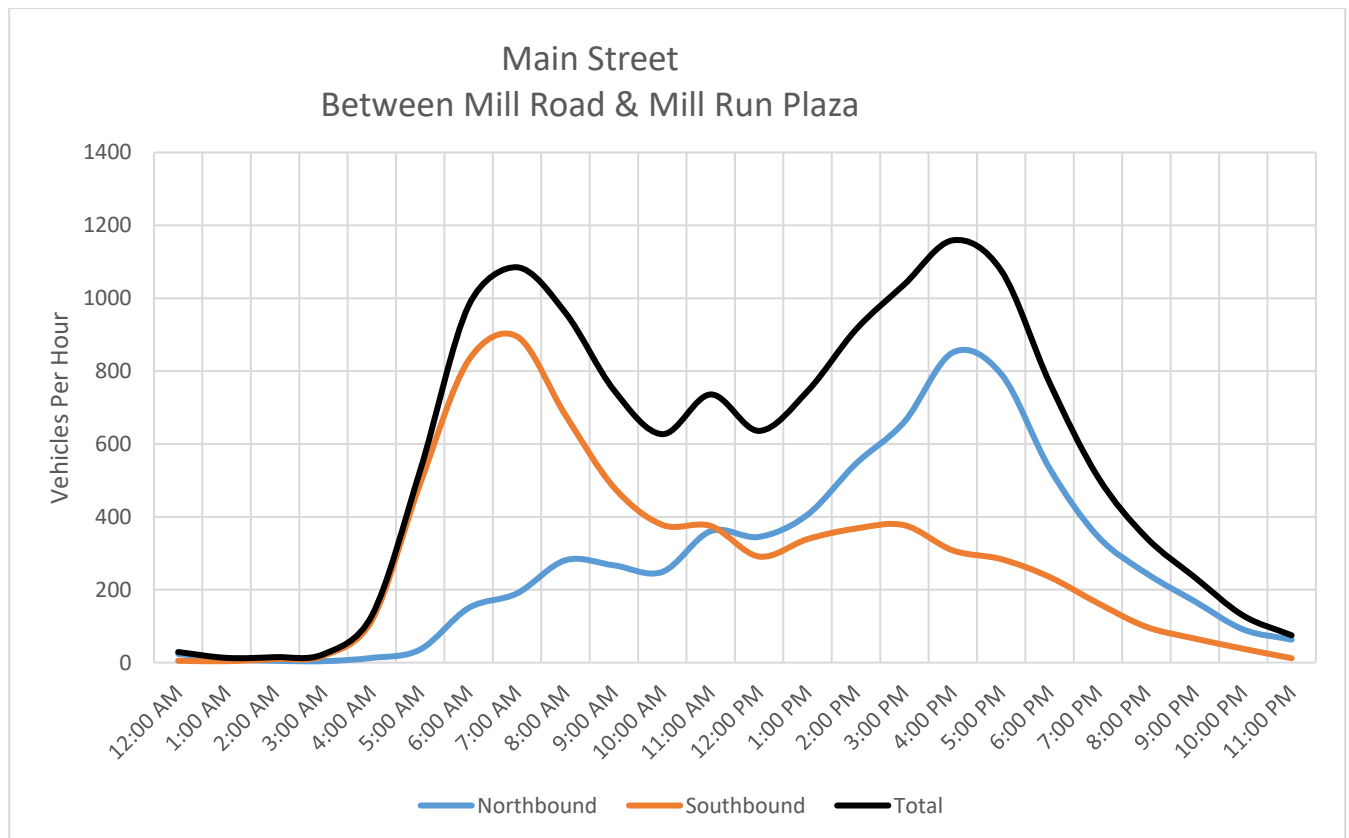
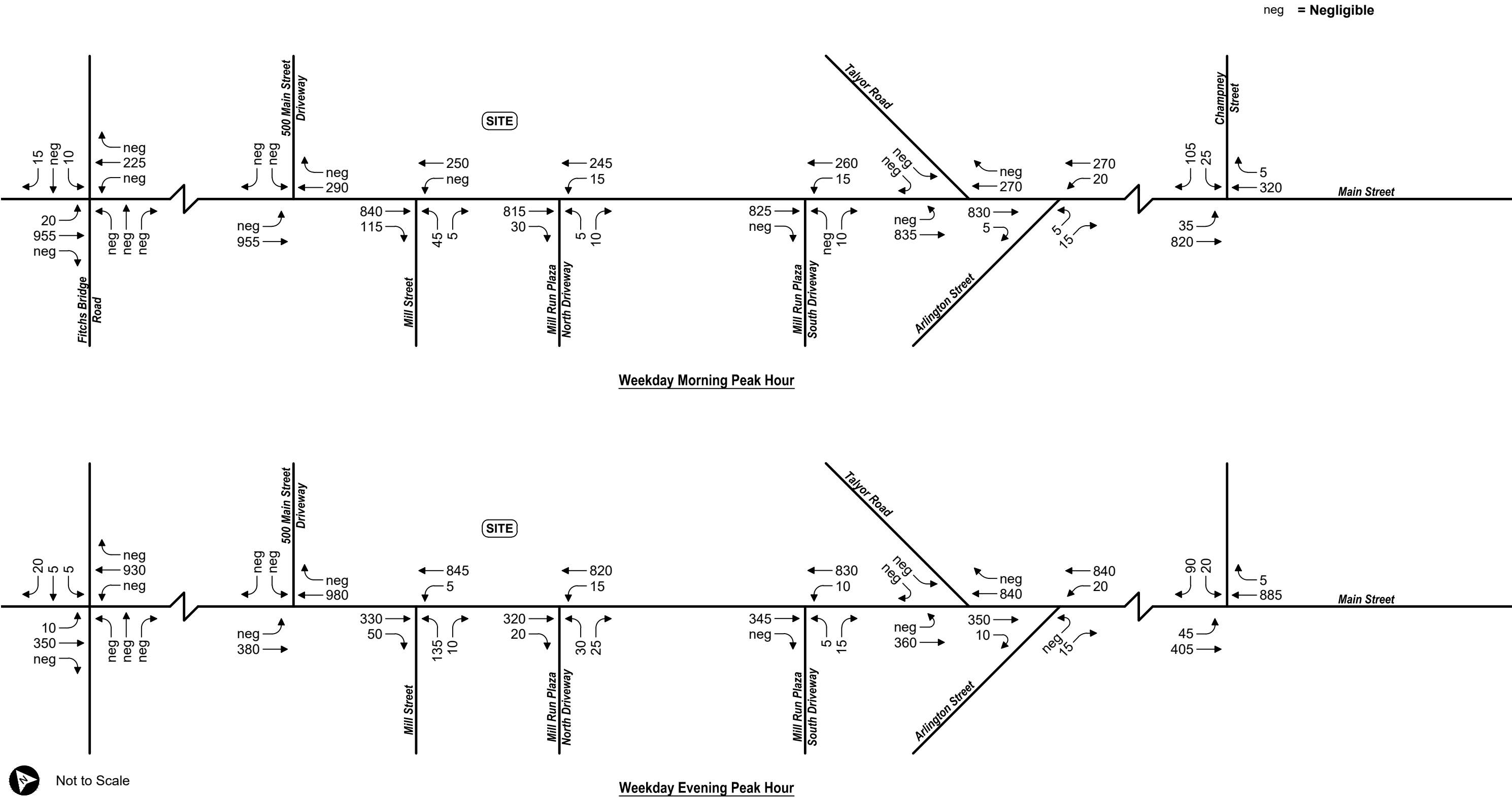


Figure 4: 2025 Existing Conditions Peak Hour Vehicle Volumes
Nashoba Satellite Emergency Facility | Groton, MA



Crash History

To identify vehicle crash trends in the study area, reported vehicular crash data for the study area intersections was obtained from MassDOT for the years 2017 through 2021. MassDOT typically requires a review of the most recent five-year period for crash analysis. A summary of the MassDOT vehicle crash history is presented in Table 4 and the detailed crash data is provided in the Appendix.

The MassDOT District 3 (the district designation for the Town of Groton) average crash rate is 0.61 collisions per million entering vehicles (mev) for unsignalized intersections. The crash rates represent the number of reported crashes for every million vehicles that pass through an intersection.

A review of the crash data in Table 2 indicates that over the five years of reported data, the study intersection with the highest prevalence of crashes was Main Street at Mill Street, with 8 total crashes over the five-year review period. All study intersections experienced crash rates lower than the MassDOT District 3 averages. Based on this review, there are no apparent safety issues within the study area that require corrective measures.

A review of MassDOT's Highway Safety Improvement Program Top Crash Locations map indicates that there are no high crash locations within the study area.

Table 2 2017-2021 Vehicle Crash Summary

	Main Street at Fitchs Bridge Road	Main Street at 500 Main Street	Main Street at Mill Street
Signalized?	No	No	No
MassDOT D3 Average Crash Rate	0.61	0.61	0.61
Calculated Crash Rate	0.04	0.00	0.29
Exceeds Average?	No	No	No
Year			
2017	0	0	2
2018	0	0	3
2019	1	0	3
2020	0	0	0
<u>2021</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	1	0	8
Collision Type			
Angle	0	0	4
Head-on	0	0	0
Rear-end	1	0	2
Rear-to-rear	0	0	0
Sideswipe, opposite direction	0	0	0
Sideswipe, same direction	0	0	0
Single Vehicle Crash	0	0	2
Unknown	0	0	0
Severity			
Fatal Injury	0	0	0
Non-Fatal Injury	0	0	1
Property Damage Only (none injured)	1	0	7
Not Reported	0	0	0
Time of day			
Weekday ,7:00 AM - 9:00 AM	0	0	1
Weekday, 4:00 – 6:00 PM	0	0	4
Saturday 11:00 AM – 1:00 PM	0	0	0
Weekday, other time	1	0	3
Weekend, other time	0	0	0
Pavement Conditions			
Dry	0	0	5
Wet	0	0	1
Snow/Ice/Slush	0	0	0
Not reported	1	0	2
Non-Motorist (Bike, Pedestrian)	0	0	0

Source: MassDOT Crash Database

1 Calculated Crash Rate based on data from 2017 – 2021

Table 2 2017-2021 Vehicle Crash Summary (Continued)

	Main Street at Mill Run Plaza North Driveway	Main Street at Mill Run Plaza South Driveway	Main Street at Arlington Street and Taylor Road	Main Street at Champney Street
Signalized?	No	No	No	No
MassDOT D3 Average Crash Rate	0.61	0.61	0.61	0.61
Calculated Crash Rate	0.16	0.00	0.28	0.14
Exceeds Average?	No	No	No	No
Year				
2017	0	0	1	2
2018	2	0	1	0
2019	0	0	1	0
2020	0	0	3	0
<u>2021</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>
Total	4	0	7	4
Collision Type				
Angle				
Head-on	0	0	1	1
Rear-end	0	0	0	0
Rear-to-rear	1	0	3	3
Sideswipe, opposite direction	0	0	0	0
Sideswipe, same direction	0	0	0	0
Single Vehicle Crash	0	0	0	0
Unknown	3	0	3	0
Severity				
Fatal Injury	0	0	0	0
Non-Fatal Injury	0	0	3	1
Property Damage Only (none injured)	4	0	4	3
Not Reported	0	0	0	0
Time of day				
Weekday ,7:00 AM - 9:00 AM	2	0	1	0
Weekday, 4:00 – 6:00 PM	0	0	1	1
Saturday 11:00 AM – 1:00 PM	0	0	1	0
Weekday, other time	2	0	1	2
Weekend, other time	0	0	3	1
Pavement Conditions				
Dry	4	0	6	4
Wet	0	0	0	0
Snow/Ice/Slush	0	0	1	0
Not reported	0	0	0	0
Non-Motorist (Bike, Pedestrian)	0	0	0	0

3

Future Conditions

Traffic volumes in the study area were projected to the year 2032, which reflects a seven-year traffic-planning horizon. Independent of the Project, volumes on the roadway network under year 2032 No-Build conditions were assumed to include existing traffic and new traffic resulting from background traffic growth assumptions. Specifically, the No-Build conditions were developed by applying an annual growth rate and incorporating expected area projects.

To analyze the Project-related impacts, the traffic expected to be generated by the full build of the Project was estimated and added to reflect the year 2032 Build conditions. The Current Project will consist of a 18,500 sf satellite emergency facility and the full build out of the Project will include an additional 15,700 sf of medical office space as part of a Potential Future Project. For the purposes of analysis in this TIA, both components were used in the traffic analysis. Trip generation estimates are provided by component.

Site Access and Parking

Access to the Project site will be provided by two new full-access curb cuts on the east side of Main Street. The northern curb cut will be constructed opposite Mill Street and will be operated under stop sign control. The southern curb cut will be provided approximately 525 feet south of Mill Street and will also operate under stop sign control. The two curb cuts will be constructed as part of the Current Project and will continue to serve the Potential Future Project without additional modifications. These curb cuts will require a MassDOT access permit.

A total of 74 parking spaces will be constructed as part of the Current Project and an additional 71 parking spaces will be constructed as part of the Potential Future Project for a total of 145 parking spaces on the site at the completion of the full build out of the Project. A total of 16 parking spaces will be equipped with electric vehicle (EV) charging capabilities as part of the Current Project parking supply.

The Project will also install regional signage and wayfinding information directing drivers to the proposed satellite emergency facility on key roadways to direct motorists to the new facility. The details of the proposed regional signage and wayfinding information will be developed for MassDOT review as part of the Access Permit process.

Sight Distance Evaluation

Sight distance measurements were performed at the proposed driveway intersections along Main Street in conformance with guidelines of the American Association of State Highway and Transportation Officials (AASHTO)¹.

Sight distance considerations are generally divided into two categories: Stopping Sight Distance (SSD) and Intersection Sight Distance (ISD). Stopping Sight Distance (SSD) is the distance required for a vehicle approaching an intersection from either direction to perceive, react and come to a complete stop before colliding with an object in the road, in this case the exiting vehicle from a driveway. In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection. SSD is affected by vehicle speeds, the grade of the roadway, perception-reaction time of the driver, and the vehicle's deceleration rate.

Intersection Sight Distance (ISD) is based on the time required for perception, reaction, and completion of the desired critical exiting maneuver once the driver on a minor street or driveway approach decided to execute the maneuver. Calculation for the critical ISD includes the time to (1) turn left, and to clear the half of the intersection without conflicting with the vehicles approaching from the left; and (2) accelerate to the operating speed of the roadway without causing approaching vehicles to unduly reduce their speed. In this context, ISD can be considered as a desirable visibility criterion for the safe operation of an unsignalized intersection. Essentially, while ISD is the minimum distance needed to avoid collisions, ISD is the minimum distance needed so that mainline motorists will not have to substantially reduce their speed due to turning vehicles. To maintain the safe operation of an unsignalized intersection, ISD only needs to be equal to the stopping sight distance, though it is desirable to meet ISD requirements by themselves.

The measured 85th percentile speed along Main Street was 44 mph. The 85th percentile speed was used to calculate the required and desirable SSD and ISD at both locations.

Table 3 summarizes the sight distance analyses based on field measurements. The sight distance worksheets are included in the Appendix to this document.

¹ A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), 2013.

Table 3 Sight Distance Summary

Location	Stopping Sight Distance (feet)			Intersection Sight Distance (feet)			
	Traveling	Required ^a	Measured ^b	Looking	Minimum	Desirable ^a	Measured ^b
Main Street at North Driveway	NB	350	1,000+	Left	350	490	1,000+
	SB	350	1,000+	Right	350	490	1,000+
Main Street at South Driveway	NB	350	595	Left	350	490	595
	SB	350	1,000+	Right	350	490	1,000+

- a Based on standards established in A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2018. Based on the measured 85th percentile speeds of 44 mph on Main Street.
- b Based on field measurements by VHB in April 2025.

As shown in Table 3, adequate SSD and ISD will be available at both driveway locations.

Background Traffic Growth

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth. A procedure frequently employed is to estimate an annual percentage increase and apply that increase to study area traffic volumes. An alternative procedure is to identify estimated traffic generated by planned new major developments that would be expected to impact the project study area roadways. Both an annual growth rate and traffic volume increases expected from area background projects were used to account for potential traffic growth within the study area, independent of the Project.

Historic Traffic Growth

Consistent with the recent traffic study conducted for the 500 Main Street project and in consultation with Town of Groton Planning staff, a half-percent per year annual growth rate was applied to the existing conditions traffic volumes. The half-percent annual growth rate accounts for future traffic volumes from economic development that may have impacts to the study area intersections and roadways.

Site-Specific Growth

In addition to accounting for background growth, the traffic associated with other planned and/or approved developments near the Site were considered. Based on input from Planning Department staff, the following proposed projects were identified in the vicinity of the Project's study area:

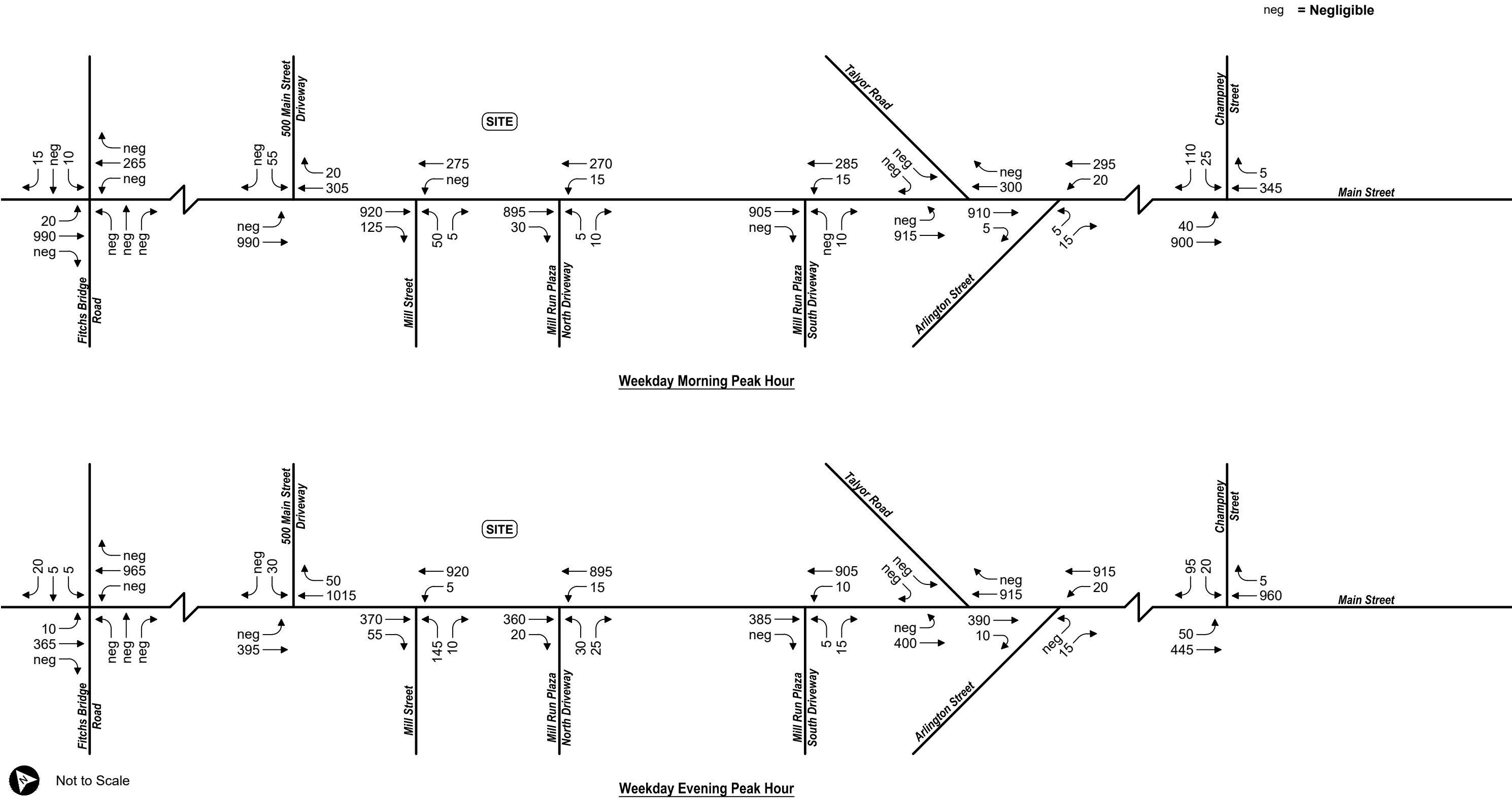
- › **500 Main Street:** This project will construct 200 residential units at 500 Main Street in Groton, Massachusetts. This project is located adjacent to the northeast portion of the Project site, with access north of the proposed site driveway opposite Mill Street.
- › **63 Gratuity Road:** This project will construct 28 age-restricted residential units located at 63 Gratuity Road, west of the Project site, in Groton, Massachusetts.

- › **Village at Shepley Hill:** This project will construct 28 age-restricted residential units located off Longley Road and Sand Hill Road, north of the Project site, in Groton, Massachusetts.

The Proponent of the 500 Main Street project will construct a sidewalk on the east side of Main Street between their driveway and the southern property line. The sidewalk will extend for approximately 390 feet south of the 500 Main Street driveway. A rectangular rapid flashing beacon (RRFB) and crosswalk will also be installed to provide pedestrian connectivity between the east and west sides of Main Street.

The 2032 No-Build Conditions peak hour traffic volumes are shown in Figure 5.

Figure 5: 2032 No-Build Conditions Peak Hour Vehicle Volumes
Nashoba Satellite Emergency Facility | Groton, MA



Project-Generated Traffic Volumes

The following sections describe the procedures used to develop the Project generated trips and the Build condition traffic volume networks.

Trip Generation

The rate at which any development generates traffic is dependent upon a number of factors such as size, location, and nature of the use. To estimate the trip-generating characteristics for a project, traffic projections are typically derived from trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*². The trip generation estimates are then adjusted based on expected mode share to account for non-vehicular uses.

The Current Project involves the construction of a 18,500-sf satellite emergency facility and a Potential Future Project involves the construction of an additional 15,700 sf of medical office space.

For traffic impact analysis purposes, the following ITE Land Use Code (LUC) was used to develop trip generation estimates for the Project:

- › **LUC 650 – Free-Standing Emergency Room:** Used to develop the trip estimates for the emergency satellite facility for the Current Project.
- › **LUC 720 – Medical-Dental Office Building:** Used to develop the trip estimates for the Potential Future Project's medical office building uses.

Table 4 presents the trip generation estimates for the Project. Detailed trip generation calculations are provided in the Appendix.

² *Trip Generation Manual, 11th Edition*; Institute of Transportation Engineers; Washington, DC, 2021.

Table 4 Trip Generation Summary

Time Period	Current Project - Satellite Emergency Facility ¹	Potential Future Project - Medical Office Building ²	Total Site
Daily			
Enter	230	285	515
<u>Exit</u>	<u>230</u>	<u>285</u>	<u>515</u>
Total	460	570	1,030
Weekday Morning Peak Hour			
Enter	10	35	45
<u>Exit</u>	<u>10</u>	<u>10</u>	<u>20</u>
Total	20	45	65
Weekday Evening Peak Hour			
Enter	15	20	35
<u>Exit</u>	<u>15</u>	<u>45</u>	<u>60</u>
Total	30	65	95

1 Based on ITE LUC 650 – Free-Standing Emergency Room (18,500 sf)

2 Based on ITE LUC 720 – Medical-Dental Office Building (15,700 sf)

As shown in Table 4, the Project is expected to generate a total of 1,030 trips (515 entering and 515 exiting) on a daily basis, 65 trips (45 entering and 20 exiting) during the weekday morning peak hour, and 95 trips (35 entering and 60 exiting) during the weekday evening peak hour.

Trip Distribution

The directional distribution of the vehicular traffic approaching and departing the Site is a function of the land use, population densities, place of residence, existing travel patterns, and the efficiency of the existing roadway system. The trip distribution patterns for the Project were developed by using both United States Census Journey-to-Work data for employees within the Town of Groton and population data for the communities that will be served by the satellite emergency facility. Both methodologies generally resulted in similar trip distribution patterns and a single trip distribution pattern was used for both the Current Project and the Potential Future Project.

The trip distribution patterns are shown on Table 5 and on Figure 6. The Project generated trips were assigned to the study area based on the trip distribution patterns and are shown in Figure 7. The Project generated trips were added to the 2032 No-Build Conditions traffic volume networks to develop the 2032 Build Conditions traffic volumes and are shown in Figure 8. The Project-generated traffic volume increases within the study area network are shown in Table 6.

Table 5 Trip Distribution Summary

Direction	Route	Trip Distribution Percentage
North	Main Street	30%
South	Main Street	45%
West/South	Mill Street	20%
East	Champney Street	5%
TOTAL		100%

Table 6 Traffic Volume Changes

Roadway	No-Build Volumes	Project Generated Volumes	Build Volumes	Percent Change
Main Street, north of Fitchs Bridge Road				
Weekday Morning Peak Hour	1,285	+20	1,305	+1.6%
Weekday Evening Peak Hour	1,345	+25	1,370	+1.9%
Main Street, south of Champney Street				
Weekday Morning Peak Hour	1,275	+30	1,305	+2.4%
Weekday Evening Peak Hour	1,430	+40	1,470	+2.8%
Mill Street, west of Main Street				
Weekday Morning Peak Hour	180	+15	195	+8.3%
Weekday Evening Peak Hour	215	+15	230	+7.0%
Champney Street, east of Main Street				
Weekday Morning Peak Hour	180	neg	180	neg
Weekday Evening Peak Hour	170	+5	175	+2.9%

neg Negligible volume increases (under 5 vehicles per hour)

Figure 6: Trip Distribution Map
Nashoba Satellite Emergency Facility | Groton, MA

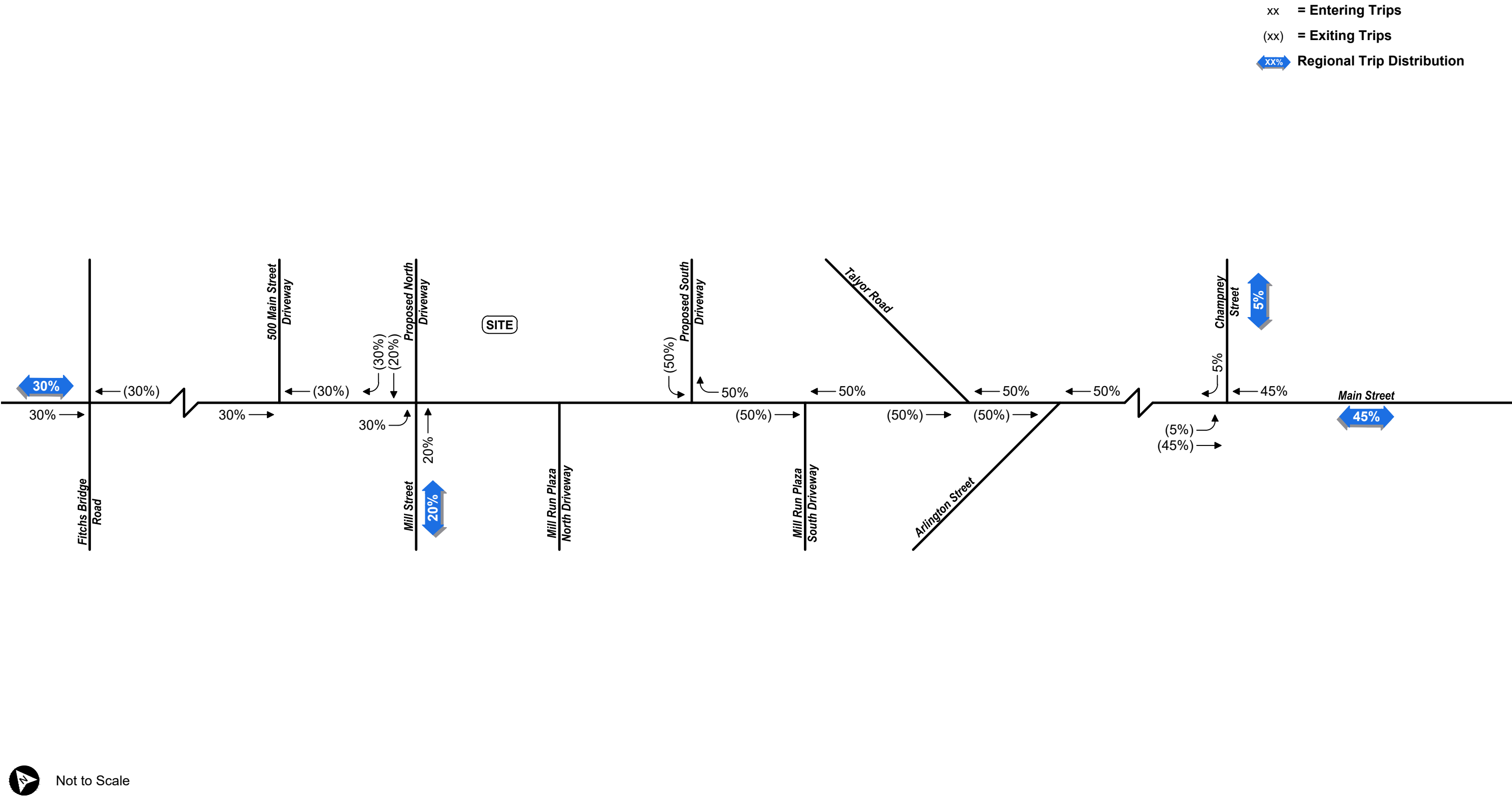


Figure 7: Peak Hour Project Generated Trips
Nashoba Satellite Emergency Facility | Groton, MA

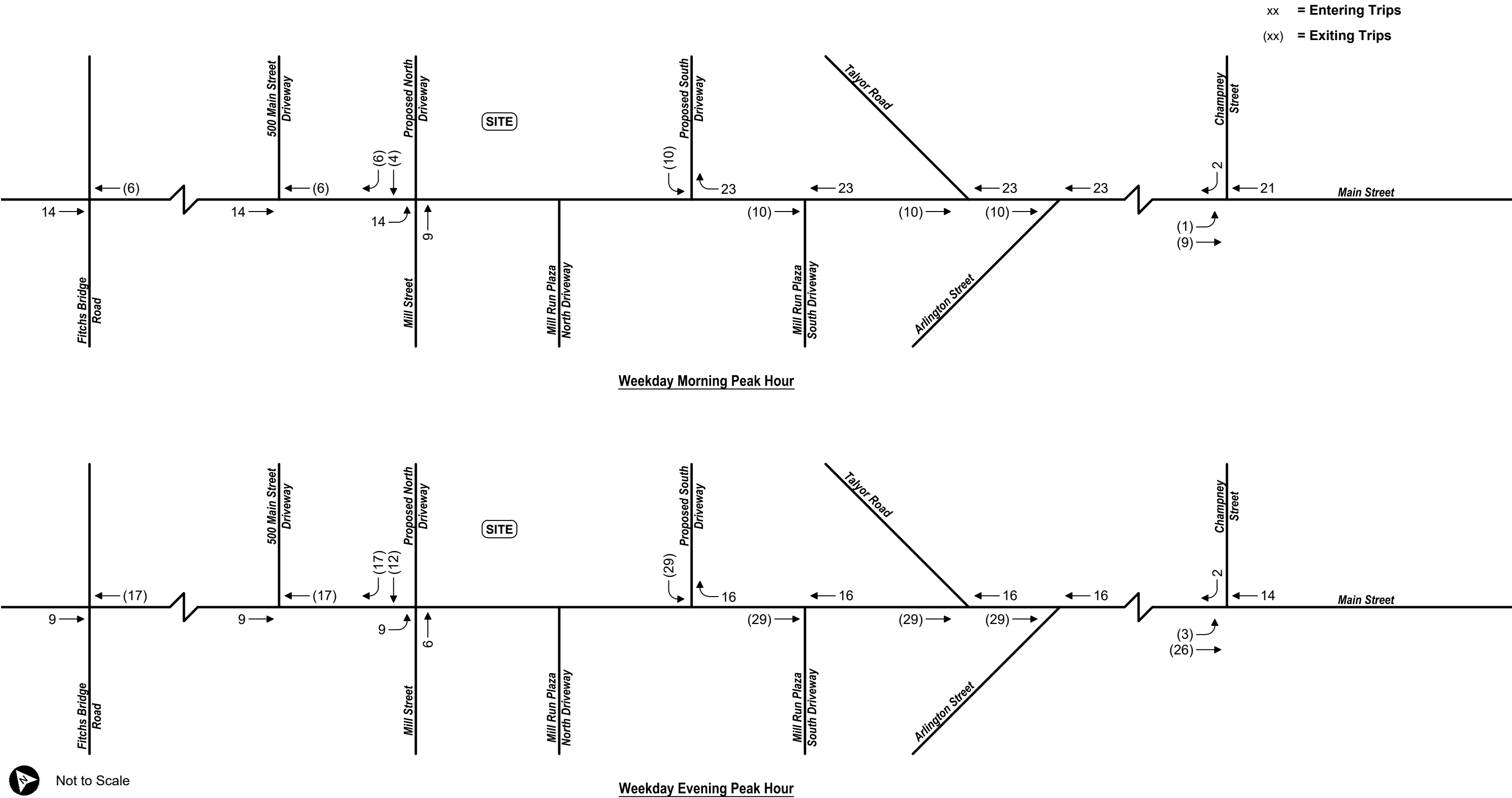
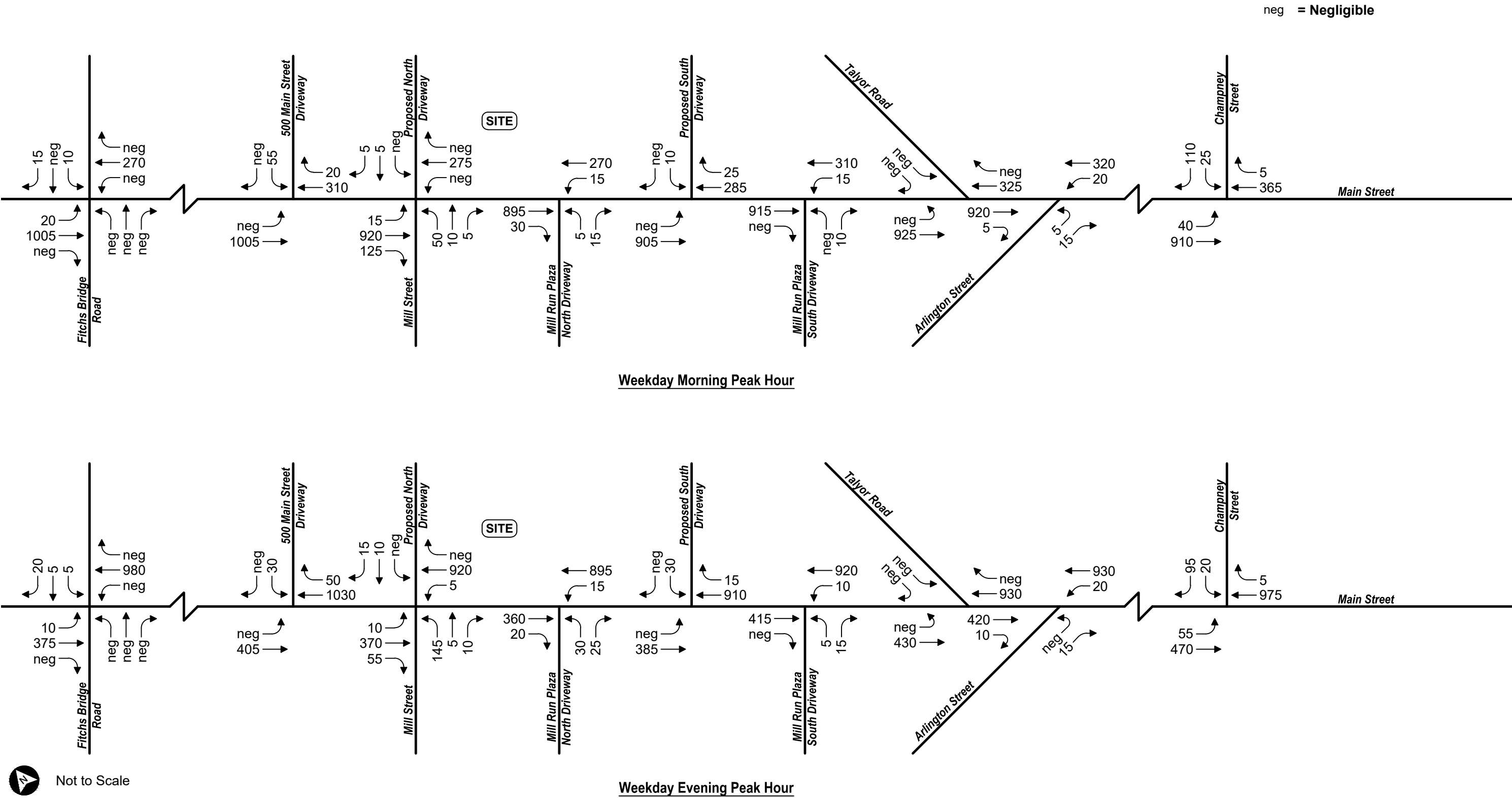


Figure 8: 2032 Build Condition Peak Hour Vehicle Volumes
Nashoba Satellite Emergency Facility | Groton, MA



4

Traffic Operation Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, intersection operations analyses were conducted with respect to Existing and projected No-Build and Build traffic volumes. The operations analyses were conducted using the Synchro traffic engineering software. The operations analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels of service.

Level-of-Service Criteria

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure of several factors including roadway geometrics, speed, travel delay and freedom to maneuver. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level-of-service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing congested operating conditions.

Level-of-service designation is reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of each lane or lane group entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on side streets. The LOS is only determined for left turns from the main street and all movements from the minor street. The evaluation criteria used to analyze intersections is based on the *Highway Capacity Manual* (HCM). The LOS criteria are summarized in Table 7.

Table 7 Level-of-Service Criteria

Level of Service	Unsignalized Intersections	Signalized Intersections
	Delay	Delay
A	0 - 10 seconds	0 - 10 seconds
B	10 - 15 seconds	10 - 20 seconds
C	15 - 25 seconds	20 - 35 seconds
D	25 - 35 seconds	35 - 55 seconds
E	35 - 50 seconds	55 - 80 seconds
F	> 50 seconds	> 80 seconds

Source: Highway Capacity Manual 6

Intersection Capacity Analysis

Capacity analyses conducted for the study area are summarized in Table 8. The capacity analyses were conducted for 2025 Existing, 2032 No-Build, and 2032 Build conditions. The detailed capacity analysis worksheets are provided in the Appendix.

The analysis summary tables show that in general, the Project will have minimal impact on the operations of the study area intersections. The following summarizes the major conclusions from the operations analysis:

- › In general, the majority of the movements at the study area intersections will operate within capacity.
- › Due to the traffic volumes along Mill Street, which include projected traffic volumes from the 500 Mill Street project, the Mill Street approach to Main Street will operate at LOS F during the weekday morning and evening peak hours. The approach is expected to operate over capacity during the weekday evening peak hour. Traffic operations along this approach will remain similar to No-Build conditions with the addition of the Project-related traffic. The Project-related traffic along the Mill Street approach is expected to be minor (approximately 10 vehicles during the weekday morning peak hour and 5 vehicles during the weekday evening peak hour). A review of traffic signal warrants for the intersection, based on estimated future traffic volumes that includes other planned development in the area, indicates that traffic signal control should not be considered at this time, for this location.
- › The Project will have limited impacts to the study area intersections due to its low trip generating characteristics. Capacity or operational improvements at the study intersections are not necessary to mitigate Project related impacts.
- › The Site Driveways along Main Street will operate below capacity with minimal queuing and at acceptable levels of service.

Table 8 Intersection Operations Analysis

Location / Movement	2025 Existing Conditions				2032 No-Build Conditions				2032 Build Conditions			
	v/c	Del	LOS	95 Q	v/c	Del	LOS	95 Q	v/c	Del	LOS	95 Q
1: Main Street & Fitchs Bridge Road												
<i>Weekday Morning</i>												
Fitchs Bridge Road EB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Fitchs Bridge Road WB L/T/R	0.18	30.0	D	1	0.13	24.8	C	0	0.14	25.6	D	1
Main Street NB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T/R	0.02	8.0	A	0	0.02	7.8	A	0	0.02	7.9	A	0
<i>Weekday Evening</i>												
Fitchs Bridge Road EB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Fitchs Bridge Road WB L/T/R	0.26	29.0	D	1	0.17	27.3	D	1	0.17	28.1	D	1
Main Street NB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T/R	0.02	10.4	B	0	0.02	10.5	B	0	0.02	10.6	B	0
2: Main Street & 500 Main Street Driveway												
<i>Weekday Morning</i>												
500 Main Street Driveway WB L/R	0.00	0.0	A	0	0.39	43.3	E	2	0.40	44.9	E	2
Main Street NB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
<i>Weekday Evening</i>												
500 Main Street Driveway WB L/R	0.00	0.0	A	0	0.25	41.4	E	1	0.26	43.3	E	1
Main Street NB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
3: Main Street & Mill Street/Proposed North Driveway												
<i>Weekday Morning</i>												
Mill Street EB L/T/R	0.47	58.4	F	2	0.46	54.3	F	2	0.60	73.2	F	3
Proposed North Driveway WB L/T/R	Not in the Existing Condition				Not in the No-Build Condition				0.05	22.8	C	0
Main Street NB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.01	7.9	A	0
Main Street SB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
<i>Weekday Evening</i>												
Mill Street EB L/T/R	> 1.00	> 120	F	10	> 1.00	> 120	F	12	> 1.00	> 120	F	14
Proposed North Driveway WB L/T/R	Not in the Existing Condition				Not in the No-Build Condition				0.14	26.7	D	1
Main Street NB L/T/R	0.01	8.2	A	0	0.00	0.0	A	0	0.01	8.3	A	0
Main Street SB L/T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.02	10.1	B	0
4: Main Street & Mill Run Plaza North Driveway												
<i>Weekday Morning</i>												
Mill Run Plaza North Driveway EB L/R	0.03	0.1	B	0	0.07	21.0	C	0	0.07	21.0	C	0
Main Street NB L/T	0.00	0.0	A	0	0.20	10.3	B	0	0.02	10.3	B	0
Main Street SB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
<i>Weekday Evening</i>												
Mill Run Plaza North Driveway EB L/R	0.27	22.7	C	1	0.25	24.9	C	1	0.25	24.9	C	1
Main Street NB L/T	0.01	8.1	A	0	0.01	8.2	A	0	0.01	8.2	A	0
Main Street SB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0

a volume to capacity ratio

b delay, measured in seconds

c level of service

d 95th percentile queue (in vehicles)

Notes: Future Conditions analyses adjust PHF upward to 0.92 for movements with an existing PHF less than 0.92 in accordance with MassDOT guidelines for traffic impact assessment. Movements with existing PHFs greater than 0.92 were not adjusted.

Table 8 Intersection Operations Analysis (Continued)

Location / Movement	2025 Existing Conditions				2032 No-Build Conditions				2032 Build Conditions			
	v/c	Del	LOS	95 Q	v/c	Del	LOS	95 Q	v/c	Del	LOS	95 Q
5: Main Street & Mill Run Plaza South Driveway												
<i>Weekday Morning</i>												
Mill Run Plaza South Driveway EB L/R	0.05	17.9	C	0	0.04	17.3	C	0	0.04	17.5	C	0
Main Street NB L/T	0.03	10.3	B	0	0.02	10.2	B	0	0.02	10.2	B	0
Main Street SB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
<i>Weekday Evening</i>												
Mill Run Plaza South Driveway EB L/R	0.09	15.3	C	0	0.06	15.8	C	0	0.07	16.5	C	0
Main Street NB L/T	0.01	8.1	A	0	0.01	8.2	A	0	0.01	8.2	A	0
Main Street SB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
6: Main Street & Taylor Street												
<i>Weekday Morning</i>												
Taylor Street WB L/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street NB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
<i>Weekday Evening</i>												
Taylor Street WB L/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street NB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
7: Main Street & Arlington Street												
<i>Weekday Morning</i>												
Arlington Street EB L/R	0.14	25.5	D	1	0.01	22.9	C	0	0.10	23.5	C	0
Main Street NB L/T	0.05	10.8	B	0	0.03	10.6	B	0	0.03	10.7	B	0
Main Street SB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
<i>Weekday Evening</i>												
Arlington Street EB L/R	0.04	11.3	B	0	0.03	10.9	B	0	0.03	11.1	B	0
Main Street NB L/T	0.02	8.4	A	0	0.02	8.2	A	0	0.02	8.3	A	0
Main Street SB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0

a volume to capacity ratio

b delay, measured in seconds

c level of service

d 95th percentile queue (in vehicles)

Notes: Future Conditions analyses adjust PHF upward to 0.92 for movements with an existing PHF less than 0.92 in accordance with MassDOT guidelines for traffic impact assessment. Movements with existing PHFs greater than 0.92 were not adjusted.

Table 8 Intersection Operations Analysis (Continued)

Location / Movement	2025 Existing Conditions				2032 No-Build Conditions				2032 Build Conditions			
	v/c	Del	LOS	95 Q	v/c	Del	LOS	95 Q	v/c	Del	LOS	95 Q
8: Main Street & Champney Street												
Weekday Morning												
Champney Street WB L/R	0.58	29.7	D	3	0.40	21.3	C	2	0.41	22.5	C	2
Main Street NB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T	0.04	8.9	A	0	0.04	8.5	A	0	0.04	8.6	A	0
Weekday Evening												
Champney Street WB L/R	0.53	35.4	E	3	0.57	41.3	E	3	0.60	45.0	E	3
Main Street NB T/R	0.00	0.0	A	0	0.00	0.0	A	0	0.00	0.0	A	0
Main Street SB L/T	0.07	10.3	B	0	0.08	10.7	B	0	0.09	10.9	B	0
9: Main Street & Proposed South Driveway												
Weekday Morning												
Proposed South Driveway WB L/R	Not in the Existing Condition				Not in the No-Build Condition				0.06	26.8	D	0
Main Street NB T/R									0.00	0.0	A	0
Main Street SB L/T									0.00	0.0	A	0
Weekday Evening												
Proposed South Driveway WB L/R	Not in the Existing Condition				Not in the No-Build Condition				0.21	34.1	D	1
Main Street NB T/R									0.00	0.0	A	0
Main Street SB L/T									0.00	0.0	A	0

a volume to capacity ratio

b delay, measured in seconds

c level of service

d 95th percentile queue (in vehicles)

Notes: Future Conditions analyses adjust PHF upward to 0.92 for movements with an existing PHF less than 0.92 in accordance with MassDOT guidelines for traffic impact assessment. Movements with existing PHFs greater than 0.92 were not adjusted.

Traffic Signal Warrant Analysis

A preliminary Traffic Signal Warrant Analysis (TSWA) was conducted for the intersection of Main Street at Mill Street to evaluate the need for traffic signal control at the intersection. The TSWA reviewed the 2025 Existing Conditions, the 2032 No-Build Conditions, and the 2032 Build Conditions traffic volumes for Warrants 1, 2, and 3 (8-Hour, 4-Hour, and Peak-Hour Warrants, respectively). Traffic volumes for the TSWA were based on a combination of the ATR and peak period TMC data collected on Main Street, record ATR data for Mill Street, projected traffic volumes related to future growth in traffic unrelated to the Project, and Project-related traffic volumes from both the Current Project (Satellite Emergency Facility) and the Potential Future Project (Medical Office Building).

Table 9 presents the results of the three traffic volume based signal warrants.

Table 9 Traffic Signal Warrant Analysis Summary – Main Street at Mill Street

Scenario	Warrant 1 Met ^a	Warrant 2 Met ^b	Warrant 3 Met ^c
2025 Existing Conditions	No	No	No
2032 No-Build Conditions	No	No	Yes
2032 Build Conditions	No	No	Yes

a Eight-hour volume warrant

b Four-hour volume warrant

c Peak hour volume warrant

As shown in Table 9, it appears that the estimated future traffic at the intersection *without* Project generated traffic could exceed Warrant 3 (Peak Hour) (i.e., the 2032 No-Build and Build conditions could satisfy the peak hour warrant). Since the full build-out of the Project does not generate significant additional traffic, only the peak hour warrant is satisfied even after adding the estimated Project traffic to the intersection in the future. The more traffic intensive Warrants 1 and 2 (eight hour and four hour) would not be met under any scenarios. Typically, the installation of a traffic signal requires that the more traffic intensive volume warrants (Warrant 1) to be met or other non-volume based warrants, such as the crash related warrant, are satisfied. Based on this review, since only the peak hour Warrant threshold volume could be exceeded, it is not recommended that a traffic signal be installed at the intersection at this time. However, it is recommended that the traffic volumes at this intersection be monitored in the future as new development along Main Street gets occupied and their actual traffic generation can be measured, to determine future need for traffic signal control.

5

Conclusions

The transportation analyses presented in this TIA analyzed the impacts on the area transportation infrastructure related to the proposed satellite emergency facility and a potential future medical office building 490 Main Street in Groton, Massachusetts.

Specifically, the Project will consist of two components. The Current Project will construct an 18,500 sf satellite emergency facility with a total of 74 parking spaces on the site. A Potential Future Project would construct an additional 15,700 sf of medical office space and 71 parking spaces on the site.

Vehicular access to the site will be provided by two new full-access curb cuts on the east side of Main Street. The northern curb cut will be constructed opposite Mill Street and will be operate under stop sign control. The southern curb cut will be provided approximately 525 feet south of Mill Street and will operate under stop sign control. The two curb cuts will be constructed as part of the Current Project and will continue to serve the Potential Future Project without additional modifications. These curb cuts will require a MassDOT access permit. The application for an access permit will be submitted after the receipt of local site plan approvals.

Overall, the Study finds that the Project's trip generation will have minimal impact to traffic operations along the surrounding roadway network. The study does identify that there may be some capacity issues unrelated to the Project along the Mill Street approach to Main Street, but that the expected future traffic volumes would not satisfy the thresholds for the installation of a traffic signal based on the results of the preliminary Traffic Signal Warrants Analysis (TSWA). The TSWA, based on estimated future traffic conditions, indicates that only Warrant 3 (Peak Hour) may be satisfied with or without the Project. It is recommended that the traffic volumes at this intersection be monitored in the future as additional development is constructed and occupied along Main Street to determine future need for traffic signal control.

Based on the traffic operations analysis presented in this study, capacity and geometric improvements to public roadways and intersections will not be required to support the Project.

Appendix

- › Traffic Count Data
- › Crash Data
- › Trip Generation Calculations
- › Trip Distribution Calculations
- › Traffic Operations Analysis
- › Traffic Signal Warrants Analysis

Traffic Count Data

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694



Count Date: Wednesday, April 16, 2025
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	9	1	0	10	12:00 PM	90	3	1	94
12:15 AM	8	1	0	9	12:15 PM	77	7	2	86
12:30 AM	3	0	0	3	12:30 PM	69	5	0	74
12:45 AM	2	0	0	2	12:45 PM	81	6	4	91
1:00 AM	2	0	0	2	1:00 PM	100	3	0	103
1:15 AM	2	0	0	2	1:15 PM	95	3	2	100
1:30 AM	3	0	0	3	1:30 PM	100	3	3	106
1:45 AM	1	1	0	2	1:45 PM	90	5	2	97
2:00 AM	2	0	0	2	2:00 PM	110	6	3	119
2:15 AM	2	0	0	2	2:15 PM	134	5	0	139
2:30 AM	1	0	0	1	2:30 PM	137	6	0	143
2:45 AM	0	0	0	0	2:45 PM	140	3	2	145
3:00 AM	0	0	0	0	3:00 PM	156	7	1	164
3:15 AM	1	0	0	1	3:15 PM	157	6	0	163
3:30 AM	2	0	0	2	3:30 PM	172	7	2	181
3:45 AM	1	0	0	1	3:45 PM	145	7	1	153
4:00 AM	3	0	1	4	4:00 PM	198	6	0	204
4:15 AM	1	0	0	1	4:15 PM	210	4	0	214
4:30 AM	3	0	0	3	4:30 PM	224	2	1	227
4:45 AM	5	0	0	5	4:45 PM	204	1	1	206
5:00 AM	8	0	0	8	5:00 PM	208	0	1	209
5:15 AM	7	0	0	7	5:15 PM	215	0	0	215
5:30 AM	11	1	0	12	5:30 PM	179	1	1	181
5:45 AM	7	1	1	9	5:45 PM	186	1	0	187
6:00 AM	16	3	0	19	6:00 PM	166	0	0	166
6:15 AM	36	2	0	38	6:15 PM	128	1	0	129
6:30 AM	42	5	0	47	6:30 PM	113	1	0	114
6:45 AM	43	1	2	46	6:45 PM	124	0	0	124
7:00 AM	31	3	1	35	7:00 PM	108	0	0	108
7:15 AM	36	4	0	40	7:15 PM	97	0	0	97
7:30 AM	50	2	5	57	7:30 PM	63	0	0	63
7:45 AM	48	6	4	58	7:45 PM	78	0	0	78
8:00 AM	81	11	1	93	8:00 PM	62	1	0	63
8:15 AM	49	5	1	55	8:15 PM	69	0	0	69
8:30 AM	53	8	1	62	8:30 PM	59	1	0	60
8:45 AM	55	13	3	71	8:45 PM	52	1	0	53
9:00 AM	61	4	0	65	9:00 PM	36	0	0	36
9:15 AM	62	7	2	71	9:15 PM	50	0	3	53
9:30 AM	61	5	0	66	9:30 PM	38	1	0	39
9:45 AM	58	5	2	65	9:45 PM	40	0	0	40
10:00 AM	51	4	1	56	10:00 PM	29	0	0	29
10:15 AM	63	6	2	71	10:15 PM	22	0	0	22
10:30 AM	54	1	4	59	10:30 PM	21	0	0	21
10:45 AM	56	6	1	63	10:45 PM	19	0	0	19
11:00 AM	63	6	1	70	11:00 PM	20	0	0	20
11:15 AM	83	6	0	89	11:15 PM	17	0	0	17
11:30 AM	96	3	1	100	11:30 PM	11	0	0	11
11:45 AM	94	6	2	102	11:45 PM	15	0	0	15

AM Total	1426	127	36	1589	PM Total	4914	103	30	5047
Percentage	89.74%	7.99%	2.27%		Percentage	97.36%	2.04%	0.59%	
AM Peak	11:00 AM	8:00 AM	7:30 AM	11:00 AM	PM Peak	4:30 PM	3:00 PM	1:15 PM	4:30 PM
Volume	336	37	11	361	Volume	851	27	10	857
					Day Total	6340	230	66	6636
					Percentage	95.54%	3.47%	0.99%	

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694



Count Date: Thursday, April 17, 2025
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	8	1	0	9	12:00 PM	103	4	1	108
12:15 AM	4	1	0	5	12:15 PM	87	6	0	93
12:30 AM	5	0	0	5	12:30 PM	98	6	2	106
12:45 AM	2	0	0	2	12:45 PM	90	0	2	92
1:00 AM	2	0	0	2	1:00 PM	87	0	5	92
1:15 AM	2	0	0	2	1:15 PM	88	1	5	94
1:30 AM	4	0	1	5	1:30 PM	93	3	1	97
1:45 AM	2	0	0	2	1:45 PM	97	8	0	105
2:00 AM	4	0	0	4	2:00 PM	97	8	1	106
2:15 AM	2	0	0	2	2:15 PM	111	4	0	115
2:30 AM	4	0	0	4	2:30 PM	125	10	0	135
2:45 AM	1	0	0	1	2:45 PM	134	4	1	139
3:00 AM	2	0	0	2	3:00 PM	174	5	1	180
3:15 AM	2	1	0	3	3:15 PM	192	4	1	197
3:30 AM	3	0	1	4	3:30 PM	206	8	2	216
3:45 AM	1	0	0	1	3:45 PM	181	4	2	187
4:00 AM	0	0	0	0	4:00 PM	251	10	0	261
4:15 AM	3	0	0	3	4:15 PM	225	3	0	228
4:30 AM	4	0	0	4	4:30 PM	222	1	0	223
4:45 AM	7	0	0	7	4:45 PM	202	3	0	205
5:00 AM	10	0	0	10	5:00 PM	221	3	2	226
5:15 AM	9	0	0	9	5:15 PM	211	1	1	213
5:30 AM	12	1	0	13	5:30 PM	205	3	0	208
5:45 AM	13	2	2	17	5:45 PM	148	3	0	151
6:00 AM	16	2	0	18	6:00 PM	159	0	1	160
6:15 AM	31	1	0	32	6:15 PM	142	1	1	144
6:30 AM	40	1	1	42	6:30 PM	148	1	0	149
6:45 AM	30	3	0	33	6:45 PM	98	0	0	98
7:00 AM	34	4	1	39	7:00 PM	121	1	0	122
7:15 AM	45	2	0	47	7:15 PM	99	0	0	99
7:30 AM	41	5	3	49	7:30 PM	84	0	0	84
7:45 AM	62	5	1	68	7:45 PM	79	2	0	81
8:00 AM	58	9	2	69	8:00 PM	93	0	0	93
8:15 AM	51	3	1	55	8:15 PM	88	0	0	88
8:30 AM	59	5	1	65	8:30 PM	87	1	0	88
8:45 AM	84	11	1	96	8:45 PM	68	2	0	70
9:00 AM	58	11	0	69	9:00 PM	61	0	1	62
9:15 AM	65	3	1	69	9:15 PM	28	1	0	29
9:30 AM	72	10	0	82	9:30 PM	38	0	0	38
9:45 AM	68	6	0	74	9:45 PM	46	0	0	46
10:00 AM	55	8	2	65	10:00 PM	29	0	1	30
10:15 AM	73	4	1	78	10:15 PM	27	0	0	27
10:30 AM	69	5	5	79	10:30 PM	22	0	0	22
10:45 AM	80	5	1	86	10:45 PM	25	0	0	25
11:00 AM	66	3	0	69	11:00 PM	11	0	0	11
11:15 AM	50	5	0	55	11:15 PM	16	0	0	16
11:30 AM	70	6	0	76	11:30 PM	12	0	0	12
11:45 AM	82	8	2	92	11:45 PM	9	1	0	10

AM Total	1465	131	27	1623	PM Total	5238	112	31	5381
Percentage	90.26%	8.07%	1.66%		Percentage	97.34%	2.08%	0.58%	
AM Peak	10:15 AM	8:45 AM	10:00 AM	8:45 AM	PM Peak	4:00 PM	1:45 PM	12:30 PM	4:00 PM
Volume	288	35	9	316	Volume	900	30	14	917
					Day Total	6703	243	58	7004
					Percentage	95.70%	3.47%	0.83%	

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694



Count Date: Wednesday, April 16, 2025
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	1	0	0	1	12:00 PM	68	5	0	73
12:15 AM	2	0	0	2	12:15 PM	78	3	1	82
12:30 AM	2	0	0	2	12:30 PM	51	5	2	58
12:45 AM	0	0	0	0	12:45 PM	73	2	3	78
1:00 AM	0	0	0	0	1:00 PM	73	2	1	76
1:15 AM	1	0	0	1	1:15 PM	80	12	0	92
1:30 AM	1	0	0	1	1:30 PM	70	11	2	83
1:45 AM	2	0	0	2	1:45 PM	80	6	2	88
2:00 AM	2	1	0	3	2:00 PM	77	4	2	83
2:15 AM	4	1	0	5	2:15 PM	83	8	1	92
2:30 AM	2	0	0	2	2:30 PM	82	5	2	89
2:45 AM	0	0	0	0	2:45 PM	102	2	0	104
3:00 AM	3	1	0	4	3:00 PM	84	6	1	91
3:15 AM	3	0	1	4	3:15 PM	92	4	0	96
3:30 AM	5	0	0	5	3:30 PM	92	3	1	96
3:45 AM	6	0	0	6	3:45 PM	90	4	0	94
4:00 AM	12	0	0	12	4:00 PM	81	1	0	82
4:15 AM	28	0	0	28	4:15 PM	69	3	0	72
4:30 AM	29	0	0	29	4:30 PM	85	1	0	86
4:45 AM	47	0	0	47	4:45 PM	68	0	0	68
5:00 AM	77	1	1	79	5:00 PM	60	1	1	62
5:15 AM	116	4	2	122	5:15 PM	81	0	1	82
5:30 AM	126	1	0	127	5:30 PM	63	0	4	67
5:45 AM	164	0	0	164	5:45 PM	71	2	0	73
6:00 AM	180	2	0	182	6:00 PM	67	1	1	69
6:15 AM	190	6	1	197	6:15 PM	65	2	0	67
6:30 AM	228	7	3	238	6:30 PM	44	1	1	46
6:45 AM	207	3	3	213	6:45 PM	53	0	0	53
7:00 AM	216	6	1	223	7:00 PM	51	0	1	52
7:15 AM	244	9	1	254	7:15 PM	42	1	0	43
7:30 AM	198	6	2	206	7:30 PM	37	0	0	37
7:45 AM	199	11	2	212	7:45 PM	31	0	0	31
8:00 AM	164	8	1	173	8:00 PM	20	0	0	20
8:15 AM	159	2	1	162	8:15 PM	29	0	0	29
8:30 AM	190	3	2	195	8:30 PM	28	0	0	28
8:45 AM	146	3	0	149	8:45 PM	21	0	0	21
9:00 AM	124	5	3	132	9:00 PM	15	0	0	15
9:15 AM	108	4	2	114	9:15 PM	18	0	0	18
9:30 AM	110	6	3	119	9:30 PM	14	0	0	14
9:45 AM	107	8	1	116	9:45 PM	19	0	0	19
10:00 AM	95	3	2	100	10:00 PM	14	1	0	15
10:15 AM	101	3	1	105	10:15 PM	4	0	0	4
10:30 AM	79	6	1	86	10:30 PM	12	0	1	13
10:45 AM	84	2	1	87	10:45 PM	6	0	0	6
11:00 AM	83	4	0	87	11:00 PM	2	0	1	3
11:15 AM	83	4	0	87	11:15 PM	4	0	0	4
11:30 AM	91	5	0	96	11:30 PM	4	0	0	4
11:45 AM	97	7	1	105	11:45 PM	1	0	0	1

AM Total	4116	132	36	4284	PM Total	2454	96	29	2579
Percentage	96.08%	3.08%	0.84%		Percentage	95.15%	3.72%	1.12%	
AM Peak	6:30 AM	7:15 AM	9:00 AM	6:30 AM	PM Peak	2:45 PM	1:15 PM	12:15 PM	2:45 PM
Volume	895	34	9	928	Volume	370	33	7	387
					Day Total	6570	228	65	6863
					Percentage	95.73%	3.32%	0.95%	

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694



Count Date: Thursday, April 17, 2025
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	12:00 PM	83	1	1	85
12:15 AM	0	0	0	0	12:15 PM	82	0	1	83
12:30 AM	0	0	0	0	12:30 PM	71	6	0	77
12:45 AM	1	1	0	2	12:45 PM	85	1	0	86
1:00 AM	0	0	0	0	1:00 PM	83	0	2	85
1:15 AM	0	0	1	1	1:15 PM	84	5	2	91
1:30 AM	1	0	0	1	1:30 PM	93	10	1	104
1:45 AM	1	0	0	1	1:45 PM	90	9	0	99
2:00 AM	4	1	0	5	2:00 PM	94	5	3	102
2:15 AM	3	0	0	3	2:15 PM	97	8	0	105
2:30 AM	3	0	0	3	2:30 PM	97	2	0	99
2:45 AM	1	0	0	1	2:45 PM	91	4	0	95
3:00 AM	1	0	0	1	3:00 PM	92	4	0	96
3:15 AM	5	0	2	7	3:15 PM	83	6	0	89
3:30 AM	8	2	0	10	3:30 PM	105	3	0	108
3:45 AM	11	0	0	11	3:45 PM	105	2	1	108
4:00 AM	14	1	1	16	4:00 PM	92	2	0	94
4:15 AM	27	0	1	28	4:15 PM	86	1	0	87
4:30 AM	30	1	0	31	4:30 PM	113	1	1	115
4:45 AM	47	2	0	49	4:45 PM	81	1	0	82
5:00 AM	78	2	0	80	5:00 PM	83	1	0	84
5:15 AM	110	1	0	111	5:15 PM	90	1	0	91
5:30 AM	108	0	1	109	5:30 PM	94	2	0	96
5:45 AM	147	0	0	147	5:45 PM	85	2	0	87
6:00 AM	176	1	1	178	6:00 PM	69	1	0	70
6:15 AM	191	6	2	199	6:15 PM	70	1	0	71
6:30 AM	206	8	0	214	6:30 PM	56	2	0	58
6:45 AM	184	7	0	191	6:45 PM	59	1	0	60
7:00 AM	223	10	1	234	7:00 PM	61	2	0	63
7:15 AM	212	10	1	223	7:15 PM	59	0	0	59
7:30 AM	199	6	1	206	7:30 PM	31	1	0	32
7:45 AM	201	10	0	211	7:45 PM	41	0	0	41
8:00 AM	168	3	2	173	8:00 PM	31	1	0	32
8:15 AM	162	1	1	164	8:15 PM	30	0	0	30
8:30 AM	185	8	1	194	8:30 PM	23	1	0	24
8:45 AM	165	0	2	167	8:45 PM	47	1	0	48
9:00 AM	120	4	3	127	9:00 PM	36	1	0	37
9:15 AM	103	8	2	113	9:15 PM	24	0	0	24
9:30 AM	92	1	2	95	9:30 PM	11	0	1	12
9:45 AM	100	3	0	103	9:45 PM	16	0	1	17
10:00 AM	73	7	2	82	10:00 PM	7	0	0	7
10:15 AM	111	4	0	115	10:15 PM	9	0	0	9
10:30 AM	86	5	3	94	10:30 PM	10	0	0	10
10:45 AM	86	4	0	90	10:45 PM	8	0	0	8
11:00 AM	88	10	3	101	11:00 PM	9	0	0	9
11:15 AM	68	10	4	82	11:15 PM	4	1	1	6
11:30 AM	91	3	0	94	11:30 PM	4	0	0	4
11:45 AM	93	7	0	100	11:45 PM	4	0	0	4

AM Total	3983	147	37	4167	PM Total	2878	90	15	2983
Percentage	95.58%	3.53%	0.89%		Percentage	96.48%	3.02%	0.50%	
AM Peak	7:00 AM	7:00 AM	10:30 AM	7:00 AM	PM Peak	3:45 PM	1:30 PM	1:15 PM	1:30 PM
Volume	835	36	10	874	Volume	396	32	6	410
					Day Total	6861	237	52	7150
					Percentage	95.96%	3.31%	0.73%	



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Weekly Report

[illegible]



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
508-875-0100 datarequests@pdillc.com

Weekly Report

[illegible]

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00



PDI File #: 250561 ATR A (Speed)

Count Date
Wednesday, April 16, 2025

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	1	16	5	2	0	0	0	0	24	47.6	43.7
1:00 AM	0	0	1	0	0	1	5	1	0	0	0	0	0	8	44.0	39.8
2:00 AM	0	0	0	0	0	2	1	1	1	0	0	0	0	5	48.0	42.4
3:00 AM	0	0	0	0	0	2	1	1	0	0	0	0	0	4	43.7	40.8
4:00 AM	0	0	0	0	0	3	7	2	0	0	0	0	0	12	44.4	41.5
5:00 AM	0	0	0	0	0	1	18	11	1	0	0	0	0	31	48.0	44.3
6:00 AM	0	0	0	0	0	17	61	53	12	2	1	0	0	146	48.0	44.2
7:00 AM	1	1	2	2	14	54	73	28	2	0	0	0	0	177	45.0	40.0
8:00 AM	0	0	2	6	42	85	90	17	2	0	0	0	0	244	43.0	38.4
9:00 AM	0	0	0	5	31	78	100	22	2	0	0	0	0	238	44.0	39.3
10:00 AM	0	0	1	3	25	75	100	17	1	0	0	0	0	222	43.0	39.3
11:00 AM	0	4	1	10	41	94	151	34	1	1	0	0	0	337	44.0	39.1
12:00 PM	0	0	3	6	23	82	169	30	4	0	1	0	0	318	44.0	40.0
1:00 PM	0	0	3	12	37	118	175	28	6	0	0	0	0	379	44.0	39.4
2:00 PM	0	0	2	20	64	199	162	42	0	0	2	0	0	491	43.0	38.4
3:00 PM	0	0	1	17	41	210	289	59	3	0	0	0	0	620	44.0	39.8
4:00 PM	0	2	5	25	83	227	398	81	2	0	0	0	0	823	44.0	39.4
5:00 PM	0	0	1	14	58	232	345	99	5	0	0	0	0	754	44.0	40.1
6:00 PM	0	0	0	1	19	98	281	118	7	2	0	0	0	526	45.3	41.9
7:00 PM	0	0	4	4	6	60	197	64	5	0	0	0	0	340	45.0	41.7
8:00 PM	0	0	1	2	3	64	122	41	6	0	0	0	0	239	45.0	41.4
9:00 PM	0	0	0	1	4	41	94	25	1	0	0	0	0	166	45.0	41.0
10:00 PM	0	0	0	1	0	7	48	31	4	1	0	0	0	92	46.0	43.5
11:00 PM	0	0	0	0	0	9	32	17	2	1	0	0	0	61	47.0	43.2
Total	1	7	27	129	491	1760	2935	827	69	7	4	0	0	6257	44.0	40.1
Percent	0.02%	0.11%	0.43%	2.06%	7.85%	28.13%	46.91%	13.22%	1.10%	0.11%	0.06%	0.00%	0.00%			

AM Peak	7:00 AM	11:00 AM	7:00 AM	11:00 AM	8:00 AM	11:00 AM	11:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM			11:00 AM
Volume	1	4	2	10	42	94	151	53	12	2	1	0	0	337

PM Peak		4:00 PM	4:00 PM	4:00 PM	4:00 PM	5:00 PM	4:00 PM	6:00 PM	6:00 PM	6:00 PM	2:00 PM			4:00 PM
Volume	0	2	5	25	83	232	398	118	7	2	2	0	0	823

15th Percentile:	36.0 MPH	Average Speed:	40.1 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	41.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	3131
85th Percentile:	44.0 MPH	Number in Pace:	4833	Percent of Vehicles > 40 MPH:	50.0%
95th Percentile:	47.0 MPH	Percent in Pace:	77.2%		

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00



PDI File #: 250561 ATR A (Speed)

Count Date
Wednesday, April 16, 2025

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	3	1	1	0	0	0	0	0	5	44.2	40.2
1:00 AM	0	0	0	0	0	0	3	1	0	0	0	0	0	4	45.1	43.8
2:00 AM	0	0	0	0	0	0	8	2	0	0	0	0	0	10	44.7	43.0
3:00 AM	0	0	0	0	0	1	6	10	1	1	0	0	0	19	48.3	44.9
4:00 AM	0	0	0	2	1	12	54	42	2	1	0	0	0	114	47.0	43.1
5:00 AM	0	0	0	2	7	46	281	121	6	0	0	0	0	463	46.0	42.5
6:00 AM	1	0	1	7	58	223	344	99	6	0	0	0	0	739	44.0	40.1
7:00 AM	0	2	0	27	144	338	235	33	0	0	0	0	0	779	42.0	37.6
8:00 AM	2	2	3	21	93	254	207	19	0	0	0	0	0	601	42.0	37.7
9:00 AM	1	1	12	20	61	178	146	16	2	0	0	0	0	437	42.0	37.3
10:00 AM	0	1	7	10	33	99	155	34	6	1	1	0	0	347	44.0	39.4
11:00 AM	0	1	5	13	47	124	114	18	0	0	0	0	0	322	42.9	37.9
12:00 PM	0	0	2	15	41	103	110	29	5	0	0	0	0	305	43.4	38.6
1:00 PM	3	1	5	17	40	98	106	15	1	0	0	0	0	286	43.0	37.5
2:00 PM	3	1	5	11	47	110	105	28	3	0	0	0	0	313	43.2	38.0
3:00 PM	4	1	5	10	59	103	95	33	3	0	0	0	0	313	44.0	37.7
4:00 PM	0	5	5	4	16	93	107	41	2	0	0	0	0	273	45.0	39.4
5:00 PM	2	3	1	3	19	64	123	31	3	0	0	0	0	249	44.0	39.8
6:00 PM	5	3	6	2	17	53	103	36	2	0	0	0	0	227	45.0	39.3
7:00 PM	1	2	3	3	11	49	62	23	2	1	0	0	0	157	45.0	39.6
8:00 PM	0	0	0	0	14	25	39	11	2	0	0	0	0	91	44.0	39.9
9:00 PM	0	0	0	2	2	15	34	11	1	0	0	0	0	65	45.0	41.0
10:00 PM	0	0	1	1	4	17	12	4	0	0	0	0	0	39	43.0	38.4
11:00 PM	0	0	0	1	0	3	5	2	0	0	0	0	0	11	44.5	40.8
Total	22	23	61	171	714	2011	2455	660	47	4	1	0	0	6169	44.0	39.0
Percent	0.36%	0.37%	0.99%	2.77%	11.57%	32.60%	39.80%	10.70%	0.76%	0.06%	0.02%	0.00%	0.00%			

AM Peak	8:00 AM	7:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM	3:00 AM	10:00 AM			7:00 AM
Volume	2	2	12	27	144	338	344	121	6	1	1	0	0	779

PM Peak	6:00 PM	4:00 PM	6:00 PM	1:00 PM	3:00 PM	2:00 PM	5:00 PM	4:00 PM	12:00 PM	7:00 PM				2:00 PM
Volume	5	5	6	17	59	110	123	41	5	1	0	0	0	313

15th Percentile:	34.0 MPH	Average Speed:	39.0 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	40.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	2590
85th Percentile:	44.0 MPH	Number in Pace:	4480	Percent of Vehicles > 40 MPH:	42.0%
95th Percentile:	46.0 MPH	Percent in Pace:	72.6%		

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00



PDI File #: 250561 ATR A (Speed)

Count Date
Wednesday, April 16, 2025

Speed (60-minute)																
Combined NB and SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	4	17	6	2	0	0	0	0	29	46.8	43.1
1:00 AM	0	0	1	0	0	1	8	2	0	0	0	0	0	12	44.7	41.1
2:00 AM	0	0	0	0	0	2	9	3	1	0	0	0	0	15	45.9	42.8
3:00 AM	0	0	0	0	0	3	7	11	1	1	0	0	0	23	48.0	44.2
4:00 AM	0	0	0	2	1	15	61	44	2	1	0	0	0	126	46.0	43.0
5:00 AM	0	0	0	2	7	47	299	132	7	0	0	0	0	494	46.0	42.6
6:00 AM	1	0	1	7	58	240	405	152	18	2	1	0	0	885	45.0	40.8
7:00 AM	1	3	2	29	158	392	308	61	2	0	0	0	0	956	43.0	38.0
8:00 AM	2	2	5	27	135	339	297	36	2	0	0	0	0	845	42.0	37.9
9:00 AM	1	1	12	25	92	256	246	38	4	0	0	0	0	675	43.0	38.0
10:00 AM	0	1	8	13	58	174	255	51	7	1	1	0	0	569	44.0	39.4
11:00 AM	0	5	6	23	88	218	265	52	1	1	0	0	0	659	43.0	38.5
12:00 PM	0	0	5	21	64	185	279	59	9	0	1	0	0	623	44.0	39.3
1:00 PM	3	1	8	29	77	216	281	43	7	0	0	0	0	665	43.0	38.6
2:00 PM	3	1	7	31	111	309	267	70	3	0	2	0	0	804	43.0	38.3
3:00 PM	4	1	6	27	100	313	384	92	6	0	0	0	0	933	44.0	39.1
4:00 PM	0	7	10	29	99	320	505	122	4	0	0	0	0	1096	44.0	39.4
5:00 PM	2	3	2	17	77	296	468	130	8	0	0	0	0	1003	44.0	40.0
6:00 PM	5	3	6	3	36	151	384	154	9	2	0	0	0	753	45.0	41.1
7:00 PM	1	2	7	7	17	109	259	87	7	1	0	0	0	497	45.0	41.0
8:00 PM	0	0	1	2	17	89	161	52	8	0	0	0	0	330	45.0	41.0
9:00 PM	0	0	0	3	6	56	128	36	2	0	0	0	0	231	45.0	41.0
10:00 PM	0	0	1	2	4	24	60	35	4	1	0	0	0	131	46.0	42.0
11:00 PM	0	0	0	1	0	12	37	19	2	1	0	0	0	72	46.4	42.9
Total	23	30	88	300	1205	3771	5390	1487	116	11	5	0	0	12426	44.0	39.6
Percent	0.19%	0.24%	0.71%	2.41%	9.70%	30.35%	43.38%	11.97%	0.93%	0.09%	0.04%	0.00%	0.00%			

AM Peak	8:00 AM	11:00 AM	9:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM	6:00 AM			7:00 AM
Volume	2	5	12	29	158	392	405	152	18	2	1	0	0	956

PM Peak	6:00 PM	4:00 PM	4:00 PM	2:00 PM	2:00 PM	4:00 PM	4:00 PM	6:00 PM	12:00 PM	6:00 PM	2:00 PM			4:00 PM
Volume	5	7	10	31	111	320	505	154	9	2	2	0	0	1096

15th Percentile:	35.0 MPH	Average Speed:	39.6 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	40.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	5721
85th Percentile:	44.0 MPH	Number in Pace:	9313	Percent of Vehicles > 40 MPH:	46.0%
95th Percentile:	46.0 MPH	Percent in Pace:	74.9%		

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00



PDI File #: 250561 ATR A (Speed)

Count Date
Thursday, April 17, 2025

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	2	12	5	1	0	0	0	0	20	46.0	43.2
1:00 AM	0	0	0	0	0	2	4	4	0	0	0	0	0	10	46.0	42.8
2:00 AM	0	0	0	2	0	5	4	0	0	0	0	0	0	11	41.0	37.2
3:00 AM	0	0	0	0	0	4	3	1	1	0	0	0	0	9	45.4	41.2
4:00 AM	0	0	0	0	0	3	7	3	1	0	0	0	0	14	48.1	43.1
5:00 AM	0	0	1	0	1	3	15	18	3	1	0	0	0	42	47.0	43.6
6:00 AM	0	0	0	1	1	12	58	35	16	2	0	0	0	125	49.0	44.0
7:00 AM	0	0	0	4	18	57	70	21	0	1	0	0	0	171	44.0	39.9
8:00 AM	0	0	4	4	18	100	96	22	1	0	0	0	0	245	43.0	39.1
9:00 AM	0	0	2	12	24	68	126	33	4	0	0	0	0	269	44.0	39.7
10:00 AM	0	0	0	5	16	85	133	29	0	0	0	0	0	268	44.0	40.1
11:00 AM	0	0	1	1	21	66	138	29	7	0	0	0	0	263	44.0	40.7
12:00 PM	2	0	3	1	33	87	185	45	3	0	0	0	0	359	44.0	40.2
1:00 PM	0	0	4	11	17	112	164	49	2	0	0	0	0	359	44.0	39.9
2:00 PM	0	0	3	12	42	121	241	48	2	0	0	0	0	469	44.0	39.7
3:00 PM	0	0	15	39	67	226	333	45	2	0	0	0	0	727	43.0	38.7
4:00 PM	0	1	5	7	60	244	387	118	2	1	0	0	0	825	44.0	40.3
5:00 PM	0	0	0	6	39	188	430	103	2	0	0	0	0	768	44.0	40.9
6:00 PM	0	0	0	5	11	113	326	85	6	1	0	0	0	547	45.0	41.6
7:00 PM	0	0	0	2	11	94	204	60	4	1	0	0	0	376	45.0	41.3
8:00 PM	0	0	0	0	6	100	177	36	2	0	0	0	0	321	44.0	41.1
9:00 PM	0	0	1	2	4	38	101	19	3	0	1	0	0	169	44.0	41.1
10:00 PM	0	0	0	0	4	16	57	19	6	2	0	0	0	104	47.0	42.5
11:00 PM	0	0	0	0	1	1	33	10	5	0	0	0	0	50	47.0	43.5
Total	2	1	39	114	394	1747	3304	837	73	9	1	0	0	6521	44.0	40.4
Percent	0.03%	0.02%	0.60%	1.75%	6.04%	26.79%	50.67%	12.84%	1.12%	0.14%	0.02%	0.00%	0.00%			

AM Peak			8:00 AM	9:00 AM	9:00 AM	8:00 AM	11:00 AM	6:00 AM	6:00 AM	6:00 AM				9:00 AM
Volume	0	0	4	12	24	100	138	35	16	2	0	0	0	269

PM Peak	12:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	5:00 PM	4:00 PM	6:00 PM	10:00 PM	9:00 PM			4:00 PM
Volume	2	1	15	39	67	244	430	118	6	2	1	0	0	825

15th Percentile:	37.0 MPH	Average Speed:	40.4 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	41.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	3481
85th Percentile:	44.0 MPH	Number in Pace:	5217	Percent of Vehicles > 40 MPH:	53.4%
95th Percentile:	47.0 MPH	Percent in Pace:	80.0%		

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00



PDI File #: 250561 ATR A (Speed)

Count Date
Thursday, April 17, 2025

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	2	48.5	45.0
1:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	45.1	43.0
2:00 AM	0	0	0	0	0	4	3	4	0	0	0	0	0	11	46.5	42.1
3:00 AM	0	0	0	0	2	4	13	6	0	0	0	0	0	25	45.0	41.9
4:00 AM	0	0	0	1	1	11	47	51	7	1	0	0	0	119	48.0	44.1
5:00 AM	0	0	0	1	9	76	272	117	11	1	0	0	0	487	45.0	42.5
6:00 AM	0	0	3	5	46	216	362	97	2	1	1	0	0	733	44.0	40.4
7:00 AM	0	2	2	19	118	320	279	32	1	0	0	0	0	773	43.0	38.2
8:00 AM	1	0	3	31	119	229	208	34	2	0	0	0	0	627	42.0	37.7
9:00 AM	0	1	3	14	33	116	169	48	2	0	0	0	0	386	44.0	39.5
10:00 AM	0	2	5	11	33	117	137	38	1	0	0	0	0	344	44.0	39.0
11:00 AM	2	1	3	11	47	120	115	27	2	0	0	0	0	328	43.0	38.2
12:00 PM	1	1	7	12	32	85	124	34	2	0	0	0	0	298	44.0	38.8
1:00 PM	1	3	3	10	19	107	139	43	1	0	0	0	0	326	44.0	39.3
2:00 PM	3	0	4	10	36	137	146	23	0	0	0	0	0	359	43.0	38.5
3:00 PM	4	2	1	12	39	105	134	29	5	0	0	0	0	331	44.0	38.7
4:00 PM	4	1	2	8	36	104	137	31	2	0	0	0	0	325	44.0	38.9
5:00 PM	8	3	3	5	30	80	140	47	4	0	0	0	0	320	45.0	39.3
6:00 PM	3	2	2	4	12	65	105	39	4	1	0	0	0	237	45.0	40.2
7:00 PM	0	0	0	4	3	54	89	28	7	0	0	0	0	185	45.0	41.3
8:00 PM	1	0	0	2	5	38	64	17	1	0	0	0	0	128	44.0	40.4
9:00 PM	0	0	0	2	7	42	27	7	1	1	0	0	0	87	43.0	39.2
10:00 PM	0	0	1	0	2	14	14	5	0	0	0	0	0	36	44.0	39.6
11:00 PM	0	0	0	1	2	5	9	4	0	0	1	0	0	22	45.9	41.6
Total	28	18	42	163	631	2049	2735	762	56	5	2	0	0	6491	44.0	39.4
Percent	0.43%	0.28%	0.65%	2.51%	9.72%	31.57%	42.14%	11.74%	0.86%	0.08%	0.03%	0.00%	0.00%			

AM Peak	11:00 AM	7:00 AM	10:00 AM	8:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM	4:00 AM	6:00 AM			7:00 AM
Volume	2	2	5	31	119	320	362	117	11	1	1	0	0	773

PM Peak	5:00 PM	1:00 PM	12:00 PM	12:00 PM	3:00 PM	2:00 PM	2:00 PM	5:00 PM	7:00 PM	6:00 PM	11:00 PM			2:00 PM
Volume	8	3	7	12	39	137	146	47	7	1	1	0	0	359

15th Percentile:	35.0 MPH	Average Speed:	39.4 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	40.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	2930
85th Percentile:	44.0 MPH	Number in Pace:	4873	Percent of Vehicles > 40 MPH:	45.1%
95th Percentile:	46.0 MPH	Percent in Pace:	75.1%		

Main Street
between Mill Road & Mill Run Plaza
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00



PDI File #: 250561 ATR A (Speed)

Count Date
Thursday, April 17, 2025

Speed (60-minute)																
Combined NB and SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	2	13	5	2	0	0	0	0	22	46.0	43.3
1:00 AM	0	0	0	0	0	2	5	5	0	0	0	0	0	12	46.0	42.8
2:00 AM	0	0	0	2	0	9	7	4	0	0	0	0	0	22	44.9	39.6
3:00 AM	0	0	0	0	2	8	16	7	1	0	0	0	0	34	45.1	41.7
4:00 AM	0	0	0	1	1	14	54	54	8	1	0	0	0	133	48.0	44.0
5:00 AM	0	0	1	1	10	79	287	135	14	2	0	0	0	529	46.0	42.6
6:00 AM	0	0	3	6	47	228	420	132	18	3	1	0	0	858	45.0	40.9
7:00 AM	0	2	2	23	136	377	349	53	1	1	0	0	0	944	43.0	38.5
8:00 AM	1	0	7	35	137	329	304	56	3	0	0	0	0	872	42.0	38.1
9:00 AM	0	1	5	26	57	184	295	81	6	0	0	0	0	655	44.0	39.6
10:00 AM	0	2	5	16	49	202	270	67	1	0	0	0	0	612	44.0	39.5
11:00 AM	2	1	4	12	68	186	253	56	9	0	0	0	0	591	44.0	39.3
12:00 PM	3	1	10	13	65	172	309	79	5	0	0	0	0	657	44.0	39.5
1:00 PM	1	3	7	21	36	219	303	92	3	0	0	0	0	685	44.0	39.6
2:00 PM	3	0	7	22	78	258	387	71	2	0	0	0	0	828	43.0	39.2
3:00 PM	4	2	16	51	106	331	467	74	7	0	0	0	0	1058	43.0	38.7
4:00 PM	4	2	7	15	96	348	524	149	4	1	0	0	0	1150	44.0	39.9
5:00 PM	8	3	3	11	69	268	570	150	6	0	0	0	0	1088	44.0	40.4
6:00 PM	3	2	2	9	23	178	431	124	10	2	0	0	0	784	45.0	41.2
7:00 PM	0	0	0	6	14	148	293	88	11	1	0	0	0	561	45.0	41.3
8:00 PM	1	0	0	2	11	138	241	53	3	0	0	0	0	449	44.0	40.9
9:00 PM	0	0	1	4	11	80	128	26	4	1	1	0	0	256	44.0	40.4
10:00 PM	0	0	1	0	6	30	71	24	6	2	0	0	0	140	46.0	41.8
11:00 PM	0	0	0	1	3	6	42	14	5	0	1	0	0	72	47.0	42.9
Total	30	19	81	277	1025	3796	6039	1599	129	14	3	0	0	13012	44.0	39.9
Percent	0.23%	0.15%	0.62%	2.13%	7.88%	29.17%	46.41%	12.29%	0.99%	0.11%	0.02%	0.00%	0.00%			

AM Peak	11:00 AM	7:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	6:00 AM	5:00 AM	6:00 AM	6:00 AM	6:00 AM			7:00 AM
Volume	2	2	7	35	137	377	420	135	18	3	1	0	0	944

PM Peak	5:00 PM	1:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	5:00 PM	5:00 PM	7:00 PM	6:00 PM	9:00 PM			4:00 PM
Volume	8	3	16	51	106	348	570	150	11	2	1	0	0	1150

15th Percentile:	36.0 MPH	Average Speed:	39.9 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	40.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	6411
85th Percentile:	44.0 MPH	Number in Pace:	10090	Percent of Vehicles > 40 MPH:	49.3%
95th Percentile:	47.0 MPH	Percent in Pace:	77.5%		

PDI File #: **250561 A**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Fitchs Bridge Road W: Fitchs Bridge Road**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)					Fitchs Bridge Road					Main Street (Route 119/111)					Fitchs Bridge Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	241	17	0	258	1	2	1	0	4	0	42	0	0	42	2	0	0	0	2	306
7:15 AM	0	280	9	0	289	5	0	2	0	7	0	49	0	0	49	0	0	0	0	0	345
7:30 AM	0	255	1	0	256	6	0	2	0	8	0	63	0	0	63	1	0	0	0	1	328
7:45 AM	0	238	5	0	243	2	0	3	0	5	0	59	0	0	59	1	0	0	0	1	308
Total	0	1014	32	0	1046	14	2	8	0	24	0	213	0	0	213	4	0	0	0	4	1287
8:00 AM	0	183	4	0	187	4	0	1	0	5	0	83	1	0	84	0	1	1	0	2	278
8:15 AM	0	151	8	0	159	2	0	2	0	4	0	65	0	0	65	0	0	0	0	0	228
8:30 AM	0	207	3	0	210	1	1	1	0	3	0	72	0	0	72	0	0	1	0	1	286
8:45 AM	1	163	1	0	165	2	0	1	0	3	0	66	0	0	66	0	0	0	0	0	234
Total	1	704	16	0	721	9	1	5	0	15	0	286	1	0	287	0	1	2	0	3	1026
Grand Total	1	1718	48	0	1767	23	3	13	0	39	0	499	1	0	500	4	1	2	0	7	2313
Approach %	0.1	97.2	2.7	0.0		59.0	7.7	33.3	0.0		0.0	99.8	0.2	0.0		57.1	14.3	28.6	0.0		
Total %	0.0	74.3	2.1	0.0	76.4	1.0	0.1	0.6	0.0	1.7	0.0	21.6	0.0	0.0	21.6	0.2	0.0	0.1	0.0	0.3	
Exiting Leg Total	524					49					1735					5					2313
Cars	0	1658	46	0	1704	21	3	12	0	36	0	437	0	0	437	3	1	2	0	6	2183
% Cars	0.0	96.5	95.8	0.0	96.4	91.3	100.0	92.3	0.0	92.3	0.0	87.6	0.0	0.0	87.4	75.0	100.0	100.0	0.0	85.7	94.4
Exiting Leg Total	460					47					1673					3					2183
Heavy Vehicles	1	60	2	0	63	2	0	1	0	3	0	62	1	0	63	1	0	0	0	1	130
% Heavy Vehicles	100.0	3.5	4.2	0.0	3.6	8.7	0.0	7.7	0.0	7.7	0.0	12.4	100.0	0.0	12.6	25.0	0.0	0.0	0.0	14.3	5.6
Exiting Leg Total	64					2					62					2					130

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)					Fitchs Bridge Road					Main Street (Route 119/111)					Fitchs Bridge Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	241	17	0	258	1	2	1	0	4	0	42	0	0	42	2	0	0	0	2	306
7:15 AM	0	280	9	0	289	5	0	2	0	7	0	49	0	0	49	0	0	0	0	0	345
7:30 AM	0	255	1	0	256	6	0	2	0	8	0	63	0	0	63	1	0	0	0	1	328
7:45 AM	0	238	5	0	243	2	0	3	0	5	0	59	0	0	59	1	0	0	0	1	308
Total Volume	0	1014	32	0	1046	14	2	8	0	24	0	213	0	0	213	4	0	0	0	4	1287
% Approach Total	0.0	96.9	3.1	0.0		58.3	8.3	33.3	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		
PHF	0.000	0.905	0.471	0.000	0.905	0.583	0.250	0.667	0.000	0.750	0.000	0.845	0.000	0.000	0.845	0.500	0.000	0.000	0.000	0.500	0.933
Cars	0	974	32	0	1006	13	2	7	0	22	0	191	0	0	191	3	0	0	0	3	1222
Cars %	0.0	96.1	100.0	0.0	96.2	92.9	100.0	87.5	0.0	91.7	0.0	89.7	0.0	0.0	89.7	75.0	0.0	0.0	0.0	75.0	94.9
Heavy Vehicles	0	40	0	0	40	1	0	1	0	2	0	22	0	0	22	1	0	0	0	1	65
Heavy Vehicles %	0.0	3.9	0.0	0.0	3.8	7.1	0.0	12.5	0.0	8.3	0.0	10.3	0.0	0.0	10.3	25.0	0.0	0.0	0.0	25.0	5.1
Cars Enter Leg	0	974	32	0	1006	13	2	7	0	22	0	191	0	0	191	3	0	0	0	3	1222
Heavy Enter Leg	0	40	0	0	40	1	0	1	0	2	0	22	0	0	22	1	0	0	0	1	65
Total Entering Leg	0	1014	32	0	1046	14	2	8	0	24	0	213	0	0	213	4	0	0	0	4	1287
Cars Exiting Leg	204					32					984					2					1222
Heavy Exiting Leg	23					0					42					0					65
Total Exiting Leg	227					32					1026					2					1287

PDI File #: **250561 A**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Fitchs Bridge Road W: Fitchs Bridge Road**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **250561 A**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Fitchs Bridge Road W: Fitchs Bridge Road**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **250561 A**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Fitchs Bridge Road W: Fitchs Bridge Road**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)					Fitchs Bridge Road					Main Street (Route 119/111)					Fitchs Bridge Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	86	5	0	92	5	0	1	0	6	0	216	0	0	216	0	0	1	0	1	315
4:15 PM	0	82	1	0	83	8	2	2	0	12	1	243	0	0	244	1	0	1	0	2	341
4:30 PM	0	107	2	0	109	8	1	0	0	9	0	234	1	0	235	0	0	0	0	0	353
4:45 PM	0	77	4	0	81	1	0	0	0	1	0	236	1	0	237	0	2	0	0	2	321
Total	1	352	12	0	365	22	3	3	0	28	1	929	2	0	932	1	2	2	0	5	1330
5:00 PM	0	68	1	0	69	4	0	0	0	4	0	224	0	0	224	0	0	0	0	0	297
5:15 PM	0	94	0	0	94	4	1	1	0	6	0	227	0	0	227	0	0	0	0	0	327
5:30 PM	0	75	2	0	77	2	0	5	0	7	1	201	0	0	202	0	0	0	0	0	286
5:45 PM	0	78	4	0	82	3	2	1	0	6	0	189	0	0	189	0	0	0	0	0	277
Total	0	315	7	0	322	13	3	7	0	23	1	841	0	0	842	0	0	0	0	0	1187
Grand Total	1	667	19	0	687	35	6	10	0	51	2	1770	2	0	1774	1	2	2	0	5	2517
Approach %	0.1	97.1	2.8	0.0		68.6	11.8	19.6	0.0		0.1	99.8	0.1	0.0		20.0	40.0	40.0	0.0		
Total %	0.0	26.5	0.8	0.0	27.3	1.4	0.2	0.4	0.0	2.0	0.1	70.3	0.1	0.0	70.5	0.0	0.1	0.1	0.0	0.2	
Exiting Leg Total	1807					23					678					9					2517
Cars	1	654	18	0	673	31	6	10	0	47	2	1743	2	0	1747	1	2	2	0	5	2472
% Cars	100.0	98.1	94.7	0.0	98.0	88.6	100.0	100.0	0.0	92.2	100.0	98.5	100.0	0.0	98.5	100.0	100.0	100.0	0.0	100.0	98.2
Exiting Leg Total	1776					22					665					9					2472
Heavy Vehicles	0	13	1	0	14	4	0	0	0	4	0	27	0	0	27	0	0	0	0	0	45
% Heavy Vehicles	0.0	1.9	5.3	0.0	2.0	11.4	0.0	0.0	0.0	7.8	0.0	1.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.8
Exiting Leg Total	31					1					13					0					45

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)					Fitchs Bridge Road					Main Street (Route 119/111)					Fitchs Bridge Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	86	5	0	92	5	0	1	0	6	0	216	0	0	216	0	0	1	0	1	315
4:15 PM	0	82	1	0	83	8	2	2	0	12	1	243	0	0	244	1	0	1	0	2	341
4:30 PM	0	107	2	0	109	8	1	0	0	9	0	234	1	0	235	0	0	0	0	0	353
4:45 PM	0	77	4	0	81	1	0	0	0	1	0	236	1	0	237	0	2	0	0	2	321
Total Volume	1	352	12	0	365	22	3	3	0	28	1	929	2	0	932	1	2	2	0	5	1330
% Approach Total	0.3	96.4	3.3	0.0		78.6	10.7	10.7	0.0		0.1	99.7	0.2	0.0		20.0	40.0	40.0	0.0		
PHF	0.250	0.822	0.600	0.000	0.837	0.688	0.375	0.375	0.000	0.583	0.250	0.956	0.500	0.000	0.955	0.250	0.250	0.500	0.000	0.625	0.942
Cars	1	347	11	0	359	20	3	3	0	26	1	911	2	0	914	1	2	2	0	5	1304
Cars %	100.0	98.6	91.7	0.0	98.4	90.9	100.0	100.0	0.0	92.9	100.0	98.1	100.0	0.0	98.1	100.0	100.0	100.0	0.0	100.0	98.0
Heavy Vehicles	0	5	1	0	6	2	0	0	0	2	0	18	0	0	18	0	0	0	0	0	26
Heavy Vehicles %	0.0	1.4	8.3	0.0	1.6	9.1	0.0	0.0	0.0	7.1	0.0	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	2.0
Cars Enter Leg	1	347	11	0	359	20	3	3	0	26	1	911	2	0	914	1	2	2	0	5	1304
Heavy Enter Leg	0	5	1	0	6	2	0	0	0	2	0	18	0	0	18	0	0	0	0	0	26
Total Entering Leg	1	352	12	0	365	22	3	3	0	28	1	929	2	0	932	1	2	2	0	5	1330
Cars Exiting Leg	933					14					351					6					1304
Heavy Exiting Leg	20					1					5					0					26
Total Exiting Leg	953					15					356					6					1330

PDI File #: **250561 A**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Fitchs Bridge Road W: Fitchs Bridge Road**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Bicycles (on Roadway and Crosswalks)**

	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **250561 A**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Fitchs Bridge Road W: Fitchs Bridge Road**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Pedestrians

	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)							Fitchs Bridge Road							Main Street (Route 119/111)							Fitchs Bridge Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **250561 B**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: #500 Main Street Driveway**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Cars and Heavy Vehicles (Combined)**

	Main Street (Route 119/111)				#500 Main Street Driveway				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	245	0	0	245	0	0	0	0	0	44	0	44	289
7:15 AM	279	0	0	279	0	0	0	0	3	51	0	54	333
7:30 AM	245	0	0	245	0	0	0	0	0	64	0	64	309
7:45 AM	244	0	0	244	0	0	0	0	0	70	0	70	314
Total	1013	0	0	1013	0	0	0	0	3	229	0	232	1245
8:00 AM	189	0	0	189	0	0	0	0	0	104	0	104	293
8:15 AM	173	0	0	173	0	0	0	0	0	64	0	64	237
8:30 AM	209	0	0	209	0	0	0	0	1	80	0	81	290
8:45 AM	166	0	0	166	0	0	0	0	0	79	0	79	245
Total	737	0	0	737	0	0	0	0	1	327	0	328	1065
Grand Total	1750	0	0	1750	0	0	0	0	4	556	0	560	2310
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.7	99.3	0.0		
Total %	75.8	0.0	0.0	75.8	0.0	0.0	0.0	0.0	0.2	24.1	0.0	24.2	
Exiting Leg Total	556				4				1750				2310
Cars	1691	0	0	1691	0	0	0	0	3	485	0	488	2179
% Cars	96.6	0.0	0.0	96.6	0.0	0.0	0.0	0.0	75.0	87.2	0.0	87.1	94.3
Exiting Leg Total	485				3				1691				2179
Heavy Vehicles	59	0	0	59	0	0	0	0	1	71	0	72	131
% Heavy Vehicles	3.4	0.0	0.0	3.4	0.0	0.0	0.0	0.0	25.0	12.8	0.0	12.9	5.7
Exiting Leg Total	71				1				59				131

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street (Route 119/111)				#500 Main Street Driveway				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	279	0	0	279	0	0	0	0	3	51	0	54	333
7:30 AM	245	0	0	245	0	0	0	0	0	64	0	64	309
7:45 AM	244	0	0	244	0	0	0	0	0	70	0	70	314
8:00 AM	189	0	0	189	0	0	0	0	0	104	0	104	293
Total Volume	957	0	0	957	0	0	0	0	3	289	0	292	1249
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		1.0	99.0	0.0		
PHF	0.858	0.000	0.000	0.858	0.000	0.000	0.000	0.000	0.250	0.695	0.000	0.702	0.938
Cars	916	0	0	916	0	0	0	0	2	255	0	257	1173
Cars %	95.7	0.0	0.0	95.7	0.0	0.0	0.0	0.0	66.7	88.2	0.0	88.0	93.9
Heavy Vehicles	41	0	0	41	0	0	0	0	1	34	0	35	76
Heavy Vehicles %	4.3	0.0	0.0	4.3	0.0	0.0	0.0	0.0	33.3	11.8	0.0	12.0	6.1
Cars Enter Leg	916	0	0	916	0	0	0	0	2	255	0	257	1173
Heavy Enter Leg	41	0	0	41	0	0	0	0	1	34	0	35	76
Total Entering Leg	957	0	0	957	0	0	0	0	3	289	0	292	1249
Cars Exiting Leg				255				2				916	1173
Heavy Exiting Leg				34				1				41	76
Total Exiting Leg				289				3				957	1249

PDI File #: 250561 B
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: #500 Main Street Driveway
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 7:00 AM
End Time: 9:00 AM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						#500 Main Street Driveway						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)						#500 Main Street Driveway						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: 250561 B
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: #500 Main Street Driveway
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 7:00 AM
End Time: 9:00 AM
Class:



Pedestrians

	Main Street (Route 119/111)							#500 Main Street Driveway							Main Street (Route 119/111)							Total
	from North							from East							from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total	0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)						#500 Main Street Driveway						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: **250561 B**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: #500 Main Street Driveway**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)				#500 Main Street Driveway				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	87	0	0	87	0	0	0	0	0	233	0	233	320
4:15 PM	92	0	0	92	0	0	0	0	0	248	0	248	340
4:30 PM	110	0	0	110	0	0	0	0	0	254	0	254	364
4:45 PM	89	0	0	89	0	0	0	0	0	234	0	234	323
Total	378	0	0	378	0	0	0	0	0	969	0	969	1347
5:00 PM	65	0	0	65	0	0	0	0	0	242	0	242	307
5:15 PM	104	0	0	104	0	0	0	0	0	234	0	234	338
5:30 PM	84	0	0	84	0	0	0	0	0	198	0	198	282
5:45 PM	79	0	0	79	0	0	0	0	0	200	0	200	279
Total	332	0	0	332	0	0	0	0	0	874	0	874	1206
Grand Total	710	0	0	710	0	0	0	0	0	1843	0	1843	2553
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	27.8	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	72.2	0.0	72.2	
Exiting Leg Total	1843				0				710				2553
Cars	697	0	0	697	0	0	0	0	0	1815	0	1815	2512
% Cars	98.2	0.0	0.0	98.2	0.0	0.0	0.0	0.0	0.0	98.5	0.0	98.5	98.4
Exiting Leg Total	1815				0				697				2512
Heavy Vehicles	13	0	0	13	0	0	0	0	0	28	0	28	41
% Heavy Vehicles	1.8	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.5	1.6
Exiting Leg Total	28				0				13				41

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)				#500 Main Street Driveway				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	87	0	0	87	0	0	0	0	0	233	0	233	320
4:15 PM	92	0	0	92	0	0	0	0	0	248	0	248	340
4:30 PM	110	0	0	110	0	0	0	0	0	254	0	254	364
4:45 PM	89	0	0	89	0	0	0	0	0	234	0	234	323
Total Volume	378	0	0	378	0	0	0	0	0	969	0	969	1347
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.859	0.000	0.000	0.859	0.000	0.000	0.000	0.000	0.000	0.954	0.000	0.954	0.925
Cars	373	0	0	373	0	0	0	0	0	951	0	951	1324
Cars %	98.7	0.0	0.0	98.7	0.0	0.0	0.0	0.0	0.0	98.1	0.0	98.1	98.3
Heavy Vehicles	5	0	0	5	0	0	0	0	0	18	0	18	23
Heavy Vehicles %	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.9	1.7
Cars Enter Leg	373	0	0	373	0	0	0	0	0	951	0	951	1324
Heavy Enter Leg	5	0	0	5	0	0	0	0	0	18	0	18	23
Total Entering Leg	378	0	0	378	0	0	0	0	0	969	0	969	1347
Cars Exiting Leg				951				0				373	1324
Heavy Exiting Leg				18				0				5	23
Total Exiting Leg				969				0				378	1347

PDI File #: 250561 B
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: #500 Main Street Driveway
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						#500 Main Street Driveway						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						#500 Main Street Driveway						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: 250561 B
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: #500 Main Street Driveway
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Pedestrians

	Main Street (Route 119/111)							#500 Main Street Driveway							Main Street (Route 119/111)							Total
	from North							from East							from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total	0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						#500 Main Street Driveway						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: **250561 C**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	21	224	0	245	34	0	0	34	0	11	0	11	290
7:15 AM	25	250	0	275	41	0	0	41	2	12	0	14	330
7:30 AM	41	204	0	245	56	0	0	56	2	8	0	10	311
7:45 AM	33	209	0	242	58	1	0	59	2	11	0	13	314
Total	120	887	0	1007	189	1	0	190	6	42	0	48	1245
8:00 AM	16	171	0	187	91	1	0	92	1	14	0	15	294
8:15 AM	15	157	0	172	55	1	0	56	5	11	0	16	244
8:30 AM	18	192	0	210	60	1	0	61	3	17	0	20	291
8:45 AM	19	147	0	166	69	2	0	71	2	11	0	13	250
Total	68	667	0	735	275	5	0	280	11	53	0	64	1079
Grand Total	188	1554	0	1742	464	6	0	470	17	95	0	112	2324
Approach %	10.8	89.2	0.0		98.7	1.3	0.0		15.2	84.8	0.0		
Total %	8.1	66.9	0.0	75.0	20.0	0.3	0.0	20.2	0.7	4.1	0.0	4.8	
Exiting Leg Total				559				1571				194	2324
Cars	185	1499	0	1684	401	6	0	407	17	93	0	110	2201
% Cars	98.4	96.5	0.0	96.7	86.4	100.0	0.0	86.6	100.0	97.9	0.0	98.2	94.7
Exiting Leg Total				494				1516				191	2201
Heavy Vehicles	3	55	0	58	63	0	0	63	0	2	0	2	123
% Heavy Vehicles	1.6	3.5	0.0	3.3	13.6	0.0	0.0	13.4	0.0	2.1	0.0	1.8	5.3
Exiting Leg Total				65				55				3	123

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Street				
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	25	250	0	275	41	0	0	41	2	12	0	14	330
7:30 AM	41	204	0	245	56	0	0	56	2	8	0	10	311
7:45 AM	33	209	0	242	58	1	0	59	2	11	0	13	314
8:00 AM	16	171	0	187	91	1	0	92	1	14	0	15	294
Total Volume	115	834	0	949	246	2	0	248	7	45	0	52	1249
% Approach Total	12.1	87.9	0.0		99.2	0.8	0.0		13.5	86.5	0.0		
PHF	0.701	0.834	0.000	0.863	0.676	0.500	0.000	0.674	0.875	0.804	0.000	0.867	0.946
Cars	113	796	0	909	215	2	0	217	7	45	0	52	1178
Cars %	98.3	95.4	0.0	95.8	87.4	100.0	0.0	87.5	100.0	100.0	0.0	100.0	94.3
Heavy Vehicles	2	38	0	40	31	0	0	31	0	0	0	0	71
Heavy Vehicles %	1.7	4.6	0.0	4.2	12.6	0.0	0.0	12.5	0.0	0.0	0.0	0.0	5.7
Cars Enter Leg	113	796	0	909	215	2	0	217	7	45	0	52	1178
Heavy Enter Leg	2	38	0	40	31	0	0	31	0	0	0	0	71
Total Entering Leg	115	834	0	949	246	2	0	248	7	45	0	52	1249
Cars Exiting Leg				260				803				115	1178
Heavy Exiting Leg				31				38				2	71
Total Exiting Leg				291				841				117	1249

PDI File #: 250561 C
 Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
 Location: W: Mill Street
 City, State: Groton, MA
 Client: VHB/M. Santos
 Site Code: 16694.00
 Count Date: Wednesday, April 16, 2025
 Start Time: 7:00 AM
 End Time: 9:00 AM



Class: Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Street						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Street							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
PHF	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	0		
Exiting Leg	0						0						0						0			
Total	0						0						0						0			

PDI File #: **250561 C**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Pedestrians**

	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Street							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total		Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100			
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100		
Exiting Leg Total	0							0							1							1

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Exiting Leg	0						0						1						1
Total	0						0						2						2

PDI File #: **250561 C**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars and Heavy Vehicles (Combined)**

	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	10	77	0	87	202	2	0	204	6	36	0	42	333
4:15 PM	14	77	0	91	214	0	0	214	3	35	0	38	343
4:30 PM	19	91	0	110	225	0	0	225	2	28	0	30	365
4:45 PM	9	80	0	89	205	1	0	206	0	34	0	34	329
Total	52	325	0	377	846	3	0	849	11	133	0	144	1370
5:00 PM	7	58	0	65	210	3	0	213	1	30	0	31	309
5:15 PM	18	81	0	99	211	3	0	214	1	27	0	28	341
5:30 PM	12	70	0	82	179	2	0	181	0	21	0	21	284
5:45 PM	6	72	0	78	180	0	0	180	2	19	0	21	279
Total	43	281	0	324	780	8	0	788	4	97	0	101	1213
Grand Total	95	606	0	701	1626	11	0	1637	15	230	0	245	2583
Approach %	13.6	86.4	0.0		99.3	0.7	0.0		6.1	93.9	0.0		
Total %	3.7	23.5	0.0	27.1	63.0	0.4	0.0	63.4	0.6	8.9	0.0	9.5	
Exiting Leg Total	1856				621				106				2583
Cars	95	595	0	690	1609	11	0	1620	14	230	0	244	2554
% Cars	100.0	98.2	0.0	98.4	99.0	100.0	0.0	99.0	93.3	100.0	0.0	99.6	98.9
Exiting Leg Total	1839				609				106				2554
Heavy Vehicles	0	11	0	11	17	0	0	17	1	0	0	1	29
% Heavy Vehicles	0.0	1.8	0.0	1.6	1.0	0.0	0.0	1.0	6.7	0.0	0.0	0.4	1.1
Exiting Leg Total	17				12				0				29

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Street				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	10	77	0	87	202	2	0	204	6	36	0	42	333
4:15 PM	14	77	0	91	214	0	0	214	3	35	0	38	343
4:30 PM	19	91	0	110	225	0	0	225	2	28	0	30	365
4:45 PM	9	80	0	89	205	1	0	206	0	34	0	34	329
Total Volume	52	325	0	377	846	3	0	849	11	133	0	144	1370
% Approach Total	13.8	86.2	0.0		99.6	0.4	0.0		7.6	92.4	0.0		
PHF	0.684	0.893	0.000	0.857	0.940	0.375	0.000	0.943	0.458	0.924	0.000	0.857	0.938
Cars	52	321	0	373	832	3	0	835	11	133	0	144	1352
Cars %	100.0	98.8	0.0	98.9	98.3	100.0	0.0	98.4	100.0	100.0	0.0	100.0	98.7
Heavy Vehicles	0	4	0	4	14	0	0	14	0	0	0	0	18
Heavy Vehicles %	0.0	1.2	0.0	1.1	1.7	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.3
Cars Enter Leg	52	321	0	373	832	3	0	835	11	133	0	144	1352
Heavy Enter Leg	0	4	0	4	14	0	0	14	0	0	0	0	18
Total Entering Leg	52	325	0	377	846	3	0	849	11	133	0	144	1370
Cars Exiting Leg				965				332				55	1352
Heavy Exiting Leg				14				4				0	18
Total Exiting Leg				979				336				55	1370

PDI File #: 250561 C
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: W: Mill Street
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: 250561 C
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: W: Mill Street
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Pedestrians

	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Street							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total				
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Exiting Leg Total	0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Street						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0							0
Total						0						0							0

PDI File #: **250561 D**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Run Plaza Driveway north**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway north				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	4	217	0	221	32	5	0	37	0	3	0	3	261
7:15 AM	8	245	0	253	40	2	0	42	2	0	0	2	297
7:30 AM	7	202	0	209	55	1	0	56	4	2	0	6	271
7:45 AM	9	202	0	211	56	3	0	59	1	2	0	3	273
Total	28	866	0	894	183	11	0	194	7	7	0	14	1102
8:00 AM	7	162	0	169	87	7	0	94	2	3	0	5	268
8:15 AM	12	155	0	167	53	4	0	57	1	1	0	2	226
8:30 AM	6	184	0	190	57	4	0	61	4	3	0	7	258
8:45 AM	15	136	0	151	67	3	0	70	4	3	0	7	228
Total	40	637	0	677	264	18	0	282	11	10	0	21	980
Grand Total	68	1503	0	1571	447	29	0	476	18	17	0	35	2082
Approach %	4.3	95.7	0.0		93.9	6.1	0.0		51.4	48.6	0.0		
Total %	3.3	72.2	0.0	75.5	21.5	1.4	0.0	22.9	0.9	0.8	0.0	1.7	
Exiting Leg Total	464				1521				97				2082
Cars	68	1443	0	1511	381	29	0	410	18	17	0	35	1956
% Cars	100.0	96.0	0.0	96.2	85.2	100.0	0.0	86.1	100.0	100.0	0.0	100.0	93.9
Exiting Leg Total	398				1461				97				1956
Heavy Vehicles	0	60	0	60	66	0	0	66	0	0	0	0	126
% Heavy Vehicles	0.0	4.0	0.0	3.8	14.8	0.0	0.0	13.9	0.0	0.0	0.0	0.0	6.1
Exiting Leg Total	66				60				0				126

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway north				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	8	245	0	253	40	2	0	42	2	0	0	2	297
7:30 AM	7	202	0	209	55	1	0	56	4	2	0	6	271
7:45 AM	9	202	0	211	56	3	0	59	1	2	0	3	273
8:00 AM	7	162	0	169	87	7	0	94	2	3	0	5	268
Total Volume	31	811	0	842	238	13	0	251	9	7	0	16	1109
% Approach Total	3.7	96.3	0.0		94.8	5.2	0.0		56.3	43.8	0.0		
PHF	0.861	0.828	0.000	0.832	0.684	0.464	0.000	0.668	0.563	0.583	0.000	0.667	0.934
Cars	31	769	0	800	205	13	0	218	9	7	0	16	1034
Cars %	100.0	94.8	0.0	95.0	86.1	100.0	0.0	86.9	100.0	100.0	0.0	100.0	93.2
Heavy Vehicles	0	42	0	42	33	0	0	33	0	0	0	0	75
Heavy Vehicles %	0.0	5.2	0.0	5.0	13.9	0.0	0.0	13.1	0.0	0.0	0.0	0.0	6.8
Cars Enter Leg	31	769	0	800	205	13	0	218	9	7	0	16	1034
Heavy Enter Leg	0	42	0	42	33	0	0	33	0	0	0	0	75
Total Entering Leg	31	811	0	842	238	13	0	251	9	7	0	16	1109
Cars Exiting Leg				212				778				44	1034
Heavy Exiting Leg				33				42				0	75
Total Exiting Leg				245				820				44	1109

PDI File #: 250561 D
 Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
 Location: W: Mill Run Plaza Driveway north
 City, State: Groton, MA
 Client: VHB/M. Santos
 Site Code: 16694.00
 Count Date: Wednesday, April 16, 2025
 Start Time: 7:00 AM
 End Time: 9:00 AM
 Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway north						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Run Plaza Driveway north							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Exiting Leg	0						0						0						0			
Total	0						0						0						0			

PDI File #: **250561 D**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Run Plaza Driveway north**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway north						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	4
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100			
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100		
Exiting Leg Total	0						0						4						4	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway north						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.375		0.375
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3
Exiting Leg	0						0						3						3	
Total	0						0						6						6	

PDI File #: **250561 D**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Run Plaza Driveway north**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars and Heavy Vehicles (Combined)**

	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway north				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	11	72	0	83	198	4	0	202	5	5	0	10	295
4:15 PM	3	75	0	78	210	5	0	215	7	4	0	11	304
4:30 PM	1	92	0	93	217	3	0	220	7	11	0	18	331
4:45 PM	4	76	0	80	194	3	0	197	4	12	0	16	293
Total	19	315	0	334	819	15	0	834	23	32	0	55	1223
5:00 PM	1	59	0	60	206	3	0	209	2	8	0	10	279
5:15 PM	2	82	0	84	200	4	0	204	6	13	0	19	307
5:30 PM	3	71	0	74	177	5	0	182	1	6	0	7	263
5:45 PM	2	72	0	74	175	2	0	177	4	4	0	8	259
Total	8	284	0	292	758	14	0	772	13	31	0	44	1108
Grand Total	27	599	0	626	1577	29	0	1606	36	63	0	99	2331
Approach %	4.3	95.7	0.0		98.2	1.8	0.0		36.4	63.6	0.0		
Total %	1.2	25.7	0.0	26.9	67.7	1.2	0.0	68.9	1.5	2.7	0.0	4.2	
Exiting Leg Total				1640				635				56	2331
Cars	27	585	0	612	1549	29	0	1578	36	63	0	99	2289
% Cars	100.0	97.7	0.0	97.8	98.2	100.0	0.0	98.3	100.0	100.0	0.0	100.0	98.2
Exiting Leg Total				1612				621				56	2289
Heavy Vehicles	0	14	0	14	28	0	0	28	0	0	0	0	42
% Heavy Vehicles	0.0	2.3	0.0	2.2	1.8	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.8
Exiting Leg Total				28				14				0	42

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway north				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	11	72	0	83	198	4	0	202	5	5	0	10	295
4:15 PM	3	75	0	78	210	5	0	215	7	4	0	11	304
4:30 PM	1	92	0	93	217	3	0	220	7	11	0	18	331
4:45 PM	4	76	0	80	194	3	0	197	4	12	0	16	293
Total Volume	19	315	0	334	819	15	0	834	23	32	0	55	1223
% Approach Total	5.7	94.3	0.0		98.2	1.8	0.0		41.8	58.2	0.0		
PHF	0.432	0.856	0.000	0.898	0.944	0.750	0.000	0.948	0.821	0.667	0.000	0.764	0.924
Cars	19	310	0	329	800	15	0	815	23	32	0	55	1199
Cars %	100.0	98.4	0.0	98.5	97.7	100.0	0.0	97.7	100.0	100.0	0.0	100.0	98.0
Heavy Vehicles	0	5	0	5	19	0	0	19	0	0	0	0	24
Heavy Vehicles %	0.0	1.6	0.0	1.5	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.0
Cars Enter Leg	19	310	0	329	800	15	0	815	23	32	0	55	1199
Heavy Enter Leg	0	5	0	5	19	0	0	19	0	0	0	0	24
Total Entering Leg	19	315	0	334	819	15	0	834	23	32	0	55	1223
Cars Exiting Leg				832				333				34	1199
Heavy Exiting Leg				19				5				0	24
Total Exiting Leg				851				338				34	1223

PDI File #: 250561 D
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: W: Mill Run Plaza Driveway north
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway north						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway north						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: 250561 D
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: W: Mill Run Plaza Driveway north
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Pedestrians

	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Run Plaza Driveway north							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total		Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total	0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway north						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **250561 E**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Run Plaza Driveway south**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway south				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	1	213	0	214	36	1	0	37	2	0	0	2	253
7:15 AM	0	250	0	250	42	3	0	45	4	0	0	4	299
7:30 AM	0	206	0	206	55	2	0	57	2	0	0	2	265
7:45 AM	0	202	0	202	61	7	0	68	2	0	0	2	272
Total	1	871	0	872	194	13	0	207	10	0	0	10	1089
8:00 AM	1	161	0	162	92	5	0	97	1	1	0	2	261
8:15 AM	2	154	0	156	58	4	0	62	5	1	0	6	224
8:30 AM	4	184	0	188	63	2	0	65	1	1	0	2	255
8:45 AM	2	138	0	140	70	6	0	76	7	1	0	8	224
Total	9	637	0	646	283	17	0	300	14	4	0	18	964
Grand Total	10	1508	0	1518	477	30	0	507	24	4	0	28	2053
Approach %	0.7	99.3	0.0		94.1	5.9	0.0		85.7	14.3	0.0		
Total %	0.5	73.5	0.0	73.9	23.2	1.5	0.0	24.7	1.2	0.2	0.0	1.4	
Exiting Leg Total				481				1532				40	2053
Cars	9	1450	0	1459	411	30	0	441	23	4	0	27	1927
% Cars	90.0	96.2	0.0	96.1	86.2	100.0	0.0	87.0	95.8	100.0	0.0	96.4	93.9
Exiting Leg Total				415				1473				39	1927
Heavy Vehicles	1	58	0	59	66	0	0	66	1	0	0	1	126
% Heavy Vehicles	10.0	3.8	0.0	3.9	13.8	0.0	0.0	13.0	4.2	0.0	0.0	3.6	6.1
Exiting Leg Total				66				59				1	126

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway south				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	0	250	0	250	42	3	0	45	4	0	0	4	299
7:30 AM	0	206	0	206	55	2	0	57	2	0	0	2	265
7:45 AM	0	202	0	202	61	7	0	68	2	0	0	2	272
8:00 AM	1	161	0	162	92	5	0	97	1	1	0	2	261
Total Volume	1	819	0	820	250	17	0	267	9	1	0	10	1097
% Approach Total	0.1	99.9	0.0		93.6	6.4	0.0		90.0	10.0	0.0		
PHF	0.250	0.819	0.000	0.820	0.679	0.607	0.000	0.688	0.563	0.250	0.000	0.625	0.917
Cars	1	779	0	780	218	17	0	235	9	1	0	10	1025
Cars %	100.0	95.1	0.0	95.1	87.2	100.0	0.0	88.0	100.0	100.0	0.0	100.0	93.4
Heavy Vehicles	0	40	0	40	32	0	0	32	0	0	0	0	72
Heavy Vehicles %	0.0	4.9	0.0	4.9	12.8	0.0	0.0	12.0	0.0	0.0	0.0	0.0	6.6
Cars Enter Leg	1	779	0	780	218	17	0	235	9	1	0	10	1025
Heavy Enter Leg	0	40	0	40	32	0	0	32	0	0	0	0	72
Total Entering Leg	1	819	0	820	250	17	0	267	9	1	0	10	1097
Cars Exiting Leg				219				788				18	1025
Heavy Exiting Leg				32				40				0	72
Total Exiting Leg				251				828				18	1097

PDI File #: 250561 E
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: W: Mill Run Plaza Driveway south
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 7:00 AM
End Time: 9:00 AM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway south						Total	
	from North						from South						from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway south						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **250561 E**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Run Plaza Driveway south**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Pedestrians**

	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Run Plaza Driveway south							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2		
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100					
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100				
Exiting Leg Total	0							0							2							2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway south						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Exiting Leg						0						0					1	1	1
Total						0						0					2	2	2

PDI File #: **250561 E**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **W: Mill Run Plaza Driveway south**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars and Heavy Vehicles (Combined)**

	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway south				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	77	0	77	197	4	0	201	5	1	0	6	284
4:15 PM	1	80	0	81	213	2	0	215	6	2	0	8	304
4:30 PM	0	99	0	99	222	1	0	223	1	0	0	1	323
4:45 PM	0	79	0	79	196	1	0	197	2	1	0	3	279
Total	1	335	0	336	828	8	0	836	14	4	0	18	1190
5:00 PM	0	61	0	61	209	1	0	210	2	1	0	3	274
5:15 PM	0	86	0	86	199	1	0	200	2	0	0	2	288
5:30 PM	0	72	0	72	181	4	0	185	4	0	0	4	261
5:45 PM	0	75	0	75	178	0	0	178	5	1	0	6	259
Total	0	294	0	294	767	6	0	773	13	2	0	15	1082
Grand Total	1	629	0	630	1595	14	0	1609	27	6	0	33	2272
Approach %	0.2	99.8	0.0		99.1	0.9	0.0		81.8	18.2	0.0		
Total %	0.0	27.7	0.0	27.7	70.2	0.6	0.0	70.8	1.2	0.3	0.0	1.5	
Exiting Leg Total				1601				656				15	2272
Cars	1	614	0	615	1562	14	0	1576	27	6	0	33	2224
% Cars	100.0	97.6	0.0	97.6	97.9	100.0	0.0	97.9	100.0	100.0	0.0	100.0	97.9
Exiting Leg Total				1568				641				15	2224
Heavy Vehicles	0	15	0	15	33	0	0	33	0	0	0	0	48
% Heavy Vehicles	0.0	2.4	0.0	2.4	2.1	0.0	0.0	2.1	0.0	0.0	0.0	0.0	2.1
Exiting Leg Total				33				15				0	48

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)				Main Street (Route 119/111)				Mill Run Plaza Driveway south				Total
	from North				from South				from West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	77	0	77	197	4	0	201	5	1	0	6	284
4:15 PM	1	80	0	81	213	2	0	215	6	2	0	8	304
4:30 PM	0	99	0	99	222	1	0	223	1	0	0	1	323
4:45 PM	0	79	0	79	196	1	0	197	2	1	0	3	279
Total Volume	1	335	0	336	828	8	0	836	14	4	0	18	1190
% Approach Total	0.3	99.7	0.0		99.0	1.0	0.0		77.8	22.2	0.0		
PHF	0.250	0.846	0.000	0.848	0.932	0.500	0.000	0.937	0.583	0.500	0.000	0.563	0.921
Cars	1	329	0	330	808	8	0	816	14	4	0	18	1164
Cars %	100.0	98.2	0.0	98.2	97.6	100.0	0.0	97.6	100.0	100.0	0.0	100.0	97.8
Heavy Vehicles	0	6	0	6	20	0	0	20	0	0	0	0	26
Heavy Vehicles %	0.0	1.8	0.0	1.8	2.4	0.0	0.0	2.4	0.0	0.0	0.0	0.0	2.2
Cars Enter Leg	1	329	0	330	808	8	0	816	14	4	0	18	1164
Heavy Enter Leg	0	6	0	6	20	0	0	20	0	0	0	0	26
Total Entering Leg	1	335	0	336	828	8	0	836	14	4	0	18	1190
Cars Exiting Leg				812				343				9	1164
Heavy Exiting Leg				20				6				0	26
Total Exiting Leg				832				349				9	1190

PDI File #: 250561 E
 Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
 Location: W: Mill Run Plaza Driveway south
 City, State: Groton, MA
 Client: VHB/M. Santos
 Site Code: 16694.00
 Count Date: Wednesday, April 16, 2025
 Start Time: 4:00 PM
 End Time: 6:00 PM



Class: Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Run Plaza Driveway south							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total		Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway south						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: 250561 E
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: W: Mill Run Plaza Driveway south
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Pedestrians

	Main Street (Route 119/111)							Main Street (Route 119/111)							Mill Run Plaza Driveway south							Total
	from North							from South							from West							
	Right	Thru	U-Turn	CW-EB	CW-WB	Total		Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg Total	0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Main Street (Route 119/111)						Mill Run Plaza Driveway south						Total
	from North						from South						from West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **250561 F**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Taylor Street W: Arlington Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)					Taylor Street					Main Street (Route 119/111)					Arlington Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	215	0	0	215	0	0	0	0	0	0	36	0	0	36	10	0	0	0	10	261
7:15 AM	4	250	0	0	254	0	0	0	0	0	0	44	6	0	50	3	0	0	0	3	307
7:30 AM	0	211	0	0	211	0	0	0	0	0	0	57	2	0	59	2	0	1	0	3	273
7:45 AM	2	203	0	0	205	0	0	1	0	1	0	66	5	0	71	4	0	2	0	6	283
Total	6	879	0	0	885	0	0	1	0	1	0	203	13	0	216	19	0	3	0	22	1124
8:00 AM	1	163	0	0	164	0	0	1	0	1	1	99	6	0	106	5	0	0	0	5	276
8:15 AM	0	161	0	0	161	0	0	0	0	0	0	61	2	0	63	2	0	0	0	2	226
8:30 AM	0	181	0	0	181	0	0	0	0	0	0	67	0	0	67	5	0	0	0	5	253
8:45 AM	1	143	0	0	144	0	0	3	0	3	1	74	12	0	87	4	0	0	0	4	238
Total	2	648	0	0	650	0	0	4	0	4	2	301	20	0	323	16	0	0	0	16	993
Grand Total	8	1527	0	0	1535	0	0	5	0	5	2	504	33	0	539	35	0	3	0	38	2117
Approach %	0.5	99.5	0.0	0.0		0.0	0.0	100.0	0.0		0.4	93.5	6.1	0.0		92.1	0.0	7.9	0.0		
Total %	0.4	72.1	0.0	0.0	72.5	0.0	0.0	0.2	0.0	0.2	0.1	23.8	1.6	0.0	25.5	1.7	0.0	0.1	0.0	1.8	
Exiting Leg Total	507					2					1567					41					2117
Cars	7	1472	0	0	1479	0	0	5	0	5	2	436	29	0	467	30	0	3	0	33	1984
% Cars	87.5	96.4	0.0	0.0	96.4	0.0	0.0	100.0	0.0	100.0	100.0	86.5	87.9	0.0	86.6	85.7	0.0	100.0	0.0	86.8	93.7
Exiting Leg Total	439					2					1507					36					1984
Heavy Vehicles	1	55	0	0	56	0	0	0	0	0	0	68	4	0	72	5	0	0	0	5	133
% Heavy Vehicles	12.5	3.6	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	13.5	12.1	0.0	13.4	14.3	0.0	0.0	0.0	13.2	6.3
Exiting Leg Total	68					0					60					5					133

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	Main Street (Route 119/111)					Taylor Street					Main Street (Route 119/111)					Arlington Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	4	250	0	0	254	0	0	0	0	0	0	44	6	0	50	3	0	0	0	3	307
7:30 AM	0	211	0	0	211	0	0	0	0	0	0	57	2	0	59	2	0	1	0	3	273
7:45 AM	2	203	0	0	205	0	0	1	0	1	0	66	5	0	71	4	0	2	0	6	283
8:00 AM	1	163	0	0	164	0	0	1	0	1	1	99	6	0	106	5	0	0	0	5	276
Total Volume	7	827	0	0	834	0	0	2	0	2	1	266	19	0	286	14	0	3	0	17	1139
% Approach Total	0.8	99.2	0.0	0.0		0.0	0.0	100.0	0.0		0.3	93.0	6.6	0.0		82.4	0.0	17.6	0.0		
PHF	0.438	0.827	0.000	0.000	0.821	0.000	0.000	0.500	0.000	0.500	0.250	0.672	0.792	0.000	0.675	0.700	0.000	0.375	0.000	0.708	0.928
Cars	7	790	0	0	797	0	0	2	0	2	1	231	17	0	249	12	0	3	0	15	1063
Cars %	100.0	95.5	0.0	0.0	95.6	0.0	0.0	100.0	0.0	100.0	100.0	86.8	89.5	0.0	87.1	85.7	0.0	100.0	0.0	88.2	93.3
Heavy Vehicles	0	37	0	0	37	0	0	0	0	0	0	35	2	0	37	2	0	0	0	2	76
Heavy Vehicles %	0.0	4.5	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	13.2	10.5	0.0	12.9	14.3	0.0	0.0	0.0	11.8	6.7
Cars Enter Leg	7	790	0	0	797	0	0	2	0	2	1	231	17	0	249	12	0	3	0	15	1063
Heavy Enter Leg	0	37	0	0	37	0	0	0	0	0	0	35	2	0	37	2	0	0	0	2	76
Total Entering Leg	7	827	0	0	834	0	0	2	0	2	1	266	19	0	286	14	0	3	0	17	1139
Cars Exiting Leg	234					1					804					24					1063
Heavy Exiting Leg	35					0					39					2					76
Total Exiting Leg	269					1					843					26					1139

PDI File #: **250561 F**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Taylor Street W: Arlington Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **250561 F**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Taylor Street W: Arlington Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	
Exiting Leg Total	0							0							0							2							2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	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	1	1	1	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	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	1	1	1	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.250	
Entering Leg	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	1	1	1	
Exiting Leg	0							0							0							1							1
Total	0							0							0							2							2

PDI File #: **250561 F**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Taylor Street W: Arlington Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)					Taylor Street					Main Street (Route 119/111)					Arlington Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	2	72	0	0	74	0	0	0	0	0	0	170	6	0	176	5	0	1	0	6	256
4:15 PM	1	55	0	0	56	0	0	0	0	0	0	132	2	0	134	2	0	0	0	2	192
4:30 PM	2	102	0	0	104	0	0	1	0	1	0	214	7	0	221	3	0	1	0	4	330
4:45 PM	3	71	0	0	74	0	0	0	0	0	0	213	4	0	219	4	0	0	0	4	297
Total	8	300	0	0	308	0	0	1	0	1	2	729	19	0	750	14	0	2	0	16	1075
5:00 PM	0	13	0	0	13	0	0	0	0	0	0	37	0	0	37	1	0	0	0	1	51
5:15 PM	0	62	0	0	62	0	0	0	0	0	0	135	2	0	137	2	0	0	0	2	201
5:30 PM	2	77	0	0	79	0	0	0	0	0	0	185	5	0	190	5	0	1	0	6	275
5:45 PM	2	75	1	0	78	0	0	0	0	0	0	174	7	0	181	3	0	2	0	5	264
Total	4	227	1	0	232	0	0	0	0	0	0	531	14	0	545	11	0	3	0	14	791
Grand Total	12	527	1	0	540	0	0	1	0	1	2	1260	33	0	1295	25	0	5	0	30	1866
Approach %	2.2	97.6	0.2	0.0		0.0	0.0	100.0	0.0		0.2	97.3	2.5	0.0		83.3	0.0	16.7	0.0		
Total %	0.6	28.2	0.1	0.0	28.9	0.0	0.0	0.1	0.0	0.1	0.1	67.5	1.8	0.0	69.4	1.3	0.0	0.3	0.0	1.6	
Exiting Leg Total	1265					3					553					45					1866
Cars	11	517	1	0	529	0	0	1	0	1	2	1236	32	0	1270	24	0	5	0	29	1829
% Cars	91.7	98.1	100.0	0.0	98.0	0.0	0.0	100.0	0.0	100.0	100.0	98.1	97.0	0.0	98.1	96.0	0.0	100.0	0.0	96.7	98.0
Exiting Leg Total	1241					3					542					43					1829
Heavy Vehicles	1	10	0	0	11	0	0	0	0	0	0	24	1	0	25	1	0	0	0	1	37
% Heavy Vehicles	8.3	1.9	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.0	0.0	1.9	4.0	0.0	0.0	0.0	3.3	2.0
Exiting Leg Total	24					0					11					2					37

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)					Taylor Street					Main Street (Route 119/111)					Arlington Street					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	2	72	0	0	74	0	0	0	0	0	0	170	6	0	176	5	0	1	0	6	256
4:15 PM	1	55	0	0	56	0	0	0	0	0	0	132	2	0	134	2	0	0	0	2	192
4:30 PM	2	102	0	0	104	0	0	1	0	1	0	214	7	0	221	3	0	1	0	4	330
4:45 PM	3	71	0	0	74	0	0	0	0	0	2	213	4	0	219	4	0	0	0	4	297
Total Volume	8	300	0	0	308	0	0	1	0	1	2	729	19	0	750	14	0	2	0	16	1075
% Approach Total	2.6	97.4	0.0	0.0		0.0	0.0	100.0	0.0		0.3	97.2	2.5	0.0		87.5	0.0	12.5	0.0		
PHF	0.667	0.735	0.000	0.000	0.740	0.000	0.000	0.250	0.000	0.250	0.250	0.852	0.679	0.000	0.848	0.700	0.000	0.500	0.000	0.667	0.814
Cars	7	297	0	0	304	0	0	1	0	1	2	715	19	0	736	14	0	2	0	16	1057
Cars %	87.5	99.0	0.0	0.0	98.7	0.0	0.0	100.0	0.0	100.0	100.0	98.1	100.0	0.0	98.1	100.0	0.0	100.0	0.0	100.0	98.3
Heavy Vehicles	1	3	0	0	4	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	18
Heavy Vehicles %	12.5	1.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	1.7
Cars Enter Leg	7	297	0	0	304	0	0	1	0	1	2	715	19	0	736	14	0	2	0	16	1057
Heavy Enter Leg	1	3	0	0	4	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	18
Total Entering Leg	8	300	0	0	308	0	0	1	0	1	2	729	19	0	750	14	0	2	0	16	1075
Cars Exiting Leg	717					2					312					26					1057
Heavy Exiting Leg	14					0					3					1					18
Total Exiting Leg	731					2					315					27					1075

PDI File #: 250561 F
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: Taylor Street W: Arlington Street
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **250561 F**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Taylor Street W: Arlington Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Pedestrians

	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)							Taylor Street							Main Street (Route 119/111)							Arlington Street								
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0	
Total	0							0							0							0							0	

PDI File #: **250561 G**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Champney Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Main Street (Route 119/111)				Champney Street				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	211	14	0	225	14	6	0	20	1	44	0	45	290
7:15 AM	226	12	0	238	16	6	0	22	2	58	0	60	320
7:30 AM	190	4	0	194	26	6	0	32	0	78	0	78	304
7:45 AM	218	13	0	231	42	6	0	48	2	119	0	121	400
Total	845	43	0	888	98	24	0	122	5	299	0	304	1314
8:00 AM	187	8	0	195	23	5	0	28	0	67	0	67	290
8:15 AM	156	5	0	161	11	3	0	14	0	83	0	83	258
8:30 AM	189	1	0	190	26	2	0	28	0	90	0	90	308
8:45 AM	169	17	0	186	19	5	0	24	3	86	0	89	299
Total	701	31	0	732	79	15	0	94	3	326	0	329	1155
Grand Total	1546	74	0	1620	177	39	0	216	8	625	0	633	2469
Approach %	95.4	4.6	0.0		81.9	18.1	0.0		1.3	98.7	0.0		
Total %	62.6	3.0	0.0	65.6	7.2	1.6	0.0	8.7	0.3	25.3	0.0	25.6	
Exiting Leg Total	802				82				1585				2469
Cars	1484	67	0	1551	169	36	0	205	8	556	0	564	2320
% Cars	96.0	90.5	0.0	95.7	95.5	92.3	0.0	94.9	100.0	89.0	0.0	89.1	94.0
Exiting Leg Total	725				75				1520				2320
Heavy Vehicles	62	7	0	69	8	3	0	11	0	69	0	69	149
% Heavy Vehicles	4.0	9.5	0.0	4.3	4.5	7.7	0.0	5.1	0.0	11.0	0.0	10.9	6.0
Exiting Leg Total	77				7				65				149

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)				Champney Street				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	211	14	0	225	14	6	0	20	1	44	0	45	290
7:15 AM	226	12	0	238	16	6	0	22	2	58	0	60	320
7:30 AM	190	4	0	194	26	6	0	32	0	78	0	78	304
7:45 AM	218	13	0	231	42	6	0	48	2	119	0	121	400
Total Volume	845	43	0	888	98	24	0	122	5	299	0	304	1314
% Approach Total	95.2	4.8	0.0		80.3	19.7	0.0		1.6	98.4	0.0		
PHF	0.935	0.768	0.000	0.933	0.583	1.000	0.000	0.635	0.625	0.628	0.000	0.628	0.821
Cars	808	38	0	846	95	22	0	117	5	266	0	271	1234
Cars %	95.6	88.4	0.0	95.3	96.9	91.7	0.0	95.9	100.0	89.0	0.0	89.1	93.9
Heavy Vehicles	37	5	0	42	3	2	0	5	0	33	0	33	80
Heavy Vehicles %	4.4	11.6	0.0	4.7	3.1	8.3	0.0	4.1	0.0	11.0	0.0	10.9	6.1
Cars Enter Leg	808	38	0	846	95	22	0	117	5	266	0	271	1234
Heavy Enter Leg	37	5	0	42	3	2	0	5	0	33	0	33	80
Total Entering Leg	845	43	0	888	98	24	0	122	5	299	0	304	1314
Cars Exiting Leg				361				43				830	1234
Heavy Exiting Leg				36				5				39	80
Total Exiting Leg				397				48				869	1314

PDI File #: 250561 G
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: Champney Street
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 7:00 AM
End Time: 9:00 AM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Champney Street						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:00 AM	Main Street (Route 119/111)							Champney Street							Main Street (Route 119/111)							Total
	from North							from East							from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Exiting Leg	0						0						0						0			
Total	0						0						0						0			

PDI File #: **250561 G**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Champney Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Main Street (Route 119/111)							Champney Street							Main Street (Route 119/111)							Total
	from North							from East							from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	U-Turn	CW-WB	CW-EB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	5	
Total	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	7	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	
Grand Total	0	0	0	0	0	0	0	0	0	0	1	7	8	0	0	0	0	0	0	0	8	
Approach %	0	0	0	0	0	0	0	0	0	0	12.5	87.5		0	0	0	0	0	0			
Total %	0	0	0	0	0	0	0	0	0	0	12.5	87.5	100	0	0	0	0	0	0	0		
Exiting Leg Total	0							8							0							8

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	Main Street (Route 119/111)						Champney Street						Main Street (Route 119/111)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	1	7	8	0	0	0	0	0	0	8
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	12.5	87.5		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.350	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.400
Entering Leg	0	0	0	0	0	0	0	0	0	1	7	8	0	0	0	0	0	0	8
Exiting Leg	0						8						0						8
Total	0						16						0						16

PDI File #: **250561 G**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Champney Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars and Heavy Vehicles (Combined)**

	Main Street (Route 119/111)				Champney Street				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	94	10	0	104	27	5	0	32	2	234	0	236	372
4:15 PM	87	9	0	96	27	4	0	31	1	218	0	219	346
4:30 PM	107	14	0	121	20	5	0	25	1	217	0	218	364
4:45 PM	119	10	0	129	15	4	0	19	2	214	0	216	364
Total	407	43	0	450	89	18	0	107	6	883	0	889	1446
5:00 PM	104	18	0	122	21	2	0	23	2	190	0	192	337
5:15 PM	113	15	0	128	9	5	0	14	1	184	0	185	327
5:30 PM	110	12	0	122	15	7	0	22	2	185	0	187	331
5:45 PM	94	10	0	104	13	5	0	18	5	166	0	171	293
Total	421	55	0	476	58	19	0	77	10	725	0	735	1288
Grand Total	828	98	0	926	147	37	0	184	16	1608	0	1624	2734
Approach %	89.4	10.6	0.0		79.9	20.1	0.0		1.0	99.0	0.0		
Total %	30.3	3.6	0.0	33.9	5.4	1.4	0.0	6.7	0.6	58.8	0.0	59.4	
Exiting Leg Total	1755				114				865				2734
Cars	813	98	0	911	144	37	0	181	16	1580	0	1596	2688
% Cars	98.2	100.0	0.0	98.4	98.0	100.0	0.0	98.4	100.0	98.3	0.0	98.3	98.3
Exiting Leg Total	1724				114				850				2688
Heavy Vehicles	15	0	0	15	3	0	0	3	0	28	0	28	46
% Heavy Vehicles	1.8	0.0	0.0	1.6	2.0	0.0	0.0	1.6	0.0	1.7	0.0	1.7	1.7
Exiting Leg Total	31				0				15				46

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)				Champney Street				Main Street (Route 119/111)				Total
	from North				from East				from South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	94	10	0	104	27	5	0	32	2	234	0	236	372
4:15 PM	87	9	0	96	27	4	0	31	1	218	0	219	346
4:30 PM	107	14	0	121	20	5	0	25	1	217	0	218	364
4:45 PM	119	10	0	129	15	4	0	19	2	214	0	216	364
Total Volume	407	43	0	450	89	18	0	107	6	883	0	889	1446
% Approach Total	90.4	9.6	0.0		83.2	16.8	0.0		0.7	99.3	0.0		
PHF	0.855	0.768	0.000	0.872	0.824	0.900	0.000	0.836	0.750	0.943	0.000	0.942	0.972
Cars	402	43	0	445	88	18	0	106	6	866	0	872	1423
Cars %	98.8	100.0	0.0	98.9	98.9	100.0	0.0	99.1	100.0	98.1	0.0	98.1	98.4
Heavy Vehicles	5	0	0	5	1	0	0	1	0	17	0	17	23
Heavy Vehicles %	1.2	0.0	0.0	1.1	1.1	0.0	0.0	0.9	0.0	1.9	0.0	1.9	1.6
Cars Enter Leg	402	43	0	445	88	18	0	106	6	866	0	872	1423
Heavy Enter Leg	5	0	0	5	1	0	0	1	0	17	0	17	23
Total Entering Leg	407	43	0	450	89	18	0	107	6	883	0	889	1446
Cars Exiting Leg				954				49				420	1423
Heavy Exiting Leg				18				0				5	23
Total Exiting Leg				972				49				425	1446

PDI File #: 250561 G
Location: N: Main St (Route 119/111) S: Main St (Route 119/111)
Location: E: Champney Street
City, State: Groton, MA
Client: VHB/M. Santos
Site Code: 16694.00
Count Date: Wednesday, April 16, 2025
Start Time: 4:00 PM
End Time: 6:00 PM
Class:



Bicycles (on Roadway and Crosswalks)

	Main Street (Route 119/111)						Champney Street						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	Main Street (Route 119/111)						Champney Street						Main Street (Route 119/111)						Total
	from North						from East						from South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **250561 G**
 Location: **N: Main St (Route 119/111) S: Main St (Route 119/111)**
 Location: **E: Champney Street**
 City, State: **Groton, MA**
 Client: **VHB/M. Santos**
 Site Code: **16694.00**
 Count Date: **Wednesday, April 16, 2025**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Pedestrians**

	Main Street (Route 119/111)							Champney Street							Main Street (Route 119/111)							Total
	from North							from East							from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0		0	0	0	1	0	1	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0		0	0	0	1	0	1	0	0	0	0	0	0	1	
Grand Total	0	0	0	0	0	0	0		0	0	0	1	0	1	0	0	0	0	0	0	1	
Approach %	0	0	0	0	0	0	0		0	0	0	100	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	0	0		0	0	0	100	0	100	0	0	0	0	0	0	0	
Exiting Leg Total	0							1							0							1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	Main Street (Route 119/111)						Champney Street						Main Street (Route 119/111)						Total	
	from North						from East						from South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
Exiting Leg						0						1							0	1
Total	0						2						0						2	

Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

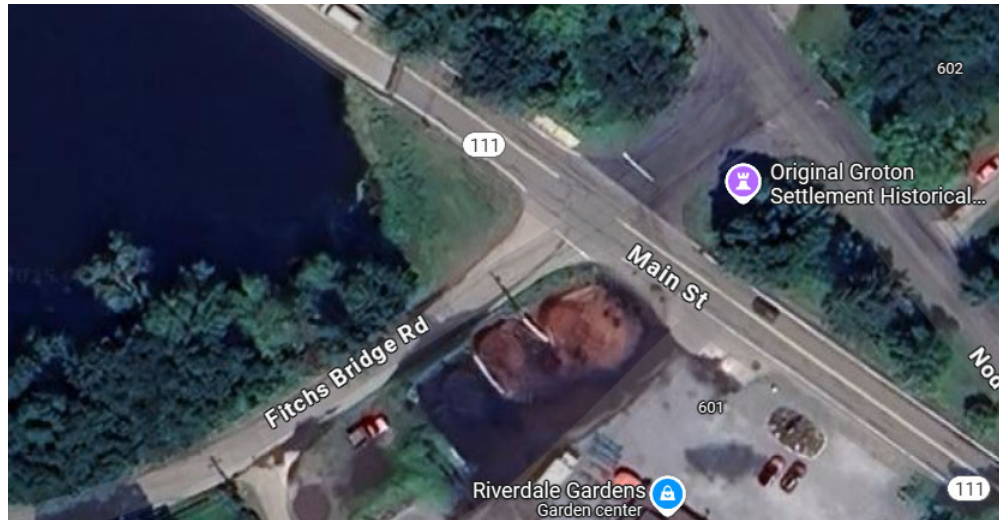
DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Fitchs Bridge Road

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

approach: PEAK HOURLY VOLUMES (PM) :	Fitchs Bridge Street	Fitchs Bridge Street	Main Street	Main Street	Total Peak Hourly Approach Volume
	EB	WB	NB	SB	
	0	30	930	360	1,320

" K " FACTOR : 0.090 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 14,667

TOTAL # OF CRASHES : 1 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (A) : 0.20

CRASH RATE CALCULATION :

0.04

$$\text{RATE} = \left(\frac{A * 1,000,000}{V * 365} \right)$$

Comments : PM Peak Hourly Voulmes

Project Title & Date: Nashoba Satellite Emergency Facility

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

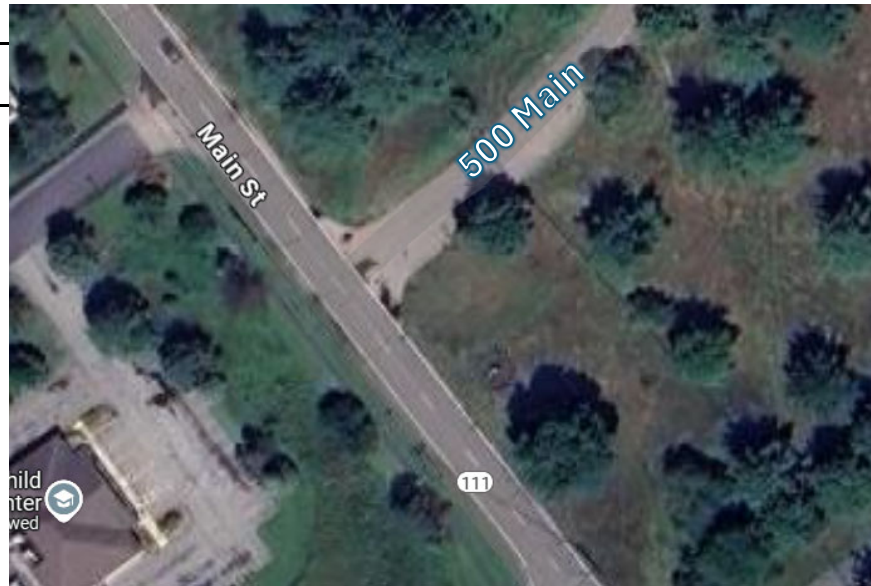
DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : 500 Main Street Driveway

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

approach:	500 Main Street Driveway		Main Street	Main Street		Total Peak Hourly Approach Volume
	WB		NB	SB		
PEAK HOURLY VOLUMES (PM) :	0		980	380		1,360

" K " FACTOR : 0.090 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 15,111

TOTAL # OF CRASHES : 0 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (A) : 0.00

CRASH RATE CALCULATION :

0.00

$$\text{RATE} = \frac{(A * 1,000,000)}{V * 365}$$

Comments : PM Peak Hourly Voulmes

Project Title & Date: Nashoba Satellite Emergency Facility

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

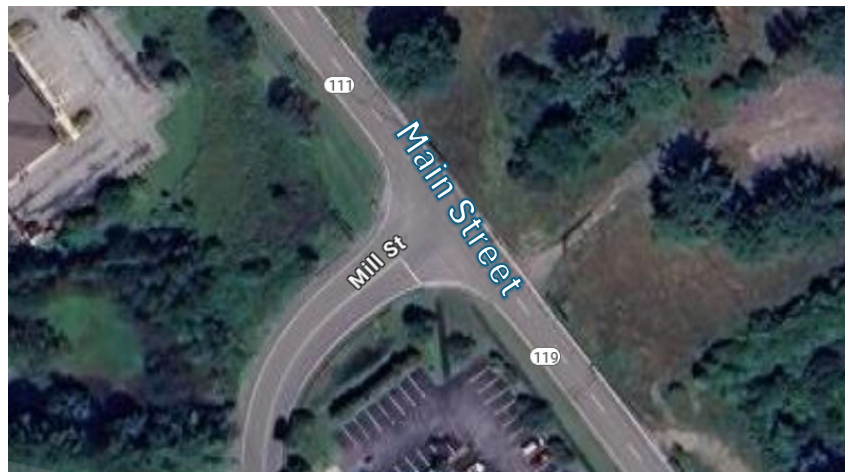
DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Mill Street

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

approach: PEAK HOURLY VOLUMES (PM) :	Mill Street		Main Street	Main Street		Total Peak Hourly Approach Volume
	EB		NB	SB		
	145		850	380		1,375

" K " FACTOR : 0.090 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 15,278

TOTAL # OF CRASHES : 8 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (A) : 1.60

CRASH RATE CALCULATION :

0.29

$$\text{RATE} = \frac{(A * 1,000,000)}{V * 365}$$

Comments : PM Peak Hourly Voulmes

Project Title & Date: Nashoba Satellite Emergency Facility

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Mill Run Plaza North Driveway

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

approach:	Mill Run Plaza North Driveway		Main Street	Main Street		Total Peak Hourly Approach Volume
	EB		NB	SB		
PEAK HOURLY VOLUMES (PM) :	55		835	340		1,230

" K " FACTOR : 0.090 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 13,667

TOTAL # OF CRASHES : 4 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (A) : 0.80

CRASH RATE CALCULATION :

0.16

$$\text{RATE} = \frac{(A * 1,000,000)}{V * 365}$$

Comments : PM Peak Hourly Voulmes

Project Title & Date: Nashoba Satellite Emergency Facility

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

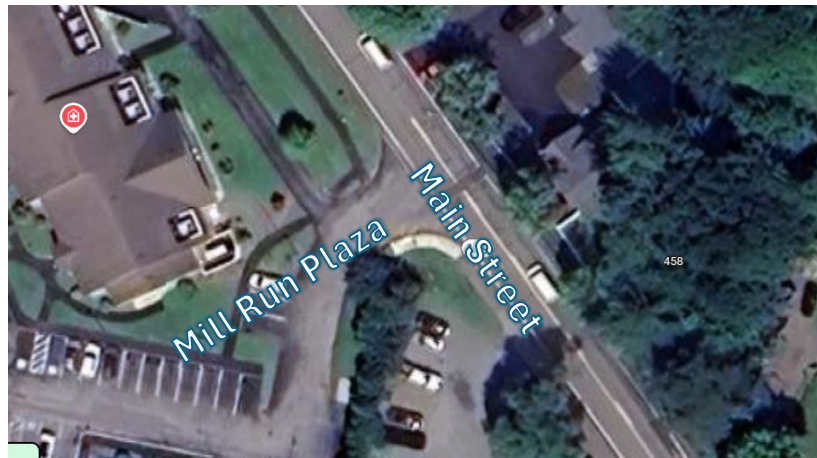
DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Mill Run Plaza South Driveway

INTERSECTION
 DIAGRAM
 (Label Approaches)



PEAK HOUR VOLUMES

approach:	Mill Run Plaza South Driveway		Main Street	Main Street		Total Peak Hourly Approach Volume
	EB		NB	SB		
PEAK HOURLY VOLUMES (PM) :	20		840	345		1,205

" K " FACTOR : 0.090 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 13,389

TOTAL # OF CRASHES : 0 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (A) : 0.00

CRASH RATE CALCULATION :

0.00

$$\text{RATE} = \frac{(A * 1,000,000)}{V * 365}$$

Comments : PM Peak Hourly Voulmes

Project Title & Date: Nashoba Satellite Emergency Facility

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Arlington Street

Taylor Road

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

approach: PEAK HOURLY VOLUMES (PM) :	Arlington Street	Taylor Street	Main Street	Main Street	Total Peak Hourly Approach Volume
	EB	WB	NB	SB	
	15	0	860	360	1,235

" K " FACTOR :

0.090

INTERSECTION ADT (V) = TOTAL DAILY
APPROACH VOLUME :

13,722

TOTAL # OF CRASHES :

7

OF YEARS

:

5

AVERAGE # OF
CRASHES PER YEAR (A)
:

1.40

CRASH RATE CALCULATION :

0.28

$$\text{RATE} = \left(\frac{A * 1,000,000}{V * 365} \right)$$

Comments : PM Peak Hourly Voulmes

Project Title & Date: Nashoba Satellite Emergency Facility

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Groton, MA COUNT DATE : 4/16/2025

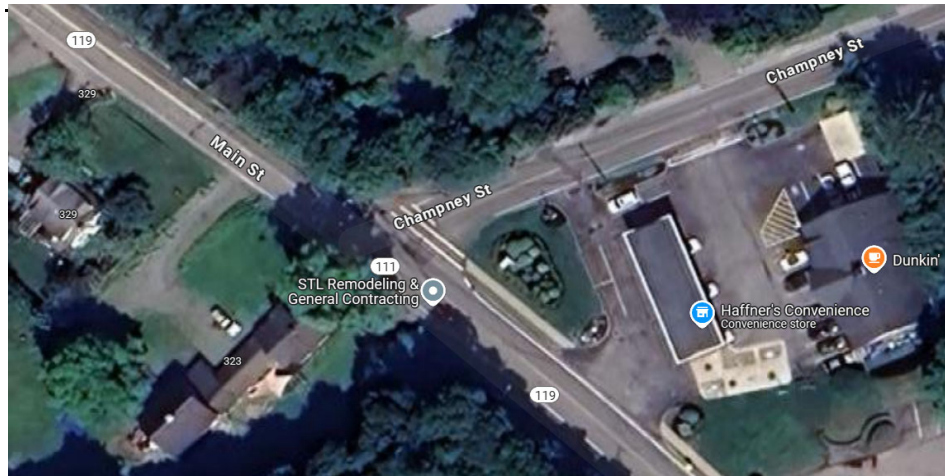
DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

~ INTERSECTION DATA ~

MAJOR STREET : Main Street

MINOR STREET(S) : Champney Street

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

	Champney Street	Main Street	Main Street		Total Peak Hourly Approach Volume
approach:	WB	NB	SB		
PEAK HOURLY VOLUMES (PM) :	110	890	450		1,450

" K " FACTOR : 0.090 INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME : 16,111

TOTAL # OF CRASHES : 4 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (A) : 0.80

CRASH RATE CALCULATION :

0.14

$$\text{RATE} = \frac{(A * 1,000,000)}{V * 365}$$

Comments : PM Peak Hourly Volumes

Project Title & Date: Nashoba Satellite Emergency Facility

1. Main Street & Fitch Bridge Road

Day	Time	Date	Crash Severity	Max Injury Severity	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Monday	3:09 PM	7/1/2019	Property damage only (none injured)	No injury	D1: (Unknown) / D2: (Unknown)		Daylight	Rear-end	Unknown	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear

3. Main Street & Mill Street/Proposed North Driveway

Day	Time	Date	Crash Severity	Max Injury Severity	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Friday	5:08 PM	2/10/2017	Property damage only (none injured)	No injury	D1: (No improper driving) / D2: (No improper driving)	D1: Not Distracted	Daylight	Rear-end	Unknown	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	Clear
Friday	2:09 PM	5/4/2018	Property damage only (none injured)	No injury	D1: (No improper driving)	D1: Not Distracted	Daylight	Single vehicle crash	Dry	0	0	V1: Travelling straight ahead	Clear
Monday	4:00 PM	7/2/2018	Property damage only (none injured)	No injury	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Daylight	Angle	Dry	0	0	V1: Turning right / V2: Slowing or stopped in traffic	Clear
Thursday	12:21 PM	12/7/2017	Property damage only (none injured)	No injury	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Dry	0	0	V1: Backing / V2: Travelling straight ahead	Clear
Friday	5:27 PM	12/21/2018	Property damage only (none injured)	No injury	D1: (No improper driving) / D2: (No improper driving) / D3: (Inattention)	D1: Not Distracted / D2: Not Distracted / D3: Not Distracted	Dark - lighted roadway	Rear-end	Wet	0	0	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic / V3: Travelling straight ahead	Rain
Monday	4:00 PM	1/7/2019	Non-fatal injury	Non-fatal injury - Possible	D1: (No improper driving) / D2: (Failed to yield right of way)	D1: Not Distracted	Daylight	Angle	Dry	0	1	V1: Travelling straight ahead / V2: Entering traffic lane	Clear
Friday	8:29 AM	7/12/2019	Property damage only (none injured)	No injury	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Unknown	0	0	V1: Entering traffic lane / V2: Travelling straight ahead	Cloudy
Friday	12:56 PM	10/25/2019	Property damage only (none injured)	No injury	D1: (No improper driving)	D1: Not Distracted	Daylight	Single vehicle crash	Dry	0	0	V1: Travelling straight ahead	Cloudy

4. Main Street & Mill Run Plaza North Driveway

Day	Time	Date	Crash Severity	Max Injury Severity	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Thursday	8:42 AM	1/14/2016	Property damage only (none injured)	No injury	D1: (Inattention),(Followed too closely)		Daylight	Single vehicle crash	Dry	0	0	V1: Travelling straight ahead	Clear
Tuesday	4:40 AM	11/29/2016	Property damage only (none injured)	No injury	D1: (No improper driving)	D1: Not Distracted	Dark - lighted roadway	Single vehicle crash	Dry	0	0	V1: Travelling straight ahead	Clear
Wednesday	10:10 AM	2/14/2018	Property damage only (none injured)	No injury	D1: (No improper driving)	D1: Not Distracted	Daylight	Single vehicle crash	Dry	0	0	V1: Travelling straight ahead	Cloudy
Thursday	8:58 AM	7/12/2018	Property damage only (none injured)	No injury	D1: (Followed too closely),(Inattention) / D2: (No improper driving) / D3: (No improper driving)	D1: Other activity (searching, eating, personal hygiene, etc.) / D2: Not Distracted / D3: Not Distracted	Daylight	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic	Clear

6. Main Street & Arlington Street/Taylor Road

Day	Time	Date	Crash Severity	Max Injury Severity	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Saturday	7:53 AM	8/6/2016	Property damage only (none injured)	No injury	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner),(Over-correcting/over-steering)		Dark - lighted roadway	Single vehicle crash	Dry	0	0	V1: Travelling straight ahead	Clear
Sunday	9:22 AM	1/15/2017	Property damage only (none injured)	No injury	D1: (Inattention),(Followed too closely) / D2: (No improper driving)	D2: Not Distracted	Daylight	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear
Thursday	4:40 PM	6/14/2018	Property damage only (none injured)	No injury	D1: (Distracted) / D2: (No improper driving)	D1: Other activity (searching, eating, personal hygiene, etc.) / D2: Not Distracted	Daylight	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
Saturday	11:42 AM	6/22/2019	Non-fatal injury	Non-fatal injury - Non-incapacitating	D1: (Followed too closely),(Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Rear-end	Dry	0	1	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	Clear

Friday	11:52 AM	4/17/2020	Property damage only (none injured)	No Apparent Injury (O)	D1: (Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Dry	0	0	V1: Travelling straight ahead / V2: Travelling straight ahead	Clear
Sunday	3:08 PM	12/20/2020	Non-fatal injury	Possible Injury (C)	D1: (No improper driving)	D1: Not Distracted	Daylight	Single vehicle crash	Snow	0	1	V1: Travelling straight ahead	Snow
Wednesday	7:58 AM	12/30/2020	Non-fatal injury	Suspected Minor Injury (B)	D1: (Glare)		Daylight	Single vehicle crash	Dry	0	1	V1: Travelling straight ahead	Clear

7. Main Street & Champney Street

Day	Time	Date	Crash Severity	Max Injury Severity	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	Light Conditions	Manner of Collision	Road Surface Condition	Total Fatalities	Total Non-Fatal Injuries	Vehicle Actions Prior to Crash (All Vehicles)	Weather Conditions
Thursday	8:15 PM	1/19/2017	Property damage only (none injured)	No injury	D1: (Followed too closely),(Inattention) / D2: (No improper driving) / D3: (No improper driving)	D1: Other activity (searching, eating, personal hygiene, etc.) / D2: Not Distracted / D3: Not Distracted	Dark - lighted roadway	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic	Clear
Friday	6:03 PM	5/19/2017	Property damage only (none injured)	No injury	D1: (No improper driving) / D2: (Followed too closely)	D1: Not Distracted	Daylight	Rear-end	Dry	0	0	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	Clear
Wednesday	5:42 PM	6/16/2021	Property damage only (none injured)	No Apparent Injury (O)	D1: (Unknown) / D2: (No improper driving)	D2: Not Distracted	Daylight	Rear-end	Dry	0	0	V1: Travelling straight ahead / V2: Turning right	Clear
Sunday	5:28 PM	8/29/2021	Non-fatal injury	Suspected Minor Injury (B)	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Daylight	Angle	Dry	0	1	V1: Turning left / V2: Travelling straight ahead	Clear

Trip Generation Calculations

ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Free-Standing Emergency Room

LANDUSE CODE: 650

SETTING/LOCATION: General Urban/Suburban

JOB NAME:

JOB NUMBER:

Independent Variable --- 1,000 Sq. Feet Gross Floor Area

FLOOR AREA (KSF): 18.5

WEEKDAY											
RATES:		# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
				Average	Low	High	Average	Low	High	Enter	Exit
	DAILY	4	--	24.94	15.49	37.57	11.00	9.88	11.00	50%	50%
	AM PEAK OF GENERATOR	4	--	2.06	1.41	3.26	11.00	9.88	11.00	64%	36%
	PM PEAK OF GENERATOR	4	--	2.24	1.69	2.81	11.00	9.88	11.00	46%	54%
	AM PEAK (ADJACENT ST)	4	--	1.12	0.71	1.72	11.00	9.88	11.00	50%	50%
	PM PEAK (ADJACENT ST)	4	--	1.52	1.13	2.26	11.00	9.88	11.00	46%	54%
TRIPS:	BY AVERAGE						BY REGRESSION				
							Total	Enter	Exit		
	DAILY						462	231	231	--	--
	AM PEAK (ADJACENT ST)						21	10	10	--	--
	PM PEAK (ADJACENT ST)						28	13	15	--	--

ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Medical-Dental Office Building - Stand Alone
LANDUSE CODE: 720 Independent Variable --- 1,000 Sq. Feet Gross Floor Area
SETTING/LOCATION: General Urban/Suburban
JOB NAME:
JOB NUMBER: FLOOR AREA (KSF): 15.7

<u>WEEKDAY</u>											
RATES:										Directional Distribution	
				Total Trip Ends			Independent Variable Range			Enter	Exit
		# Studies	R^2	Average	Low	High	Average	Low	High		
	DAILY	18	0.92	36.00	14.52	100.75	15	1.575	60.000		
	AM PEAK (ADJACENT ST)	24	0.80	3.10	0.87	14.30	25	1.575	95.000		
PM PEAK (ADJACENT ST)	30	0.77	3.93	0.62	8.86	23	1.575	95.000	30%	70%	

TRIPS:		BY AVERAGE			BY REGRESSION		
		Total	Enter	Exit	Total	Enter	Exit
	DAILY	566	283	283	568	284	284
	AM PEAK (ADJACENT ST)	49	38	10	46	36	10
	PM PEAK (ADJACENT ST)	62	19	43	61	18	43

Trip Distribution Calculations

Trip Distribution - Based on Population of Communities Served

Residential															
Community in Service Area	Total Population (2020)	Adjustment Percentage ¹	Adjusted Count	Percent of Total	Cumulative Total	Champney					Main Street (To/From North)	Main Street (To/From South)	Mill Street (To/From South)	Champney Street (To/From East)	Total
						Main Street (To/From North)	Main Street (To/From South)	Mill Street (To/From South)	Street (To/From East)	Total					
Column1	Column4	Column5	Column6	Column7	Column8	Column92	Column10	Column102	Column11	Column13	Column156	Column155	Column153	Column1532	Column19
Ayer	8,479	1	8,479	11.1%	11.1%	50%	50%			100%	0.0%	5.5%	5.5%	0.0%	11.1%
Devens (included in other town populations)		1	0	0.0%	11.1%	50%	50%			100%	0.0%	0.0%	0.0%	0.0%	0.0%
Groton	11,315	1	11,315	14.7%	25.8%	60%	20%	20%		100%	0.0%	8.8%	2.9%	2.9%	14.7%
Harvard	6,851	1	6,851	8.9%	34.7%	50%	50%			100%	0.0%	4.5%	4.5%	0.0%	8.9%
Littleton	10,141	1	10,141	13.2%	47.9%	90%	10%			100%	0.0%	11.9%	1.3%	0.0%	13.2%
Lunenburg	11,782	1	11,782	15.4%	63.3%	50%	50%			100%	0.0%	7.7%	7.7%	0.0%	15.4%
Pepperell	11,604	1	11,604	15.1%	78.4%	100%				100%	15.1%	0.0%	0.0%	0.0%	15.1%
Shirley	7,431	1	7,431	9.7%	88.1%	50%	50%			100%	0.0%	4.8%	4.8%	0.0%	9.7%
Townsend	9,127	1	9,127	11.9%	100.0%	100%				100%	11.9%	0.0%	0.0%	0.0%	11.9%
Totals	76,730		76,730	100.0%	#REF!						27.0%	43.3%	26.8%	2.9%	100.0%
											27.0%	43.0%	27.0%	3.0%	100.0%

Trip Distribution - Based on Employees in Groton

Residential															
State/U.S. Island Area/Foreign Country/County/MCD						Main Street (To/From North)	Main Street (To/From South)	Mill Street (To/From South)	Champney Street (To/From East)	Total	Main Street (To/From North)	Main Street (To/From South)	Mill Street (To/From South)	Champney Street (To/From East)	Total
	Count	Adjustment Percentage ¹	Adjusted Count	Percent of Total	Cumulative Total										
	Column1	Column4	Column5	Column6	Column7	Column8	Column92	Column10	Column102	Column11	Column13	Column156	Column155	Column153	Column1532
Groton town	1,298	1	1,298	36.5%	36.5%		60%	20%	20%	100%	0.0%	21.9%	7.3%	7.3%	36.5%
Pepperell town	360	1	360	10.1%	46.6%	100%				100%	10.1%	0.0%	0.0%	0.0%	10.1%
Townsend town	287	1	287	8.1%	54.7%	100%				100%	8.1%	0.0%	0.0%	0.0%	8.1%
Ayer town	174	1	174	4.9%	59.6%		50%	50%		100%	0.0%	2.4%	2.4%	0.0%	4.9%
New Ipswich town	137	1	137	3.9%	63.4%	100%				100%	3.9%	0.0%	0.0%	0.0%	3.9%
Leominster city	128	1	128	3.6%	67.0%		50%	50%		100%	0.0%	1.8%	1.8%	0.0%	3.6%
Dunstable town	101	1	101	2.8%	69.9%				100%	100%	0.0%	0.0%	0.0%	2.8%	2.8%
Fitchburg city	91	1	91	2.6%	72.4%		50%	50%		100%	0.0%	1.3%	1.3%	0.0%	2.6%
Dracut town	78	1	78	2.2%	74.6%		75%		25%	100%	0.0%	1.6%	0.0%	0.5%	2.2%
Lunenburg town	76	1	76	2.1%	76.8%		50%	50%		100%	0.0%	1.1%	1.1%	0.0%	2.1%
Westminster town	67	1	67	1.9%	78.6%		50%	50%		100%	0.0%	0.9%	0.9%	0.0%	1.9%
Ashby town	66	1	66	1.9%	80.5%	100%				100%	1.9%	0.0%	0.0%	0.0%	1.9%
Westford town	63	1	63	1.8%	82.3%		100%			100%	0.0%	1.8%	0.0%	0.0%	1.8%
Littleton town	51	1	51	1.4%	83.7%		90%	10%		100%	0.0%	1.3%	0.1%	0.0%	1.4%
Chelmsford town	47	1	47	1.3%	85.0%		100%			100%	0.0%	1.3%	0.0%	0.0%	1.3%
Billerica town	44	1	44	1.2%	86.3%		100%			100%	0.0%	1.2%	0.0%	0.0%	1.2%
Revere city	41	1	41	1.2%	87.4%		100%			100%	0.0%	1.2%	0.0%	0.0%	1.2%
Nashua city	38	1	38	1.1%	88.5%	100%				100%	1.1%	0.0%	0.0%	0.0%	1.1%
Northborough town	35	1	35	1.0%	89.5%		100%			100%	0.0%	1.0%	0.0%	0.0%	1.0%
Harvard town	33	1	33	0.9%	90.4%		50%	50%		100%	0.0%	0.5%	0.5%	0.0%	0.9%
Salem town	32	1	32	0.9%	91.3%		100%			100%	0.0%	0.9%	0.0%	0.0%	0.9%
Lowell city	29	1	29	0.8%	92.1%		100%			100%	0.0%	0.8%	0.0%	0.0%	0.8%
Burlington town	27	1	27	0.8%	92.9%		100%			100%	0.0%	0.8%	0.0%	0.0%	0.8%
Hubbardston town	27	1	27	0.8%	93.6%		50%	50%		100%	0.0%	0.4%	0.4%	0.0%	0.8%
East Longmeadow town	26	1	26	0.7%	94.3%		50%	50%		100%	0.0%	0.4%	0.4%	0.0%	0.7%
Athol town	26	1	26	0.7%	95.1%		50%	50%		100%	0.0%	0.4%	0.4%	0.0%	0.7%
Jaffrey town	26	1	26	0.7%	95.8%	100%				100%	0.7%	0.0%	0.0%	0.0%	0.7%
Bedford town	24	1	24	0.7%	96.5%		100%			100%	0.0%	0.7%	0.0%	0.0%	0.7%
Hudson town	24	1	24	0.7%	97.2%	100%				100%	0.7%	0.0%	0.0%	0.0%	0.7%
Rindge town	22	1	22	0.6%	97.8%	100%				100%	0.6%	0.0%	0.0%	0.0%	0.6%
Wilton town	22	1	22	0.6%	98.4%	100%				100%	0.6%	0.0%	0.0%	0.0%	0.6%
Saugus town	21	1	21	0.6%	99.0%		100%			100%	0.0%	0.6%	0.0%	0.0%	0.6%
Carlisle town	18	1	18	0.5%	99.5%		100%			100%	0.0%	0.5%	0.0%	0.0%	0.5%
Framingham town	18	1	18	0.5%	100.0%		100%			100%	0.0%	0.5%	0.0%	0.0%	0.5%
Totals	3,557		3,557	100.0%	CHECK						27.6%	45.2%	16.6%	10.7%	100.0%
											28.0%	45.0%	17.0%	10.0%	100.0%

Based on Residence MCD/County to Workplace MCD/County Commuting Flows for the United States and Puerto Rico Sorted by Residence Geography: 5-Year ACS, 2011-2015

1 Adjustments were made to some communities based on the likelihood that people who work in those communities would opt to live closer to their place of employment or closer to transit opportunities

Traffic Operations Analysis

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	10	0	15	0	255	0	20	955	0
Future Vol, veh/h	0	0	0	10	0	15	0	255	0	20	955	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	50	50	78	78	78	76	76	76	84	84	84
Heavy Vehicles, %	0	0	100	25	0	12	100	20	0	0	8	0
Mvmt Flow	0	0	0	13	0	19	0	336	0	24	1137	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1531	1521	1137	1521	1521	336	1137	0	0	336	0	0
Stage 1	1185	1185	-	336	336	-	-	-	-	-	-	-
Stage 2	346	336	-	1185	1185	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	7.2	7.35	6.5	6.32	5.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	4.2	3.725	4	3.408	3.1	-	-	2.2	-	-
Pot Cap-1 Maneuver	97	120	159	86	120	684	364	-	-	1235	-	-
Stage 1	233	265	-	633	645	-	-	-	-	-	-	-
Stage 2	674	645	-	207	265	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	91	114	159	83	114	684	364	-	-	1235	-	-
Mov Cap-2 Maneuver	91	114	-	83	114	-	-	-	-	-	-	-
Stage 1	233	251	-	633	645	-	-	-	-	-	-	-
Stage 2	655	645	-	196	251	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			30			0			0.2		
HCM LOS	A			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	364	-	-	-	176	1235	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.182	0.019	-	-				
HCM Control Delay (s)	0	-	-	0	30	8	0	-				
HCM Lane LOS	A	-	-	A	D	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1	-	-				

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	290	5	0	955
Future Vol, veh/h	0	0	290	5	0	955
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	92	92	70	70	86	86
Heavy Vehicles, %	0	0	21	67	0	8
Mvmt Flow	0	0	414	7	0	1110

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1528	418	0
Stage 1	418	-	-
Stage 2	1110	-	-
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	131	639	1149
Stage 1	669	-	-
Stage 2	318	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	131	639	1149
Mov Cap-2 Maneuver	131	-	-
Stage 1	669	-	-
Stage 2	318	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1149	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	45	0	5	0	0	0	0	250	0	0	840	115
Future Vol, veh/h	45	0	5	0	0	0	0	250	0	0	840	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	92	92	92	67	67	67	86	86	86
Heavy Vehicles, %	2	0	0	0	0	0	0	22	0	0	9	3
Mvmt Flow	52	0	6	0	0	0	0	373	0	0	977	134
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1417	1417	1044	1420	1484	373	1111	0	0	373	0	0
Stage 1	1044	1044	-	373	373	-	-	-	-	-	-	-
Stage 2	373	373	-	1047	1111	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	115	138	281	115	126	678	636	-	-	1197	-	-
Stage 1	277	309	-	652	622	-	-	-	-	-	-	-
Stage 2	648	622	-	278	287	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	115	138	281	113	126	678	636	-	-	1197	-	-
Mov Cap-2 Maneuver	115	138	-	113	126	-	-	-	-	-	-	-
Stage 1	277	309	-	652	622	-	-	-	-	-	-	-
Stage 2	648	622	-	272	287	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	58.4		0			0			0			
HCM LOS	F		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	636	-	-	122	-	1197	-	-				
HCM Lane V/C Ratio	-	-	-	0.471	-	-	-	-				
HCM Control Delay (s)	0	-	-	58.4	0	0	-	-				
HCM Lane LOS	A	-	-	F	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	2.1	-	0	-	-				

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	15	245	815	30
Future Vol, veh/h	5	10	15	245	815	30
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	67	67	67	67	83	83
Heavy Vehicles, %	0	0	0	24	10	0
Mvmt Flow	7	15	22	366	982	36

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1410	1000	1018	0	0
Stage 1	1000	-	-	-	-
Stage 2	410	-	-	-	-
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	154	298	689	-	-
Stage 1	359	-	-	-	-
Stage 2	674	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	148	298	689	-	-
Mov Cap-2 Maneuver	148	-	-	-	-
Stage 1	345	-	-	-	-
Stage 2	674	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.9	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	689	-	223	-	-
HCM Lane V/C Ratio	0.032	-	0.1	-	-
HCM Control Delay (s)	10.4	0	22.9	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	15	260	825	0
Future Vol, veh/h	0	10	15	260	825	0
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	63	63	69	69	82	82
Heavy Vehicles, %	0	0	0	22	10	0
Mvmt Flow	0	16	22	377	1006	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1427	1006	1006	0	-	0
Stage 1	1006	-	-	-	-	-
Stage 2	421	-	-	-	-	-
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	150	295	697	-	-	-
Stage 1	357	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	144	295	697	-	-	-
Mov Cap-2 Maneuver	144	-	-	-	-	-
Stage 1	343	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.9	0.6		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	697	-	295	-	-	
HCM Lane V/C Ratio	0.031	-	0.054	-	-	
HCM Control Delay (s)	10.3	0	17.9	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	275	0	0	835
Future Vol, veh/h	0	0	275	0	0	835
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	50	50	67	67	82	82
Heavy Vehicles, %	0	0	23	0	0	9
Mvmt Flow	0	0	410	0	0	1018
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1428	410	0	0	410	0
Stage 1	410	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
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	150	646	-	-	1160	-
Stage 1	674	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	150	646	-	-	1160	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1160	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	20	270	830	5
Future Vol, veh/h	5	15	20	270	830	5
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	71	71	67	67	82	82
Heavy Vehicles, %	0	36	11	23	9	0
Mvmt Flow	7	21	30	403	1012	6
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1478	1015	1018	0	-	0
Stage 1	1015	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Critical Hdwy	6.4	6.56	4.21	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.624	2.299	-	-	-
Pot Cap-1 Maneuver	140	249	648	-	-	-
Stage 1	353	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	132	249	648	-	-	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	332	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.5	0.7		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	648	-	204	-	-	
HCM Lane V/C Ratio	0.046	-	0.138	-	-	
HCM Control Delay (s)	10.8	0	25.5	-	-	
HCM Lane LOS	B	A	D	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-	

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	105	320	5	35	820
Future Vol, veh/h	25	105	320	5	35	820
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	68	68	67	67	90	90
Heavy Vehicles, %	17	6	22	0	24	10
Mvmt Flow	37	154	478	7	39	911

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1471	482	0	0	485
Stage 1	482	-	-	-	-
Stage 2	989	-	-	-	-
Critical Hdwy	6.57	6.26	-	-	4.34
Critical Hdwy Stg 1	5.57	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-
Follow-up Hdwy	3.653	3.354	-	-	2.416
Pot Cap-1 Maneuver	130	576	-	-	973
Stage 1	591	-	-	-	-
Stage 2	338	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	119	576	-	-	973
Mov Cap-2 Maneuver	119	-	-	-	-
Stage 1	591	-	-	-	-
Stage 2	311	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.7	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	331	973	-
HCM Lane V/C Ratio	-	-	0.578	0.04	-
HCM Control Delay (s)	-	-	29.7	8.9	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	3.4	0.1	-

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	5	5	20	0	930	0	10	350	0
Future Vol, veh/h	0	0	0	5	5	20	0	930	0	10	350	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	58	58	58	95	95	95	84	84	84
Heavy Vehicles, %	0	0	0	0	0	9	0	2	0	8	1	0
Mvmt Flow	0	0	0	9	9	34	0	979	0	12	417	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1442	1420	417	1420	1420	979	417	0	0	979	0	0
Stage 1	441	441	-	979	979	-	-	-	-	-	-	-
Stage 2	1001	979	-	441	441	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.29	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.381	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	111	138	640	115	138	294	1153	-	-	682	-	-
Stage 1	599	580	-	304	331	-	-	-	-	-	-	-
Stage 2	295	331	-	599	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	92	135	640	113	135	294	1153	-	-	682	-	-
Mov Cap-2 Maneuver	92	135	-	113	135	-	-	-	-	-	-	-
Stage 1	599	567	-	304	331	-	-	-	-	-	-	-
Stage 2	254	331	-	585	567	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			29			0			0.3		
HCM LOS	A			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1153	-	-	-	201	682	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.257	0.017	-	-				
HCM Control Delay (s)	0	-	-	0	29	10.4	0	-				
HCM Lane LOS	A	-	-	A	D	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	1	0.1	-	-				

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	980	0	0	380
Future Vol, veh/h	0	0	980	0	0	380
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	92	92	95	95	86	86
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	0	1032	0	0	442

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1474	1032	0	0	1032
Stage 1	1032	-	-	-	-
Stage 2	442	-	-	-	-
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	141	285	-	-	681
Stage 1	347	-	-	-	-
Stage 2	652	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	141	285	-	-	681
Mov Cap-2 Maneuver	141	-	-	-	-
Stage 1	347	-	-	-	-
Stage 2	652	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	681	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection												
Int Delay, s/veh	21.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	135	0	10	0	0	0	5	845	0	0	330	50
Future Vol, veh/h	135	0	10	0	0	0	5	845	0	0	330	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	92	92	92	94	94	94	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	157	0	12	0	0	0	5	899	0	0	384	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1322	1322	413	1328	1351	899	442	0	0	899	0	0
Stage 1	413	413	-	909	909	-	-	-	-	-	-	-
Stage 2	909	909	-	419	442	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 135	158	643	133	152	340	1129	-	-	764	-	-
Stage 1	620	597	-	332	357	-	-	-	-	-	-	-
Stage 2	332	357	-	616	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 134	157	643	130	151	340	1129	-	-	764	-	-
Mov Cap-2 Maneuver	~ 134	157	-	130	151	-	-	-	-	-	-	-
Stage 1	614	597	-	329	354	-	-	-	-	-	-	-
Stage 2	329	354	-	605	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	196.3	0	0	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1129	-	-	142	-	764	-	-
HCM Lane V/C Ratio	0.005	-	-	1.187	-	-	-	-
HCM Control Delay (s)	8.2	0	-	196.3	0	0	-	-
HCM Lane LOS	A	A	-	F	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	9.8	-	0	-	-

Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	25	15	820	320	20
Future Vol, veh/h	30	25	15	820	320	20
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	76	76	95	95	90	90
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	39	33	16	863	356	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1262	367	378	0	-	0
Stage 1	367	-	-	-	-	-
Stage 2	895	-	-	-	-	-
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	189	683	1192	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	184	683	1192	-	-	-
Mov Cap-2 Maneuver	184	-	-	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	22.7	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1192	-	275	-	-	
HCM Lane V/C Ratio	0.013	-	0.263	-	-	
HCM Control Delay (s)	8.1	0	22.7	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	1	-	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	10	830	345	0
Future Vol, veh/h	5	15	10	830	345	0
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	56	56	94	94	85	85
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	9	27	11	883	406	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1311	406	406	0	-	0
Stage 1	406	-	-	-	-	-
Stage 2	905	-	-	-	-	-
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	177	649	1164	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	174	649	1164	-	-	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.3	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1164	-	386	-	-	
HCM Lane V/C Ratio	0.009	-	0.093	-	-	
HCM Control Delay (s)	8.1	0	15.3	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.3	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	840	0	0	360
Future Vol, veh/h	0	0	840	0	0	360
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	25	25	85	85	74	74
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	0	988	0	0	486
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1474	988	0	0	988	0
Stage 1	988	-	-	-	-	-
Stage 2	486	-	-	-	-	-
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	141	303	-	-	708	-
Stage 1	364	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	141	303	-	-	708	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	364	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	708	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	20	840	350	10
Future Vol, veh/h	0	15	20	840	350	10
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	67	67	85	85	74	74
Heavy Vehicles, %	0	0	0	2	1	13
Mvmt Flow	0	22	24	988	473	14
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1516	480	487	0	-	0
Stage 1	480	-	-	-	-	-
Stage 2	1036	-	-	-	-	-
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	590	1086	-	-	-
Stage 1	627	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	126	590	1086	-	-	-
Mov Cap-2 Maneuver	126	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.3	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1086	-	590	-	-	
HCM Lane V/C Ratio	0.022	-	0.038	-	-	
HCM Control Delay (s)	8.4	0	11.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	90	885	5	45	405
Future Vol, veh/h	20	90	885	5	45	405
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	84	84	94	94	87	87
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	24	107	941	5	52	466
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1514	944	0	0	946	0
Stage 1	944	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	133	319	-	-	734	-
Stage 1	381	-	-	-	-	-
Stage 2	570	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	120	319	-	-	734	-
Mov Cap-2 Maneuver	120	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	35.4	0		1		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	245	734	-	
HCM Lane V/C Ratio	-	-	0.534	0.07	-	
HCM Control Delay (s)	-	-	35.4	10.3	0	
HCM Lane LOS	-	-	E	B	A	
HCM 95th %tile Q(veh)	-	-	2.9	0.2	-	

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	10	0	15	0	265	0	20	990	0
Future Vol, veh/h	0	0	0	10	0	15	0	265	0	20	990	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	100	25	0	12	100	20	0	0	8	0
Mvmt Flow	0	0	0	11	0	16	0	288	0	22	1076	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1416	1408	1076	1408	1408	288	1076	0	0	288	0	0
Stage 1	1120	1120	-	288	288	-	-	-	-	-	-	-
Stage 2	296	288	-	1120	1120	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	7.2	7.35	6.5	6.32	5.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	4.2	3.725	4	3.408	3.1	-	-	2.2	-	-
Pot Cap-1 Maneuver	116	140	175	104	140	728	388	-	-	1286	-	-
Stage 1	253	284	-	672	677	-	-	-	-	-	-	-
Stage 2	717	677	-	226	284	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	110	134	175	101	134	728	388	-	-	1286	-	-
Mov Cap-2 Maneuver	110	134	-	101	134	-	-	-	-	-	-	-
Stage 1	253	272	-	672	677	-	-	-	-	-	-	-
Stage 2	701	677	-	216	272	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			24.8			0			0.2		
HCM LOS	A			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	388	-	-	-	209	1286	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.13	0.017	-	-				
HCM Control Delay (s)	0	-	-	0	24.8	7.8	0	-				
HCM Lane LOS	A	-	-	A	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	0.4	0.1	-	-				

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	0	305	20	0	990
Future Vol, veh/h	55	0	305	20	0	990
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	21	67	0	8
Mvmt Flow	60	0	332	22	0	1076
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1419	343	0	0	354	0
Stage 1	343	-	-	-	-	-
Stage 2	1076	-	-	-	-	-
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	152	704	-	-	1216	-
Stage 1	723	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	152	704	-	-	1216	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	723	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	43.3	0		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	152	1216	-	
HCM Lane V/C Ratio	-	-	0.393	-	-	
HCM Control Delay (s)	-	-	43.3	0	-	
HCM Lane LOS	-	-	E	A	-	
HCM 95th %tile Q(veh)	-	-	1.7	0	-	

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	50	0	5	0	0	0	0	275	0	0	920	125
Future Vol, veh/h	50	0	5	0	0	0	0	275	0	0	920	125
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	0	0	0	0	22	0	0	9	3
Mvmt Flow	54	0	5	0	0	0	0	299	0	0	1000	136
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1367	1367	1068	1370	1435	299	1136	0	0	299	0	0
Stage 1	1068	1068	-	299	299	-	-	-	-	-	-	-
Stage 2	299	299	-	1071	1136	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	124	148	272	125	135	745	622	-	-	1274	-	-
Stage 1	268	301	-	714	670	-	-	-	-	-	-	-
Stage 2	710	670	-	270	279	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	124	148	272	123	135	745	622	-	-	1274	-	-
Mov Cap-2 Maneuver	124	148	-	123	135	-	-	-	-	-	-	-
Stage 1	268	301	-	714	670	-	-	-	-	-	-	-
Stage 2	710	670	-	265	279	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	54.3			0			0			0		
HCM LOS	F			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	622	-	-	130	-	1274	-	-				
HCM Lane V/C Ratio	-	-	-	0.46	-	-	-	-				
HCM Control Delay (s)	0	-	-	54.3	0	0	-	-				
HCM Lane LOS	A	-	-	F	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	2.1	-	0	-	-				

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	15	270	895	30
Future Vol, veh/h	5	10	15	270	895	30
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	24	10	0
Mvmt Flow	5	11	16	293	973	33

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1315	990	1006	0	-	0
Stage 1	990	-	-	-	-	-
Stage 2	325	-	-	-	-	-
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	176	302	697	-	-	-
Stage 1	363	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	171	302	697	-	-	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	353	-	-	-	-	-
Stage 2	737	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	697	-	241	-	-
HCM Lane V/C Ratio	0.023	-	0.068	-	-
HCM Control Delay (s)	10.3	0	21	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	15	285	905	0
Future Vol, veh/h	0	10	15	285	905	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	22	10	0
Mvmt Flow	0	11	16	310	984	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1326	984	984	0	-	0
Stage 1	984	-	-	-	-	-
Stage 2	342	-	-	-	-	-
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	173	304	710	-	-	-
Stage 1	365	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	168	304	710	-	-	-
Mov Cap-2 Maneuver	168	-	-	-	-	-
Stage 1	355	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.3	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	710	-	304	-	-	
HCM Lane V/C Ratio	0.023	-	0.036	-	-	
HCM Control Delay (s)	10.2	0	17.3	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	300	0	0	915
Future Vol, veh/h	0	0	300	0	0	915
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	23	0	0	9
Mvmt Flow	0	0	326	0	0	995
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1321	326	0	0	326	0
Stage 1	326	-	-	-	-	-
Stage 2	995	-	-	-	-	-
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	174	720	-	-	1245	-
Stage 1	736	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	174	720	-	-	1245	-
Mov Cap-2 Maneuver	174	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1245	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	20	295	910	5
Future Vol, veh/h	5	15	20	295	910	5
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	92	92	92	92	92	92
Heavy Vehicles, %	0	36	11	23	9	0
Mvmt Flow	5	16	22	321	989	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1357	992	994	0	-	0
Stage 1	992	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Critical Hdwy	6.4	6.56	4.21	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.624	2.299	-	-	-
Pot Cap-1 Maneuver	166	258	661	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	258	661	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	348	-	-	-	-	-
Stage 2	707	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	22.9	0.7		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	661	-	223	-	-	
HCM Lane V/C Ratio	0.033	-	0.097	-	-	
HCM Control Delay (s)	10.6	0	22.9	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	110	345	5	40	900
Future Vol, veh/h	25	110	345	5	40	900
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	92	92	92	92	92	92
Heavy Vehicles, %	17	6	22	0	24	10
Mvmt Flow	27	120	375	5	43	978
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1442	378	0	0	380	0
Stage 1	378	-	-	-	-	-
Stage 2	1064	-	-	-	-	-
Critical Hdwy	6.57	6.26	-	-	4.34	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.354	-	-	2.416	-
Pot Cap-1 Maneuver	135	660	-	-	1068	-
Stage 1	661	-	-	-	-	-
Stage 2	311	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	123	660	-	-	1068	-
Mov Cap-2 Maneuver	123	-	-	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.3	0		0.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	365	1068	-	
HCM Lane V/C Ratio	-	-	0.402	0.041	-	
HCM Control Delay (s)	-	-	21.3	8.5	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.9	0.1	-	

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	5	5	20	0	965	0	10	365	0
Future Vol, veh/h	0	0	0	5	5	20	0	965	0	10	365	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	95	95	95	92	92	92
Heavy Vehicles, %	0	0	0	0	0	9	0	2	0	8	1	0
Mvmt Flow	0	0	0	5	5	22	0	1016	0	11	397	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1449	1435	397	1435	1435	1016	397	0	0	1016	0	0
Stage 1	419	419	-	1016	1016	-	-	-	-	-	-	-
Stage 2	1030	1016	-	419	419	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.29	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.381	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	110	135	657	113	135	280	1173	-	-	660	-	-
Stage 1	616	593	-	289	318	-	-	-	-	-	-	-
Stage 2	284	318	-	616	593	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	97	132	657	111	132	280	1173	-	-	660	-	-
Mov Cap-2 Maneuver	97	132	-	111	132	-	-	-	-	-	-	-
Stage 1	616	581	-	289	318	-	-	-	-	-	-	-
Stage 2	257	318	-	603	581	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	0		27.3			0			0.3			
HCM LOS	A		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1173	-	-	-	194	660	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.168	0.016	-	-				
HCM Control Delay (s)	0	-	-	0	27.3	10.5	0	-				
HCM Lane LOS	A	-	-	A	D	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1	-	-				

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		W		W	W
Traffic Vol, veh/h	30	0	1015	50	0	395
Future Vol, veh/h	30	0	1015	50	0	395
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	92	92	95	95	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	33	0	1068	53	0	429
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1524	1095	0	0	1121	0
Stage 1	1095	-	-	-	-	-
Stage 2	429	-	-	-	-	-
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	131	262	-	-	631	-
Stage 1	323	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	131	262	-	-	631	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	323	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	41.4	0		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	131	631	-	
HCM Lane V/C Ratio	-	-	0.249	-	-	
HCM Control Delay (s)	-	-	41.4	0	-	
HCM Lane LOS	-	-	E	A	-	
HCM 95th %tile Q(veh)	-	-	0.9	0	-	

Intersection												
Int Delay, s/veh	30.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	145	0	10	0	0	0	5	920	0	0	370	55
Future Vol, veh/h	145	0	10	0	0	0	5	920	0	0	370	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	158	0	11	0	0	0	5	979	0	0	402	60
Major/Minor	Minor2		Minor1		Major1				Major2			
Conflicting Flow All	1421	1421	432	1427	1451	979	462	0	0	979	0	0
Stage 1	432	432	-	989	989	-	-	-	-	-	-	-
Stage 2	989	989	-	438	462	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 115	138	628	114	132	306	1110	-	-	713	-	-
Stage 1	606	586	-	300	327	-	-	-	-	-	-	-
Stage 2	300	327	-	601	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 114	137	628	111	131	306	1110	-	-	713	-	-
Mov Cap-2 Maneuver	~ 114	137	-	111	131	-	-	-	-	-	-	-
Stage 1	600	586	-	297	324	-	-	-	-	-	-	-
Stage 2	297	324	-	591	568	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	290.9			0			0			0		
HCM LOS	F			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1110	-	-	120	-	713	-	-				
HCM Lane V/C Ratio	0.005	-	-	1.404	-	-	-	-				
HCM Control Delay (s)	8.3	0	-	290.9	0	0	-	-				
HCM Lane LOS	A	A	-	F	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	11.5	-	0	-	-				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	25	15	895	360	20
Future Vol, veh/h	30	25	15	895	360	20
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	92	92	95	95	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	33	27	16	942	391	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1376	402	413	0	-	0
Stage 1	402	-	-	-	-	-
Stage 2	974	-	-	-	-	-
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	162	653	1157	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	653	1157	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	24.9	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1157	-	240	-	-	
HCM Lane V/C Ratio	0.014	-	0.249	-	-	
HCM Control Delay (s)	8.2	0	24.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	1	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	5	15	10	905	385	0
Traffic Vol, veh/h	5	15	10	905	385	0
Future Vol, veh/h	5	15	10	905	385	0
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	92	92	94	94	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	5	16	11	963	418	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1403	418	418	0	-	0
Stage 1	418	-	-	-	-	-
Stage 2	985	-	-	-	-	-
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	156	639	1152	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	153	639	1152	-	-	-
Mov Cap-2 Maneuver	153	-	-	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	15.8	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1152	-	356	-	-	
HCM Lane V/C Ratio	0.009	-	0.061	-	-	
HCM Control Delay (s)	8.2	0	15.8	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	915	0	0	400
Future Vol, veh/h	0	0	915	0	0	400
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	0	995	0	0	435
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1430	995	0	0	995	0
Stage 1	995	-	-	-	-	-
Stage 2	435	-	-	-	-	-
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	150	300	-	-	703	-
Stage 1	361	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	150	300	-	-	703	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	361	-	-	-	-	-
Stage 2	657	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	703	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	20	915	390	10
Future Vol, veh/h	0	15	20	915	390	10
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	13
Mvmt Flow	0	16	22	995	424	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1469	430	435	0	-	0
Stage 1	430	-	-	-	-	-
Stage 2	1039	-	-	-	-	-
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	142	629	1135	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	136	629	1135	-	-	-
Mov Cap-2 Maneuver	136	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.9	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1135	-	629	-	-	
HCM Lane V/C Ratio	0.019	-	0.026	-	-	
HCM Control Delay (s)	8.2	0	10.9	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	95	960	5	50	445
Future Vol, veh/h	20	95	960	5	50	445
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	92	92	94	94	92	92
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	22	103	1021	5	54	484

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1616	1024	0
Stage 1	1024	-	-
Stage 2	592	-	-
Critical Hdwy	6.4	6.21	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.309	-
Pot Cap-1 Maneuver	115	287	-
Stage 1	350	-	-
Stage 2	557	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	103	287	-
Mov Cap-2 Maneuver	103	-	-
Stage 1	350	-	-
Stage 2	497	-	-

Approach	WB	NB	SB
HCM Control Delay, s	41.3	0	1.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	219	685	-
HCM Lane V/C Ratio	-	-	0.571	0.079	-
HCM Control Delay (s)	-	-	41.3	10.7	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	3.1	0.3	-

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	10	0	15	0	270	0	20	1005	0
Future Vol, veh/h	0	0	0	10	0	15	0	270	0	20	1005	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	100	25	0	12	100	20	0	0	8	0
Mvmt Flow	0	0	0	11	0	16	0	293	0	22	1092	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1437	1429	1092	1429	1429	293	1092	0	0	293	0	0
Stage 1	1136	1136	-	293	293	-	-	-	-	-	-	-
Stage 2	301	293	-	1136	1136	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	7.2	7.35	6.5	6.32	5.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.35	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	4.2	3.725	4	3.408	3.1	-	-	2.2	-	-
Pot Cap-1 Maneuver	112	136	171	100	136	723	381	-	-	1280	-	-
Stage 1	248	279	-	668	674	-	-	-	-	-	-	-
Stage 2	712	674	-	222	279	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	106	130	171	97	130	723	381	-	-	1280	-	-
Mov Cap-2 Maneuver	106	130	-	97	130	-	-	-	-	-	-	-
Stage 1	248	267	-	668	674	-	-	-	-	-	-	-
Stage 2	696	674	-	212	267	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			25.6			0			0.2		
HCM LOS	A			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	381	-	-	-	202	1280	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.135	0.017	-	-				
HCM Control Delay (s)	0	-	-	0	25.6	7.9	0	-				
HCM Lane LOS	A	-	-	A	D	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	0.5	0.1	-	-				

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	0	310	20	0	1005
Future Vol, veh/h	55	0	310	20	0	1005
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	21	67	0	8
Mvmt Flow	60	0	337	22	0	1092
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1440	348	0	0	359	0
Stage 1	348	-	-	-	-	-
Stage 2	1092	-	-	-	-	-
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	148	700	-	-	1211	-
Stage 1	719	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	148	700	-	-	1211	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	44.9	0		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	148	1211	-	
HCM Lane V/C Ratio	-	-	0.404	-	-	
HCM Control Delay (s)	-	-	44.9	0	-	
HCM Lane LOS	-	-	E	A	-	
HCM 95th %tile Q(veh)	-	-	1.8	0	-	

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	50	10	5	0	5	5	0	275	0	15	920	125
Future Vol, veh/h	50	10	5	0	5	5	0	275	0	15	920	125
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	0	0	0	0	0	0	22	0	0	9	3
Mvmt Flow	54	11	5	0	5	5	0	299	0	16	1000	136
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1404	1399	1068	1407	1467	299	1136	0	0	299	0	0
Stage 1	1100	1100	-	299	299	-	-	-	-	-	-	-
Stage 2	304	299	-	1108	1168	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	117	142	272	118	129	745	622	-	-	1274	-	-
Stage 1	257	290	-	714	670	-	-	-	-	-	-	-
Stage 2	705	670	-	257	270	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	109	137	272	106	124	745	622	-	-	1274	-	-
Mov Cap-2 Maneuver	109	137	-	106	124	-	-	-	-	-	-	-
Stage 1	257	280	-	714	670	-	-	-	-	-	-	-
Stage 2	694	670	-	234	261	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	73.2		22.8			0			0.1			
HCM LOS	F		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	622	-	-	118	213	1274	-	-				
HCM Lane V/C Ratio	-	-	-	0.599	0.051	0.013	-	-				
HCM Control Delay (s)	0	-	-	73.2	22.8	7.9	0	-				
HCM Lane LOS	A	-	-	F	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	3	0.2	0	-	-				

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	15	270	895	30
Future Vol, veh/h	5	10	15	270	895	30
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	24	10	0
Mvmt Flow	5	11	16	293	973	33

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1315	990	1006	0	0
Stage 1	990	-	-	-	-
Stage 2	325	-	-	-	-
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	176	302	697	-	-
Stage 1	363	-	-	-	-
Stage 2	737	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	171	302	697	-	-
Mov Cap-2 Maneuver	171	-	-	-	-
Stage 1	353	-	-	-	-
Stage 2	737	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	697	-	241	-	-
HCM Lane V/C Ratio	0.023	-	0.068	-	-
HCM Control Delay (s)	10.3	0	21	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	15	310	915	0
Future Vol, veh/h	0	10	15	310	915	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	22	10	0
Mvmt Flow	0	11	16	337	995	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1364	995	995	0	-	0
Stage 1	995	-	-	-	-	-
Stage 2	369	-	-	-	-	-
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	164	300	703	-	-	-
Stage 1	361	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	159	300	703	-	-	-
Mov Cap-2 Maneuver	159	-	-	-	-	-
Stage 1	351	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.5	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	703	-	300	-	-	
HCM Lane V/C Ratio	0.023	-	0.036	-	-	
HCM Control Delay (s)	10.2	0	17.5	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	325	0	0	925
Future Vol, veh/h	0	0	325	0	0	925
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	23	0	0	9
Mvmt Flow	0	0	353	0	0	1005
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1358	353	0	0	353	0
Stage 1	353	-	-	-	-	-
Stage 2	1005	-	-	-	-	-
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	166	695	-	-	1217	-
Stage 1	716	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	166	695	-	-	1217	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	357	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1217	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	20	320	920	5
Future Vol, veh/h	5	15	20	320	920	5
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	92	92	92	92	92	92
Heavy Vehicles, %	0	36	11	23	9	0
Mvmt Flow	5	16	22	348	1000	5
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1395	1003	1005	0	-	0
Stage 1	1003	-	-	-	-	-
Stage 2	392	-	-	-	-	-
Critical Hdwy	6.4	6.56	4.21	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.624	2.299	-	-	-
Pot Cap-1 Maneuver	157	254	655	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	150	254	655	-	-	-
Mov Cap-2 Maneuver	150	-	-	-	-	-
Stage 1	343	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	23.5	0.6		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	655	-	216	-	-	
HCM Lane V/C Ratio	0.033	-	0.101	-	-	
HCM Control Delay (s)	10.7	0	23.5	-	-	
HCM Lane LOS	B	A	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-	

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	110	365	5	40	910
Future Vol, veh/h	25	110	365	5	40	910
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	92	92	92	92	92	92
Heavy Vehicles, %	17	6	22	0	24	10
Mvmt Flow	27	120	397	5	43	989
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1475	400	0	0	402	0
Stage 1	400	-	-	-	-	-
Stage 2	1075	-	-	-	-	-
Critical Hdwy	6.57	6.26	-	-	4.34	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.354	-	-	2.416	-
Pot Cap-1 Maneuver	129	641	-	-	1047	-
Stage 1	646	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	641	-	-	1047	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.5	0		0.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	350	1047	-	
HCM Lane V/C Ratio	-	-	0.419	0.042	-	
HCM Control Delay (s)	-	-	22.5	8.6	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	2	0.1	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	0	285	25	0	905
Future Vol, veh/h	10	0	285	25	0	905
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	22	0	0	10
Mvmt Flow	11	0	310	27	0	984

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1308	324	0	0	337
Stage 1	324	-	-	-	-
Stage 2	984	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.1
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.2
Pot Cap-1 Maneuver	176	717	-	-	1234
Stage 1	733	-	-	-	-
Stage 2	362	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	176	717	-	-	1234
Mov Cap-2 Maneuver	176	-	-	-	-
Stage 1	733	-	-	-	-
Stage 2	362	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.8	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	176	1234	-
HCM Lane V/C Ratio	-	-	0.062	-	-
HCM Control Delay (s)	-	-	26.8	0	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	5	5	20	0	980	0	10	375	0
Future Vol, veh/h	0	0	0	5	5	20	0	980	0	10	375	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	95	95	95	92	92	92
Heavy Vehicles, %	0	0	0	0	0	9	0	2	0	8	1	0
Mvmt Flow	0	0	0	5	5	22	0	1032	0	11	408	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1476	1462	408	1462	1462	1032	408	0	0	1032	0	0
Stage 1	430	430	-	1032	1032	-	-	-	-	-	-	-
Stage 2	1046	1032	-	430	430	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.29	4.1	-	-	4.18	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.381	2.2	-	-	2.272	-	-
Pot Cap-1 Maneuver	105	130	648	108	130	274	1162	-	-	651	-	-
Stage 1	607	587	-	284	313	-	-	-	-	-	-	-
Stage 2	278	313	-	607	587	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	92	127	648	106	127	274	1162	-	-	651	-	-
Mov Cap-2 Maneuver	92	127	-	106	127	-	-	-	-	-	-	-
Stage 1	607	574	-	284	313	-	-	-	-	-	-	-
Stage 2	251	313	-	594	574	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			28.1			0			0.3		
HCM LOS	A			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1162	-	-	-	188	651	-	-				
HCM Lane V/C Ratio	-	-	-	-	0.173	0.017	-	-				
HCM Control Delay (s)	0	-	-	0	28.1	10.6	0	-				
HCM Lane LOS	A	-	-	A	D	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1	-	-				

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	0	1030	50	0	405
Future Vol, veh/h	30	0	1030	50	0	405
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	92	92	95	95	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	33	0	1084	53	0	440

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1551	1111	0
Stage 1	1111	-	-
Stage 2	440	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	126	257	-
Stage 1	318	-	-
Stage 2	653	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	126	257	-
Mov Cap-2 Maneuver	126	-	-
Stage 1	318	-	-
Stage 2	653	-	-

Approach	WB	NB	SB
HCM Control Delay, s	43.3	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	126	622	-
HCM Lane V/C Ratio	-	-	0.259	-	-
HCM Control Delay (s)	-	-	43.3	0	-
HCM Lane LOS	-	-	E	A	-
HCM 95th %tile Q(veh)	-	-	1	0	-

Intersection												
Int Delay, s/veh	47											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	145	5	10	0	10	15	5	920	0	10	370	55
Future Vol, veh/h	145	5	10	0	10	15	5	920	0	10	370	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	94	94	94	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	0	1	0
Mvmt Flow	158	5	11	0	11	16	5	979	0	11	402	60
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1457	1443	432	1451	1473	979	462	0	0	979	0	0
Stage 1	454	454	-	989	989	-	-	-	-	-	-	-
Stage 2	1003	989	-	462	484	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 109	133	628	110	128	306	1110	-	-	713	-	-
Stage 1	589	573	-	300	327	-	-	-	-	-	-	-
Stage 2	294	327	-	584	555	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 94	129	628	102	124	306	1110	-	-	713	-	-
Mov Cap-2 Maneuver	~ 94	129	-	102	124	-	-	-	-	-	-	-
Stage 1	583	561	-	297	324	-	-	-	-	-	-	-
Stage 2	266	324	-	556	543	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	\$ 443.6			26.7			0			0.2		
HCM LOS	F			D								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1110	-	-	100	193	713	-	-				
HCM Lane V/C Ratio	0.005	-	-	1.739	0.141	0.015	-	-				
HCM Control Delay (s)	8.3	0	-	\$ 443.6	26.7	10.1	0	-				
HCM Lane LOS	A	A	-	F	D	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	13.9	0.5	0	-	-				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	25	15	895	360	20
Future Vol, veh/h	30	25	15	895	360	20
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	92	92	95	95	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	33	27	16	942	391	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1376	402	413	0	-	0
Stage 1	402	-	-	-	-	-
Stage 2	974	-	-	-	-	-
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	162	653	1157	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	653	1157	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	369	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	24.9	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1157	-	240	-	-	
HCM Lane V/C Ratio	0.014	-	0.249	-	-	
HCM Control Delay (s)	8.2	0	24.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	1	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	15	10	920	415	0
Future Vol, veh/h	5	15	10	920	415	0
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	92	92	94	94	92	92
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	5	16	11	979	451	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1452	451	451	0	-	0
Stage 1	451	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
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	145	613	1120	-	-	-
Stage 1	646	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	142	613	1120	-	-	-
Mov Cap-2 Maneuver	142	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.5	0.1		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1120	-	335	-	-	
HCM Lane V/C Ratio	0.009	-	0.065	-	-	
HCM Control Delay (s)	8.2	0	16.5	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	930	0	0	430
Future Vol, veh/h	0	0	930	0	0	430
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	0	0	1011	0	0	467
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1478	1011	0	0	1011	0
Stage 1	1011	-	-	-	-	-
Stage 2	467	-	-	-	-	-
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	140	293	-	-	694	-
Stage 1	355	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	293	-	-	694	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	355	-	-	-	-	-
Stage 2	635	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	694	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	20	930	420	10
Future Vol, veh/h	0	15	20	930	420	10
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	2	1	13
Mvmt Flow	0	16	22	1011	457	11
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1518	463	468	0	-	0
Stage 1	463	-	-	-	-	-
Stage 2	1055	-	-	-	-	-
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	132	603	1104	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	126	603	1104	-	-	-
Mov Cap-2 Maneuver	126	-	-	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.1	0.2		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1104	-	603	-	-	
HCM Lane V/C Ratio	0.02	-	0.027	-	-	
HCM Control Delay (s)	8.3	0	11.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-	

Intersection						
Int Delay, s/veh	3.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	95	975	5	55	470
Future Vol, veh/h	20	95	975	5	55	470
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	92	92	94	94	92	92
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	22	103	1037	5	60	511
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1671	1040	0	0	1042	0
Stage 1	1040	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.4	6.21	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.309	-	-	2.2	-
Pot Cap-1 Maneuver	107	281	-	-	675	-
Stage 1	344	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	94	281	-	-	675	-
Mov Cap-2 Maneuver	94	-	-	-	-	-
Stage 1	344	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	45	0		1.1		
HCM LOS	E					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	209	675	-	
HCM Lane V/C Ratio	-	-	0.598	0.089	-	
HCM Control Delay (s)	-	-	45	10.9	0	
HCM Lane LOS	-	-	E	B	A	
HCM 95th %tile Q(veh)	-	-	3.4	0.3	-	

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	0	910	15	0	385
Future Vol, veh/h	30	0	910	15	0	385
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	92	92	94	94	92	92
Heavy Vehicles, %	2	2	2	0	0	2
Mvmt Flow	33	0	968	16	0	418
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1394	976	0	0	984	0
Stage 1	976	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.1	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.2	-
Pot Cap-1 Maneuver	156	305	-	-	710	-
Stage 1	365	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	156	305	-	-	710	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	365	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	34.1	0		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	156	710	-	
HCM Lane V/C Ratio	-	-	0.209	-	-	
HCM Control Delay (s)	-	-	34.1	0	-	
HCM Lane LOS	-	-	D	A	-	
HCM 95th %tile Q(veh)	-	-	0.8	0	-	

Traffic Signal Warrants Analysis

Traffic Volume Calculations for Warrant Analysis - Traffic Counts and Growth

			Mill Street ATR Data (3/1/2022)		2025 Existing Volumes								2032 Future Volumes with 0.5 Percent Growth											
					Existing Counts (4/16/2025)				Main Street ATR Data (4/16/2025)		Mill Street ATR Data - Grown to 2025		Main Street ATR Data - Grown to 2032		Mill Street ATR Data - Grown to 2032		Future Volumes Assumes 0.5 Percent per year to the year 2032							
Start Time	EB	WB	Main Street SBT	Main Street SBR	Main Street NBL	Main Street NBT	Mill Street EBL	Mill Street EBR	NB	SB	EB	WB	NB	SB	EB	WB	Main Street SBT	Main Street SBR	Main Street NBL	Main Street NBT	Mill Street EBL	Mill Street EBR		
6:00 AM	27	63							150	830	27	64	155	859	28	66	857	62	4	151	25	2		
7:00 AM	59	107	887	120	1	189	42	6	190	895	60	109	197	927	62	113	919	124	1	196	43	6		
8:00 AM	51	84	667	68	5	275	53	11	281	679	52	85	291	703	54	88	691	70	5	285	55	11		
9:00 AM	39	38							267	481	40	39	276	498	41	40	494	38	2	274	36	4		
10:00 AM	35	38							249	378	36	39	258	391	37	40	388	38	2	256	33	3		
11:00 AM	43	36							361	375	44	37	374	388	46	38	384	36	2	372	40	4		
12:00 PM	60	42							345	291	61	43	357	301	63	45	296	42	3	354	56	5		
1:00 PM	58	49							406	339	59	50	420	351	61	52	346	49	3	417	54	5		
2:00 PM	90	36							546	368	91	37	565	381	94	38	373	36	2	563	83	8		
3:00 PM	141	66							661	377	143	67	684	390	148	69	377	65	4	680	130	13		
4:00 PM	129	48	325	52	3	846	133	11	851	308	131	49	881	319	136	51	337	54	3	876	138	11		
5:00 PM	107	39	281	43	8	780	97	4	792	284	109	40	820	294	113	41	291	45	8	808	100	4		
6:00 PM	53	31							533	235	54	31	552	243	56	32	238	30	2	550	49	5		
Entering/Exiting Mill Street Calculations																	Note: Turning movements based on turning movement percentages obtained from TMC counts at Main Street/Mill Street							
<u>Total (4 hours)</u>			<u>SBR</u>		<u>NBL</u>				<u>EBL</u>		<u>EBR</u>													
			283		17				325		32													
			Entering:		Exiting:																			
			From North		94%		To North		91%															
			From South		6%		To South		9%															

Traffic Volume Calculations for Warrant Analysis - Development Related Traffic

Time of Day Trip Generation - 500 Main Street									
			Residential - Based on ITE Time of Day		500 Main Street Project Generated Trips				
	Entering	Exiting	Entering	Exiting	Main Street SBR (Exit)	Main Street SBT (Exit)	Main Street NBT (Enter)	Mill Street EBL (Enter)	
Start Time	Entering	Exiting	Entering	Exiting	(Exit)	(Exit)	(Enter)	(Enter)	
6:00 AM	1.0%	7.8%	5	37	4	32	4	1	
7:00 AM	2.5%	14.7%	12	69	8	59	10	1	
8:00 AM					6	49	15	2	
9:00 AM	2.2%	6.9%	10	33	4	28	9	1	
10:00 AM	2.7%	4.6%	13	22	2	19	11	1	
11:00 AM	3.4%	4.0%	16	19	2	16	14	2	
12:00 PM	4.3%	4.8%	20	23	3	20	17	2	
1:00 PM	4.4%	4.4%	21	21	2	18	18	2	
2:00 PM	4.1%	3.7%	19	18	2	15	16	2	
3:00 PM	5.9%	3.8%	28	18	2	15	24	3	
4:00 PM	9.2%	5.1%	44	24	3	21	38	5	
5:00 PM					4	27	43	5	
6:00 PM	12.1%	6.0%	57	28	3	24	49	6	

Trip Distribution ²: 11% 86% 86% 11%

Enter Exit

Daily Trip Generation ¹: 474 474 948

Notes:

(1) Daily Trip Generation and trip distribution patterns based on information from

Time of Day Trip Generation - Project Trips - Medical Office (LUC 720)									
			Medical Office - Based on ITE Time of Day		Medical Office Project Generated Trips				
	Entering	Exiting	Entering	Exiting	Main Street SBL (Enter)	Mill Street EBT (Enter)	Driveway WBR (Exit)	Driveway WBT (Exit)	
Start Time	Entering	Exiting	Entering	Exiting	(Enter)	(Enter)	(Exit)	(Exit)	
6:00 AM	1.9%	0.5%	5	1	2	1	0	0	
7:00 AM	6.8%	1.0%	19	3	1	4	1	4	
8:00 AM			35	10	3	7	3	7	
9:00 AM	11.4%	9.1%	32	26	8	6	8	6	
10:00 AM	10.6%	10.0%	30	28	8	6	8	6	
11:00 AM	7.7%	10.4%	22	30	9	4	9	4	
12:00 PM	6.8%	8.2%	19	23	7	4	7	4	
1:00 PM	10.4%	7.6%	30	22	7	6	7	6	
2:00 PM	9.6%	9.9%	27	28	8	5	8	5	
3:00 PM	9.0%	10.1%	26	29	9	5	9	5	
4:00 PM	5.8%	10.1%	17	29	9	3	9	3	
5:00 PM			20	45	14	4	14	4	
6:00 PM	1.2%	3.6%	3	10	3	1	3	1	

Trip Distribution ²: 30% 20% 30% 20%

Enter Exit

Daily Trip Generation ¹: 285 285 570

Notes:

(1) Daily Trip Generation and trip distribution patterns based on information in TIA

Time of Day Trip Generation - Project Trips - Emergency Building Uses (LUC 650)									
			Emergency Building - Based on ITE Time of		Emergency Building Project Generated Trips				
	Entering	Exiting	Entering	Exiting	Main Street SBL (Enter)	Mill Street EBT (Enter)	Driveway WBR (Exit)	Driveway WBT (Exit)	
Start Time	Entering	Exiting	Entering	Exiting	(Enter)	(Enter)	(Exit)	(Exit)	
6:00 AM	7.5%	4.6%	17	10	5	3	3	2	
7:00 AM	4.0%	5.0%	9	12	4	2	4	2	
8:00 AM			10	10	3	2	3	2	
9:00 AM	4.1%	4.2%	10	10	3	2	3	2	
10:00 AM	4.8%	4.2%	11	10	3	2	3	2	
11:00 AM	6.0%	5.6%	14	13	4	3	4	3	
12:00 PM	7.6%	5.3%	17	12	4	3	4	3	
1:00 PM	5.0%	6.0%	12	14	4	2	4	2	
2:00 PM	5.8%	5.7%	13	13	4	3	4	3	
3:00 PM	5.6%	6.0%	13	14	4	3	4	3	
4:00 PM	4.9%	5.6%	11	13	4	2	4	2	
5:00 PM			15	15	5	3	5	3	
6:00 PM	8.5%	7.6%	19	17	5	4	5	4	

Trip Distribution ²: 30% 20% 30% 20%

Enter Exit

Daily Trip Generation ¹: 230 230 460

Notes:

(1) Daily Trip Generation and trip distribution patterns based on information in TIA

Traffic Volume Calculations for Warrant Analysis - Volumes used in Analysis

	Volumes used in Warrant Analysis - Existing			Volumes used in Warrant Analysis - No-Build Conditions			Volumes used in Warrant Analysis - Build Conditions		
	Main Street SB	Main Street NB	Mill Street EB	Main Street SB	Main Street NB	Mill Street EB	Main Street SB	Main Street NB	Mill Street EB
Start Time									
6:00 AM	890	150	27	955	159	28	962	159	31
7:00 AM	1007	190	48	1110	207	50	1115	207	52
8:00 AM	735	280	64	816	305	68	822	305	70
9:00 AM	481	267	40	564	285	41	575	285	43
10:00 AM	378	249	36	447	269	37	458	269	39
11:00 AM	375	361	44	438	388	46	451	388	49
12:00 PM	291	345	61	361	374	63	372	374	66
1:00 PM	339	406	59	415	438	61	426	438	63
2:00 PM	368	546	91	426	581	93	438	581	96
3:00 PM	377	661	143	459	708	146	472	708	149
4:00 PM	377	849	144	415	917	154	428	917	156
5:00 PM	324	788	101	367	859	109	386	859	112
6:00 PM	235	533	54	295	601	60	303	601	64

2009 MUTCD

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: **Main Street at Mill Street**

Major Street Direction: Northbound-Southbound ▼

Year: **2032** Condition: **2025 Existing Conditions**

Speed Limit on Major Roadway: **40** mph

Number of approaches: **3**

Required approach volumes

Warrant 1 EIGHT-HOUR VEHICULAR VOLUME				Minimum*	Adjusted Minimum**
Warrant 1A MINIMUM VEHICULAR VOLUME (8 hours of day)					
	Major Street :	1	Lane(s) on each approach	500	500
	Minor Street :	1	Lane(s) on each approach	150	150
Warrant 1B INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)					
	Major Street :	1	Lane(s) on each approach	750	750
	Minor Street :	1	Lane(s) on each approach	75	75
80 PERCENT SATISFACTION OF WARRANT 1A AND WARRANT 1B				Warrant 1A	Warrant 1B
	Major Street :	1	Lane(s) on each approach	400	600
	Minor Street :	1	Lane(s) on each approach	120	60

Warrant 2 FOUR HOUR VEHICULAR VOLUME				
	Major Street :	1	Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2. 25 = accuracy of regression equations
	Minor Street :	1	Lane(s) on each approach	

Warrant 3 PEAK HOUR VOLUME				
	Major Street :	1	Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4. 25 = accuracy of regression equations
	Minor Street :	1	Lane(s) on each approach	

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road		Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants?				
		Northbound	Southbound		1A	1B	80%(1A&1B)	2	3
6:00 - 7:00 AM	27	150	890	1040	No	No	No	No	No
7:00 - 8:00 AM	48	190	1007	1197	No	No	No	No	No
8:00 - 9:00 AM	64	280	735	1015	No	No	No	No	No
9:00 - 10:00 AM	40	267	481	748	No	No	No	No	No
10:00 - 11:00 AM	36	249	378	627	No	No	No	No	No
11:00 - 12:00 PM	44	361	375	736	No	No	No	No	No
12:00 - 1:00 PM	61	345	291	636	No	No	No	No	No
1:00 - 2:00 PM	59	406	339	745	No	No	No	No	No
2:00 - 3:00 PM	91	546	368	914	No	Yes	No	No	No
3:00 - 4:00 PM	143	661	377	1038	No	Yes	Yes	Yes	No
4:00 - 5:00 PM	144	849	377	1226	No	Yes	Yes	Yes	No
5:00 - 6:00 PM	101	788	324	1112	No	Yes	No	Verify	No
6:00 - 7:00 PM	54	533	235	768	No	No	No	No	No
					No	No	No	No	No
					Warrants Met?		1	2	3
							NO	No	No

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

2009 MUTCD

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: **Main Street at Mill Street**

Major Street Direction: Northbound-Southbound ▼

Year: **2032** Condition: **2032 No Build Conditions**

Speed Limit on Major Roadway: **40** mph

Number of approaches: **3**

Required approach volumes

Warrant 1 EIGHT-HOUR VEHICULAR VOLUME				Minimum*	Adjusted Minimum**
Warrant 1A MINIMUM VEHICULAR VOLUME (8 hours of day)					
	Major Street :	1	Lane(s) on each approach	500	500
	Minor Street :	1	Lane(s) on each approach	150	150
Warrant 1B INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)					
	Major Street :	1	Lane(s) on each approach	750	750
	Minor Street :	1	Lane(s) on each approach	75	75
80 PERCENT SATISFACTION OF WARRANT 1A AND WARRANT 1B				Warrant 1A	Warrant 1B
	Major Street :	1	Lane(s) on each approach	400	600
	Minor Street :	1	Lane(s) on each approach	120	60

Warrant 2 FOUR HOUR VEHICULAR VOLUME				
	Major Street :	1	Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2. 25 = accuracy of regression equations
	Minor Street :	1	Lane(s) on each approach	

Warrant 3 PEAK HOUR VOLUME				
	Major Street :	1	Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4. 25 = accuracy of regression equations
	Minor Street :	1	Lane(s) on each approach	

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road		Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants?				
		Northbound	Southbound		1A	1B	80%(1A&1B)	2	3
6:00 - 7:00 AM	28	159	955	1114	No	No	No	No	No
7:00 - 8:00 AM	50	207	1110	1317	No	No	No	No	No
8:00 - 9:00 AM	68	305	816	1121	No	No	No	No	No
9:00 - 10:00 AM	41	285	564	849	No	No	No	No	No
10:00 - 11:00 AM	37	269	447	716	No	No	No	No	No
11:00 - 12:00 PM	46	388	438	826	No	No	No	No	No
12:00 - 1:00 PM	63	374	361	735	No	No	No	No	No
1:00 - 2:00 PM	61	438	415	853	No	No	No	No	No
2:00 - 3:00 PM	93	581	426	1007	No	Yes	No	No	No
3:00 - 4:00 PM	146	708	459	1167	No	Yes	Yes	Yes	No
4:00 - 5:00 PM	154	917	415	1332	Yes	Yes	Yes	Yes	Yes
5:00 - 6:00 PM	109	859	367	1226	No	Yes	No	Yes	No
6:00 - 7:00 PM	60	601	295	896	No	No	No	No	No
					No	No	No	No	Yes
					1			2	3
					NO			No	Yes
					Warrants Met?				

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.

2009 MUTCD

TRAFFIC SIGNAL WARRANT ANALYSIS (VOLUME BASED)

Intersection: **Main Street at Mill Street**

Major Street Direction: Northbound-Southbound ▼

Year: **2032** Condition: **2032 Build Conditions**

Speed Limit on Major Roadway: **40** mph

Number of approaches: **3**

Required approach volumes

Warrant 1 EIGHT-HOUR VEHICULAR VOLUME				Minimum*	Adjusted Minimum**
Warrant 1A MINIMUM VEHICULAR VOLUME (8 hours of day)					
	Major Street :	1	Lane(s) on each approach	500	500
	Minor Street :	1	Lane(s) on each approach	150	150
Warrant 1B INTERRUPTION OF CONTINUOUS TRAFFIC (8 hours of day)					
	Major Street :	1	Lane(s) on each approach	750	750
	Minor Street :	1	Lane(s) on each approach	75	75
80 PERCENT SATISFACTION OF WARRANT 1A AND WARRANT 1B				Warrant 1A	Warrant 1B
	Major Street :	1	Lane(s) on each approach	400	600
	Minor Street :	1	Lane(s) on each approach	120	60

Warrant 2 FOUR HOUR VEHICULAR VOLUME				
	Major Street :	1	Lane(s) on each approach	If "verify" indicated, see Figure 4C-1 or 4C-2. 25 = accuracy of regression equations
	Minor Street :	1	Lane(s) on each approach	

Warrant 3 PEAK HOUR VOLUME				
	Major Street :	1	Lane(s) on each approach	If "verify" indicated, see Figure 4C-3 or 4C-4. 25 = accuracy of regression equations
	Minor Street :	1	Lane(s) on each approach	

Hour	Entering Vol. Minor Road+	Entering Vol. on Major Road		Tot. Ent. Vol. On Major Rd	Meets the following volume-based warrants?				
		Northbound	Southbound		1A	1B	80%(1A&1B)	2	3
6:00 - 7:00 AM	31	159	962	1121	No	No	No	No	No
7:00 - 8:00 AM	52	207	1115	1322	No	No	No	No	No
8:00 - 9:00 AM	70	305	822	1127	No	No	No	No	No
9:00 - 10:00 AM	43	285	575	860	No	No	No	No	No
10:00 - 11:00 AM	39	269	458	727	No	No	No	No	No
11:00 - 12:00 PM	49	388	451	839	No	No	No	No	No
12:00 - 1:00 PM	66	374	372	746	No	No	No	No	No
1:00 - 2:00 PM	63	438	426	864	No	No	No	No	No
2:00 - 3:00 PM	96	581	438	1019	No	Yes	No	No	No
3:00 - 4:00 PM	149	708	472	1180	No	Yes	Yes	Yes	No
4:00 - 5:00 PM	156	917	428	1345	Yes	Yes	Yes	Yes	Yes
5:00 - 6:00 PM	112	859	386	1245	No	Yes	No	Yes	No
6:00 - 7:00 PM	64	601	303	904	No	No	No	No	No
					No	No	No	No	Yes
					1			2	3
					NO			No	Yes
					Warrants Met?				

*From the criteria described for the warrant in the MUTCD.

**If the operating speed is higher than 40mph then the volumes can be adjusted to 70%. (If no adjusted minimum, the minimum from the previous column is shown)

+If more than one approach, report the approach that has the higher volume.