

Proposed Adult Entertainment Club Milford Street

Mendon, MA



January 31, 2021

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TRAFFIC IMPACT AND ACCESS STUDY

PROPOSED ENTERTAINMENT CLUB

49 Milford Street
MENDON, MASSACHUSETTS

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SECTION 1: EXECUTIVE SUMMARY

Bayside Engineering has prepared this study to assess the traffic impact and to evaluate the access requirements of a proposed adult entertainment club, to be located at 49 Milford Street in Mendon, Massachusetts. The club will consist of approximately 4,806 square feet (sf) of space.

This report identifies existing traffic operating parameters on key roadways and intersections within the study area, evaluates the anticipated traffic volume increases as a result of the proposed project, analyzes the project's traffic-related impacts, determines the projects access/egress requirements and identifies appropriate mitigating measures designed to minimize the traffic-related impacts created by the project.

Review of the proposed entertainment club and access plan shows that in relation to roadway capacity, traffic safety, and traffic impacts upon the surrounding roadway network, the proposed project will meet safety standards and have a minimal impact on existing and future traffic conditions. The following provides a summary of the project and the study's findings.

PROJECT DESCRIPTION

The site is on the south side of Milford Street (Route 16). Currently, the site contains a single structure. One full-movement driveway currently serves the site.

The current development proposal consists of construction of a single building. The building will consist of approximately 4,806 gross square feet of space which will be used as an adult entertainment club. Seating will be provided for 165 customers. Valet parking will be provided.

Access would continue to be provided by way of the driveway to Milford Street. Figure 1 shows the site location in relation to the surrounding area.



Figure 1
Site Location Map

STUDY METHODOLOGY

This study has been prepared in three stages. The first stage involved an assessment of existing conditions within the study area and included an inventory of roadway geometrics, pedestrian and bicycle facilities and public transportation services. Existing traffic counts were performed at the study area intersections.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the project were assessed along with future traffic demands due to expected traffic growth independent of the proposed project. In accordance with Massachusetts Department of Transportation (MassDOT) and Executive Office of Environmental Affairs (EEA) guidelines, the year 2028 was selected as the basis for modeling future transportation impacts of the proposed development to reflect a seven-year planning horizon.

The third stage of the study presents and evaluates measures to address traffic issues, if any, and necessary improvements to accommodate the development.

STUDY AREA

Roadway geometry and traffic control information was collected for the intersections of

Milford Street, North Avenue and Main Street, as well as Milford Street in the site vicinity.

EXISTING CONDITIONS

Evaluation of existing conditions within the study area includes a description of roadway geometrics, traffic constraints, land uses at the intersections, and quantification of traffic volumes.

Existing Traffic Volumes

To establish base traffic conditions within the study area, manual turning movement and vehicle classification counts were originally obtained in December 2021. Peak-period turning movement counts were conducted during the weekday afternoon (12:00 noon to 2:00 PM) and weekday evening (4:00 to 6:30 PM) periods. Daily traffic counts were conducted on Milford Street for a two (2) day weekday period using automatic traffic recorders (ATR).

The traffic-volume data gathered as part of this study was collected during the month of December 2021. Data from the MassDOT was reviewed to determine the monthly variations of the traffic volumes. Seasonal adjustment factors compiled by MassDOT were reviewed. Based on the MassDOT data, December volumes were slightly lower than average month volumes (approximately 1%). Therefore, the December count data was adjusted upward by a factor of 1.01 to represent average month conditions.

Due to the COVID pandemic, counts are also currently lower than normal. Traffic volume data from the Functional Design Report prepared for planned roadway improvements for Route 16 were reviewed. Manual turning movement counts were conducted at the study area intersection in April 2018 (pre-pandemic). The 2018 counts were projected to 2021 and compared to the seasonally adjusted counts. This comparison showed that the seasonally adjusted counts were higher than the pre-pandemic counts. Therefore, the current seasonally adjusted counts were used in this assessment.

Milford Street was recorded to carry approximately 13,600 vehicles per day (vpd) west of Main Street on a weekday. During the weekday midday peak hour, approximately 848 vehicles per hour (vph) were recorded, and during the weekday evening peak hour, approximately 1,063 vph were recorded.

Vehicle Speeds

Existing speed data for Milford Street was also collected using the ATR. The average speed of vehicles travelling eastbound or westbound on Milford Street was found to be 45 and 43 mph, respectively. The 85th percentile speed was found to be 49 mph for eastbound vehicles and 48 mph for westbound vehicles. The 85th percentile speed is the speed at which sight distances are evaluated.

Motor Vehicle Crash Data

A substantial number of crashes were reported at the intersection of Milford Street, Hastings Road, North Avenue and Main Street from 2015 through 2021. A road Safety Audit was performed for this intersection in 2018 by MassDOT. As identified below, improvements have been identified and are scheduled to be constructed in 2024.

Planned Roadway Improvements

Milford Street (Route 16) is under the jurisdiction of MassDOT. MassDOT currently is designing roadway and intersection improvements for the study area. Plans are currently at the 25% stage, with the project expected to go to construction in 2024. These plans call for the improvements at the intersection of Milford Street, Hastings Road, North Avenue and Main Street. All approaches will be widened to include exclusive left-turn lanes and the existing traffic control system will be fully upgraded.

PROBABLE IMPACTS OF THE PROJECT

No-Build Traffic Volumes

To determine the impact of site-generated traffic volumes generated by the project on the roadway network under future conditions, baseline traffic volumes in the study area were projected to the year 2028. Traffic volumes on the roadway network at that time, in the absence of the proposed project, would include existing traffic, new traffic due to general background traffic growth, and traffic related to specific developments by others expected to be completed by 2028. MassDOT prepared a Functional Design Report for improvements within the study area and identified a 0.5% annual growth rate. A 0.5 compounded growth rate was used in this study.

Discussions with the Town of Mendon indicate that there is one (1) project that has been identified that could impact traffic volumes in the study area. A marijuana dispensary is proposed for 49 Milford Street. Traffic from this identified background project was included in the background projections.

Build Traffic Volumes

On a typical weekday, during the weekday midday peak hour, 28 vehicle trips (15 vehicles entering and 13 vehicles exiting) are expected. During the weekday evening peak hour, 33 vehicle trips (17 vehicles entering and 16 vehicles exiting) are expected.

TRAFFIC OPERATIONS ANALYSIS

TO assess the impacts of the proposed project on the roadway network, traffic operations

analyses were performed at the study area intersections under 2021 Existing, 2028 No-Build and 2028 Build conditions. These analyses indicate that the proposed project will not result in a significant impact on traffic operations at the study area intersections over No-Build conditions.

RECOMMENDATIONS

The capacity analyses performed for the 2021 Existing and 2028 future No-Build and Build conditions indicate that the proposed project will not result in a significant impact on traffic operations at the study area intersections during the weekday midday peak hour, which is between 1:00 to 2:00 PM or the weekday evening peak hour which is between 4:15 and 5:15 PM. The proposed project's impacts are expected to be less after 5:15 p.m. and on weekends, since the existing volumes on Milford Street will be lower at those times. Traffic from the drive-in which occurs at later hours of night when traffic is lower has been considered but does not affect the findings made in this report.

The site driveway should have one entering and one exiting lane and should have a stop sign on the premises at the entrance to Milford Street.

To maintain sight distances for the measured 85th percentile speeds, it is recommended that a sight triangle be established along the site frontage, in both directions from a point fifteen (15) feet back at Milford Street and extending to each of the corners of the site along Milford Street. Within this triangle, any existing vegetation should be cut-back, and any plantings and site signage should be designed to be low to not impede sight distances.

SUMMARY

Review of the proposed entertainment club and access plan shows that in relation to roadway capacity, traffic safety, and traffic impacts upon the surrounding roadway network, the proposed project will meet safety standards and have a minimal impact on existing and future traffic conditions. With the proposed access, in conjunction with the mitigation measures described above and maintaining sight distances from the site driveway (clear sight lines along frontage), safe and efficient access can be provided to the clientele of the proposed entertainment club and to the motoring public in the area.

SECTION 2: EXISTING TRAFFIC CONDITIONS

STUDY AREA

Roadway geometry and traffic control information was collected for the following intersections:

- Milford Street and existing site driveway
- Milford Street, Hastings Road, North Avenue and Main Street

FIELD SURVEY

A comprehensive field inventory of the proposed site was conducted in December 2021. The inventory included collection of existing roadway geometrics, traffic volumes, and safety data for the existing study area intersections and site access driveway locations. Traffic volumes were measured by means of automatic traffic recorder (ATR) counts and substantiated by manual turning movement counts (TMCs) conducted at the study area intersections.

GEOMETRICS

Primary study area roadways are described below.

Roadways

Milford Street (Route 16)

Milford Street is a Rural Minor Arterial under the jurisdiction of the Massachusetts Department of Transportation (MassDOT). Milford Street traverses the study area in a general east/west direction. Milford Street is a two-lane roadway. Travel lanes are generally separated by a double yellow centerline. Sidewalks are provided on the south

side of Milford Street. Marked shoulders are also provided. The posted speed limit on Milford Street in the vicinity of the site is 50 miles per hour (mph). Land use along Milford Street in the study area is primarily commercial.

Intersections

Milford Street, Hastings Road, North Avenue and Main Street

This signalized intersection is under the jurisdiction of MassDOT. Milford Street forms the east leg, Hastings Road forms the west leg, Main Street forms the south leg and North Avenue forms the north leg. The Hastings Road eastbound and Milford Street westbound approaches each consist of a single through lane permitting all movements. The Main Street and North Avenue approaches each consist of a single through lane permitting all movements. Sidewalks exist along the west side of North Avenue, the north side of Hastings Road and the west side of Main Street. A crosswalk exists across the Hastings Road eastbound approach. The intersection is controlled by a two-phase traffic signal with pedestrian activation. Land use at the intersection consists of the commercial uses and a park.

Milford Street and Existing Site Driveway

This unsignalized intersection is under the jurisdiction of MassDOT. Milford Street forms the east and west legs and the site driveway forms the south leg. The Milford Street eastbound and westbound approaches each consist of single through lanes permitting left- or right-turn movements. The driveway approach consists of a single lane permitting all movements. Sidewalks are present on the south side of Milford Street. The driveway operates under STOP control. Land use at the intersection consists of commercial uses.

TRAFFIC VOLUMES

Existing Traffic Volumes

To establish base traffic conditions within the study area, manual turning movement and vehicle classification counts were obtained in December 2021. Peak-period turning movement counts were conducted during the weekday midday peak period (12:00 noon to 2:00 PM) and weekday evening period (4:00 to 6:30 PM) at the following intersections:

- Milford Street, Hastings Road, North Avenue and Main Street

Daily traffic counts were conducted on Milford Street and on Main Street for a two (2) day weekday period using automatic traffic recorders (ATR). The ATR counts were obtained in December 2021.

Analysis of the peak-period traffic counts indicated that the weekday midday peak hour generally occurs between 1:00 PM and 2:00 PM and the weekday evening peak hour

generally occurs between 4:15 PM and 5:15 PM. The traffic count worksheets are provided in the Appendix.

Seasonal Adjustment

The traffic-volume data gathered as part of this study was collected during the month of December 2021. Data from the MassDOT was reviewed to determine the monthly variations of the traffic volumes. Seasonal adjustment factors compiled by MassDOT were reviewed. Based on the MassDOT data, December volumes were slightly lower than average month volumes (approximately 1%). Therefore, the December count data was adjusted upward by a factor of 1.01 to represent average month conditions.

Due to the COVID pandemic, counts are also currently lower than normal. Traffic volume data from the Functional Design Report prepared for planned roadway improvements for Route 16 were reviewed. Manual turning movement counts were conducted at the study area intersection in April 2018 (pre-pandemic). The 2018 counts were projected to 2021 and compared to the seasonally adjusted counts. This comparison showed that the seasonally adjusted counts were higher than the pre-pandemic counts. Therefore, the current seasonally adjusted counts were used in this assessment. The worksheets and 2018 counts are included in the Appendix.

The 2021 Existing weekday daily and peak-hour traffic volumes for average-month conditions are summarized below in Table 1. The 2021 Existing peak hour traffic flow networks are shown graphically on Figure 2 for the weekday midday and weekday evening peak hours. The seasonal worksheets are provided in the Appendix.

**TABLE 1
EXISTING WEEKDAY TRAFFIC-VOLUME SUMMARY^a**

Location	Weekday Traffic Volume ^b	Weekday Midday Peak Hour			Weekday Evening Peak Hour		
		Traffic Volume ^c	K Factor ^d	Directional Distribution ^e	Traffic Volume	K Factor	Directional Distribution
Milford Street, west of site	13,600	848	6.2	51.8% WB	1,063	7.8	61.0% WB

^aTwo-way traffic volume

^bDaily traffic expressed in vehicles per day.

^cExpressed in vehicles per hour.

^dPercent of daily traffic volumes which occurs during the peak hour.

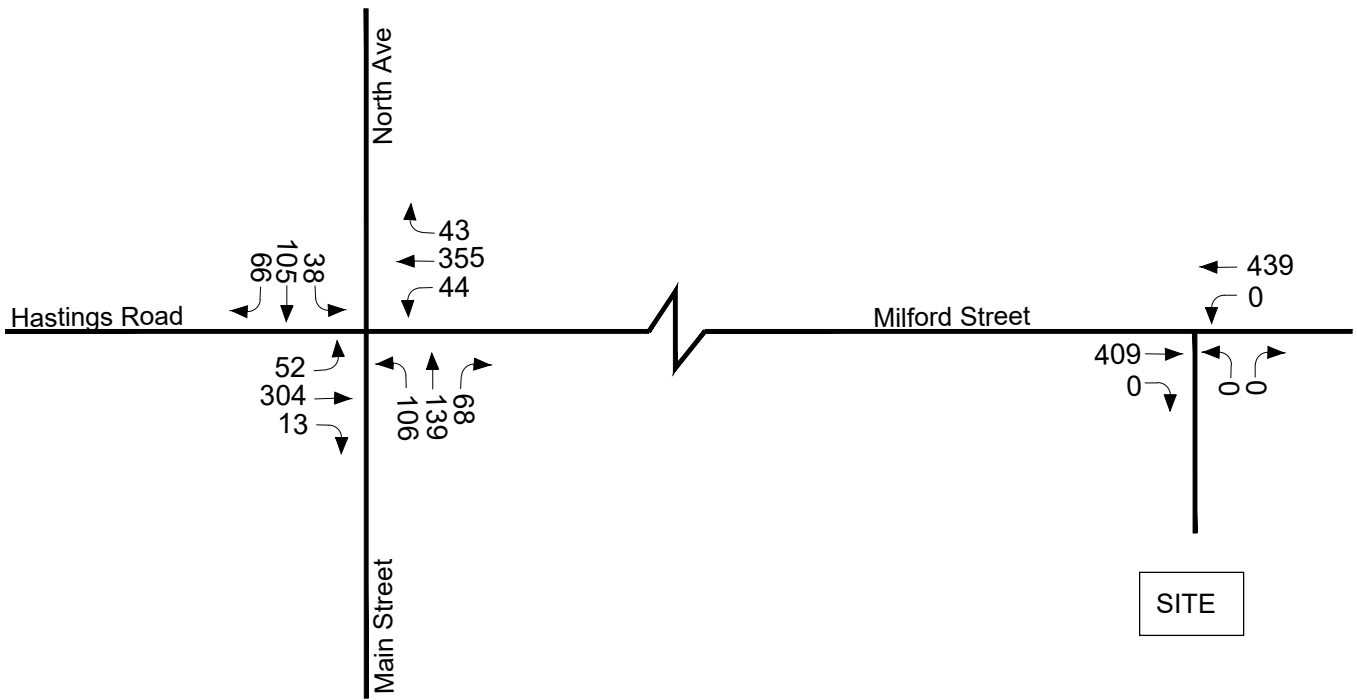
^ePercent of peak-hour volume in the predominant direction of travel.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound.

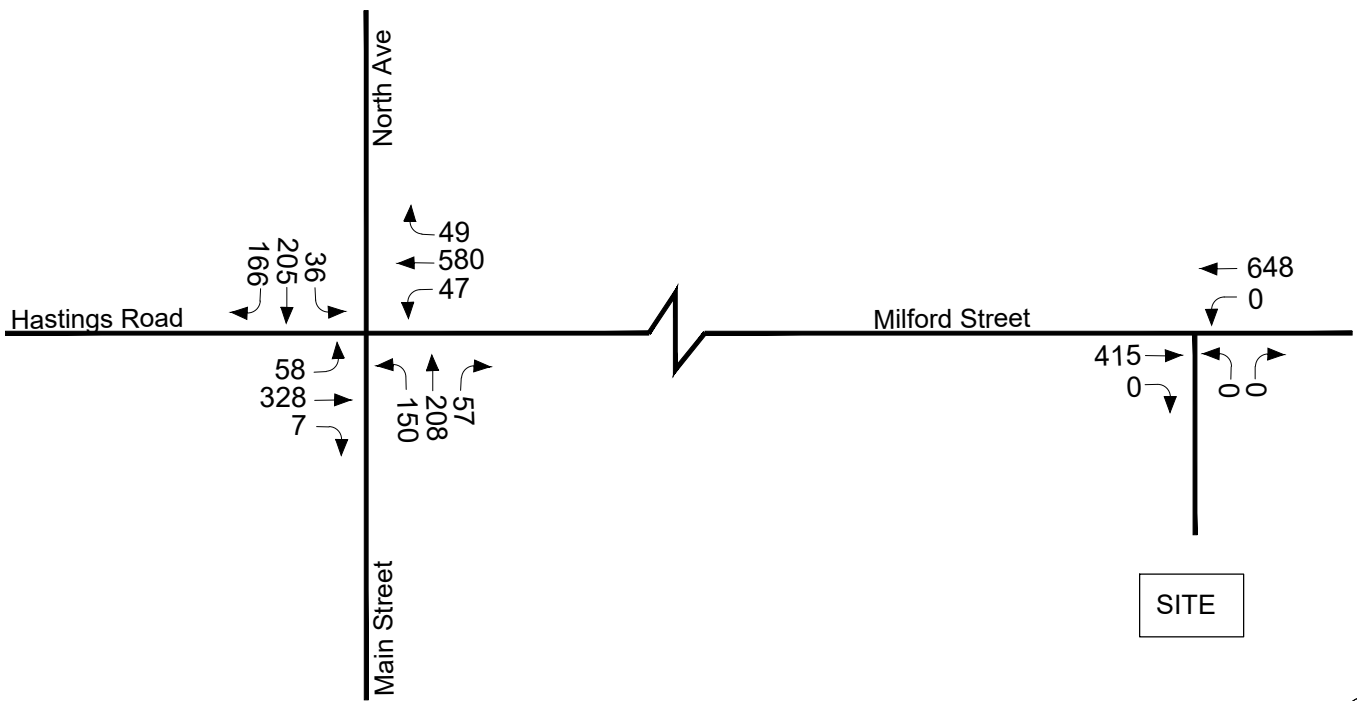
Milford Street was recorded to carry approximately 13,600 vehicles per day (vpd) west of Main Street on a weekday. During the weekday midday peak hour, approximately 848 vehicles per hour (vph) were recorded, and during the weekday evening peak hour, approximately 1,063 vph were recorded.

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Weekday Midday Peak Hour



Weekday Evening Peak Hour



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Figure 2

2021 Existing
Peak Hour Traffic Volumes

VEHICLE SPEEDS

Existing speed data for Milford Street was also collected using the ATRs. The posted speed limit on Milford Street is 50 miles per hour (mph) in the site vicinity. The speed data is summarized in Table 2.

**TABLE 2
OBSERVED VEHICLE SPEEDS**

Direction	Posted Speed Limit (mph)	Average Observed Speed ^a (mph)	85 th Percentile Speed (mph)
Milford Street Eastbound	50	45	49
Milford Street Westbound	50	43	48

^aBased on speed data compiled on December 15 through December 16, 2022.

As shown in Table 2, the average speed of vehicles travelling eastbound or westbound on Milford Street was found to be 45 and 43 mph, respectively. The 85th percentile speed was found to be 49 mph for eastbound vehicles and 48 mph for westbound vehicles.

The 85th percentile speed is the speed at which sight distances are evaluated.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash data for the study area intersections were obtained from the MassDOT Crash Portal for 2015 through the end of 2021. The motor vehicle crash data was reviewed to determine crash trends in the study area. One hundred seven (107) crashes were reported at the study area intersections. Of the one hundred seven (107) crashes, one hundred six (106) crashes were reported at the intersection of Milford Street and North Avenue and one (1) crash was reported at the intersection of Milford Street and the site driveway. No fatalities were reported. The crash data is included in the Appendix. The crash data is summarized in Table 3.

TABLE 3
MOTOR VEHICLE CRASH DATA SUMMARY^a

Scenario	Location	
	Milford Street, Hastings Road, North Avenue and Main Street	Milford Street and Site Driveway
<i>Year:</i>		
2015	17	1
2016	15	0
2017	16	0
2018	23	0
2019	20	0
2020	7	0
<u>2021</u>	<u>8</u>	<u>0</u>
Total	106	1
Average	15.1	0.1
Crash Rate	1.99	0.03
Significant	Yes	No
<i>Type:</i>		
Angle	36	0
Rear-End	49	1
Head-On	3	0
Sideswipe	13	0
<u>Single Vehicle Crash</u>	<u>5</u>	<u>0</u>
Total	106	1
<i>Time of Day:</i>		
Weekday (7:00 to 9:00 AM)	16	1
Weekday (4:00 to 6:00 PM)	19	0
<u>Remainder of Day</u>	<u>71</u>	<u>0</u>
Total	106	1
<i>Pavement Conditions:</i>		
Dry	81	1
Wet	21	0
Snow/Ice	2	0
<u>Unknown</u>	<u>2</u>	<u>0</u>
Total	106	1

^aSource: MassDOT Crash Portal.

^bAverage crashes over analysis period.

^cCrash rate per million entering vehicles (mev).

^dSignalized intersections are significant if rate >0.89 crashes per million vehicles, and unsignalized intersections are significant if rate >0.61 crashes per million vehicles. District 6 signalized intersections are significant if rate >0.71 crashes per million vehicles and unsignalized intersections are significant if rate >0.52 crashes per million vehicles.

As shown in Table 3, a substantial number of crashes were reported at the intersection of Milford Street, Hastings Road, North Avenue and Main Street. A road Safety Audit was performed for this intersection in 2018 by MassDOT. As identified below, improvements have been identified and are scheduled to be constructed in 2024.

PLANNED ROADWAY IMPROVEMENTS

Officials for MassDOT and the City of Mendon were contacted regarding roadway improvements planned for the study area intersections. Milford Street (Route 16) is under the jurisdiction of MassDOT. MassDOT currently is designing roadway and intersection improvements for the study area. Plans are currently at the 25% stage, with the project expected to go to construction in 2024. These plans call for the improvements at the intersection of Milford Street, Hastings Road, North Avenue and Main Street. All approaches will be widened to include exclusive left-turn lanes and the existing traffic control system will be fully upgraded.

SECTION 3:

2028 NO-BUILD AND BUILD TRAFFIC CONDITIONS

To determine the impact of site-generated traffic volumes on the roadway network under future conditions, baseline traffic volumes in the study area were projected to the year 2028. Traffic volumes on the roadway network at that time, in the absence of the proposed project, would include existing traffic, new traffic due to general background traffic growth, and traffic related to specific developments by others expected to be completed by 2028. Consideration of these factors resulted in the development of 2028 No-Build traffic volumes. Anticipated site-generated traffic volumes were then superimposed upon these No-Build traffic flow networks to develop 2028 Build conditions.

2028 NO-BUILD TRAFFIC VOLUMES

Traffic growth on area roadways is a function of the expected land development in the immediate area as well as the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This produces a more realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

To provide a conservative analysis framework, both procedures were used.

Background Traffic Growth

To determine the impact of site-generated traffic volumes generated by the project on the

roadway network under future conditions, baseline traffic volumes in the study area were projected to the year 2028. Traffic volumes on the roadway network at that time, in the absence of the proposed project, would include existing traffic, new traffic due to general background traffic growth, and traffic related to specific developments by others expected to be completed by 2028. The Central Transportation Planning Staff (CMRPC) was contacted to determine an appropriate growth rate. CMRPC indicated growth in the area is 0.33 percent. Therefore, a 0.5 percent compounded growth rate was used to develop future No-Build conditions.

Specific Development by Others

Traffic volumes generated by the specific local developments by others were included in the 2028 No-Build condition. The Town of Mendon was contacted to identify specific planned developments. Based on these discussions, there is one (1) project that has been identified that could impact traffic volumes in the study area. This project is:

- Proposed Marijuana Dispensary – 49 Milford Street

No traffic study was prepared for the dispensary. Traffic expected to be generated by the dispensary were obtained from the ITE Trip Generation Manual.

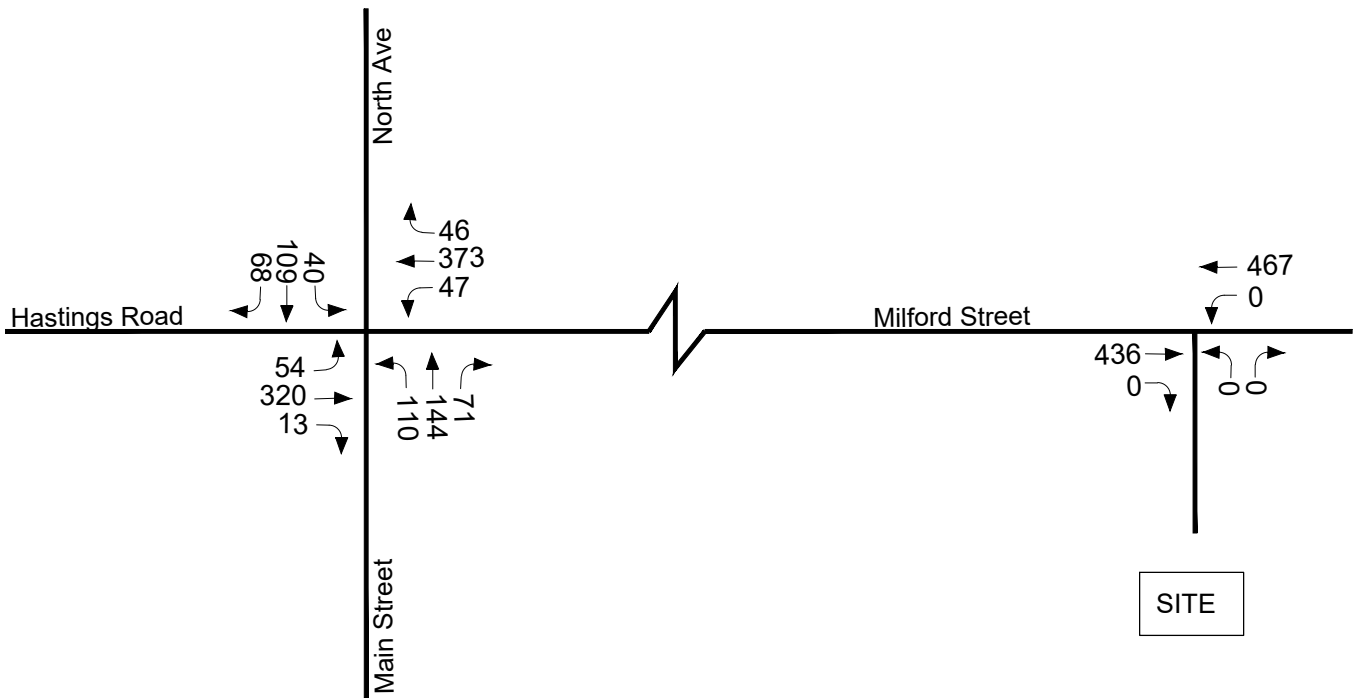
The background project traffic generation is included in the Appendix for the project.

No-Build Condition Traffic Volumes

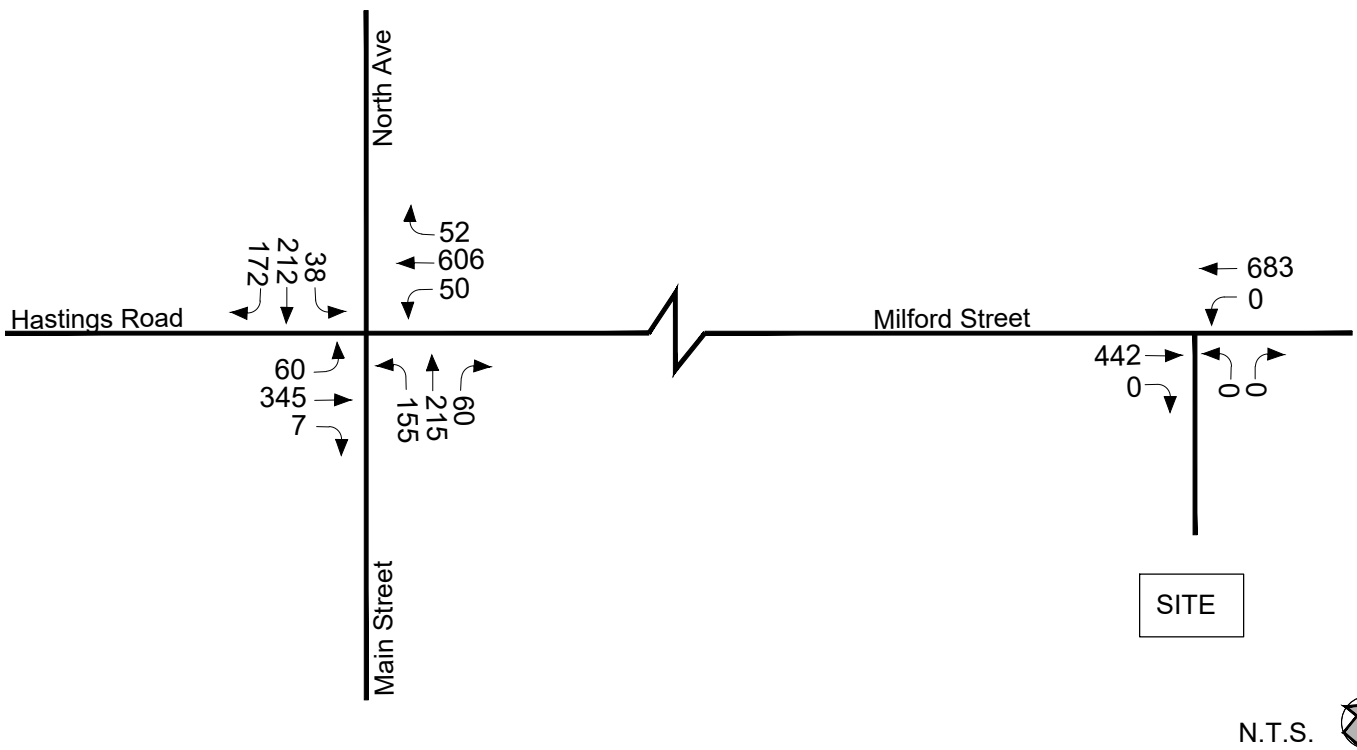
The 2028 No-Build weekday midday and weekday evening peak-hour traffic volumes were developed by applying a compounded 0.5 percent annual growth rate to the 2021 Existing peak-hour traffic volumes and adding traffic from the identified background projects. Figure 3 shows the projected 2028 No-Build peak hour traffic volumes for the weekday midday and weekday evening peak-hour conditions.

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Weekday Midday Peak Hour



Weekday Evening Peak Hour



N.T.S. 



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Mendon, MA

Figure 3

2028 No-Build
Peak Hour Traffic Volumes

FUTURE 2028 BUILD CONDITIONS

Project Description

The current development proposal consists of construction of a single building. The building will consist of approximately 4,806 gross square feet of space which will be used as an adult entertainment club. Seating will be provided for 165 customers. Valet parking will be provided.

Access would continue to be provided by way of the driveway to Milford Street.

Site Traffic Generation

To develop the traffic characteristics of the proposed development, available trip-generation statistics published by the Institute of Transportation Engineers (ITE)¹ was researched and projected site operations and employee data were reviewed. The ITE has Land Use Code (LUC) 440 – Adult Cabaret that would represent the proposed use. However, the ITE data consists of a single data point that was based on sites in California and Florida which would not be applicable to this club. The most accurate data available would be the original traffic study prepared for the project at its inception which utilized count data performed at the Foxy Lady in Brockton, Massachusetts. Since this would be the most accurate data, this was the data utilized in the study and included in the appendix

Using the above information and increasing the daily numbers to account for miscellaneous trips (10% contingency), the projects traffic generation was determined as summarized in Table 4.

TABLE 4
TRIP-GENERATION SUMMARY

	<u>Proposed Club</u>
<i>Weekday Midday Peak Hour:</i>	
Entering	15
<u>Exiting</u>	<u>13</u>
Total	28
<i>Weekday Evening Peak Hour:</i>	
Entering	17
<u>Exiting</u>	<u>16</u>
Total	33

¹*Trip Generation*, Eleventh Edition; Institute of Transportation Engineers; Washington, DC; 2021.

Trip Distribution

The directional distribution of the vehicular traffic approaching and departing the site is a function of population densities, the location of employment, existing travel patterns, similar uses, and the efficiency of the existing roadway system. For purposes of this analysis, existing traffic flow was reviewed and used to develop the expected trip distribution patterns for the proposed club. Table 5 summarizes the expected trip distribution for the project and the trip distribution worksheets are in the Appendix.

**TABLE 5
PROPOSED TRIP DISTRIBUTION**

<u>Route</u>	<u>Direction</u>	<u>Percent of Trips</u>
Milford Street	East	35
Hastings Road	West	21
North Avenue	North	22
Main Street	South	<u>22</u>
TOTAL		100

Future Traffic Volumes - Build Condition

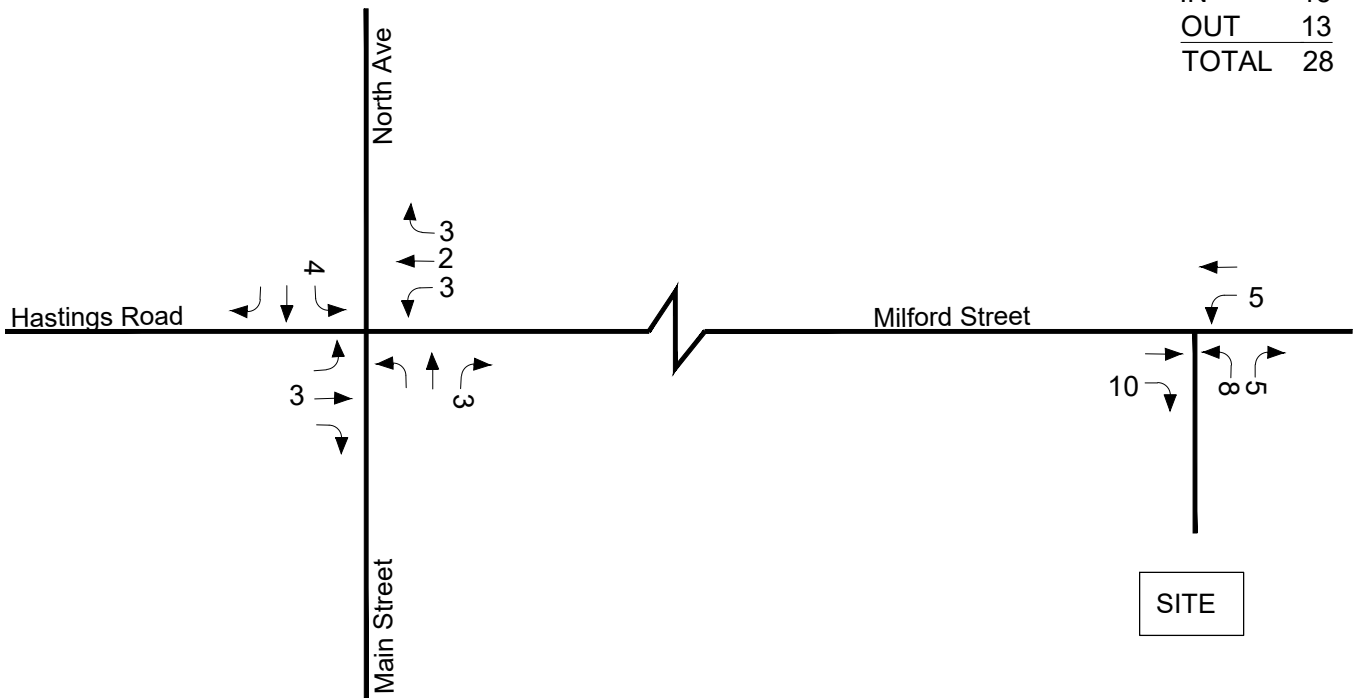
The site-generated traffic was distributed within the study area according to the percentages summarized in Table 5. The site generated volumes are graphically presented in Figure 4. The site generated volumes were superimposed onto the 2028 No-Build traffic volumes to represent the 2028 Build traffic-volume conditions. The anticipated 2028 Build weekday midday and weekday evening traffic volumes are graphically presented in Figure 5. These volumes were used as the basis for all analysis as well as to identify potential mitigation measures to ameliorate the project's impacts.

A summary of 2028 peak-hour projected traffic-volume changes in the site vicinity are shown in Table 6. These volumes are based on the expected increases from the site traffic generation.

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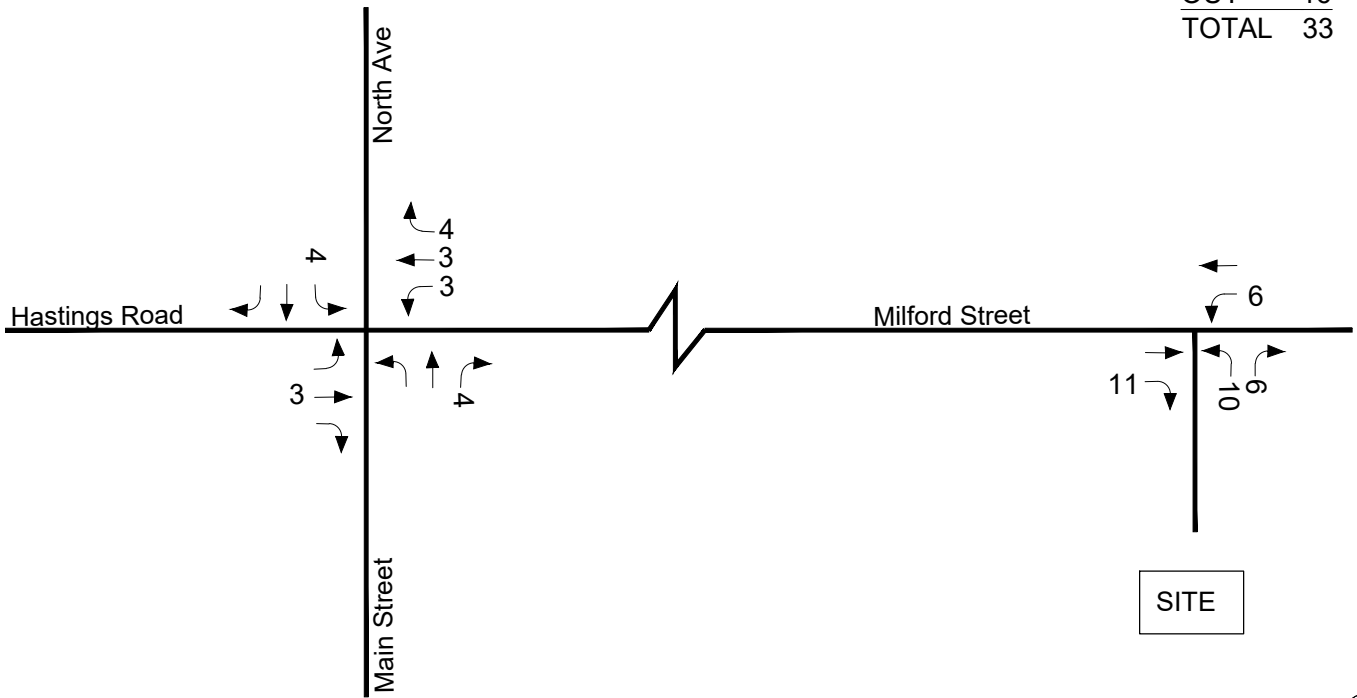
Weekday Midday Peak Hour

IN	15
OUT	13
TOTAL	28



Weekday Evening Peak Hour

IN	17
OUT	16
TOTAL	33



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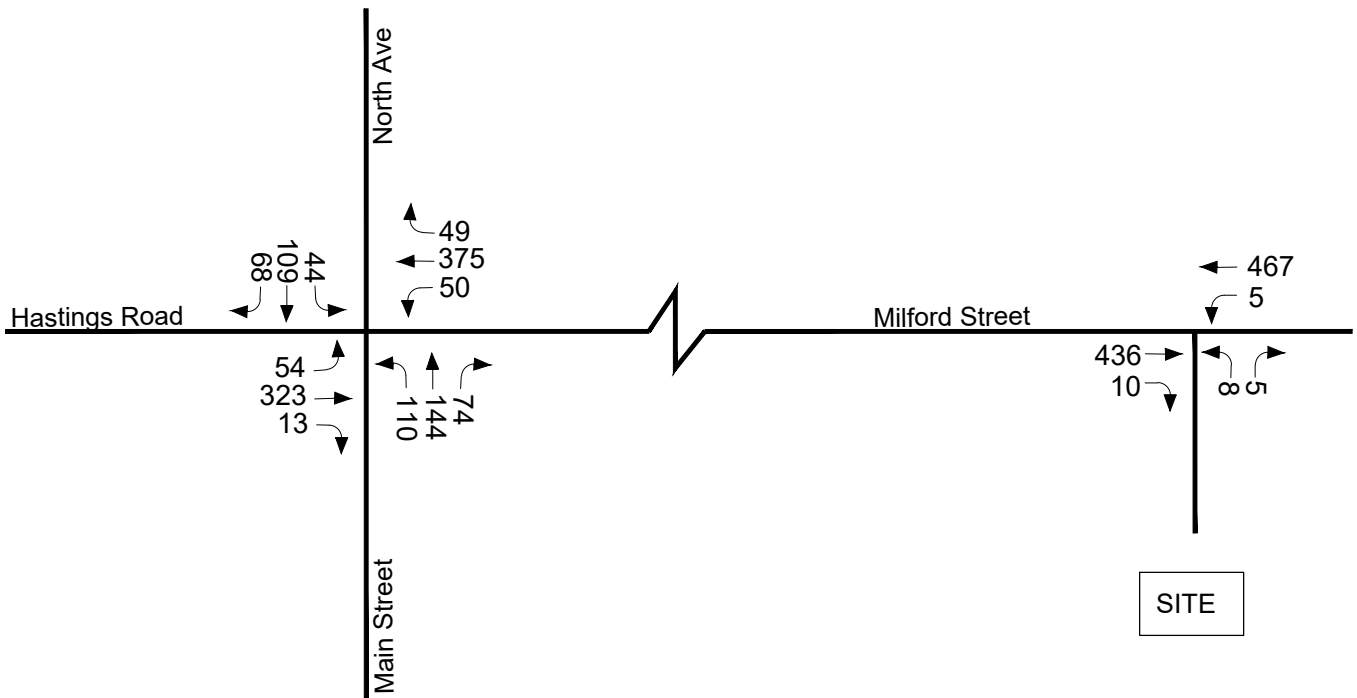


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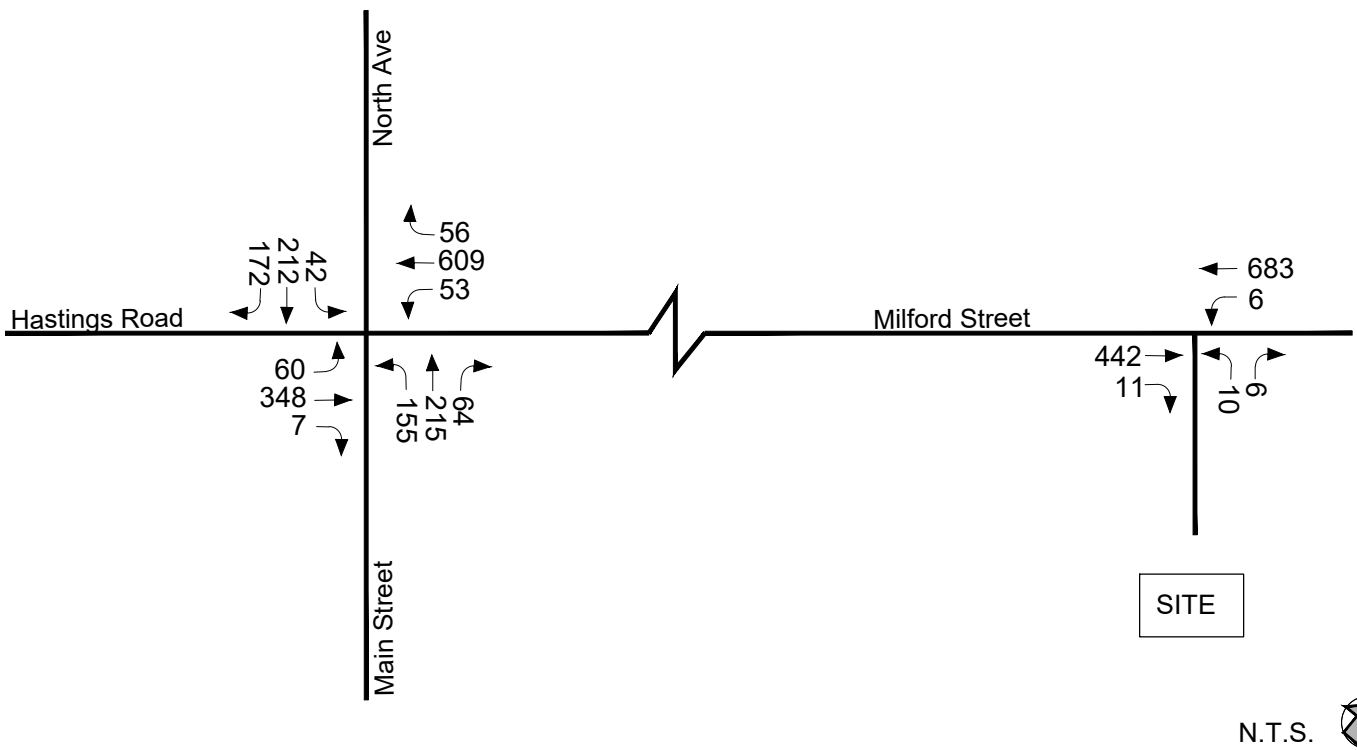
Figure 4
Site Generated
Peak Hour Traffic Volumes

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Weekday Midday Peak Hour



Weekday Evening Peak Hour



N.T.S. 



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Figure 5

2028 Build
Peak Hour Traffic Volumes

**TABLE 6
TRAFFIC-VOLUME INCREASES^a**

Location/Peak Hour	2028 No-Build	2028 Build	Volume Increase over No-Build	Percent Increase over No-Build
<i>Milford Street, east of Site Driveway</i>				
Weekday Midday	903	913	10	1.1
Weekday Evening	1,125	1,137	12	1.1
<i>Hastings Road, west of Main Street</i>				
Weekday Midday	938	943	5	0.5
Weekday Evening	1,345	1,351	6	0.4
<i>North Avenue, north of Milford Street</i>				
Weekday Midday	461	468	7	1.5
Weekday Evening	749	757	8	1.1
<i>Main Street, south of Milford Street</i>				
Weekday Midday	494	500	6	1.2
Weekday Evening	699	706	7	1.0

^aAll volumes are vehicles per hour, total of both directions.

As shown in Table 6, project-related increases are in the range of 5 to 12 bi-directional vehicles during the peak hours. This is approximately equivalent to one additional vehicle every ten (10) minutes or less per direction on average during the peak hours.

SECTION 4: CAPACITY ANALYSIS

To assess intersection operations, capacity analyses were conducted for Existing, No-Build, and Build traffic-volume conditions. Capacity analyses provide an indication of how well the study area intersections serve existing and projected traffic volumes. Vehicle queue analyses provide a secondary measure of the operational characteristics of an intersection or section of roadway under study in terms of lane use and demand.

METHODOLOGY

Levels of Service

Level of service (LOS) is a quantitative measure used to describe the operation of an intersection or roadway segment. The level of service definition is described by the quality of traffic flow and is primarily defined in terms of traffic delays. The primary result of capacity analyses² is the assignment of a level of service to traffic intersections or roadway segments under various traffic-flow conditions. Six levels of service are defined for traffic intersections and roadway segments. Levels of service range from LOS A to LOS F. LOS A represents very good operating conditions and LOS F represents poor operating conditions.

Unsignalized Intersections

The level of service for an unsignalized intersection is determined by the methodology and procedures described in the 2010 *Highway Capacity Manual*.³ The level of service for unsignalized intersections is measured in terms of average delay for the critical movements (typically side street turning movements or mainline turning movements). The delay for the critical movements is a function of the available capacity for the movement and the

²The capacity analysis methodology is based on procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Main, DC; 2010.

³*Highway Capacity Manual*; Transportation Research Board; Main, DC; 2010.

degree of saturation of the lane group containing the critical movement. The delay calculation includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. The definitions for level of service at unsignalized intersections are also provided in the 2010 *Highway Capacity Manual*. Table 7 summarizes the relationship between level of service and average control delay for the critical movements at unsignalized intersections.

TABLE 7
LEVEL-OF-SERVICE CRITERIA FOR
UNSIGNALIZED INTERSECTIONS^a

Average Delay (seconds per vehicle)	Resulting Level of Service
≤ 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
>50.0	F

^a*Highway Capacity Manual*; Transportation Research Board; Main, DC; 2010; page 17-2.

The analytical methodologies used for the analysis of unsignalized intersections use conservative analysis parameters, such as high critical gaps. The critical gap is defined as the minimum time between successive main line vehicles for a side street vehicle to execute the appropriate turning maneuver. Actual field observations indicate that drivers on minor streets accept smaller gaps in traffic than those used in the analysis procedures and therefore experience less delay than calculated by the HCM methodology. ***The analysis results overstate the actual delays experienced in the field.*** It should be noted that the unsignalized intersections along heavily trafficked roadways operate at constrained levels and the resulting calculated results of the unsignalized intersection analyses should be considered highly conservative.

Signalized Intersections

Levels of service for signalized intersections are calculated using the methodology and procedures described in the 2010 *Highway Capacity Manual*. The methodology assesses the intersection based on type of signal operation, signal timing and phasing, progression, vehicle mix, and intersection geometrics. Level-of-service designations are based on the delay per vehicle. Table 8 summarizes the relationship between level of service and delay. The calculated delay values result in level-of-service designations which are applied to individual lane groups, to individual intersection approaches, and to the entire intersection.

**TABLE 8
LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED
INTERSECTIONS^a**

Delay per Vehicle (Seconds)	Resulting Level of Service
≤10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
>80.0	F

^aHighway Capacity Manual; Transportation Research Board; Main, DC; 2010; page 16-2.

ANALYSIS RESULTS

Level-of-service analyses were conducted for 2022 Existing, 2028 No-Build and 2028 Build conditions for the intersections within the study area. The results of the signalized analyses are shown in Table 9 and the results of the unsignalized analyses are shown in Table 10. Field observations indicate that drivers on minor streets did not experience the delays that the HCM methodology indicates, further supporting the conservative nature of the analysis methodology. Again, it is important to note that the analysis results overstate the actual delays experienced in the field. Detailed analysis sheets are presented in the Appendix.

Milford Street, Hastings Road, North Avenue and Main Street

Under 2021 Existing conditions, the intersection is projected to operate at LOS B during the weekday midday peak hour and at LOS B during the weekday evening peak hour. Under future 2028 No-Build conditions, the intersection is projected to operate at LOS B during the weekday midday peak hour and at LOS D during the weekday evening peak hour. Under future 2028 Build conditions, with the project, the intersection is projected to continue to operate at LOS B during the weekday midday peak hour and at LOS D during the weekday evening peak hour.

**TABLE 9
SIGNALIZED LEVEL-OF-SERVICE SUMMARY MILFORD STREET, HASTINGS ROAD, NORTH AVENUE AND MAIN STREET**

Peak Hour/Lane Group	2021 Existing				2028 No-Build				2028 Build			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d	V/C	Delay	LOS	Queue	V/C	Delay	LOS	Queue
<i>Weekday Midday</i>												
Eastbound Lt/Th/Rt	0.58	12.6	B	81/148	--	--	--	--	--	--	--	--
Eastbound Lt	--	--	--	--	0.20	13.5	B	10/25	0.20	13.5	B	10/25
Eastbound Th/Rt	--	--	--	--	0.65	17.5	B	107/180	0.65	17.6	B	108/182
Westbound Lt/Th/Rt	0.68	13.7	B	97/176	--	--	--	--	--	--	--	--
Westbound Lt	--	--	--	--	0.14	12.7	B	9/22	0.15	12.7	B	9/23
Westbound Th/Rt	--	--	--	--	0.82	21.6	C	137/229	0.82	21.8	C	139/232
Northbound Lt/Th/Rt	0.50	11.8	B	73/129	--	--	--	--	--	--	--	--
Northbound Lt	--	--	--	--	0.36	18.7	B	42/75	0.36	18.9	B	43/75
Northbound Th/Rt	--	--	--	--	0.35	14.2	B	74/113	0.35	14.3	B	75/114
Southbound Lt/Th/Rt	0.29	9.2	A	30/87	--	--	--	--	--	--	--	--
Southbound Lt	--	--	--	--	0.09	15.3	B	10/34	0.10	15.6	B	12/37
Southbound Th/Rt	--	--	--	--	0.31	13.7	B	35/88	0.31	13.8	B	35/88
Overall	--	12.2	B	--	--	17.5	B	--	--	17.7	B	--
<i>Weekday Evening</i>												
Eastbound Lt/Th/Rt	0.53	10.5	B	91/166	--	--	--	--	--	--	--	--
Eastbound Lt	--	--	--	--	0.31	15.8	B	11/27	0.31	15.8	B	11/27
Eastbound Th/Rt	--	--	--	--	0.52	15.1	B	115/191	0.53	15.2	B	116/193
Westbound Lt/Th/Rt	0.83	19.2	B	192/399	--	--	--	--	--	--	--	--
Westbound Lt	--	--	--	--	0.12	11.1	B	9/23	0.13	11.1	B	10/25
Westbound Th/Rt	--	--	--	--	1.00	51.6	D	287/504	1.00	53.7	D	295/509
Northbound Lt/Th/Rt	0.73	24.4	C	143/279	--	--	--	--	--	--	--	--
Northbound Lt	--	--	--	--	0.90	73.9	E	74/181	0.90	73.9	E	74/181
Northbound Th/Rt	--	--	--	--	0.40	19.1	B	89/159	0.40	19.1	B	90/161
Southbound Lt/Th/Rt	0.68	20.3	C	108/229	--	--	--	--	--	--	--	--
Southbound Lt	--	--	--	--	0.12	20.9	C	13/34	0.13	21.1	C	14/36
Southbound Th/Rt	--	--	--	--	0.82	32.8	C	134/251	0.82	32.8	C	134/251
Overall	--	18.6	B	--	--	36.4	D	--	--	37.0	D	--

^aMaximum volume-to-capacity ratio.

^bDelay in seconds per vehicle.

^cLevel of service.

^dAverage Queue (ft)/95th %tile Queue (ft)

Lt = Left; Th = Through; Rt = Right.

Milford Street and Site Driveway

Under 2021 Existing and No-Build conditions, there is no traffic volume on this driveway. Under future 2028 Build conditions, the critical movements (all movements from the site driveway) are projected to operate at LOS C during the weekday midday peak hour and at LOS C during the weekday evening peak hour. The volume to capacity (v/c) ratio will be below 1.00 during each peak hour, indicating there will be capacity to accommodate the anticipated traffic volumes.

**TABLE 10
UNIGNALIZED LEVEL-OF-SERVICE ANALYSIS SUMMARY**

Critical Movement/ Peak Hour	2021 Existing					2028 No-Build					2028 Build				
	Demand ^a	V/C ^b	Delay ^c	LOS ^d	Queue ^e	Demand	V/C	Delay	LOS	Queue	Demand	V/C	Delay	LOS	Queue
Milford Street & Site Driveway															
<i>All movements from Driveway:</i>															
Weekday Morning	-	-	-	-	-	-	-	-	-	-	13	0.04	16.0	C	2.5
Weekday Evening	-	-	-	-	-	-	-	-	-	-	16	0.07	20.0	C	5.0

^aDemand of critical movements in vehicles per hour.

^bVolume-to-capacity ratio.

^cDelay in seconds per vehicle.

^dLevel of service.

^e95th percentile queue in feet.

Calculated delay and v/c not representative of actual conditions when v/c exceeds 1.0.

SIGHT DISTANCE

Sight distance measurements were performed at the intersection of Milford Street with the site driveway in accordance with Massachusetts Department of Transportation (MassDOT) and American Association of State Highway and Transportation Officials (AASHTO) standards. Stopping sight distance (SSD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. Intersection sight distance (ISD) or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway, to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. Table 12 presents the measured SSD at the intersection of Milford Street with Milford Street Extension. The sight distance calculations are included in the Appendix.

As can be seen in Table 11, the SSD measurements performed at the Milford Street intersection with the site driveway indicate that the intersection exceeds the recommended minimum requirements based on the 85th percentile speeds. In accordance with the AASHTO manual, *“If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.”* Accordingly, the ISD should be at least equal to the SSD, which would allow a driver approaching the minor road to safely stop. It is recommended that any proposed landscaping be less than three (3) feet in height and maintained for sight lines. Along the Milford Street frontage, it is recommended that no plantings occur within ten (10) feet of the travelled way to maintain sight lines. The existing fence at the westerly edge of the site driveway should also be removed to improve sight lines.

**TABLE 11
SIGHT DISTANCE SUMMARY**

	Required Minimum (Feet) ^a	Measured (Feet)
<i>Milford Street and Site Driveway</i>		
<i>Stopping Sight Distance:</i>		
Milford Street approaching from the East	432	500+
Milford Street approaching from the West	380	500+
<i>Intersection Sight Distance:</i>		
Site Driveway looking to the East	468 ^b /540 ^c	500+
Site Driveway looking to the West	459 ^b /529 ^c	281

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*; American Association of State Highway and Transportation Officials (AASHTO); 2017 and based on 85th percentile speed for Milford Street, adjusted for grade.

^bRecommended minimum value for vehicles turning right exiting a roadway under STOP-sign control.

^cRecommended minimum value for vehicles turning left exiting a roadway under STOP-sign control.

^dDistance from Milford Street Extension to intersection of Milford Street and Crescent Avenue.

SECTION 5: RECOMMENDATION AND CONCLUSION

RECOMMENDATIONS

The final phase of the analysis process is to identify the mitigation measures necessary to minimize the impact of the project on the transportation system. The proponent has made a commitment to implement the mitigation measures listed below.

The capacity analyses performed for the 2021 Existing and 2028 future No-Build and Build conditions indicate that the proposed project will not result in a significant impact on traffic operations at the study area intersections during the weekday midday peak hour, which is between 1:00 to 2:00 PM or the weekday evening peak hour which is between 4:15 and 5:15 PM. The proposed project's impacts are expected to be less after 5:15 p.m. and on weekends, since the existing volumes on Milford Street will be lower at those times. Traffic from the drive-in which occurs at later hours of night when traffic is lower has been considered but does not affect the findings made in this report.

The site driveway should have one entering and one exiting lane and should have a stop sign on the premises at the entrance to Milford Street.

To maintain sight distances for the measured 85th percentile speeds, it is recommended that a sight triangle be established along the site frontage, in both directions from a point fifteen (15) feet back at the site driveway and extending to each of the corners of the site along Milford Street. Within this triangle, any existing vegetation should be cut-back, and any plantings and site signage should be designed to be low to not impede sight distances.

CONCLUSION

The proposed sf entertainment club is to be located at 49 Milford Street. During a typical weekday, the proposed entertainment club is expected to generate 28 vehicle trips (15 vehicles entering and 13 vehicles exiting) during the midday peak hour. During the weekday evening peak hour, 33 vehicle trips (17 vehicles entering and 16 vehicles exiting) are expected.

Capacity analyses were performed for each of the study area intersections for 2021 Existing, 2028 No-Build and 2028 Build conditions. Based on the analyses performed, there is no significant change in level of service from No-Build to Build conditions at the study area intersections.

Review of the proposed entertainment club and access plan shows that in relation to roadway capacity, traffic safety, and traffic impacts upon the surrounding roadway network, the proposed project will meet safety standards and have a minimal impact on existing traffic conditions. With the proposed access, in conjunction with the mitigation measures described above and maintaining sight distances from the site driveway (clear sight lines along frontage), safe and efficient access can be provided to the clientele of the proposed entertainment club and to the motoring public in the area.

APPENDIX

Traffic Count Data

Seasonal Adjustment/COVID-19 Worksheets

Crash Data and Worksheets

Background Projects

Trip Generation Worksheets

Trip Distribution Worksheets

Capacity Analysis Worksheets

Sight Distance Worksheets

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Traffic Count Data

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PDI File #: 218331 A
 Location: N: North Avenue S: Main Street
 Location: E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway
 City, State: Mendon, MA
 Client: Bayside/ K. Cram
 Site Code: 2213004
 Count Date: Wednesday, December 15, 2021
 Start Time: 12:00 PM
 End Time: 2:00 PM
 Class:



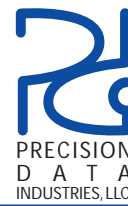
Cars

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
12:00 PM	15	19	0	11	0	45	8	63	8	0	0	79	0	0	0	1	0	1	0	10	25	25	0	60	2	0	84	13	0	99	284
12:15 PM	15	30	0	5	0	50	11	80	5	0	0	96	0	0	0	0	0	0	0	18	23	25	0	66	5	0	81	10	0	96	308
12:30 PM	13	13	0	8	0	34	10	90	10	0	0	110	0	1	0	1	0	2	1	12	30	14	0	57	3	0	98	12	0	113	316
12:45 PM	16	33	0	11	0	60	4	78	11	0	0	93	0	0	1	1	0	2	1	13	29	28	0	71	4	0	70	11	0	85	311
Total	59	95	0	35	0	189	33	311	34	0	0	378	0	1	1	3	0	5	2	53	107	92	0	254	14	0	333	46	0	393	1219
1:00 PM	11	33	0	11	0	55	8	76	9	0	0	93	0	0	0	0	0	0	1	19	21	16	0	57	2	0	65	14	0	81	286
1:15 PM	18	21	0	10	0	49	7	93	10	0	0	110	0	0	0	1	0	1	0	13	23	29	0	65	4	2	75	8	0	89	314
1:30 PM	16	18	0	7	0	41	13	81	12	0	0	106	0	0	0	0	0	0	1	15	35	24	0	75	4	0	66	14	0	84	306
1:45 PM	20	23	0	9	0	52	11	82	11	0	0	104	0	1	0	0	0	1	2	16	32	18	0	68	2	0	84	13	0	99	324
Total	65	95	0	37	0	197	39	332	42	0	0	413	0	1	0	1	0	2	4	63	111	87	0	265	12	2	290	49	0	353	1230
Grand Total	124	190	0	72	0	386	72	643	76	0	0	791	0	2	1	4	0	7	6	116	218	179	0	519	26	2	623	95	0	746	2449
Approach %	32.1	49.2	0.0	18.7	0.0		9.1	81.3	9.6	0.0	0.0		0.0	28.6	14.3	57.1	0.0		1.2	22.4	42.0	34.5	0.0		3.5	0.3	83.5	12.7	0.0		
Total %	5.1	7.8	0.0	2.9	0.0	15.8	2.9	26.3	3.1	0.0	0.0	32.3	0.0	0.1	0.0	0.2	0.0	0.3	0.2	4.7	8.9	7.3	0.0	21.2	1.1	0.1	25.4	3.9	0.0	30.5	
Exiting Leg Total	387						811						8						296						947						2449

Peak Hour Analysis from 12:00 PM to 02:00 PM begins at:

1:00 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
1:00 PM	11	33	0	11	0	55	8	76	9	0	0	93	0	0	0	0	0	0	1	19	21	16	0	57	2	0	65	14	0	81	286
1:15 PM	18	21	0	10	0	49	7	93	10	0	0	110	0	0	0	1	0	1	0	13	23	29	0	65	4	2	75	8	0	89	314
1:30 PM	16	18	0	7	0	41	13	81	12	0	0	106	0	0	0	0	0	0	1	15	35	24	0	75	4	0	66	14	0	84	306
1:45 PM	20	23	0	9	0	52	11	82	11	0	0	104	0	1	0	0	0	1	2	16	32	18	0	68	2	0	84	13	0	99	324
Total Volume	65	95	0	37	0	197	39	332	42	0	0	413	0	1	0	1	0	2	4	63	111	87	0	265	12	2	290	49	0	353	1230
% Approach Total	33.0	48.2	0.0	18.8	0.0		9.4	80.4	10.2	0.0	0.0		0.0	50.0	0.0	50.0	0.0		1.5	23.8	41.9	32.8	0.0		3.4	0.6	82.2	13.9	0.0		
PHF	0.813	0.720	0.000	0.841	0.000	0.895	0.750	0.892	0.875	0.000	0.000	0.939	0.000	0.250	0.000	0.250	0.000	0.500	0.500	0.829	0.793	0.750	0.000	0.883	0.750	0.250	0.863	0.875	0.000	0.891	0.949
Entering Leg	65	95	0	37	0	197	39	332	42	0	0	413	0	1	0	1	0	2	4	63	111	87	0	265	12	2	290	49	0	353	1230
Exiting Leg	200						390						6						150						484						
Total	397						803						8						415						837						2460

PDI File #: **218331 A**
 Location: **N: North Avenue S: Main Street**
 Location: **E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway**
 City, State: **Mendon, MA**
 Client: **Bayside/ K. Cram**
 Site Code: **2213004**
 Count Date: **Wednesday, December 15, 2021**
 Start Time: **12:00 PM**
 End Time: **2:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Buses

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total								
	from North						from East						from Southeast						from South						from West														
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total									
12:00 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	0	0	0	0	0	0	0	0	1
12:15 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	0	0	0	0	0	0	0	0	
12:30 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	0	0	0	0	0	0	0	0	
12:45 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	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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
1:00 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	0	0	0	0	0	0	0		
1:15 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	0	0	0	0	0	0	0		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	26		
1:45 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	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	26	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	26		
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	27			
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	100.0	0.0	0.0	0.0	100.0	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	100.0	0.0	0.0	0.0	100.0	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	27						0						0						0						0						0	27							

Peak Hour Analysis from 12:00 PM to 02:00 PM begins at:

12:45 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total					
	from North						from East						from Southeast						from South						from West											
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total						
12:45 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	0	0	0	0	0	0
1:00 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	0	0	0	0	0	0
1:15 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	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	26
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	26
% 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	100.0	0.0	0.0	0.0	100.0	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	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	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	0	0	0	0	0	0	0	0	0	0	26	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	26
Exiting Leg	26						0						0						0						0						0	26				
Total	26						0						0						26						0						0	52				

PDI File #: **218331 A**
 Location: **N: North Avenue S: Main Street**
 Location: **E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway**
 City, State: **Mendon, MA**
 Client: **Bayside/ K. Cram**
 Site Code: **2213004**
 Count Date: **Wednesday, December 15, 2021**
 Start Time: **12:00 PM**
 End Time: **2:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Single-Unit Trucks

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
12:00 PM	0	3	0	1	0	4	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0	3	0	0	2	0	0	2	12
12:15 PM	0	4	0	0	0	4	0	3	0	0	0	3	0	0	0	0	0	0	0	0	1	3	0	4	0	0	6	0	0	6	17
12:30 PM	0	1	0	0	0	1	1	2	0	0	0	3	0	0	0	0	0	0	0	0	4	2	0	6	0	0	1	0	0	1	11
12:45 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	4	7	0	12	0	0	1	0	0	1	16
Total	0	8	0	1	0	9	2	10	0	0	0	12	0	0	0	0	0	0	0	1	9	15	0	25	0	0	10	0	0	10	56
1:00 PM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	1	0	4	9
1:15 PM	0	2	0	0	0	2	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	0	0	4	11
1:30 PM	0	4	0	1	0	5	2	7	0	0	0	9	0	0	0	0	0	0	0	0	1	7	0	8	1	1	1	0	0	3	25
1:45 PM	0	1	0	0	0	1	0	4	1	0	0	5	0	0	0	0	0	0	0	0	0	5	0	5	0	0	1	1	0	2	13
Total	0	7	0	1	0	8	4	16	1	0	0	21	0	0	0	0	0	0	0	0	1	15	0	16	1	1	9	2	0	13	58
Grand Total	0	15	0	2	0	17	6	26	1	0	0	33	0	0	0	0	0	0	0	1	10	30	0	41	1	1	19	2	0	23	114
Approach %	0.0	88.2	0.0	11.8	0.0		18.2	78.8	3.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	2.4	24.4	73.2	0.0		4.3	4.3	82.6	8.7	0.0		
Total %	0.0	13.2	0.0	1.8	0.0	14.9	5.3	22.8	0.9	0.0	0.0	28.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	8.8	26.3	0.0	36.0	0.9	0.9	16.7	1.8	0.0	20.2	
Exiting Leg Total	18						22						1						17						56	114					

Peak Hour Analysis from 12:00 PM to 02:00 PM begins at:

12:45 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
12:45 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	4	7	0	12	0	0	1	0	0	1	16
1:00 PM	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	1	0	0	3	1	0	4	9
1:15 PM	0	2	0	0	0	2	2	1	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	0	0	4	0	0	4	11
1:30 PM	0	4	0	1	0	5	2	7	0	0	0	9	0	0	0	0	0	0	0	0	1	7	0	8	1	1	1	0	0	3	25
Total Volume	0	6	0	1	0	7	4	15	0	0	0	19	0	0	0	0	0	0	0	1	5	17	0	23	1	1	9	1	0	12	61
% Approach Total	0.0	85.7	0.0	14.3	0.0		21.1	78.9	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	4.3	21.7	73.9	0.0		8.3	8.3	75.0	8.3	0.0		
PHF	0.000	0.375	0.000	0.250	0.000	0.350	0.500	0.536	0.000	0.000	0.000	0.528	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.313	0.607	0.000	0.479	0.250	0.250	0.563	0.250	0.000	0.750	0.610
Entering Leg	0	6	0	1	0	7	4	15	0	0	0	19	0	0	0	0	0	0	0	1	5	17	0	23	1	1	9	1	0	12	61
Exiting Leg	10						11						1						7						32	61					
Total	17						30						1						30						44	122					

PDI File #: **218331 A**
 Location: **N: North Avenue S: Main Street**
 Location: **E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway**
 City, State: **Mendon, MA**
 Client: **Bayside/ K. Cram**
 Site Code: **2213004**
 Count Date: **Wednesday, December 15, 2021**
 Start Time: **12:00 PM**
 End Time: **2:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Articulated Trucks

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total						
	from North						from East						from Southeast						from South						from West												
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total							
12:00 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	4
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
12:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	4	0	0	1	0	0	1	0	0	0	0	0	0	6
Total	0	1	0	0	0	1	0	4	0	0	0	4	0	0	0	0	0	0	0	1	2	2	0	5	0	0	5	0	0	5	0	0	0	0	0	0	15
1:00 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	1	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	2	0	0	0	2	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	0	0	1	0	0	0	0	0	0	8
1:30 PM	0	0	0	0	0	0	0	1	1	0	0	2	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
1:45 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	0	0	0	0	0	0	0
Total	0	2	0	0	0	2	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	3	0	3	0	0	2	0	0	2	0	0	0	0	0	0	11
Grand Total	0	3	0	0	0	3	0	7	1	0	0	8	0	0	0	0	0	0	0	1	2	5	0	8	0	0	7	0	0	7	0	0	0	0	0	0	26
Approach %	0.0	100.0	0.0	0.0	0.0		0.0	87.5	12.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	12.5	25.0	62.5	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	11.5	0.0	0.0	0.0	11.5	0.0	26.9	3.8	0.0	0.0	30.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	7.7	19.2	0.0	30.8	0.0	0.0	26.9	0.0	0.0	26.9	0.0	0.0	0.0	0.0	0.0	0.0	26.9
Exiting Leg Total	2						8						0						4						12		26										

Peak Hour Analysis from 12:00 PM to 02:00 PM begins at:

12:30 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total						
	from North						from East						from Southeast						from South						from West												
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total							
12:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
12:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	4	0	0	1	0	0	1	0	0	0	0	0	0	6
1:00 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	1	0	0	1	0	0	0	0	0	0	1
1:15 PM	0	2	0	0	0	2	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	0	0	1	0	0	0	0	0	0	8
Total Volume	0	3	0	0	0	3	0	3	0	0	0	3	0	0	0	0	0	0	0	1	1	5	0	7	0	0	4	0	0	4	0	0	0	0	0	0	17
% Approach Total	0.0	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	14.3	14.3	71.4	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.417	0.000	0.438	0.000	0.000	1.000	0.000	0.000	1.000	0.531						
Entering Leg	0	3	0	0	0	3	0	3	0	0	0	3	0	0	0	0	0	0	0	1	1	5	0	7	0	0	4	0	0	4	0	0	0	0	0	0	17
Exiting Leg	1						5						0						3						8		17										
Total	4						8						0						10						12		34										

PDI File #: **218331 A**
 Location: **N: North Avenue S: Main Street**
 Location: **E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway**
 City, State: **Mendon, MA**
 Client: **Bayside/ K. Cram**
 Site Code: **2213004**
 Count Date: **Wednesday, December 15, 2021**
 Start Time: **12:00 PM**
 End Time: **2:00 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	North Avenue								Milford Street (Route 16)								Driveway								Main Street								Hastings Street (Route 16)								Total						
	from North								from East								from Southeast								from South								from West														
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total							
12:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 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	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
1:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 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	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
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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	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								0						

Peak Hour Analysis from 12:00 PM to 02:00 PM begins at:

	North Avenue								Milford Street (Route 16)								Driveway								Main Street								Hastings Street (Route 16)								Total								
	from North								from East								from Southeast								from South								from West																
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total									
12:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:15 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:45 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	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	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	0.0	0.0	0.0	0.0	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Exiting Leg	0								0								0								0								0								0								
Total	0								0								0								0								0								0								0

PDI File #: **218331 A**
 Location: **N: North Avenue S: Main Street**
 Location: **E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway**
 City, State: **Mendon, MA**
 Client: **Bayside/ K. Cram**
 Site Code: **2213004**
 Count Date: **Wednesday, December 15, 2021**
 Start Time: **4:00 PM**
 End Time: **6:30 PM**
 Class:



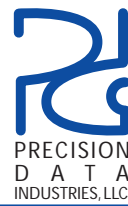
Cars

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:00 PM	27	39	0	3	0	69	7	134	20	0	0	161	0	0	0	2	0	2	2	12	59	32	0	105	2	0	66	13	0	81	418
4:15 PM	36	55	0	10	0	101	11	140	10	0	0	161	0	0	0	0	0	0	1	17	56	37	0	111	1	0	73	13	0	87	460
4:30 PM	40	61	0	14	0	115	9	152	9	0	0	170	0	0	0	0	0	0	1	10	47	34	0	92	2	0	75	19	0	96	473
4:45 PM	30	43	0	7	0	80	15	151	12	0	0	178	0	0	0	0	0	0	2	8	51	37	0	98	2	0	84	8	0	94	450
Total	133	198	0	34	0	365	42	577	51	0	0	670	0	0	0	2	0	2	6	47	213	140	0	406	7	0	298	53	0	358	1801
5:00 PM	55	38	0	5	0	98	11	114	14	0	0	139	0	0	0	1	0	1	1	13	45	38	0	97	2	0	87	17	0	106	441
5:15 PM	35	47	0	6	0	88	9	142	21	0	0	172	0	0	0	0	0	0	1	25	50	29	0	105	2	0	72	16	0	90	455
5:30 PM	21	49	0	10	0	80	10	122	11	0	0	143	0	0	0	0	0	0	1	11	51	36	0	99	1	0	62	10	0	73	395
5:45 PM	25	21	0	9	0	55	11	110	15	0	0	136	0	0	0	0	0	0	1	15	36	39	0	91	1	0	67	9	0	77	359
Total	136	155	0	30	0	321	41	488	61	0	0	590	0	0	0	1	0	1	4	64	182	142	0	392	6	0	288	52	0	346	1650
6:00 PM	10	39	0	9	0	58	6	90	12	0	0	108	0	0	0	0	0	0	7	7	53	24	0	91	1	0	52	9	0	62	319
6:15 PM	14	28	0	7	0	49	10	91	12	0	0	113	0	0	0	1	0	1	13	12	34	18	0	77	2	1	62	17	0	82	322
Total	24	67	0	16	0	107	16	181	24	0	0	221	0	0	0	1	0	1	20	19	87	42	0	168	3	1	114	26	0	144	641
Grand Total	293	420	0	80	0	793	99	1246	136	0	0	1481	0	0	0	4	0	4	30	130	482	324	0	966	16	1	700	131	0	848	4092
Approach %	36.9	53.0	0.0	10.1	0.0		6.7	84.1	9.2	0.0	0.0		0.0	0.0	0.0	100.0	0.0		3.1	13.5	49.9	33.5	0.0		1.9	0.1	82.5	15.4	0.0		
Total %	7.2	10.3	0.0	2.0	0.0	19.4	2.4	30.4	3.3	0.0	0.0	36.2	0.0	0.0	0.0	0.1	0.0	0.1	0.7	3.2	11.8	7.9	0.0	23.6	0.4	0.0	17.1	3.2	0.0	20.7	
Exiting Leg Total	712						910						31						576						1863	4092					

Peak Hour Analysis from 04:00 PM to 06:30 PM begins at:

4:15 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total
	from North						from East						from Southeast						from South						from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	
4:15 PM	36	55	0	10	0	101	11	140	10	0	0	161	0	0	0	0	0	0	1	17	56	37	0	111	1	0	73	13	0	87	460
4:30 PM	40	61	0	14	0	115	9	152	9	0	0	170	0	0	0	0	0	0	1	10	47	34	0	92	2	0	75	19	0	96	473
4:45 PM	30	43	0	7	0	80	15	151	12	0	0	178	0	0	0	0	0	0	2	8	51	37	0	98	2	0	84	8	0	94	450
5:00 PM	55	38	0	5	0	98	11	114	14	0	0	139	0	0	0	1	0	1	1	13	45	38	0	97	2	0	87	17	0	106	441
Total Volume	161	197	0	36	0	394	46	557	45	0	0	648	0	0	0	1	0	1	5	48	199	146	0	398	7	0	319	57	0	383	1824
% Approach Total	40.9	50.0	0.0	9.1	0.0		7.1	86.0	6.9	0.0	0.0		0.0	0.0	0.0	100.0	0.0		1.3	12.1	50.0	36.7	0.0		1.8	0.0	83.3	14.9	0.0		
PHF	0.732	0.807	0.000	0.643	0.000	0.857	0.767	0.916	0.804	0.000	0.000	0.910	0.000	0.000	0.000	0.250	0.000	0.250	0.625	0.706	0.888	0.961	0.000	0.896	0.875	0.000	0.917	0.750	0.000	0.903	0.964
Entering Leg	161	197	0	36	0	394	46	557	45	0	0	648	0	0	0	1	0	1	5	48	199	146	0	398	7	0	319	57	0	383	1824
Exiting Leg	302						403						5						250						864	1824					
Total	696						1051						6						648						1247	3648					

PDI File #: **218331 A**
 Location: **N: North Avenue S: Main Street**
 Location: **E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway**
 City, State: **Mendon, MA**
 Client: **Bayside/ K. Cram**
 Site Code: **2213004**
 Count Date: **Wednesday, December 15, 2021**
 Start Time: **4:00 PM**
 End Time: **6:30 PM**
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Buses

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total						
	from North						from East						from Southeast						from South						from West												
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total							
4:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0
Total	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	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
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	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
Total	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3
6:00 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	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	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
Total	0	0	0	0	0	0	0	1	0	0	0	1	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
Grand Total	0	6	0	0	0	6	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	9
Approach %	0.0	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	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	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	66.7	0.0	0.0	0.0	66.7	0.0	11.1	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	22.2	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	2						0						0						6						1						9						

Peak Hour Analysis from 04:00 PM to 06:30 PM begins at:

4:00 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total						
	from North						from East						from Southeast						from South						from West												
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total							
4:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	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
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0
Total Volume	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
% Approach Total	0.0	100.0	0.0	0.0	0.0		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	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	0.333	0.000	0.000	0.000	0.333	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	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.417						
Entering Leg	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Exiting Leg	1						0						0						4						0						5						
Total	5						0						0						5						0						10						

PDI File #: 218331 A
 Location: N: North Avenue S: Main Street
 Location: E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway
 City, State: Mendon, MA
 Client: Bayside/ K. Cram
 Site Code: 2213004
 Count Date: Wednesday, December 15, 2021
 Start Time: 4:00 PM
 End Time: 6:30 PM
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Single-Unit Trucks

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	1	0	0	0	1	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	5	1	0	6	11
4:15 PM	1	1	0	0	0	2	1	3	2	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	1	10
4:30 PM	1	0	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	1	0	2	2	0	5	0	0	1	0	0	0	1	9
4:45 PM	1	2	0	0	0	3	0	4	0	0	0	4	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	0	0	0	1	11
Total	3	4	0	0	0	7	2	11	2	0	0	15	0	0	0	0	0	0	1	1	4	4	0	10	0	0	8	1	0	0	9	41
5:00 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	0	0	1	0	0	0	1	7
5:15 PM	0	1	0	0	0	1	0	2	2	0	0	4	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	2	8
5:30 PM	1	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	2
Total	1	1	0	0	0	2	0	6	2	0	0	8	0	0	0	0	0	0	0	2	4	1	0	7	0	0	4	0	0	0	4	21
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
6:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	1	3
Grand Total	4	5	0	0	0	9	2	18	4	0	0	24	0	0	0	0	0	0	1	3	9	5	0	18	0	0	13	1	0	0	14	65
Approach %	44.4	55.6	0.0	0.0	0.0		8.3	75.0	16.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0		5.6	16.7	50.0	27.8	0.0		0.0	0.0	92.9	7.1	0.0			
Total %	6.2	7.7	0.0	0.0	0.0	13.8	3.1	27.7	6.2	0.0	0.0	36.9	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.6	13.8	7.7	0.0	27.7	0.0	0.0	20.0	1.5	0.0		21.5	
Exiting Leg Total	12						16						1						9						27						65	

Peak Hour Analysis from 04:00 PM to 06:30 PM begins at:

4:00 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	1	0	0	0	1	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	5	1	0	6	11	
4:15 PM	1	1	0	0	0	2	1	3	2	0	0	6	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	1	10	
4:30 PM	1	0	0	0	0	1	1	1	0	0	0	2	0	0	0	0	0	0	1	0	2	2	0	5	0	0	1	0	0	1	9	
4:45 PM	1	2	0	0	0	3	0	4	0	0	0	4	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	0	0	1	11	
Total Volume	3	4	0	0	0	7	2	11	2	0	0	15	0	0	0	0	0	0	1	1	4	4	0	10	0	0	8	1	0	9	41	
% Approach Total	42.9	57.1	0.0	0.0	0.0		13.3	73.3	13.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0		10.0	10.0	40.0	40.0	0.0		0.0	0.0	88.9	11.1	0.0			
PHF	0.750	0.500	0.000	0.000	0.000	0.583	0.500	0.688	0.250	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.500	0.000	0.500	0.000	0.000	0.400	0.250	0.000	0.375	0.932	
Entering Leg	3	4	0	0	0	7	2	11	2	0	0	15	0	0	0	0	0	0	1	1	4	4	0	10	0	0	8	1	0	9	41	
Exiting Leg	7						9						1						6						18							
Total	14						24						1						16						27						82	

PDI File #: 218331 A
 Location: N: North Avenue S: Main Street
 Location: E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway
 City, State: Mendon, MA
 Client: Bayside/ K. Cram
 Site Code: 2213004
 Count Date: Wednesday, December 15, 2021
 Start Time: 4:00 PM
 End Time: 6:30 PM
 Class:



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Articulated Trucks

	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
4:15 PM	0	1	0	0	0	1	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	1	0	0	0	1	1	8	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	13
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	0	0	0
5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	0	1	0	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
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	1	0	0	0	1	1
Total	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	4
6:00 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	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
Grand Total	1	2	0	0	0	3	1	8	0	0	0	9	0	0	0	0	0	0	0	0	0	2	0	2	0	0	3	1	0	0	4	18
Approach %	33.3	66.7	0.0	0.0	0.0		11.1	88.9	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	0.0	75.0	25.0	0.0			
Total %	5.6	11.1	0.0	0.0	0.0	16.7	5.6	44.4	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	11.1	0.0	0.0	16.7	5.6	0.0	22.2		
Exiting Leg Total	2						3						0						2						11						18	

Peak Hour Analysis from 04:00 PM to 06:30 PM begins at:

4:00 PM	North Avenue						Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total	
	from North						from East						from Southeast						from South						from West							
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
4:15 PM	0	1	0	0	0	1	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total Volume	0	1	0	0	0	1	1	8	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	13
% Approach Total	0.0	100.0	0.0	0.0	0.0		11.1	88.9	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	66.7	33.3	0.0			
PHF	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.667	0.000	0.000	0.000	0.750	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	0.500	0.250	0.000	0.750	0.813	
Entering Leg	0	1	0	0	0	1	1	8	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	13
Exiting Leg	2						2						0						1						8						13	
Total	3						11						0						1						11						26	

PDI File #: 218331 A
 Location: N: North Avenue S: Main Street
 Location: E: Milford Street (Route 16) W: Hastings Street (Route 16) SE: Driveway
 City, State: Mendon, MA
 Client: Bayside/ K. Cram
 Site Code: 2213004
 Count Date: Wednesday, December 15, 2021
 Start Time: 4:00 PM
 End Time: 6:30 PM
 Class:



PRECISION
DATA
INDUSTRIES, LLC

157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

Bicycles (on Roadway and Crosswalks)

	North Avenue										Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total				
	from North										from East						from Southeast						from South						from West										
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEE	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right		Thru	Left	U-Turn	CW-NB
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	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	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	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	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
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	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	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	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	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
6:00 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	0	0	0	0	0	0	0	0	0
6:15 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	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
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	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	0.0	0.0	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	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						0					

Peak Hour Analysis from 04:00 PM to 06:30 PM begins at:

4:00 PM	North Avenue										Milford Street (Route 16)						Driveway						Main Street						Hastings Street (Route 16)						Total				
	from North										from East						from Southeast						from South						from West										
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEE	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right		Thru	Left	U-Turn	CW-NB
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	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	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	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	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	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	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	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	0	0	0	0	0	0	0	0	
Exiting Leg	0									0						0						0						0						0					
Total	0									0						0						0						0						0					

Milford Street (Route 16)
 west of #49 Milford Street
 City, State: Roxbury, MA
 Client: Toole/K. Sawyer
 Site Code: 6131/ Task 2.00



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 218331 ATR A

Count Date: Wednesday, December 15, 2021
 Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	3	0	0	3	12:00 PM	107	5	0	112
12:15 AM	3	1	0	4	12:15 PM	106	6	2	114
12:30 AM	2	1	0	3	12:30 PM	117	1	1	119
12:45 AM	3	1	0	4	12:45 PM	92	1	3	96
1:00 AM	2	0	0	2	1:00 PM	99	4	1	104
1:15 AM	2	0	0	2	1:15 PM	95	4	1	100
1:30 AM	5	0	0	5	1:30 PM	84	3	0	87
1:45 AM	5	1	1	7	1:45 PM	112	2	0	114
2:00 AM	3	0	0	3	2:00 PM	111	4	1	116
2:15 AM	5	0	1	6	2:15 PM	115	4	2	121
2:30 AM	4	1	0	5	2:30 PM	123	1	1	125
2:45 AM	2	1	1	4	2:45 PM	99	2	1	102
3:00 AM	4	1	0	5	3:00 PM	104	1	0	105
3:15 AM	1	0	0	1	3:15 PM	95	1	2	98
3:30 AM	7	0	0	7	3:30 PM	111	4	0	115
3:45 AM	11	0	1	12	3:45 PM	107	0	0	107
4:00 AM	4	0	1	5	4:00 PM	77	2	0	79
4:15 AM	19	1	0	20	4:15 PM	100	3	0	103
4:30 AM	20	0	0	20	4:30 PM	96	3	1	100
4:45 AM	22	1	1	24	4:45 PM	103	1	1	105
5:00 AM	39	0	0	39	5:00 PM	101	2	0	103
5:15 AM	57	3	0	60	5:15 PM	98	2	0	100
5:30 AM	66	0	1	67	5:30 PM	75	0	0	75
5:45 AM	85	3	0	88	5:45 PM	74	1	0	75
6:00 AM	71	0	0	71	6:00 PM	73	1	1	75
6:15 AM	120	1	1	122	6:15 PM	81	1	0	82
6:30 AM	140	5	2	147	6:30 PM	65	2	0	67
6:45 AM	174	7	0	181	6:45 PM	75	3	0	78
7:00 AM	139	6	1	146	7:00 PM	62	0	0	62
7:15 AM	185	4	0	189	7:15 PM	57	1	0	58
7:30 AM	151	4	3	158	7:30 PM	53	1	0	54
7:45 AM	138	13	1	152	7:45 PM	55	1	0	56
8:00 AM	142	2	0	144	8:00 PM	46	0	1	47
8:15 AM	145	2	1	148	8:15 PM	59	1	0	60
8:30 AM	131	4	0	135	8:30 PM	53	0	0	53
8:45 AM	130	3	1	134	8:45 PM	38	1	0	39
9:00 AM	128	6	4	138	9:00 PM	27	0	0	27
9:15 AM	120	5	3	128	9:15 PM	26	1	1	28
9:30 AM	116	5	3	124	9:30 PM	19	0	0	19
9:45 AM	123	3	2	128	9:45 PM	25	0	0	25
10:00 AM	95	5	0	100	10:00 PM	28	0	1	29
10:15 AM	96	2	1	99	10:15 PM	21	1	0	22
10:30 AM	103	6	1	110	10:30 PM	20	0	0	20
10:45 AM	103	0	4	107	10:45 PM	19	0	0	19
11:00 AM	98	8	1	107	11:00 PM	5	0	1	6
11:15 AM	89	6	2	97	11:15 PM	7	1	1	9
11:30 AM	97	0	1	98	11:30 PM	10	0	0	10
11:45 AM	90	6	1	97	11:45 PM	9	1	0	10

AM Total	3298	118	40	3456	PM Total	3334	73	23	3430
Percentage	95.43%	3.41%	1.16%		Percentage	97.20%	2.13%	0.67%	
AM Peak	6:45 AM	7:00 AM	9:00 AM	6:45 AM	PM Peak	1:45 PM	12:00 PM	12:15 PM	1:45 PM
Volume	649	27	12	674	Volume	461	13	7	476
					Day Total	6632	191	63	6886
					Percentage	96.31%	2.77%	0.91%	

Milford Street (Route 16)
 west of #49 Milford Street
 City, State: Roxbury, MA
 Client: Toole/K. Sawyer
 Site Code: 6131/ Task 2.00



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 218331 ATR A

Count Date: Thursday, December 16, 2021
 Direction: EB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	4	0	0	4
12:15 AM	0	0	0	0
12:30 AM	3	0	0	3
12:45 AM	1	0	0	1
1:00 AM	4	0	0	4
1:15 AM	1	0	0	1
1:30 AM	3	1	0	4
1:45 AM	4	0	0	4
2:00 AM	4	0	0	4
2:15 AM	6	1	0	7
2:30 AM	3	0	0	3
2:45 AM	1	1	0	2
3:00 AM	5	0	0	5
3:15 AM	2	0	0	2
3:30 AM	5	1	1	7
3:45 AM	8	0	0	8
4:00 AM	4	0	0	4
4:15 AM	17	1	1	19
4:30 AM	20	2	0	22
4:45 AM	29	0	0	29
5:00 AM	41	3	1	45
5:15 AM	51	4	1	56
5:30 AM	53	3	0	56
5:45 AM	85	1	0	86
6:00 AM	105	2	0	107
6:15 AM	127	3	0	130
6:30 AM	142	4	0	146
6:45 AM	166	4	0	170
7:00 AM	146	4	1	151
7:15 AM	164	9	1	174
7:30 AM	164	8	0	172
7:45 AM	161	11	0	172
8:00 AM	124	5	2	131
8:15 AM	122	1	3	126
8:30 AM	117	4	3	124
8:45 AM	131	7	0	138
9:00 AM	110	4	4	118
9:15 AM	103	7	2	112
9:30 AM	95	1	1	97
9:45 AM	107	7	1	115
10:00 AM	96	4	2	102
10:15 AM	110	3	0	113
10:30 AM	95	2	0	97
10:45 AM	112	2	0	114
11:00 AM	105	6	1	112
11:15 AM	84	6	1	91
11:30 AM	93	2	0	95
11:45 AM	107	3	1	111

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	100	1	0	101
12:15 PM	89	1	1	91
12:30 PM	100	1	1	102
12:45 PM	110	3	0	113
1:00 PM	111	5	0	116
1:15 PM	91	6	1	98
1:30 PM	100	1	2	103
1:45 PM	109	4	1	114
2:00 PM	103	3	4	110
2:15 PM	115	4	0	119
2:30 PM	116	3	0	119
2:45 PM	110	1	2	113
3:00 PM	111	3	1	115
3:15 PM	88	0	1	89
3:30 PM	120	3	0	123
3:45 PM	122	1	2	125
4:00 PM	110	1	0	111
4:15 PM	108	2	2	112
4:30 PM	107	4	0	111
4:45 PM	124	2	0	126
5:00 PM	110	1	0	111
5:15 PM	102	1	0	103
5:30 PM	85	5	1	91
5:45 PM	87	1	0	88
6:00 PM	83	3	0	86
6:15 PM	80	1	0	81
6:30 PM	89	1	0	90
6:45 PM	66	0	0	66
7:00 PM	38	0	0	38
7:15 PM	50	0	0	50
7:30 PM	45	1	0	46
7:45 PM	53	0	0	53
8:00 PM	51	1	0	52
8:15 PM	47	0	2	49
8:30 PM	41	2	0	43
8:45 PM	35	1	0	36
9:00 PM	50	0	0	50
9:15 PM	41	0	0	41
9:30 PM	33	0	0	33
9:45 PM	29	0	0	29
10:00 PM	25	0	0	25
10:15 PM	20	0	0	20
10:30 PM	35	1	0	36
10:45 PM	17	0	0	17
11:00 PM	5	1	0	6
11:15 PM	4	0	0	4
11:30 PM	8	0	0	8
11:45 PM	6	0	0	6

AM Total 3240 127 27 3394
 Percentage 95.46% 3.74% 0.80%
 AM Peak 6:45 AM 7:15 AM 8:15 AM 7:00 AM
 Volume 640 33 10 669

PM Total 3479 69 21 3569
 Percentage 97.48% 1.93% 0.59%
 PM Peak 3:30 PM 1:00 PM 1:15 PM 3:30 PM
 Volume 460 16 8 471

Day Total 6719 196 48 6963
 Percentage 96.50% 2.81% 0.69%

Milford Street (Route 16)
 west of #49 Milford Street
 City, State: Roxbury, MA
 Client: Toole/K. Sawyer
 Site Code: 6131/ Task 2.00



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 218331 ATR A

Count Date: Wednesday, December 15, 2021
 Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	11	0	0	11	12:00 PM	85	3	4	92
12:15 AM	9	1	0	10	12:15 PM	97	3	0	100
12:30 AM	8	0	0	8	12:30 PM	114	6	0	120
12:45 AM	6	1	0	7	12:45 PM	95	3	0	98
1:00 AM	6	0	0	6	1:00 PM	88	4	0	92
1:15 AM	11	2	1	14	1:15 PM	106	4	3	113
1:30 AM	4	2	0	6	1:30 PM	104	7	2	113
1:45 AM	3	0	0	3	1:45 PM	108	8	1	117
2:00 AM	6	0	0	6	2:00 PM	111	5	2	118
2:15 AM	8	1	0	9	2:15 PM	118	9	2	129
2:30 AM	7	0	0	7	2:30 PM	126	8	1	135
2:45 AM	1	0	0	1	2:45 PM	147	8	2	157
3:00 AM	0	2	0	2	3:00 PM	163	1	0	164
3:15 AM	0	1	0	1	3:15 PM	180	0	1	181
3:30 AM	3	1	0	4	3:30 PM	178	9	0	187
3:45 AM	4	0	0	4	3:45 PM	168	7	1	176
4:00 AM	2	1	0	3	4:00 PM	167	5	1	173
4:15 AM	5	1	0	6	4:15 PM	175	6	1	182
4:30 AM	5	1	1	7	4:30 PM	156	3	2	161
4:45 AM	2	0	0	2	4:45 PM	138	2	2	142
5:00 AM	9	0	0	9	5:00 PM	156	1	0	157
5:15 AM	9	0	0	9	5:15 PM	172	1	0	173
5:30 AM	13	0	1	14	5:30 PM	132	0	0	132
5:45 AM	20	0	0	20	5:45 PM	123	0	0	123
6:00 AM	22	0	0	22	6:00 PM	109	1	0	110
6:15 AM	46	1	0	47	6:15 PM	104	1	0	105
6:30 AM	52	1	0	53	6:30 PM	78	0	0	78
6:45 AM	60	3	0	63	6:45 PM	66	1	0	67
7:00 AM	71	6	0	77	7:00 PM	91	0	1	92
7:15 AM	68	4	2	74	7:15 PM	69	0	0	69
7:30 AM	71	4	0	75	7:30 PM	50	0	0	50
7:45 AM	86	1	2	89	7:45 PM	67	0	1	68
8:00 AM	83	2	2	87	8:00 PM	71	0	0	71
8:15 AM	81	3	3	87	8:15 PM	75	0	0	75
8:30 AM	71	4	4	79	8:30 PM	49	0	1	50
8:45 AM	78	2	1	81	8:45 PM	37	0	4	41
9:00 AM	52	7	1	60	9:00 PM	51	0	0	51
9:15 AM	64	3	1	68	9:15 PM	38	0	4	42
9:30 AM	70	5	0	75	9:30 PM	31	0	0	31
9:45 AM	85	3	3	91	9:45 PM	27	1	0	28
10:00 AM	69	6	1	76	10:00 PM	28	0	0	28
10:15 AM	83	3	3	89	10:15 PM	22	0	0	22
10:30 AM	28	3	0	31	10:30 PM	19	0	0	19
10:45 AM	35	1	0	36	10:45 PM	13	0	0	13
11:00 AM	97	6	2	105	11:00 PM	20	0	0	20
11:15 AM	101	5	1	107	11:15 PM	17	0	0	17
11:30 AM	101	4	0	105	11:30 PM	22	0	1	23
11:45 AM	84	6	1	91	11:45 PM	13	0	0	13

AM Total	1810	97	30	1937	PM Total	4374	107	37	4518
Percentage	93.44%	5.01%	1.55%		Percentage	96.81%	2.37%	0.82%	
AM Peak	11:00 AM	11:00 AM	7:45 AM	11:00 AM	PM Peak	3:15 PM	1:45 PM	8:30 PM	3:30 PM
Volume	383	21	11	408	Volume	693	30	9	718
					Day Total	6184	204	67	6455
					Percentage	95.80%	3.16%	1.04%	

Milford Street (Route 16)
 west of #49 Milford Street
 City, State: Roxbury, MA
 Client: Toole/K. Sawyer
 Site Code: 6131/ Task 2.00



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 218331 ATR A

Count Date: Thursday, December 16, 2021
 Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	14	0	1	15
12:15 AM	7	0	0	7
12:30 AM	7	0	0	7
12:45 AM	2	0	1	3
1:00 AM	8	0	0	8
1:15 AM	11	0	0	11
1:30 AM	4	0	0	4
1:45 AM	1	0	0	1
2:00 AM	8	1	0	9
2:15 AM	6	0	0	6
2:30 AM	5	0	0	5
2:45 AM	2	0	0	2
3:00 AM	0	0	1	1
3:15 AM	1	0	1	2
3:30 AM	3	0	2	5
3:45 AM	2	0	0	2
4:00 AM	3	1	1	5
4:15 AM	7	2	0	9
4:30 AM	6	1	1	8
4:45 AM	6	0	1	7
5:00 AM	7	0	2	9
5:15 AM	11	0	0	11
5:30 AM	8	0	0	8
5:45 AM	17	0	0	17
6:00 AM	29	0	0	29
6:15 AM	51	0	0	51
6:30 AM	53	0	0	53
6:45 AM	49	0	0	49
7:00 AM	74	4	1	79
7:15 AM	73	1	0	74
7:30 AM	82	3	0	85
7:45 AM	78	6	3	87
8:00 AM	76	8	4	88
8:15 AM	66	3	3	72
8:30 AM	69	1	3	73
8:45 AM	75	1	2	78
9:00 AM	69	4	2	75
9:15 AM	79	7	1	87
9:30 AM	80	1	1	82
9:45 AM	76	2	1	79
10:00 AM	59	6	1	66
10:15 AM	68	4	3	75
10:30 AM	70	4	2	76
10:45 AM	96	3	1	100
11:00 AM	87	1	1	89
11:15 AM	94	5	1	100
11:30 AM	88	6	3	97
11:45 AM	90	8	2	100

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	122	7	0	129
12:15 PM	103	4	0	107
12:30 PM	107	3	2	112
12:45 PM	93	4	0	97
1:00 PM	102	6	1	109
1:15 PM	110	4	2	116
1:30 PM	124	5	3	132
1:45 PM	90	1	3	94
2:00 PM	112	6	0	118
2:15 PM	109	7	2	118
2:30 PM	119	2	1	122
2:45 PM	132	7	2	141
3:00 PM	147	5	0	152
3:15 PM	165	2	0	167
3:30 PM	185	3	1	189
3:45 PM	172	4	0	176
4:00 PM	146	3	0	149
4:15 PM	153	4	0	157
4:30 PM	174	8	2	184
4:45 PM	167	1	0	168
5:00 PM	172	0	0	172
5:15 PM	161	2	0	163
5:30 PM	152	1	0	153
5:45 PM	130	3	0	133
6:00 PM	106	1	0	107
6:15 PM	86	0	0	86
6:30 PM	87	3	0	90
6:45 PM	98	0	0	98
7:00 PM	78	0	0	78
7:15 PM	89	3	1	93
7:30 PM	59	0	0	59
7:45 PM	64	0	1	65
8:00 PM	70	0	0	70
8:15 PM	69	2	0	71
8:30 PM	44	1	0	45
8:45 PM	46	0	0	46
9:00 PM	40	1	0	41
9:15 PM	37	0	0	37
9:30 PM	34	0	0	34
9:45 PM	34	0	0	34
10:00 PM	30	0	0	30
10:15 PM	29	0	0	29
10:30 PM	22	0	0	22
10:45 PM	18	0	0	18
11:00 PM	20	1	0	21
11:15 PM	16	0	0	16
11:30 PM	20	0	0	20
11:45 PM	12	0	0	12

AM Total 1877 83 46 2006
 Percentage 93.57% 4.14% 2.29%
 AM Peak 10:45 AM 7:30 AM 7:45 AM 10:45 AM
 Volume 365 20 13 386

PM Total 4455 104 21 4580
 Percentage 97.27% 2.27% 0.46%
 PM Peak 4:30 PM 2:00 PM 1:00 PM 4:30 PM
 Volume 674 22 9 687

Day Total 6332 187 67 6586
 Percentage 96.14% 2.84% 1.02%

Milford Street (Route 16)
 west of #49 Milford Street
 City, State: Roxbury, MA
 Client: Toole/K. Sawyer
 Site Code: 6131/ Task 2.00



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 218331 ATR A

Direction: EB

Weekly Report

Day Date	Wednesday 12/15/21		Thursday 12/16/21												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	3	112	4	101	0	0	0	0	0	0	0	0	0	0	4	107		
12:15	4	114	0	91	0	0	0	0	0	0	0	0	0	0	2	103		
12:30	3	119	3	102	0	0	0	0	0	0	0	0	0	0	3	111		
12:45	4	96	1	113	0	0	0	0	0	0	0	0	0	0	3	105		
1:00	2	104	4	116	0	0	0	0	0	0	0	0	0	0	3	110		
1:15	2	100	1	98	0	0	0	0	0	0	0	0	0	0	2	99		
1:30	5	87	4	103	0	0	0	0	0	0	0	0	0	0	5	95		
1:45	7	114	4	114	0	0	0	0	0	0	0	0	0	0	6	114		
2:00	3	116	4	110	0	0	0	0	0	0	0	0	0	0	4	113		
2:15	6	121	7	119	0	0	0	0	0	0	0	0	0	0	7	120		
2:30	5	125	3	119	0	0	0	0	0	0	0	0	0	0	4	122		
2:45	4	102	2	113	0	0	0	0	0	0	0	0	0	0	3	108		
3:00	5	105	5	115	0	0	0	0	0	0	0	0	0	0	5	110		
3:15	1	98	2	89	0	0	0	0	0	0	0	0	0	0	2	94		
3:30	7	115	7	123	0	0	0	0	0	0	0	0	0	0	7	119		
3:45	12	107	8	125	0	0	0	0	0	0	0	0	0	0	10	116		
4:00	5	79	4	111	0	0	0	0	0	0	0	0	0	0	5	95		
4:15	20	103	19	112	0	0	0	0	0	0	0	0	0	0	20	108		
4:30	20	100	22	111	0	0	0	0	0	0	0	0	0	0	21	106		
4:45	24	105	29	126	0	0	0	0	0	0	0	0	0	0	27	116		
5:00	39	103	45	111	0	0	0	0	0	0	0	0	0	0	42	107		
5:15	60	100	56	103	0	0	0	0	0	0	0	0	0	0	58	102		
5:30	67	75	56	91	0	0	0	0	0	0	0	0	0	0	62	83		
5:45	88	75	86	88	0	0	0	0	0	0	0	0	0	0	87	82		
6:00	71	75	107	86	0	0	0	0	0	0	0	0	0	0	89	81		
6:15	122	82	130	81	0	0	0	0	0	0	0	0	0	0	126	82		
6:30	147	67	146	90	0	0	0	0	0	0	0	0	0	0	147	79		
6:45	181	78	170	66	0	0	0	0	0	0	0	0	0	0	176	72		
7:00	146	62	151	38	0	0	0	0	0	0	0	0	0	0	149	50		
7:15	189	58	174	50	0	0	0	0	0	0	0	0	0	0	182	54		
7:30	158	54	172	46	0	0	0	0	0	0	0	0	0	0	165	50		
7:45	152	56	172	53	0	0	0	0	0	0	0	0	0	0	162	55		
8:00	144	47	131	52	0	0	0	0	0	0	0	0	0	0	138	50		
8:15	148	60	126	49	0	0	0	0	0	0	0	0	0	0	137	55		
8:30	135	53	124	43	0	0	0	0	0	0	0	0	0	0	130	48		
8:45	134	39	138	36	0	0	0	0	0	0	0	0	0	0	136	38		
9:00	138	27	118	50	0	0	0	0	0	0	0	0	0	0	128	39		
9:15	128	28	112	41	0	0	0	0	0	0	0	0	0	0	120	35		
9:30	124	19	97	33	0	0	0	0	0	0	0	0	0	0	111	26		
9:45	128	25	115	29	0	0	0	0	0	0	0	0	0	0	122	27		
10:00	100	29	102	25	0	0	0	0	0	0	0	0	0	0	101	27		
10:15	99	22	113	20	0	0	0	0	0	0	0	0	0	0	106	21		
10:30	110	20	97	36	0	0	0	0	0	0	0	0	0	0	104	28		
10:45	107	19	114	17	0	0	0	0	0	0	0	0	0	0	111	18		
11:00	107	6	112	6	0	0	0	0	0	0	0	0	0	0	110	6		
11:15	97	9	91	4	0	0	0	0	0	0	0	0	0	0	94	7		
11:30	98	10	95	8	0	0	0	0	0	0	0	0	0	0	97	9		
11:45	97	10	111	6	0	0	0	0	0	0	0	0	0	0	104	8		
Total	3456	3430	3394	3569	0	0	0	0	0	0	0	0	0	0	3425	3500		
Day Total	6886		6963		0		0		0		0		0		6925			
Peak HR	6:45 AM	1:45 PM	7:00 AM	3:30 PM													6:45 AM	1:45 PM
Volume	674	476	669	471													671	469

Milford Street (Route 16)
 west of #49 Milford Street
 City, State: Roxbury, MA
 Client: Toole/K. Sawyer
 Site Code: 6131/ Task 2.00



157 Washington Street, Suite 2
 Hudson, MA 01749
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 218331 ATR A

Direction: WB

Weekly Report

Day Date	Wednesday 12/15/21		Thursday 12/16/21												Week Ave			
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
12:00	11	92	15	129	0	0	0	0	0	0	0	0	0	0	13	111		
12:15	10	100	7	107	0	0	0	0	0	0	0	0	0	0	9	104		
12:30	8	120	7	112	0	0	0	0	0	0	0	0	0	0	8	116		
12:45	7	98	3	97	0	0	0	0	0	0	0	0	0	0	5	98		
1:00	6	92	8	109	0	0	0	0	0	0	0	0	0	0	7	101		
1:15	14	113	11	116	0	0	0	0	0	0	0	0	0	0	13	115		
1:30	6	113	4	132	0	0	0	0	0	0	0	0	0	0	5	123		
1:45	3	117	1	94	0	0	0	0	0	0	0	0	0	0	2	106		
2:00	6	118	9	118	0	0	0	0	0	0	0	0	0	0	8	118		
2:15	9	129	6	118	0	0	0	0	0	0	0	0	0	0	8	124		
2:30	7	135	5	122	0	0	0	0	0	0	0	0	0	0	6	129		
2:45	1	157	2	141	0	0	0	0	0	0	0	0	0	0	2	149		
3:00	2	164	1	152	0	0	0	0	0	0	0	0	0	0	2	158		
3:15	1	181	2	167	0	0	0	0	0	0	0	0	0	0	2	174		
3:30	4	187	5	189	0	0	0	0	0	0	0	0	0	0	5	188		
3:45	4	176	2	176	0	0	0	0	0	0	0	0	0	0	3	176		
4:00	3	173	5	149	0	0	0	0	0	0	0	0	0	0	4	161		
4:15	6	182	9	157	0	0	0	0	0	0	0	0	0	0	8	170		
4:30	7	161	8	184	0	0	0	0	0	0	0	0	0	0	8	173		
4:45	2	142	7	168	0	0	0	0	0	0	0	0	0	0	5	155		
5:00	9	157	9	172	0	0	0	0	0	0	0	0	0	0	9	165		
5:15	9	173	11	163	0	0	0	0	0	0	0	0	0	0	10	168		
5:30	14	132	8	153	0	0	0	0	0	0	0	0	0	0	11	143		
5:45	20	123	17	133	0	0	0	0	0	0	0	0	0	0	19	128		
6:00	22	110	29	107	0	0	0	0	0	0	0	0	0	0	26	109		
6:15	47	105	51	86	0	0	0	0	0	0	0	0	0	0	49	96		
6:30	53	78	53	90	0	0	0	0	0	0	0	0	0	0	53	84		
6:45	63	67	49	98	0	0	0	0	0	0	0	0	0	0	56	83		
7:00	77	92	79	78	0	0	0	0	0	0	0	0	0	0	78	85		
7:15	74	69	74	93	0	0	0	0	0	0	0	0	0	0	74	81		
7:30	75	50	85	59	0	0	0	0	0	0	0	0	0	0	80	55		
7:45	89	68	87	65	0	0	0	0	0	0	0	0	0	0	88	67		
8:00	87	71	88	70	0	0	0	0	0	0	0	0	0	0	88	71		
8:15	87	75	72	71	0	0	0	0	0	0	0	0	0	0	80	73		
8:30	79	50	73	45	0	0	0	0	0	0	0	0	0	0	76	48		
8:45	81	41	78	46	0	0	0	0	0	0	0	0	0	0	80	44		
9:00	60	51	75	41	0	0	0	0	0	0	0	0	0	0	68	46		
9:15	68	42	87	37	0	0	0	0	0	0	0	0	0	0	78	40		
9:30	75	31	82	34	0	0	0	0	0	0	0	0	0	0	79	33		
9:45	91	28	79	34	0	0	0	0	0	0	0	0	0	0	85	31		
10:00	76	28	66	30	0	0	0	0	0	0	0	0	0	0	71	29		
10:15	89	22	75	29	0	0	0	0	0	0	0	0	0	0	82	26		
10:30	31	19	76	22	0	0	0	0	0	0	0	0	0	0	54	21		
10:45	36	13	100	18	0	0	0	0	0	0	0	0	0	0	68	16		
11:00	105	20	89	21	0	0	0	0	0	0	0	0	0	0	97	21		
11:15	107	17	100	16	0	0	0	0	0	0	0	0	0	0	104	17		
11:30	105	23	97	20	0	0	0	0	0	0	0	0	0	0	101	22		
11:45	91	13	100	12	0	0	0	0	0	0	0	0	0	0	96	13		
Total	1937	4518	2006	4580	0	0	0	0	0	0	0	0	0	0	1972	4549		
Day Total	6455		6586		0		0		0		0		0		6521			
Peak HR	11:00 AM	3:30 PM	10:45 AM	4:30 PM													11:00 AM	3:15 PM
Volume	408	718	386	687													397	699

Milford Street (Route 16)
west of #49 Milford Street
City, State: Mendon, MA

Client: Bayside Engineering/ K. Cram

Site Code: 2213123



PDI File #: 218331 ATR-A Speed

Count Date

Wednesday, December 15, 2021

Speed (60-minute)

WB																
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	14	11	1	0	0	0	40	51.0	46.4
1:00 AM	0	0	0	1	0	2	11	10	2	2	1	0	0	29	49.6	45.2
2:00 AM	0	0	0	0	0	0	12	8	2	1	0	0	0	23	49.0	45.7
3:00 AM	0	0	0	0	0	2	1	3	5	0	0	0	0	11	51.5	46.4
4:00 AM	0	0	0	0	0	1	3	10	3	1	0	0	0	18	50.9	46.9
5:00 AM	0	0	0	0	0	6	13	30	8	1	0	0	0	58	49.5	45.8
6:00 AM	0	0	0	0	1	13	70	71	38	4	1	1	0	199	51.0	45.7
7:00 AM	0	0	0	0	0	12	119	139	35	8	0	0	0	313	49.0	45.6
8:00 AM	1	0	0	4	3	15	87	161	59	4	2	0	0	336	50.0	46.0
9:00 AM	0	0	0	1	4	11	78	125	65	7	0	0	0	291	51.0	46.4
10:00 AM	1	11	40	44	29	51	69	56	13	2	0	0	0	316	46.0	36.0
11:00 AM	0	0	0	0	2	28	184	155	36	6	1	0	0	412	48.4	44.6
12:00 PM	0	0	0	0	0	19	178	154	47	4	0	0	0	402	49.0	45.1
1:00 PM	0	0	0	0	1	48	178	162	45	2	1	0	0	437	49.0	44.4
2:00 PM	0	0	0	0	5	82	290	141	23	1	2	0	0	544	47.0	43.0
3:00 PM	0	0	2	19	51	153	289	169	26	2	0	0	0	711	46.0	41.3
4:00 PM	24	39	49	37	59	135	145	64	7	0	0	0	0	559	44.0	34.7
5:00 PM	0	0	0	4	2	106	326	161	23	0	0	0	0	622	46.0	42.8
6:00 PM	0	0	0	0	5	61	164	123	18	1	0	0	0	372	47.0	43.2
7:00 PM	0	0	0	0	10	40	145	90	5	0	0	0	0	290	46.0	42.8
8:00 PM	0	0	0	4	9	43	111	65	11	0	0	0	0	243	46.0	42.4
9:00 PM	0	0	2	4	2	18	62	47	18	3	2	0	0	158	49.0	43.8
10:00 PM	0	0	0	0	1	9	29	33	12	2	1	0	0	87	50.0	45.4
11:00 PM	0	0	0	0	1	12	22	36	10	1	0	0	0	82	49.0	44.7
Total	26	50	93	118	185	869	2598	2027	522	53	11	1	0	6553	48.0	42.7
Percent	0.40%	0.76%	1.42%	1.80%	2.82%	13.26%	39.65%	30.93%	7.97%	0.81%	0.17%	0.02%	0.00%			

AM Peak	8:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	11:00 AM	8:00 AM	9:00 AM	7:00 AM	8:00 AM	6:00 AM		11:00 AM
Volume	1	11	40	44	29	51	184	161	65	8	2	1	0	412
PM Peak	4:00 PM	4:00 PM	4:00 PM	4:00 PM	4:00 PM	3:00 PM	5:00 PM	3:00 PM	12:00 PM	12:00 PM	2:00 PM			3:00 PM
Volume	24	39	49	37	59	153	326	169	47	4	2	0	0	711

15th Percentile:	38.0 MPH	Average Speed:	42.7 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	43.0 MPH	10 MPH Pace:	39 to 48 MPH	Number of Vehicles > 40 MPH:	4801
85th Percentile:	48.0 MPH	Number in Pace:	4727	Percent of Vehicles > 40 MPH:	73.3%
95th Percentile:	51.0 MPH	Percent in Pace:	72.1%		

Milford Street (Route 16)
west of #49 Milford Street
City, State: Mendon, MA

Client: Bayside Engineering/ K. Cram

Site Code: 2213123



PDI File #: 218331 ATR-A Speed

Count Date

Wednesday, December 15, 2021

Speed (60-minute)

EB																
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	2	3	2	4	3	0	1	0	0	15	50.9	44.7
1:00 AM	0	0	0	0	0	4	1	8	2	2	0	0	0	17	51.2	46.2
2:00 AM	0	0	0	0	1	0	7	5	4	1	1	0	0	19	52.3	47.1
3:00 AM	0	0	0	0	0	2	7	10	4	3	0	0	0	26	53.3	46.9
4:00 AM	0	0	0	0	0	1	15	36	17	0	0	0	0	69	50.8	47.0
5:00 AM	0	0	0	0	1	5	68	132	43	6	2	0	0	257	50.0	46.6
6:00 AM	0	0	1	4	8	43	199	229	61	5	0	0	0	550	49.0	44.7
7:00 AM	0	0	0	1	9	33	179	315	76	11	1	0	0	625	49.0	45.6
8:00 AM	0	0	0	0	5	31	196	219	74	10	2	0	0	537	50.0	45.4
9:00 AM	0	0	0	2	4	53	167	208	57	15	1	0	0	507	49.0	44.8
10:00 AM	0	2	2	31	68	84	111	58	23	4	0	0	0	383	46.0	39.2
11:00 AM	0	0	0	2	5	34	152	153	42	7	0	0	0	395	49.0	44.6
12:00 PM	0	0	3	0	8	54	150	149	54	11	0	0	0	429	49.8	44.2
1:00 PM	0	0	1	1	4	29	112	187	47	10	2	1	0	394	50.0	45.6
2:00 PM	1	0	0	3	4	33	131	195	77	9	0	0	0	453	50.0	45.4
3:00 PM	0	0	0	0	15	36	110	176	58	8	3	0	0	406	50.0	45.3
4:00 PM	0	1	0	1	9	52	150	110	28	3	1	0	0	355	48.0	43.5
5:00 PM	1	0	0	1	2	58	126	135	33	5	1	0	0	362	48.0	43.9
6:00 PM	1	0	0	0	1	34	127	104	32	3	0	0	0	302	48.0	44.1
7:00 PM	0	0	0	1	3	30	88	77	25	4	0	0	0	228	49.0	44.2
8:00 PM	0	0	0	3	3	32	68	62	30	0	1	0	0	199	50.0	43.7
9:00 PM	0	0	0	0	0	11	28	44	10	7	0	0	1	101	50.0	45.9
10:00 PM	0	0	1	0	0	11	35	27	14	1	1	0	0	90	50.0	44.6
11:00 PM	2	0	0	0	0	8	9	9	6	2	0	0	0	36	50.8	42.9
Total	5	3	8	50	152	681	2238	2652	820	127	17	1	1	6755	49.0	44.6
Percent	0.07%	0.04%	0.12%	0.74%	2.25%	10.08%	33.13%	39.26%	12.14%	1.88%	0.25%	0.01%	0.01%			

AM Peak		10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	6:00 AM	7:00 AM	7:00 AM	9:00 AM	5:00 AM			7:00 AM
Volume	0	2	2	31	68	84	199	315	76	15	2	0	0	625

PM Peak	11:00 PM	4:00 PM	12:00 PM	2:00 PM	3:00 PM	5:00 PM	12:00 PM	2:00 PM	2:00 PM	12:00 PM	3:00 PM	1:00 PM	9:00 PM	2:00 PM
Volume	2	1	3	3	15	58	150	195	77	11	3	1	1	453

15th Percentile:	40.0 MPH	Average Speed:	44.6 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	45.0 MPH	10 MPH Pace:	41 to 50 MPH	Number of Vehicles > 40 MPH:	5559
85th Percentile:	49.0 MPH	Number in Pace:	4916	Percent of Vehicles > 40 MPH:	82.3%
95th Percentile:	52.0 MPH	Percent in Pace:	72.8%		

Milford Street (Route 16)
west of #49 Milford Street
City, State: Mendon, MA

Client: Bayside Engineering/ K. Cram

Site Code: 2213123



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File #: 218331 ATR-A Speed

Count Date

Wednesday, December 15, 2021

Speed (60-minute)

Combined WB and EB

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	2	5	14	18	14	1	1	0	0	55	51.0	45.9
1:00 AM	0	0	0	1	0	6	12	18	4	4	1	0	0	46	50.5	45.6
2:00 AM	0	0	0	0	1	0	19	13	6	2	1	0	0	42	51.9	46.3
3:00 AM	0	0	0	0	0	4	8	13	9	3	0	0	0	37	52.6	46.7
4:00 AM	0	0	0	0	0	2	18	46	20	1	0	0	0	87	51.0	47.0
5:00 AM	0	0	0	0	1	11	81	162	51	7	2	0	0	315	50.0	46.4
6:00 AM	0	0	1	4	9	56	269	300	99	9	1	1	0	749	49.0	45.0
7:00 AM	0	0	0	1	9	45	298	454	111	19	1	0	0	938	49.0	45.6
8:00 AM	1	0	0	4	8	46	283	380	133	14	4	0	0	873	50.0	45.7
9:00 AM	0	0	0	3	8	64	245	333	122	22	1	0	0	798	50.0	45.4
10:00 AM	1	13	42	75	97	135	180	114	36	6	0	0	0	699	46.0	37.8
11:00 AM	0	0	0	2	7	62	336	308	78	13	1	0	0	807	49.0	44.6
12:00 PM	0	0	3	0	8	73	328	303	101	15	0	0	0	831	49.0	44.7
1:00 PM	0	0	1	1	5	77	290	349	92	12	3	1	0	831	49.0	44.9
2:00 PM	1	0	0	3	9	115	421	336	100	10	2	0	0	997	48.0	44.1
3:00 PM	0	0	2	19	66	189	399	345	84	10	3	0	0	1117	48.0	42.8
4:00 PM	24	40	49	38	68	187	295	174	35	3	1	0	0	914	46.0	38.1
5:00 PM	1	0	0	5	4	164	452	296	56	5	1	0	0	984	47.0	43.2
6:00 PM	1	0	0	0	6	95	291	227	50	4	0	0	0	674	48.0	43.6
7:00 PM	0	0	0	1	13	70	233	167	30	4	0	0	0	518	47.5	43.4
8:00 PM	0	0	0	7	12	75	179	127	41	0	1	0	0	442	48.0	43.0
9:00 PM	0	0	2	4	2	29	90	91	28	10	2	0	1	259	50.0	44.6
10:00 PM	0	0	1	0	1	20	64	60	26	3	2	0	0	177	50.0	45.0
11:00 PM	2	0	0	0	1	20	31	45	16	3	0	0	0	118	50.0	44.1
Total	31	53	101	168	337	1550	4836	4679	1342	180	28	2	1	13308	49.0	43.7
Percent	0.23%	0.40%	0.76%	1.26%	2.53%	11.65%	36.34%	35.16%	10.08%	1.35%	0.21%	0.02%	0.01%			

AM Peak	8:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	10:00 AM	11:00 AM	7:00 AM	8:00 AM	9:00 AM	8:00 AM	6:00 AM		7:00 AM
Volume	1	13	42	75	97	135	336	454	133	22	4	1	0	938

PM Peak	4:00 PM	4:00 PM	4:00 PM	4:00 PM	4:00 PM	3:00 PM	5:00 PM	1:00 PM	12:00 PM	12:00 PM	1:00 PM	1:00 PM	9:00 PM	3:00 PM
Volume	24	40	49	38	68	189	452	349	101	15	3	1	1	1117

15th Percentile:	39.0 MPH	Average Speed:	43.7 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	44.0 MPH	10 MPH Pace:	40 to 49 MPH	Number of Vehicles > 40 MPH:	10360
85th Percentile:	49.0 MPH	Number in Pace:	9515	Percent of Vehicles > 40 MPH:	77.8%
95th Percentile:	52.0 MPH	Percent in Pace:	71.5%		

Milford Street (Route 16)
west of #49 Milford Street
City, State: Mendon, MA

Client: Bayside Engineering/ K. Cram

Site Code: 2213123



PDI File #: 218331 ATR-A Speed

Count Date

Thursday, December 16, 2021

Speed (60-minute)

WB																
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	14	16	3	0	0	0	0	36	48.8	44.6
1:00 AM	0	0	0	0	0	8	16	4	2	0	0	0	0	30	47.0	42.3
2:00 AM	0	0	0	0	0	1	9	5	6	1	0	0	0	22	50.9	46.2
3:00 AM	0	0	0	1	0	1	5	4	0	1	0	0	0	12	48.4	43.5
4:00 AM	0	1	0	0	2	4	8	7	6	2	0	0	0	30	51.0	43.9
5:00 AM	0	0	0	1	1	10	19	12	9	0	0	0	0	52	50.4	43.7
6:00 AM	0	0	0	0	3	12	77	60	22	2	2	1	0	179	49.3	45.1
7:00 AM	0	0	0	0	2	29	133	127	18	5	0	0	0	314	48.0	44.4
8:00 AM	0	1	0	3	14	45	145	90	11	2	0	0	1	312	47.0	42.7
9:00 AM	1	2	0	3	10	28	135	122	20	4	0	0	0	325	48.0	43.4
10:00 AM	0	0	0	1	4	26	149	108	29	0	1	0	0	318	49.0	44.1
11:00 AM	0	0	1	1	5	57	172	137	21	1	1	0	0	396	48.0	43.5
12:00 PM	0	0	0	1	3	33	171	188	43	4	0	0	0	443	49.0	44.8
1:00 PM	0	0	2	0	3	41	184	174	42	6	0	0	0	452	49.0	44.5
2:00 PM	0	1	0	1	1	52	219	183	43	3	1	0	0	504	48.0	44.1
3:00 PM	0	8	11	36	62	133	252	160	22	3	0	0	0	687	46.0	40.4
4:00 PM	0	0	5	6	33	152	326	114	15	1	0	0	0	652	45.0	41.1
5:00 PM	0	0	1	2	22	149	340	108	15	1	0	0	0	638	45.0	41.5
6:00 PM	0	0	0	0	2	63	196	124	12	1	0	0	0	398	47.0	43.0
7:00 PM	0	1	2	1	6	48	120	87	23	3	0	0	0	291	48.0	43.3
8:00 PM	0	0	0	0	0	37	90	92	25	1	0	0	0	245	49.0	44.2
9:00 PM	0	0	0	0	0	14	55	56	26	2	1	0	0	154	50.0	45.3
10:00 PM	0	0	0	0	1	5	44	39	16	1	0	0	0	106	50.0	45.1
11:00 PM	0	0	0	0	2	1	19	38	10	2	0	0	0	72	50.0	45.8
Total	1	14	22	57	176	952	2898	2055	439	46	6	1	1	6668	48.0	43.1
Percent	0.01%	0.21%	0.33%	0.85%	2.64%	14.28%	43.46%	30.82%	6.58%	0.69%	0.09%	0.01%	0.01%			

AM Peak	9:00 AM	9:00 AM	11:00 AM	8:00 AM	8:00 AM	11:00 AM	11:00 AM	11:00 AM	10:00 AM	7:00 AM	6:00 AM	6:00 AM	8:00 AM	11:00 AM
Volume	1	2	1	3	14	57	172	137	29	5	2	1	1	396

PM Peak	3:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	5:00 PM	12:00 PM	12:00 PM	1:00 PM	2:00 PM	3:00 PM			
Volume	0	8	11	36	62	152	340	188	43	6	1	0	0	687

15th Percentile:	39.0 MPH	Average Speed:	43.1 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	43.0 MPH	10 MPH Pace:	39 to 48 MPH	Number of Vehicles > 40 MPH:	4955
85th Percentile:	48.0 MPH	Number in Pace:	5035	Percent of Vehicles > 40 MPH:	74.3%
95th Percentile:	50.0 MPH	Percent in Pace:	75.5%		

Milford Street (Route 16)
west of #49 Milford Street
City, State: Mendon, MA

Client: Bayside Engineering/ K. Cram

Site Code: 2213123



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File #: 218331 ATR-A Speed

Count Date

Thursday, December 16, 2021

Speed (60-minute)

EB																
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	1	0	0	0	0	4	2	4	3	2	0	0	1	17	53.8	45.1
1:00 AM	0	0	0	0	0	1	4	3	5	0	0	0	0	13	51.4	46.4
2:00 AM	1	2	0	0	0	1	3	8	5	0	0	0	0	20	51.3	42.2
3:00 AM	0	0	1	0	0	2	4	7	8	1	0	0	0	23	52.7	46.0
4:00 AM	2	0	0	0	3	3	25	27	14	3	0	0	0	77	50.0	44.6
5:00 AM	0	0	1	0	0	6	61	110	59	4	2	0	0	243	51.0	46.7
6:00 AM	1	0	0	1	7	50	244	198	50	4	1	0	0	556	48.0	44.1
7:00 AM	0	0	1	1	6	62	231	276	70	7	0	0	0	654	49.0	44.6
8:00 AM	0	1	5	3	16	94	201	139	29	4	2	0	0	494	48.0	42.6
9:00 AM	2	0	3	9	12	75	161	136	34	2	0	2	0	436	48.0	42.7
10:00 AM	1	1	1	1	6	49	172	150	39	5	1	0	0	426	48.0	43.9
11:00 AM	0	0	0	0	8	39	107	176	58	10	1	0	0	399	50.0	45.4
12:00 PM	0	0	1	0	1	12	117	188	77	15	3	0	0	414	50.1	46.6
1:00 PM	1	0	0	1	3	42	146	158	68	6	1	0	0	426	50.0	45.1
2:00 PM	0	0	2	2	21	27	98	186	89	11	1	0	0	437	51.0	45.6
3:00 PM	0	0	0	1	2	27	120	212	59	14	4	1	0	440	50.0	46.1
4:00 PM	0	1	0	2	17	57	149	169	47	5	1	0	0	448	49.0	44.0
5:00 PM	0	0	1	0	3	44	168	128	40	0	1	0	0	385	48.0	44.0
6:00 PM	0	0	1	0	5	41	115	119	31	6	0	0	0	318	49.0	44.3
7:00 PM	0	1	0	0	2	18	87	89	11	6	0	0	0	214	48.0	44.3
8:00 PM	0	0	0	0	2	8	62	68	31	7	0	1	0	179	51.0	46.0
9:00 PM	0	0	0	0	1	11	64	53	20	5	1	0	1	156	50.0	45.3
10:00 PM	0	0	0	0	2	4	31	36	17	6	1	0	0	97	51.0	46.3
11:00 PM	0	0	0	0	0	0	8	10	3	2	1	0	0	24	51.7	46.6
Total	9	6	17	21	117	677	2380	2650	867	125	21	4	2	6896	49.0	44.7
Percent	0.13%	0.09%	0.25%	0.30%	1.70%	9.82%	34.51%	38.43%	12.57%	1.81%	0.30%	0.06%	0.03%			

AM Peak	4:00 AM	2:00 AM	8:00 AM	9:00 AM	8:00 AM	8:00 AM	6:00 AM	7:00 AM	7:00 AM	11:00 AM	5:00 AM	9:00 AM	12:00 AM	7:00 AM
Volume	2	2	5	9	16	94	244	276	70	10	2	2	1	654

PM Peak	1:00 PM	4:00 PM	2:00 PM	2:00 PM	2:00 PM	4:00 PM	5:00 PM	3:00 PM	2:00 PM	12:00 PM	3:00 PM	3:00 PM	9:00 PM	4:00 PM
Volume	1	1	2	2	21	57	168	212	89	15	4	1	1	448

15th Percentile:	40.0 MPH	Average Speed:	44.7 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	45.0 MPH	10 MPH Pace:	40 to 49 MPH	Number of Vehicles > 40 MPH:	5728
85th Percentile:	49.0 MPH	Number in Pace:	5030	Percent of Vehicles > 40 MPH:	83.1%
95th Percentile:	53.0 MPH	Percent in Pace:	72.9%		

Milford Street (Route 16)
west of #49 Milford Street
City, State: Mendon, MA

Client: Bayside Engineering/ K. Cram

Site Code: 2213123



PRECISION
D A T A
INDUSTRIES, LLC

157 Washington Street, Suite 2
Hudson, MA 01749
Office: 508-875-0100 Fax: 508-875-0118

PDI File #: 218331 ATR-A Speed

Count Date

Thursday, December 16, 2021

Speed (60-minute)

Combined WB and EB

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	1	0	0	0	0	7	16	20	6	2	0	0	1	53	50.0	44.7
1:00 AM	0	0	0	0	0	9	20	7	7	0	0	0	0	43	49.7	43.5
2:00 AM	1	2	0	0	0	2	12	13	11	1	0	0	0	42	51.0	44.3
3:00 AM	0	0	1	1	0	3	9	11	8	2	0	0	0	35	51.9	45.1
4:00 AM	2	1	0	0	5	7	33	34	20	5	0	0	0	107	50.1	44.4
5:00 AM	0	0	1	1	1	16	80	122	68	4	2	0	0	295	51.0	46.2
6:00 AM	1	0	0	1	10	62	321	258	72	6	3	1	0	735	49.0	44.4
7:00 AM	0	0	1	1	8	91	364	403	88	12	0	0	0	968	49.0	44.5
8:00 AM	0	2	5	6	30	139	346	229	40	6	2	0	1	806	48.0	42.6
9:00 AM	3	2	3	12	22	103	296	258	54	6	0	2	0	761	48.0	43.0
10:00 AM	1	1	1	2	10	75	321	258	68	5	2	0	0	744	48.0	44.0
11:00 AM	0	0	1	1	13	96	279	313	79	11	2	0	0	795	49.0	44.5
12:00 PM	0	0	1	1	4	45	288	376	120	19	3	0	0	857	50.0	45.7
1:00 PM	1	0	2	1	6	83	330	332	110	12	1	0	0	878	49.0	44.8
2:00 PM	0	1	2	3	22	79	317	369	132	14	2	0	0	941	50.0	44.8
3:00 PM	0	8	11	37	64	160	372	372	81	17	4	1	0	1127	48.0	42.6
4:00 PM	0	1	5	8	50	209	475	283	62	6	1	0	0	1100	47.0	42.3
5:00 PM	0	0	2	2	25	193	508	236	55	1	1	0	0	1023	46.7	42.4
6:00 PM	0	0	1	0	7	104	311	243	43	7	0	0	0	716	48.0	43.6
7:00 PM	0	2	2	1	8	66	207	176	34	9	0	0	0	505	48.0	43.7
8:00 PM	0	0	0	0	2	45	152	160	56	8	0	1	0	424	50.0	45.0
9:00 PM	0	0	0	0	1	25	119	109	46	7	2	0	1	310	50.0	45.3
10:00 PM	0	0	0	0	3	9	75	75	33	7	1	0	0	203	51.0	45.7
11:00 PM	0	0	0	0	2	1	27	48	13	4	1	0	0	96	50.0	46.0
Total	10	20	39	78	293	1629	5278	4705	1306	171	27	5	3	13564	49.0	43.9
Percent	0.07%	0.15%	0.29%	0.58%	2.16%	12.01%	38.91%	34.69%	9.63%	1.26%	0.20%	0.04%	0.02%			

AM Peak	9:00 AM	2:00 AM	8:00 AM	9:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	9:00 AM	12:00 AM	7:00 AM
Volume	3	2	5	12	30	139	364	403	88	12	3	2	1	968

PM Peak	1:00 PM	3:00 PM	3:00 PM	3:00 PM	3:00 PM	4:00 PM	5:00 PM	12:00 PM	2:00 PM	12:00 PM	3:00 PM	3:00 PM	9:00 PM	3:00 PM
Volume	1	8	11	37	64	209	508	376	132	19	4	1	1	1127

15th Percentile:	39.0 MPH	Average Speed:	43.9 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	44.0 MPH	10 MPH Pace:	40 to 49 MPH	Number of Vehicles > 40 MPH:	10683
85th Percentile:	49.0 MPH	Number in Pace:	9983	Percent of Vehicles > 40 MPH:	78.8%
95th Percentile:	52.0 MPH	Percent in Pace:	73.6%		

Seasonal Adjustment/COVID-19 Worksheets

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Massachusetts Highway Department
Statewide Traffic Data Collection
2019 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.22	1.14	1.12	1.06	1.00	0.96	0.87	0.85	0.96	0.99	1.04	1.12	0.85
R2	0.95	0.96	0.98	0.97	0.97	0.93	0.97	0.94	0.96	0.90	0.92	0.93	0.96
R3	1.15	1.06	1.07	1.00	0.89	0.88	0.89	0.89	0.95	0.92	1.02	1.01	0.97
R4-R7	1.09	1.09	1.11	1.02	0.96	0.92	0.89	0.89	0.99	0.98	1.09	1.13	0.98
U1-Boston	1.03	1.01	0.98	0.94	0.94	0.92	0.95	0.93	0.94	0.94	0.97	1.04	0.96
U1-Essex	1.09	1.06	1.03	0.99	0.94	0.90	0.88	0.86	0.93	0.94	0.99	1.06	0.93
U1-Southeast	1.06	1.05	1.01	0.97	0.95	0.93	0.93	0.90	0.94	0.94	0.98	1.04	0.98
U1-West	1.19	1.14	1.09	0.95	0.92	0.89	0.89	0.86	0.91	0.95	0.97	1.07	0.84
U1-Worcester	1.02	1.04	0.97	0.94	0.93	0.91	0.95	0.91	0.93	0.92	0.95	1.10	0.88
U2	1.01	1.00	0.94	0.93	0.91	0.89	0.93	0.90	0.90	0.91	0.94	1.02	0.99
U3	1.06	1.03	0.98	0.94	0.93	0.91	0.95	0.91	0.92	0.93	0.97	1.00	0.98
U4-U7	1.01	1.00	0.95	0.92	0.88	0.86	0.92	0.91	0.92	0.94	0.99	1.04	0.99
Rec - East	1.04	1.16	1.12	0.98	0.92	0.88	0.77	0.81	0.94	1.02	1.08	1.12	0.99
Rec - West	1.30	1.23	1.32	1.18	0.95	0.82	0.70	0.69	0.97	0.96	1.16	1.15	0.98

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

Recreational - East Group - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

Recreational - West Group - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113,1114, 1116,2196,2197 and 2198.

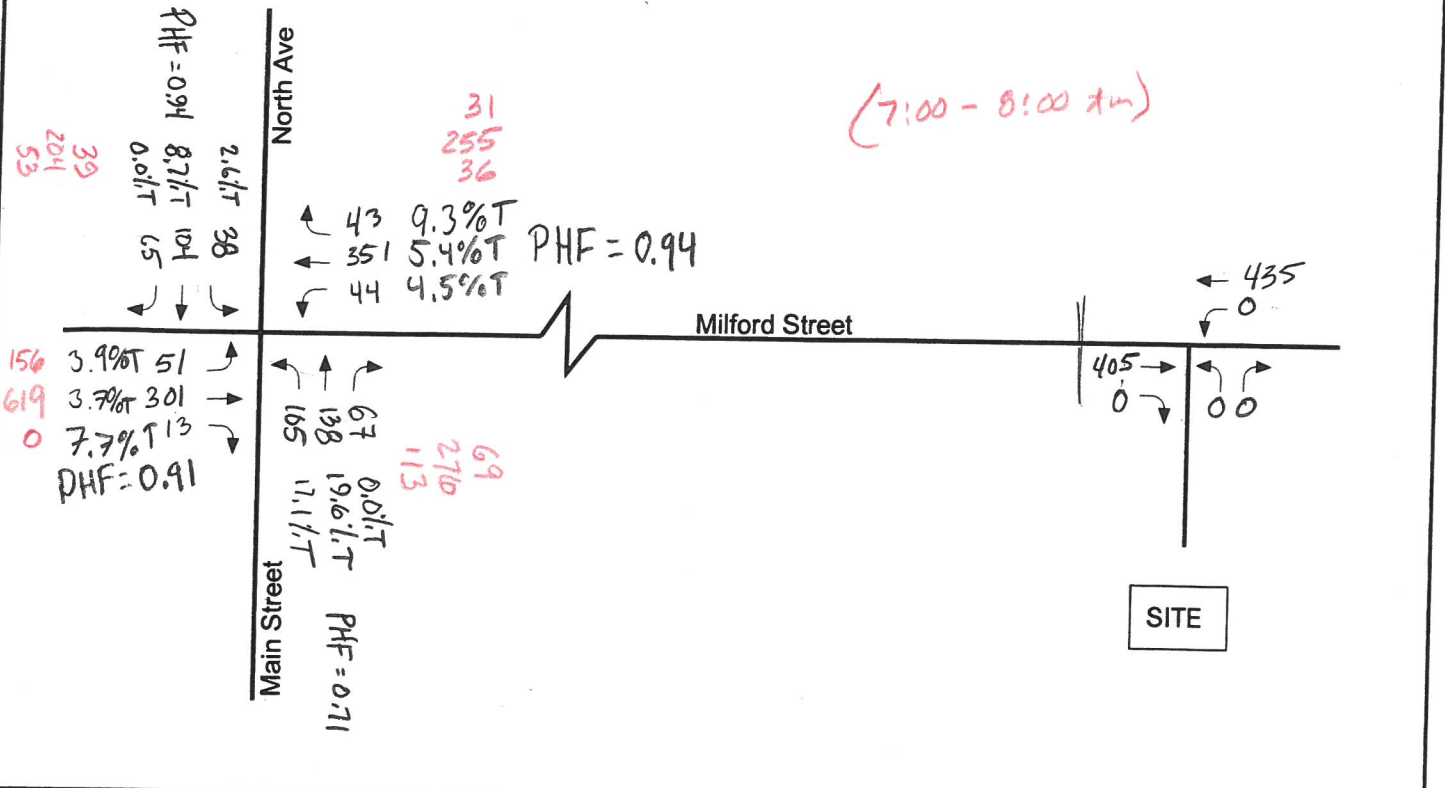
Study Name Mendon - Route 16 at Main Street and North Avenue TM7 TMC
 Start Date Saturday, April 07, 2018 11:00 AM
 End Date Tuesday, April 10, 2018 6:00 PM
 Site Code

Report Summary

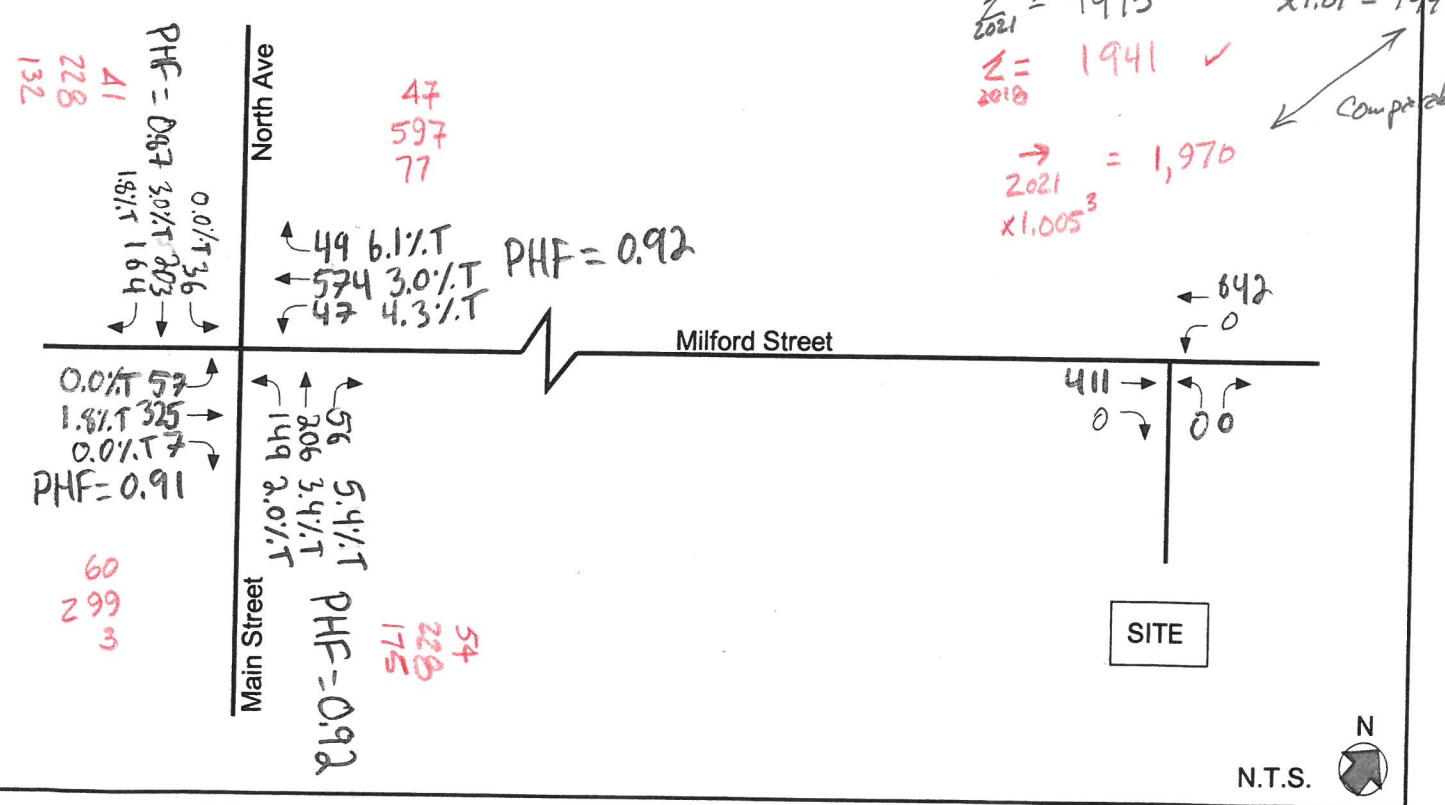
Time Period	Class.	Southbound					Westbound					Northbound					Eastbound					Crosswalk								
		R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	R	T	L	U	I	O	Total	Pedestrians	Total		
Peak 1	Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	1	1	
Specified Period	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%			
7:00 AM - 12:00 PM	Cars	42	155	34	0	231	384	28	193	25	0	246	598	61	224	78	0	363	180	0	503	132	0	635	313	1475	E	0	0	
One Hour Peak	%	79%	76%	87%	0%	78%	83%	90%	76%	69%	0%	76%	82%	88%	81%	69%	0%	79%	75%	0%	81%	85%	0%	82%	74%	80%	0%			
7:00 AM - 8:00 AM	Light Goods Vehicles	7	33	3	0	43	56	1	45	6	0	52	111	5	34	22	0	61	39	0	103	21	0	124	74	280	S	0	0	
	%	13%	16%	8%	0%	15%	12%	3%	18%	17%	0%	16%	15%	7%	12%	19%	0%	13%	16%	0%	17%	13%	0%	16%	18%	15%	0%			
	Buses	3	11	0	0	14	8	1	0	1	0	2	0	0	6	1	0	7	12	0	0	1	0	1	4	24	W	0	0	
	%	6%	5%	0%	0%	5%	2%	3%	0%	3%	0%	1%	0%	0%	2%	1%	0%	2%	5%	0%	0%	1%	0%	0%	1%	1%	0%			
	Single-Unit Trucks	1	5	2	0	8	11	1	11	4	0	16	12	3	8	4	0	15	9	0	7	2	0	9	16	48		1	1	
	%	2%	2%	5%	0%	3%	2%	3%	4%	11%	0%	5%	2%	4%	3%	4%	0%	3%	4%	0%	1%	1%	0%	1%	4%	3%	0%			
	Articulated Trucks	0	0	0	0	0	4	0	6	0	0	6	6	0	4	8	0	12	0	0	6	0	0	6	14	24				
	%	0%	0%	0%	0%	0%	1%	0%	2%	0%	0%	2%	1%	0%	1%	7%	0%	3%	0%	0%	1%	0%	0%	1%	3%	1%	0%			
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	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	53	204	39	0	296	463	31	255	36	0	322	727	69	276	113	0	458	240	0	619	156	0	775	421	1851				
	PHF	0.78	0.86	0.7	0	0.84	0.88	0.48	0.86	0.75	0	0.84	0.87	0.96	0.78	0.81	0	0.85	0.86	0	0.87	0.87	0	0.93	0.85	0.95				
	Approach %					16%	25%					17%	39%				25%	13%					42%	23%						
Peak 2	Motorcycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N	0	0		
Specified Period	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
12:00 PM - 6:00 PM	Cars	112	196	33	0	341	264	34	498	66	0	598	319	43	180	136	0	359	264	2	243	50	0	295	746	1593	E	0	0	
One Hour Peak	%	85%	86%	80%	0%	85%	79%	72%	83%	86%	0%	83%	81%	80%	79%	78%	0%	78%	85%	67%	81%	83%	0%	81%	83%	82%	0%			
4:45 PM - 5:45 PM	Light Goods Vehicles	20	30	8	0	58	64	11	91	8	0	110	67	10	43	33	1	87	40	1	49	10	0	60	144	315	S	0	0	
	%	15%	13%	20%	0%	14%	19%	23%	15%	10%	0%	15%	17%	19%	19%	19%	100%	19%	13%	33%	16%	17%	0%	17%	16%	16%	0%			
	Buses	0	0	0	0	0	4	2	0	0	0	2	1	0	2	0	0	2	0	0	1	0	0	1	0	5	W	0	0	
	%	0%	0%	0%	0%	0%	1%	4%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%			
	Single-Unit Trucks	0	2	0	0	2	3	0	6	3	0	9	7	1	3	3	0	7	5	0	6	0	0	6	9	24		0	0	
	%	0%	1%	0%	0%	0%	1%	0%	1%	4%	0%	1%	2%	2%	1%	2%	0%	2%	2%	0%	2%	0%	0%	2%	1%	1%	0%			
	Articulated Trucks	0	0	0	0	0	0	0	2	0	0	2	0	0	0	3	0	3	0	0	0	0	0	0	5	5				
	%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%	0%			
	Bicycles on Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	%	0%	0%	0%	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	132	228	41	0	401	335	47	597	77	0	721	394	54	228	175	1	458	309	3	299	60	0	362	904	1942				
	PHF	0.89	0.81	0.73	0	0.87	0.86	0.78	0.98	0.88	0	0.98	0.84	0.84	0.81	0.81	0.25	0.89	0.89	0.25	0.82	0.94	0	0.85	0.96	0.95				
	Approach %					21%	17%					37%	20%				24%	16%					19%	47%						

Q:\PROJECTS\21 PROJECTS\2213004 - 140 MEDICO LLC PROP. REHAB FACILITY, ANDOVER\DWG\2213004 NETWORK.DWG 27-Dec-21 12:25 PM

Weekday Morning Peak Hour (1:00 to 2:00 PM)



Weekday Evening Peak Hour (4:15 to 5:15 PM)



600 Unicorn Park Drive ▲ Woburn, MA 01801
Phone: 781.932.3201 ▲ Fax: 781.932.3413
www.baysideengineering.com

Proposed Adult Entertainment Site
Mendon, MA

Figure 2
2021 Existing Peak Hour Traffic Volumes

Raw Counts
2018 Pre-Card Counts

Crash Data and Worksheets

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Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Travel			Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
																						Directions (All Vehicles)	Weather	Hit and Run													
4011884	01/07/2015	Property damage only (none injured)	3:52 PM	No injury	4	D1: (No improper driving) / D2: (No improper driving) / D3: (No improper driving) / D4: (Unknown)		Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic / V4:	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car) / V4:(Passenger car)	V4:(Yes, vehicle or trailer disabled)	V1: W / V2: W / V3: W / V4: W	Cloudy/Unkn own	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic) / V4:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic) / V4:(Collision with motor vehicle in traffic)	42.10802	-71.55331	1	MILFORD STREET					
4012530	01/15/2015	Property damage only (none injured)	12:38 PM	No injury	1	D1: (No improper driving)		Other non-collision	Yes	Daylight	Single vehicle crash	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic	V1:(Unknown vehicle configuration)	V1:(Yes, vehicle or trailer disabled)	V1: W	Clear/Unkn own	No hit and run	V1:(Fire/explosion)	No, school bus not involved	35	Yes, device functionin g	V1:(Fire/explosion)	42.10774	-71.55365		MILFORD STREET / NORTH AVENUE					
4012537	01/07/2015	Property damage only (none injured)	3:30 PM	No injury	2	D1: (No improper driving) / D2: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner)		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)		V1: N / V2: W	Cloudy/Unkn own	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	25	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVENUE / MILFORD STREET					
4039665	02/12/2015	Property damage only (none injured)	7:16 AM	No injury	2	D1: (No improper driving) / D2: (Failed to yield right of way),(Visibility obstructed)		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Flashing traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)		V1: E / V2: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10802	-71.55331	1	MILFORD STREET					
4054249	05/19/2015	Property damage only (none injured)	2:16 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Not at junction	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Tractor/doubles)	V1:(No) / V2:(No)	V1: (No) / V2: (No)	Cloudy	No hit and run	V1:(Collision with parked motor vehicle) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	No, device not functionin g	V1:(Collision with parked motor vehicle) / V2:(Collision with motor vehicle in traffic)	42.10789	-71.55347		MILFORD STREET	NORTH AVENUE	75 feet W of			
4074724	05/12/2015	Property damage only (none injured)	3:26 PM	No injury	2	D1: (Inattention) / D2: (Unknown)	D2: Not Distracted	Collision with parked motor vehicle	Yes	Daylight	Rear-end	Dry	Not at junction	0	0	Traffic control signal	Two-way, not divided	V1: Backing / V2: Parked	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: W / V2: W	Clear	No hit and run	V1:(Collision with parked motor vehicle) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functionin g	V1:(Collision with parked motor vehicle) / V2:(Collision with motor vehicle in traffic)	42.10784	-71.55354		HASTINGS STREET / NORTH AVENUE / MILFORD STREET	MAIN STREET	75 feet W of		
4078518	06/06/2015	Property damage only (none injured)	2:26 PM	No injury	2	D1: (No improper driving) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Stop signs	Two-way, not divided	V1: Turning right / V2: Entering traffic lane	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: N	Cloudy/Unkn own	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10802	-71.55331	1	MILFORD STREET					
4078561	05/20/2015	Property damage only (none injured)	5:55 PM	No injury	2	D1: (Followed too closely) / D2: (Swerving or avoiding due to wind, slippery surface, vehicle, object, non-motorist in roadway, etc)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	0	No controls	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365	1	MILFORD STREET	HASTINGS STREET			
4103518	10/02/2015	Property damage only (none injured)	4:39 PM	No injury	2	D1: (No improper driving) / D2: (Illness)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: W	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET Rte 16 W / MILFORD STREET Rte 16 W					
4109739	10/27/2015	Property damage only (none injured)	7:44 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)		Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Dry	Not at junction	0	0	No controls	Two-way, divided, unprotected median	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10782	-71.55355		MILFORD STREET Rte 16 W	NORTH AVENUE	40 feet E of		
4130370	10/07/2015	Non-fatal injury - Possible	6:32 PM	Non-fatal injury - Possible	2	D1: (Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Dusk	Rear-end	Dry	Not at junction	0	1	No controls	Two-way, divided, unprotected median	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVENUE	HASTINGS STREET			
4130760	12/05/2015	Property damage only (none injured)	11:50 AM	No injury	2	D1: (Unknown) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: S	Clear/Unkn own	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365	1	MAIN STREET / NORTH AVENUE / MILFORD STREET	HASTINGS STREET				

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
4140397	10/19/2015	Property damage only (none injured)	6:42 PM	No injury	3	D1: (No improper driving) / D2: (Unknown) / D3: (Followed too closely)		Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility)) / V3:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No) / V3:(No)	V1: S / V2: S / V3: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	25	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / MILFORD STREET / HASTINGS STREET			
4148057	11/14/2015	Property damage only (none injured)	12:11 PM	No injury	2	D1: (Inattention),(Distracted) / D2: (No improper driving)	D1: Manually operating an electronic device / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET / MAIN STREET		
4148122	09/09/2015	Non-fatal injury - Possible	10:15 AM	Non-fatal injury - Possible	2	D1: (Inattention),(Followed too closely) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	1	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET / NORTH AVENUE		
4162376	12/31/2015	Property damage only (none injured)	4:44 PM	No injury	3	D1: (Inattention),(Followed too closely) / D2: (No improper driving) / D3: (No improper driving)		Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1:(No) / V2:(No) / V3:(No)	V1: E / V2: Not Reported / V3: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10772	-71.55367		HASTINGS STREET	MAIN STREET	10 feet W of	
4162379	12/18/2015	Property damage only (none injured)	4:25 PM	No injury	2	D1: (Disregarded traffic signs, signals, road markings),(Inattention) / D2: (No improper driving)		Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: E / V2: N	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET Rte 16 / MAIN STREET / NORTH AVENUE		
4168828	03/21/2016	Property damage only (none injured)	5:53 PM	No injury	1	D1: (Over-correcting/over-steering)		Collision with unknown fixed object	Yes	Daylight	Single vehicle crash	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning right	V1:(Tractor/semi-trailer)	V1:(No)	V1:(No)	V1: S	Clear	No hit and run	V1:(Collision with other fixed object (wall, building, tunnel, etc.))	No, school bus not involved	35	Yes, device functioning	V1:(Collision with utility pole),(Collision with other fixed object(wall, building, tunnel, etc.))	42.10774	-71.55365		HASTINGS STREET Rte 16 / MAIN STREET		
4175251	01/29/2016	Property damage only (none injured)	1:48 PM	No injury	2	D1: (Unknown) / D2: (Unknown)		Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	0	No controls	Unknown	V1: Backing / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: S / V2: N	Clear/Unknown	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	No	device not functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55366		HASTINGS STREET	NORTH AVENUE	
4192822	03/05/2016	Property damage only (none injured)	1:02 PM	No injury	2	D1: (Inattention),(Distracted) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Five-point or more	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10802	-71.55331	1	MILFORD STREET		
4192888	04/12/2016	Property damage only (none injured)	2:53 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / MILFORD STREET / HASTINGS STREET		
4195332	04/22/2016	Property damage only (none injured)	1:57 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)		Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	45	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET / NORTH AVENUE		
4216079	06/22/2016	Property damage only (none injured)	9:25 PM	No injury	2	D1: (Followed too closely),(Inattention) / D2: (No improper driving)	D1: Other activity (searching, eating, personal hygiene,	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET Rte 16 W / NORTH AVENUE		
4216082	06/20/2016	Property damage only (none injured)	7:47 AM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / NORTH AVENUE		
4238045	08/04/2016	Property damage only (none injured)	8:22 AM	No injury	2	D1: (Failed to yield right of way) / D2: (Failed to yield right of way)		Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Dry	Five-point or more	0	0	Stop signs	Two-way, not divided	V1: Turning left / V2: Entering traffic lane	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET Rte 16 / MAIN STREET / NORTH AVENUE		

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal			Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Travel		Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
															Fatal Injuries	Traffic Control Device Type	Trafficway Description					Directions (All Vehicles)	Clear													
4238837	07/30/2016	Non-fatal injury	4:21 PM	Non-fatal injury - Non-incapacitating	2	D1: (No improper driving) / D2: (Disregarded traffic signs, signals, road markings),(Inattention)	D1: Not Distracted / D2: Other activity (searching, eating, personal hygiene,	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	2	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: S / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVENUE / HASTINGS STREET / MAIN STREET			
4266605	09/29/2016	Property damage only (none injured)	7:34 AM	No injury	2	D1: (No improper driving) / D2: (Failure to keep in proper lane or running off road)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Single-unit truck (2-axle, 6-tires)) / V2:(Passenger car)	V1:(No) / V2:(Yes, other reason not disabled)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	25	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10799	-71.55334		MAIN STREET / MILFORD STREET				
4267026	09/25/2016	Non-fatal injury	3:40 PM	Non-fatal injury - Possible	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper driving)	D1: Other activity (searching, eating, personal hygiene,	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	2	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: N	Clear/Unkown	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10773	-71.55365	1	MAIN STREET				
4282841	10/06/2016	Non-fatal injury	2:11 PM	Non-fatal injury - Possible	3	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper driving) / D3: (No improper driving)	D2: Not Distracted / D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	1	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility)) / V3:(Light truck(van, mini-van, pickup, sport utility))	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled) / V3:(Yes, vehicle or trailer disabled)	V1: E / V2: S / V3: N	Clear/Unkown	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / NORTH AVENUE					
4286644	10/25/2016	Property damage only (none injured)	1:07 PM	No injury	2	D1: (No improper driving) / D2: (Operating vehicle in erratic, reckless,		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: N	Clear/Other	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / HASTINGS STREET				
4286646	10/22/2016	Property damage only (none injured)	10:55 AM	No injury	2	D1: (Followed too closely),(Inattention) / D2: (No improper driving)	D1: External distraction (outside the vehicle) / D2: External distraction	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET Rte 16 W / HASTINGS STREET Rte 16 / MAIN STREET			
4286651	09/23/2016	Property damage only (none injured)	4:56 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Five-point or more	0	0	Stop signs	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10802	-71.55331	1	MILFORD STREET			
4339723	03/07/2017	Property damage only (none injured)	9:10 AM	No injury	3	D1: (Failure to keep in proper lane or running off road),(Disregarded traffic signs, signals, road markings) / D2: (Unknown) / D3: (No improper driving)	D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Dry	Five-point or more	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Turning left / V3: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car) / V3:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No) / V3:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled) / V3:(No)	V1: E / V2: W / V3: N	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / MILFORD STREET Rte 16 / HASTINGS STREET Rte 16			
4339752	03/03/2017	Property damage only (none injured)	8:45 PM	No injury	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET / NORTH AVENUE			
4342973	02/08/2017	Property damage only (none injured)	8:30 AM	No injury	2	D1: (No improper driving) / D2: (Inattention)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Backing	V1:(Passenger car) / V2:(Bus seats for 16 or more, including driver)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Fog, smog, smoke/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	Yes, school bus involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365	1	MILFORD STREET	HASTINGS STREET		
4353158	04/03/2017	Property damage only (none injured)	6:20 AM	No injury	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET / MAIN STREET			
4362286	04/25/2017	Property damage only (none injured)	8:15 PM	No injury	2	D1: (No improper driving)	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Not reported	V1:(Passenger car)	V1:(No)	V1:(No)	V1: S / V2: Not Reported	Rain	Yes, hit and run	V1:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic)	42.10791	-71.5538		NORTH AVENUE	HASTINGS STREET Rte 16			
4384616	06/04/2017	Non-fatal injury	2:11 PM	Non-fatal injury - Incapacitating	2	D1: (Inattention),(Failed to yield right of way) / D2: (Unknown)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Not at junction	0	3	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Motorcycle)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: E	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET	NORTH AVENUE		

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Directions (All Vehicles)	Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
4397593	06/16/2017	Property damage only (none injured)	5:09 PM	No injury	2	D1: (Other improper action) / D2: (Other improper action)		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: N / V2: S	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET / MAIN STREET / NORTH AVENUE		
4397598	07/02/2017	Property damage only (none injured)	11:46 AM	No injury	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner),(Other	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET Rte 16 / NORTH AVENUE		
4407176	07/24/2017	Property damage only (none injured)	2:37 PM	No injury	2	D1: (Inattention),(Followed too closely) / D2: (Unknown)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Five-point or more	0	0	Stop signs	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Entering traffic lane	V1:(Passenger car) / V2:(Other e.g. farm equipment)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: N	Cloudy/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10799	-71.55334		MAIN STREET / MILFORD STREET Rte 16 E		
4421499	08/24/2017	Property damage only (none injured)	5:31 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: N / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	25	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD STREET / MAIN STREET / NORTH AVENUE		
4443230	10/09/2017	Property damage only (none injured)	7:16 AM	No injury	2	D1: (No improper driving) / D2: (Inattention)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST / MAIN ST		
4443234	09/09/2017	Non-fatal injury - Possible	10:40 AM	Non-fatal injury - Possible	2	D1: (Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Five-point or more	0	2	Stop signs	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, other reason not disabled)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10799	-71.55334		Rte 16 / MAIN STREET / MILFORD STREET		
4450444	10/10/2017	Property damage only (none injured)	7:32 AM	No injury	2	D1: (No improper driving) / D2: (Inattention)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST / MAIN ST		
4457076	10/24/2017	Property damage only (none injured)	6:18 AM	No injury	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Dawn	Angle	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, minivan, pickup, sport utility))	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: W / V2: E	Rain/Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	45	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10799	-71.55334		MILFORD ST / MAIN ST		
4469644	10/14/2017	Non-fatal injury - Non-incapacitating	4:41 PM	Non-fatal injury - Non-incapacitating	3	D1: (Inattention) / D2: (No improper driving) / D3: (No improper driving)	D2: Not Distracted / D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	5	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1:(No) / V2:(No) / V3:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled) / V3:(Yes, vehicle or trailer disabled)	V1: N / V2: E / V3: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / MILFORD STREET Rte 16 / HASTINGS STREET		
4481961	12/12/2017	Property damage only (none injured)	2:59 PM	No injury	2	D1: (Unknown) / D2: (Unknown)		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: W	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVENUE / MAIN STREET / MILFORD STREET		
4523465	02/08/2018	Property damage only (none injured)	9:12 AM	No injury	2	D1: (Disregarded traffic signs, signals, road markings),(Inattention) / D2: (No improper driving)	D1: Other activity, electronic device / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10798	-71.55335		MILFORD ST Rte 16 W / MAIN ST		
4523469	02/16/2018	Property damage only (none injured)	1:39 PM	No injury	1	D1: (Failure to keep in proper lane or running off road),(Other		Collision with unknown fixed object	Yes	Daylight	Single vehicle crash	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning right	V1:(Tractor/semi-trailer)	V1:(No)	V1:(No)	V1: N	Clear	No hit and run	V1:(Collision with other fixed object (wall, building, tunnel, etc.))	No, school bus not involved	35	Yes, device functioning	V1:(Collision with other fixed object(wall, building, tunnel, etc.))	42.10798	-71.55335		MILFORD ST / MAIN ST		
4523474	02/25/2018	Non-fatal injury - Possible	12:41 PM	Non-fatal injury - Possible	3	D1: (Disregarded traffic signs, signals, road markings),(Inattention) / D2: (No improper driving) / D3: (No improper driving)	D1: Talking on handheld electronic device / D2: Not Distracted / D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Wet	Five-point or more	0	1	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3: Turning left	V1:(Light truck(van, minivan, pickup, sport utility)) / V2:(Passenger car) / V3:(Passenger car)	V1:(No) / V2:(No) / V3:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled) / V3:(No)	V1: N / V2: S / V3: W	Cloudy/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic),(Collision with parked motor vehicle) V2:(Collision with motor vehicle in traffic) V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST Rte 16 W / NORTH AVE		
4523475	02/28/2018	Non-fatal injury - Possible	8:41 AM	Non-fatal injury - Possible	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper		Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	1	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Clear/Unknown	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST / NORTH		

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
4537273	01/24/2018	Property damage only (none injured)	7:50 AM	No injury	2	D1: (Other improper action) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Not at junction	0	0	No controls	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10785	-71.55337	6	MAIN ST	MILFORD ST Rte 16	50 feet S of
4537276	01/31/2018	Non-fatal injury	9:40 AM	Non-fatal injury - Possible	2	D1: (Followed too closely) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Snow	Four-way intersection	0	2	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10798	-71.55335		MAIN ST / MILFORD ST		
4537288	01/10/2018	Property damage only (none injured)	11:28 AM	No injury	2	D1: (Disregarded traffic signs, signals, road markings),(Inattention) / D2: (No improper driving)	D1: Manually operating an electronic device /	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Dry	Five-point or more	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 W / MAIN ST / HASTINGS ST Rte 16		
4537356	03/23/2018	Non-fatal injury	6:27 AM	Non-fatal injury - Possible	2	D1: (Unknown) / D2: (Unknown)		Collision with motor vehicle in traffic	Yes	Dawn	Angle	Dry	Four-way intersection	0	1	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: N / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST Rte 16 / MAIN ST		
4577853	06/08/2018	Property damage only (none injured)	3:41 PM	No injury	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (Operating		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Not at junction	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Cloudy/Unknown	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	25	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN STREET / HASTINGS STREET		
4577857	06/11/2018	Property damage only (none injured)	5:38 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10797	-71.55385		NORTH AVE	MILFORD ST Rte 16	100 feet N of
4581748	04/06/2018	Property damage only (none injured)	7:10 AM	No injury	2	D1: (Followed too closely),(Inattention) / D2: (No improper driving)		Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	T-intersection	0	0	Stop signs	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Single unit truck (2-axle, 6-tires))	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST Rte 16		
4581983	04/27/2018	Property damage only (none injured)	3:16 PM	No injury	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Bus (seats for 9-15 people, including driver))	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Cloudy/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	Yes, school bus involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10784	-71.55353		MILFORD ST	MAIN ST	50 feet E of
4581985	05/05/2018	Non-fatal injury	7:54 PM	Non-fatal injury - Non-incapacitating	2	D1: (No improper driving) / D2: (Failed to yield right of way)		Collision with motor vehicle in traffic	Yes	Dusk	Angle	Dry	Four-way intersection	0	2	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: E / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 / HASTINGS ST Rte 16 / MAIN ST		
4582001	05/25/2018	Property damage only (none injured)	3:46 PM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	No controls	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 / MAIN ST		
4632163	07/23/2018	Property damage only (none injured)	4:10 PM	No injury	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner) / D2: (No improper driving)	D2: Not Distracted	Collision with parked motor vehicle	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Parked	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: S	Clear	No hit and run	V1:(Collision with parked motor vehicle) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with parked motor vehicle) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVE / HASTINGS ST Rte 16		
4632165	07/24/2018	Property damage only (none injured)	3:34 PM	No injury	2	D1: (Followed too closely) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, unprotected median	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / HASTINGS ST		
4632180	08/22/2018	Property damage only (none injured)	4:19 PM	No injury	2	D1: (Disregarded traffic signs, signals, road markings),(Inattention) / D2: (No	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / HASTINGS ST Rte 16 / MILFORD ST Rte 16		
4632181	08/23/2018	Non-fatal injury	5:06 PM	Non-fatal injury - Non-incapacitating	2	D1: (Inattention) / D2: (No improper driving)	D1: Other activity (searching, eating, personal hygiene, etc.) / D2:	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	2	No controls	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10733	-71.55329		MAIN STREET	MILFORD STREET Rte 16 S	175 feet S of

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distracted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Directions (All Vehicles)	Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
4632185	09/13/2018	Property damage only (none injured)	6:24 PM	No injury	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET Rte 16 E / MILFORD STREET Rte 16 W / NORTH AVENUE		
4632193	10/24/2018	Property damage only (none injured)	10:38 AM	No injury	2	D1: (No improper driving) / D2: (Operating vehicle in erratic, reckless, careless, negligent or aggressive	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST / MILFORD ST		
4653646	12/05/2018	Property damage only (none injured)	10:12 AM	No injury	2	D1: (No improper driving) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: E / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST Rte 16 / MAIN ST		
4653648	12/12/2018	Property damage only (none injured)	3:29 PM	No injury	2	D1: (No improper driving) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, same direction	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	Yes, school bus involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / HASTINGS ST Rte 16 W		
4653653	12/15/2018	Property damage only (none injured)	4:02 PM	No injury	1	D1: (No improper driving)	D1: Not Distracted	Collision with animal - deer	Yes	Daylight	Single vehicle crash	Dry	Not at junction	0	0	No controls	Two-way, not divided	V1: Travelling straight ahead	V1:(Passenger car)	V1:(No)	V1:(No)	V1: E	Clear	No hit and run	V1:(Collision with animal - deer)	No, school bus not involved	50	Not reported	V1:(Collision with animal - deer)	42.10815	-71.55317		MILFORD ST Rte 16 E	MAIN ST	200 feet E of
4681554	02/12/2019	Property damage only (none injured)	3:27 PM	No injury	2	D1: (Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Snow	Four-way intersection	0	0	Flashing traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: E	Snow/Sleet, hail (freezing rain or drizzle)	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 / MAIN ST / NORTH AVE			
4715892	04/08/2019	Property damage only (none injured)	7:35 AM	No injury	3	D1: (Followed too closely),(Unknown) / D2: (No improper driving) / D3: (No improper driving)	D2: Not Distracted / D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Not at junction	0	0	Traffic control signal	Two-way, divided, unprotected median	V1: Travelling straight ahead / V2: Slowing or stopped in traffic / V3: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1:(No) / V2:(No) / V3:(No)	V1:(No) / V2:(No) / V3:(No)	V1: N / V2: N / V3: N	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10751	-71.55345	6	MAIN ST	MILFORD ST	100 feet S of	
4715898	04/26/2019	Non-fatal injury - Possible	7:12 AM	Non-fatal injury - Possible	3	D1: (Failed to yield right of way) / D2: (Unknown) / D3: (No improper driving)	D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Wet	Four-way intersection	0	3	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead / V3: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car) / V3:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No) / V3:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled) / V3:(No)	V1: S / V2: N / V3: W	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 / NORTH AVE / MAIN ST		
4715905	05/22/2019	Property damage only (none injured)	7:47 AM	No injury	2	D1: (Inattention) / D2: (No improper driving)		Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	T-intersection	0	0	Stop signs	Two-way, not divided	V1: Entering traffic lane / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST / MAIN ST			
4715908	05/28/2019	Non-fatal injury - Non-incapacitating	2:17 PM	Non-fatal injury - Non-incapacitating	2	D1: (No improper driving) / D2: (Failed to yield right of way),(No improper driving)	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Wet	Four-way intersection	0	1	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: N / V2: W	Cloudy/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic),(Collision with utility pole) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST		
4730346	06/06/2019	Property damage only (none injured)	8:15 AM	No injury	2	D1: (No improper driving) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction		Not at junction	0	0	No controls	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: W	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10807	-71.55324	1	MILFORD ST		
4730351	06/10/2019	Property damage only (none injured)	10:24 AM	No injury	2	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle		Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	No, device not functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVE / MILFORD ST		
4744161	07/03/2019	Property damage only (none injured)	2:31 PM	No injury	2	D1: (Failed to yield right of way) / D2: (Other improper action)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Overtaking/passing	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 W / HASTINGS ST Rte 16 E		
4744172	03/06/2019	Property damage only (none injured)	3:09 PM	No injury	2	D1: (Followed too closely) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	0	No controls	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Not reported	V1:(Collision with motor vehicle in traffic),(Ran off road right),(Collision with embankment) / V2:(Collision with motor vehicle in traffic)	42.10758	-71.55388	3	HASTINGS STREET Rte 16 E	MAIN STREET	500 feet W of	

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Distorted By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection	
4764441	08/18/2019	Property damage only (none injured)	8:41 PM	No injury	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Head-on	Dry	Not at junction	0	0	No controls	Two-way, divided, unprotected median	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, other reason not disabled) / V2:(Yes, other reason not disabled)	V1: W / V2: E	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10807	-71.55324	1	MILFORD ST			
4764444	08/22/2019	Property damage only (none injured)	8:28 PM	No injury	2	D1: (Unknown) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Sideswipe, opposite direction	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, divided, unprotected median	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST / NORTH AVE / HASTINGS ST			
4764466	08/31/2019	Property damage only (none injured)	11:45 AM	No injury	2	D1: (Failed to yield right of way) / D2: (Other improper action)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, opposite direction	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 / HASTINGS ST Rte 16 / NORTH AVE			
4765011	08/10/2019	Property damage only (none injured)	5:38 PM	No injury	2	D1: (Inattention),(Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Motorcycle)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET / NORTH AVENUE			
4765880	09/04/2019	Property damage only (none injured)	3:12 PM	No Apparent Injury (O)	2	D1: (Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 W / MAIN ST				
4810198	10/23/2019	Property damage only (none injured)	3:08 PM	No Apparent Injury (O)	2	D1: (Inattention),(Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Head-on	Dry	Driveway	0	0	No controls	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Light truck(van, mini-van, pickup, sport utility))	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Not reported	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10807	-71.55324	1	MILFORD ST			
4810200	10/29/2019	Property damage only (none injured)	5:54 PM	No Apparent Injury (O)	2	D1: (No improper driving) / D2: (Inattention)	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, divided, unprotected median	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: S / V2: S	Cloudy/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVE / HASTINGS ST			
4810220	12/14/2019	Non-fatal injury	11:19 AM	Possible Injury (C)	2	D1: (Distracted) / D2: (No improper driving)	D1: Other activity (searching, eating, personal hygiene,	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Not at junction	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Cloudy/Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST Rte 16 E / MILFORD ST Rte 16 E / MAIN ST			
4810314	10/17/2019	Non-fatal injury	6:46 AM	Possible Injury (C)	2	D1: (No improper driving) / D2: (Followed too closely),(Distracted)	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Wet	Four-way intersection	0	0	Stop signs	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: N / V2: N	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	No, device not functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365	1	MILFORD ST	MAIN ST		
4810315	10/21/2019	Non-fatal injury	12:01 PM	Suspected Minor Injury (B)	3	D1: (Disregarded traffic signs, signals, road markings) / D2: (No improper driving) / D3: (No improper driving)	D1: Not Distracted / D2: Not Distracted / D3: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead / V3: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car) / V3:(Passenger car)	V1:(No) / V2:(No) / V3:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled) / V3:(Yes, vehicle or trailer disabled)	V1: E / V2: N / V3: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic) / V3:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 W / MAIN ST / HASTINGS ST Rte 16 E			
4810321	11/04/2019	Property damage only (none injured)	12:46 PM	No Apparent Injury (O)	2	D1: (Followed too closely) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: W	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST Rte 16 W / HASTINGS ST Rte 16 W			
4849971	04/30/2020	Property damage only (none injured)	8:20 AM	No Apparent Injury (O)	2	D1: (Inattention),(Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Light truck(van, mini-van, pickup, sport utility)) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: S	Rain	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST / NORTH AVE			
4865709	06/29/2020	Property damage only (none injured)	1:05 PM	No Apparent Injury (O)	2	D1: (Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Five-point or more	0	0	Stop signs	One-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functioning	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST			

Crash Number	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	Number of Vehicles	Driver Contributing Circumstances (All Drivers)	Driver Disturbed By (All Vehicles)	First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash (All Vehicles)	Vehicle Configuration (All Vehicles)	Vehicle Emergency Use (All Vehicles)	Vehicle Towed From Scene (All Vehicles)	Vehicle Travel Directions (All Vehicles)	Weather Conditions	Hit and Run	Most Harmful Event (All Vehicles)	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events (All Vehicles)	Latitude	Longitude	Street Number	Roadway	Near Intersection Roadway	Distance and Direction From Intersection
4942402	11/04/2020	Property damage only (none injured)	4:03 PM	No Apparent Injury (0)	2	D1: (Followed too closely) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	0	No controls	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Not reported	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10766	-71.55359	1	MAIN ST	MILFORD ST Rte 16	5 feet S of
4942627	12/24/2020	Property damage only (none injured)	2:15 PM	No Apparent Injury (0)	2	D1: (Unknown) / D2: (Unknown)		Collision with motor vehicle in traffic	Yes	Daylight	Front to Front	Wet	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Turning left / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: W / V2: E	Cloudy/Unknown	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	40	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST		
4942629	08/02/2020	Property damage only (none injured)	12:52 PM	No Apparent Injury (0)	2	D1: (Disregarded traffic signs, signals, road markings) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: W / V2: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	No, device not functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		NORTH AVE / MILFORD ST Rte 16 W		
4942642	10/10/2020	Property damage only (none injured)	6:49 PM	No Apparent Injury (0)	2	D1: (No improper driving) / D2: (Failed to yield right of way)	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, divided, unprotected median	V1: Travelling straight ahead / V2: Turning left	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: N / V2: S	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MILFORD ST / NORTH AVE		
4942661	03/12/2021	Property damage only (none injured)	3:06 PM	No Apparent Injury (0)	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(Yes, vehicle or trailer disabled)	V1: E / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / HASTINGS ST / MILFORD ST		
4942667	01/19/2021	Property damage only (none injured)	11:16 AM	No Apparent Injury (0)	2	D1: (No improper driving) / D2: (Followed too closely)	D1: Not Distracted / D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Y-intersection	0	0	Stop signs	One-way, not divided	V1: Entering traffic lane / V2: Entering traffic lane	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST		
5041422	10/28/2021	Property damage only (none injured)	1:45 PM	No Apparent Injury (0)	1	D1: (Failure to keep in proper lane or running off road)	D1: Not Distracted	Collision with other light pole or other post/support	Yes	Daylight	Single vehicle crash	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, divided, unprotected median	V1: Turning left	V1:(Tractor/se mi-trailer)	V1:(No)	V1:(No)	V1: S	Clear/Cloudy	No hit and run	V1:(Collision with light pole or other post/support)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with light pole or other post/support)	42.10774	-71.55365		MILFORD STREET Rte 16 W / MAIN STREET		
5041429	10/17/2021	Property damage only (none injured)	1:31 PM	No Apparent Injury (0)	2	D1: (Distracted),(Inattention) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Single unit truck (2-axle, 6-tires))	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: E	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS ST Rte 16 E / MILFORD ST / MAIN ST		
5041430	09/07/2021	Property damage only (none injured)	2:25 PM	No Apparent Injury (0)	2	D1: (Failure to keep in proper lane or running off road) / D2: (No improper driving)		Collision with motor vehicle in traffic	Yes	Daylight	Sideswipe, same direction	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Slowing or stopped in traffic / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		HASTINGS STREET Rte SR16 E / MAIN STREET		
5041560	09/23/2021	Property damage only (none injured)	5:52 PM	No Apparent Injury (0)	2	D1: (Failed to yield right of way) / D2: (No improper driving)	D2: Not Distracted	Collision with motor vehicle in traffic	Yes	Daylight	Angle	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(No) / V2:(No)	V1: E / V2: N	Cloudy/Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / HASTINGS ST		
5041567	07/24/2021	Property damage only (none injured)	10:42 PM	No Apparent Injury (0)	2	D1: (No improper driving)	D1: Not Distracted	Collision with motor vehicle in traffic	Yes	Dark - lighted roadway	Rear-end	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1:(Passenger car) / V2:(Passenger car)	V1:(No)	V1:(No) / V2:(No)	V1: N / V2: N	Clear	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	35	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST		
5041586	07/18/2021	Property damage only (none injured)	7:24 PM	No Apparent Injury (0)	2	D1: (Operating vehicle in erratic, reckless, careless, negligent or aggressive manner),(Other	D1: Other activity (searching, eating, personal hygiene,	Collision with motor vehicle in traffic	Yes	Daylight	Rear to Side	Dry	Four-way intersection	0	0	Traffic control signal	Two-way, not divided	V1: Travelling straight ahead / V2: Slowing or stopped in traffic	V1:(Passenger car) / V2:(Passenger car)	V1:(No) / V2:(No)	V1:(Yes, vehicle or trailer disabled) / V2:(No)	V1: N / V2: N	Cloudy	No hit and run	V1:(Collision with motor vehicle in traffic) / V2:(Collision with motor vehicle in traffic)	No, school bus not involved	30	Yes, device functionin g	V1:(Collision with motor vehicle in traffic) V2:(Collision with motor vehicle in traffic)	42.10774	-71.55365		MAIN ST / MILFORD ST		

Crash Number	City/Town Name	Crash Date	Crash Severity	Crash Time	Crash Year	Max Injury Severity Reported	Number of Vehicles	Driver Contributing		First Harmful Event	Is Geocoded	Light Conditions	Manner of Collision	Road Surface Condition	Roadway Junction Type	Total Fatalities	Total Non-Fatal Injuries	Traffic Control Device Type	Trafficway Description	Vehicle Actions Prior to Crash	Vehicle Configuration	Vehicle Use	Vehicle Towed From Scene	Vehicle Travel Directions	Weather Conditions	Hit and Run	Most Harmful Event	Road Contributing Circumstances	School Bus Related	Speed Limit	Traffic Control Device Function	Vehicle Sequence of Events	Street Number	Roadway	Near Intersection	Distance and Direction From Intersection
								D1: (Inattention) / D2: (No improper driving)	Distracted Drivers																											
4078517	MENDON	06/04/2015	Non-fatal injury	8:55 AM	2015	Non-fatal injury - Non-incapacitating	2	D1: (Inattention) / D2: (No improper driving)	Distracted Drivers	Collision with motor vehicle in traffic	Yes	Daylight	Rear-end	Dry	Not at junction	0	1	No controls	Two-way, not divided	V1: Travelling straight ahead / V2: Travelling straight ahead	V1: (Passenger car) / V2: (Light truck/van, mini-van, pickup, sport utility))	V1: (No) / V2: (No)	V1: (Yes, vehicle or trailer) / V2: (No)	V1: E / V2: E	Clear	No hit and run	V1: (Collision with motor vehicle in traffic) / V2: (Collision with motor vehicle in traffic)	Work zone (construction involved)	No, school bus not involved	50	Not reported	V1: (Collision with motor vehicle in traffic) / V2: (Collision with motor vehicle in traffic)	49	MILFORD STREET		

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Mendon COUNT DATE : December 2021

DISTRICT : 3 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Milford Street, Hastings Street

MINOR STREET(S) : North Avenue, Main Street

**INTERSECTION
 DIAGRAM
 (Label Approaches)**



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	389	670	411	403		1,873

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

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

CRASH RATE CALCULATION :

1.99

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

Comments : _____

Project Title & Date: _____

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Mendon COUNT DATE : December 2021

DISTRICT : 3 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Milford Street

MINOR STREET(S) : Site Driveway

**INTERSECTION
 DIAGRAM
 (Label Approaches)**



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (AM/PM) :	411	642	1	0		1,054

" K " FACTOR : INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

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

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

Comments : _____

Project Title & Date: _____

Background Projects

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Proposed Dispensary, Mendon, MA

Land Use Code (LUC) 882 - Marijuana Dispensary

Source: Institute of Transportation Engineers (ITE) - 11th Edition

Average Vehicle Trips Ends vs. 1,000 Square Feet Gross Floor Area

Independent Variable (X): 2.000 ksf

AVERAGE WEEKDAY DAILY

$T = 211.120 * X$ 7 Studies, Avg size = 3 ksf
 $T = 211.120 * (2.000)$ $R^2 = NC, AR = 211.12 \text{ t/d}$
 $T = 422.24$
 $T = 422$ vehicle trips
with 50% (211 vpd) entering and 50% (211 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 10.54 * (X)$ 6 Studies, Avg size = 3 ksf
 $T = 10.54 * (2.000)$ $R^2 = NC, AR = 10.54 \text{ t/h}$
 $T = 21.08$
 $T = 21$ vehicle trips
with 52% (11 vph) entering and 48% (10 vph) exiting.

WEEKDAY MORNING PEAK HOUR OF GENERATOR

$T = 16.57 * (X)$ 7 Studies, Avg size = 3 ksf
 $T = 16.57 * (2.000)$ $R^2 = NC, AR = 16.57 \text{ t/h}$
 $T = 33.14$
 $T = 33$ vehicle trips
with 54% (18 vph) entering and 46% (15 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$T = 18.92 * X$ 16 Studies, Avg size = 2 ksf
 $T = 18.92 * (2.000)$ $R^2 = NC, AR = 18.92 \text{ t/h}$
 $T = 37.84$
 $T = 38$ vehicle trips
with 50% (19 vph) entering and 50% (19 vph) exiting.
9.50 9.50

WEEKDAY EVENING PEAK HOUR OF GENERATOR

$T = 24.57 * (X)$ 12 Studies, Avg size = 2 ksf
 $T = 24.57 * (2.000)$ $R^2 = NC, AR = 24.57 \text{ t/h}$
 $T = 49.14$
 $T = 50$ vehicle trips
with 49% (25 vph) entering and 51% (26 vph) exiting.

Proposed Dispensary, Mendon, MA

Land Use Code (LUC) 882 - Marijuana Dispensary

Source: Institute of Transportation Engineers (ITE) - 11th Edition

Average Vehicle Trips Ends vs. 1,000 Square Feet Gross Floor Area

Independent Variable (X): 2.000 ksf

SATURDAY DAILY

$T = 259.31 * X$ 4 Studies, Avg size = 2 ksf

$T = 259.31 * (2.000)$ $R^2 = NC, AR = 259.31 \text{ t/d}$

$T = 518.62$

$T = 518$ vehicle trips

with 50% (259 vpd) entering and 50% (259 vpd) exiting.

129.50

129.50

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$T = 28.85 * X$ 5 Studies, Avg size = 3 ksf

$T = 28.85 * (2.000)$ $R^2 = NC, AR = 28.85 \text{ t/h}$

$T = 57.70$

$T = 58$ vehicle trips

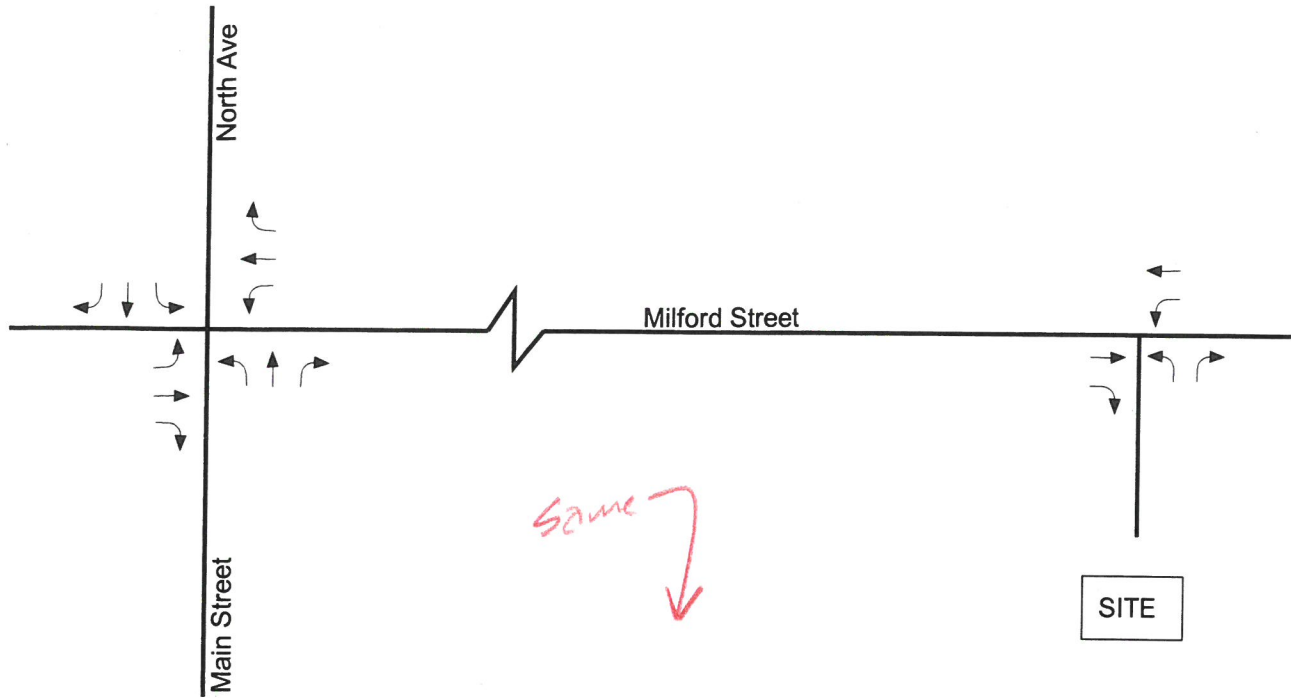
with 50% (29 vph) entering and 50% (29 vph) exiting.

2.34

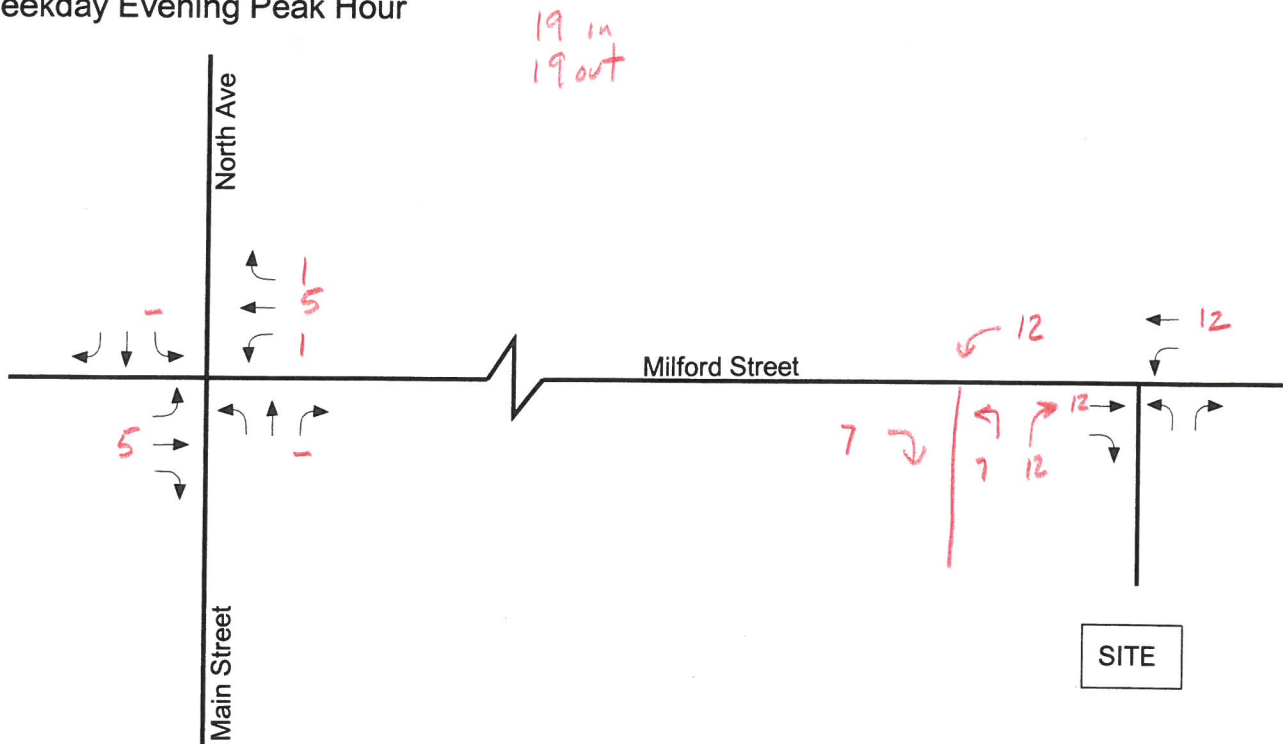
2.16

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Weekday Morning Peak Hour



Weekday Evening Peak Hour



N.T.S. 



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Proposed Adult Entertainment Site - club
Mendon, MA

Figure 2
2021 Existing Peak Hour Traffic Volumes

2nd of Marijuana Dispensing Background Project

Trip Generation Worksheets

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TRAFFIC IMPACT AND ACCESS STUDY

Proposed Showtime Entertainment Club, Mendon, Massachusetts

TRIP-GENERATION DATA

TRAFFIC/PARKING COUNTS
FOXY LADY, BROCKTON
Friday, October 17, 2008

12 PM - 2 PM Count

<u>Time</u>	<u>Enter</u>	<u>Exit</u>
12:00		
12:20	1	
12:35	1	
12:50	1	
12:55	1	
1:00	1	1
1:07	1	
1:10	1	1
1:15	1	1
1:17		1
1:20		1
1:21		1
1:22	1	1
1:24	1	
1:25	1	
1:27	1	1
1:31	1	1
1:32	1	
1:33	1	
1:41		1
1:43	1	
1:48	1	1
1:51	1	
1:52		1
1:59	1	1
TOTAL	19	13

Midday Peak Hour (1 - 2 PM), 15 entering vehicles, 13 exiting vehicles

Peak Hour of Adjacent Street Traffic: 1 - 2 PM

TRAFFIC/PARKING COUNTS
FOXY LADY, BROCKTON
 Friday, November 14, 2008

4 PM - 10 PM Count

<u>Time</u>	<u>Enter</u>	<u>Exit</u>
4:00		
4:01	1	
4:04	1	1
4:10	1	1
4:12	1	1
4:14	1	
4:15		1
4:18		1
4:19	1	
4:20		1
4:22	1	1
4:25	1	
4:30		1
4:34		1
4:35	1	
4:37	3	
4:41	1	1
4:42	1	
4:43	1	
4:50		1
4:51	1	
4:54		1
4:55		1
4:56		1
5:00		1
5:01	1	1
5:05	1	
5:07	1	
5:09		1
5:12	1	
5:16	1	
5:28	1	
5:30	1	
5:31	1	
5:34	1	
5:35		1
5:36	1	
5:38	1	
5:40		1
5:41	1	
5:44	1	
5:56	1	

**TRAFFIC/PARKING COUNTS
FOXY LADY, BROCKTON
Friday, November 14, 2008**

4 PM - 10 PM Count

<u>Time</u>	<u>Enter</u>	<u>Exit</u>
6:00		1
6:02		1
6:05	1	
6:06		1
6:07	1	1
6:08	1	
6:09	1	1
6:10	1	
6:11		1
6:12	1	
6:14	1	
6:16	1	
6:17		1
6:18		1
6:19	1	
6:22		1
6:24	1	
6:25	1	
6:26		1
6:27	1	
6:30		1
6:31		1
6:33		1
6:34		1
6:35		2
6:36		1
6:39		1
6:40	2	
6:41	1	
6:42		2
6:46	3	
6:51	1	
6:52		1
6:53	1	
6:54	1	1
6:57	1	
6:58	1	1
6:59	1	1
7:08	1	
7:12	1	
7:19		1
7:24	1	

TRAFFIC/PARKING COUNTS
FOXY LADY, BROCKTON
 Friday, November 14, 2008

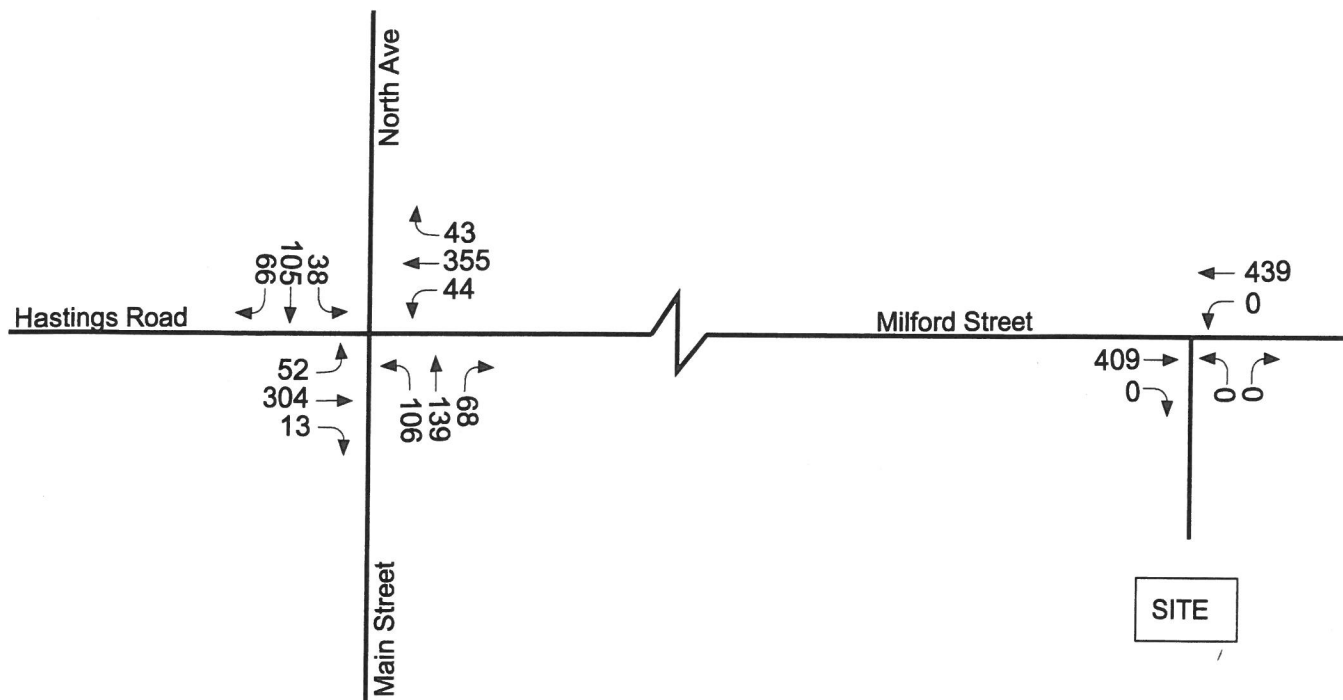
4 PM - 10 PM Count

<u>Time</u>	<u>Enter</u>	<u>Exit</u>
7:27		1
7:28	1	
7:29	1	
7:35	1	1
7:36		1
7:38	1	
7:47	1	1
7:50		1
7:56	1	
8:01	1	
8:02	1	
8:04	1	1
8:05	2	1
8:06	1	
8:08	1	
8:10		1
8:12	1	
8:14		1
8:15	1	
8:20	1	
8:21	1	
8:23	1	
8:25		1
8:28		2
8:29	1	1
8:33		1
8:36	1	
8:38	2	
8:43	1	
8:45	2	
8:46	1	1
8:48	1	
9:00	1	
9:01	1	
9:02	2	1
9:08	1	
9:10	1	
9:11	1	1
9:12	2	
9:15	1	
9:22		1
9:23	1	

Trip Distribution Worksheets

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Weekday Middy Peak Hour



Weekday Evening Peak Hour

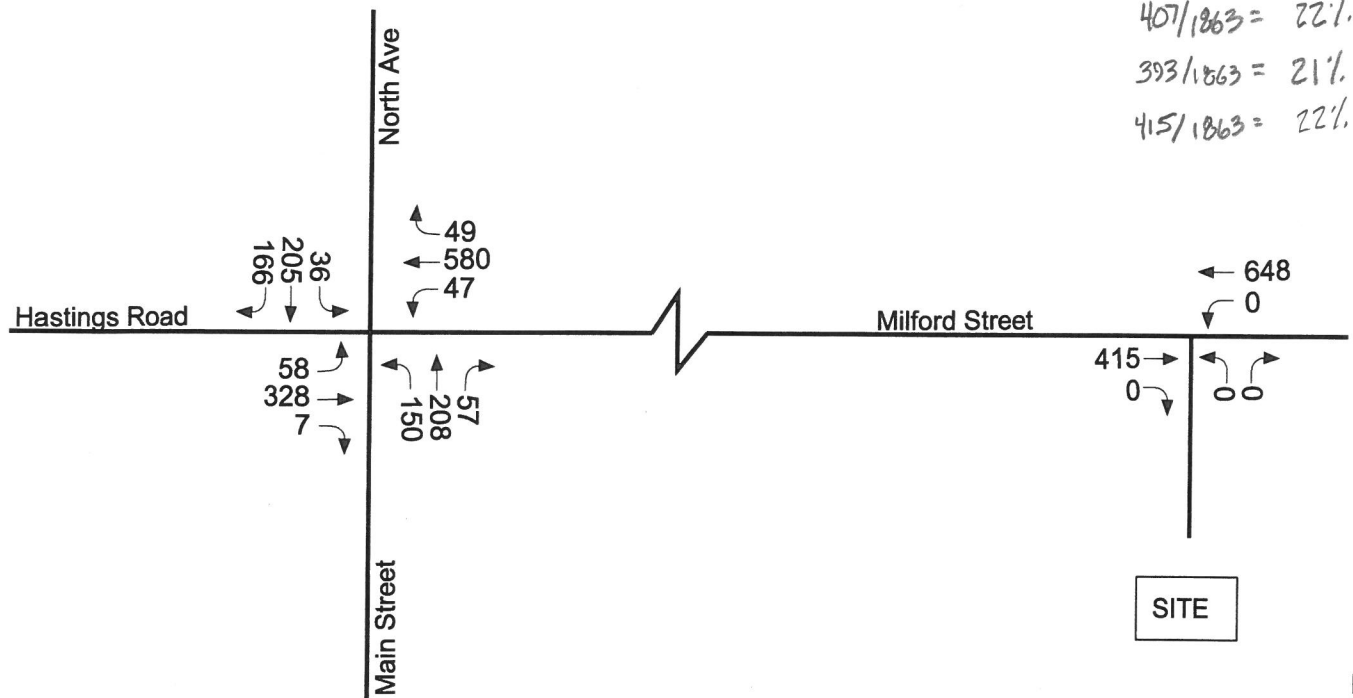
$\Sigma = 1863$

$648/1863 = 35\%$

$407/1863 = 22\%$

$393/1863 = 21\%$

$415/1863 = 22\%$



N.T.S. 

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Proposed Entertainment Club
Mendon, MA

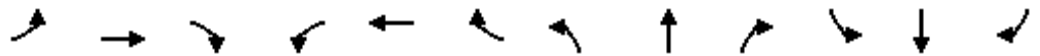
600 Unicorn Park Drive ▲ Woburn, MA 01801
Phone: 781.932.3201 ▲ Fax: 781.932.3413
www.baysideengineering.com

*Trap Distribution
Worksheet*

Capacity Analysis Worksheets

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30: Main Street/North Avenue & Hastings Road/Milford Street 2021 Existing Midday Peak Hour
Lanes, Volumes, Timings HCM 6th Edition



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Volume (vph)	52	304	13	44	355	43	106	139	68	38	105	66
Future Volume (vph)	52	304	13	44	355	43	106	139	68	38	105	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.995			0.987				0.850		0.957	
Fl _t Protected		0.993			0.995			0.979			0.991	
Satd. Flow (prot)	0	1803	0	0	1770	0	0	1567	1615	0	1715	0
Fl _t Permitted		0.898			0.934			0.788			0.895	
Satd. Flow (perm)	0	1630	0	0	1662	0	0	1261	1615	0	1549	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			14				96			47
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		950			3597			586			484	
Travel Time (s)		21.6			81.8			13.3			11.0	
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	8%	5%	5%	9%	17%	20%	0%	3%	9%	0%
Adj. Flow (vph)	57	334	14	47	378	46	149	196	96	40	112	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	0	0	471	0	0	345	96	0	222	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												

30: Main Street/North Avenue & Hastings Road/Milford Street 2021 Existing Midday Peak Hour
 Lanes, Volumes, Timings HCM 6th Edition

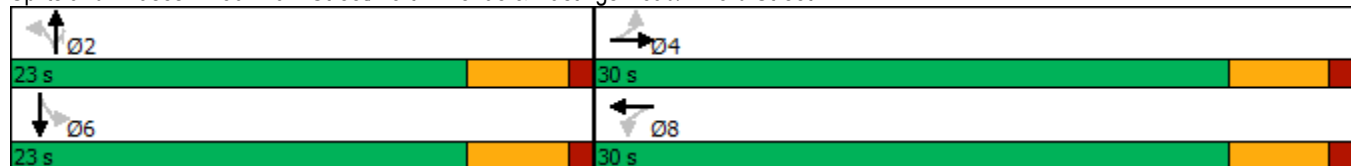


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0		30.0	30.0		23.0	23.0	23.0	23.0	23.0	
Total Split (%)	56.6%	56.6%		56.6%	56.6%		43.4%	43.4%	43.4%	43.4%	43.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		18.0	18.0	18.0	18.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		17.5			17.5			18.2	18.2			18.2
Actuated g/C Ratio		0.38			0.38			0.40	0.40			0.40
v/c Ratio		0.65			0.73			0.69	0.14			0.34
Control Delay		16.4			18.9			24.0	4.0			11.0
Queue Delay		0.0			0.0			0.0	0.0			0.0
Total Delay		16.4			18.9			24.0	4.0			11.0
LOS		B			B			C	A			B
Approach Delay		16.4			18.9			19.7				11.0
Approach LOS		B			B			B				B

Intersection Summary

Area Type:	Other
Cycle Length:	53
Actuated Cycle Length:	45.9
Natural Cycle:	55
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	17.3
Intersection LOS:	B
Intersection Capacity Utilization:	66.4%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 30: Main Street/North Avenue & Hastings Road/Milford Street



30: Main Street/North Avenue & Hastings Road/Milford Street 2021 Existing Midday Peak Hour
Queues

HCM 6th Edition



Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	405	471	345	96	222
v/c Ratio	0.65	0.73	0.69	0.14	0.34
Control Delay	16.4	18.9	24.0	4.0	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.4	18.9	24.0	4.0	11.0
Queue Length 50th (ft)	81	97	73	0	30
Queue Length 95th (ft)	148	176	129	14	87
Internal Link Dist (ft)	870	3517	506		404
Turn Bay Length (ft)					
Base Capacity (vph)	901	923	501	699	644
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.51	0.69	0.14	0.34
Intersection Summary					

30: Main Street/North Avenue & Hastings Road/Milford Street 2021 Existing Midday Peak Hour
 HCM 6th Signalized Intersection Summary HCM 6th Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Volume (veh/h)	52	304	13	44	355	43	106	139	68	38	105	66
Future Volume (veh/h)	52	304	13	44	355	43	106	139	68	38	105	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1781	1826	1826	1767	1648	1604	1900	1856	1767	1900
Adj Flow Rate, veh/h	57	334	14	47	378	46	149	196	0	40	112	70
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	8	5	5	9	17	20	0	3	9	0
Cap, veh/h	148	528	21	127	505	58	325	367		167	391	211
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.42	0.42	0.00	0.42	0.42	0.42
Sat Flow, veh/h	149	1536	60	99	1469	170	485	871	1610	159	928	501
Grp Volume(v), veh/h	405	0	0	471	0	0	345	0	0	222	0	0
Grp Sat Flow(s),veh/h/ln	1746	0	0	1738	0	0	1356	0	1610	1588	0	0
Q Serve(g_s), s	0.0	0.0	0.0	2.1	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.1	0.0	0.0	10.1	0.0	0.0	7.8	0.0	0.0	3.8	0.0	0.0
Prop In Lane	0.14		0.03	0.10		0.10	0.43		1.00	0.18		0.32
Lane Grp Cap(c), veh/h	697	0	0	691	0	0	693	0		769	0	0
V/C Ratio(X)	0.58	0.00	0.00	0.68	0.00	0.00	0.50	0.00		0.29	0.00	0.00
Avail Cap(c_a), veh/h	1087	0	0	1092	0	0	693	0		769	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.8	0.0	0.0	12.5	0.0	0.0	9.2	0.0	0.0	8.2	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.2	0.0	0.0	2.6	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	3.3	0.0	0.0	2.2	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	0.0	13.7	0.0	0.0	11.8	0.0	0.0	9.2	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A		A	A	A
Approach Vol, veh/h		405			471			345	A		222	
Approach Delay, s/veh		12.6			13.7			11.8			9.2	
Approach LOS		B			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		19.7		23.0		19.7				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		18.0		25.0		18.0		25.0				
Max Q Clear Time (g_c+I1), s		9.8		10.1		5.8		12.1				
Green Ext Time (p_c), s		1.4		2.3		1.0		2.5				

Intersection Summary

HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

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

30: Main Street/North Avenue & Hastings Road/Milford Street 2028 No-Build Midday Peak Hour
 Lanes, Volumes, Timings HCM 6th Edition



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	320	13	47	373	46	110	144	71	40	109	68
Future Volume (vph)	54	320	13	47	373	46	110	144	71	40	109	68
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.984			0.950			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1813	0	1719	1773	0	1543	1592	0	1752	1697	0
Flt Permitted	0.291			0.399			0.639			0.514		
Satd. Flow (perm)	532	1813	0	722	1773	0	1038	1592	0	948	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			11			39			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		950			3597			586			484	
Travel Time (s)		21.6			81.8			13.3			11.0	
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	8%	5%	5%	9%	17%	20%	0%	3%	9%	0%
Adj. Flow (vph)	59	352	14	50	397	49	155	203	100	43	116	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	366	0	50	446	0	155	303	0	43	188	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

30: Main Street/North Avenue & Hastings Road/Milford Street 2028 No-Build Midday Peak Hour
 Lanes, Volumes, Timings HCM 6th Edition

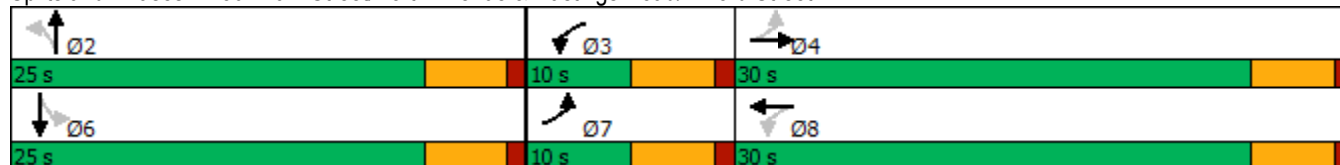


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		23.0	23.0		23.0	23.0	
Total Split (s)	10.0	30.0		10.0	30.0		25.0	25.0		25.0	25.0	
Total Split (%)	15.4%	46.2%		15.4%	46.2%		38.5%	38.5%		38.5%	38.5%	
Maximum Green (s)	5.0	25.0		5.0	25.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	20.7	18.1		20.7	18.1		20.8	20.8		20.8	20.8	
Actuated g/C Ratio	0.38	0.33		0.38	0.33		0.38	0.38		0.38	0.38	
v/c Ratio	0.19	0.61		0.14	0.75		0.39	0.48		0.12	0.28	
Control Delay	9.3	20.2		8.6	25.0		20.2	17.3		16.6	13.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.3	20.2		8.6	25.0		20.2	17.3		16.6	13.0	
LOS	A	C		A	C		C	B		B	B	
Approach Delay		18.7			23.3			18.3			13.7	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 54.5
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 19.3
 Intersection LOS: B
 Intersection Capacity Utilization 59.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 30: Main Street/North Avenue & Hastings Road/Milford Street



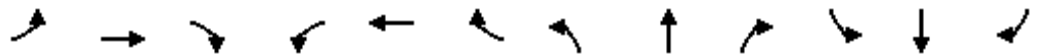
30: Main Street/North Avenue & Hastings Road/Milford Street 2028 No-Build Midday Peak Hour
Queues

HCM 6th Edition



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	366	50	446	155	303	43	188
v/c Ratio	0.19	0.61	0.14	0.75	0.39	0.48	0.12	0.28
Control Delay	9.3	20.2	8.6	25.0	20.2	17.3	16.6	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	20.2	8.6	25.0	20.2	17.3	16.6	13.0
Queue Length 50th (ft)	10	107	9	137	42	74	10	35
Queue Length 95th (ft)	25	180	22	229	75	113	34	88
Internal Link Dist (ft)		870		3517		506		404
Turn Bay Length (ft)	200		200		200		200	
Base Capacity (vph)	316	867	368	852	396	632	362	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.42	0.14	0.52	0.39	0.48	0.12	0.28
Intersection Summary								

30: Main Street/North Avenue & Hastings Road/Milford Street 2028 No-Build Midday Peak Hour
 HCM 6th Signalized Intersection Summary HCM 6th Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	320	13	47	373	46	110	144	71	40	109	68
Future Volume (veh/h)	54	320	13	47	373	46	110	144	71	40	109	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1781	1826	1826	1767	1648	1604	1900	1856	1767	1900
Adj Flow Rate, veh/h	59	352	14	50	397	49	155	203	0	43	116	72
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	8	5	5	9	17	20	0	3	9	0
Cap, veh/h	296	546	22	353	486	60	432	587		453	374	232
Arrive On Green	0.05	0.31	0.31	0.05	0.30	0.30	0.37	0.37	0.00	0.37	0.37	0.37
Sat Flow, veh/h	1753	1758	70	1739	1594	197	1053	1604	0	1170	1020	633
Grp Volume(v), veh/h	59	0	366	50	0	446	155	203	0	43	0	188
Grp Sat Flow(s),veh/h/ln	1753	0	1828	1739	0	1790	1053	1604	0	1170	0	1653
Q Serve(g_s), s	1.2	0.0	9.4	1.0	0.0	12.6	6.7	5.0	0.0	1.5	0.0	4.4
Cycle Q Clear(g_c), s	1.2	0.0	9.4	1.0	0.0	12.6	11.2	5.0	0.0	6.5	0.0	4.4
Prop In Lane	1.00		0.04	1.00		0.11	1.00		0.00	1.00		0.38
Lane Grp Cap(c), veh/h	296	0	567	353	0	546	432	587		453	0	605
V/C Ratio(X)	0.20	0.00	0.65	0.14	0.00	0.82	0.36	0.35		0.09	0.00	0.31
Avail Cap(c_a), veh/h	361	0	837	428	0	820	432	587		453	0	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	16.2	12.6	0.0	17.6	16.4	12.6	0.0	14.9	0.0	12.4
Incr Delay (d2), s/veh	0.3	0.0	1.2	0.2	0.0	4.0	2.3	1.6	0.0	0.4	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.7	0.4	0.0	5.2	1.7	1.8	0.0	0.4	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	17.5	12.7	0.0	21.6	18.7	14.2	0.0	15.3	0.0	13.7
LnGrp LOS	B	A	B	B	A	C	B	B		B	A	B
Approach Vol, veh/h		425			496			358	A		231	
Approach Delay, s/veh		16.9			20.7			16.1			14.0	
Approach LOS		B			C			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	7.7	21.9		25.0	8.0	21.6				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		20.0	5.0	25.0		20.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s		13.2	3.0	11.4		8.5	3.2	14.6				
Green Ext Time (p_c), s		1.0	0.0	1.8		0.9	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

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

6: Site Driveway & Milford Street
Lanes, Volumes, Timings

2028 Build Midday Peak Hour
HCM 6th Edition



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	436	10	5	467	8	5
Future Volume (vph)	436	10	5	467	8	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.997			0.952		
Fl _t Protected				0.969		
Satd. Flow (prot)	1823	0	0	1828	1753	0
Fl _t Permitted				0.969		
Satd. Flow (perm)	1823	0	0	1828	1753	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	3597			290	245	
Travel Time (s)	81.8			6.6	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	474	11	5	508	9	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	485	0	0	513	14	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	436	10	5	467	8	5
Future Vol, veh/h	436	10	5	467	8	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	0	0	4	0	0
Mvmt Flow	474	11	5	508	9	5

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	485	0	998
Stage 1	-	-	-	-	480
Stage 2	-	-	-	-	518
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1088	-	273
Stage 1	-	-	-	-	627
Stage 2	-	-	-	-	602
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1088	-	271
Mov Cap-2 Maneuver	-	-	-	-	271
Stage 1	-	-	-	-	627
Stage 2	-	-	-	-	598

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	16
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	342	-	-	1088	-
HCM Lane V/C Ratio	0.041	-	-	0.005	-
HCM Control Delay (s)	16	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

30: Main Street/North Avenue & Hastings Road/Milford Street 2028 Build Midday Peak Hour
 Lanes, Volumes, Timings HCM 6th Edition



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	323	13	50	375	49	110	144	74	44	109	68
Future Volume (vph)	54	323	13	50	375	49	110	144	74	44	109	68
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.983			0.949			0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1736	1813	0	1719	1771	0	1543	1592	0	1752	1697	0
Flt Permitted	0.286			0.396			0.639			0.508		
Satd. Flow (perm)	522	1813	0	717	1771	0	1038	1592	0	937	1697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			12			41			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		950			3597			586			484	
Travel Time (s)		21.6			81.8			13.3			11.0	
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	8%	5%	5%	9%	17%	20%	0%	3%	9%	0%
Adj. Flow (vph)	59	355	14	53	399	52	155	203	104	47	116	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	369	0	53	451	0	155	307	0	47	188	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

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 Lanes, Volumes, Timings HCM 6th Edition

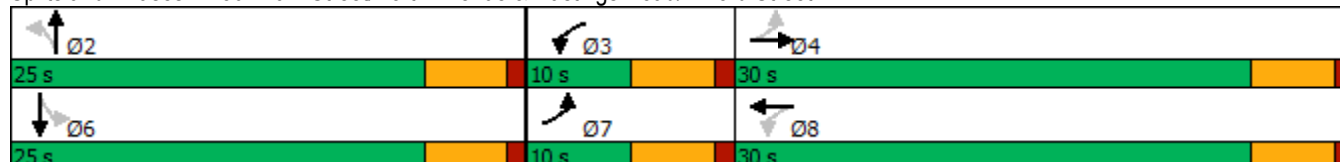


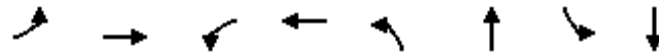
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		23.0	23.0		23.0	23.0	
Total Split (s)	10.0	30.0		10.0	30.0		25.0	25.0		25.0	25.0	
Total Split (%)	15.4%	46.2%		15.4%	46.2%		38.5%	38.5%		38.5%	38.5%	
Maximum Green (s)	5.0	25.0		5.0	25.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	20.8	18.2		20.8	18.2		20.8	20.8		20.8	20.8	
Actuated g/C Ratio	0.38	0.33		0.38	0.33		0.38	0.38		0.38	0.38	
v/c Ratio	0.19	0.61		0.14	0.76		0.39	0.49		0.13	0.28	
Control Delay	9.3	20.2		8.7	25.1		20.3	17.4		16.8	13.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	9.3	20.2		8.7	25.1		20.3	17.4		16.8	13.1	
LOS	A	C		A	C		C	B		B	B	
Approach Delay		18.7			23.4			18.4			13.8	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 54.6
 Natural Cycle: 65
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 19.4 Intersection LOS: B
 Intersection Capacity Utilization 59.8% ICU Level of Service B
 Analysis Period (min) 15

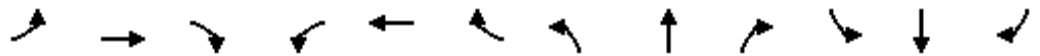
Splits and Phases: 30: Main Street/North Avenue & Hastings Road/Milford Street





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	369	53	451	155	307	47	188
v/c Ratio	0.19	0.61	0.14	0.76	0.39	0.49	0.13	0.28
Control Delay	9.3	20.2	8.7	25.1	20.3	17.4	16.8	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	20.2	8.7	25.1	20.3	17.4	16.8	13.1
Queue Length 50th (ft)	10	108	9	139	43	75	12	35
Queue Length 95th (ft)	25	182	23	232	75	114	37	88
Internal Link Dist (ft)		870		3517		506		404
Turn Bay Length (ft)	200		200		200		200	
Base Capacity (vph)	314	865	368	849	395	631	356	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.43	0.14	0.53	0.39	0.49	0.13	0.28
Intersection Summary								

30: Main Street/North Avenue & Hastings Road/Milford Street 2028 Build Midday Peak Hour
 HCM 6th Signalized Intersection Summary HCM 6th Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	323	13	50	375	49	110	144	74	44	109	68
Future Volume (veh/h)	54	323	13	50	375	49	110	144	74	44	109	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1781	1826	1826	1767	1648	1604	1900	1856	1767	1900
Adj Flow Rate, veh/h	59	355	14	53	399	52	155	203	0	47	116	72
Peak Hour Factor	0.91	0.91	0.91	0.94	0.94	0.94	0.71	0.71	0.71	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	8	5	5	9	17	20	0	3	9	0
Cap, veh/h	295	547	22	355	487	63	430	585		450	372	231
Arrive On Green	0.05	0.31	0.31	0.05	0.31	0.31	0.36	0.36	0.00	0.36	0.36	0.36
Sat Flow, veh/h	1753	1759	69	1739	1583	206	1053	1604	0	1170	1020	633
Grp Volume(v), veh/h	59	0	369	53	0	451	155	203	0	47	0	188
Grp Sat Flow(s),veh/h/ln	1753	0	1828	1739	0	1789	1053	1604	0	1170	0	1653
Q Serve(g_s), s	1.2	0.0	9.6	1.1	0.0	12.8	6.8	5.0	0.0	1.7	0.0	4.5
Cycle Q Clear(g_c), s	1.2	0.0	9.6	1.1	0.0	12.8	11.2	5.0	0.0	6.7	0.0	4.5
Prop In Lane	1.00		0.04	1.00		0.12	1.00		0.00	1.00		0.38
Lane Grp Cap(c), veh/h	295	0	569	355	0	550	430	585		450	0	603
V/C Ratio(X)	0.20	0.00	0.65	0.15	0.00	0.82	0.36	0.35		0.10	0.00	0.31
Avail Cap(c_a), veh/h	360	0	834	425	0	816	430	585		450	0	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	16.3	12.5	0.0	17.6	16.5	12.7	0.0	15.1	0.0	12.5
Incr Delay (d2), s/veh	0.3	0.0	1.3	0.2	0.0	4.2	2.3	1.6	0.0	0.5	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.7	0.4	0.0	5.3	1.7	1.8	0.0	0.5	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	17.6	12.7	0.0	21.8	18.9	14.3	0.0	15.6	0.0	13.8
LnGrp LOS	B	A	B	B	A	C	B	B		B	A	B
Approach Vol, veh/h		428			504			358	A		235	
Approach Delay, s/veh		17.0			20.8			16.3			14.2	
Approach LOS		B			C			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	7.8	22.1		25.0	8.0	21.9				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		20.0	5.0	25.0		20.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s		13.2	3.1	11.6		8.7	3.2	14.8				
Green Ext Time (p_c), s		1.0	0.0	1.8		0.9	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

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

30: Main Street/North Avenue & Hastings Road/Milford Street
Lanes, Volumes, Timings

2021 Existing PM Peak Hour
HCM 6th Edition



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Volume (vph)	58	328	7	47	580	49	150	208	57	36	205	166
Future Volume (vph)	58	328	7	47	580	49	150	208	57	36	205	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.997			0.990				0.850		0.945	
Fl _t Protected		0.993			0.997			0.979			0.996	
Satd. Flow (prot)	0	1850	0	0	1816	0	0	1813	1538	0	1748	0
Fl _t Permitted		0.842			0.947			0.572			0.937	
Satd. Flow (perm)	0	1569	0	0	1725	0	0	1059	1538	0	1644	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			10				62		71	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		950			3597			586			484	
Travel Time (s)		21.6			81.8			13.3			11.0	
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	2%	0%	4%	3%	6%	2%	3%	5%	0%	3%	2%
Adj. Flow (vph)	64	360	8	51	630	53	163	226	62	41	236	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	432	0	0	734	0	0	389	62	0	468	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												

30: Main Street/North Avenue & Hastings Road/Milford Street
Lanes, Volumes, Timings

2021 Existing PM Peak Hour
HCM 6th Edition

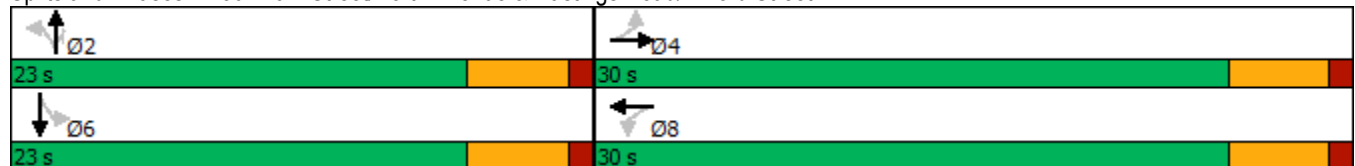


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		23.0	23.0	23.0	23.0	23.0	
Total Split (s)	30.0	30.0		30.0	30.0		23.0	23.0	23.0	23.0	23.0	
Total Split (%)	56.6%	56.6%		56.6%	56.6%		43.4%	43.4%	43.4%	43.4%	43.4%	
Maximum Green (s)	25.0	25.0		25.0	25.0		18.0	18.0	18.0	18.0	18.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		5.0			5.0			5.0	5.0		5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		23.8			23.8			18.0	18.0			18.0
Actuated g/C Ratio		0.46			0.46			0.35	0.35			0.35
v/c Ratio		0.60			0.92			1.06	0.11			0.76
Control Delay		14.6			33.5			86.7	4.6			23.5
Queue Delay		0.0			0.0			0.0	0.0			0.0
Total Delay		14.6			33.5			86.7	4.6			23.5
LOS		B			C			F	A			C
Approach Delay		14.6			33.5			75.4				23.5
Approach LOS		B			C			E				C

Intersection Summary

Area Type: Other
 Cycle Length: 53
 Actuated Cycle Length: 51.8
 Natural Cycle: 75
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 36.4
 Intersection Capacity Utilization 95.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F

Splits and Phases: 30: Main Street/North Avenue & Hastings Road/Milford Street





Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	432	734	389	62	468
v/c Ratio	0.60	0.92	1.06	0.11	0.76
Control Delay	14.6	33.5	86.7	4.6	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	33.5	86.7	4.6	23.5
Queue Length 50th (ft)	91	192	~143	0	108
Queue Length 95th (ft)	166	#399	#279	19	#229
Internal Link Dist (ft)	870	3517	506		404
Turn Bay Length (ft)					
Base Capacity (vph)	759	838	368	575	618
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.88	1.06	0.11	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

30: Main Street/North Avenue & Hastings Road/Milford Street
 HCM 6th Signalized Intersection Summary

2021 Existing PM Peak Hour
 HCM 6th Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Volume (veh/h)	58	328	7	47	580	49	150	208	57	36	205	166
Future Volume (veh/h)	58	328	7	47	580	49	150	208	57	36	205	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1841	1856	1811	1870	1856	1826	1900	1856	1870
Adj Flow Rate, veh/h	64	360	8	51	630	53	163	226	0	41	236	191
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	0	2	0	4	3	6	2	3	5	0	3	2
Cap, veh/h	144	656	14	107	714	58	256	274		107	329	248
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.35	0.35	0.00	0.35	0.35	0.35
Sat Flow, veh/h	140	1444	30	71	1573	128	446	781	1547	86	937	706
Grp Volume(v), veh/h	432	0	0	734	0	0	389	0	0	468	0	0
Grp Sat Flow(s),veh/h/ln	1615	0	0	1772	0	0	1227	0	1547	1729	0	0
Q Serve(g_s), s	0.0	0.0	0.0	10.1	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	0.0	19.6	0.0	0.0	15.7	0.0	0.0	12.3	0.0	0.0
Prop In Lane	0.15		0.02	0.07		0.07	0.42		1.00	0.09		0.41
Lane Grp Cap(c), veh/h	813	0	0	879	0	0	530	0		683	0	0
V/C Ratio(X)	0.53	0.00	0.00	0.83	0.00	0.00	0.73	0.00		0.68	0.00	0.00
Avail Cap(c_a), veh/h	865	0	0	938	0	0	530	0		683	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.0	0.0	0.0	12.9	0.0	0.0	15.7	0.0	0.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	6.3	0.0	0.0	8.7	0.0	0.0	5.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	7.5	0.0	0.0	5.0	0.0	0.0	5.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	0.0	0.0	19.2	0.0	0.0	24.4	0.0	0.0	20.3	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A		C	A	A
Approach Vol, veh/h		432			734			389	A			468
Approach Delay, s/veh		10.5			19.2			24.4				20.3
Approach LOS		B			B			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		28.3		23.0		28.3				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		18.0		25.0		18.0		25.0				
Max Q Clear Time (g_c+I1), s		17.7		10.5		14.3		21.6				
Green Ext Time (p_c), s		0.1		2.6		1.1		1.6				

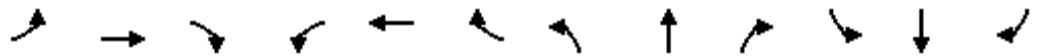
Intersection Summary

HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

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

30: Main Street/North Avenue & Hastings Road/Milford Street 2028 No-Build PM Peak Hour
 Lanes, Volumes, Timings HCM 6th Edition



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	345	7	50	608	52	155	215	60	38	212	172
Future Volume (vph)	60	345	7	50	608	52	155	215	60	38	212	172
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.988			0.967			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1858	0	1736	1818	0	1770	1776	0	1805	1729	0
Flt Permitted	0.159			0.419			0.280			0.475		
Satd. Flow (perm)	302	1858	0	765	1818	0	522	1776	0	902	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			8			22			65	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		950			3597			586			484	
Travel Time (s)		21.6			81.8			13.3			11.0	
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	2%	0%	4%	3%	6%	2%	3%	5%	0%	3%	2%
Adj. Flow (vph)	66	379	8	54	661	57	168	234	65	44	244	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	387	0	54	718	0	168	299	0	44	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

30: Main Street/North Avenue & Hastings Road/Milford Street
Lanes, Volumes, Timings

2028 No-Build PM Peak Hour
HCM 6th Edition

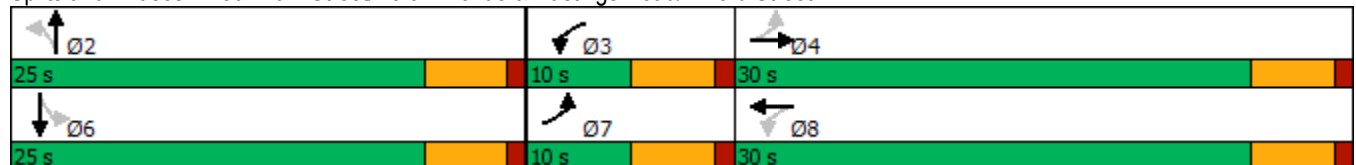


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		23.0	23.0		23.0	23.0	
Total Split (s)	10.0	30.0		10.0	30.0		25.0	25.0		25.0	25.0	
Total Split (%)	15.4%	46.2%		15.4%	46.2%		38.5%	38.5%		38.5%	38.5%	
Maximum Green (s)	5.0	25.0		5.0	25.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	28.0	25.2		28.0	25.2		20.1	20.1		20.1	20.1	
Actuated g/C Ratio	0.46	0.41		0.46	0.41		0.33	0.33		0.33	0.33	
v/c Ratio	0.25	0.50		0.13	0.95		0.98	0.50		0.15	0.72	
Control Delay	10.1	17.2		8.2	44.8		93.3	19.7		17.8	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.1	17.2		8.2	44.8		93.3	19.7		17.8	24.8	
LOS	B	B		A	D		F	B		B	C	
Approach Delay		16.1			42.2			46.2			24.2	
Approach LOS		B			D			D			C	

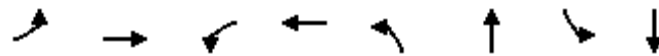
Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 61
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 33.6
 Intersection LOS: C
 Intersection Capacity Utilization 86.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 30: Main Street/North Avenue & Hastings Road/Milford Street



Queues



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	387	54	718	168	299	44	442
v/c Ratio	0.25	0.50	0.13	0.95	0.98	0.50	0.15	0.72
Control Delay	10.1	17.2	8.2	44.8	93.3	19.7	17.8	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	17.2	8.2	44.8	93.3	19.7	17.8	24.8
Queue Length 50th (ft)	11	115	9	~287	~74	89	13	134
Queue Length 95th (ft)	27	191	23	#504	#181	159	34	#251
Internal Link Dist (ft)		870		3517		506		404
Turn Bay Length (ft)	200		200		200		200	
Base Capacity (vph)	262	767	431	754	172	600	297	614
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.50	0.13	0.95	0.98	0.50	0.15	0.72

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

30: Main Street/North Avenue & Hastings Road/Milford Street
 HCM 6th Signalized Intersection Summary

2028 No-Build PM Peak Hour
 HCM 6th Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	345	7	50	608	52	155	215	60	38	212	172
Future Volume (veh/h)	60	345	7	50	608	52	155	215	60	38	212	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1841	1856	1811	1870	1856	1826	1900	1856	1870
Adj Flow Rate, veh/h	66	379	8	54	661	57	168	234	0	44	244	198
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	0	2	0	4	3	6	2	3	5	0	3	2
Cap, veh/h	214	730	15	436	664	57	187	585		366	299	243
Arrive On Green	0.05	0.40	0.40	0.05	0.39	0.39	0.32	0.32	0.00	0.32	0.32	0.32
Sat Flow, veh/h	1810	1825	39	1753	1684	145	947	1856	0	1165	948	769
Grp Volume(v), veh/h	66	0	387	54	0	718	168	234	0	44	0	442
Grp Sat Flow(s),veh/h/ln	1810	0	1863	1753	0	1829	947	1856	0	1165	0	1717
Q Serve(g_s), s	1.3	0.0	10.0	1.1	0.0	24.8	4.9	6.3	0.0	2.0	0.0	15.1
Cycle Q Clear(g_c), s	1.3	0.0	10.0	1.1	0.0	24.8	20.0	6.3	0.0	8.2	0.0	15.1
Prop In Lane	1.00		0.02	1.00		0.08	1.00		0.00	1.00		0.45
Lane Grp Cap(c), veh/h	214	0	745	436	0	721	187	585		366	0	541
V/C Ratio(X)	0.31	0.00	0.52	0.12	0.00	1.00	0.90	0.40		0.12	0.00	0.82
Avail Cap(c_a), veh/h	258	0	745	490	0	721	187	585		366	0	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	14.4	10.9	0.0	19.2	30.6	17.0	0.0	20.2	0.0	20.0
Incr Delay (d2), s/veh	0.8	0.0	0.6	0.1	0.0	32.4	43.3	2.0	0.0	0.7	0.0	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.9	0.4	0.0	15.7	4.7	2.8	0.0	0.6	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	15.1	11.1	0.0	51.6	73.9	19.1	0.0	20.9	0.0	32.8
LnGrp LOS	B	A	B	B	A	D	E	B		C	A	C
Approach Vol, veh/h		453			772			402	A		486	
Approach Delay, s/veh		15.2			48.8			42.0			31.8	
Approach LOS		B			D			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	8.1	30.4		25.0	8.4	30.0				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		20.0	5.0	25.0		20.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s		22.0	3.1	12.0		17.1	3.3	26.8				
Green Ext Time (p_c), s		0.0	0.0	1.9		0.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			36.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

6: Site Driveway & Milford Street
Lanes, Volumes, Timings

2028 Build PM Peak Hour
HCM 6th Edition



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	442	11	6	683	10	6
Future Volume (vph)	442	11	6	683	10	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t	0.997			0.947		
Fl _t Protected				0.970		
Satd. Flow (prot)	1823	0	0	1828	1745	0
Fl _t Permitted				0.970		
Satd. Flow (perm)	1823	0	0	1828	1745	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	3597			290	245	
Travel Time (s)	81.8			6.6	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	0%	0%	4%	0%	0%
Adj. Flow (vph)	480	12	7	742	11	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	492	0	0	749	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	50.7% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↔		↔	
Traffic Vol, veh/h	442	11	6	683	10	6
Future Vol, veh/h	442	11	6	683	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	0	0	4	0	0
Mvmt Flow	480	12	7	742	11	7

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	492	0	1242
Stage 1	-	-	-	-	486
Stage 2	-	-	-	-	756
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1082	-	195
Stage 1	-	-	-	-	623
Stage 2	-	-	-	-	467
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1082	-	193
Mov Cap-2 Maneuver	-	-	-	-	193
Stage 1	-	-	-	-	623
Stage 2	-	-	-	-	462

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	258	-	-	1082	-
HCM Lane V/C Ratio	0.067	-	-	0.006	-
HCM Control Delay (s)	20	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

30: Main Street/North Avenue & Hastings Road/Milford Street
Lanes, Volumes, Timings

2028 Build PM Peak Hour
HCM 6th Edition



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	348	7	53	609	56	155	215	64	42	212	172
Future Volume (vph)	60	348	7	53	609	56	155	215	64	42	212	172
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997			0.987			0.965			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1858	0	1736	1816	0	1770	1772	0	1805	1729	0
Flt Permitted	0.159			0.416			0.280			0.468		
Satd. Flow (perm)	302	1858	0	760	1816	0	522	1772	0	889	1729	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			8			24			65	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		950			3597			586			484	
Travel Time (s)		21.6			81.8			13.3			11.0	
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	2%	0%	4%	3%	6%	2%	3%	5%	0%	3%	2%
Adj. Flow (vph)	66	382	8	58	662	61	168	234	70	48	244	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	390	0	58	723	0	168	304	0	48	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

30: Main Street/North Avenue & Hastings Road/Milford Street
Lanes, Volumes, Timings

2028 Build PM Peak Hour
HCM 6th Edition

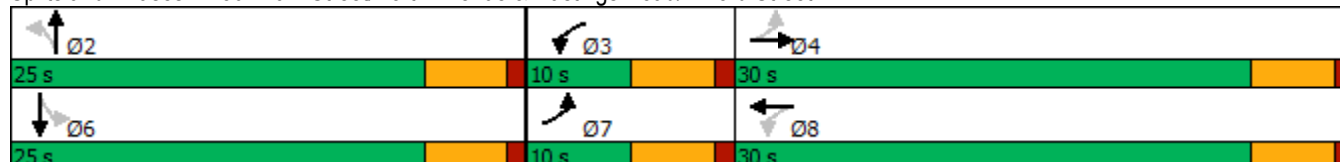


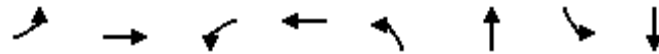
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	30.0		10.0	30.0		23.0	23.0		23.0	23.0	
Total Split (s)	10.0	30.0		10.0	30.0		25.0	25.0		25.0	25.0	
Total Split (%)	15.4%	46.2%		15.4%	46.2%		38.5%	38.5%		38.5%	38.5%	
Maximum Green (s)	5.0	25.0		5.0	25.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	28.0	25.2		28.0	25.2		20.1	20.1		20.1	20.1	
Actuated g/C Ratio	0.46	0.41		0.46	0.41		0.33	0.33		0.33	0.33	
v/c Ratio	0.25	0.51		0.14	0.96		0.98	0.51		0.16	0.72	
Control Delay	10.1	17.2		8.3	46.3		93.3	19.7		18.0	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	10.1	17.2		8.3	46.3		93.3	19.7		18.0	24.8	
LOS	B	B		A	D		F	B		B	C	
Approach Delay		16.2			43.5			45.9			24.2	
Approach LOS		B			D			D			C	

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 61
 Natural Cycle: 90
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 34.1
 Intersection Capacity Utilization 86.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service E

Splits and Phases: 30: Main Street/North Avenue & Hastings Road/Milford Street





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	66	390	58	723	168	304	48	442
v/c Ratio	0.25	0.51	0.14	0.96	0.98	0.51	0.16	0.72
Control Delay	10.1	17.2	8.3	46.3	93.3	19.7	18.0	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	17.2	8.3	46.3	93.3	19.7	18.0	24.8
Queue Length 50th (ft)	11	116	10	~295	~74	90	14	134
Queue Length 95th (ft)	27	193	25	#509	#181	161	36	#251
Internal Link Dist (ft)		870		3517		506		404
Turn Bay Length (ft)	200		200		200		200	
Base Capacity (vph)	262	767	429	753	172	600	293	614
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.51	0.14	0.96	0.98	0.51	0.16	0.72

Intersection Summary

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

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

30: Main Street/North Avenue & Hastings Road/Milford Street
 HCM 6th Signalized Intersection Summary

2028 Build PM Peak Hour
 HCM 6th Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	348	7	53	609	56	155	215	64	42	212	172
Future Volume (veh/h)	60	348	7	53	609	56	155	215	64	42	212	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1841	1856	1811	1870	1856	1826	1900	1856	1870
Adj Flow Rate, veh/h	66	382	8	58	662	61	168	234	0	48	244	198
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	0	2	0	4	3	6	2	3	5	0	3	2
Cap, veh/h	212	726	15	435	660	61	187	585		366	299	243
Arrive On Green	0.05	0.40	0.40	0.05	0.39	0.39	0.32	0.32	0.00	0.32	0.32	0.32
Sat Flow, veh/h	1810	1825	38	1753	1674	154	947	1856	0	1165	948	769
Grp Volume(v), veh/h	66	0	390	58	0	723	168	234	0	48	0	442
Grp Sat Flow(s),veh/h/ln	1810	0	1863	1753	0	1828	947	1856	0	1165	0	1717
Q Serve(g_s), s	1.3	0.0	10.1	1.2	0.0	25.0	4.9	6.3	0.0	2.1	0.0	15.1
Cycle Q Clear(g_c), s	1.3	0.0	10.1	1.2	0.0	25.0	20.0	6.3	0.0	8.4	0.0	15.1
Prop In Lane	1.00		0.02	1.00		0.08	1.00		0.00	1.00		0.45
Lane Grp Cap(c), veh/h	212	0	741	435	0	720	187	585		366	0	541
V/C Ratio(X)	0.31	0.00	0.53	0.13	0.00	1.00	0.90	0.40		0.13	0.00	0.82
Avail Cap(c_a), veh/h	256	0	741	485	0	720	187	585		366	0	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	14.5	10.9	0.0	19.2	30.6	17.0	0.0	20.3	0.0	20.0
Incr Delay (d2), s/veh	0.8	0.0	0.7	0.1	0.0	34.4	43.3	2.0	0.0	0.7	0.0	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	4.0	0.4	0.0	16.2	4.7	2.8	0.0	0.6	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	0.0	15.2	11.1	0.0	53.7	73.9	19.1	0.0	21.1	0.0	32.8
LnGrp LOS	B	A	B	B	A	F	E	B		C	A	C
Approach Vol, veh/h		456			781			402	A		490	
Approach Delay, s/veh		15.3			50.5			42.0			31.7	
Approach LOS		B			D			D			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.0	8.2	30.2		25.0	8.4	30.0				
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		20.0	5.0	25.0		20.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s		22.0	3.2	12.1		17.1	3.3	27.0				
Green Ext Time (p_c), s		0.0	0.0	1.9		0.9	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D

Notes

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

Sight Distance Worksheets

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Sight Distance Calculations

Proposed Entertainment Club, Mendon, MA

Inputs

Posted Speed Limit = 50 mph EB and 50 mph WB

Direction 1 =	Milford Street EB	85% Speed =	49	mph	Grade =	-3	t=	2.5 s	a=	11.2 ft/s ²
Direction 2 =	Milford Street WB	85% Speed =	48	mph	Grade =	3	t=	2.5 s	a=	11.2 ft/s ²
							Left: t _g =	7.5 s		
							Right: t _g =	6.5 s		

SSD = Reaction Distance + Braking Distance

Reaction Distance = 1.47 x V x t

Braking Distance = V² / (30 x ((a/32.2) + G))

ISD = 1.47 x V x t_g

Where

- t = reaction time (sec)
- t_g = time gap for minor road vehicle to enter the major road
- V = travel speed (mph)
- G = roadway grade
- a = deceleration rate (ft/s²)

Calculations

	<u>Reaction</u> <u>Distance (ft)</u>	<u>Brake</u> <u>Distance (ft)</u>	<u>SSD (ft)</u>
Milford Street EB	180.1	251.8	432
Milford Street WB	176.4	203.3	380

For 49 mph:

Left Turn ISD =	540	ft
Right Turn ISD =	468	ft

For 48 mph:

Left Turn ISD =	529	ft
Right Turn ISD =	459	ft