MEMORANDUM

TO: Washington Street Sherborn Homes, LLC
c/o Mr. Robert Murchison
177 Lake Street
Sherborn, MA 01770

FROM: Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE
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DATE: September 5, 2023

RE: 9633

SUBJECT: Transportation Impact Assessment
Proposed Multifamily Residential Development – 121-129 Washington Street (Route 16)
Sherborn, Massachusetts

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of a multifamily residential development to be located at 121-129 Washington Street (Route 16) in Sherborn, Massachusetts (hereafter referred to as the "Project"). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Route 16 and at major intersections located along this roadway through which Project-related traffic will travel. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE),[1] the Project is expected to generate approximately 332 vehicle trips on an average weekday (two-way, 24-hour volume), with 35 vehicle trips expected during the weekday morning peak-hour and 38 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not result in a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with Project-related impacts generally defined as an increase in average motorist delay of up to 1.0 seconds with no (0) material increase in vehicle queuing shown to occur;

3. All movements exiting the Project site driveway to Route 16 are predicted to operate at a level-of-service (LOS) C or better during the peak hours with vehicle queuing of up to one (1) vehicle predicted. All movements along Route 16 approaching the driveway are predicted to operate at LOS A with negligible vehicle queuing predicted;

[1] *Trip Generation,* 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

4. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study area intersections; and

5. Lines of sight at the Project site driveway intersection with Route 16 were found to exceed or can be made to exceed the recommended minimum distance for the intersection to operate in a safe and efficient manner with the selective trimming/removal of trees and vegetation located within the sight triangle area.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the recommendations defined herein.

The following details our assessment of the Project.

PROJECT DESCRIPTION

The Project will entail the construction of a 40-unit multifamily residential building to be located at 121-129 Washington Street (Route 16) in Sherborn, Massachusetts. The site that will contain the Project will be created by a subdivision of the aforementioned properties to create five (5) lots, with Lot 5 to contain the Project and to be comprised of the portion of the subject properties that is located along Route 16; Lots 1 through 4 will encompass the balance of the property and will front along Greenwood Street. The development of Lots 1 through 4 are not a part of the Project and will be the subject of a future application to be filed with the Town. Lot 5 (the "Project site") encompasses approximately 14.8± acres of land that is bound by Route 16 to the north; Lots 1 through 4, residential properties, areas of open and wooded space, and low-lying wetland areas to the south; Lots 1 through 4 and areas of open and wooded space to the east; and areas of open and wooded space and low-lying wetland areas to the west. Figure 1 depicts the Project site location in relation to the existing roadway network.

Access to the Project site will be provided by way of a new driveway that will intersect the south side of Route 16 approximately 100 feet southwest of Old Orchard Road. Off-street parking will be provided for 60 vehicles, or a parking ratio of 1.50 parking spaces per unit. The proposed parking ratio is consistent with the parking ratios that have been observed for other multifamily residential communities in a similar setting documented by the ITE,[2] which range from 0.75 to 2.03 spaces per residential unit, with an average observed peak parking demand of 1.31 parking spaces per unit.

STUDY METHODOLOGY

This study was prepared in consultation with the Massachusetts Department of Transportation (MassDOT) and the Town of Sherborn; was performed in accordance with MassDOT's *Transportation Impact Assessment (TIA) Guidelines* and the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian and bicycle facilities; on-street parking; public transportation services; observations of traffic flow; and collection of pedestrian, bicycle, and vehicle counts.

[2] *Parking Generation,* 5th Edition; Institute of Transportation Engineers; Washington D.C.; January 2019.

Figure 1

Site Location Map

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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 Project. A seven-year time horizon was selected for analyses consistent with MassDOT guidelines. The analysis conducted in stage two identifies existing or projected future capacity, safety, and access issues, as these areas relate to the transportation infrastructure.

The third stage of the study presents and evaluates measures to address deficiencies in the transportation infrastructure, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in February 2023. This inventory included the collection of traffic-volume data and vehicle travel speed measurements, as well as a review of existing pedestrian and bicycle accommodations, public transportation services, and motor vehicle crash data. The following summarizes existing conditions within the study area.

Roadway

Route 16

Washington Street (Route 16) is a two-lane principal arterial roadway that traverses the study area in a general northeast-southwest direction and is under town jurisdiction. In the vicinity of the Project site, Route 16 provides two 12-foot-wide travel lanes that are separated by a double yellow centerline with 1-foot wide marked shoulders. The posted speed limit in the vicinity of the Project site is 45 miles per hour (mph). Sidewalks and illumination are not provided along the roadway within the study area. Land use along Route 16 within the study area consists of the Project site, residential properties, wetlands, and areas of open and wooded space.

Intersections

Table 1 and Figure 2 summarize existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in February 2023.

Table 1
STUDY AREA INTERSECTION DESCRIPTION

Intersection	Traffic Control Type[a]	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
Rte. 16/ Woodland St.	S	1 general-purpose travel lane provided on all approaches	Yes; 1 to 2 feet on Rte. 16 and Woodland St.	No	No
Rte. 16/ Greenwood St.	S	1 general-purpose travel lane provided on all approaches	Yes; 1 to 2 feet on Rte. 16 and Greenwood St.	No	No

[a]S = STOP-sign control.

Legend:

Ⓤ Unsignalized Intersection

XX' Lane Use and Travel Lane Width

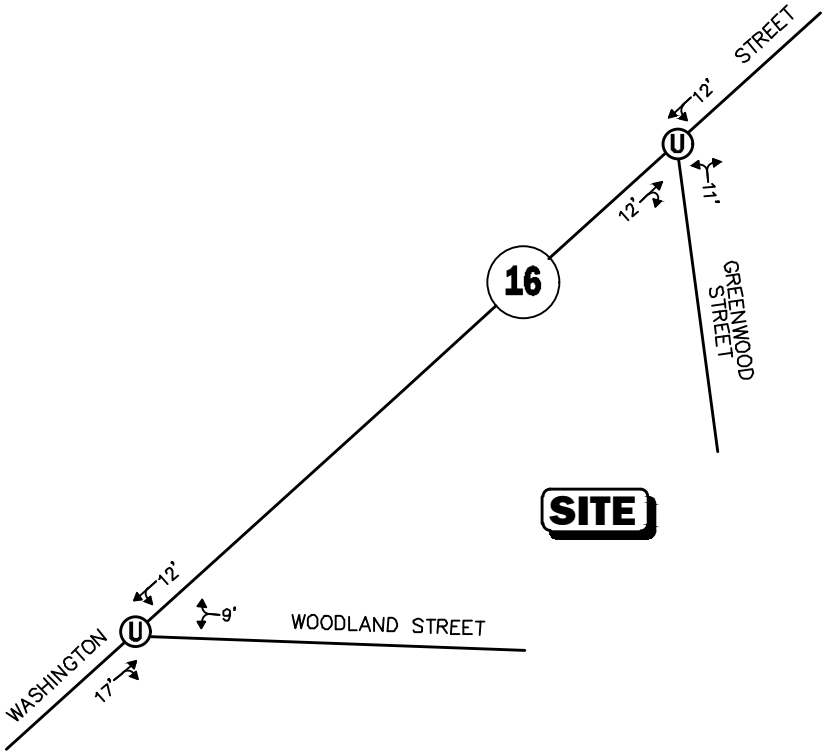

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Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities

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Existing Traffic Volumes

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs), and vehicle classification counts were completed in February 2023 while public schools were in regular session. The ATR counts were conducted on Route 16, southwest of Old Orchard Road, on February 14th through 15th, 2023 (Tuesday through Wednesday, inclusive) in order to record weekday traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak-period TMCs performed at the study intersections on February 14th, 2023 (Tuesday). These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, MassDOT weekday seasonal factors for Urban Groups 3 roadways (other principal arterials, the functional classifications of Route 16) were reviewed.[3] Based on a review of this data, it was determined that traffic volumes for the month of February are approximately 3.0 percent *below* average-month conditions. As such, the February traffic volumes were adjusted upward by 3.0 percent in order to be representative of average-month conditions in accordance with MassDOT standards.

MassDOT does not require pandemic-related adjustment of traffic counts performed after March 2022, except in locations where the predominant land use consists of offices or similar uses.[4] Given that the predominant land use within the study area is residential, a pandemic-related adjustment was not required.

The 2023 Existing traffic volumes are summarized in Table 2, with the weekday morning and evening peak-hour traffic volumes graphically depicted on Figure 3. Note that the peak-hour traffic volumes presented in Table 2 were obtained from the TMCs and are reflected in the aforementioned figure.

Table 2
2023 EXISTING TRAFFIC VOLUMES

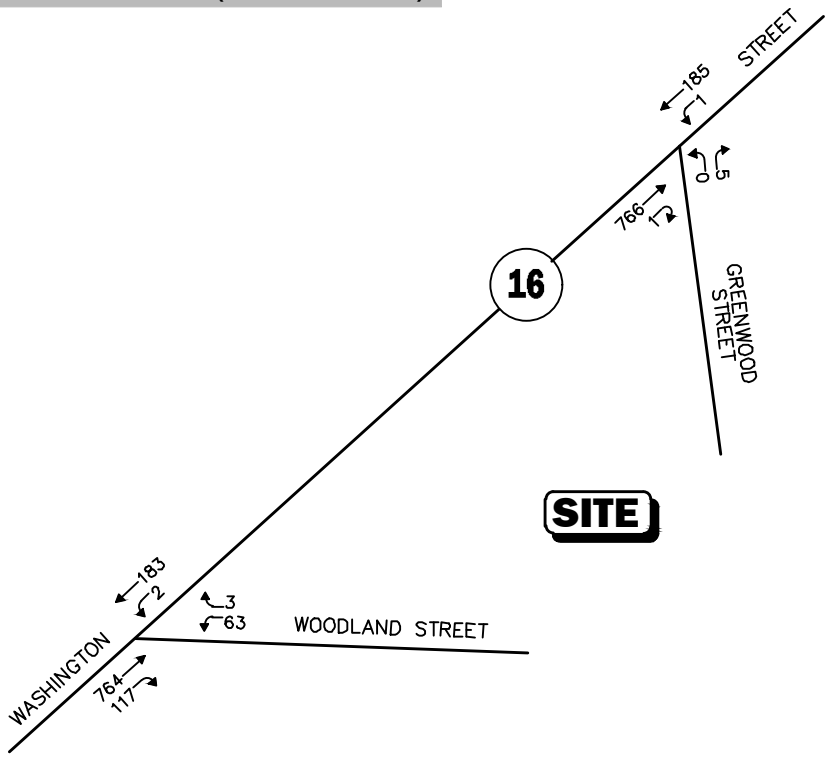
Location/Peak-Hour	AWT[a]	VPH[b]	K Factor[c]	Directional Distribution[d]
Route 16, southwest of Old Orchard Road:	9,890	--	--	--
Weekday Morning (7:00 – 8:00 AM)	--	952	9.6	80.6% NEB
Weekday Evening (4:15 – 5:15 PM)	--	922	9.3	70.6% SWB

[a]Average weekday traffic in vehicles per day.
[b]Vehicles per hour.
[c]Percent of daily traffic occurring during the peak-hour.
[d]Percent traveling in peak direction.
NEB = northeastbound; SWB = southwestbound.

As can be seen in Table 2, Route 16 in the vicinity of the Project site, was found to accommodate approximately 9,890 vehicles on an average weekday (two-way, 24-hour volume), with approximately 952 vehicles per hour (vph) during the weekday morning peak-hour and 922 vph during the weekday evening peak-hour.

[3]MassDOT statewide Traffic Data Collection; 2019 Weekday Seasonal Factors, Group U3.
[4]*25% Design Submission Guidelines;* MassDOT Highway Division, Traffic and Safety Engineering; Revised May 31, 2022.

WEEKDAY MORNING PEAK HOUR (7:00 - 8:00 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)

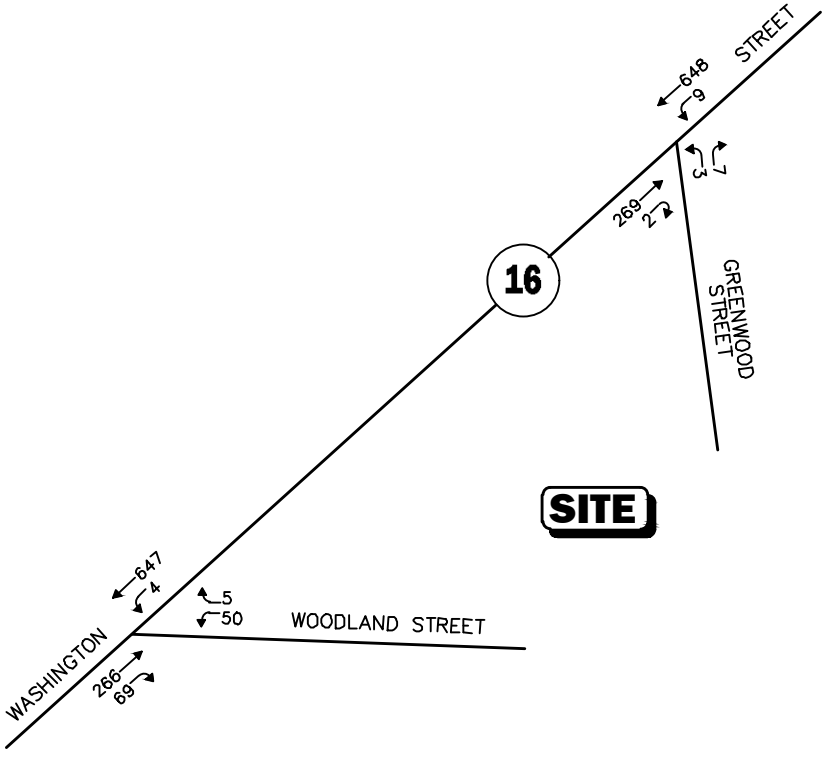


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Figure 3

2023 Existing
Peak-Hour Traffic Volumes

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Pedestrian and Bicycle Facilities

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in February 2023. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study intersections, as well as the location of existing and planned future bicycle facilities. Sidewalks and marked crosswalks are not provided within the study area. Formal bicycle facilities are also not provided within the study area; however, Route 16 generally provides sufficient width (combined travel lane and shoulder) to support bicycle travel in a shared traveled-way configuration (i.e., motor vehicles and bicyclists sharing the roadway).[5]

Public Transportation

Regularly scheduled public transportation services are not currently provided within the Town of Sherborn or in the immediate vicinity of the Project site. The closest regularly scheduled public transportation services to the Project site are located in Natick (Massachusetts Bay Transportation Authority (MBTA) Commuter Rail service on the Framingham/Worcester Line from Natick Center Station).

The Sherborn Council on Aging (COA) coordinates with JFK Transportation in Natick to provide discounted taxi ride coupons for seniors. The cards cost $30.00 for a ten-ride coupon. JFK requires a 24-hour notice for local trips and a 48-hour notice for medical trips.

Spot Speed Measurements

Vehicle travel speed measurements were performed on Route 16 in the vicinity of the Project site in conjunction with the ATR counts. Table 3 summarizes the vehicle travel speed measurements.

Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	Route 16	
	Northeastbound	Southwestbound
Mean Travel Speed (mph)	36	38
85th Percentile Speed (mph)	42	46
Posted Speed Limit (mph)	45	45

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Route 16 in the vicinity of the Project site was found to be 36 mph in the northeastbound direction and 38 mph southwestbound. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 42 mph in the northeastbound direction and 46 mph southwestbound, which is generally consistent with the posted speed limit in the vicinity of the Project site (30 mph). The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances, and is often used in establishing posted speed limits.

[5]A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

Motor Vehicle Crash Data

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2016 through 2020, inclusive) to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, roadway and weather conditions, and day of occurrence, and is presented in Table 4.

As can be seen in Table 4, no (0) motor vehicle crashes were reported to have occurred at the Route 16/Greenwood Street intersection over the five-year review period. Five (5) motor vehicle crashes were reported to have occurred at the Route 16/Woodland Street intersection, or an average of 1.0 motor vehicle crash per year. The majority of the reported crashes occurred on a weekday; under clear weather conditions; during nighttime or low light conditions; and involved angle type collisions that resulted in property damage only. The calculated motor vehicle crash rate for the intersection was found to be *below* the MassDOT statewide and District average crash rates for similar intersections for the MassDOT Highway Division District in which the intersection is located (District 3).

A review of the MassDOT statewide High Crash Location List indicated that there are no Highway Safety Improvement Program (HSIP) eligible high crash locations within the study area. In addition, no fatal motor vehicle crashes were reported to have occurred at the study area intersections over the five-year review period.

The detailed MassDOT Crash Rate Worksheet and HSIP Mapping are attached.

Table 4
MOTOR VEHICLE CRASH DATA SUMMARY[a]

	Rte. 16/ Woodland St.	Rte. 16/ Greenwood St.
Traffic Control Type[b]	U	U
Year:		
2016	1	0
2017	3	0
2018	1	0
2019	0	0
2020	0	0
Total	5	0
Average	1.00	0.00
Crash Rate[c]	0.22	0.00
MassDOT Crash Rate:[d]	0.57/0.61	0.57/0.61
Significant?[e]	No	No
Type:		
Angle	3	0
Head-On	0	0
Rear-End	0	0
Sideswipe	0	0
Fixed Object	2	0
Pedestrian/Bicycle	0	0
Unknown/Other	0	0
Total	5	0
Conditions:		
Clear	3	0
Cloudy	1	0
Rain	1	0
Snow/Ice	0	0
Not Reported/Other	0	0
Total	5	0
Lighting:		
Daylight	2	0
Dawn/Dusk	0	0
Dark (Road Lit)	2	0
Dark (Road Unlit)	1	0
Total	5	0
Day of Week:		
Monday-Friday	4	0
Saturday	0	0
Sunday	1	0
Total	5	0
Severity:		
Property Damage Only	3	0
Non-fatal Injury	2	0
Fatalities	0	0
Not Reported	0	0
Total	5	0

[a]Source: MassDOT Safety Management/Traffic Operations Unit records, 2016 through 2020.
[b]Traffic Control Type: S = signalized, U = unsignalized.
[c]Crash rate per million vehicles entering the intersection.
[d]Statewide/District crash rate.
[e]The intersection crash rate is significant if it is found to exceed the MassDOT crash rate for the MassDOT Highway Division District in which the Project is located (District 3).

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2030, which reflects a seven-year planning horizon consistent with MassDOT guidelines. Independent of the Project, traffic volumes on the roadway network in the year 2030 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon the 2030 No-Build traffic volumes reflect 2030 Build traffic-volume conditions with the Project.

Future Traffic Growth

Future traffic growth is a function of the expected land development in the immediate area and 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 actually 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 procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The Town of Sherborn Planning Staff has been contacted in order to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study area intersections. In addition, a review of previous studies that have been conducted by VAI within the Town was also completed.[6] Based on this information, the following projects were identified for review in conjunction with this assessment:

- ***Proposed Residential Development, 55 and 65 Farm Road, Sherborn, Massachusetts.*** This project entails the construction of a 32-unit residential development to be located at 55 and 65 Farm Road to the northeast of the Project.

- ***Proposed Dunkin' with Drive-Through Window, Sherborn, Massachusetts.*** This project consists of the relocation of the existing Dunkin' restaurant located at 21 South Main Street (Route 27) and northeast of the Project to a new building just south of its current location that will include indoor seating and a drive through window.

- ***Apple Hill Estates, Sherborn, Massachusetts.*** This project consists of the construction of 27 single-family homes to be located off Hunting Lane and north of the Project.

- ***Coolidge Crossing, Sherborn, Massachusetts.*** This project consists of the construction of 120 multi-family units to be located at 84 & 86 Coolidge Street and north of the Project.

[6] *Transportation Impact Assessment*, Proposed Residential Development, 55 and 65 Farm Road; VAI; December 2022.

- ***Meadowbrook Commons, Sherborn, Massachusetts.*** This project consists of the construction of 40 duplex units and 27 single-family homes to be located at 104 Coolidge Street and north of the Project.

- ***The Pines Residences, Sherborn, Massachusetts.*** This project consists of the construction of 60 multi-family units to be located at 41 North Main Street (Route 27) and north of the Project.

Traffic volumes associated with the identified specific development projects by others within the study area are expected to be relatively minor and would be included in the general background growth rate.

As stated previously, the larger overall parcel that contain the Project site will be subdivided to create five (5) lots, with Lot 5 to contain the Project and Lots 1 through 4 to be the subject of a future application to be filed with the Town. At this time, it is envisioned that Lots 1 through 4 will be developed to contain single-family homes that will be accessed from individual driveways located along Greenwood Street. The potential future trips associated with the development of these lots were estimated using trip-generation statistics published by the Institute of Transportation Engineers (ITE)[7] for a single-family home (four (4) homes total) and are included in both the No-Build and Build condition traffic volumes. The detailed trip-generation calculations and trip assignments for Lots 1 through 4 are included in the Appendix.

No other specific development projects by others were identified at this time.

General Background Traffic Growth

Traffic-volume data compiled by MassDOT from count stations located in and around Sherborn were reviewed in order to determine general traffic growth trends in the area. This data indicates that annual traffic volumes have fluctuated over the past several years, with the average growth rate found to be approximately 0.66 percent per year. In order to be consistent with the traffic growth rate that has been used in prior studies that have been conducted by VAI in the Town,[8] a higher 1.5 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

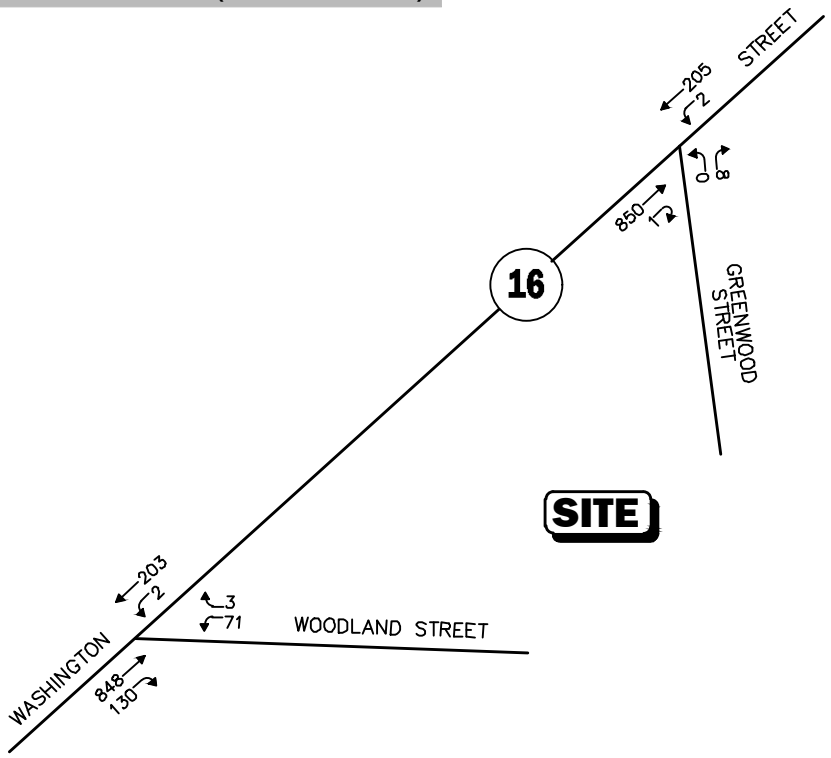
The Town of Sherborn was contacted and the MassDOT Project Viewer website was reviewed in order to determine if there were any planned future roadway improvement projects expected to be complete by 2030 within the study area. Based on this review, no roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

No-Build Traffic Volumes

The 2030 No-Build condition peak-hour traffic volumes were developed by applying the 1.5 percent per year compounded annual background traffic growth rate to the 2023 Existing weekday morning and evening peak-hour traffic volumes. The resulting 2030 No-Build peak-hour traffic volumes are shown on Figure 4.

[7]Institute of Transportation Engineers, op. cit. 1.
[8]VAI, op. cit. 8.

WEEKDAY MORNING PEAK HOUR (7:00 - 8:00 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)

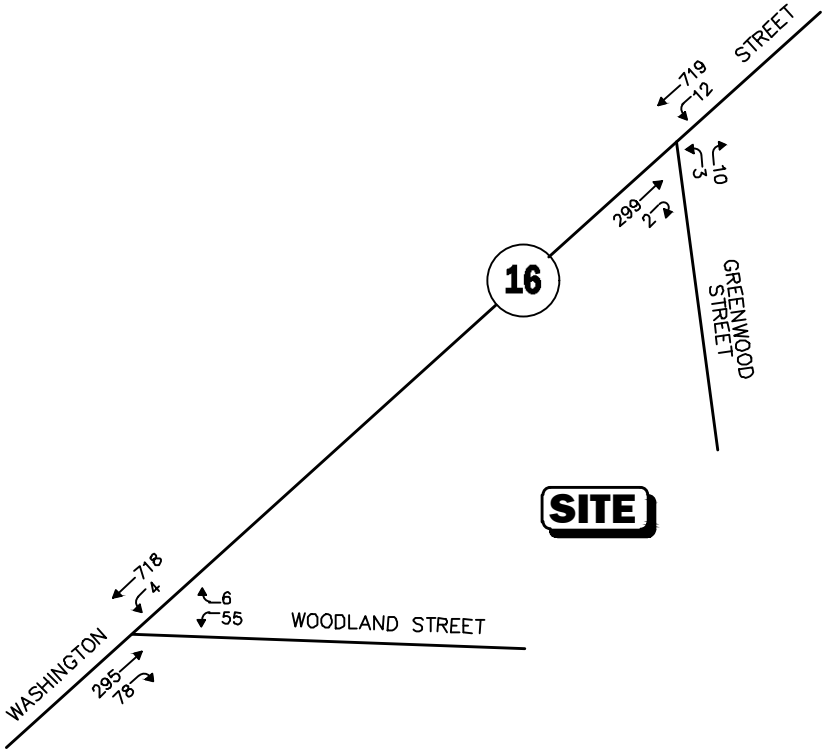


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Figure 4

2030 No-Build
Peak-Hour Traffic Volumes

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Project-Generated Traffic

Design year (2030 Build) traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

As proposed, the Project will entail the construction of a 40-unit multifamily residential development. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE[9] for a similar land use as that proposed were used. ITE Land Use Code (LUC) 220, *Multifamily Housing (Low-Rise)*, was used to develop the traffic characteristics of the Project, the results of which are summarized in Table 5.

Table 5
TRIP GENERATION SUMMARY

Time Period	Vehicle Trips[a]		
	Entering	Exiting	Total
Average Weekday:	166	166	332
Weekday Morning Peak-Hour:	8	27	35
Weekday Evening Peak-Hour:	24	14	38

[a]Based on ITE LUC 220, *Multifamily Housing (Low-Rise)* (40 units).

Project-Generated Traffic-Volume Summary

As can be seen in Table 5, the Project is expected to generate approximately 332 vehicle trips on an average weekday (two-way, 24-hour volume, or 166 vehicles entering and 166 exiting), with 35 vehicle trips (8 vehicles entering and 27 exiting) expected during the weekday morning peak-hour and 38 vehicle trips (24 vehicles entering and 14 exiting) expected during the weekday evening peak-hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of U.S. Census Journey-to-Work data for the Town of Sherborn and then refined based on a review of existing traffic patterns within the study area. The general trip distribution for the Project is graphically depicted in Figure 5, with the additional traffic that is expected to be generated by the Project assigned on the study area roadway network as shown on Figures 6.

Build Traffic Volumes

The 2030 Build condition traffic volumes consist of the 2030 No-Build traffic volumes with the addition of the traffic expected to be generated by the Project. The 2030 Build weekday morning and evening peak-hour traffic volumes are graphically depicted on Figure 7.

[9]Ibid 6.

Legend:

XX	Entering Trips
(XX)	Exiting Trips

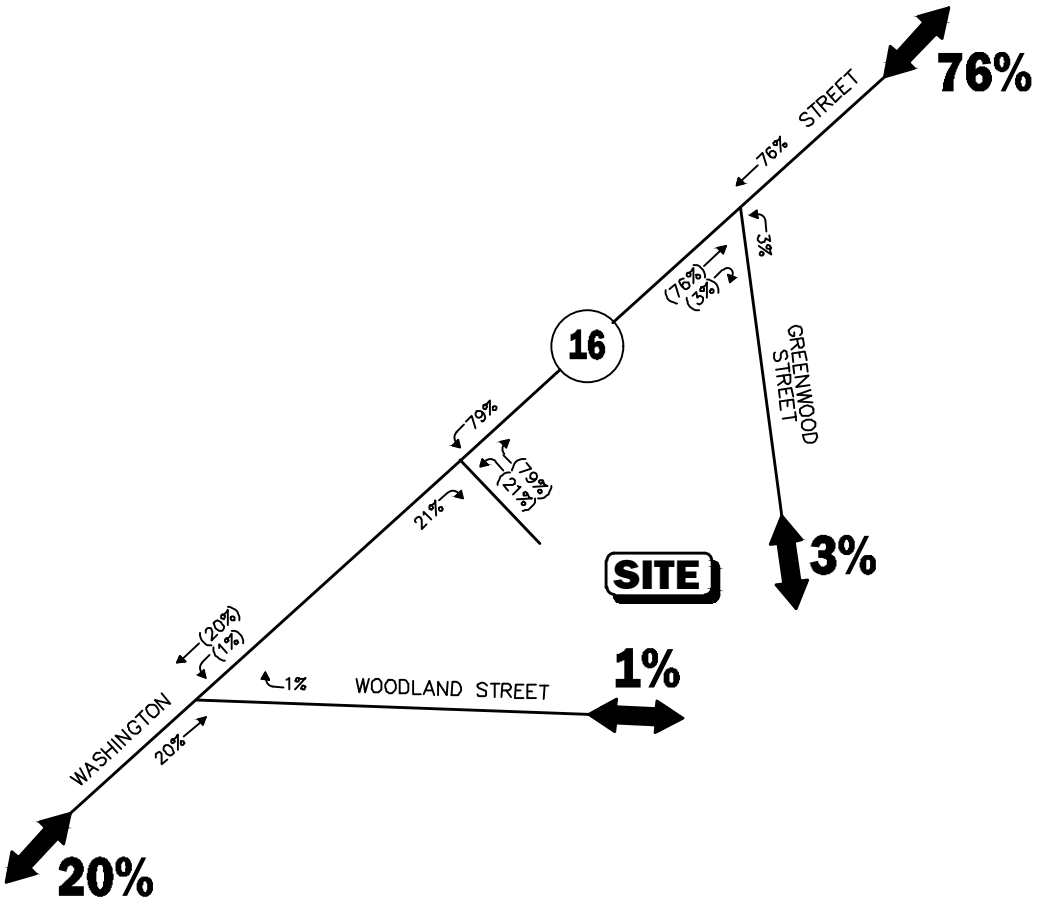

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Figure 5

Trip Distribution Map

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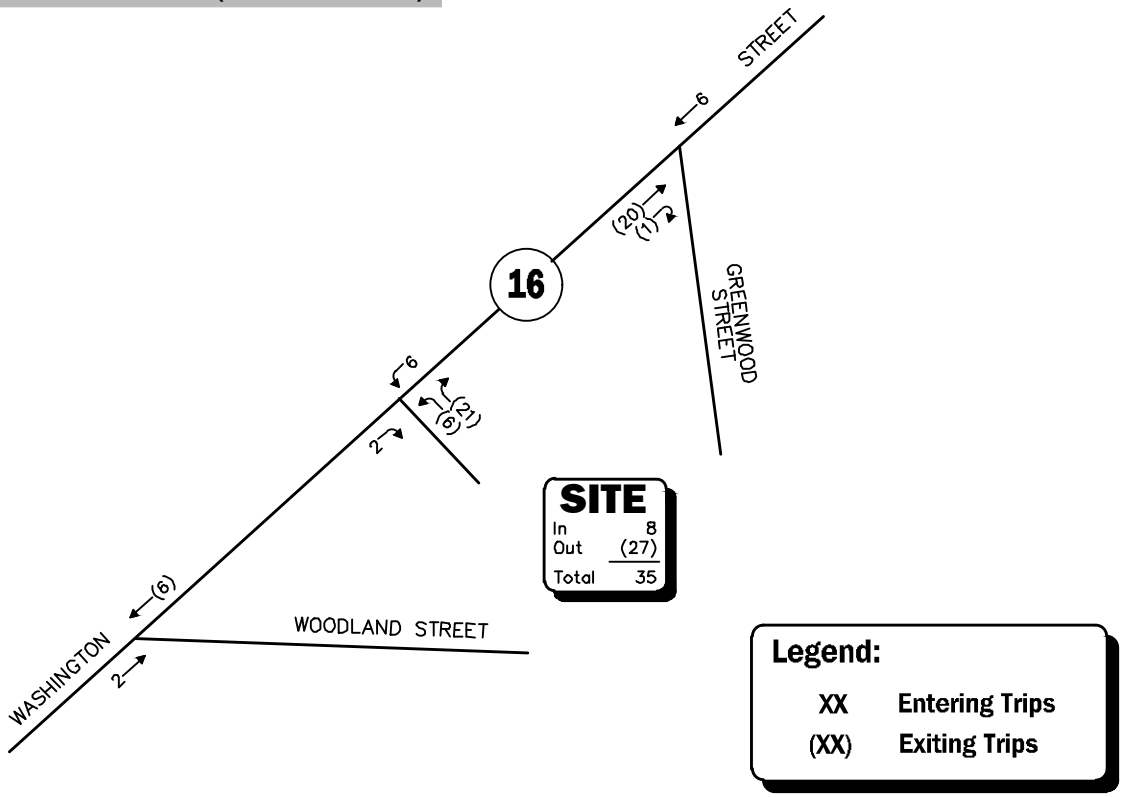
WEEKDAY MORNING PEAK HOUR (7:00 - 8:00 AM)



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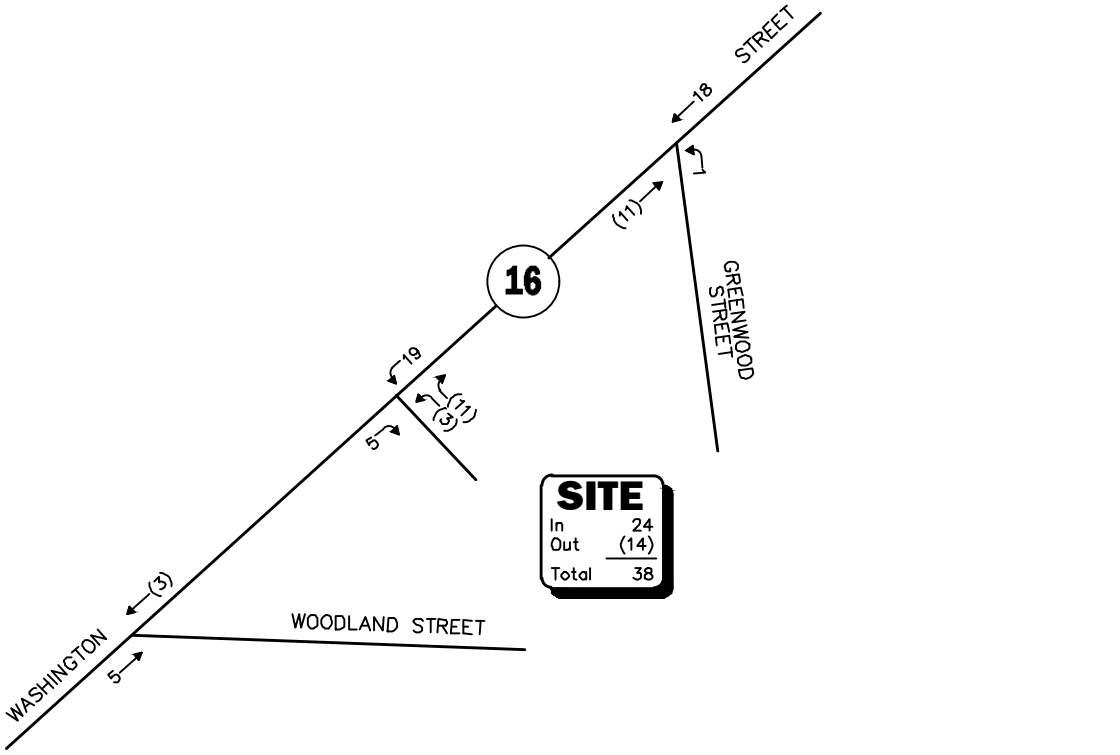

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Figure 6

Project-Generated Peak-Hour Traffic Volumes

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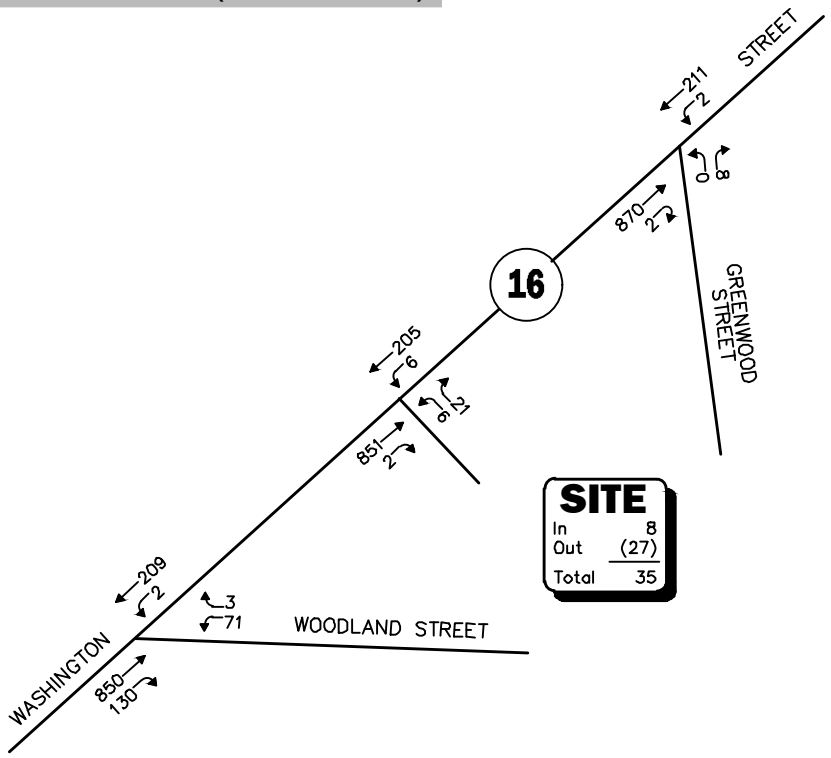
WEEKDAY MORNING PEAK HOUR (7:00 - 8:00 AM)



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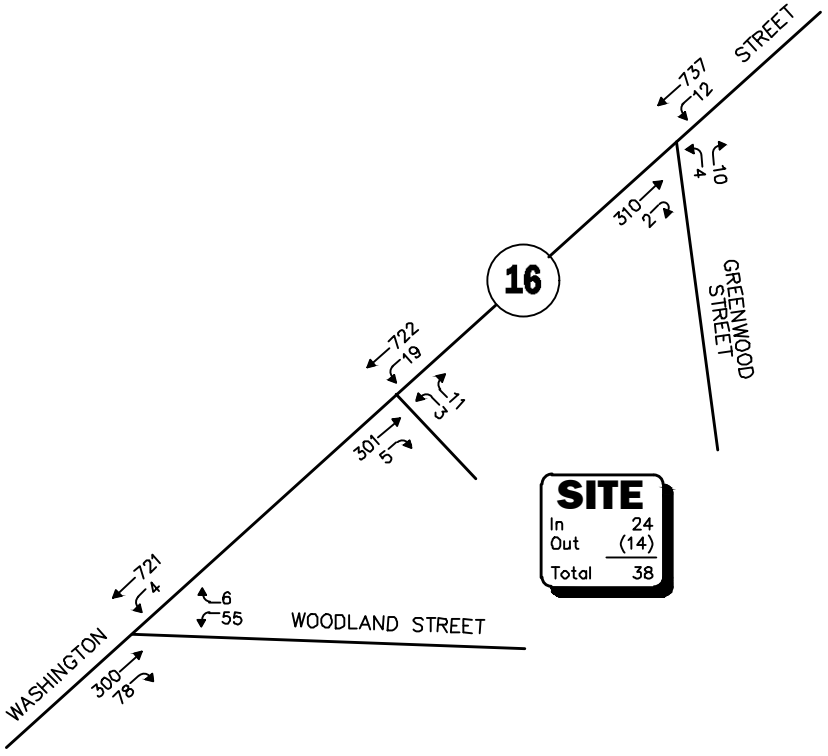

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Figure 7

2030 Build
Peak-Hour Traffic Volumes

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TRAFFIC OPERATIONS ANALYSIS

In order to assess the potential impact of the Project on the roadway network, a detailed traffic operations analysis (motorist delays, vehicle queuing and level-of-service) was performed for the study intersections. Capacity analyses provide an indication of how well transportation facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing congested or constrained operations. An LOS of "E" is representative of a transportation facility that is operating at its design capacity with an LOS of "D" generally defined as the limit of "acceptable" traffic operations. Since the level-of-service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year. The Synchro® intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the *6th Edition Highway Capacity Manual* (HCM)[10] for unsignalized intersections was used to complete the level-of-service and vehicle queue analyses.

Analysis Results

Level-of-service and vehicle queue analysis were conducted for 2023 Existing, 2030 No-Build, and 2030 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Table 6, with the detailed analysis results attached.

The following is a summary of the level-of-service and vehicle queue analyses for intersections within the study area. For context, we note that an LOS of "D" or better is generally defined as "acceptable" operating conditions.

Project-related impacts at the unsignalized study area intersections are shown on Table 8 and are defined as follows:

Route 16 at Woodland Street

No change in level of service or vehicle queuing is predicted to occur for any movement over No-Build conditions, with Project-related impacts generally defined as a predicted increase in average motorist delay of less than 1.0 seconds with no (0) material increase in vehicle queuing.

Route 16 at Greenwood Street

No change in level of service or vehicle queuing is predicted to occur for any movement over No-Build conditions, with Project-related impacts generally defined as a predicted increase in average motorist delay of up to 1.0 seconds with no (0) material increase in vehicle queuing.

Route 16 at the Project Site Driveway

All movements exiting the Project site driveway to Route 16 are predicted to operate at LOS C or better during the peak hours with vehicle queuing of up to one (1) vehicle predicted. All movements along Route 16 approaching the Project site driveway were shown to operate at LOS A with negligible vehicle queuing predicted.

[10] *Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2016.

Table 6
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

	2023 Existing				2030 No-Build				2030 Build			
Unsignalized Intersection/Peak-Hour/Movement	Demand[a]	Delay[b]	LOS[c]	Queue 95th[d]	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th
Route 16 at Woodland Street												
Weekday Morning:												
Woodland Street NWB LT/RT	66	25.2	D	1	74	32.1	D	2	74	32.5	D	2
Route 16 NEB TH/RT	881	0.0	A	0	978	0.0	A	0	980	0.0	A	0
Route 16 SWB LT/TH	185	0.1	A	0	205	0.1	A	0	211	0.1	A	0
Weekday Evening:												
Woodland Street NWB LT/RT	55	23.5	C	1	61	29.3	D	2	61	29.6	D	2
Route 16 NEB TH/RT	336	0.0	A	0	373	0.0	A	0	378	0.0	A	0
Route 16 SWB LT/TH	651	0.0	A	0	722	0.0	A	0	725	0.0	A	0
Route 16 at Greenwood Street												
Weekday Morning:												
Greenwood Street NB LT/RT	5	16.0	C	0	8	17.8	C	0	8	18.2	C	0
Route 16 NEB TH/RT	767	0.0	A	0	851	0.0	A	0	872	0.0	A	0
Route 16 SWB LT/TH	186	0.1	A	0	207	0.1	A	0	213	0.1	A	0
Weekday Evening:												
Greenwood Street NB LT/RT	10	12.7	B	0	13	12.9	B	0	14	13.9	B	0
Route 16 NEB TH/RT	271	0.0	A	0	301	0.0	A	0	312	0.0	A	0
Route 16 SWB LT/TH	657	0.1	A	0	731	0.1	A	0	749	0.1	A	0
Route 16 at the Project Site Driveway												
Weekday Morning:												
Project Site Driveway NWB LT/RT	--	--	--	--	--	--	--	--	27	18.7	C	1
Route 16 NEB TH/RT	--	--	--	--	--	--	--	--	853	0.0	A	0
Route 16 SWB LT/TH	--	--	--	--	--	--	--	--	211	0.3	A	0
Weekday Evening:												
Project Site Driveway NWB LT/RT	--	--	--	--	--	--	--	--	14	12.9	B	0
Route 16 NEB TH/RT	--	--	--	--	--	--	--	--	306	0.0	A	0
Route 16 SWB LT/TH	--	--	--	--	--	--	--	--	741	0.2	A	0

[a]Demand in vehicles per hour.
[b]Average control delay per vehicle (in seconds).
[c]Level of service.
[d]Queue length in vehicles.
NWB = northwestbound, NEB = northeastbound; SWB = southwestbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE ASSESSMENT

Sight distance measurements were performed at the Project site driveway intersection with Route 16 in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)[11] requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) 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. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an oncoming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 7 presents the measured SSD and ISD at the subject intersection.

Table 7
SIGHT DISTANCE MEASUREMENTS[a]

Intersection/Sight Distance Measurement	Feet		
	Required Minimum (SSD)	Desirable (ISD)[b]	Measured
Route 16 at the Project Site Driveway			
Stopping Sight Distance:			
Route 16 approaching from the northeast	425	--	644
Route 16 approaching from the southwest	425	--	650+
Intersection Sight Distance:			
Looking to the northeast from the Project Site Driveway	425	555	650+[c]
Looking to the southwest from the Project Site Driveway	425	480	650+[c]

[a]Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on a 50 mph approach speed on Route 16.

[b]Values shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

[c]Available sight distance with the selective trimming/removal of trees and vegetation located within the sight triangle areas.

As can be seen in Table 7, with the selective trimming/removal of trees and vegetation located within the sight triangle area(s) of Project site driveway, the available lines of sight to and from the Project site driveway intersection with Route 16 will exceed the recommended minimum sight distances to function in a safe (SSD) and efficient (ISD) manner based on a 50 mph approach speed, which is above both the measured 85th percentile vehicle travel speed (42/46 mph) and the posted speed limit (45 mph) in the vicinity of the Project site.

[11] *A Policy on Geometric Design of Highway and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

SUMMARY

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed construction of a multifamily residential development to be located at 121-129 Washington Street (Route 16) in Sherborn, Massachusetts. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE,[12] the Project is expected to generate approximately 332 vehicle trips on an average weekday (two-way, 24-hour volume), with 35 vehicle trips expected during the weekday morning peak-hour and 38 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not result in a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with Project-related impacts generally defined as an increase in average motorist delay of up to 1.0 seconds with no (0) material increase in vehicle queuing shown to occur;

3. All movements exiting the Project site driveway to Route 16 are predicted to operate at LOS C or better during the peak hours with vehicle queuing of up to one (1) vehicle predicted. All movements along Route 16 approaching the driveway are predicted to operate at LOS A with negligible vehicle queuing predicted;

4. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study area intersections; and

5. Lines of sight at the Project site driveway intersection with Route 16 were found to exceed or can be made to exceed the recommended minimum distance for the intersection to operate in a safe and efficient manner with the selective trimming/removal of trees and vegetation located within the sight triangle area.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the recommendations that follow.

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified as a part of this assessment. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

[12] Institute of Transportation Engineers, op. cit. 1.

Project Access

Access to the Project site will be provided by way of a new driveway that will intersect the south side of Route 16 approximately 100 feet southwest of Old Orchard Road. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulation, many of which are reflected on the site plan:

- The Project site driveway will be 24 feet in width and designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle.
- Where perpendicular parking is proposed the drive aisle behind the parking will be a minimum of 23 feet in order to facilitate parking maneuvers.
- Vehicles exiting the Project site will be placed under STOP-sign control with a marked STOP-line provided.
- All signs and pavement markings to be installed within the Project site will conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).[13]
- A sidewalk should be constructed along one side of the driveway that should connect the proposed building to Route 16, where a widened sidewalk area should be provided to serve as a school bus waiting area.
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas of the Project site driveway should be designed and maintained so as not to restrict lines of sight.
- Existing trees and vegetation located within the sight triangle areas of the Project site driveway should be selectively trimmed or removed and maintained so as to provide the necessary sight lines for the driveway to operate in a safe manner.
- Snow accumulations (windrows) within sight triangle areas should be promptly removed where such accumulations would impede sight lines.

Transportation Demand Management

In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles (SOVs), the following Transportation Demand Management (TDM) measures should be implemented as part of the Project:

- A transportation coordinator should be assigned for the Project to coordinate the TDM program;
- Information regarding public transportation services, maps, schedules, and fare information should be posted in a central location and/or otherwise made available to residents;
- A "welcome packet" should be provided to new residents detailing available public transportation services, bicycle and walking alternatives, and other commuting options;

[13] *Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

- Amenities should be provided to support telecommuting by residents of the Project;
- A central maildrop and package delivery station should be provided within the building; and
- Secure bicycle parking should be provided for residents and visitors.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

cc: File

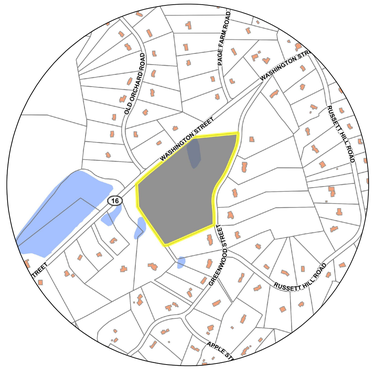
ATTACHMENTS

PROJECT SITE PLAN
AUTOMATIC TRAFFIC RECORDER COUNT DATA
TURNING MOVEMENT COUNT DATA
SEASONAL ADJUSTMENT DATA
PUBLIC TRANSPORTATION INFORMATION
VEHICLE TRAVEL SPEED DATA
MASSDOT CRASH RATE WORKSHEETS AND HIGH CRASH LOCATION MAPPING
GENERAL BACKGROUND TRAFFIC GROWTH
BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS
TRIP-GENERATION CALCULATIONS
TRIP-DISTRIBUTION DATA
CAPACITY ANALYSIS WORKSHEETS

PROJECT SITE PLAN

J269-19

NAD83
NAVD88



Site Locus
N.T.S.

WASHINGTON STREET
(PUBLIC - 60' WIDE)

Zone I
Zone II

APPROXIMATE 10' WIDE TRAIL EASEMENT (PLAN 1158 OF 2005)

APPROXIMATE PROPERTY LINES PER GIS

APPROXIMATE PROPERTY LINES (PLAN 1131 OF 2005)

0 OLD ORCHARD RD
N/F
TOWN OF SHERBORN
PARCEL ID: 7 0 36

91 OLD ORCHARD RD
N/F
LUDWIG, JR. KARL F
PARCEL ID: 7 0 104

134 WASHINGTON ST
N/F
NEIL MARGARET R.
PARCEL ID: 7 0 102

No Well Data Available

Conc Head Wall Inv=200.2

DMH Rim=206.87

Conc Head Wall

SB

SAS Area 20,000 SF

Stormwater Basin Area: 5,907 SF

Stormwater Trench # 1 1,050 SF

Stormwater Trench # 2 1,050 SF

Isolated Vegetated Wetlands

Bordering Vegetated Wetlands

50' No Alteration Line

100' Wetland Buffer

Lot 5 - 647124 SF± or 14.86 AC±

Lot 4 - 40000 SF± or 0.92 AC±

Lot 3 - 40000 SF± or 0.92 AC±

Lot 2 - 40000 SF± or 0.92 AC±

Lot 1 - 40000 SF± or 0.92 AC±

Covered Sign "Bailey Trail Connector"

0 WASHINGTON STREET
N/F
AB REALTY TRUST
BK.25396, PG.417

Total Lot Area
LOT AREA = 807,124 SF±
OR 18.53 ACRES±
(PLAN 1131 OF 2005)

GREENWOOD STREET
(PUBLIC – VARIABLE WIDTH)

56 GREENWOOD STREET
N/F
PARRISH NORMA R. TR
PARCEL ID: 7 0 48

46 GREENWOOD STREET
N/F
ADKIN ALEXANDER
PARCEL ID: 7 0 50C

34 GREENWOOD STREET
N/F
PARRISH DAVID
PARCEL ID: 7 0 49A

31 GREENWOOD STREET
N/F
BROWN, ROBERT L
PARCEL ID: 7 0 49A

31 GREENWOOD STREET
N/F
LEFANO, MICHAEL &
PARCEL ID: 7 0 49B

21 GREENWOOD STREET
N/F
BEACH CATHERINE A.
PARCEL ID: 7 0 49C

19 GREENWOOD STREET
N/F
CARVER-STPHEN W.
PARCEL ID: 7 0 48D

0 GREENWOOD STREET
TOWN OF SHERBORN
PARCEL ID: 7 0 48

Graphic Scale
60 0 60 120
1 Inch = 60 Feet

General notes

- Record owner is AB Realty Trust. See Middlesex County Registry of Deeds Book 25396, Page 417 and Sherborn Assessor's Map 7, Lot 49 for records.
- The Zoning district for the parcel is RB.
- The lot is shown in a FEMA Federal Hazard Zone "X" (unshaded), area of minimal flood hazard and outside the 0.2% annual chance floodplain. FIRM 25017C0632E, Effective 06/04/2010.
- This plan is only for the purpose of 40B feasibility site permitting.
- The Wetland Delineation was conducted by Creative Land & Water Engineering, LLC. on February 24 and on March 3, 4, 8, and 14 of 2022 and approved by SCC on 10/11/2022.
- The Horizontal Datum was based on NAD 83.
- Existing site details are based on the plan titled "Plan of Land" by Samiotes Consultants, INC., dated April 5, 2022.
- This plan is referenced vertically to the North American Vertical Datum of 1988 by RTK GPS observations taken on March 11, 14 & 15 of 2022 by Samiotes Consultants, INC.
- This plan is not intended to represent an on-the-ground topographic survey. Contours shown have been generated from GIS data and are for conceptual purposes only.
- This plan is not intended to represent a boundary survey. Property lines and easements shown are approximate.
- Owners of abutting properties are according to current assessor's records.

Land use analysis - LIHTC (Lot 5)

Landuse	Sq.Ft	%
Buildings (Lot 5)	15581	2.41
Parking/paved areas (Lot 5)	38275	5.91
Useable open space (total area minus building, parking/paved areas)	593268	91.68
Unusable open space (wetlands)	123556	19.09
Lot coverage (total of buildings and parking/paved)	53856	8.32
Total Area =	647124	100.00

Item	RB	Proposed LIHTC Apartments (Lot 5)	Waiver Required (yes,no)
Minimum Lot Area	2 acres	2.7 apartments per acre	Yes
Minimum Frontage	200 feet	816 feet	No
Minimum Lot Width	200 feet	816 feet	No
Minimum Lot Depth	N/A	N/A	No
Minimum Front Setback	60 feet	>100 feet	No
Minimum Side Setback	40 feet	>100 feet	No
Minimum Rear Setback	30 feet	>100 feet	No
Maximum Height (Stories)	2.5	3.5	Yes
Maximum Height (Feet)	35 feet	47 feet	Yes
Maximum Lot Coverage	N/A	N/A	No

Creative Land & Water Engineering, LLC
Environmental Scientists and Engineers
P.O. Box 584 - Southborough - MA - 01772
774-454-0266 www.claweng.com

Plan Title:	Conceptual Site Plan (40B)		
Project Name:	Washington Street Sherborn Homes		
Site Address:	0 Washington St (Map 7, Lot 49) - Sherborn, MA		
Owner:	AB Realty Trust	Client:	Robert Murchison
Project No: J269-19	Drawn by:	Date: 10/14/22	Sheet No: 1 of 1
Designed by:	Approved by:	Scale: 1" = 60'	

Rev.:	Date:	Description	By:
1	9/29/22	Updated Wetland Line	FA

C:\Users\clawer\OneDrive\Jobs\Sherborn\J269-19 Greenwood\Drafting

AUTOMATIC TRAFFIC RECORDER COUNT DATA

Accurate Counts

978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA

2/14/2023	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	7	55			1	58				
12:15	6	66			3	56				
12:30	2	62			1	66				
12:45	0	69	15	252	0	71	5	251	20	503
1:00	1	70			2	64				
1:15	0	71			0	58				
1:30	2	81			3	69				
1:45	0	54	3	276	1	50	6	241	9	517
2:00	1	58			1	54				
2:15	1	64			3	48				
2:30	0	93			0	55				
2:45	0	112	2	327	1	48	5	205	7	532
3:00	1	110			1	62				
3:15	1	124			2	59				
3:30	0	126			4	69				
3:45	0	141	2	501	5	73	12	263	14	764
4:00	1	112			4	57				
4:15	0	138			9	77				
4:30	1	127			15	68				
4:45	1	154	3	531	16	58	44	260	47	791
5:00	2	155			19	61				
5:15	6	141			55	58				
5:30	4	135			65	61				
5:45	7	118	19	549	78	36	217	216	236	765
6:00	9	141			134	42				
6:15	16	111			156	44				
6:30	23	111			201	49				
6:45	35	98	83	461	213	37	704	172	787	633
7:00	39	80			187	30				
7:15	32	76			195	25				
7:30	46	48			173	26				
7:45	47	41	164	245	163	18	718	99	882	344
8:00	45	51			160	20				
8:15	68	43			138	22				
8:30	47	37			165	10				
8:45	42	39	202	170	155	8	618	60	820	230
9:00	51	23			114	12				
9:15	50	24			109	9				
9:30	45	29			88	13				
9:45	44	16	190	92	78	6	389	40	579	132
10:00	46	20			65	12				
10:15	48	21			72	9				
10:30	44	11			86	4				
10:45	42	13	180	65	60	7	283	32	463	97
11:00	46	10			63	3				
11:15	54	17			56	3				
11:30	50	8			73	1				
11:45	58	13	208	48	60	1	252	8	460	56
Total	1071	3517			3253	1847			4324	5364
Percent	23.3%	76.7%			63.8%	36.2%			44.6%	55.4%

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA

2/15/2023	SB		Hour Totals		NB		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	7	51			3	54				
12:15	8	69			2	68				
12:30	3	69			0	61				
12:45	5	56	23	245	1	60	6	243	29	488
1:00	0	63			1	48				
1:15	1	65			2	50				
1:30	0	55			2	60				
1:45	0	79	1	262	0	36	5	194	6	456
2:00	1	95			2	67				
2:15	0	74			2	61				
2:30	0	106			2	40				
2:45	0	101	1	376	2	63	8	231	9	607
3:00	2	115			2	50				
3:15	0	134			5	57				
3:30	0	116			6	64				
3:45	0	122	2	487	4	59	17	230	19	717
4:00	2	127			4	56				
4:15	0	125			11	62				
4:30	0	127			11	65				
4:45	0	143	2	522	11	65	37	248	39	770
5:00	5	149			24	65				
5:15	3	126			52	77				
5:30	3	149			50	65				
5:45	6	126	17	550	91	53	217	260	234	810
6:00	7	115			137	44				
6:15	14	110			167	39				
6:30	31	111			195	35				
6:45	42	97	94	433	193	33	692	151	786	584
7:00	28	60			172	29				
7:15	42	64			186	22				
7:30	58	46			190	12				
7:45	48	40	176	210	158	18	706	81	882	291
8:00	48	57			134	19				
8:15	48	59			174	17				
8:30	43	60			152	16				
8:45	43	34	182	210	120	11	580	63	762	273
9:00	44	45			104	20				
9:15	31	29			103	7				
9:30	33	23			91	7				
9:45	31	30	139	127	85	10	383	44	522	171
10:00	36	19			81	7				
10:15	53	18			81	8				
10:30	38	11			76	4				
10:45	52	16	179	64	57	4	295	23	474	87
11:00	45	13			58	3				
11:15	51	12			55	4				
11:30	56	10			63	4				
11:45	55	8	207	43	58	1	234	12	441	55
Total	1023	3529			3180	1780			4203	5309
Percent	22.5%	77.5%			64.1%	35.9%			44.2%	55.8%
Grand Total	2094	7046			6433	3627			8527	10673
Percent	22.9%	77.1%			63.9%	36.1%			44.4%	55.6%
ADT		ADT: 9,600		AADT: 9,600						

Accurate Counts
978-664-2565

Location : Washington Street
Location : South of Old Orchard Road
City/State: Sherborn, MA

96330001

2/13/2023	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Week Average	
Time	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB
12:00 AM	*	*	15	5	23	6	*	*	*	*	*	*	*	*	19	6
1:00	*	*	3	6	1	5	*	*	*	*	*	*	*	*	2	6
2:00	*	*	2	5	1	8	*	*	*	*	*	*	*	*	2	6
3:00	*	*	2	12	2	17	*	*	*	*	*	*	*	*	2	14
4:00	*	*	3	44	2	37	*	*	*	*	*	*	*	*	2	40
5:00	*	*	19	217	17	217	*	*	*	*	*	*	*	*	18	217
6:00	*	*	83	704	94	692	*	*	*	*	*	*	*	*	88	698
7:00	*	*	164	718	176	706	*	*	*	*	*	*	*	*	170	712
8:00	*	*	202	618	182	580	*	*	*	*	*	*	*	*	192	599
9:00	*	*	190	389	139	383	*	*	*	*	*	*	*	*	164	386
10:00	*	*	180	283	179	295	*	*	*	*	*	*	*	*	180	289
11:00	*	*	208	252	207	234	*	*	*	*	*	*	*	*	208	243
12:00 PM	*	*	252	251	245	243	*	*	*	*	*	*	*	*	248	247
1:00	*	*	276	241	262	194	*	*	*	*	*	*	*	*	269	218
2:00	*	*	327	205	376	231	*	*	*	*	*	*	*	*	352	218
3:00	*	*	501	263	487	230	*	*	*	*	*	*	*	*	494	246
4:00	*	*	531	260	522	248	*	*	*	*	*	*	*	*	526	254
5:00	*	*	549	216	550	260	*	*	*	*	*	*	*	*	550	238
6:00	*	*	461	172	433	151	*	*	*	*	*	*	*	*	447	162
7:00	*	*	245	99	210	81	*	*	*	*	*	*	*	*	228	90
8:00	*	*	170	60	210	63	*	*	*	*	*	*	*	*	190	62
9:00	*	*	92	40	127	44	*	*	*	*	*	*	*	*	110	42
10:00	*	*	65	32	64	23	*	*	*	*	*	*	*	*	64	28
11:00	*	*	48	8	13	3	*	*	*	*	*	*	*	*	30	6
Total	0	0	4588	5100	4522	4951	0	0	0	0	0	0	0	0	4555	5027
Day	0		9688		9473		0		0		0		0		9582	
AM Peak			11:00	7:00	11:00	7:00									11:00	7:00
Volume			208	718	207	706									208	712
PM Peak			5:00	3:00	5:00	5:00									5:00	4:00
Volume			549	263	550	260									550	254
Comb Total	0		9688		9473		0		0		0		0		9582	
ADT	ADT: 9,600		AADT: 9,600													

TURNING MOVEMENT COUNT DATA

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Cars - Trucks

	Route 16 From North		Greenwood St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	44	0	0	207	0	251
07:15 AM	0	35	0	2	200	0	237
07:30 AM	0	52	0	2	178	1	233
07:45 AM	1	43	0	1	159	0	204
Total	1	174	0	5	744	1	925
08:00 AM	3	38	0	2	163	1	207
08:15 AM	1	82	0	4	166	0	253
08:30 AM	2	48	0	1	160	0	211
08:45 AM	1	47	0	1	160	0	209
Total	7	215	0	8	649	1	880
Grand Total	8	389	0	13	1393	2	1805
Apprch %	2	98	0	100	99.9	0.1	
Total %	0.4	21.6	0	0.7	77.2	0.1	
Cars	6	363	0	12	1348	2	1731
% Cars	75	93.3	0	92.3	96.8	100	95.9
Trucks	2	26	0	1	45	0	74
% Trucks	25	6.7	0	7.7	3.2	0	4.1

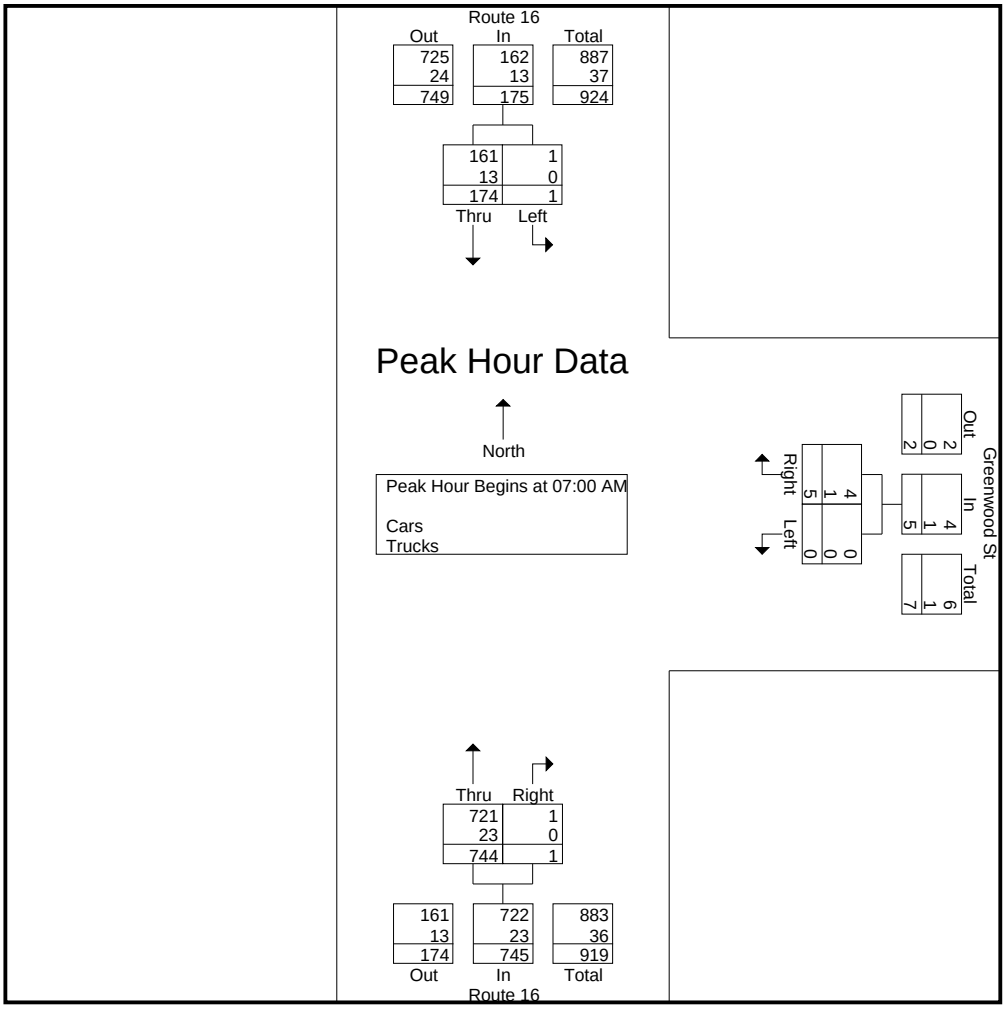
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	44	44	0	0	0	**207**	0	**207**	**251**
07:15 AM	0	35	35	0	**2**	**2**	200	0	200	237
07:30 AM	0	**52**	**52**	0	2	2	178	**1**	179	233
07:45 AM	**1**	43	44	0	1	1	159	0	159	204
Total Volume	1	174	175	0	5	5	744	1	745	925
% App. Total	0.6	99.4		0	100		99.9	0.1		
PHF	.250	.837	.841	.000	.625	.625	.899	.250	.900	.921
Cars	1	161	162	0	4	4	721	1	722	888
% Cars	100	92.5	92.6	0	80.0	80.0	96.9	100	96.9	96.0
Trucks	0	13	13	0	1	1	23	0	23	37
% Trucks	0	7.5	7.4	0	20.0	20.0	3.1	0	3.1	4.0

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

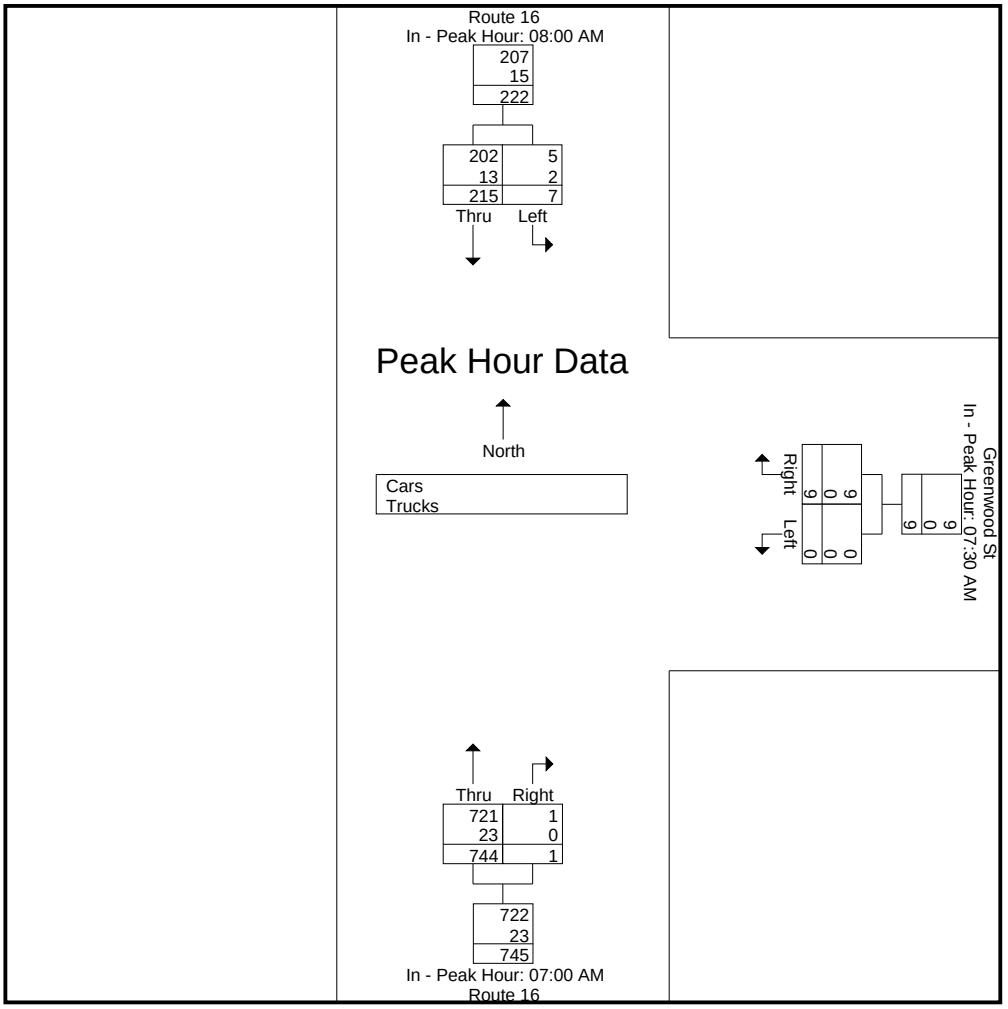
	08:00 AM			07:30 AM			07:00 AM		
+0 mins.	**3**	38	41	0	2	2	**207**	0	**207**
+15 mins.	1	**82**	**83**	0	1	1	200	0	200
+30 mins.	2	48	50	0	2	2	178	**1**	179
+45 mins.	1	47	48	0	**4**	**4**	159	0	159
Total Volume	7	215	222	0	9	9	744	1	745
% App. Total	3.2	96.8		0	100		99.9	0.1	
PHF	.583	.655	.669	.000	.563	.563	.899	.250	.900
Cars	5	202	207	0	9	9	721	1	722
% Cars	71.4	94	93.2	0	100	100	96.9	100	96.9
Trucks	2	13	15	0	0	0	23	0	23
% Trucks	28.6	6	6.8	0	0	0	3.1	0	3.1

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Cars

	Route 16 From North		Greenwood St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	42	0	0	199	0	241
07:15 AM	0	32	0	1	192	0	225
07:30 AM	0	48	0	2	174	1	225
07:45 AM	1	39	0	1	156	0	197
Total	1	161	0	4	721	1	888
08:00 AM	1	34	0	2	156	1	194
08:15 AM	1	76	0	4	163	0	244
08:30 AM	2	47	0	1	153	0	203
08:45 AM	1	45	0	1	155	0	202
Total	5	202	0	8	627	1	843
Grand Total	6	363	0	12	1348	2	1731
Apprch %	1.6	98.4	0	100	99.9	0.1	
Total %	0.3	21	0	0.7	77.9	0.1	

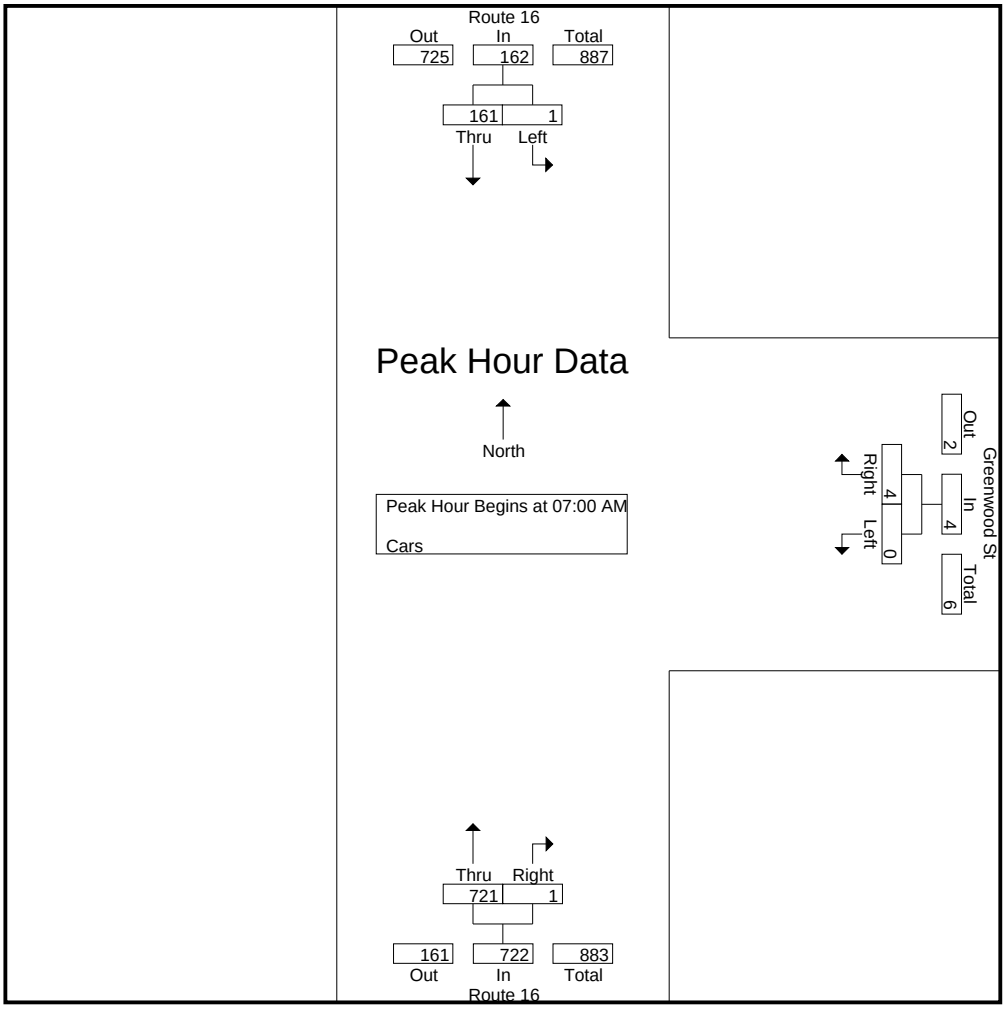
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	42	42	0	0	0	**199**	0	**199**	**241**
07:15 AM	0	32	32	0	1	1	192	0	192	225
07:30 AM	0	**48**	**48**	0	**2**	**2**	174	**1**	175	225
07:45 AM	**1**	39	40	0	1	1	156	0	156	197
Total Volume	1	161	162	0	4	4	721	1	722	888
% App. Total	0.6	99.4		0	100		99.9	0.1		
PHF	.250	.839	.844	.000	.500	.500	.906	.250	.907	.921

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

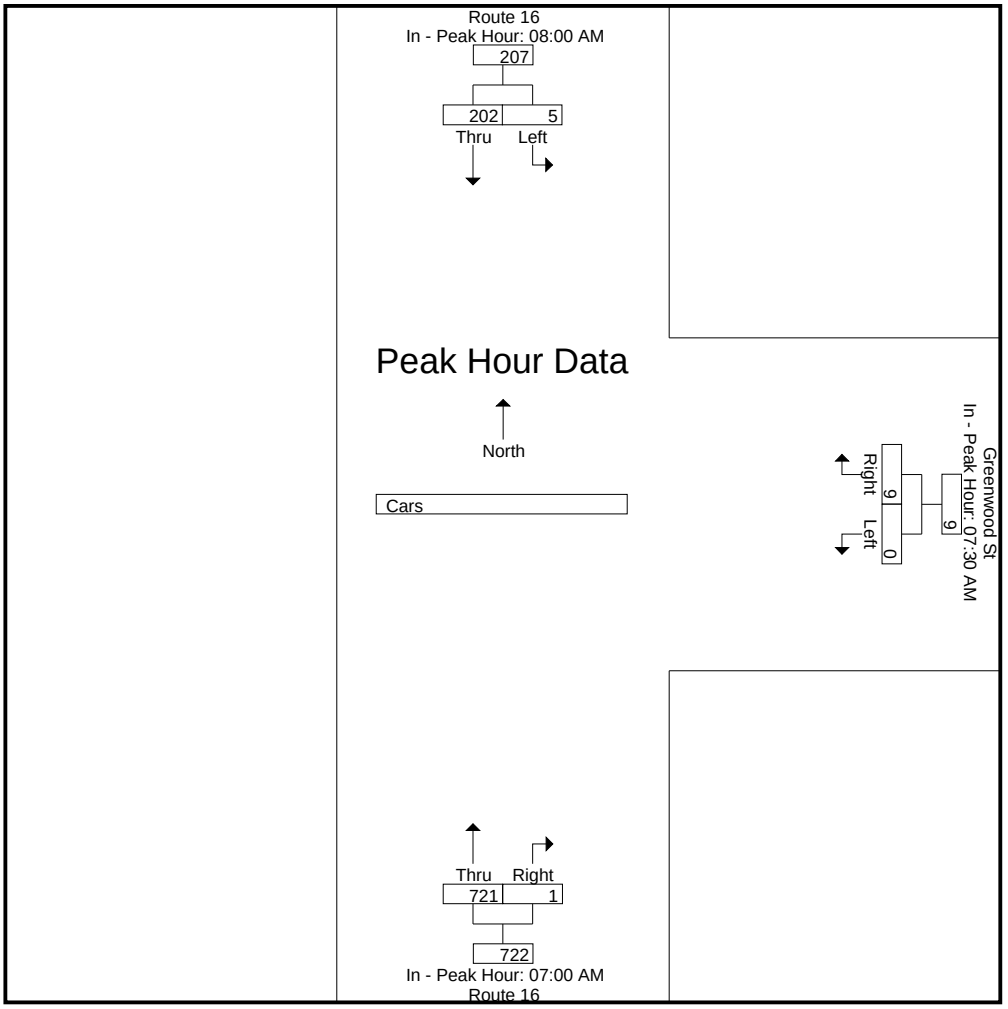
	08:00 AM			07:30 AM			07:00 AM		
+0 mins.	1	34	35	0	2	2	**199**	0	**199**
+15 mins.	1	**76**	**77**	0	1	1	192	0	192
+30 mins.	**2**	47	49	0	2	2	174	**1**	175
+45 mins.	1	45	46	0	**4**	**4**	156	0	156
Total Volume	5	202	207	0	9	9	721	1	722
% App. Total	2.4	97.6		0	100		99.9	0.1	
PHF	.625	.664	.672	.000	.563	.563	.906	.250	.907

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Trucks

	Route 16 From North		Greenwood St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	2	0	0	8	0	10
07:15 AM	0	3	0	1	8	0	12
07:30 AM	0	4	0	0	4	0	8
07:45 AM	0	4	0	0	3	0	7
Total	0	13	0	1	23	0	37
08:00 AM	2	4	0	0	7	0	13
08:15 AM	0	6	0	0	3	0	9
08:30 AM	0	1	0	0	7	0	8
08:45 AM	0	2	0	0	5	0	7
Total	2	13	0	0	22	0	37
Grand Total	2	26	0	1	45	0	74
Apprch %	7.1	92.9	0	100	100	0	
Total %	2.7	35.1	0	1.4	60.8	0	

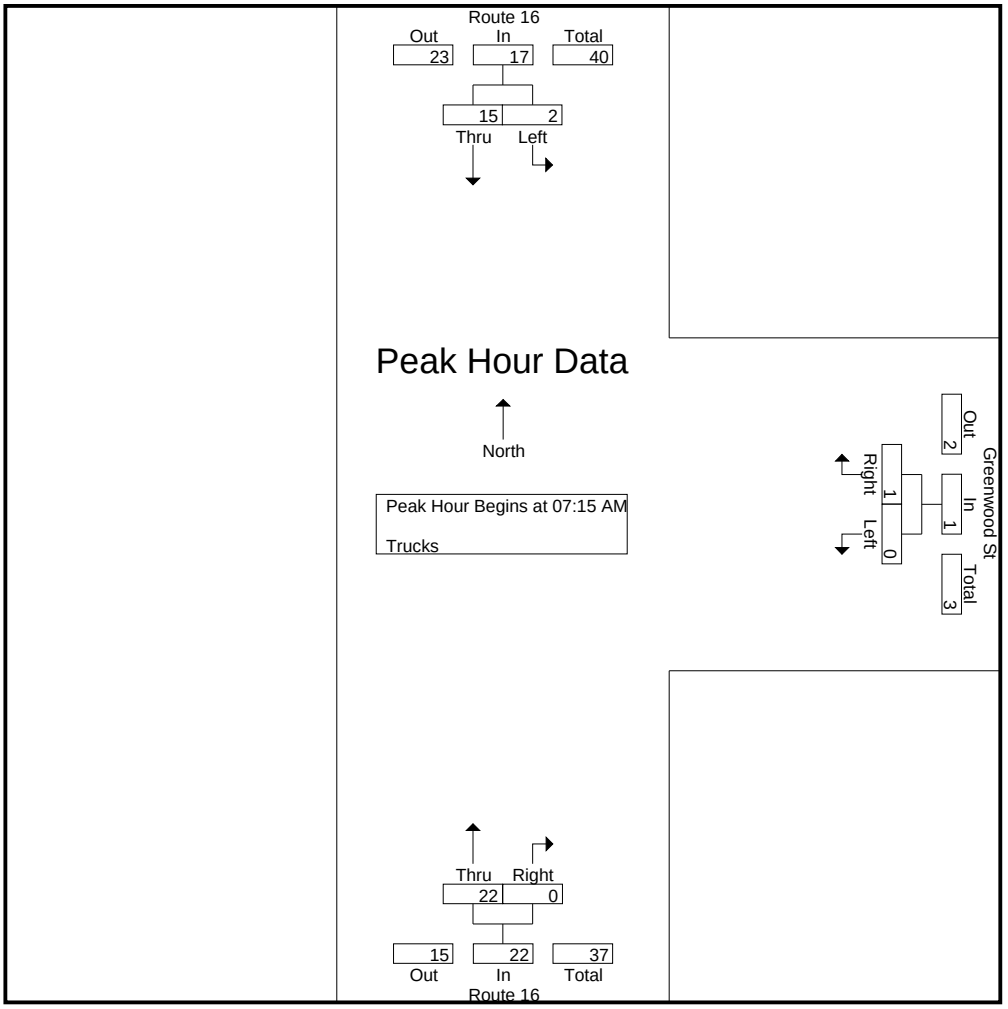
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	3	3	0	**1**	**1**	**8**	0	**8**	12
07:30 AM	0	**4**	4	0	0	0	4	0	4	8
07:45 AM	0	4	4	0	0	0	3	0	3	7
08:00 AM	**2**	4	**6**	0	0	0	7	0	7	**13**
Total Volume	2	15	17	0	1	1	22	0	22	40
% App. Total	11.8	88.2		0	100		100	0		
PHF	.250	.938	.708	.000	.250	.250	.688	.000	.688	.769

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 8



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

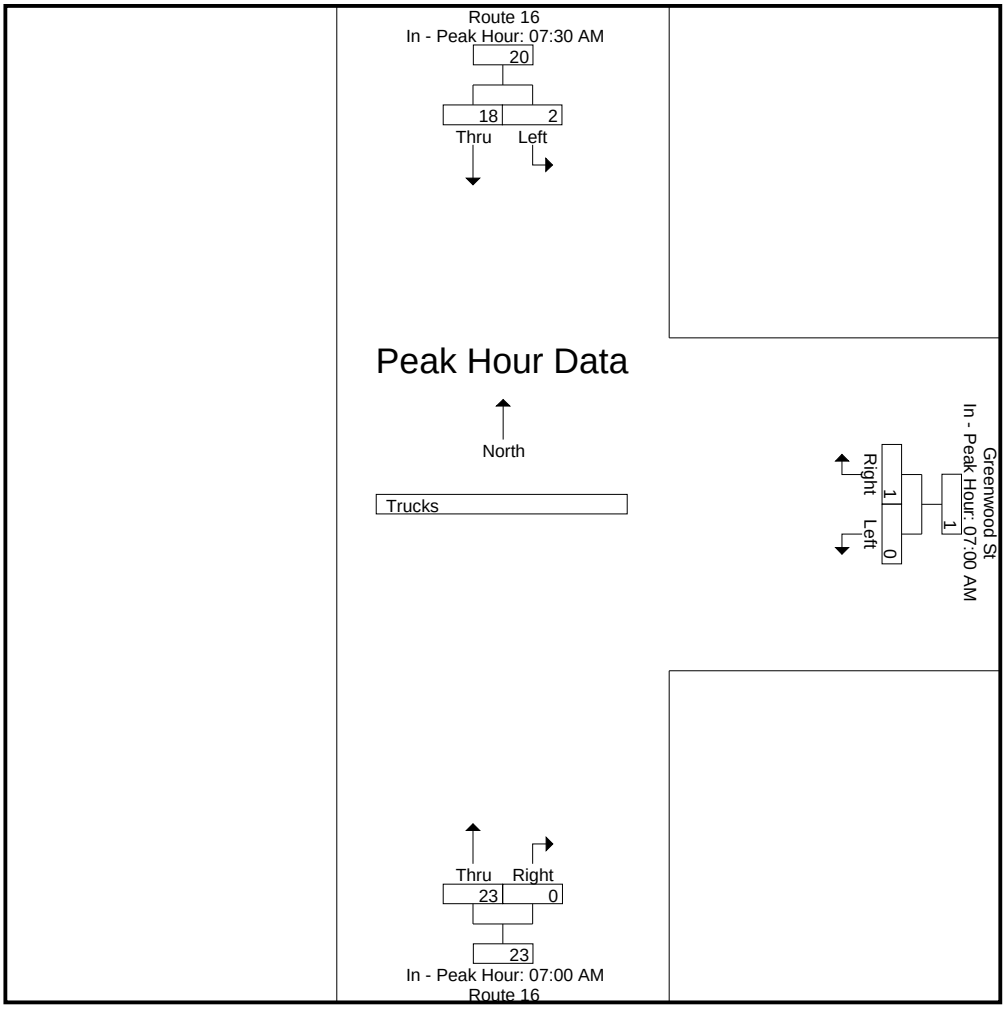
	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	0	4	4	0	0	0	**8**	0	**8**
+15 mins.	0	4	4	0	**1**	**1**	8	0	8
+30 mins.	**2**	4	**6**	0	0	0	4	0	4
+45 mins.	0	**6**	6	0	0	0	3	0	3
Total Volume	2	18	20	0	1	1	23	0	23
% App. Total	10	90		0	100		100	0	
PHF	.250	.750	.833	.000	.250	.250	.719	.000	.719

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

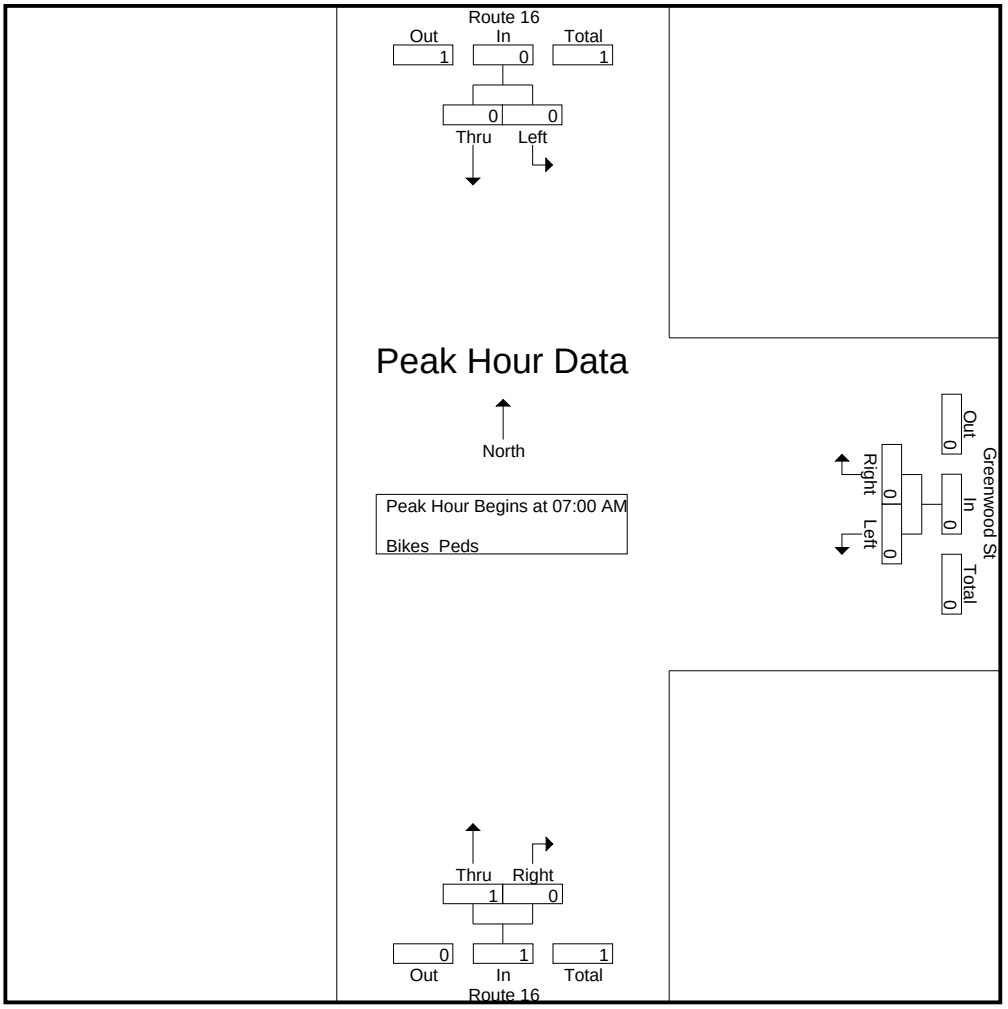
Groups Printed- Bikes Peds

	Route 16 From North			Greenwood St From East			Route 16 From South					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	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
Grand Total	0	0	0	0	0	0	1	0	0	0	1	1
Apprch %	0	0		0	0		100	0				
Total %	0	0		0	0		100	0		0	100	

	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	**1**	0	**1**	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 11



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

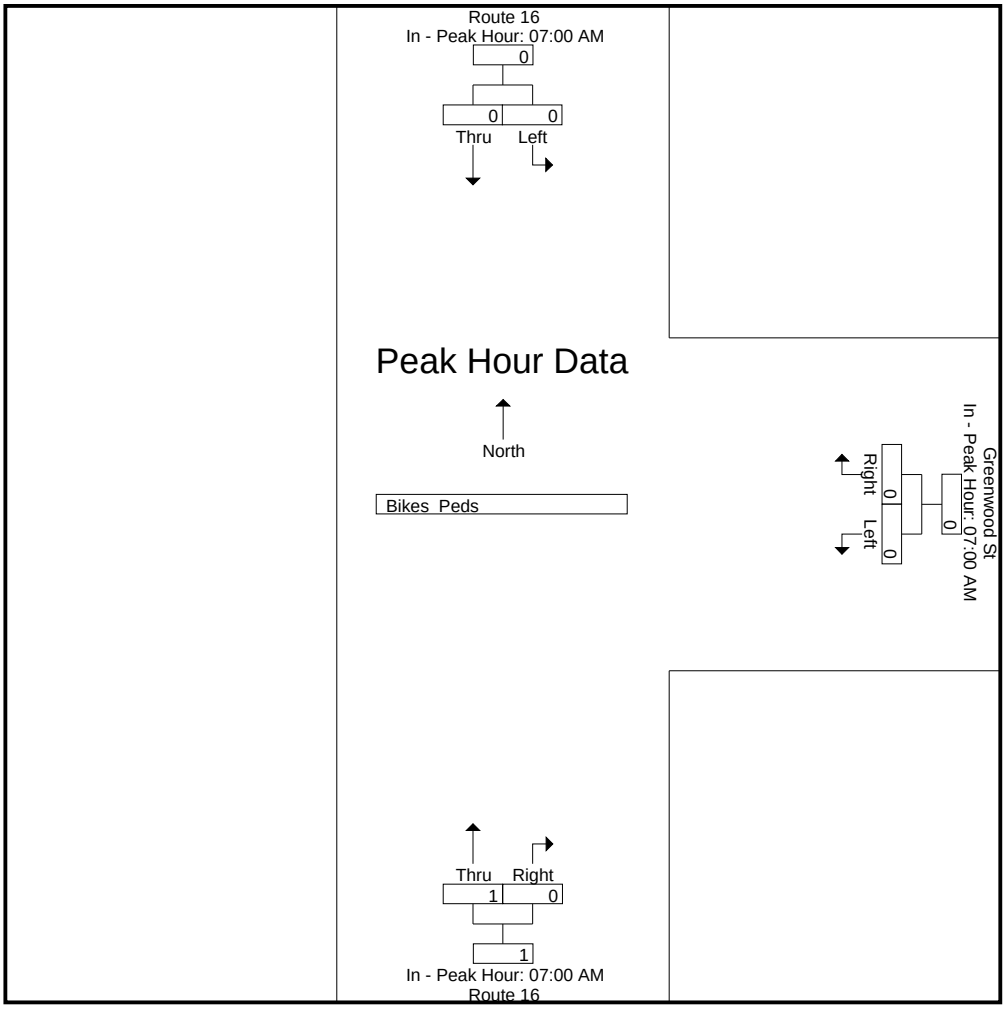
	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0		0	0		100	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Cars - Trucks

	Route 16 From North		Greenwood St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	3	132	1	1	60	0	197
04:15 PM	0	133	1	1	78	0	213
04:30 PM	1	137	1	0	67	1	207
04:45 PM	3	171	1	4	67	0	246
Total	7	573	4	6	272	1	863
05:00 PM	1	161	1	0	63	0	226
05:15 PM	4	148	0	2	59	1	214
05:30 PM	1	149	1	1	64	1	217
05:45 PM	5	131	0	1	42	0	179
Total	11	589	2	4	228	2	836
Grand Total	18	1162	6	10	500	3	1699
Apprch %	1.5	98.5	37.5	62.5	99.4	0.6	
Total %	1.1	68.4	0.4	0.6	29.4	0.2	
Cars	18	1156	6	10	497	3	1690
% Cars	100	99.5	100	100	99.4	100	99.5
Trucks	0	6	0	0	3	0	9
% Trucks	0	0.5	0	0	0.6	0	0.5

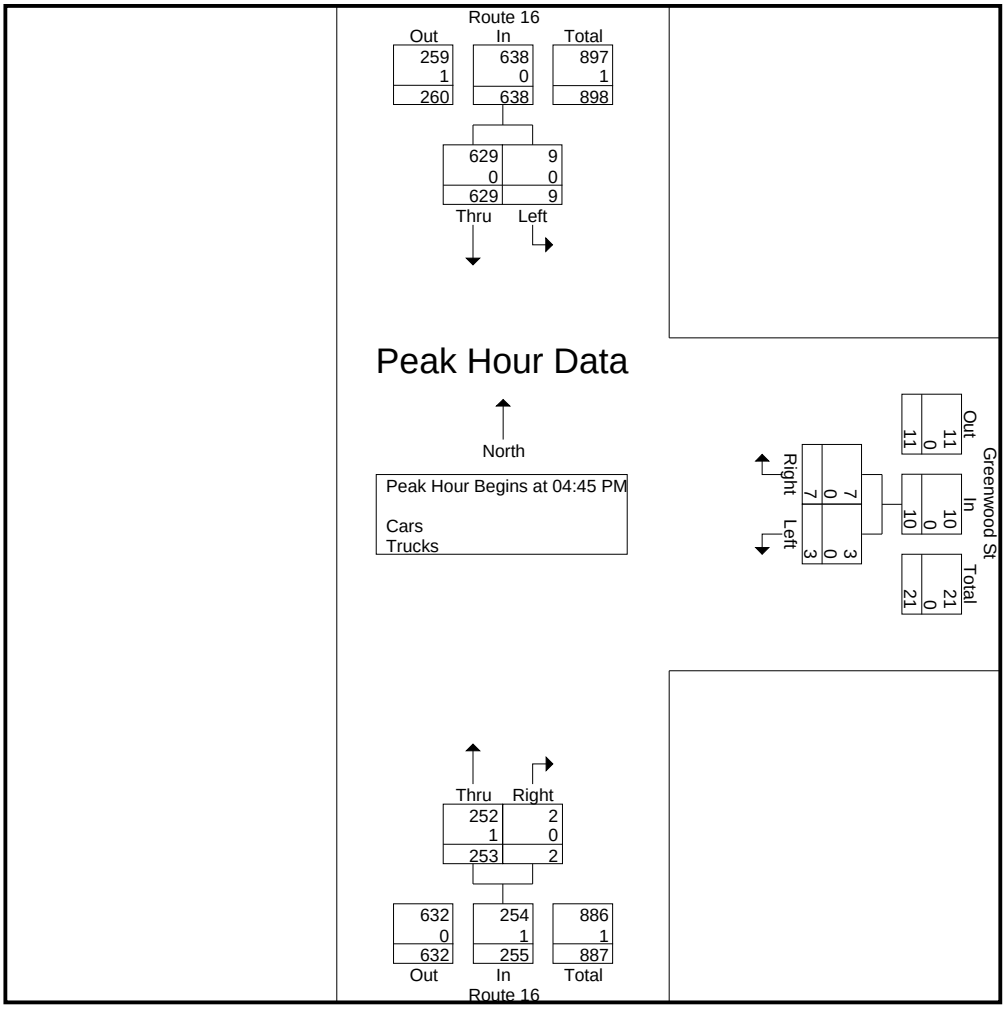
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	3	**171**	**174**	**1**	**4**	**5**	**67**	0	**67**	**246**
05:00 PM	1	161	162	1	0	1	63	0	63	226
05:15 PM	**4**	148	152	0	2	2	59	**1**	60	214
05:30 PM	1	149	150	1	1	2	64	1	65	217
Total Volume	9	629	638	3	7	10	253	2	255	903
% App. Total	1.4	98.6		30	70		99.2	0.8		
PHF	.563	.920	.917	.750	.438	.500	.944	.500	.951	.918
Cars	9	629	638	3	7	10	252	2	254	902
% Cars	100	100	100	100	100	100	99.6	100	99.6	99.9
Trucks	0	0	0	0	0	0	1	0	1	1
% Trucks	0	0	0	0	0	0	0.4	0	0.4	0.1

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

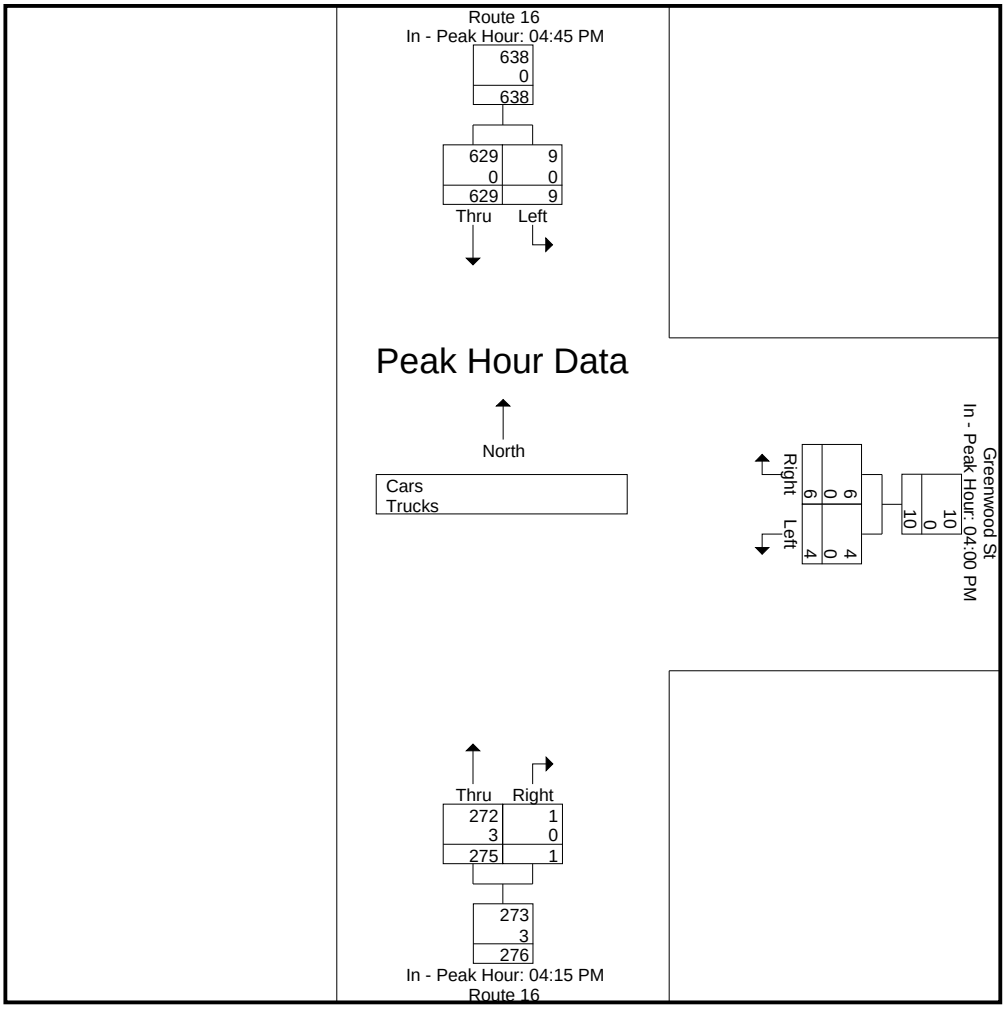
	04:45 PM			04:00 PM			04:15 PM		
+0 mins.	3	**171**	**174**	**1**	1	2	**78**	0	**78**
+15 mins.	1	161	162	1	1	2	67	**1**	68
+30 mins.	**4**	148	152	1	0	1	67	0	67
+45 mins.	1	149	150	1	**4**	**5**	63	0	63
Total Volume	9	629	638	4	6	10	275	1	276
% App. Total	1.4	98.6		40	60		99.6	0.4	
PHF	.563	.920	.917	1.000	.375	.500	.881	.250	.885
Cars	9	629	638	4	6	10	272	1	273
% Cars	100	100	100	100	100	100	98.9	100	98.9
Trucks	0	0	0	0	0	0	3	0	3
% Trucks	0	0	0	0	0	0	1.1	0	1.1

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Cars

	Route 16 From North		Greenwood St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	3	130	1	1	60	0	195
04:15 PM	0	133	1	1	77	0	212
04:30 PM	1	134	1	0	66	1	203
04:45 PM	3	171	1	4	67	0	246
Total	7	568	4	6	270	1	856
05:00 PM	1	161	1	0	62	0	225
05:15 PM	4	148	0	2	59	1	214
05:30 PM	1	149	1	1	64	1	217
05:45 PM	5	130	0	1	42	0	178
Total	11	588	2	4	227	2	834
Grand Total	18	1156	6	10	497	3	1690
Apprch %	1.5	98.5	37.5	62.5	99.4	0.6	
Total %	1.1	68.4	0.4	0.6	29.4	0.2	

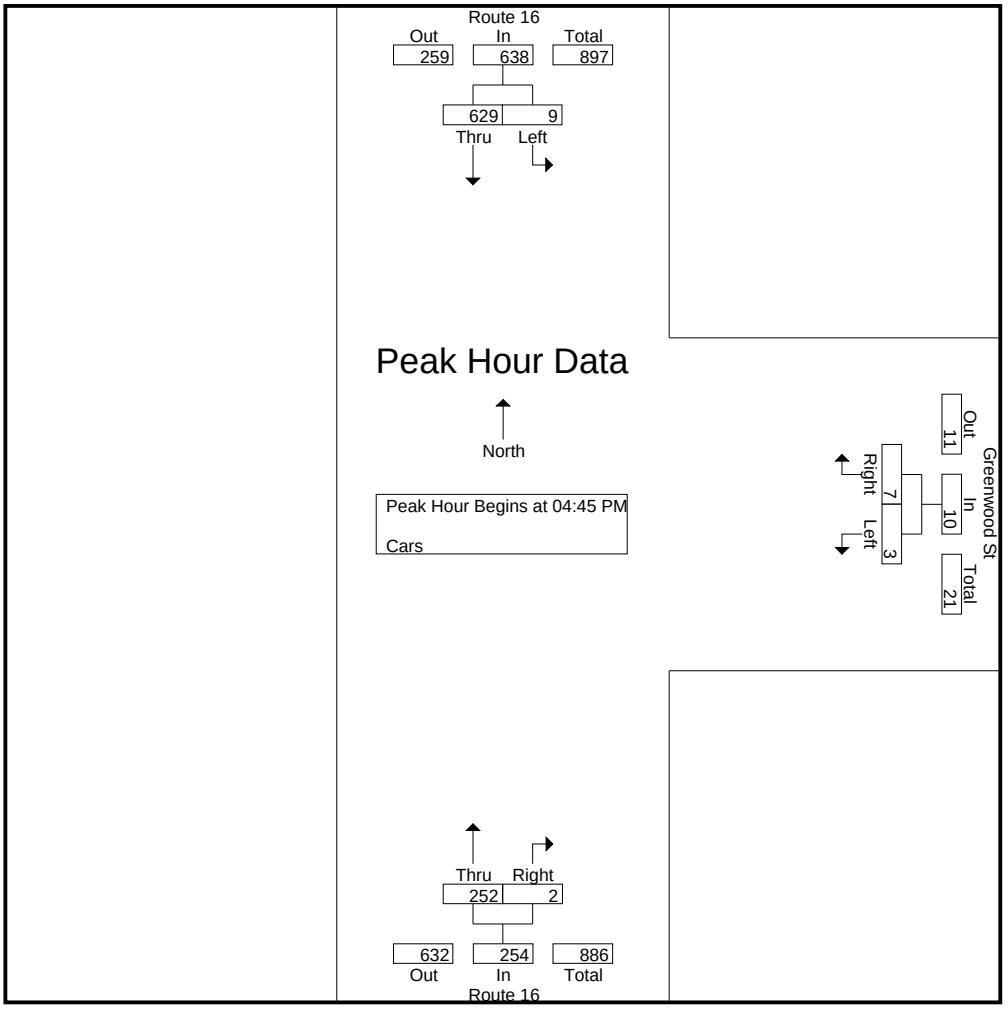
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	3	**171**	**174**	**1**	**4**	**5**	**67**	0	**67**	**246**
05:00 PM	1	161	162	1	0	1	62	0	62	225
05:15 PM	**4**	148	152	0	2	2	59	**1**	60	214
05:30 PM	1	149	150	1	1	2	64	1	65	217
Total Volume	9	629	638	3	7	10	252	2	254	902
% App. Total	1.4	98.6		30	70		99.2	0.8		
PHF	.563	.920	.917	.750	.438	.500	.940	.500	.948	.917

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 5



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

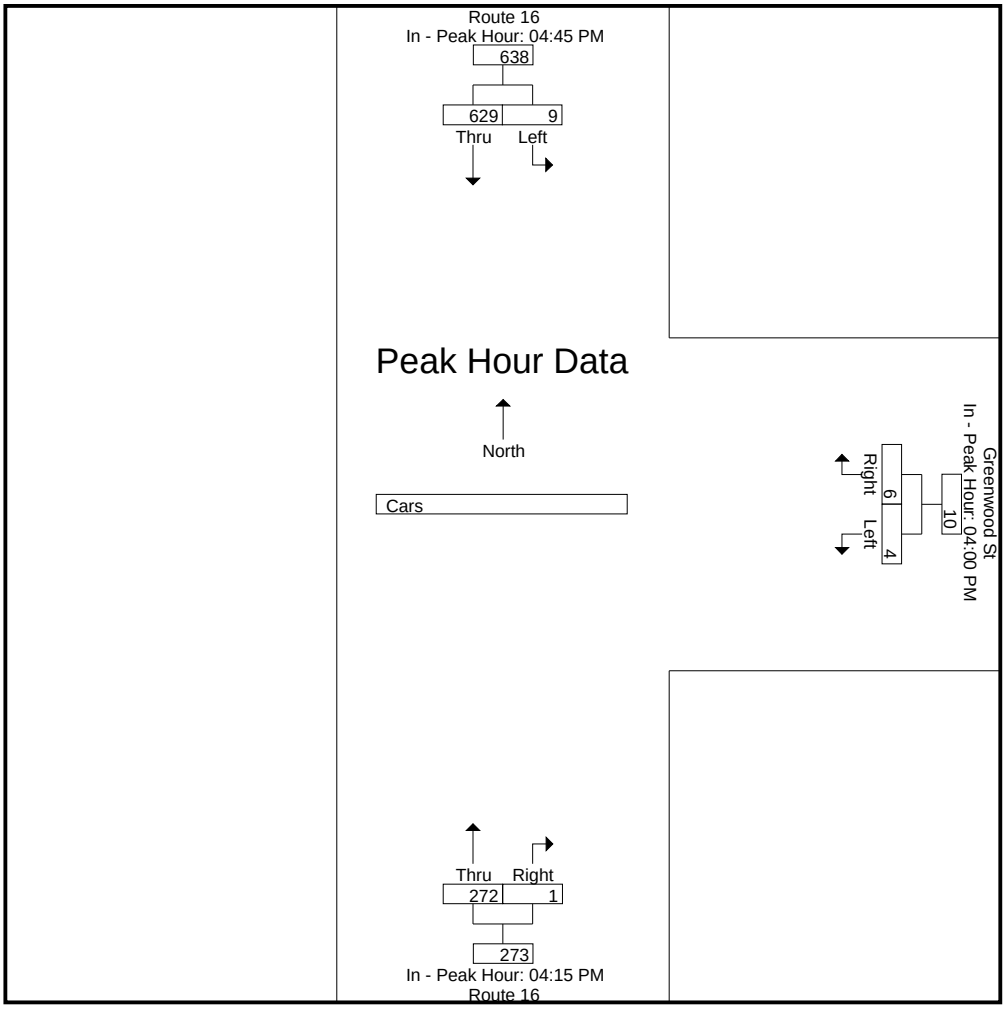
	04:45 PM			04:00 PM			04:15 PM		
+0 mins.	3	**171**	**174**	**1**	1	2	**77**	0	**77**
+15 mins.	1	161	162	1	1	2	66	**1**	67
+30 mins.	**4**	148	152	1	0	1	67	0	67
+45 mins.	1	149	150	1	**4**	**5**	62	0	62
Total Volume	9	629	638	4	6	10	272	1	273
% App. Total	1.4	98.6		40	60		99.6	0.4	
PHF	.563	.920	.917	1.000	.375	.500	.883	.250	.886

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Trucks

	Route 16 From North		Greenwood St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	1	0	1
04:30 PM	0	3	0	0	1	0	4
04:45 PM	0	0	0	0	0	0	0
Total	0	5	0	0	2	0	7
05:00 PM	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	0	0	1
Total	0	1	0	0	1	0	2
Grand Total	0	6	0	0	3	0	9
Apprch %	0	100	0	0	100	0	
Total %	0	66.7	0	0	33.3	0	

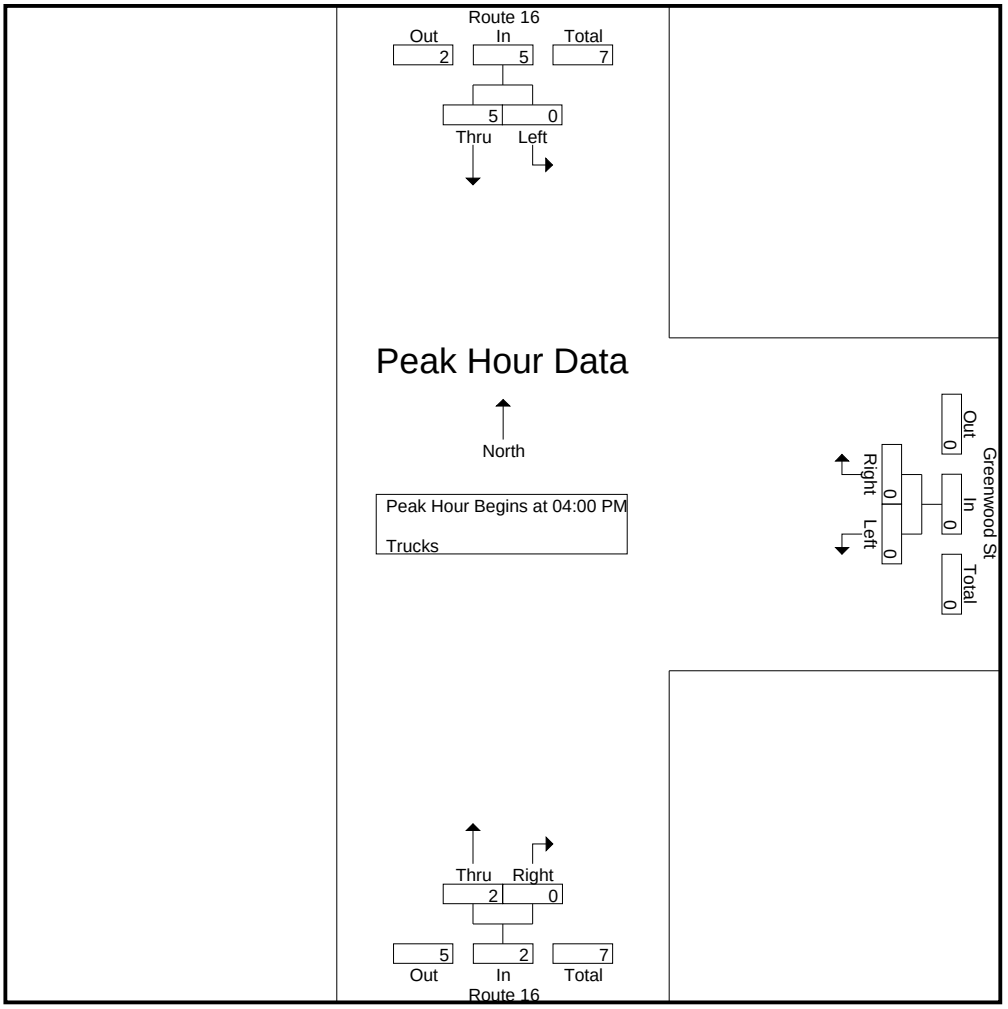
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	2	2	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	**1**	0	**1**	1
04:30 PM	0	**3**	**3**	0	0	0	1	0	1	**4**
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	5	5	0	0	0	2	0	2	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.417	.417	.000	.000	.000	.500	.000	.500	.438

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

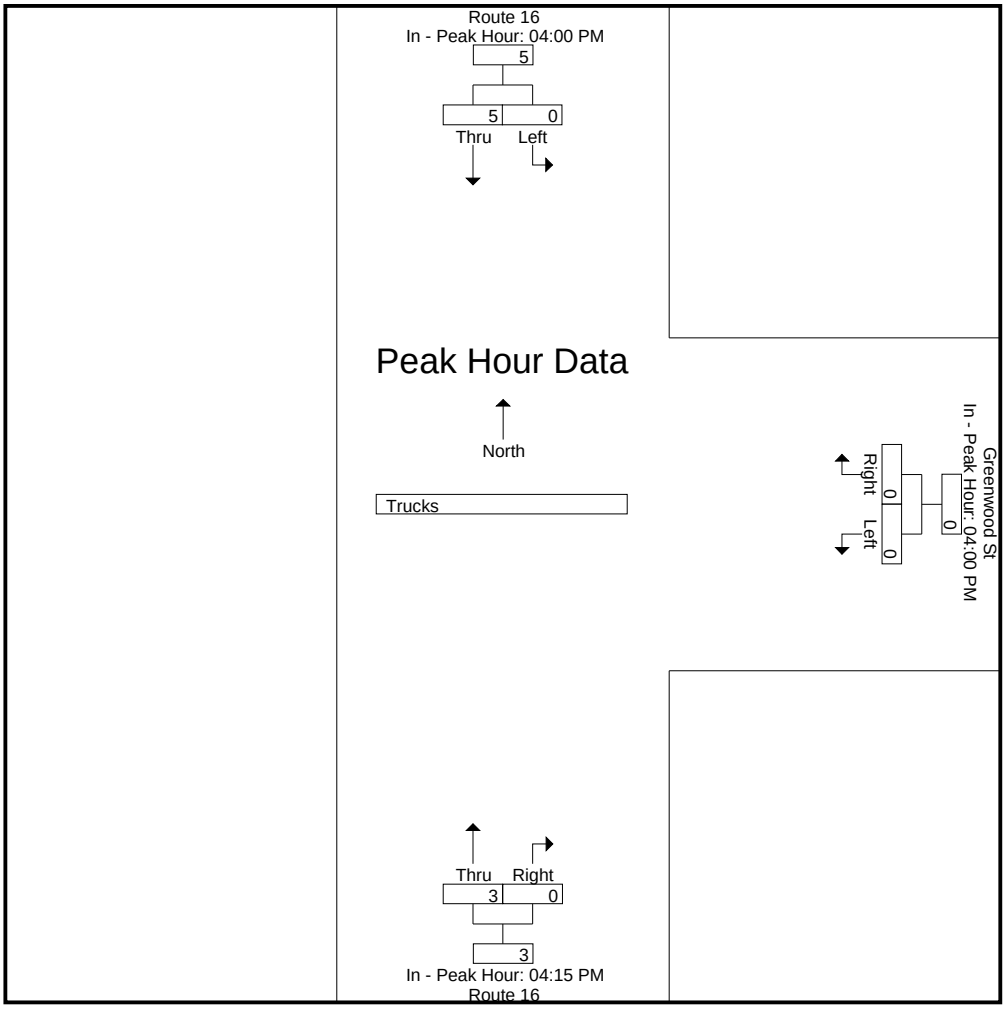
	04:00 PM			04:00 PM			04:15 PM		
+0 mins.	0	2	2	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	**3**	**3**	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	5	5	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.417	.417	.000	.000	.000	.750	.000	.750

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023

Groups Printed- Bikes Peds

	Route 16 From North			Greenwood St From East			Route 16 From South					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	0	0	0	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	1	1
Grand Total	0	1	0	0	0	0	0	0	0	0	1	1
Apprch %	0	100		0	0		0	0				
Total %	0	100		0	0		0	0		0	100	

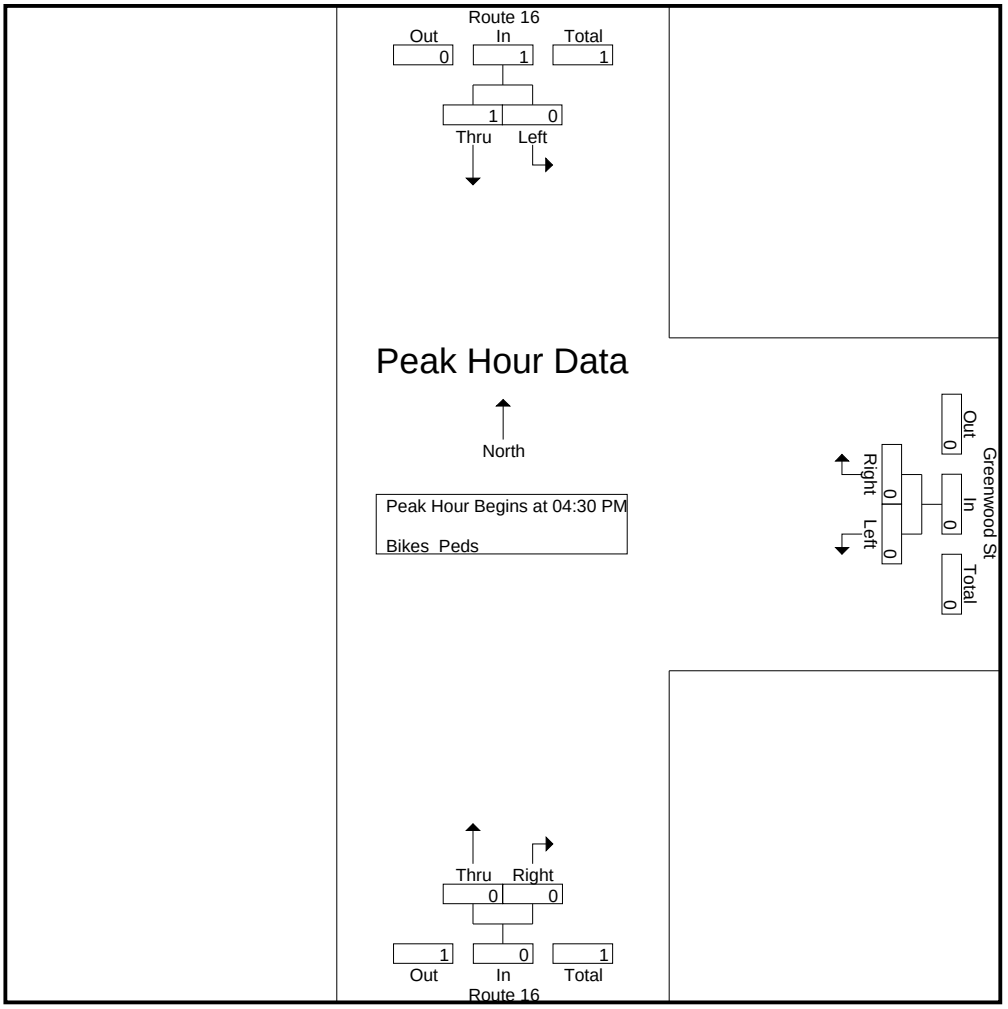
	Route 16 From North			Greenwood St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**1**	**1**	0	0	0	0	0	0	**1**
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 11



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

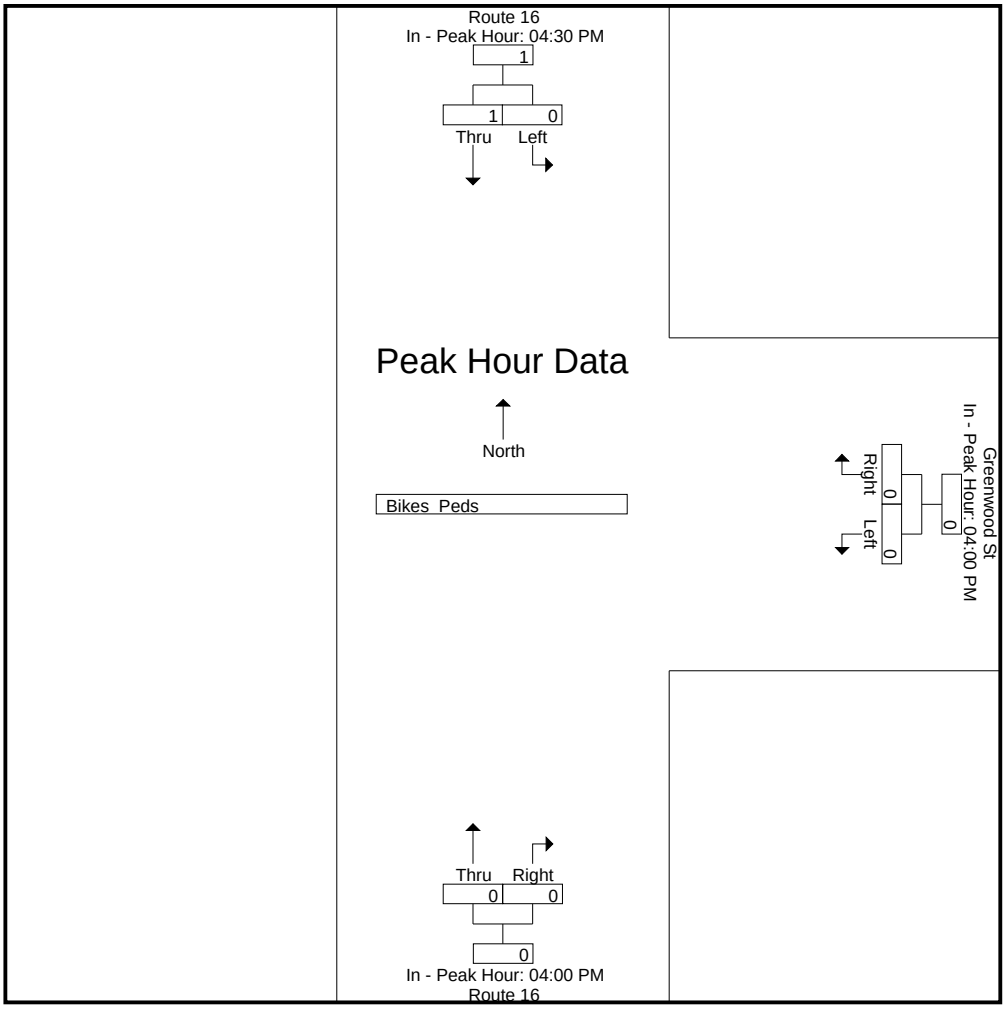
	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	**1**	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Greenwood Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330001
Site Code : 96330001
Start Date : 2/14/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Cars - Trucks

	Route 16 From North		Woodland St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	1	45	16	1	187	29	279
07:15 AM	0	39	13	1	193	22	268
07:30 AM	1	52	17	0	177	37	284
07:45 AM	0	42	15	1	154	26	238
Total	2	178	61	3	711	114	1069
08:00 AM	1	37	13	1	158	25	235
08:15 AM	2	81	19	1	146	27	276
08:30 AM	1	47	15	0	155	11	229
08:45 AM	1	45	13	4	156	9	228
Total	5	210	60	6	615	72	968
Grand Total	7	388	121	9	1326	186	2037
Apprch %	1.8	98.2	93.1	6.9	87.7	12.3	
Total %	0.3	19	5.9	0.4	65.1	9.1	
Cars	7	361	120	8	1292	181	1969
% Cars	100	93	99.2	88.9	97.4	97.3	96.7
Trucks	0	27	1	1	34	5	68
% Trucks	0	7	0.8	11.1	2.6	2.7	3.3

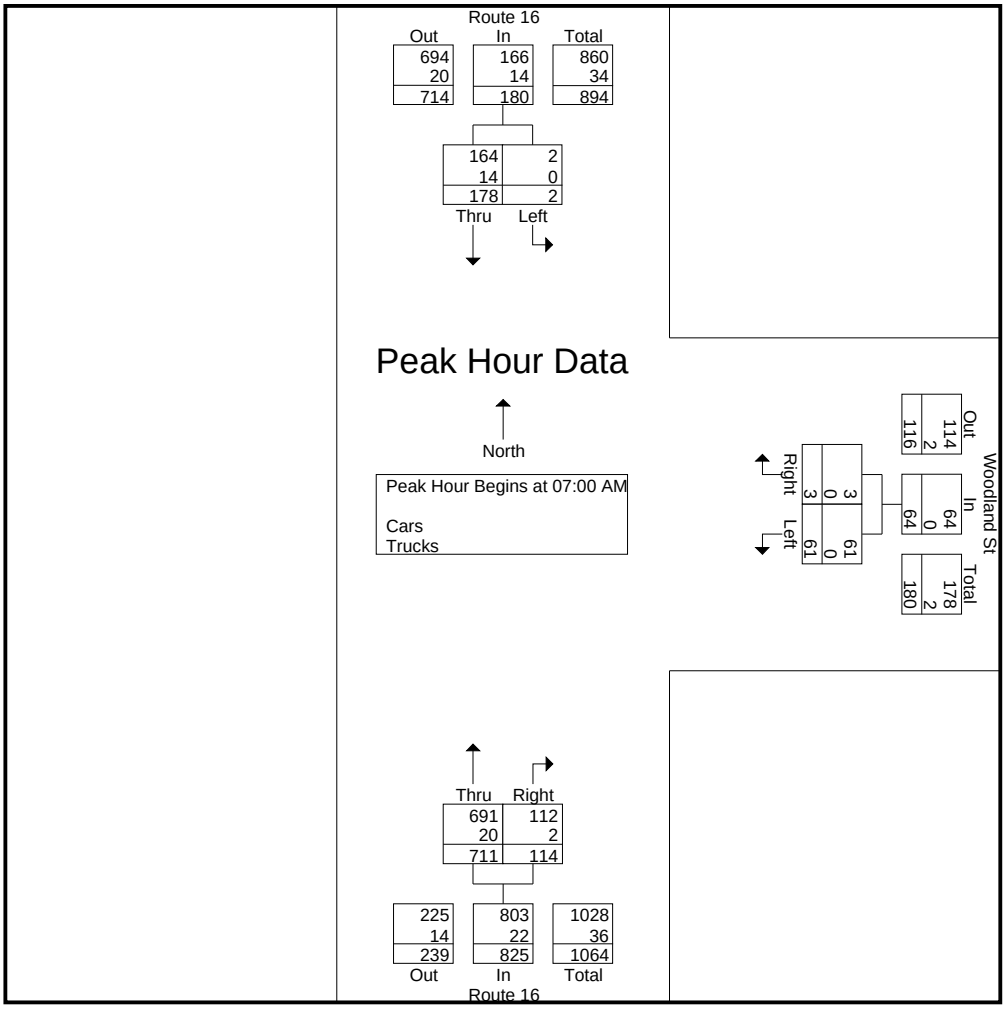
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**1**	45	46	16	**1**	**17**	187	29	**216**	279
07:15 AM	0	39	39	13	1	14	**193**	22	215	268
07:30 AM	1	**52**	**53**	**17**	0	17	177	**37**	214	**284**
07:45 AM	0	42	42	15	1	16	154	26	180	238
Total Volume	2	178	180	61	3	64	711	114	825	1069
% App. Total	1.1	98.9		95.3	4.7		86.2	13.8		
PHF	.500	.856	.849	.897	.750	.941	.921	.770	.955	.941
Cars	2	164	166	61	3	64	691	112	803	1033
% Cars	100	92.1	92.2	100	100	100	97.2	98.2	97.3	96.6
Trucks	0	14	14	0	0	0	20	2	22	36
% Trucks	0	7.9	7.8	0	0	0	2.8	1.8	2.7	3.4

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

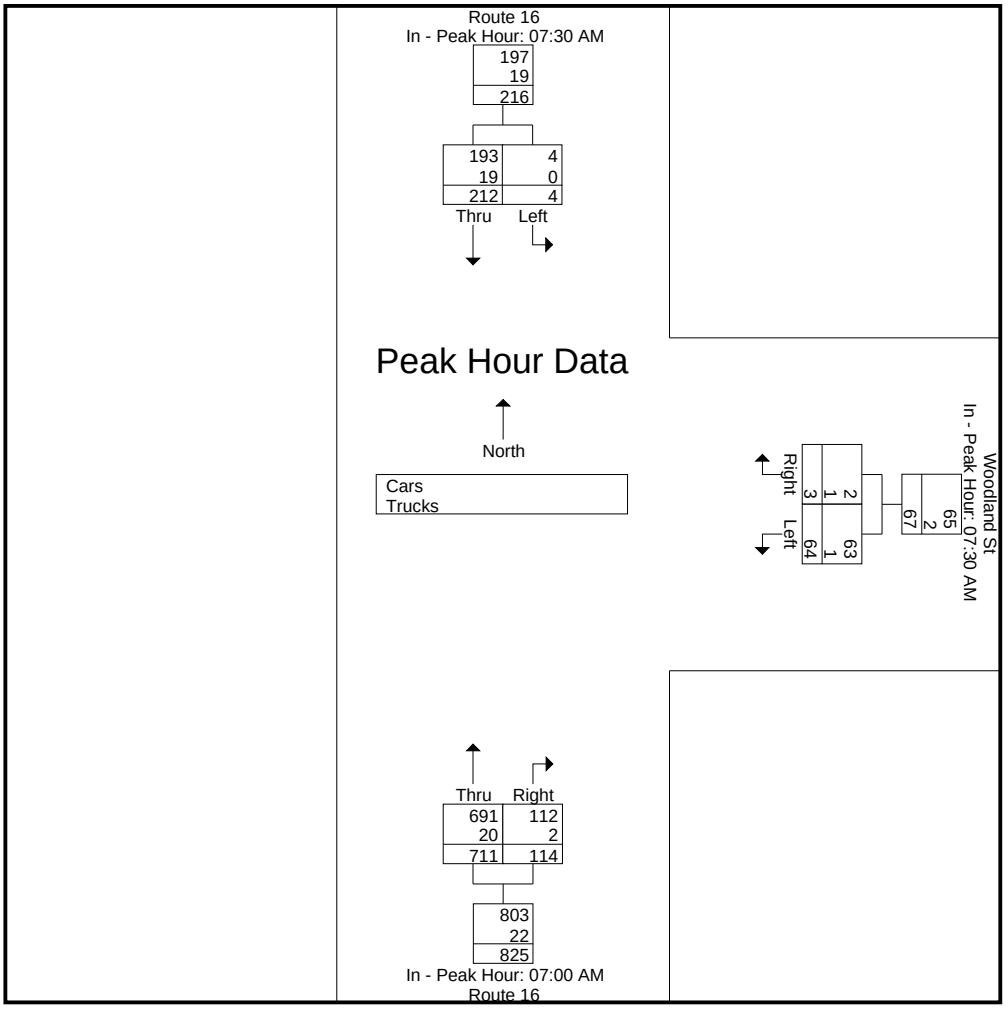
	07:30 AM			07:30 AM			07:00 AM		
+0 mins.	1	52	53	17	0	17	187	29	**216**
+15 mins.	0	42	42	15	**1**	16	**193**	22	215
+30 mins.	1	37	38	13	1	14	177	**37**	214
+45 mins.	**2**	**81**	**83**	**19**	1	**20**	154	26	180
Total Volume	4	212	216	64	3	67	711	114	825
% App. Total	1.9	98.1		95.5	4.5		86.2	13.8	
PHF	.500	.654	.651	.842	.750	.838	.921	.770	.955
Cars	4	193	197	63	2	65	691	112	803
% Cars	100	91	91.2	98.4	66.7	97	97.2	98.2	97.3
Trucks	0	19	19	1	1	2	20	2	22
% Trucks	0	9	8.8	1.6	33.3	3	2.8	1.8	2.7

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Cars

	Route 16 From North		Woodland St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	1	42	16	1	178	29	267
07:15 AM	0	36	13	1	187	21	258
07:30 AM	1	48	17	0	175	36	277
07:45 AM	0	38	15	1	151	26	231
Total	2	164	61	3	691	112	1033
08:00 AM	1	34	13	1	154	24	227
08:15 AM	2	73	18	0	144	26	263
08:30 AM	1	46	15	0	148	10	220
08:45 AM	1	44	13	4	155	9	226
Total	5	197	59	5	601	69	936
Grand Total	7	361	120	8	1292	181	1969
Apprch %	1.9	98.1	93.8	6.2	87.7	12.3	
Total %	0.4	18.3	6.1	0.4	65.6	9.2	

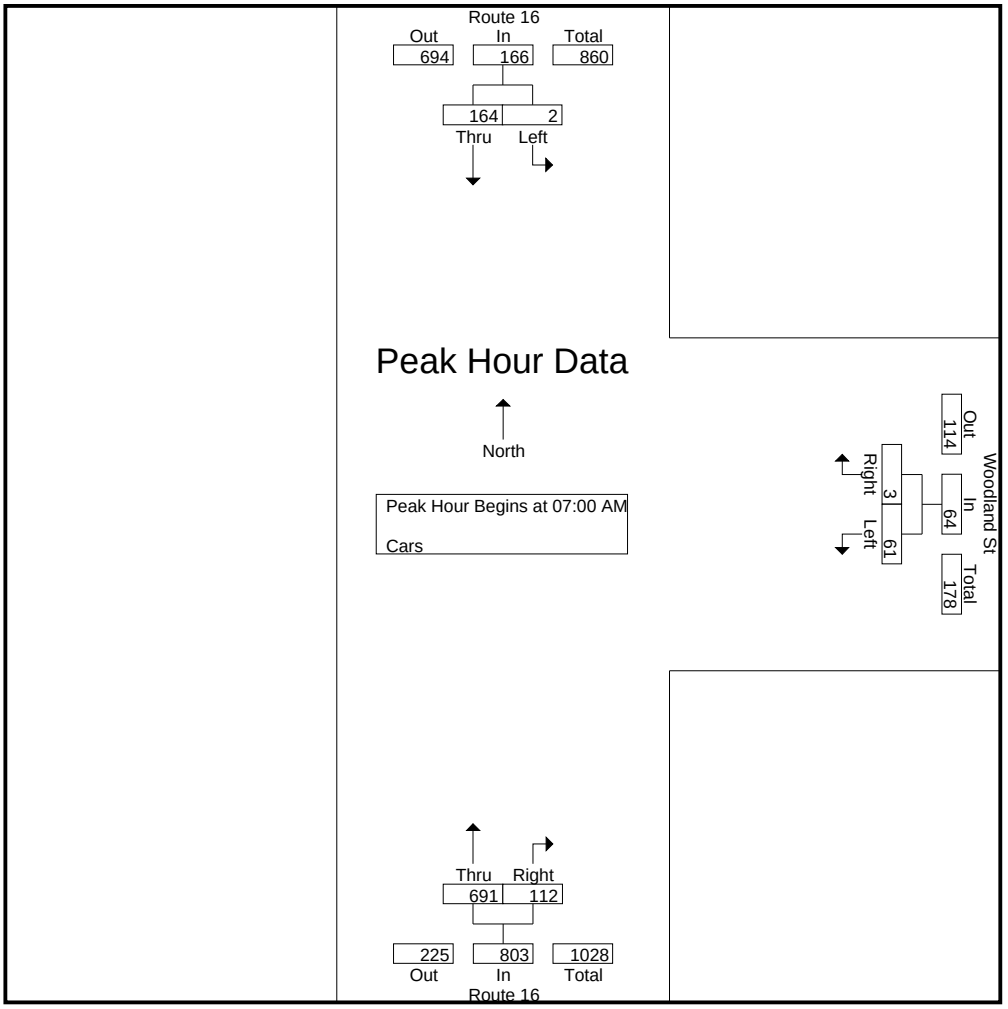
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**1**	42	43	16	**1**	**17**	178	29	207	267
07:15 AM	0	36	36	13	1	14	**187**	21	208	258
07:30 AM	1	**48**	**49**	**17**	0	17	175	**36**	**211**	**277**
07:45 AM	0	38	38	15	1	16	151	26	177	231
Total Volume	2	164	166	61	3	64	691	112	803	1033
% App. Total	1.2	98.8		95.3	4.7		86.1	13.9		
PHF	.500	.854	.847	.897	.750	.941	.924	.778	.951	.932

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 5



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

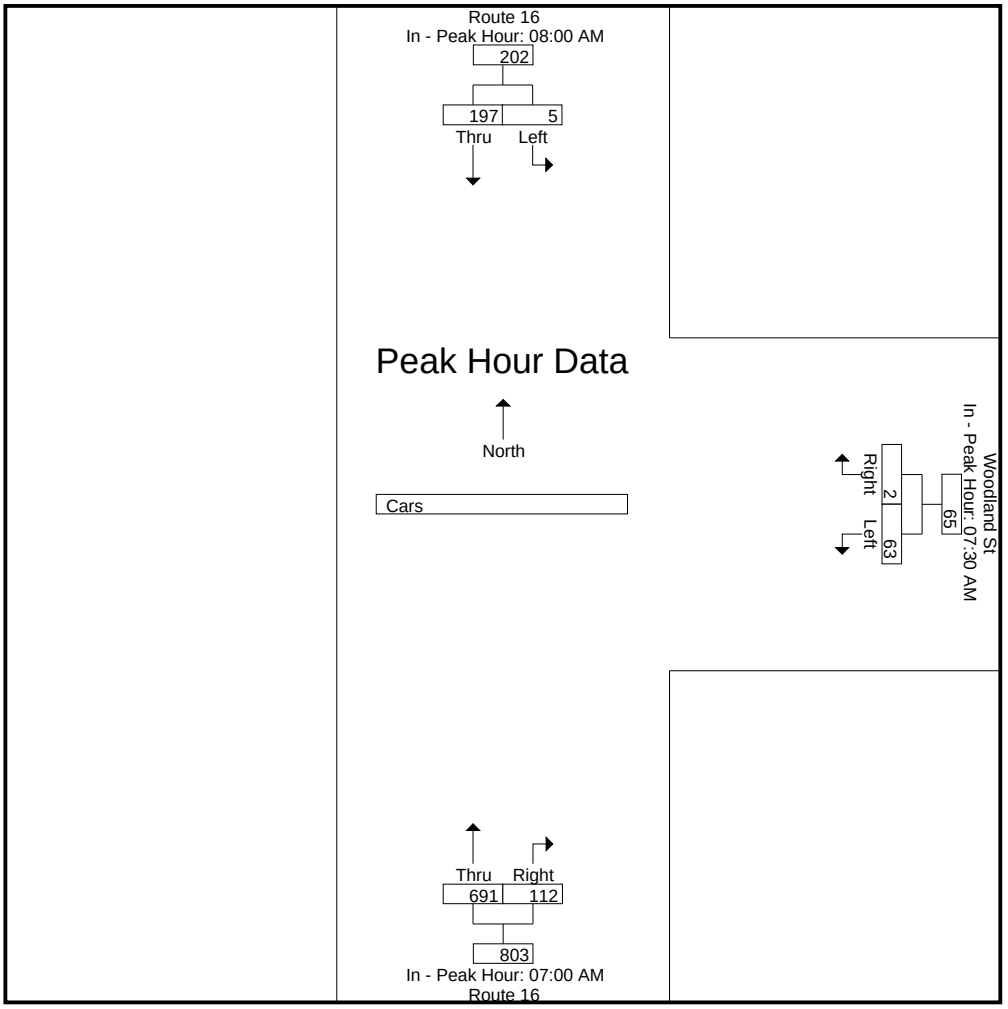
	08:00 AM			07:30 AM			07:00 AM		
+0 mins.	1	34	35	17	0	17	178	29	207
+15 mins.	**2**	**73**	**75**	15	**1**	16	**187**	21	208
+30 mins.	1	46	47	13	1	14	175	**36**	**211**
+45 mins.	1	44	45	**18**	0	**18**	151	26	177
Total Volume	5	197	202	63	2	65	691	112	803
% App. Total	2.5	97.5		96.9	3.1		86.1	13.9	
PHF	.625	.675	.673	.875	.500	.903	.924	.778	.951

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Trucks

	Route 16 From North		Woodland St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
07:00 AM	0	3	0	0	9	0	12
07:15 AM	0	3	0	0	6	1	10
07:30 AM	0	4	0	0	2	1	7
07:45 AM	0	4	0	0	3	0	7
Total	0	14	0	0	20	2	36
08:00 AM	0	3	0	0	4	1	8
08:15 AM	0	8	1	1	2	1	13
08:30 AM	0	1	0	0	7	1	9
08:45 AM	0	1	0	0	1	0	2
Total	0	13	1	1	14	3	32
Grand Total	0	27	1	1	34	5	68
Apprch %	0	100	50	50	87.2	12.8	
Total %	0	39.7	1.5	1.5	50	7.4	

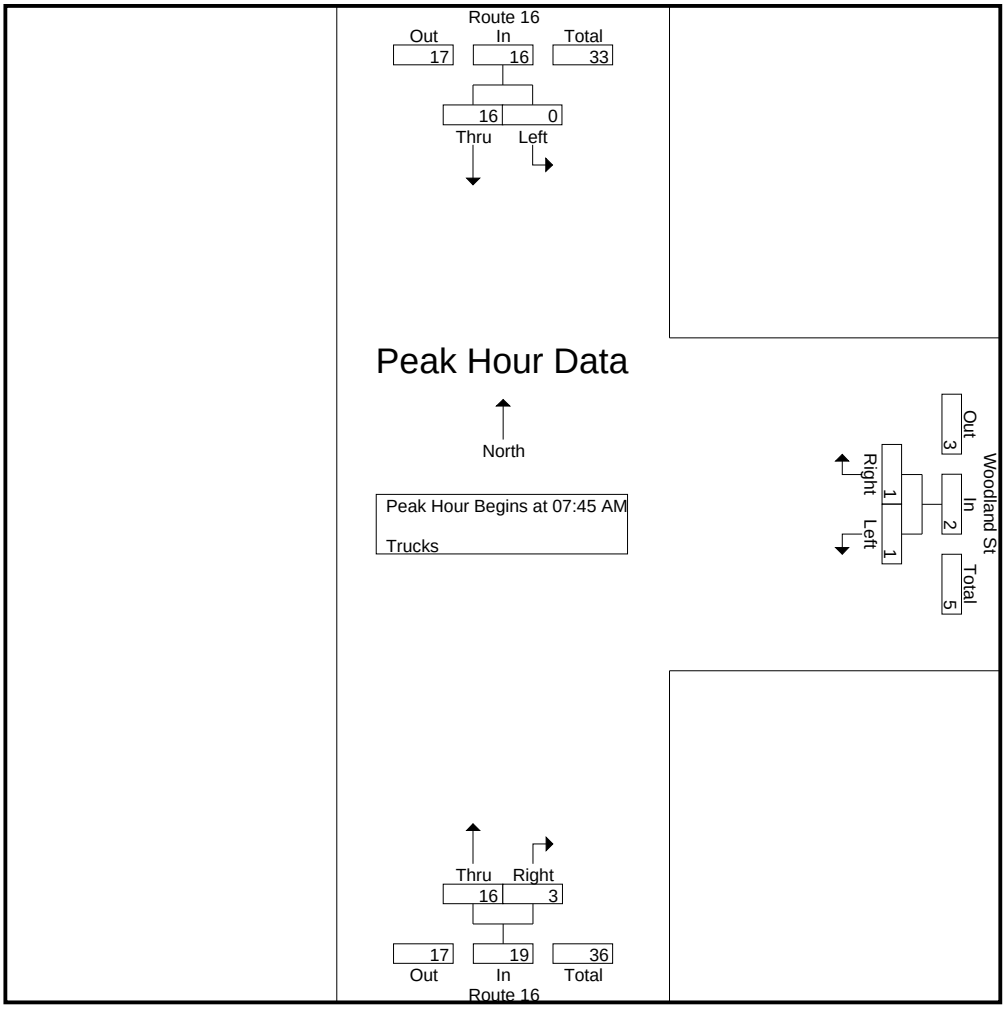
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	4	4	0	0	0	3	0	3	7
08:00 AM	0	3	3	0	0	0	4	**1**	5	8
08:15 AM	0	**8**	**8**	**1**	**1**	**2**	2	1	3	**13**
08:30 AM	0	1	1	0	0	0	**7**	1	**8**	9
Total Volume	0	16	16	1	1	2	16	3	19	37
% App. Total	0	100		50	50		84.2	15.8		
PHF	.000	.500	.500	.250	.250	.250	.571	.750	.594	.712

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 8



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

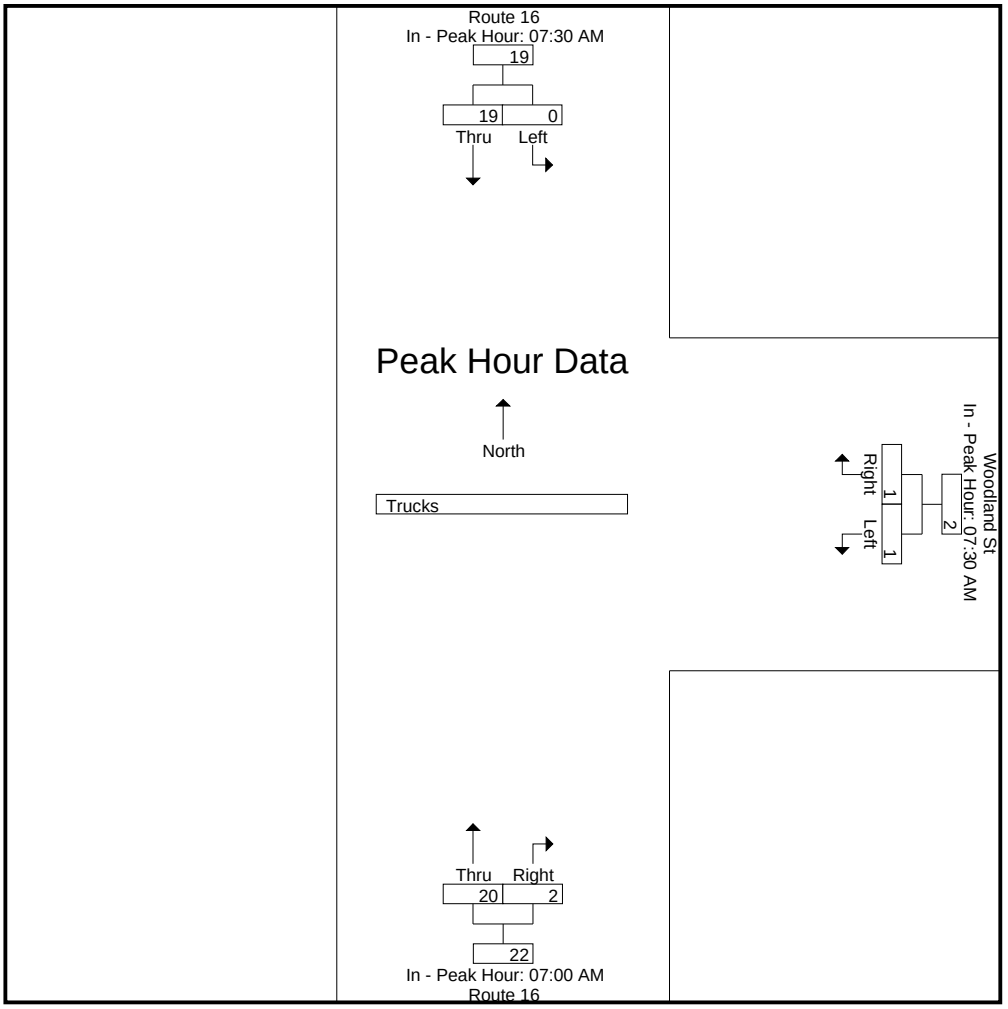
	07:30 AM			07:30 AM			07:00 AM		
+0 mins.	0	4	4	0	0	0	**9**	0	**9**
+15 mins.	0	4	4	0	0	0	6	**1**	7
+30 mins.	0	3	3	0	0	0	2	1	3
+45 mins.	0	**8**	**8**	**1**	**1**	**2**	3	0	3
Total Volume	0	19	19	1	1	2	20	2	22
% App. Total	0	100		50	50		90.9	9.1	
PHF	.000	.594	.594	.250	.250	.250	.556	.500	.611

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Bikes Peds

	Route 16 From North			Woodland St From East			Route 16 From South					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	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
Grand Total	0	0	0	0	0	0	1	0	0	0	1	1
Apprch %	0	0		0	0		100	0				
Total %	0	0		0	0		100	0		0	100	

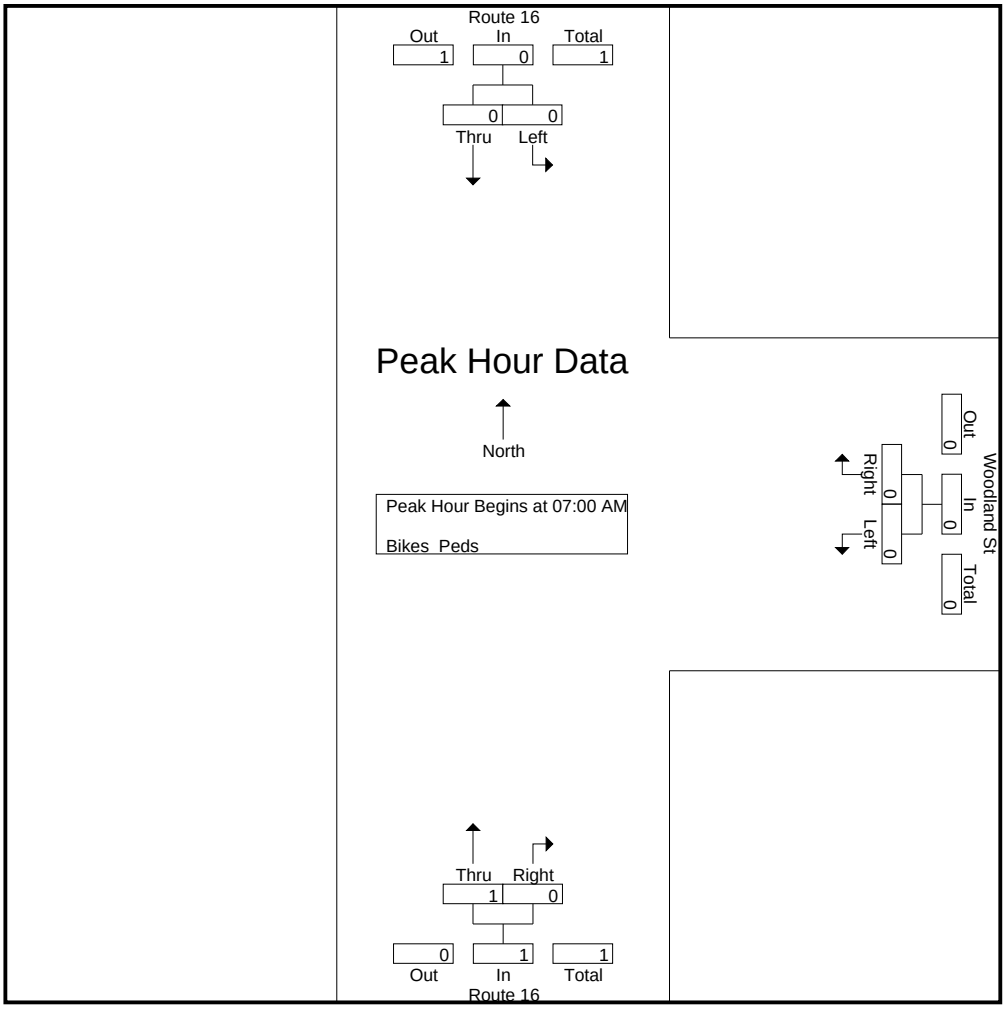
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	**1**	0	**1**	**1**
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 11



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

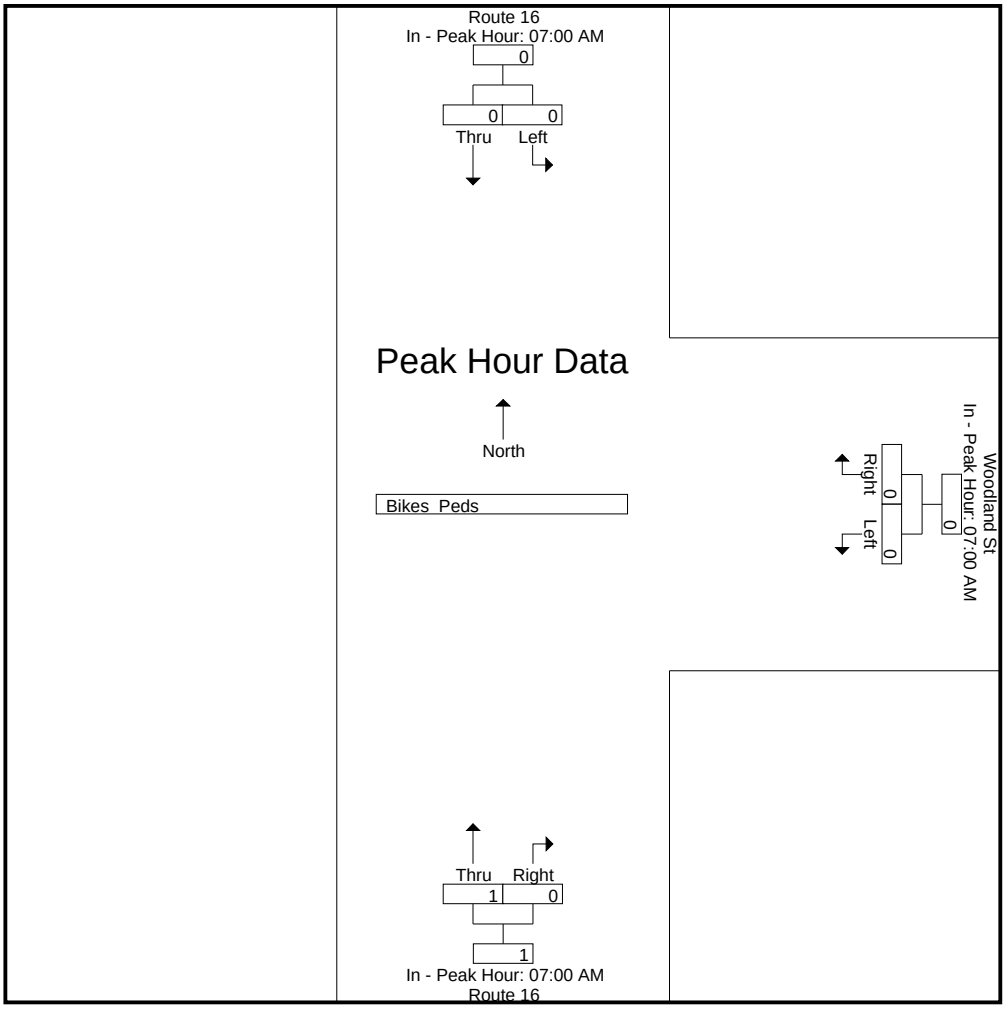
	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0		0	0		100	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 12



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Cars - Trucks

	Route 16 From North		Woodland St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	0	119	16	0	56	15	206
04:15 PM	1	138	15	1	75	11	241
04:30 PM	0	135	19	1	69	13	237
04:45 PM	0	165	6	1	58	17	247
Total	1	557	56	3	258	56	931
05:00 PM	3	156	9	2	56	26	252
05:15 PM	3	147	15	1	55	12	233
05:30 PM	0	138	14	1	63	16	232
05:45 PM	0	134	6	0	39	7	186
Total	6	575	44	4	213	61	903
Grand Total	7	1132	100	7	471	117	1834
Apprch %	0.6	99.4	93.5	6.5	80.1	19.9	
Total %	0.4	61.7	5.5	0.4	25.7	6.4	
Cars	7	1128	98	7	467	117	1824
% Cars	100	99.6	98	100	99.2	100	99.5
Trucks	0	4	2	0	4	0	10
% Trucks	0	0.4	2	0	0.8	0	0.5

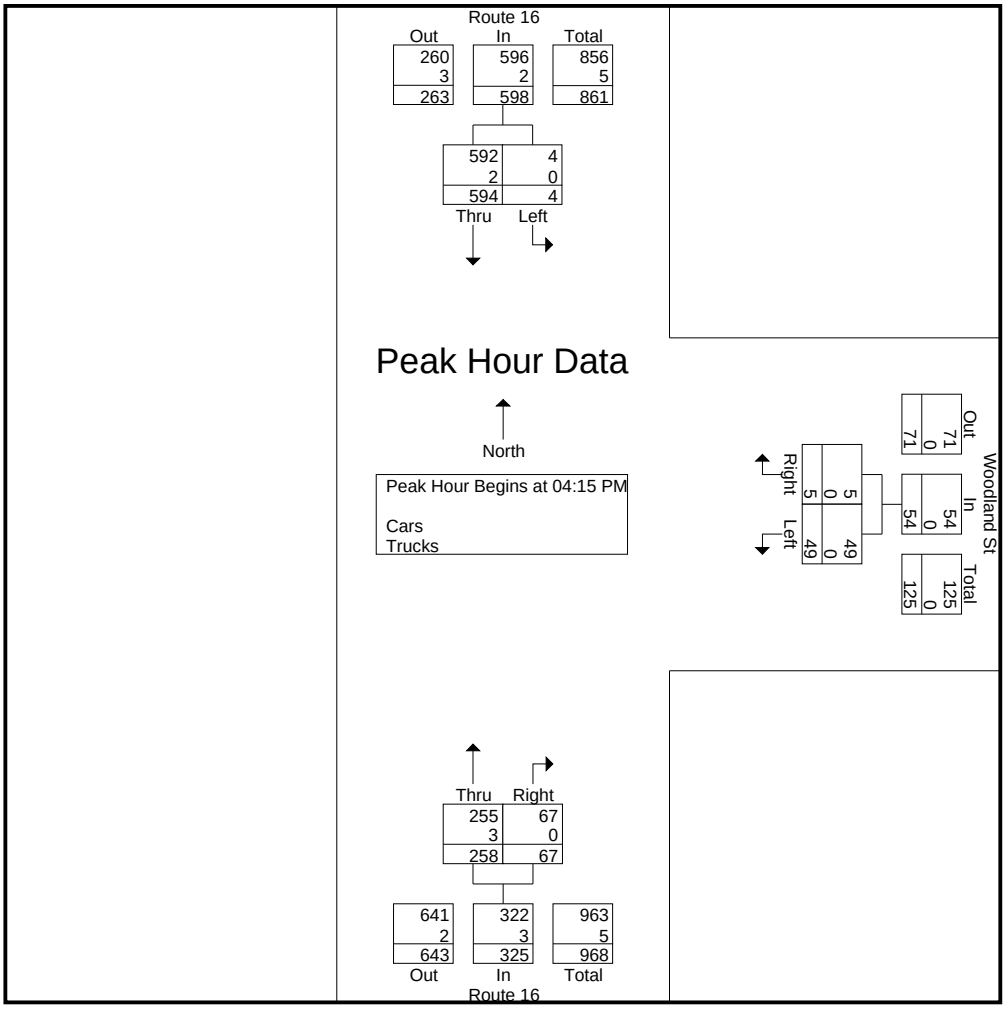
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	1	138	139	15	1	16	**75**	11	**86**	241
04:30 PM	0	135	135	**19**	1	**20**	69	13	82	237
04:45 PM	0	**165**	**165**	6	1	7	58	17	75	247
05:00 PM	**3**	156	159	9	**2**	11	56	**26**	82	**252**
Total Volume	4	594	598	49	5	54	258	67	325	977
% App. Total	0.7	99.3		90.7	9.3		79.4	20.6		
PHF	.333	.900	.906	.645	.625	.675	.860	.644	.945	.969
Cars	4	592	596	49	5	54	255	67	322	972
% Cars	100	99.7	99.7	100	100	100	98.8	100	99.1	99.5
Trucks	0	2	2	0	0	0	3	0	3	5
% Trucks	0	0.3	0.3	0	0	0	1.2	0	0.9	0.5

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

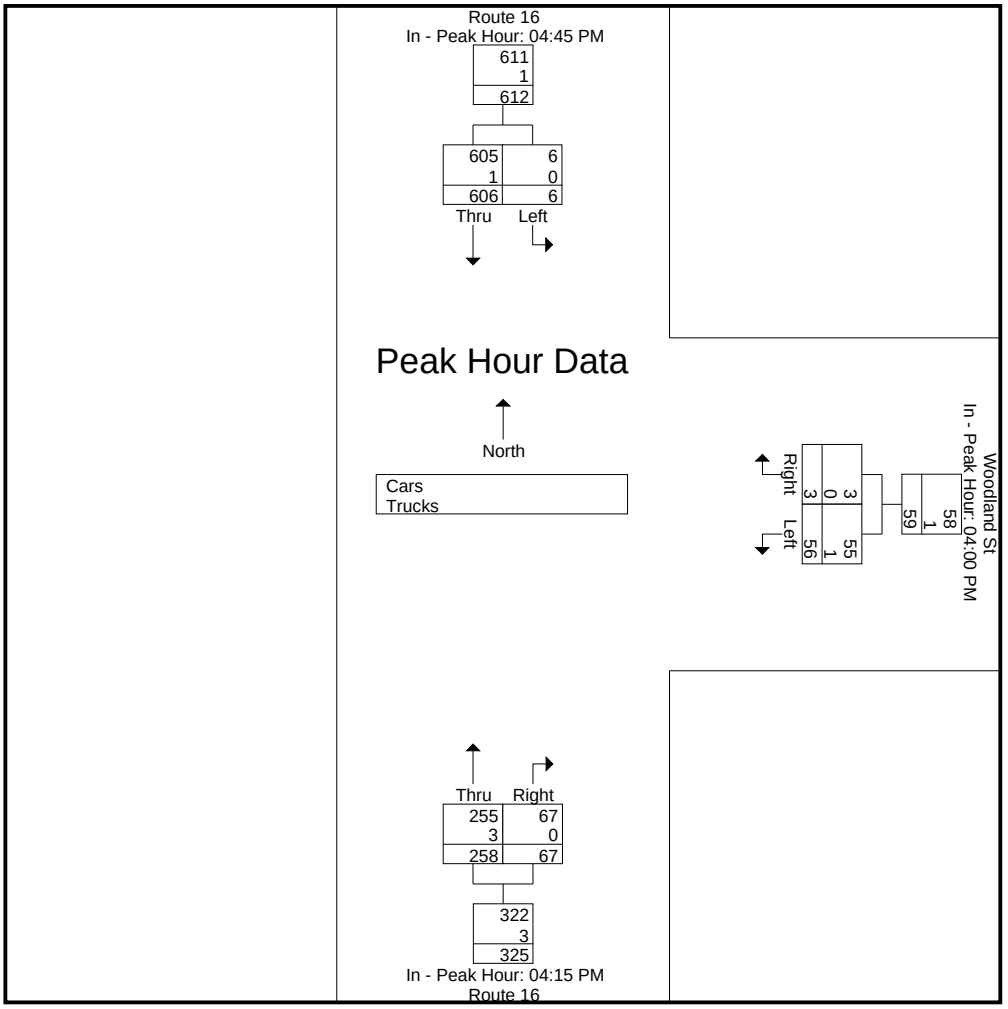
	04:45 PM			04:00 PM			04:15 PM		
+0 mins.	0	**165**	**165**	16	0	16	**75**	11	**86**
+15 mins.	**3**	156	159	15	**1**	16	69	13	82
+30 mins.	3	147	150	**19**	1	**20**	58	17	75
+45 mins.	0	138	138	6	1	7	56	**26**	82
Total Volume	6	606	612	56	3	59	258	67	325
% App. Total	1	99		94.9	5.1		79.4	20.6	
PHF	.500	.918	.927	.737	.750	.738	.860	.644	.945
Cars	6	605	611	55	3	58	255	67	322
% Cars	100	99.8	99.8	98.2	100	98.3	98.8	100	99.1
Trucks	0	1	1	1	0	1	3	0	3
% Trucks	0	0.2	0.2	1.8	0	1.7	1.2	0	0.9

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Cars

	Route 16 From North		Woodland St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	0	118	15	0	56	15	204
04:15 PM	1	138	15	1	74	11	240
04:30 PM	0	133	19	1	68	13	234
04:45 PM	0	165	6	1	58	17	247
Total	1	554	55	3	256	56	925
05:00 PM	3	156	9	2	55	26	251
05:15 PM	3	147	15	1	55	12	233
05:30 PM	0	137	13	1	62	16	229
05:45 PM	0	134	6	0	39	7	186
Total	6	574	43	4	211	61	899
Grand Total	7	1128	98	7	467	117	1824
Apprch %	0.6	99.4	93.3	6.7	80	20	
Total %	0.4	61.8	5.4	0.4	25.6	6.4	

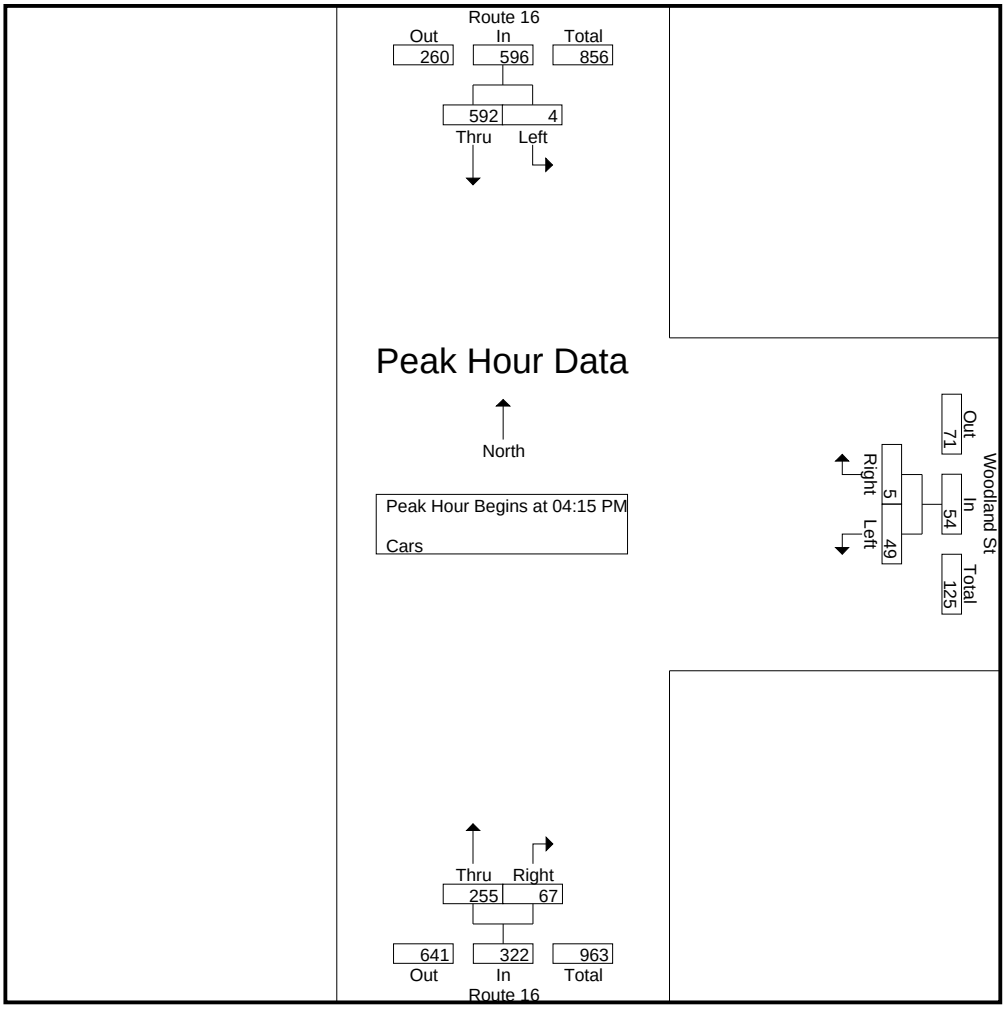
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	1	138	139	15	1	16	**74**	11	**85**	240
04:30 PM	0	133	133	**19**	1	**20**	68	13	81	234
04:45 PM	0	**165**	**165**	6	1	7	58	17	75	247
05:00 PM	**3**	156	159	9	**2**	11	55	**26**	81	**251**
Total Volume	4	592	596	49	5	54	255	67	322	972
% App. Total	0.7	99.3		90.7	9.3		79.2	20.8		
PHF	.333	.897	.903	.645	.625	.675	.861	.644	.947	.968

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 5



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

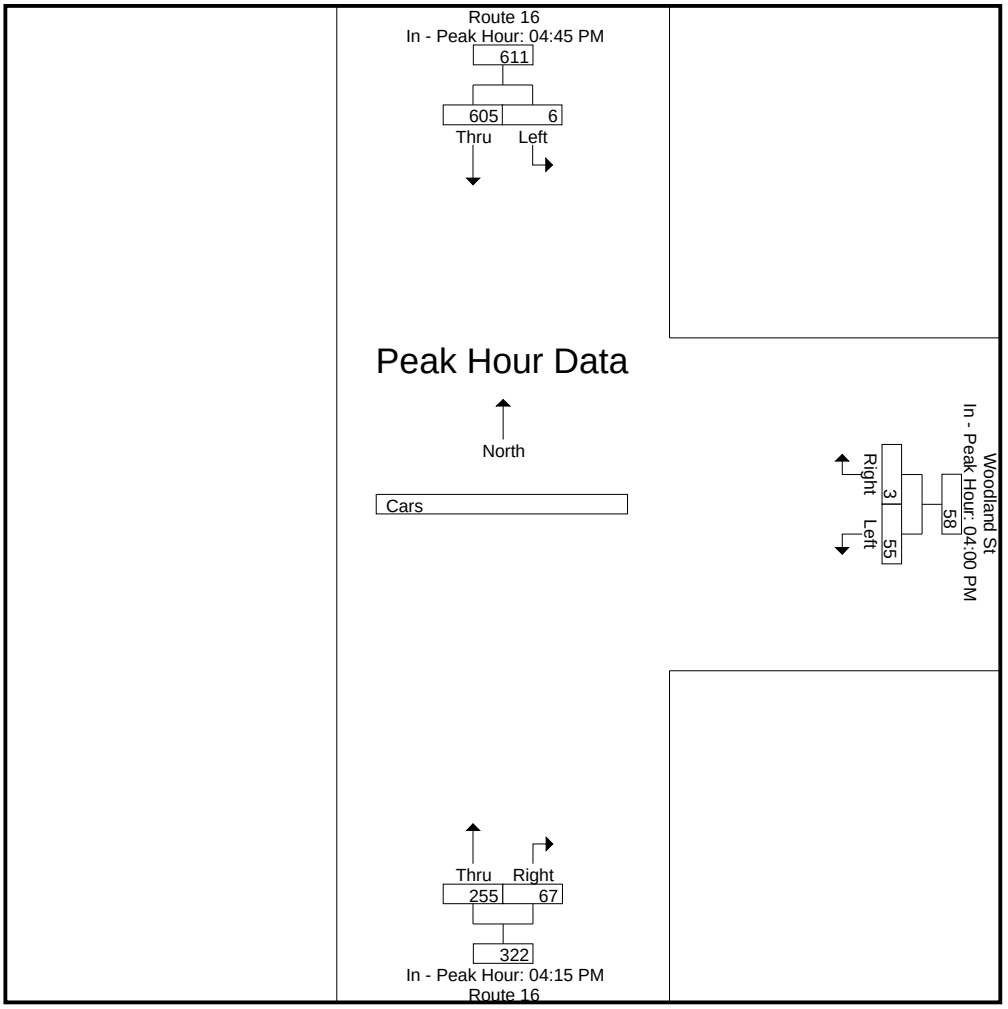
	04:45 PM			04:00 PM			04:15 PM		
+0 mins.	0	**165**	**165**	15	0	15	**74**	11	**85**
+15 mins.	**3**	156	159	15	**1**	16	68	13	81
+30 mins.	3	147	150	**19**	1	**20**	58	17	75
+45 mins.	0	137	137	6	1	7	55	**26**	81
Total Volume	6	605	611	55	3	58	255	67	322
% App. Total	1	99		94.8	5.2		79.2	20.8	
PHF	.500	.917	.926	.724	.750	.725	.861	.644	.947

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 6



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Trucks

	Route 16 From North		Woodland St From East		Route 16 From South		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:00 PM	0	1	1	0	0	0	2
04:15 PM	0	0	0	0	1	0	1
04:30 PM	0	2	0	0	1	0	3
04:45 PM	0	0	0	0	0	0	0
Total	0	3	1	0	2	0	6
05:00 PM	0	0	0	0	1	0	1
05:15 PM	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	1	0	3
05:45 PM	0	0	0	0	0	0	0
Total	0	1	1	0	2	0	4
Grand Total	0	4	2	0	4	0	10
Apprch %	0	100	100	0	100	0	
Total %	0	40	20	0	40	0	

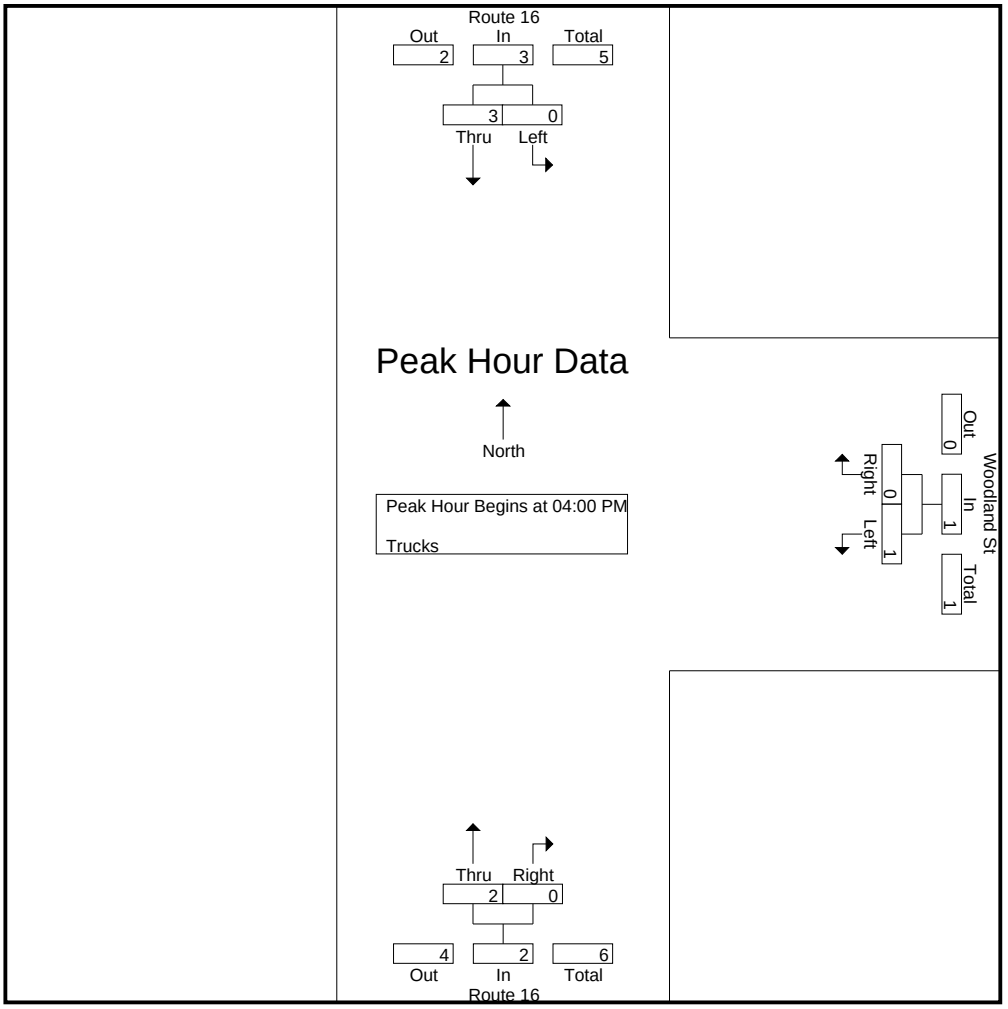
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	1	1	**1**	0	**1**	0	0	0	2
04:15 PM	0	0	0	0	0	0	**1**	0	**1**	1
04:30 PM	0	**2**	**2**	0	0	0	1	0	1	**3**
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	3	3	1	0	1	2	0	2	6
% App. Total	0	100		100	0		100	0		
PHF	.000	.375	.375	.250	.000	.250	.500	.000	.500	.500

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 8



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

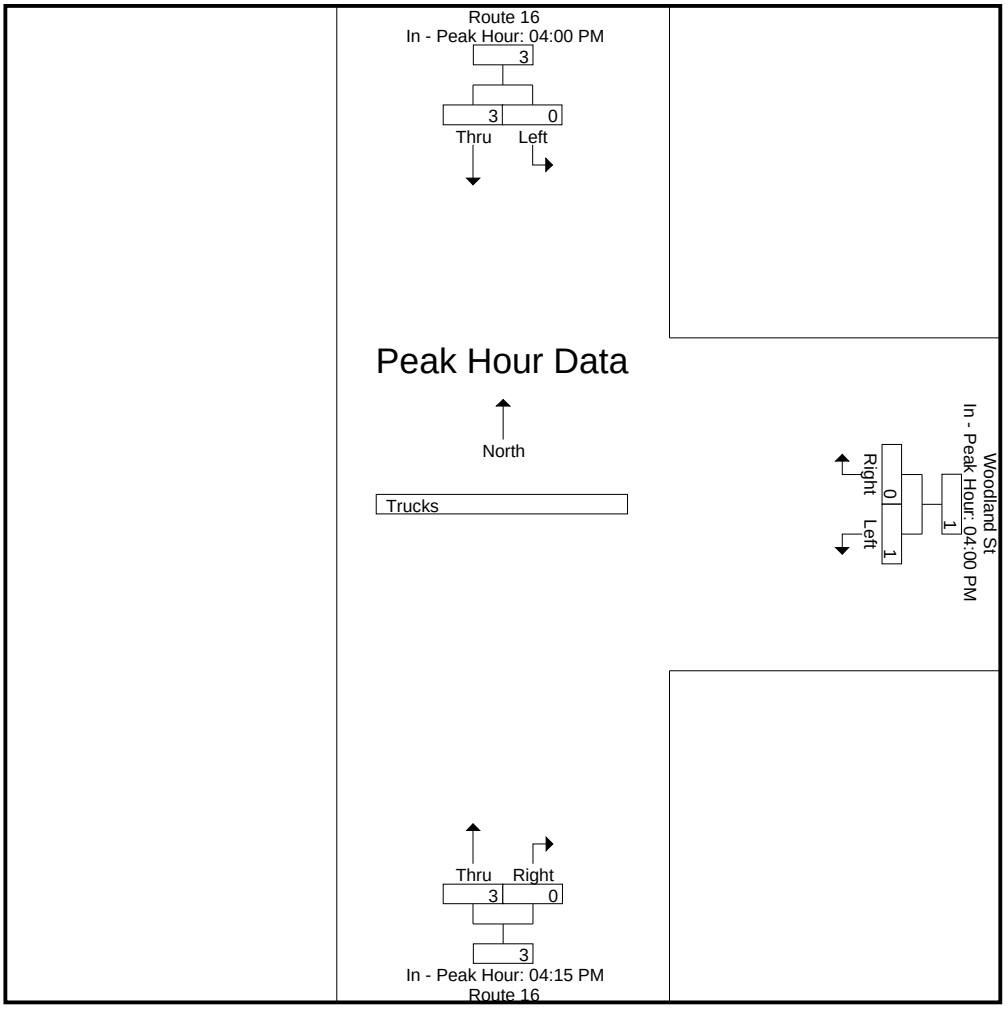
	04:00 PM			04:00 PM			04:15 PM		
+0 mins.	0	1	1	**1**	0	**1**	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	**2**	**2**	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	3	3	1	0	1	3	0	3
% App. Total	0	100		100	0		100	0	
PHF	.000	.375	.375	.250	.000	.250	.750	.000	.750

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 9



Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023

Groups Printed- Bikes Peds

	Route 16 From North			Woodland St From East			Route 16 From South					
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	0	0	0	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	1	1
Grand Total	0	1	0	0	0	0	0	0	0	0	1	1
Apprch %	0	100		0	0		0	0				
Total %	0	100		0	0		0	0		0	100	

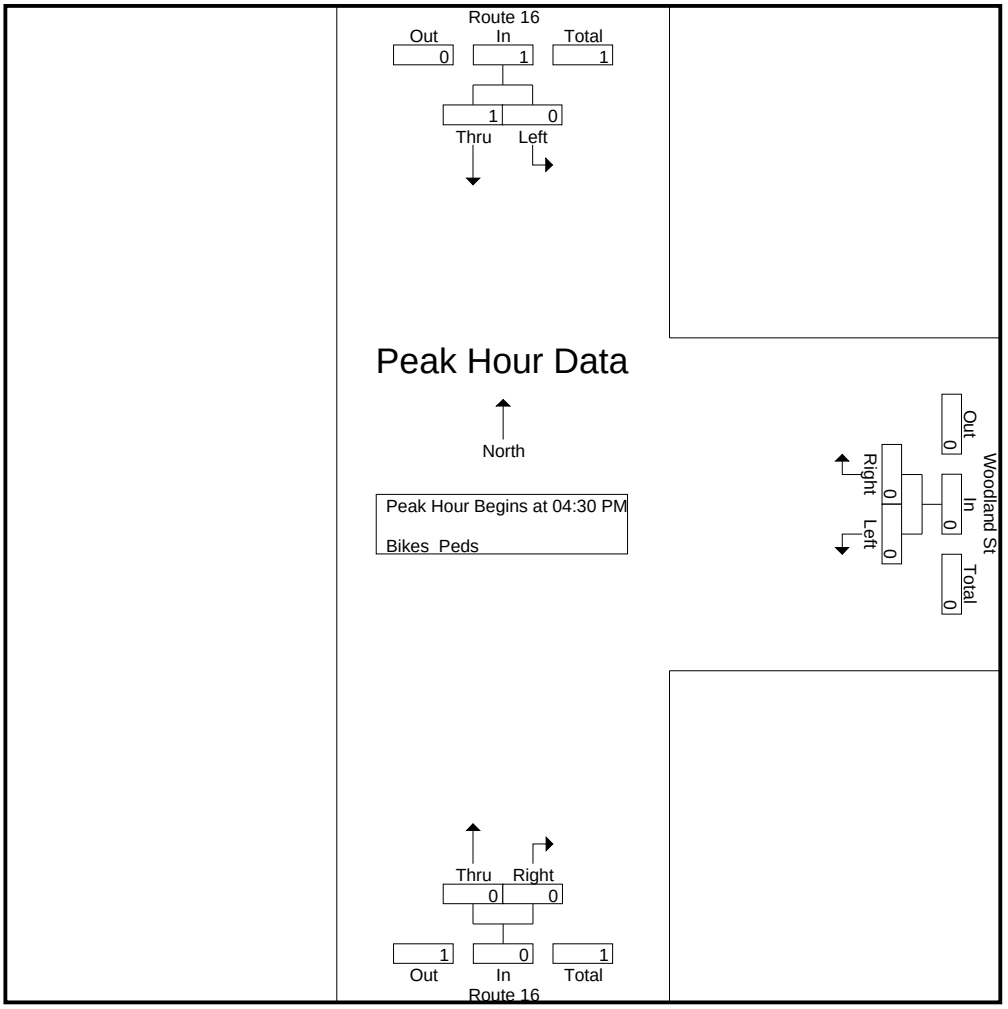
	Route 16 From North			Woodland St From East			Route 16 From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**1**	**1**	0	0	0	0	0	0	**1**
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 11



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

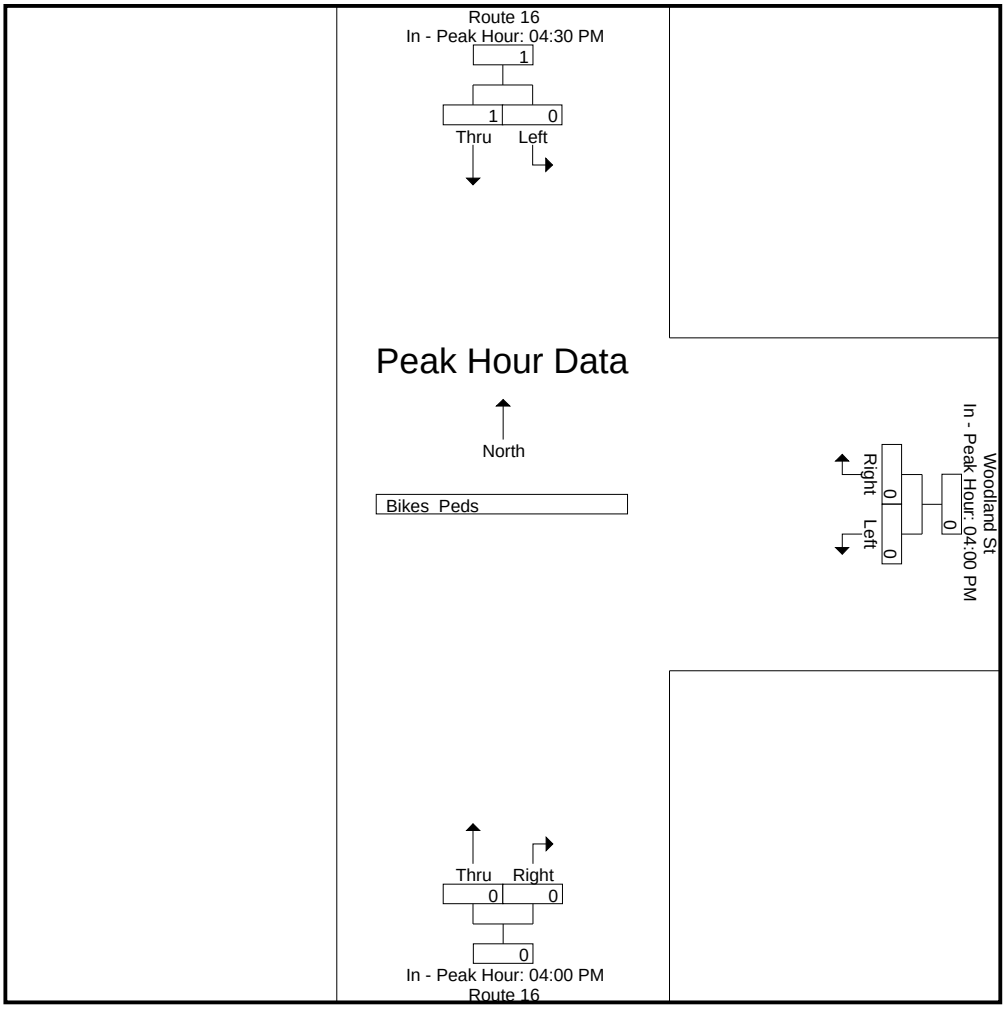
	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	**1**	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Route 16
E/W Street : Woodland Street
City/State : Sherborn, MA
Weather : Clear

File Name : 96330002
Site Code : 96330002
Start Date : 2/14/2023
Page No : 12



SEASONAL ADJUSTMENT DATA

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.

9/14/2021

PUBLIC TRANSPORTATION INFORMATION

coadirector@sherbornma.org
(508) 651-7858

coadirector@sherbornma.org (508) 651-7858

Transportation

JFK Transportation

You can purchase discounted taxi coupons from the COA when you are in need of transportation. Cards cost $30.00 for a ten-ride coupon. We work with JFK Transportation in Natick. You call them directly to make your appointment. Medical rides to Boston can also be purchased for $20.00 a card. We have been working with JFK Transportation for several years. They are reliable, courteous. Masks are no longer required for drivers, however, you can request that the driver wear a mask, if it makes you feel more comfortable.

Please contact the office to purchase your coupons. JFK can be reached at 508-653-4500. JFK usually requires 24-hour notice for local trips and 48-hour notice for medical trips.

VEHICLE TRAVEL SPEED DATA

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA
Direction: SB

2/14/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	1	5	5	4	0	0	0	0	0	0	0	0	15
1:00	0	0	0	2	1	0	0	0	0	0	0	0	0	3
2:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
3:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
4:00	0	0	0	1	2	0	0	0	0	0	0	0	0	3
5:00	0	1	1	0	6	3	5	1	1	1	0	0	0	19
6:00	0	0	3	4	23	22	15	13	2	0	1	0	0	83
7:00	0	2	8	16	41	45	22	23	5	2	0	0	0	164
8:00	0	1	6	11	27	45	58	37	14	3	0	0	0	202
9:00	1	2	8	26	39	27	39	33	13	1	1	0	0	190
10:00	0	2	5	17	52	33	33	25	8	3	2	0	0	180
11:00	0	1	9	30	49	49	43	19	6	2	0	0	0	208
12:00 PM	0	0	1	15	42	75	56	43	20	0	0	0	0	252
1:00	0	3	4	21	49	74	55	47	20	2	1	0	0	276
2:00	0	3	4	9	54	81	86	47	32	8	3	0	0	327
3:00	0	3	3	17	133	117	109	78	36	3	1	1	0	501
4:00	0	3	9	37	156	132	98	64	28	3	1	0	0	531
5:00	0	3	16	63	178	148	86	40	12	2	0	1	0	549
6:00	0	3	17	78	180	97	66	14	4	2	0	0	0	461
7:00	0	3	15	50	91	52	20	12	2	0	0	0	0	245
8:00	0	1	14	54	50	27	14	8	2	0	0	0	0	170
9:00	0	0	16	25	27	12	9	0	2	1	0	0	0	92
10:00	0	0	7	25	21	5	4	0	3	0	0	0	0	65
11:00	0	1	7	15	13	11	1	0	0	0	0	0	0	48
Total	1	33	159	524	1238	1055	819	504	210	33	10	2	0	4588

Percentile	15th	50th	85th	95th
Speed	30	37	45	50

Mean Speed (Average)	37.3
10 MPH Pace Speed	30-39
Number in Pace	2282
Percent in Pace	49.7%
Number > 40 MPH	1578
Percent > 40 MPH	34.4%

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA
Direction: SB

2/15/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	4	7	5	2	4	1	0	0	0	0	0	23
1:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
2:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
4:00	0	0	0	0	2	0	0	0	0	0	0	0	0	2
5:00	0	0	0	5	8	3	1	0	0	0	0	0	0	17
6:00	0	1	2	16	24	20	8	14	7	2	0	0	0	94
7:00	0	2	4	15	58	34	34	14	9	4	2	0	0	176
8:00	0	1	5	22	55	30	40	19	7	1	1	1	0	182
9:00	0	2	7	12	39	33	30	10	3	3	0	0	0	139
10:00	0	1	2	16	47	49	31	21	10	2	0	0	0	179
11:00	0	0	7	29	51	35	43	30	9	3	0	0	0	207
12:00 PM	0	1	0	6	32	63	73	47	19	3	1	0	0	245
1:00	0	1	3	13	38	67	56	59	19	5	1	0	0	262
2:00	0	1	3	27	79	100	70	57	33	6	0	0	0	376
3:00	0	0	3	24	101	134	121	69	26	8	0	1	0	487
4:00	0	4	2	20	157	116	96	80	41	3	0	2	1	522
5:00	0	3	7	48	133	136	120	78	22	3	0	0	0	550
6:00	0	0	2	44	150	117	61	48	10	0	1	0	0	433
7:00	0	0	8	42	79	41	28	7	5	0	0	0	0	210
8:00	0	0	19	42	68	44	22	12	2	1	0	0	0	210
9:00	0	0	7	26	46	26	14	5	2	1	0	0	0	127
10:00	0	0	3	19	22	11	3	6	0	0	0	0	0	64
11:00	0	0	0	4	2	4	2	1	0	0	0	0	0	13
Total	0	17	90	438	1197	1065	857	578	224	45	6	4	1	4522
			Percentile	15th	50th	85th	95th							
			Speed	31	37	47	51							
			Mean Speed (Average)	38.1										
			10 MPH Pace Speed	30-39										
			Number in Pace	2249										
			Percent in Pace	49.7%										
			Number > 40 MPH	1715										
			Percent > 40 MPH	37.9%										
Grand Total	1	50	249	962	2435	2120	1676	1082	434	78	16	6	1	9110
			Percentile	15th	50th	85th	95th							
			Speed	30	37	46	50							
			Mean Speed (Average)	37.7										
			10 MPH Pace Speed	30-39										
			Number in Pace	4532										
			Percent in Pace	49.7%										
			Number > 40 MPH	3293										
			Percent > 40 MPH	36.1%										

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA
Direction: NB

2/14/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	1	1	2	1	0	0	0	0	0	0	5
1:00	0	0	0	0	4	2	0	0	0	0	0	0	0	6
2:00	0	0	0	2	1	0	2	0	0	0	0	0	0	5
3:00	0	0	0	1	3	5	3	0	0	0	0	0	0	12
4:00	0	0	0	5	5	17	9	4	3	1	0	0	0	44
5:00	0	0	3	12	60	78	51	10	3	0	0	0	0	217
6:00	0	1	14	84	276	238	77	14	0	0	0	0	0	704
7:00	0	6	28	79	256	237	100	11	0	0	1	0	0	718
8:00	1	5	6	88	225	186	93	9	5	0	0	0	0	618
9:00	0	1	8	45	112	132	78	12	1	0	0	0	0	389
10:00	0	3	13	40	82	97	33	14	1	0	0	0	0	283
11:00	1	1	8	36	84	79	30	12	1	0	0	0	0	252
12:00 PM	0	2	5	20	72	89	48	14	1	0	0	0	0	251
1:00	2	0	4	22	72	79	48	12	1	1	0	0	0	241
2:00	0	0	5	15	42	72	54	13	4	0	0	0	0	205
3:00	0	1	4	21	78	91	56	10	2	0	0	0	0	263
4:00	1	5	7	7	59	94	58	26	3	0	0	0	0	260
5:00	2	3	4	17	67	58	52	11	2	0	0	0	0	216
6:00	2	1	8	20	42	59	29	11	0	0	0	0	0	172
7:00	0	1	1	7	22	37	25	6	0	0	0	0	0	99
8:00	0	0	0	7	15	22	10	4	1	1	0	0	0	60
9:00	0	0	3	1	11	13	11	1	0	0	0	0	0	40
10:00	0	0	2	3	3	14	6	4	0	0	0	0	0	32
11:00	0	0	0	0	2	3	1	2	0	0	0	0	0	8
Total	9	30	123	533	1594	1704	875	200	28	3	1	0	0	5100

Percentile	15th	50th	85th	95th
Speed	30	36	42	45

Mean Speed (Average)	35.8
10 MPH Pace Speed	30-39
Number in Pace	3275
Percent in Pace	64.2%
Number > 40 MPH	1107
Percent > 40 MPH	21.7%

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA
Direction: NB

2/15/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	0	1	2	3	0	0	0	0	0	0	0	6
1:00	0	0	0	0	1	3	1	0	0	0	0	0	0	5
2:00	0	0	0	2	2	4	0	0	0	0	0	0	0	8
3:00	0	0	0	3	2	7	4	0	0	1	0	0	0	17
4:00	0	0	0	2	10	12	7	4	1	1	0	0	0	37
5:00	0	0	2	17	71	80	36	10	1	0	0	0	0	217
6:00	0	3	12	85	238	252	87	11	4	0	0	0	0	692
7:00	0	1	8	97	265	240	87	8	0	0	0	0	0	706
8:00	4	3	11	61	184	211	79	19	2	6	0	0	0	580
9:00	0	4	5	18	125	139	72	20	0	0	0	0	0	383
10:00	0	1	4	27	104	108	38	12	0	0	1	0	0	295
11:00	0	0	8	28	50	88	40	18	1	1	0	0	0	234
12:00 PM	0	0	6	15	73	88	44	15	2	0	0	0	0	243
1:00	0	1	0	20	59	63	34	10	5	2	0	0	0	194
2:00	1	2	4	16	73	73	47	14	1	0	0	0	0	231
3:00	3	5	0	13	53	79	56	13	7	1	0	0	0	230
4:00	3	2	8	8	55	94	55	17	5	0	1	0	0	248
5:00	0	6	1	19	82	89	47	13	2	1	0	0	0	260
6:00	0	0	5	10	33	66	28	8	1	0	0	0	0	151
7:00	1	1	0	6	21	32	16	2	2	0	0	0	0	81
8:00	0	0	3	5	15	29	7	3	1	0	0	0	0	63
9:00	0	0	3	2	6	23	7	3	0	0	0	0	0	44
10:00	0	0	0	1	1	9	7	5	0	0	0	0	0	23
11:00	0	0	0	0	0	2	1	0	0	0	0	0	0	3
Total	12	29	80	456	1525	1794	800	205	35	13	2	0	0	4951
			Percentile	15th	50th	85th	95th							
			Speed	31	36	42	45							
			Mean Speed (Average)	36.0										
			10 MPH Pace Speed	30-39										
			Number in Pace	3292										
			Percent in Pace	66.5%										
			Number > 40 MPH	1055										
			Percent > 40 MPH	21.3%										
Grand Total	21	59	203	989	3119	3498	1675	405	63	16	3	0	0	10051
			Percentile	15th	50th	85th	95th							
			Speed	30	36	42	45							
			Mean Speed (Average)	35.9										
			10 MPH Pace Speed	30-39										
			Number in Pace	6567										
			Percent in Pace	65.3%										
			Number > 40 MPH	2162										
			Percent > 40 MPH	21.5%										

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA
Direction: Combined

2/14/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	1	5	6	5	2	1	0	0	0	0	0	0	20
1:00	0	0	0	2	5	2	0	0	0	0	0	0	0	9
2:00	0	0	1	3	1	0	2	0	0	0	0	0	0	7
3:00	0	0	0	3	3	5	3	0	0	0	0	0	0	14
4:00	0	0	0	6	7	17	9	4	3	1	0	0	0	47
5:00	0	1	4	12	66	81	56	11	4	1	0	0	0	236
6:00	0	1	17	88	299	260	92	27	2	0	1	0	0	787
7:00	0	8	36	95	297	282	122	34	5	2	1	0	0	882
8:00	1	6	12	99	252	231	151	46	19	3	0	0	0	820
9:00	1	3	16	71	151	159	117	45	14	1	1	0	0	579
10:00	0	5	18	57	134	130	66	39	9	3	2	0	0	463
11:00	1	2	17	66	133	128	73	31	7	2	0	0	0	460
12:00 PM	0	2	6	35	114	164	104	57	21	0	0	0	0	503
1:00	2	3	8	43	121	153	103	59	21	3	1	0	0	517
2:00	0	3	9	24	96	153	140	60	36	8	3	0	0	532
3:00	0	4	7	38	211	208	165	88	38	3	1	1	0	764
4:00	1	8	16	44	215	226	156	90	31	3	1	0	0	791
5:00	2	6	20	80	245	206	138	51	14	2	0	1	0	765
6:00	2	4	25	98	222	156	95	25	4	2	0	0	0	633
7:00	0	4	16	57	113	89	45	18	2	0	0	0	0	344
8:00	0	1	14	61	65	49	24	12	3	1	0	0	0	230
9:00	0	0	19	26	38	25	20	1	2	1	0	0	0	132
10:00	0	0	9	28	24	19	10	4	3	0	0	0	0	97
11:00	0	1	7	15	15	14	2	2	0	0	0	0	0	56
Total	10	63	282	1057	2832	2759	1694	704	238	36	11	2	0	9688

Percentile	15th	50th	85th	95th
Speed	30	36	43	48

Mean Speed (Average)	36.5
10 MPH Pace Speed	30-39
Number in Pace	5557
Percent in Pace	57.4%
Number > 40 MPH	2685
Percent > 40 MPH	27.7%

Accurate Counts
978-664-2565

Location : Washington Street 96330001
Location : South of Old Orchard Road
City/State: Sherborn, MA
Direction: Combined

2/15/2023 Time	0 - 15 MPH	> 15 - 20 MPH	> 20 - 25 MPH	> 25 - 30 MPH	> 30 - 35 MPH	> 35 - 40 MPH	> 40 - 45 MPH	> 45 - 50 MPH	> 50 - 55 MPH	> 55 - 60 MPH	> 60 - 65 MPH	> 65 - 70 MPH	> 70 MPH	Total
12:00 AM	0	0	4	8	7	5	4	1	0	0	0	0	0	29
1:00	0	0	0	1	1	3	1	0	0	0	0	0	0	6
2:00	0	0	1	2	2	4	0	0	0	0	0	0	0	9
3:00	0	0	1	3	3	7	4	0	0	1	0	0	0	19
4:00	0	0	0	2	12	12	7	4	1	1	0	0	0	39
5:00	0	0	2	22	79	83	37	10	1	0	0	0	0	234
6:00	0	4	14	101	262	272	95	25	11	2	0	0	0	786
7:00	0	3	12	112	323	274	121	22	9	4	2	0	0	882
8:00	4	4	16	83	239	241	119	38	9	7	1	1	0	762
9:00	0	6	12	30	164	172	102	30	3	3	0	0	0	522
10:00	0	2	6	43	151	157	69	33	10	2	1	0	0	474
11:00	0	0	15	57	101	123	83	48	10	4	0	0	0	441
12:00 PM	0	1	6	21	105	151	117	62	21	3	1	0	0	488
1:00	0	2	3	33	97	130	90	69	24	7	1	0	0	456
2:00	1	3	7	43	152	173	117	71	34	6	0	0	0	607
3:00	3	5	3	37	154	213	177	82	33	9	0	1	0	717
4:00	3	6	10	28	212	210	151	97	46	3	1	2	1	770
5:00	0	9	8	67	215	225	167	91	24	4	0	0	0	810
6:00	0	0	7	54	183	183	89	56	11	0	1	0	0	584
7:00	1	1	8	48	100	73	44	9	7	0	0	0	0	291
8:00	0	0	22	47	83	73	29	15	3	1	0	0	0	273
9:00	0	0	10	28	52	49	21	8	2	1	0	0	0	171
10:00	0	0	3	20	23	20	10	11	0	0	0	0	0	87
11:00	0	0	0	4	2	6	3	1	0	0	0	0	0	16
Total	12	46	170	894	2722	2859	1657	783	259	58	8	4	1	9473
			Percentile	15th	50th	85th	95th							
			Speed	31	37	43	48							
			Mean Speed (Average)	37.0										
			10 MPH Pace Speed	30-39										
			Number in Pace	5542										
			Percent in Pace	58.5%										
			Number > 40 MPH	2770										
			Percent > 40 MPH	29.2%										
Grand Total	22	109	452	1951	5554	5618	3351	1487	497	94	19	6	1	19161
			Percentile	15th	50th	85th	95th							
			Speed	30	36	43	48							
			Mean Speed (Average)	36.8										
			10 MPH Pace Speed	30-39										
			Number in Pace	11099										
			Percent in Pace	57.9%										
			Number > 40 MPH	5455										
			Percent > 40 MPH	28.5%										

MASSDOT CRASH RATE WORKSHEETS AND HIGH CRASH LOCATION MAPPING

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sherborn COUNT DATE : 2/14/2023

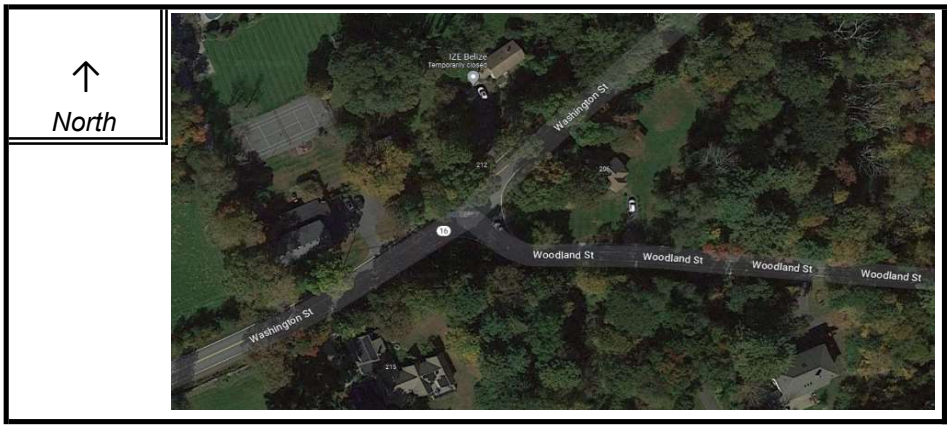
DISTRICT : 3 UNSIGNALIZED : X SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Washington Street (Route 14)

MINOR STREET(S) : Woodland Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NEB	SWB	NWB			
PEAK HOURLY VOLUMES (AM) :	881	185	66			1,132

" K " FACTOR : 0.090 INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : 12,578

TOTAL # OF CRASHES : 5 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : 1.00

CRASH RATE CALCULATION : 0.22 RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : Below MassDOT Statewide and District Average Crash Rates

Project Title & Date: 9633 - Proposed Multifamily Residential Development

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sherborn COUNT DATE : 2/14/2023

DISTRICT : 3 UNSIGNALIZED : X SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Washington Street (Route 14)

MINOR STREET(S) : Greenwood Street

INTERSECTION DIAGRAM
(Label Approaches)

↑ *North*

PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NEB	SWB	NB			
PEAK HOURLY VOLUMES (AM) :	767	186	5			**958**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **10,644**

TOTAL # OF CRASHES : 0

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.00**

CRASH RATE CALCULATION : **0.00**

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

Comments : Below MassDOT Statewide and District Average Crash Rates

Project Title & Date: 9633 - Proposed Multifamily Residential Development

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sherborn COUNT DATE : 2/14/2023

DISTRICT : 3 UNSIGNALIZED : X SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Washington Street (Route 14)

MINOR STREET(S) : Project Site Driveway

INTERSECTION DIAGRAM (Label Approaches)

↑ *North*

PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NEB	SWB	NWB			
PEAK HOURLY VOLUMES (AM) :	767	185	-			**952**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **10,578**

TOTAL # OF CRASHES : 0

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.00**

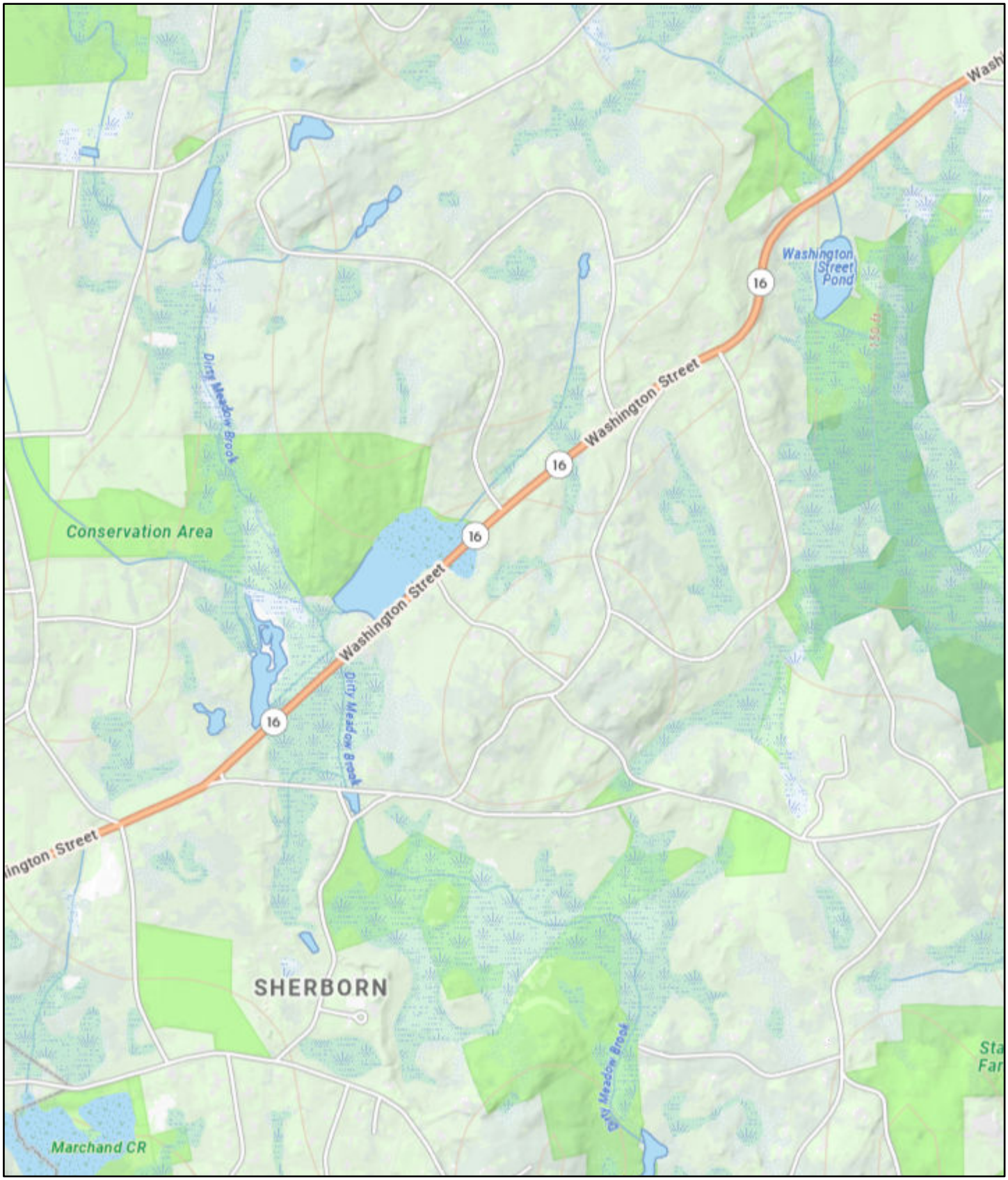
CRASH RATE CALCULATION : **0.00**

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

Comments : Below MassDOT Statewide and District Average Crash Rates

Project Title & Date: 9633 - Proposed Multifamily Residential Development

MassDOT Top Crash Locations



8/21/2023, 4:28:26 PM

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

MassDOT

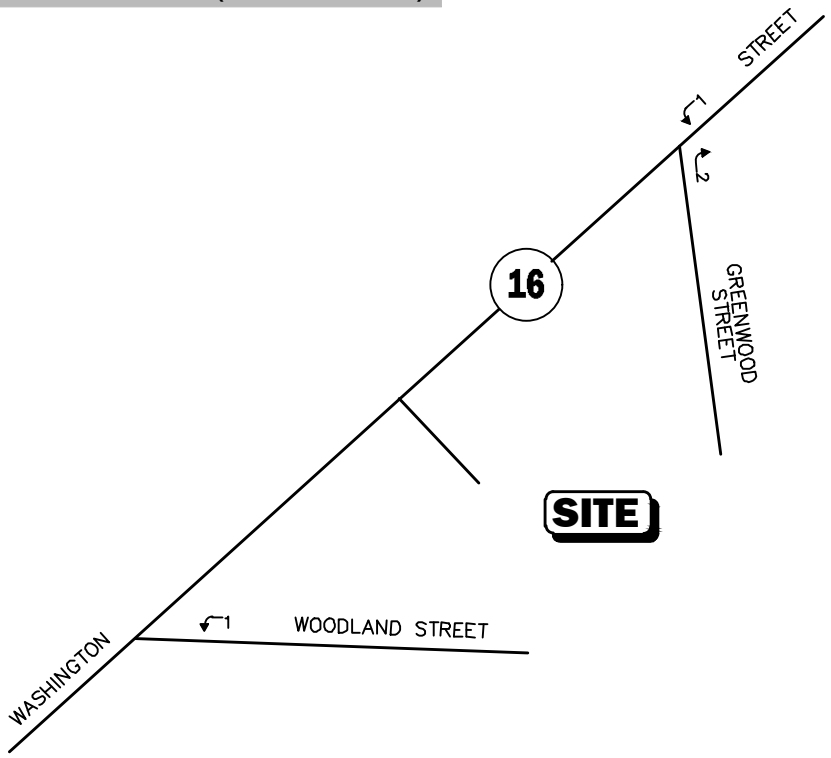
GENERAL BACKGROUND TRAFFIC GROWTH

General Background Traffic Growth - Daily Traffic Volumes

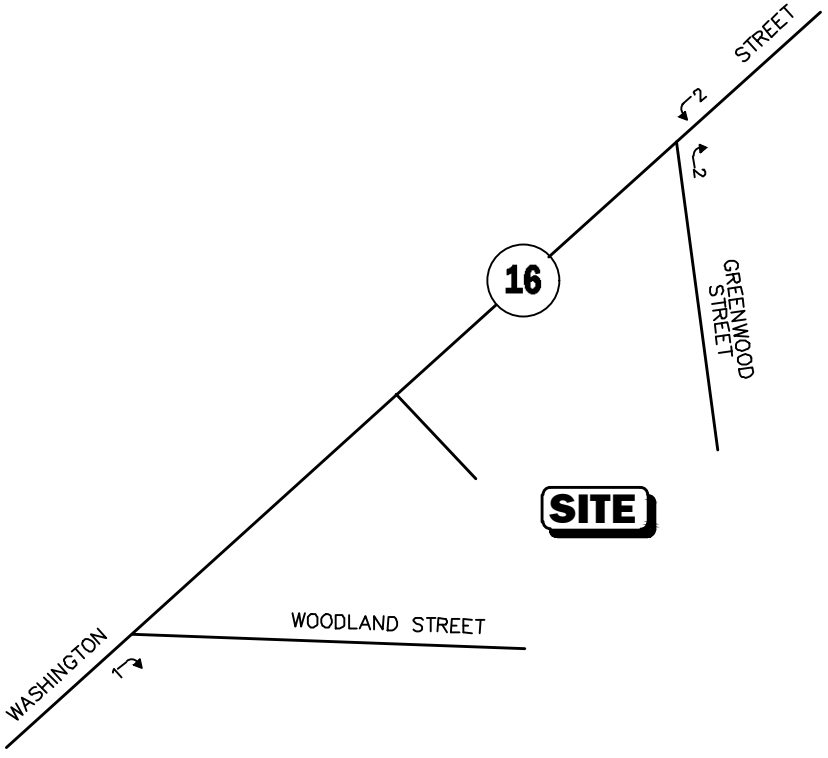
CITY/TOWN	ROUTE/STREET	LOCATION	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Annual Growth
Sherborn	North Main Street (Route 16)	North of Zions Lane	24,053	21,400	21,755	21,670	21,873			22,515			22,689	**-2.21%**
Holliston	Washington Street (Route 16)	East of Whitney Street	12,750	12,890	12,381	12,453	12,559			12,453	14,905			**-0.35%**
Holliston	Washington Street	West of High Street	11,953	12,085	10,894	10,997	11084	10,918			12,487			**-1.70%**
Sherborn	Bullard Street (Route 115)	Millis Town Line	5,163	4,799	4,887	4,868	4,939	6,178			6,458			**4.19%**
Medfield	Main Street (Route 109)	East of Brook Street	16,300	16,357	16,623	15,570	15,498		15,723			16,259		**-1.21%**
Holliston	Washington Street (Route 16/126)	East of Summer Street	19,300	19,368	19,659	20,893	21,023		19,653					**2.19%**
Millis	Main Street (Route 109)	East of Plain Street (Route 115)	14,886	15,481	16,079	15,952	16,085	17,049			15,503			**2.78%**
Medway	Main Street (Route 109)	Millis Town Line	14,500	14,551	14,736	13,426	13,526		14,939			14,067		**-1.63%**
Ashland	Chestnut Street	South of Union Street	6,157	6,700	6,832	6,836	6,723			7,158		7,302		**2.30%**
Framingham	Fountain Street	East of Winter Street	11,022	9,900	10,089	9,986	11,828						10,443	**2.29%**
Framingham	Union Avenue	South of Mount Wayte Avenue	17,973	15,500	15,797	15,273	17,009			14,980				**-0.95%**
Framingham	Beacon Street	North of Worcester Road (Route 9)	6,548	6,570	6,692	6,535	6,655	6,203						**-1.02%**
Natick	West Central Street (Route 135)	East of Newfield Drive	18,852	19,600			17,998			16,214			18,686	**3.97%**
														0.66%

BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS

WEEKDAY MORNING PEAK HOUR (7:00 - 8:00 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)



N

Not To Scale

Figure A-1

Lots 1-4
Peak-Hour Traffic Volumes

Vanasse & Associates inc

R:\9633\9633NT1.dwg, 8/24/2023 9:24:05 AM

TRIP-GENERATION CALCUALTIONS

Graph Look Up

Query Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

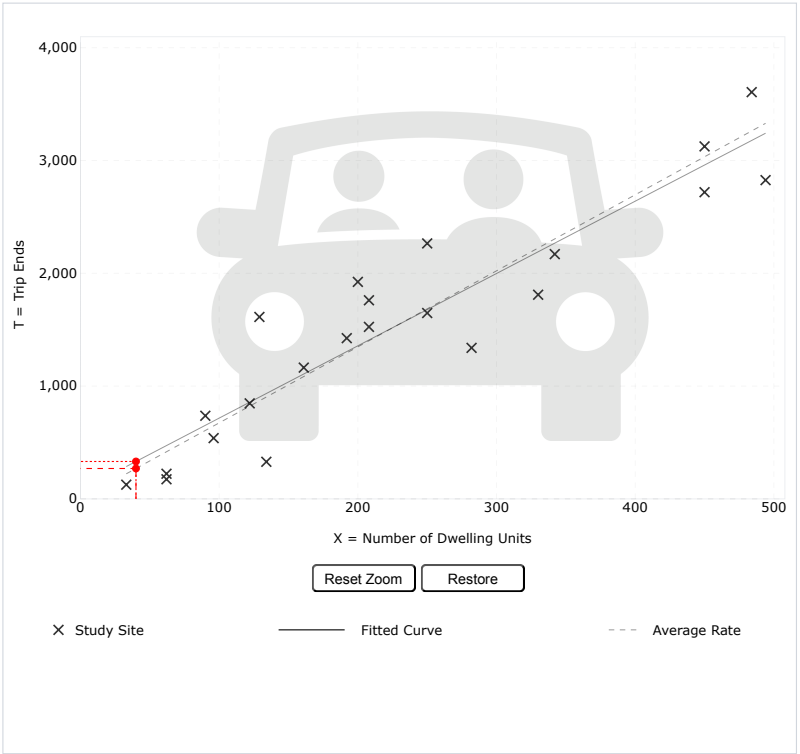
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
40 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
22

Avg. Num. of Dwelling Units:
229

Average Rate:
6.74

Range of Rates:
2.46 - 12.50

Standard Deviation:
1.79

Fitted Curve Equation:
T = 6.41(X) + 75.31

R^2:
0.86

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 270 (Total), 135 (Entry), 135 (Exit)
Fitted Curve: 332 (Total), 166 (Entry), 166 (Exit)

Graph Look Up

Query Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

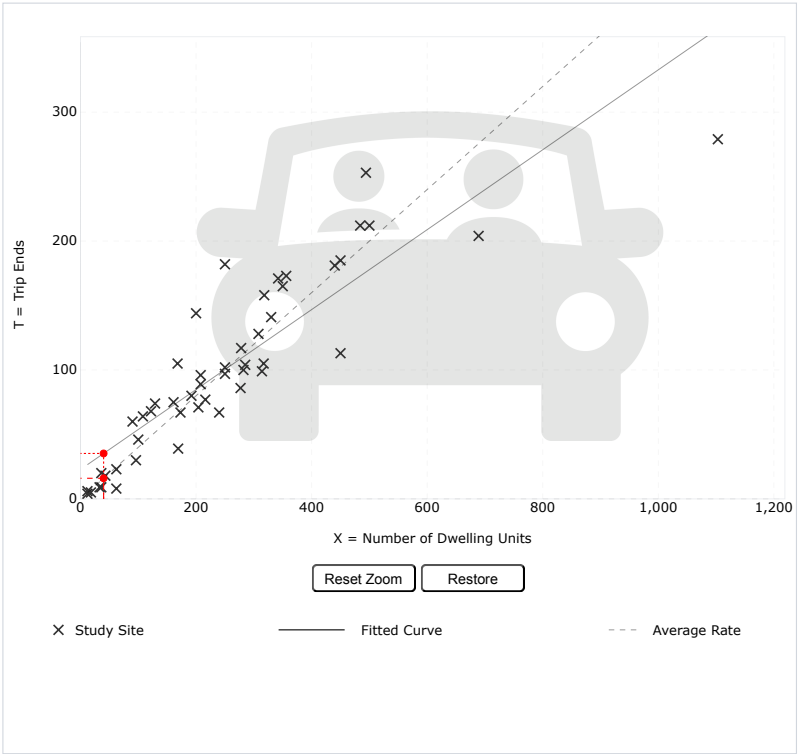
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
40 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 7 and 9 a.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
49

Avg. Num. of Dwelling Units:
249

Average Rate:
0.40

Range of Rates:
0.13 - 0.73

Standard Deviation:
0.12

Fitted Curve Equation:
T = 0.31(X) + 22.85

R^2:
0.79

Directional Distribution:
24% entering, 76% exiting

Calculated Trip Ends:
Average Rate: 16 (Total), 4 (Entry), 12 (Exit)
Fitted Curve: 35 (Total), 8 (Entry), 27 (Exit)

Graph Look Up

Query Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

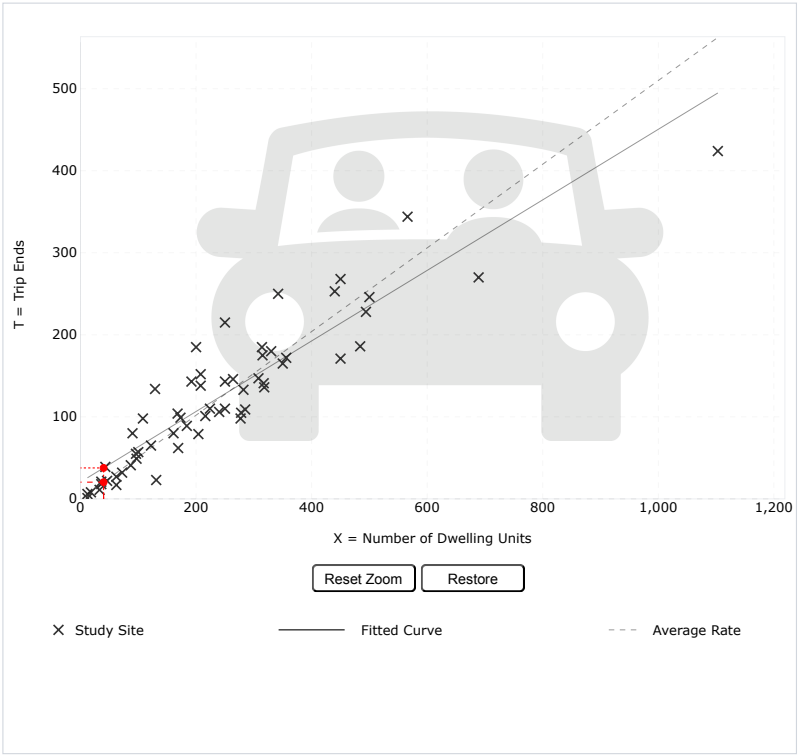
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, Peak Hour of Adjacent Street Traffic

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
40 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
59

Avg. Num. of Dwelling Units:
241

Average Rate:
0.51

Range of Rates:
0.08 - 1.04

Standard Deviation:
0.15

Fitted Curve Equation:
T = 0.43(X) + 20.55

R^2:
0.84

Directional Distribution:
63% entering, 37% exiting

Calculated Trip Ends:
Average Rate: 20 (Total), 13 (Entry), 7 (Exit)
Fitted Curve: 38 (Total), 24 (Entry), 14 (Exit)

TRIP-DISTRIBUTION DATA

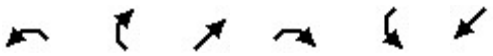
Proposed Multifamily Residential Development
Sherborn, Massachusetts

Residence	Workplace	Number	Route 16 (Northeast)		Route 16 (Southwest)		Greenwood Street (South)		Woodland Street (Southeast)	
Sherborn town	Boston city	331	100%	331		0		0		0
Sherborn town	Sherborn town	299	64%	191	17%	51	15%	45	4%	12
Sherborn town	Natick town	194	100%	194		0		0		0
Sherborn town	Framingham town	155		0	100%	155		0		0
Sherborn town	Wellesley town	127	100%	127		0		0		0
Sherborn town	Newton city	106	100%	106		0		0		0
Sherborn town	Waltham city	98	100%	98		0		0		0
Sherborn town	Worcester city	50	25%	13	75%	38		0		0
Sherborn town	Concord town	42	100%	42		0		0		0
Sherborn town	Dover town	42	100%	42		0		0		0
Sherborn town	Westborough town	42		0	100%	42		0		0
Sherborn town	Weston town	31	100%	31		0		0		0
Sherborn town	Wayland town	29	100%	29		0		0		0
Sherborn town	Needham town	28	100%	28		0		0		0
Sherborn town	Westwood town	26	100%	26		0		0		0
Sherborn town	Cambridge city	24	100%	24		0		0		0
Sherborn town	Holliston town	23		0	100%	23		0		0
Sherborn town	Andover town	18	60%	11	40%	7		0		0
Sherborn town	Lexington town	18	100%	18		0		0		0
Sherborn town	Canton town	18	100%	18		0		0		0
Sherborn town	Hudson town	17		0	100%	17		0		0
Sherborn town	Watertown Town city	17	100%	17		0		0		0
Sherborn town	Northborough town	17		0	100%	17		0		0
Sherborn town	Hopkinton town	12		0	100%	12		0		0
		1,764		1,346		362		45		12
				76.3%		20.5%		2.5%		0.7%
		SAY		**76%**		**20%**		**3%**		**1%**

CAPACITY ANALYSIS WORKSHEETS

Route 16 at Woodland Street
Route 16 at Greenwood Street
Route 16 at the Project Site Driveway

Route 16 at Woodland Street



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	63	3	764	117	2	183
Future Volume (vph)	63	3	764	117	2	183
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994		0.982			
Flt Protected	0.954					
Satd. Flow (prot)	1622	0	2056	0	0	1760
Flt Permitted	0.954					
Satd. Flow (perm)	1622	0	2056	0	0	1760
Adj. Flow (vph)	67	3	796	122	2	215
Lane Group Flow (vph)	70	0	918	0	0	217
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

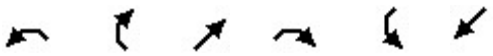
Intersection	
Int Delay, s/veh	1.5

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	63	3	764	117	2	183
Future Vol, veh/h	63	3	764	117	2	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	96	96	85	85
Heavy Vehicles, %	0	0	3	2	0	8
Mvmt Flow	67	3	796	122	2	215

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1076	857	0	0	918	0
Stage 1	857	-	-	-	-	-
Stage 2	219	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	245	360	-	-	752	-
Stage 1	419	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	244	360	-	-	752	-
Mov Cap-2 Maneuver	244	-	-	-	-	-
Stage 1	419	-	-	-	-	-
Stage 2	820	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	25.2	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	248	752	-
HCM Lane V/C Ratio	-	-	0.283	0.003	-
HCM Control Delay (s)	-	-	25.2	9.8	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	50	5	266	69	4	647
Future Volume (vph)	50	5	266	69	4	647
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988		0.972			
Flt Protected	0.956					
Satd. Flow (prot)	1615	0	2077	0	0	1881
Flt Permitted	0.956					
Satd. Flow (perm)	1615	0	2077	0	0	1881
Adj. Flow (vph)	74	7	280	73	4	711
Lane Group Flow (vph)	81	0	353	0	0	715
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

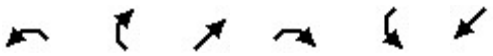
Intersection	
Int Delay, s/veh	1.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	50	5	266	69	4	647
Future Vol, veh/h	50	5	266	69	4	647
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	95	95	91	91
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	74	7	280	73	4	711

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1036	317	0	0	353	0
Stage 1	317	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	259	728	-	-	1217	-
Stage 1	743	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	258	728	-	-	1217	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	23.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	274	1217	-
HCM Lane V/C Ratio	-	-	0.295	0.004	-
HCM Control Delay (s)	-	-	23.5	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	71	3	848	130	2	203
Future Volume (vph)	71	3	848	130	2	203
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995		0.982			
Flt Protected	0.954					
Satd. Flow (prot)	1623	0	2056	0	0	1760
Flt Permitted	0.954					
Satd. Flow (perm)	1623	0	2056	0	0	1760
Adj. Flow (vph)	76	3	883	135	2	239
Lane Group Flow (vph)	79	0	1018	0	0	241
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

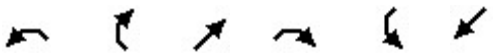
Intersection	
Int Delay, s/veh	1.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	71	3	848	130	2	203
Future Vol, veh/h	71	3	848	130	2	203
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	96	96	85	85
Heavy Vehicles, %	0	0	3	2	0	8
Mvmt Flow	76	3	883	135	2	239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1194	951	0	0	1018	0
Stage 1	951	-	-	-	-	-
Stage 2	243	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	208	318	-	-	689	-
Stage 1	379	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	207	318	-	-	689	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	379	-	-	-	-	-
Stage 2	800	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	32.1	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	210	689	-
HCM Lane V/C Ratio	-	-	0.375	0.003	-
HCM Control Delay (s)	-	-	32.1	10.2	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	1.6	0	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	55	6	295	78	4	718
Future Volume (vph)	55	6	295	78	4	718
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.972			
Flt Protected	0.957					
Satd. Flow (prot)	1614	0	2077	0	0	1881
Flt Permitted	0.957					
Satd. Flow (perm)	1614	0	2077	0	0	1881
Adj. Flow (vph)	81	9	311	82	4	789
Lane Group Flow (vph)	90	0	393	0	0	793
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

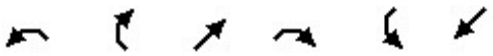
Intersection	
Int Delay, s/veh	2.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	55	6	295	78	4	718
Future Vol, veh/h	55	6	295	78	4	718
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	95	95	91	91
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	81	9	311	82	4	789

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1149	352	0	0	393	0
Stage 1	352	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	221	696	-	-	1177	-
Stage 1	716	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	220	696	-	-	1177	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	29.3	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	236	1177	-
HCM Lane V/C Ratio	-	-	0.38	0.004	-
HCM Control Delay (s)	-	-	29.3	8.1	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	71	3	850	130	2	209
Future Volume (vph)	71	3	850	130	2	209
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995		0.982			
Flt Protected	0.954					
Satd. Flow (prot)	1623	0	2056	0	0	1760
Flt Permitted	0.954					
Satd. Flow (perm)	1623	0	2056	0	0	1760
Adj. Flow (vph)	76	3	885	135	2	246
Lane Group Flow (vph)	79	0	1020	0	0	248
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

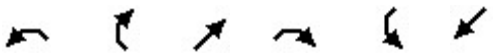
Intersection	
Int Delay, s/veh	1.9

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	71	3	850	130	2	209
Future Vol, veh/h	71	3	850	130	2	209
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	96	96	85	85
Heavy Vehicles, %	0	0	3	2	0	8
Mvmt Flow	76	3	885	135	2	246

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1203	953	0	0	1020	0
Stage 1	953	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	206	317	-	-	688	-
Stage 1	378	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	205	317	-	-	688	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	378	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	32.5	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	208	688	-
HCM Lane V/C Ratio	-	-	0.378	0.003	-
HCM Control Delay (s)	-	-	32.5	10.3	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	1.7	0	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	55	6	300	78	4	721
Future Volume (vph)	55	6	300	78	4	721
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986		0.972			
Flt Protected	0.957					
Satd. Flow (prot)	1614	0	2077	0	0	1881
Flt Permitted	0.957					
Satd. Flow (perm)	1614	0	2077	0	0	1881
Adj. Flow (vph)	81	9	316	82	4	792
Lane Group Flow (vph)	90	0	398	0	0	796
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	55	6	300	78	4	721
Future Vol, veh/h	55	6	300	78	4	721
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	68	68	95	95	91	91
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	81	9	316	82	4	792

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1157	357	0	0	398	0
Stage 1	357	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	219	692	-	-	1172	-
Stage 1	713	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	218	692	-	-	1172	-
Mov Cap-2 Maneuver	218	-	-	-	-	-
Stage 1	713	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	29.6	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	234	1172	-
HCM Lane V/C Ratio	-	-	0.383	0.004	-
HCM Control Delay (s)	-	-	29.6	8.1	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0	-

Route 16 at Greenwood Street

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	5	766	1	1	185
Future Volume (vph)	0	5	766	1	1	185
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1324	0	1845	0	0	1760
Flt Permitted						
Satd. Flow (perm)	1324	0	1845	0	0	1760
Adj. Flow (vph)	0	8	851	1	1	220
Lane Group Flow (vph)	8	0	852	0	0	221
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.1

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	5	766	1	1	185
Future Vol, veh/h	0	5	766	1	1	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	90	90	84	84
Heavy Vehicles, %	0	20	3	0	0	8
Mvmt Flow	0	8	851	1	1	220

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1074	852	0	0	852	0
Stage 1	852	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Critical Hdwy	6.4	6.4	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.48	-	-	2.2	-
Pot Cap-1 Maneuver	246	334	-	-	795	-
Stage 1	421	-	-	-	-	-
Stage 2	820	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	246	334	-	-	795	-
Mov Cap-2 Maneuver	246	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	819	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	16	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	334	795	-
HCM Lane V/C Ratio	-	-	0.024	0.001	-
HCM Control Delay (s)	-	-	16	9.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	3	7	269	2	9	648
Future Volume (vph)	3	7	269	2	9	648
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.905		0.999			
Flt Protected	0.985					0.999
Satd. Flow (prot)	1637	0	1879	0	0	1898
Flt Permitted	0.985					0.999
Satd. Flow (perm)	1637	0	1879	0	0	1898
Adj. Flow (vph)	6	14	283	2	10	704
Lane Group Flow (vph)	20	0	285	0	0	714
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	3	7	269	2	9	648
Future Vol, veh/h	3	7	269	2	9	648
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	95	95	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	6	14	283	2	10	704

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1008	284	0	0	285	0
Stage 1	284	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	269	760	-	-	1289	-
Stage 1	769	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	266	760	-	-	1289	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	478	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	12.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	488	1289	-
HCM Lane V/C Ratio	-	-	0.041	0.008	-
HCM Control Delay (s)	-	-	12.7	7.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	8	850	1	2	205
Future Volume (vph)	0	8	850	1	2	205
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1324	0	1845	0	0	1760
Flt Permitted						
Satd. Flow (perm)	1324	0	1845	0	0	1760
Adj. Flow (vph)	0	13	944	1	2	244
Lane Group Flow (vph)	13	0	945	0	0	246
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	8	850	1	2	205
Future Vol, veh/h	0	8	850	1	2	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	90	90	84	84
Heavy Vehicles, %	0	20	3	0	0	8
Mvmt Flow	0	13	944	1	2	244

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1193	945	0	0	945	0
Stage 1	945	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.4	6.4	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.48	-	-	2.2	-
Pot Cap-1 Maneuver	208	294	-	-	734	-
Stage 1	381	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	207	294	-	-	734	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	381	-	-	-	-	-
Stage 2	796	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	17.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	294	734	-
HCM Lane V/C Ratio	-	-	0.043	0.003	-
HCM Control Delay (s)	-	-	17.8	9.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	3	10	299	2	12	719
Future Volume (vph)	3	10	299	2	12	719
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.896		0.999			
Flt Protected	0.989					0.999
Satd. Flow (prot)	1628	0	1879	0	0	1898
Flt Permitted	0.989					0.999
Satd. Flow (perm)	1628	0	1879	0	0	1898
Adj. Flow (vph)	6	20	315	2	13	782
Lane Group Flow (vph)	26	0	317	0	0	795
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	3	10	299	2	12	719
Future Vol, veh/h	3	10	299	2	12	719
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	95	95	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	6	20	315	2	13	782

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1124	316	0	0	317	0
Stage 1	316	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	229	729	-	-	1255	-
Stage 1	744	-	-	-	-	-
Stage 2	442	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	225	729	-	-	1255	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	12.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	481	1255	-
HCM Lane V/C Ratio	-	-	0.054	0.01	-
HCM Control Delay (s)	-	-	12.9	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	0	8	870	2	2	211
Future Volume (vph)	0	8	870	2	2	211
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1324	0	1845	0	0	1760
Flt Permitted						
Satd. Flow (perm)	1324	0	1845	0	0	1760
Adj. Flow (vph)	0	13	967	2	2	251
Lane Group Flow (vph)	13	0	969	0	0	253
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.2

Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	8	870	2	2	211
Future Vol, veh/h	0	8	870	2	2	211
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	63	63	90	90	84	84
Heavy Vehicles, %	0	20	3	0	0	8
Mvmt Flow	0	13	967	2	2	251

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1223	968	0	0	969	0
Stage 1	968	-	-	-	-	-
Stage 2	255	-	-	-	-	-
Critical Hdwy	6.4	6.4	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.48	-	-	2.2	-
Pot Cap-1 Maneuver	200	285	-	-	719	-
Stage 1	372	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	199	285	-	-	719	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	790	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	18.2	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	285	719	-
HCM Lane V/C Ratio	-	-	0.045	0.003	-
HCM Control Delay (s)	-	-	18.2	10	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	4	10	310	2	12	737
Future Volume (vph)	4	10	310	2	12	737
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.904		0.999			
Flt Protected	0.986					0.999
Satd. Flow (prot)	1637	0	1879	0	0	1898
Flt Permitted	0.986					0.999
Satd. Flow (perm)	1637	0	1879	0	0	1898
Adj. Flow (vph)	8	20	326	2	13	801
Lane Group Flow (vph)	28	0	328	0	0	814
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.4

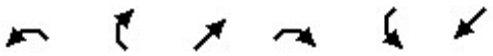
Movement	NBL	NBR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	4	10	310	2	12	737
Future Vol, veh/h	4	10	310	2	12	737
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	50	95	95	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	8	20	326	2	13	801

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1154	327	0	0	328	0
Stage 1	327	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	220	719	-	-	1243	-
Stage 1	735	-	-	-	-	-
Stage 2	433	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	216	719	-	-	1243	-
Mov Cap-2 Maneuver	216	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	425	-	-	-	-	-

Approach	NB	NE	SW
HCM Control Delay, s	13.9	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NBLn1	SWL	SWT
Capacity (veh/h)	-	-	432	1243	-
HCM Lane V/C Ratio	-	-	0.065	0.01	-
HCM Control Delay (s)	-	-	13.9	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Route 16 at the Project Site Driveway



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	6	21	851	2	6	205
Future Volume (vph)	6	21	851	2	6	205
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.896					
Flt Protected	0.988					0.998
Satd. Flow (prot)	1649	0	1863	0	0	1859
Flt Permitted	0.988					0.998
Satd. Flow (perm)	1649	0	1863	0	0	1859
Adj. Flow (vph)	7	23	925	2	7	223
Lane Group Flow (vph)	30	0	927	0	0	230
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

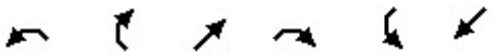
Intersection	
Int Delay, s/veh	0.5

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	6	21	851	2	6	205
Future Vol, veh/h	6	21	851	2	6	205
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	23	925	2	7	223

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1163	926	0	0	927	0
Stage 1	926	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	215	326	-	-	737	-
Stage 1	386	-	-	-	-	-
Stage 2	802	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	213	326	-	-	737	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	18.7	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	292	737	-
HCM Lane V/C Ratio	-	-	0.101	0.009	-
HCM Control Delay (s)	-	-	18.7	9.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Lane Group	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (vph)	3	11	301	5	19	722
Future Volume (vph)	3	11	301	5	19	722
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.892		0.998			
Flt Protected	0.990					0.999
Satd. Flow (prot)	1645	0	1859	0	0	1861
Flt Permitted	0.990					0.999
Satd. Flow (perm)	1645	0	1859	0	0	1861
Adj. Flow (vph)	3	12	327	5	21	785
Lane Group Flow (vph)	15	0	332	0	0	806
Sign Control	Stop		Free			Free

Intersection Summary
Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.3

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	3	11	301	5	19	722
Future Vol, veh/h	3	11	301	5	19	722
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	12	327	5	21	785

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1157	330	0	0	332	0
Stage 1	330	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	217	712	-	-	1227	-
Stage 1	728	-	-	-	-	-
Stage 2	430	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	210	712	-	-	1227	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	417	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	12.9	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	SWL	SWT
Capacity (veh/h)	-	-	471	1227	-
HCM Lane V/C Ratio	-	-	0.032	0.017	-
HCM Control Delay (s)	-	-	12.9	8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-