

Transportation Impact Assessment

Proposed Medical Office Building
15 Pleasant Valley Road
Sutton, Massachusetts

Prepared for:

Torrington Properties, Inc.
Boston, Massachusetts

October 2022

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EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate the potential traffic impacts associated with the proposed development of a medical office building to be located at 15 Pleasant Valley Road in Sutton, Massachusetts. 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.

As documented in this assessment:

- Project-related traffic increases are expected to amount to 186 new vehicle trips (93 entering and 93 exiting) on a typical weekday, including 16 new vehicle trips (13 entering and 3 exiting) during the weekday morning peak hour and 20 new vehicle trips (6 entering and 14 exiting) during the weekday evening peak hour;
- Available sight lines exceed the minimum requirements to ensure safe access to and from the Project;
- In comparison to future No-Build traffic volumes, Project-related traffic increases amount to an increase in peak hour traffic volumes of approximately one percent or less;
- Project-related traffic conditions are expected to amount to no notable increase to delays as compared to future No-Build conditions.

The following recommendations are provided to ensure safe and efficient access to the Project.

RECOMMENDATIONS

Site Access

Access to the Project site is proposed via a full access and egress driveway onto Pleasant Valley Road. It is recommended that the proposed Pleasant Valley Road driveway be placed under STOP-sign (MUTCD R1-1) control, with a painted STOP bar at the driveway approach to Pleasant Valley Road. A painted double-yellow centerline should also be provided to delineate inbound and outbound travel lanes. In order to ensure safe and efficient access to the Project and that adequate sightlines are provided in both directions along Pleasant Valley Road, all signs and landscaping should be designed as to not impede lines of sight in both directions. Additionally, it is recommended that all areas of the site located within the required sight distance triangle be grassed and regularly maintained to ensure available sight lines to the south along Pleasant Valley Road, and the exclusive right-turn lane from Route 146, be provided at all times.

CONCLUSION

In summary, the addition of Project-related traffic to study area roadways and intersections is not anticipated to significantly impact traffic operations within the study area over No-Build conditions. As documented in this report, Project-related traffic increases do not result in significant impact to area traffic operations, with only minimal increases to motorist delays projected at the signalized intersection of Route 146 with Boston Road. With implementation of the above recommendations, the proposed Project can be built with minimal traffic impact on the surrounding roadway system.

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Transportation Impact Assessment (TIA) in order to evaluate the potential traffic impacts associated with the proposed development of a medical office building to be located at 15 Pleasant Valley Road in Sutton, Massachusetts. 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.

PROJECT DESCRIPTION

The Project site is situated on an approximate 1.25± acre parcel of land located in the southeast quadrant of the intersection of Route 146 with Pleasant Valley Road in Sutton, Massachusetts. The Project site is generally bounded by Route 146 to the west, Pleasant Valley Road to the north, and private properties to the east and south. Access to the Project site is currently provided by a single right-in/right-out driveway directly onto Route 146.

The Project entails the construction of a new approximate 5,150± square foot (sf) medical office building providing a total of thirty (30) parking spaces, including two (2) handicap accessible parking spaces. Access to the Project is proposed via a new full access driveway onto Pleasant Valley Road, with the existing site access onto Route 146 eliminated. The proposed site layout would include a one-way counterclockwise traffic pattern around the proposed building, including two rows of angled parking spaces along the eastern side of the building.

The location of the Project site relative to the surrounding roadway network is displayed in Figure 1.



Figure 1

Site Location Map

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Sutton and in accordance with the Massachusetts Department of Transportation (MassDOT) Guidelines for traffic impact assessments 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 facilities; observations of traffic flow; review of safety characteristics along area roadways and collection of daily and peak period traffic counts. 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 state guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues. The third stage of the study presents and evaluates measures to address traffic and safety issues, 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 April of 2022. The field investigation consisted of an inventory of existing roadway geometrics, pedestrian facilities, traffic volumes, and operating characteristics; as well as posted speed limits and land use information for the major roadways that provide access to the Project including Route 146 and Pleasant Valley Road, including the key intersections which are expected to accommodate the majority of Project-related traffic. The study area for the project is listed below and graphically depicted in Figure 2.

1. Route 146 at Pleasant Valley Road
2. Route 146 at Boston Road
3. Pleasant Valley Road at Boston Road and Dudley Road

The following describes the study area roadways and intersections:

GEOMETRY

Roadways

Worcester-Providence Turnpike

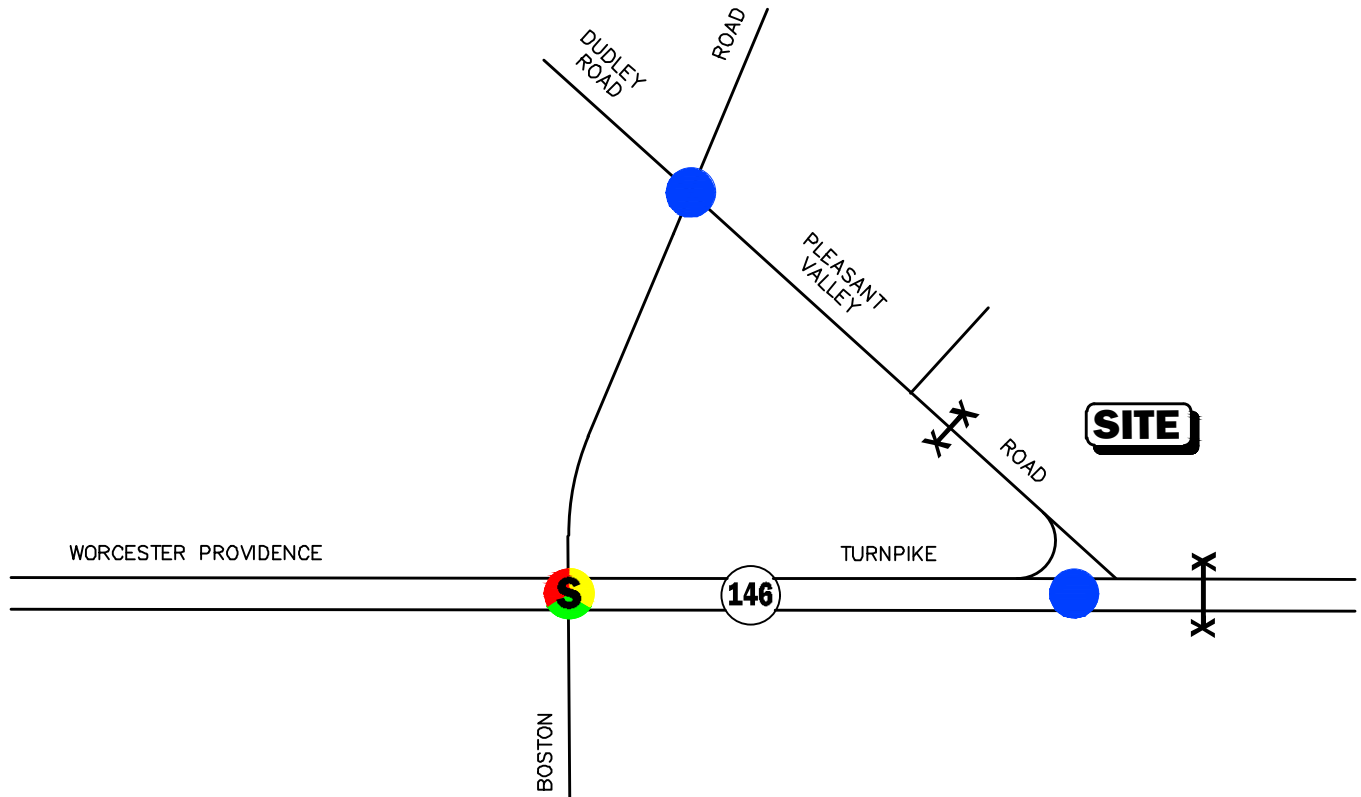
Route 146 (Worcester-Providence Turnpike) is a limited access median divided four-lane principal arterial roadway under the jurisdiction of MassDOT that traverses the study area in a general northwest-southeast orientation. Within the study area, Worcester-Providence Turnpike provides three approximate 12-foot travel lanes in each direction separated by a jersey barrier median. An approximate 8-foot paved shoulder is provided along both sides of the corridor in the vicinity of the Project. Along the site frontage The posted speed limit along Worcester-Providence Turnpike is 40 miles per hour (mph) in the vicinity of the project site and 50 mph north of the project site. Land use along Worcester-Providence Turnpike consists of a mix of office, commercial and residential properties.

Pleasant Valley Road

Pleasant Valley Road is a local roadway under the jurisdiction of the Town of Sutton that traverses the study area in a general north-south orientation between it's southern dead end terminus, south of Route 146 and it's northern terminus at Boston Road. Pleasant Valley Road provides an approximate 12-foot lane of travel in each direction, separated by a painted double-yellow centerline, with a variable width marked

Legend:

-  Unsignalized Turning Movement Count Location
-  Signalized Turning Movement Count Location
-  Automatic Traffic Recorder Count Location



Not To Scale

Figure 2

Traffic Count Locations



shoulder provided. The posted speed limit on Pleasant Valley Road is 30 mph. Land use along the corridor consists primarily of commercial properties.

Intersections

Worcester-Providence Turnpike at Boston Road

Boston Road intersects Worcester-Providence Turnpike from the east and west to form a four-way intersection that operates under traffic signal control. The Boston Road eastbound approach provides an approximate 12-foot wide exclusive left-turn lane, and approximate 12-foot wide through lane and an approximate 12-foot wide channelized exclusive right-turn lane. The Boston Road westbound approach provides two approximate 12-foot wide exclusive left-turn lanes, an approximate 12-foot wide through lane and an approximate 12-foot wide exclusive right-turn lane. The Worcester-Providence Turnpike northbound approach provides two approximate 12-foot wide through lanes and an approximate 12-foot wide shared through/right-turn lane. The Worcester-Providence Turnpike southbound approach provides two approximate 12-foot wide exclusive left-turn lanes, three approximate 12-foot wide through lanes and an approximate 12-foot wide exclusive right-turn lane. The traffic signal at this location operates under a four-phase signal operation with a protected left-turn phase for southbound traffic on Worcester-Providence Turnpike and an exclusive left-turn phase for the eastbound and westbound Boston Road approaches. Land use in the vicinity of this intersection consists primarily commercial uses including a restaurant, gas station and drive-through bank.

Route 146 at Pleasant Valley Road

Pleasant Valley Road intersects Route 146 from the east to form a three-way intersection that operates under STOP-sign control. The Pleasant Valley Road westbound approach provides a single approximate 12-foot wide exclusive right-turn lane that operates under STOP-sign control. The Route 146 northbound approach provides three approximate 12-foot wide through lanes and an approximate 12-foot wide exclusive right-turn lane onto Pleasant Valley Road. Land use in the vicinity of this intersection consists primarily of commercial properties.

Boston Road at Pleasant Valley Road and Dudley Road

Pleasant Valley Road and Dudley Road intersect Boston Road from the south and north, respectively, to form a four-way intersection that operates under STOP-sign control. The Pleasant Valley Road eastbound approach provides two approximate 12-foot wide general purpose travel lanes. The Pleasant Valley Road westbound approach provides two approximate 12-foot wide general purpose travel lanes, with a channelized right-turn lane onto Dudley Road provided that operates under YIELD-sign control. The Pleasant Valley Road northbound approach provides an approximate 16-foot wide general purpose travel lane that operates under STOP-sign control. The Dudley Road southbound approach provides an approximate 13-foot wide general purpose travel lane that operates under STOP-sign control. Lane use in the vicinity of this intersection consists of a mix of commercial and residential properties.

EXISTING TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, traffic counts were conducted along both Route 146 and Pleasant Valley Road by way of an automatic traffic recorder (ATR) count in April 2022. Additionally, peak period turning movement counts were conducted at all study area locations between the hours of 7:00 and 9:00 AM, and 4:00 and 6:00 PM. These time periods represent the peak period of roadway and commuter traffic. Based on a review of the collected data, the peak hours of roadway traffic generally occurred between 7:00 and 8:00 AM during the weekday morning and between 4:30 and 5:30 PM during the weekday evening.

Seasonal Variation

In order to identify whether traffic volumes collected in April are representative of typical traffic conditions, seasonal adjustment data published by MassDOT were reviewed. Route 146 falls within Group U2 – “Rural Freeway and Expressway.” Based on a review of this data, April traffic volumes are approximately 7 percent higher than average annual conditions, and therefore the collected data represent a conservative analysis scenario.

Route 146, along the northbound side of the corridor, in the vicinity of the Project, was found to accommodate approximately 20,609 vehicles on an average weekday (24-hour, two-way volume), with approximately 2,118 vehicles per hour (vph) during the weekday morning peak hour and 1,504 vph during the weekday evening peak hour.

Pleasant Valley Road, east of Route 146, currently accommodates approximately 1,803 vpd, including approximately 162 vph during the weekday morning peak hour, and 152 vph during the weekday evening peak hour.

A review of the peak-period traffic counts indicates that the weekday morning peak hour generally occurs between 7:00 and 8:00 AM, with the weekday evening peak hour, generally occurring between 4:30 and 5:30 PM.

The 2022 Existing traffic volumes are summarized in Table 1, with the weekday morning and evening peak-hour traffic volumes graphically depicted on Figures 3.

Table 1
EXISTING ROADWAY TRAFFIC-VOLUME SUMMARY

Location	Daily Volume (vpd) ^a	Weekday Morning Peak Hour (8:00 – 9:00 AM)			Weekday Afternoon Peak Hour (4:30 – 5:30 PM)		
		Volume (vph) ^b	Percent of Daily Traffic ^c	Predominant Flow	Volume (vph)	Percent of Daily Traffic	Predominant Flow
Route 146, south of Pleasant Valley Road	20,609	2,118	10.3	100% NB	1,504	7.3	100% NB
Pleasant Valley Road, east of Route 146	1,803	162	9.0	98% EB	152	8.4	94% EB

Source: Automatic traffic recorder counts and manual turning movement counts conducted in April 2022.

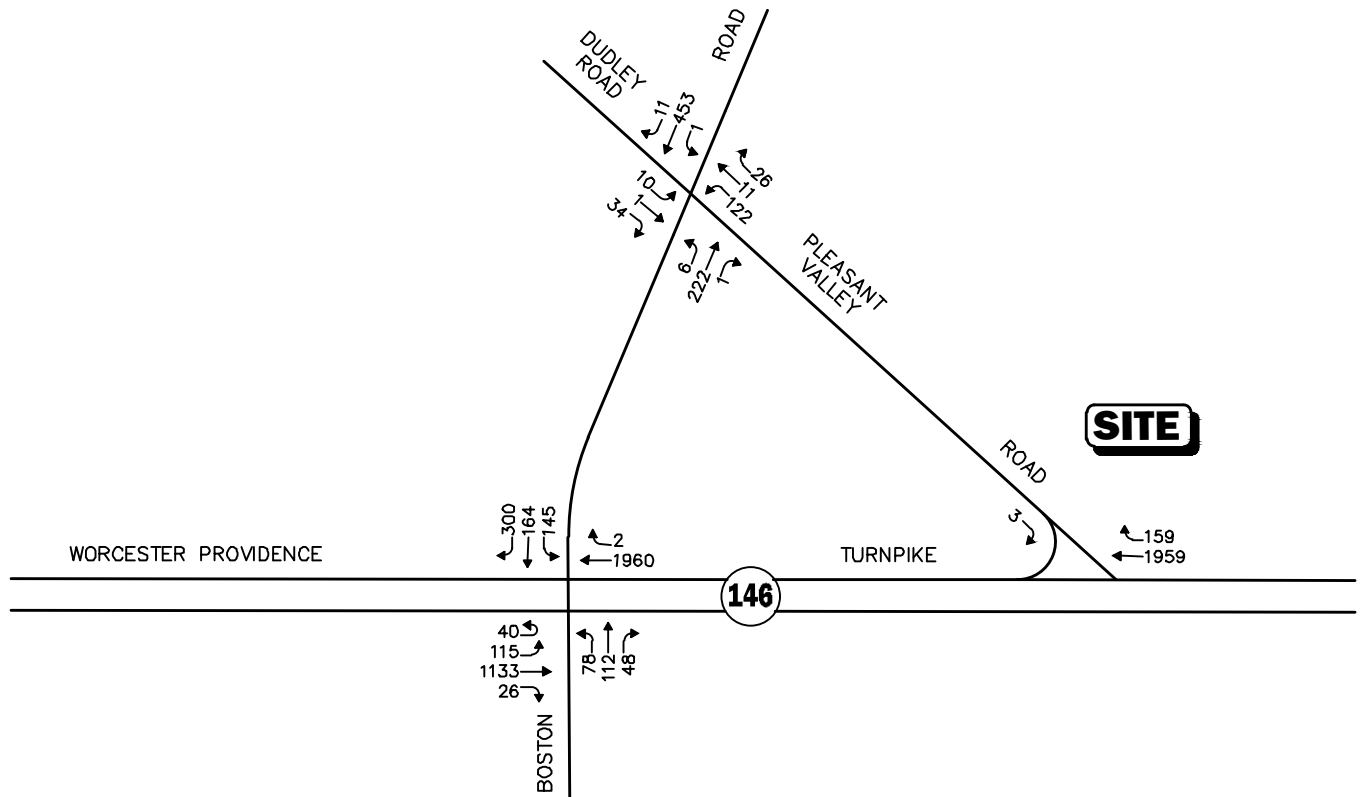
^aTwo-way daily traffic expressed in vehicles per day.

^bManual turning movement counts conducted in April 2022.

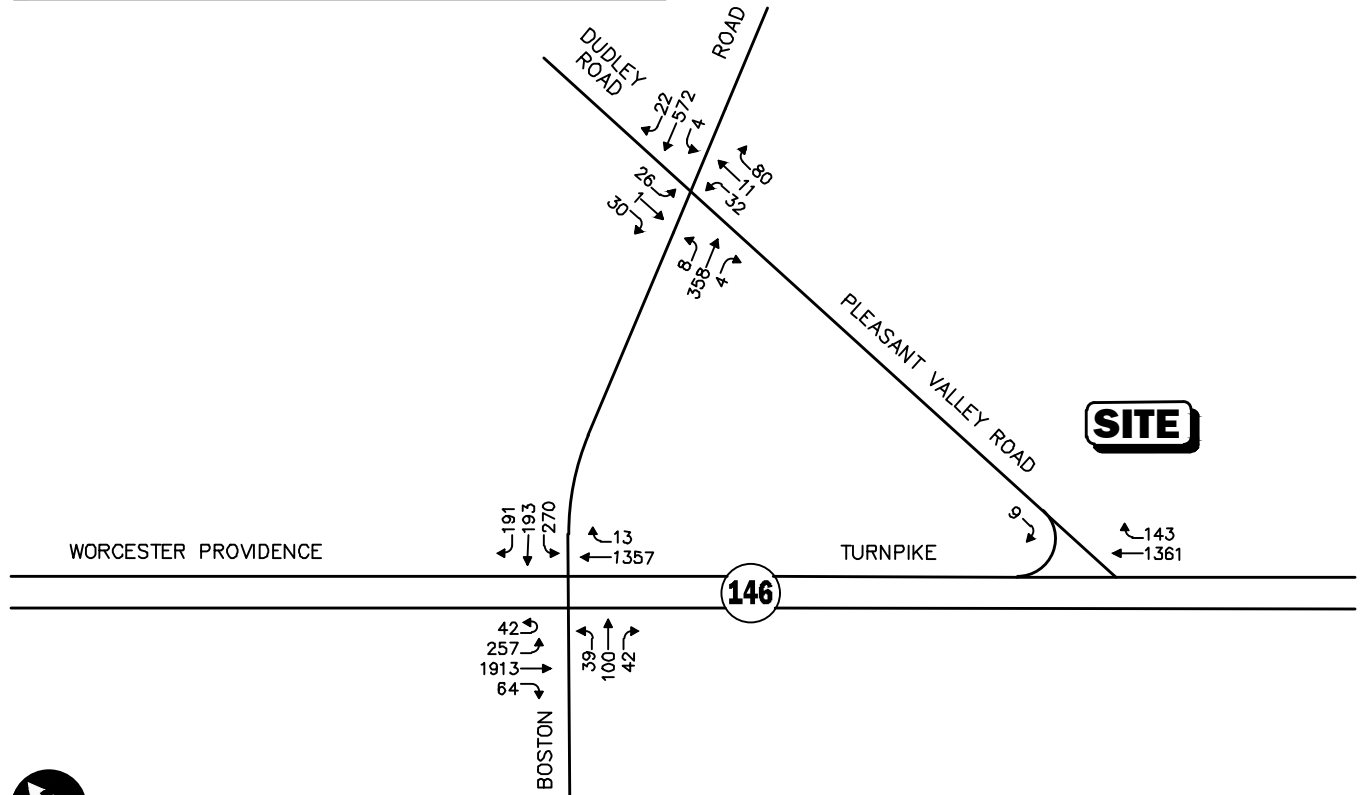
^cThe percent of daily traffic that occurs during the peak hour.

EB = eastbound, NB = northbound

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



SATURDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



Not To Scale



Figure 3

2022 Existing
Peak-Hour Traffic Volumes

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in April of 2022. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study area roadways and at the study area intersections. In general, pedestrian accommodations are not currently provided within the study area, with no sidewalk or marked pedestrian crossings provided. Sharrows are provided along Boston Road in both the eastbound and westbound directions to accommodate bicycle traffic along this corridor.

PUBLIC TRANSPORTATION

Public transportation services are not currently provided within the immediate study area, though the Town of Sutton is served by SCM Elderbus, which provides transportation services to all Sutton residents aged 60 or older, as well as residents with disabilities.

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) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, and severity, and is presented in Table 2.

As summarized in Table 2, the intersection of Route 146 with Boston Road experienced the highest frequency of accidents over the five-year review period with a total of 123 collisions reported at the intersection, averaging 24.6 crashes per year. The majority of accidents involved property damage only, occurred on dry pavement, and involved rear-end collisions. The motor vehicle crash rate for this location falls above MassDOT's average crash rate for signalized intersections in this MassDOT District.

The intersection of Boston Road with Pleasant Valley Road experienced a total of 10 motor vehicle collisions over the five-year review period, averaging 2.0 crashes per year. The majority of crashes involved property damage only, occurred on dry pavement, and involved angle type collisions. The motor vehicle crash rate for this location falls below MassDOT's average crash rate for unsignalized intersections in this MassDOT District.

The remaining study area location exhibited significantly lower crash frequency, all locations exhibiting crash rates below the District average in which the project is located (District 3). No fatalities were reported at any of the study area intersections over the five-year period reviewed.

The Highway Safety Improvement Program (HSIP) database was reviewed to identify whether any of the study area intersections are listed as HSIP-eligible clusters in the most recent (2017-2019) HSIP cluster listing. Based on this review, the intersection of Route 146 with Boston Road was identified as HSIP-eligible cluster location and Top 200 Crash Cluster location for the years 2017-2019. It is noted that this intersection was reconstructed in 2016 to enhance traffic operations and safety at this location, including geometric improvements and the elimination of northbound left-turn movements from Route 146 to Boston Road westbound.

SIGHT DISTANCE ANALYSIS

In order to ensure safe and efficient access will be provided to and from the Project site, a sight distance analysis was conducted for the proposed site driveway with Pleasant Valley Road. Specifically, available sight lines at the proposed driveway location were compared to the sight distance requirements as defined by the American Association of State Highway and Transportation Officials (AASHTO).

In order to identify prevailing travel speeds along Pleasant Valley Road, an automatic traffic recorder count was conducted to record vehicle speeds over an extended period. The results of the speed study indicate that while the posted speed limit along the corridor is 30 mph, the average travel speed is 32 mph in the northbound direction and 29 mph in the southbound direction. The 85th percentile travel speed, which is utilized for design purposes was determined to be 36 mph in the northbound direction and 34 mph in the southbound direction.

Based on these travel speeds a minimum of 261 feet of sight distance is required for vehicles approaching from Route 146 and for exiting vehicles looking left, with a total of 240 feet of sight distance required for vehicles approaching from the north, and exiting vehicles looking right. Field observations reveal that under existing conditions in excess of 400 feet of sight distance is available to and from the north, well exceeding the minimum AASHTO requirements. Under existing conditions, vegetation located on site obstructs sight lines for vehicles approaching from Route 146 and exiting vehicles looking left. As such, sight distance profile plans were developed under post-development conditions to ensure that the clearing of the site and proposed site grading would allow for the required sight line in this direction. Based on this analysis, the required sight distance will be provided. The sight distance profile plans, including the identification of the area that should be grassed and regularly maintained is provided in the technical appendix of this report.

Table 2
MOTOR VEHICLE CRASH DATA SUMMARY^a

Scenario	Route 146 at Boston Road	Boston Road at Pleasant Valley Road	Route 146 at Pleasant Valley Road
<i>Year:</i>			
2016	31	3	1
2017	22	2	0
2018	27	1	1
2019	27	1	0
<u>2020</u>	<u>19</u>	<u>3</u>	<u>0</u>
Total	126	10	2
Average ^b	24.6	2.0	0.4
Crash Rate ^c	1.39	0.42	0.07
Significant ^d	Yes	No	No
<i>Type:</i>			
Angle	14	8	0
Rear-End	80	0	1
Head-On	2	0	0
Sideswipe	16	2	0
Fixed Object	13	0	1
<u>Unknown/Other</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	126	10	2
<i>Day:</i>			
Weekday	84	8	2
Saturday	20	1	0
<u>Sunday</u>	<u>22</u>	<u>1</u>	<u>0</u>
Total	126	10	2
<i>Lighting Conditions:</i>			
Daylight	89	9	1
Dawn/Dusk	4	0	1
Dark (lit)	7	0	0
Dark (unlit)	25	1	0
<u>Unknown</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	126	10	2
<i>Pavement Conditions</i>			
Dry	92	10	2
Wet	21	0	0
Snow	9	0	0
Ice	1	0	0
<u>Unknown(Other)</u>	<u>3</u>	<u>0</u>	<u>0</u>
Total	126	10	2
<i>Severity:</i>			
Property Only	91	7	2
Injury Accident	35	3	0
Fatal Accident	0	0	0
<u>Unknown/Other</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	126	10	2

^aSource: MassDOT, 2016 through 2020

^bAverage crashes over five-year period.

^cCrash rate per million entering vehicles (mev).

^dUnsignalized intersections are significant if rate >0.57 crashes per million vehicles

^eSignalized intersections are significant if rate >0.73 crashes per million vehicles

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2029, which reflects a seven-year planning horizon consistent with State Traffic Study Guidelines. Independent of the Project, traffic volumes on the roadway network in the year 2029 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon this 2029 No-Build traffic network reflect the 2029 Build 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, the drawback of this procedure is that the potential growth in population and development external to the study area would not be accounted for in the traffic projections.

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

Background Traffic Growth

In order to account for background growth in traffic, independent of any specific area development projects, a one percent annual compounded growth rate was applied to area traffic volumes over the seven year planning horizon. This growth rate is consistent with the background growth rate utilized for other recently conducted area traffic assessments.

Specific Developments by Others

In addition to the aforementioned background growth rate, traffic volumes associated with the following area development projects were identified based on a review of the Town of Sutton's development project database, and have been incorporated into the analysis of future traffic conditions.

UN1F1ED Sutton, 105 Providence Road, Sutton Massachusetts – The 1165R Massachusetts Avenue development project entails construction of two warehouse and distribution buildings totaling approximately 995,000 sf. Additional traffic expected to be generated by this project were obtained from the traffic impact assessment¹ prepared for this development, and have been included in the analysis of future traffic conditions.

Blackstone Logistics Center, Sutton Massachusetts – The Blackstone Logistics Center development project, to be located in the Towns of Sutton, Douglas and Uxbridge, entails construction of an approximate 650,000 sf warehouse facility on Lackey Dam Road. Additional traffic expected to be generated by this project were obtained from the traffic impact assessment² prepared for this development, and have been included in the analysis of future traffic conditions.

No other developments were identified that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

ROADWAY IMPROVEMENT PROJECTS

The Town of Sutton Planning Department and MassDOT were contacted to identify if any roadway or traffic signal improvement projects are proposed within the study area that would affect future traffic operations within the study area. Based on these discussions, the no specific roadway improvement projects were identified within the study area that are expected to influence future traffic conditions.

NO-BUILD TRAFFIC VOLUMES

The 2029 No-Build peak-hour traffic-volume networks were developed by applying the background growth rate to the 2022 Existing traffic volumes, as well as traffic associated with the aforementioned background development project. The resulting 2029 No-Build weekday morning and weekday evening peak-hour traffic volume networks are shown on Figure 4.

PROJECT-GENERATED TRAFFIC

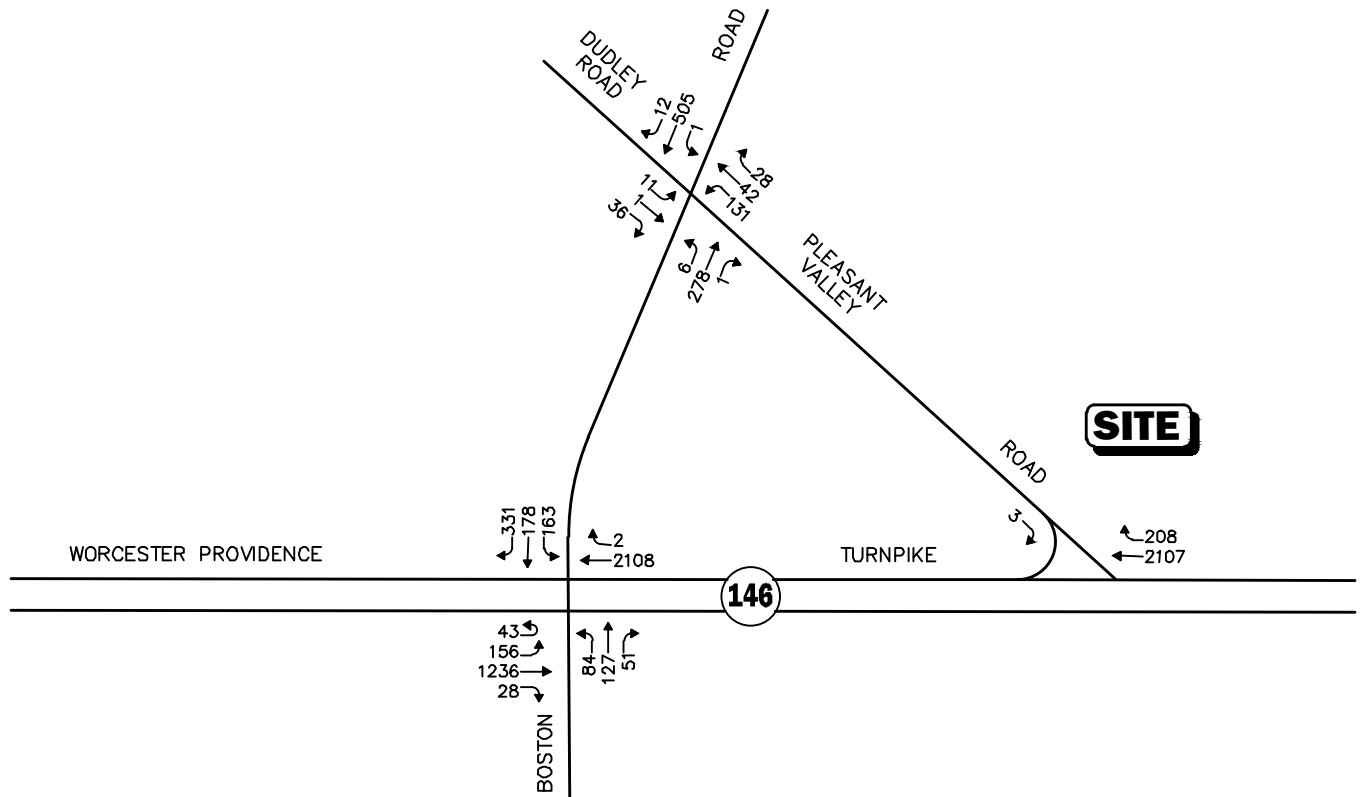
The proposal entails the development of an approximate 5,150± sf medical office building. In order to develop the traffic characteristics of this project, trip-generation statistics published by the Institute of Transportation Engineers (ITE)³ for LUC 720 – *Medical-Dental Office Building* were used. This land use code represent the most appropriate category for the proposed development of the site. The trip generation projections are summarized in Table 3.

¹ *Traffic Impact Evaluation – 105 Providence Road, Sutton, MA*; VHB, March 30, 2022.

² *Traffic Impact and Access Study – Blackstone Logistics Center, Sutton, Douglas and Uxbridge, MA*; VHB, January 11, 2021.

³ *Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; September 2021.

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



SATURDAY EVENING PEAK HOUR (4:30 - 5:30 PM)

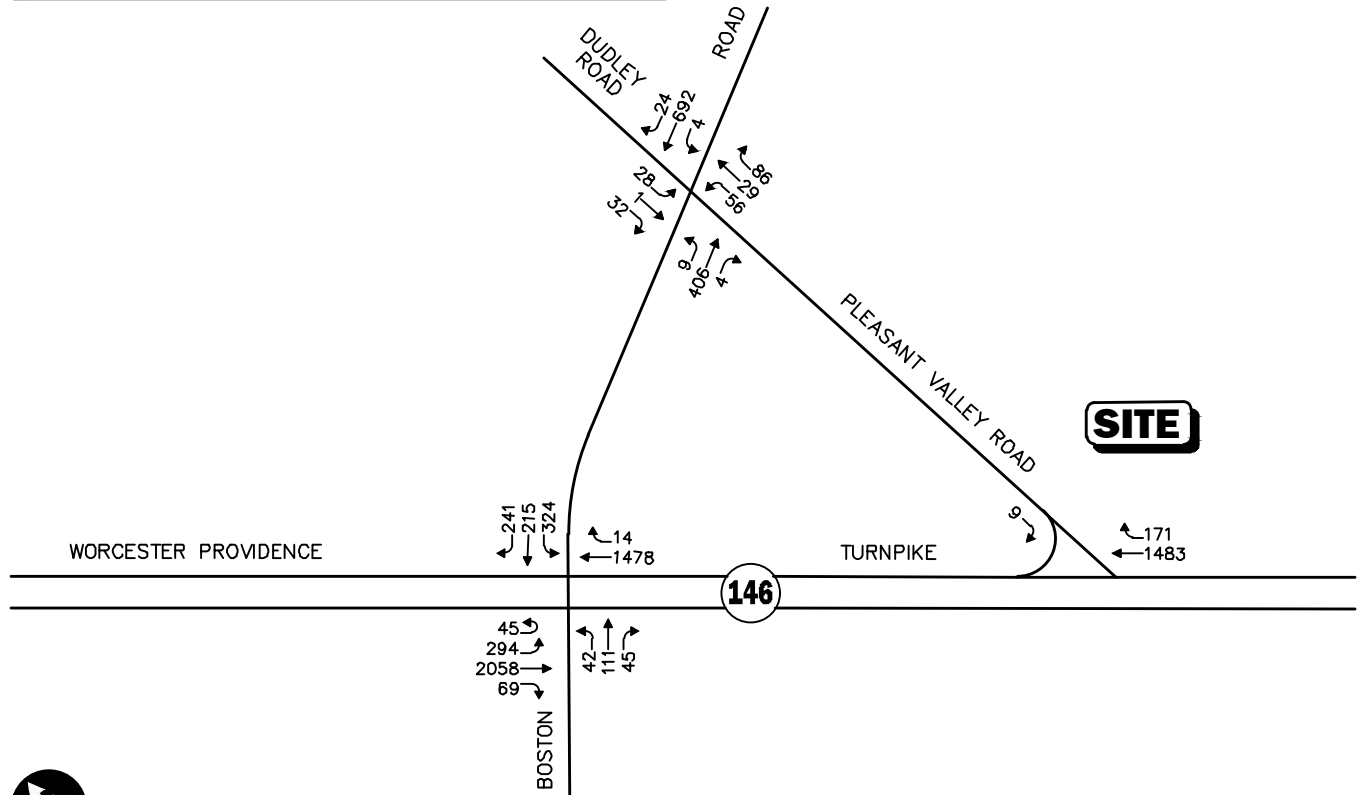


Figure 4

2029 No-Build
Peak-Hour Traffic Volumes

Table 3
TRIP GENERATION SUMMARY^a

Time Period/ Directional Distribution	Total Trips
Weekday Daily	186
<i>Weekday Morning Peak Hour:</i>	
Entering	13
<u>Exiting</u>	<u>3</u>
Total	16
<i>Weekday Evening Peak Hour:</i>	
Entering	15
<u>Exiting</u>	<u>10</u>
Total	25

^aBased on ITE LUC 720 – *Medical-Dental Office Building – Stand Alone*, 5,150 sf.

As summarized in Table 3, the Project is expected to generate approximately 186 vehicle trips on a typical weekday (93 entering and 93 exiting), including 16 vehicle trips (13 entering and 3 exiting) during the weekday morning peak hour and 20 vehicle trips (6 entering and 14 exiting) during the weekday evening peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of the site-generated trips to and from the proposed development was determined based on a review of existing traffic patterns along the Route 146 and Boston Road corridors and the anticipated arrival and distribution patterns for employee and patient traffic. In general, it is expected that 35 percent of Project-related traffic will be oriented to and from Route 146, south of the site; 35 percent to and from Route 146, north of the site; 20 percent to and from Boston Road, east of the site; and 10 percent to and from Boston Road, west of the site.

The general trip distribution for the project is summarized in Table 5 and displayed on Figure 5. The weekday morning and weekday evening peak-hour traffic volumes expected to be generated by the Project were assigned on the study area roadway network based on these patterns, as shown on Figure 6.

Table 5
TRIP-DISTRIBUTION SUMMARY

Roadway	Direction (To/From)	Percentage (%)
Route 146	North	35%
Route 146	South	35%
Boston Road	East	20%
Boston Road	West	<u>10%</u>
TOTAL		100%

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

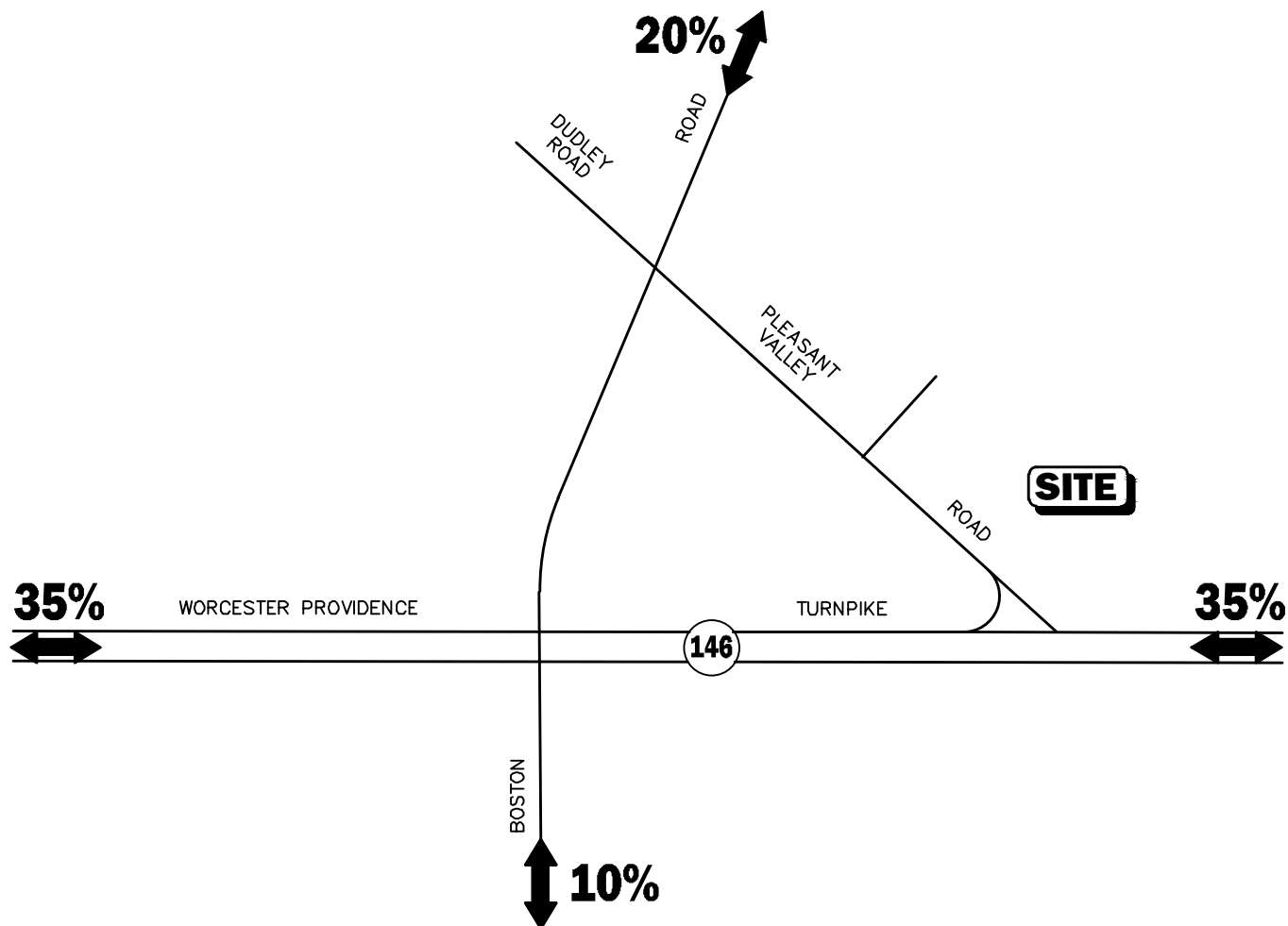
The 2029 Build condition networks consist of the 2029 No-Build traffic volumes with the anticipated Project-generated traffic added to them. The 2029 Build weekday morning and weekday evening peak-hour traffic volume networks are graphically depicted on Figure 7.

A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 6. These volumes are based on the expected increases from the Project.

Table 6
PEAK HOUR TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2029 No-Build	2029 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Route 146 at Boston Road:</i>				
Weekday Morning	4,507	4,514	7	0.2
Weekday Evening	4,936	4,950	14	0.3
<i>Route 146 at Pleasant Valley Road:</i>				
Weekday Morning	2,311	2,317	6	0.3
Weekday Evening	1,663	1,670	7	0.4
<i>Boston Road at Pleasant Valley Road:</i>				
Weekday Morning	1,052	1,062	10	1.0
Weekday Evening	1,371	1,384	13	0.9

As summarized in Table 6, in comparison to future 2029 No-Build conditions, overall traffic volumes are expected to increase by approximately 0.2 to 1.0 percent at all off-site locations evaluated as part of this assessment, with overall volumes expected to increase by approximately 6 to 14 vehicles per hour, or approximately one new vehicle trip every 4 to 10 minutes.



Not To Scale

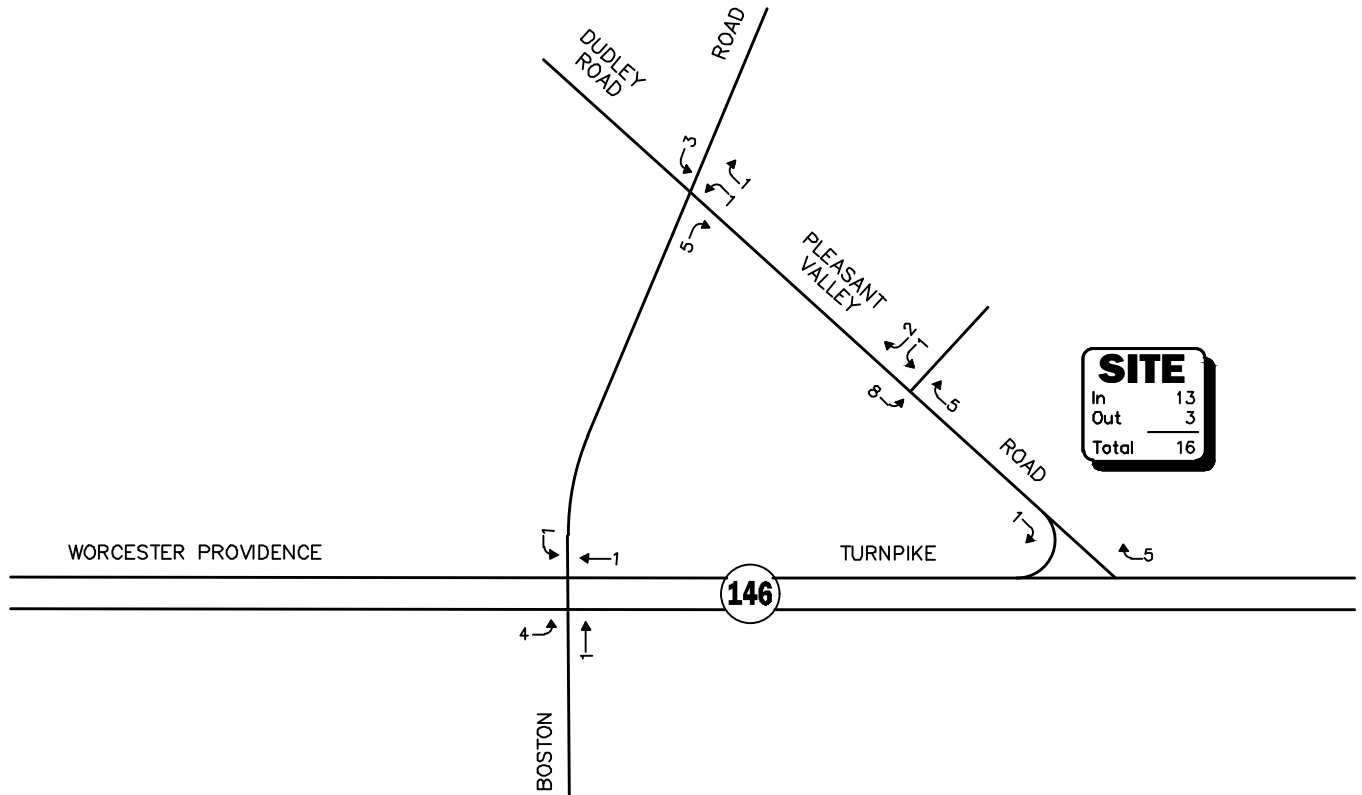


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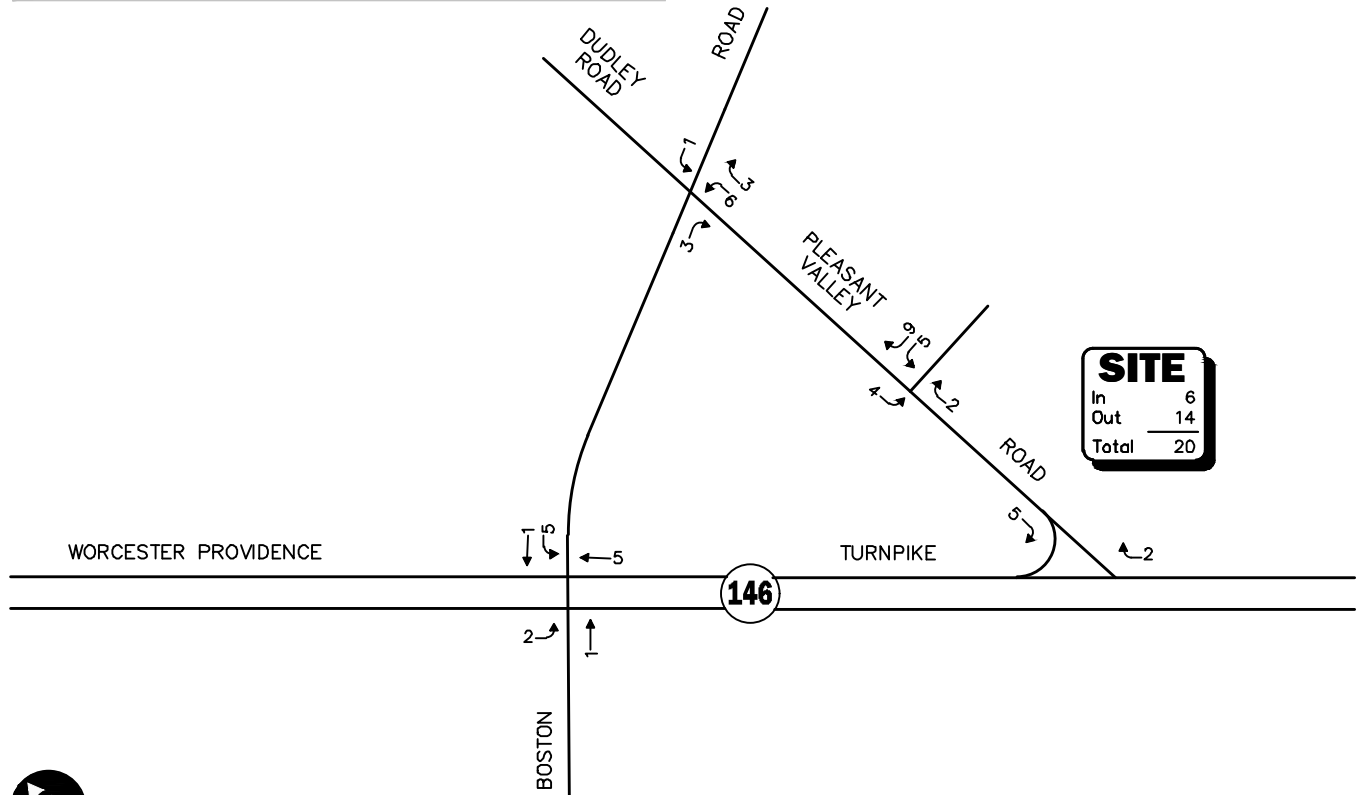
Figure 5

Trip Distribution Map

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



SATURDAY EVENING PEAK HOUR (4:30 - 5:30 PM)



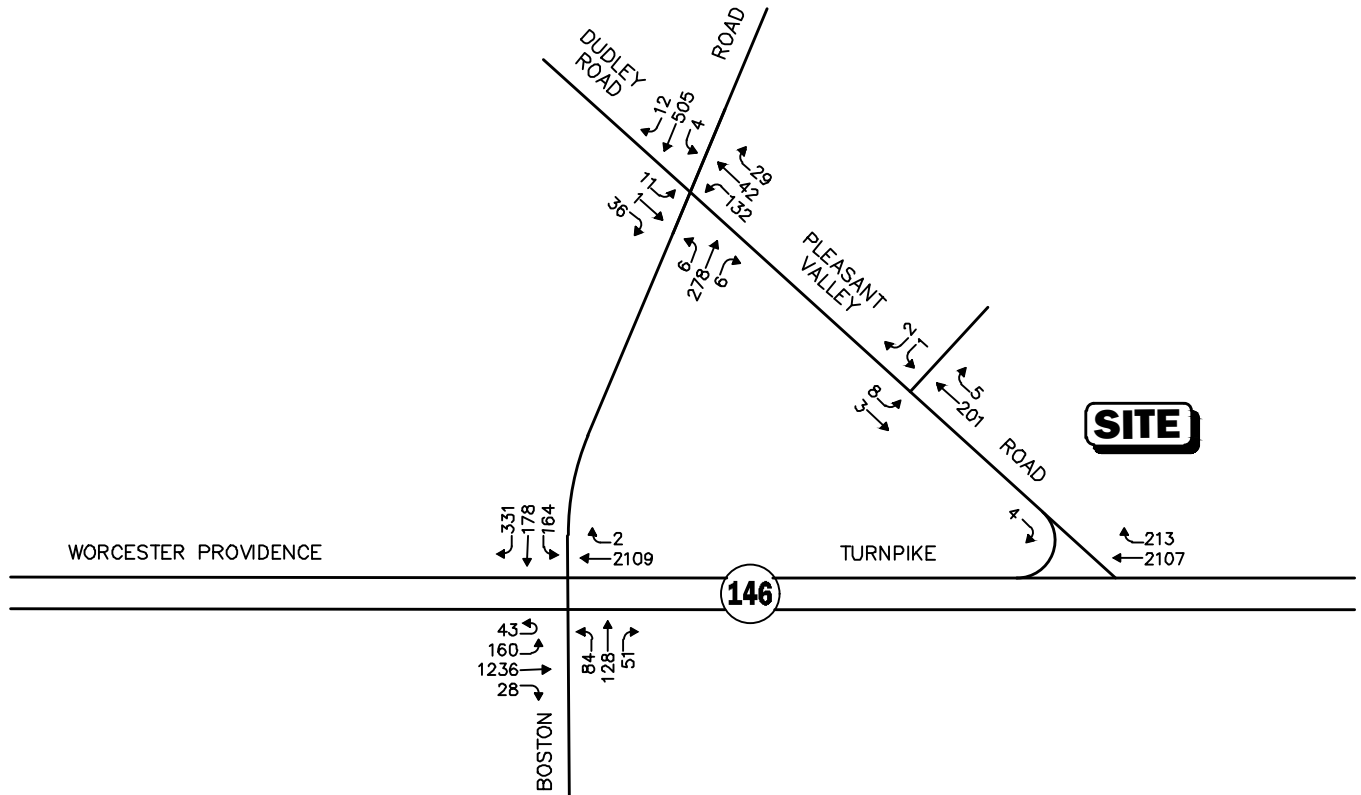
Not To Scale



Figure 6

Project-Generated
Peak-Hour Traffic Volumes

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



SATURDAY EVENING PEAK HOUR (4:30 - 5:30 PM)

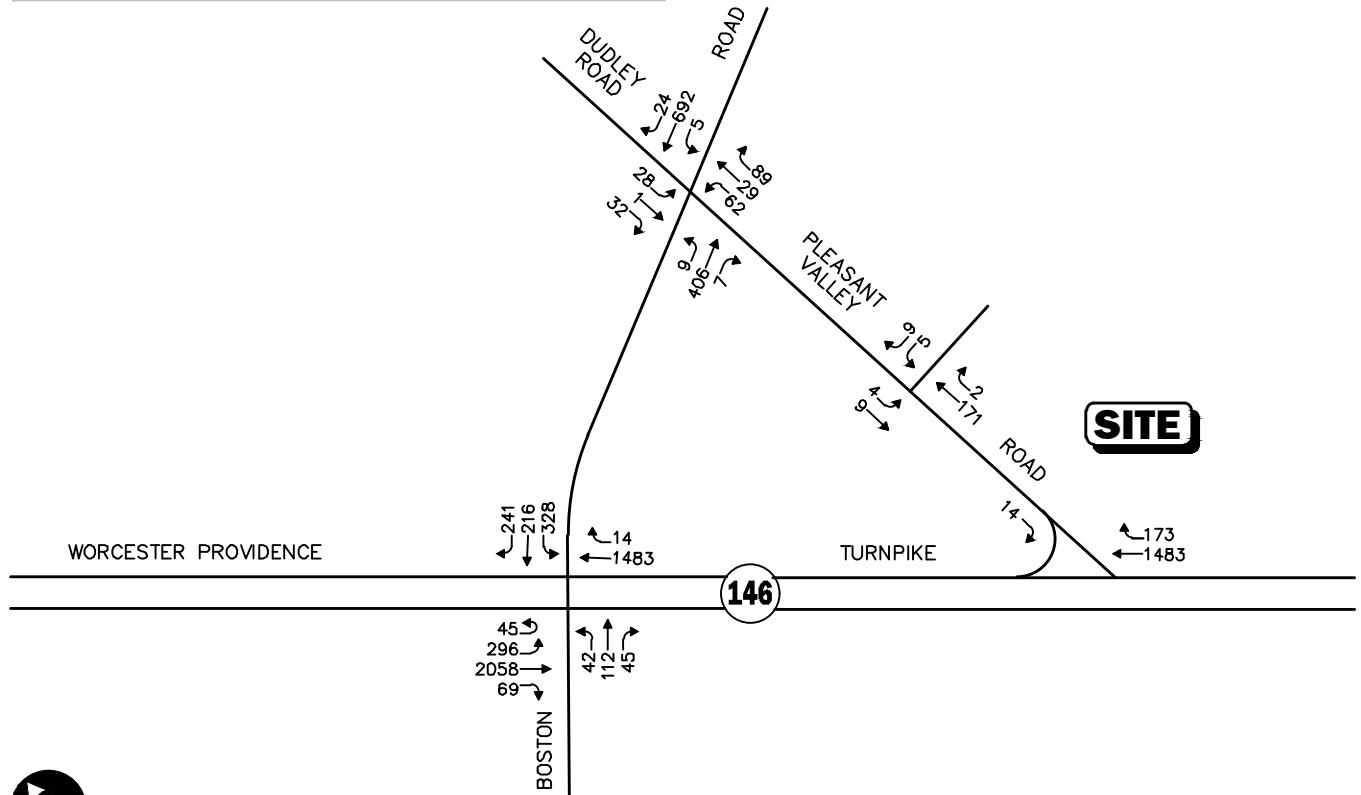


Figure 7

2029 Build
Peak-Hour Traffic Volumes

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build and Build traffic volume conditions. Capacity analyses provide an indication of how well the roadway 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.

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.⁴ The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with level-of-service (LOS) A representing the best operating conditions and LOS F representing congested or constrained operating conditions.

Since the level of service of a traffic facility is a function of the traffic 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 year.

Signalized Intersections

The six levels of service for signalized intersections may be described as follows:

- *LOS A* describes operations with very low control delay; most vehicles do not stop at all.

⁴The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

- *LOS B* describes operations with relatively low control delay. However, more vehicles stop than *LOS A*.
- *LOS C* describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- *LOS D* describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- *LOS E* describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- *LOS F* describes operations with high control delay values that often occur with over-saturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections were calculated using the Percentile Delay Method implemented as a part of the Synchro™ 8 software as suggested by MassDOT in order to compensate for errors found when employing the 2010 *Highway Capacity Manual* methodology as a part of the software. The Percentile Delay Method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on “percentile” delay. Level-of-service designations are based on the criterion of percentile delay per vehicle and is a measure of: i) driver discomfort; ii) motorist frustration; and iii) fuel consumption; and includes a uniform delay based on percentile volumes using a Poisson arrival pattern, an initial queue move-up time, and a queue interaction delay that accounts for delays resulting from queues extending from adjacent intersections. Table 7 summarizes the relationship between level-of-service and percentile delay, and uses the same numerical delay thresholds as the HCM method. The tabulated percentile delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

Table 7
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS^a

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

Unsignalized Intersections

The six levels of service for unsignalized intersections may be described as follows:

- *LOS A* represents a condition with little or no control delay to minor street traffic.
- *LOS B* represents a condition with short control delays to minor street traffic.

- *LOS C* represents a condition with average control delays to minor street traffic.
- *LOS D* represents a condition with long control delays to minor street traffic.
- *LOS E* represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- *LOS F* represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

The levels of service of unsignalized intersections are determined by application of a procedure described in the 2010 *Highway Capacity Manual*.⁵ Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the 2010 *Highway Capacity Manual*. Table 8 summarizes the relationship between level of service and average control delay for two way stop controlled and all-way stop controlled intersections.

Table 8
LEVEL-OF-SERVICE CRITERIA FOR
UNSIGNALIZED INTERSECTIONS^a

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
$v/c \leq 1.0$	$v/c > 1.0$	
A	F	≤ 10.0
B	F	10.1 to 15.0
C	F	15.1 to 25.0
D	F	25.1 to 35.0
E	F	35.1 to 50.0
F	F	> 50.0

^aSource: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010; page 19-2.

ANALYSIS RESULTS

Level-of-service analyses were conducted for 2022 Existing, 2029 No-Build and 2029 Build conditions for the intersections within the study area. The results of the intersection capacity analyses for signalized and unsignalized intersections are summarized in Table 9 through Table 10, with detailed analysis results provided in the Appendix. The following is a summary of the level-of-service and delay analyses for the intersections within the study area:

⁵*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

Table 9
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Location/Time Period/Movement	2022 Existing			2029 No-Build			2029 Build		
	V/C ^a	Delay ^b	LOS ^c	V/C	Delay	LOS	V/C	Delay	LOS
Route 146 at Boston Road									
<i>Weekday Morning:</i>									
Boston Road EB	0.79	72	E	0.90	82	F	0.91	82	F
Boston Road WB	1.01	91	F	1.11	115	F	1.11	115	F
Route 146 NB	0.78	30	C	0.86	36	D	0.86	36	D
Route 146 SB	0.52	18	B	0.59	20	B	0.59	20	B
Overall	--	38	D	--	46	D	--	46	D
<i>Weekday Evening:</i>									
Boston Road EB	0.59	63	E	0.62	65	E	0.62	65	E
Boston Road WB	0.68	56	E	0.77	58	E	0.78	59	E
Route 146 NB	0.57	29	C	0.64	32	C	0.64	32	C
Route 146 SB	0.67	24	C	0.81	27	C	0.81	27	C
Overall	--	32	C	--	35	D	--	35	D

^aVolume to capacity ratio.

^bDelay in seconds per vehicle.

^cLevel of service.

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

Signalized Intersection Capacity Analysis Results

Route 146 at Boston Road

Under 2022 Existing conditions the intersection of Route 146 with Boston Road currently operates at an overall LOS D or better during the weekday morning and weekday evening peak hours. Under future 2029 No-Build conditions, this intersection is projected to operate at LOS D during both the weekday morning peak and weekday evening peak hours. Under future Build conditions this location is projected to continue to operate at LOS D during both the weekday morning and weekday evening peak hours, with Project-related traffic increases resulting in increases to overall delays of less than one second per vehicle, as compared to No-Build conditions.

Table 10
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Location/Time Period/Movement	2022 Existing			2029 No-Build			2029 Build		
	V/C ^a	Delay ^b	LOS ^c	V/C	Delay	LOS	V/C	Delay	LOS
<i>Boston Road at Pleasant Valley Road and Dudley Road</i>									
<i>Weekday Morning Peak Hour</i>									
Boston Road EB	0.01	<5	A	0.01	<5	A	0.01	<5	A
Boston Road WB	0.00	<5	A	0.00	<5	A	0.00	<5	A
Pleasant Valley Road NB	0.38	18	C	0.59	27	D	0.60	28	D
Dudley Road SB	0.08	12	B	0.11	13	B	0.11	13	B
<i>Weekday Evening Peak Hour</i>									
Boston Road EB	0.01	<5	A	0.01	<5	A	0.01	<5	A
Boston Road WB	0.00	<5	A	0.00	<5	A	0.01	<5	A
Pleasant Valley Road NB	0.36	18	C	0.56	29	D	0.60	31	D
Dudley Road SB	0.18	18	C	0.28	26	D	0.28	26	D
<i>Route 146 at Pleasant Valley Road</i>									
<i>Weekday Morning Peak Hour</i>									
Pleasant Valley Road WB	0.02	25	C	0.02	27	D	0.03	27	D
Route 146 NB	0.00	<5	A	0.00	<5	A	0.00	<5	A
<i>Weekday Evening Peak Hour</i>									
Pleasant Valley Road WB	0.03	17	C	0.04	18	C	0.06	19	C
Route 146 NB	0.00	<5	A	0.00	<5	A	0.00	<5	A
<i>Pleasant Valley Road at Site Driveway</i>									
<i>Weekday Morning Peak Hour</i>									
Pleasant Valley Road WB	--	--	--	--	--	--	0.01	<5	A
Site Driveway NB	--	--	--	--	--	--	0.00	9	A
<i>Weekday Evening Peak Hour</i>									
Pleasant Valley Road WB	--	--	--	--	--	--	0.00	<5	A
Site Driveway NB	--	--	--	--	--	--	0.02	9	A

^aVolume to capacity ratio.

^bDelay in seconds per vehicle.

^cLevel of service.

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

Unsignalized Capacity Analysis Results

Boston Road at Pleasant Valley Road and Dudley Road

Under 2022 Existing conditions, mainline traffic volumes along Boston Road, at its intersection with Pleasant Valley Road and Dudley Road, currently operate at LOS A conditions during both the weekday morning and weekday evening peak hours, with all movements from Pleasant Valley Road and Dudley Road operating at LOS C or better during both peak periods. Under future 2029 No-Build conditions, mainline traffic volumes on Boston Road are projected to continue to operate at LOS A, with all movements from Pleasant Valley Road and Dudley Road projected to operate at LOS D or better during both the weekday morning and weekday evening peak hours. Under future 2029 Build conditions, mainline traffic volumes on Boston Road are projected to continue to operate at LOS A, with all movements from Pleasant Valley Road and Dudley Road continuing to operate at LOS D or better during both the weekday morning and weekday evening peak hours. Project-related traffic increases are projected to result in minimal increases to side street delays, on the order of 1 to 2 second per vehicle.

Route 146 at Pleasant Valley Road

Under 2022 Existing conditions, critical movements at this unsignalized intersection (right-turns from Pleasant Valley Road) currently operate at LOS C or better during the weekday morning and weekday evening peak hours. Under future 2029 No-Build conditions, right-turns from Pleasant Valley Road are projected to operate at LOS D or better during the weekday morning and weekday evening peak hours. Under future 2029 Build conditions, right-turns from Pleasant Valley Road are projected to continue to operate at LOS D or better, with Project-related traffic volumes resulting in minimal increases to approach delays for this movement.

Pleasant Valley Road at Site Driveway

Under future 2029 Build conditions, mainline traffic volumes along Pleasant Valley Road, at its intersection with the proposed site driveway are projected to operate at LOS A during both the weekday morning and weekday evening peak hours, with the site driveway northbound approach operating at LOS A during both peak periods.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

As documented in this report, the Project is expected to generate approximately 186 vehicle trips on a typical weekday (93 entering and 93 exiting), including 16 vehicle trips (13 entering and 3 exiting) during the weekday morning peak hour and 20 vehicle trips (6 entering and 14 exiting) during the weekday evening peak hour. In comparison to future No-Build conditions, Project-related traffic increases are expected to amount to only a 0.2 to 1.0 percent increase to traffic volumes at intersections located within the study area that are expected to accommodate the majority of Project-related traffic activity.

An analysis of traffic operations at the study area intersections indicates that in general, the Project will not result in a notable impact on motorist delays at study area intersections as compared to future No-Build conditions, with no notable impact to mainline traffic operations along either the Route 146, Boston Road or Pleasant Valley Road corridors.

The following recommendations are provided to ensure safe and efficient access to the Project.

RECOMMENDATIONS

Site Access

Access to the Project site is proposed via a full access and egress driveway onto Pleasant Valley Road. It is recommended that the proposed Pleasant Valley Road driveway be placed under STOP-sign (MUTCD R1-1) control, with a painted STOP bar at the driveway approach to Pleasant Valley Road. A painted double-yellow centerline should also be provided to delineate inbound and outbound travel lanes. In order to ensure safe and efficient access to the Project and that adequate sightlines are provided in both directions along Pleasant Valley Road, all signs and landscaping should be designed as to not impede lines of sight in both directions. Additionally, it is recommended that all areas of the site located within the required sight distance triangle be grassed and regularly maintained to ensure available sight lines to the south along Pleasant Valley Road, and the exclusive right-turn lane from Route 146, be provided at all times.

CONCLUSION

In summary, the addition of Project-related traffic to study area roadways and intersections is not anticipated to significantly impact traffic operations within the study area over No-Build conditions. As documented in this report, Project-related traffic increases do not result in significant impact to area traffic operations, with only minimal increases to motorist delays projected at the signalized intersection of Route 146 with Boston Road. With implementation of the above recommendations, the proposed Project can be built with minimal traffic impact on the surrounding roadway system.

TRANSPORTATION TECHNICAL APPENDIX

APPENDIX A - TRAFFIC COUNT DATA

APPENDIX B – MOTOR VEHICLE CRASH DATA

APPENDIX C – TRIP-GENERATION CALCULATIONS

APPENDIX D – CAPACITY ANALYSIS WORKSHEETS

APPENDIX E – SIGHT DISTANCE ANALYSIS



APPENDIX A - TRAFFIC COUNT DATA



Worcester Providence Tpk (Route 146)
east of Pleasant Valley Road
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



PDI File # 228509 ATR A

Count Date: Wednesday, April 6, 2022
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	24	1	5	30
12:15 AM	18	0	9	27
12:30 AM	7	1	5	13
12:45 AM	17	2	6	25
1:00 AM	25	3	1	29
1:15 AM	13	4	10	27
1:30 AM	13	5	8	26
1:45 AM	16	1	10	27
2:00 AM	16	2	8	26
2:15 AM	20	1	6	27
2:30 AM	20	0	7	27
2:45 AM	27	3	8	38
3:00 AM	17	2	15	34
3:15 AM	49	7	5	61
3:30 AM	62	4	12	78
3:45 AM	79	7	19	105
4:00 AM	101	5	17	123
4:15 AM	145	5	20	170
4:30 AM	225	3	14	242
4:45 AM	192	3	21	216
5:00 AM	261	9	15	285
5:15 AM	405	12	16	433
5:30 AM	451	21	15	487
5:45 AM	485	22	17	524
6:00 AM	399	23	17	439
6:15 AM	490	27	18	535
6:30 AM	527	16	19	562
6:45 AM	476	24	17	517
7:00 AM	366	13	17	396
7:15 AM	378	13	23	414
7:30 AM	371	14	28	413
7:45 AM	280	26	30	336
8:00 AM	290	17	18	325
8:15 AM	249	22	19	290
8:30 AM	221	16	23	260
8:45 AM	241	23	23	287
9:00 AM	244	15	26	285
9:15 AM	222	15	30	267
9:30 AM	239	16	36	291
9:45 AM	210	15	33	258
10:00 AM	205	19	29	253
10:15 AM	211	14	31	256
10:30 AM	221	19	24	264
10:45 AM	219	13	21	253
11:00 AM	216	26	30	272
11:15 AM	211	11	27	249
11:30 AM	229	13	30	272
11:45 AM	199	6	21	226

AM Total	9602	539	859	11000
Percentage	87.29%	4.90%	7.81%	
AM Peak	5:45 AM	5:30 AM	9:30 AM	5:45 AM
Volume	1901	93	129	2060

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	228	19	16	263
12:15 PM	234	21	26	281
12:30 PM	216	17	21	254
12:45 PM	228	18	28	274
1:00 PM	252	16	27	295
1:15 PM	286	15	21	322
1:30 PM	324	18	24	366
1:45 PM	290	19	19	328
2:00 PM	309	10	20	339
2:15 PM	312	14	14	340
2:30 PM	317	10	20	347
2:45 PM	313	9	14	336
3:00 PM	295	11	19	325
3:15 PM	333	8	15	356
3:30 PM	329	10	18	357
3:45 PM	326	9	11	346
4:00 PM	309	9	11	329
4:15 PM	319	5	13	337
4:30 PM	336	6	12	354
4:45 PM	290	8	17	315
5:00 PM	219	4	9	232
5:15 PM	201	6	10	217
5:30 PM	211	3	14	228
5:45 PM	170	2	7	179
6:00 PM	171	5	10	186
6:15 PM	144	1	5	150
6:30 PM	132	5	11	148
6:45 PM	120	2	3	125
7:00 PM	108	3	6	117
7:15 PM	122	2	2	126
7:30 PM	117	2	9	128
7:45 PM	94	2	13	109
8:00 PM	83	3	8	94
8:15 PM	85	0	12	97
8:30 PM	82	0	10	92
8:45 PM	67	4	7	78
9:00 PM	80	2	12	94
9:15 PM	61	0	5	66
9:30 PM	105	2	16	123
9:45 PM	60	2	7	69
10:00 PM	48	1	10	59
10:15 PM	29	1	6	36
10:30 PM	31	2	6	39
10:45 PM	28	3	8	39
11:00 PM	35	3	10	48
11:15 PM	39	3	7	49
11:30 PM	25	2	4	31
11:45 PM	13	1	6	20

PM Total	8526	318	599	9443
Percentage	90.29%	3.37%	6.34%	
PM Peak	3:15 PM	12:00 PM	12:15 PM	3:15 PM
Volume	1297	75	102	1388

Day Total	18128	857	1458	20443
Percentage	88.68%	4.19%	7.13%	

Worcester Providence Tpk (Route 146)
east of Pleasant Valley Road
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



PDI File # 228509 ATR A

Count Date: Thursday, April 7, 2022
Direction: WB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	23	3	4	30
12:15 AM	18	2	5	25
12:30 AM	22	3	5	30
12:45 AM	27	1	7	35
1:00 AM	14	0	9	23
1:15 AM	21	3	5	29
1:30 AM	15	3	3	21
1:45 AM	21	4	4	29
2:00 AM	15	2	10	27
2:15 AM	16	0	6	22
2:30 AM	21	1	11	33
2:45 AM	19	0	11	30
3:00 AM	30	7	6	43
3:15 AM	51	10	2	63
3:30 AM	61	4	5	70
3:45 AM	93	7	11	111
4:00 AM	115	9	15	139
4:15 AM	161	4	19	184
4:30 AM	216	8	16	240
4:45 AM	198	16	18	232
5:00 AM	314	13	17	344
5:15 AM	402	27	17	446
5:30 AM	485	16	16	517
5:45 AM	427	12	15	454
6:00 AM	423	8	28	459
6:15 AM	453	19	22	494
6:30 AM	410	27	17	454
6:45 AM	450	19	20	489
7:00 AM	395	12	16	423
7:15 AM	379	13	20	412
7:30 AM	347	20	23	390
7:45 AM	301	20	32	353
8:00 AM	266	18	29	313
8:15 AM	288	17	28	333
8:30 AM	292	11	23	326
8:45 AM	258	16	23	297
9:00 AM	230	17	33	280
9:15 AM	248	20	26	294
9:30 AM	219	24	26	269
9:45 AM	231	14	26	271
10:00 AM	204	22	33	259
10:15 AM	217	8	34	259
10:30 AM	214	11	22	247
10:45 AM	242	20	18	280
11:00 AM	204	14	22	240
11:15 AM	218	16	26	260
11:30 AM	239	19	15	273
11:45 AM	196	6	21	223

AM Total	9709	546	820	11075
Percentage	87.67%	4.93%	7.40%	
AM Peak	5:30 AM	9:15 AM	9:30 AM	5:30 AM
Volume	1788	80	119	1924

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	211	17	23	251
12:15 PM	241	14	21	276
12:30 PM	231	15	19	265
12:45 PM	234	15	18	267
1:00 PM	253	18	27	298
1:15 PM	304	6	16	326
1:30 PM	329	17	24	370
1:45 PM	311	17	30	358
2:00 PM	322	13	21	356
2:15 PM	321	16	23	360
2:30 PM	353	12	10	375
2:45 PM	292	8	9	309
3:00 PM	326	11	14	351
3:15 PM	347	5	15	367
3:30 PM	320	9	10	339
3:45 PM	299	10	15	324
4:00 PM	322	4	21	347
4:15 PM	325	2	9	336
4:30 PM	340	4	6	350
4:45 PM	288	6	8	302
5:00 PM	262	6	7	275
5:15 PM	258	3	6	267
5:30 PM	208	4	8	220
5:45 PM	174	4	10	188
6:00 PM	179	3	4	186
6:15 PM	146	6	3	155
6:30 PM	166	5	4	175
6:45 PM	130	6	6	142
7:00 PM	120	2	5	127
7:15 PM	119	1	3	123
7:30 PM	119	4	6	129
7:45 PM	105	3	11	119
8:00 PM	71	4	5	80
8:15 PM	98	4	3	105
8:30 PM	81	4	1	86
8:45 PM	97	2	0	99
9:00 PM	47	4	14	65
9:15 PM	58	1	10	69
9:30 PM	85	5	7	97
9:45 PM	64	2	8	74
10:00 PM	86	0	1	87
10:15 PM	54	0	3	57
10:30 PM	46	1	8	55
10:45 PM	40	1	9	50
11:00 PM	27	1	11	39
11:15 PM	24	2	10	36
11:30 PM	31	2	6	39
11:45 PM	22	2	5	29

PM Total	8886	301	513	9700
Percentage	91.61%	3.10%	5.29%	
PM Peak	2:30 PM	1:30 PM	1:30 PM	1:45 PM
Volume	1318	63	98	1449

Day Total	18595	847	1333	20775
Percentage	89.51%	4.08%	6.42%	

Worcester Providence Tpk (Route 146)
east of Pleasant Valley Road
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



PRECISION
DATA
INDUSTRIES, LLC

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

PDI File # 228509 ATR A

Direction: WB

Weekly Report

Day Date	Wednesday 04/06/22		Thursday 04/07/22												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	30	263	30	251	0	0	0	0	0	0	0	0	0	0	30	257
12:15	27	281	25	276	0	0	0	0	0	0	0	0	0	0	26	279
12:30	13	254	30	265	0	0	0	0	0	0	0	0	0	0	22	260
12:45	25	274	35	267	0	0	0	0	0	0	0	0	0	0	30	271
1:00	29	295	23	298	0	0	0	0	0	0	0	0	0	0	26	297
1:15	27	322	29	326	0	0	0	0	0	0	0	0	0	0	28	324
1:30	26	366	21	370	0	0	0	0	0	0	0	0	0	0	24	368
1:45	27	328	29	358	0	0	0	0	0	0	0	0	0	0	28	343
2:00	26	339	27	356	0	0	0	0	0	0	0	0	0	0	27	348
2:15	27	340	22	360	0	0	0	0	0	0	0	0	0	0	25	350
2:30	27	347	33	375	0	0	0	0	0	0	0	0	0	0	30	361
2:45	38	336	30	309	0	0	0	0	0	0	0	0	0	0	34	323
3:00	34	325	43	351	0	0	0	0	0	0	0	0	0	0	39	338
3:15	61	356	63	367	0	0	0	0	0	0	0	0	0	0	62	362
3:30	78	357	70	339	0	0	0	0	0	0	0	0	0	0	74	348
3:45	105	346	111	324	0	0	0	0	0	0	0	0	0	0	108	335
4:00	123	329	139	347	0	0	0	0	0	0	0	0	0	0	131	338
4:15	170	337	184	336	0	0	0	0	0	0	0	0	0	0	177	337
4:30	242	354	240	350	0	0	0	0	0	0	0	0	0	0	241	352
4:45	216	315	232	302	0	0	0	0	0	0	0	0	0	0	224	309
5:00	285	232	344	275	0	0	0	0	0	0	0	0	0	0	315	254
5:15	433	217	446	267	0	0	0	0	0	0	0	0	0	0	440	242
5:30	487	228	517	220	0	0	0	0	0	0	0	0	0	0	502	224
5:45	524	179	454	188	0	0	0	0	0	0	0	0	0	0	489	184
6:00	439	186	459	186	0	0	0	0	0	0	0	0	0	0	449	186
6:15	535	150	494	155	0	0	0	0	0	0	0	0	0	0	515	153
6:30	562	148	454	175	0	0	0	0	0	0	0	0	0	0	508	162
6:45	517	125	489	142	0	0	0	0	0	0	0	0	0	0	503	134
7:00	396	117	423	127	0	0	0	0	0	0	0	0	0	0	410	122
7:15	414	126	412	123	0	0	0	0	0	0	0	0	0	0	413	125
7:30	413	128	390	129	0	0	0	0	0	0	0	0	0	0	402	129
7:45	336	109	353	119	0	0	0	0	0	0	0	0	0	0	345	114
8:00	325	94	313	80	0	0	0	0	0	0	0	0	0	0	319	87
8:15	290	97	333	105	0	0	0	0	0	0	0	0	0	0	312	101
8:30	260	92	326	86	0	0	0	0	0	0	0	0	0	0	293	89
8:45	287	78	297	99	0	0	0	0	0	0	0	0	0	0	292	89
9:00	285	94	280	65	0	0	0	0	0	0	0	0	0	0	283	80
9:15	267	66	294	69	0	0	0	0	0	0	0	0	0	0	281	68
9:30	291	123	269	97	0	0	0	0	0	0	0	0	0	0	280	110
9:45	258	69	271	74	0	0	0	0	0	0	0	0	0	0	265	72
10:00	253	59	259	87	0	0	0	0	0	0	0	0	0	0	256	73
10:15	256	36	259	57	0	0	0	0	0	0	0	0	0	0	258	47
10:30	264	39	247	55	0	0	0	0	0	0	0	0	0	0	256	47
10:45	253	39	280	50	0	0	0	0	0	0	0	0	0	0	267	45
11:00	272	48	240	39	0	0	0	0	0	0	0	0	0	0	256	44
11:15	249	49	260	36	0	0	0	0	0	0	0	0	0	0	255	43
11:30	272	31	273	39	0	0	0	0	0	0	0	0	0	0	273	35
11:45	226	20	223	29	0	0	0	0	0	0	0	0	0	0	225	25
Total Day Total	11000 20443	9443	11075 20775	9700	0 0	0	0 0	0	0 0	0 0	0 0	0 0	0 0	0 0	11038 20609	9572
Peak HR Volume	5:45 AM 2060	3:15 PM 1388	5:30 AM 1924	1:45 PM 1449											6:00 AM 1975	1:30 PM 1409

Pleasant Valley Road
north of Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



PDI File # 228509 ATR B

Count Date: Wednesday, April 6, 2022
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	4	0	0	4
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	1	0	0	1
1:30 AM	2	0	0	2
1:45 AM	1	0	0	1
2:00 AM	2	0	1	3
2:15 AM	3	0	0	3
2:30 AM	1	0	0	1
2:45 AM	1	0	0	1
3:00 AM	2	0	0	2
3:15 AM	2	0	1	3
3:30 AM	3	0	0	3
3:45 AM	1	1	0	2
4:00 AM	4	0	0	4
4:15 AM	3	0	0	3
4:30 AM	6	0	0	6
4:45 AM	15	1	0	16
5:00 AM	18	1	2	21
5:15 AM	25	1	0	26
5:30 AM	38	3	0	41
5:45 AM	31	1	3	35
6:00 AM	25	2	1	28
6:15 AM	33	2	2	37
6:30 AM	35	0	0	35
6:45 AM	35	0	0	35
7:00 AM	32	3	1	36
7:15 AM	34	2	0	36
7:30 AM	30	1	1	32
7:45 AM	35	2	0	37
8:00 AM	21	4	2	27
8:15 AM	9	3	0	12
8:30 AM	15	1	1	17
8:45 AM	22	1	2	25
9:00 AM	11	1	0	12
9:15 AM	19	2	0	21
9:30 AM	18	2	1	21
9:45 AM	26	2	0	28
10:00 AM	16	5	2	23
10:15 AM	18	2	0	20
10:30 AM	22	1	2	25
10:45 AM	21	1	2	24
11:00 AM	19	3	0	22
11:15 AM	26	1	3	30
11:30 AM	23	1	3	27
11:45 AM	20	2	0	22

AM Total	728	52	30	810
Percentage	89.88%	6.42%	3.70%	
AM Peak	6:30 AM	9:15 AM	10:45 AM	6:15 AM
Volume	136	11	8	143

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	13	1	3	17
12:15 PM	27	2	2	31
12:30 PM	28	0	3	31
12:45 PM	33	3	1	37
1:00 PM	26	3	1	30
1:15 PM	23	2	1	26
1:30 PM	35	2	2	39
1:45 PM	35	1	0	36
2:00 PM	43	1	0	44
2:15 PM	23	1	2	26
2:30 PM	33	3	1	37
2:45 PM	21	0	0	21
3:00 PM	29	2	0	31
3:15 PM	25	0	0	25
3:30 PM	33	0	0	33
3:45 PM	33	2	1	36
4:00 PM	37	0	0	37
4:15 PM	35	0	0	35
4:30 PM	37	0	0	37
4:45 PM	21	1	0	22
5:00 PM	22	0	0	22
5:15 PM	27	1	0	28
5:30 PM	19	0	1	20
5:45 PM	17	0	0	17
6:00 PM	16	0	1	17
6:15 PM	15	0	0	15
6:30 PM	9	0	0	9
6:45 PM	10	0	0	10
7:00 PM	14	0	0	14
7:15 PM	15	0	0	15
7:30 PM	9	0	0	9
7:45 PM	6	0	0	6
8:00 PM	11	0	0	11
8:15 PM	6	0	0	6
8:30 PM	8	0	0	8
8:45 PM	11	1	0	12
9:00 PM	2	0	0	2
9:15 PM	10	0	0	10
9:30 PM	18	0	0	18
9:45 PM	8	0	0	8
10:00 PM	7	1	0	8
10:15 PM	3	0	0	3
10:30 PM	2	0	0	2
10:45 PM	4	0	0	4
11:00 PM	2	0	0	2
11:15 PM	3	0	0	3
11:30 PM	2	0	0	2
11:45 PM	1	0	0	1

PM Total	867	27	19	913
Percentage	94.96%	2.96%	2.08%	
PM Peak	3:45 PM	12:45 PM	12:00 PM	1:15 PM
Volume	142	10	9	145

Day Total	1595	79	49	1723
Percentage	92.57%	4.59%	2.84%	

Pleasant Valley Road
north of Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



PDI File # 228509 ATR B

Count Date: Thursday, April 7, 2022
Direction: NB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	3	0	0	3
12:15 AM	1	0	0	1
12:30 AM	0	0	0	0
12:45 AM	3	0	0	3
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	1	2	0	3
1:45 AM	1	0	0	1
2:00 AM	3	0	0	3
2:15 AM	1	0	0	1
2:30 AM	1	0	0	1
2:45 AM	1	0	0	1
3:00 AM	1	0	0	1
3:15 AM	1	0	1	2
3:30 AM	1	0	0	1
3:45 AM	1	0	0	1
4:00 AM	5	0	0	5
4:15 AM	4	1	0	5
4:30 AM	9	0	0	9
4:45 AM	15	1	0	16
5:00 AM	23	1	0	24
5:15 AM	28	1	1	30
5:30 AM	39	1	1	41
5:45 AM	30	1	1	32
6:00 AM	19	4	3	26
6:15 AM	35	0	2	37
6:30 AM	23	1	1	25
6:45 AM	37	3	0	40
7:00 AM	27	1	1	29
7:15 AM	24	2	1	27
7:30 AM	24	1	2	27
7:45 AM	28	2	0	30
8:00 AM	25	1	2	28
8:15 AM	12	0	0	12
8:30 AM	20	2	0	22
8:45 AM	14	2	1	17
9:00 AM	15	0	0	15
9:15 AM	15	2	1	18
9:30 AM	24	1	1	26
9:45 AM	22	1	0	23
10:00 AM	17	1	3	21
10:15 AM	17	1	5	23
10:30 AM	20	5	1	26
10:45 AM	24	1	2	27
11:00 AM	33	2	1	36
11:15 AM	24	1	1	26
11:30 AM	21	1	0	22
11:45 AM	18	0	3	21

AM Total	710	43	35	788
Percentage	90.10%	5.46%	4.44%	
AM Peak	5:30 AM	10:15 AM	10:00 AM	5:30 AM
Volume	123	9	11	136

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	23	4	1	28
12:15 PM	18	2	2	22
12:30 PM	20	1	4	25
12:45 PM	20	4	0	24
1:00 PM	25	0	1	26
1:15 PM	34	3	3	40
1:30 PM	34	0	1	35
1:45 PM	26	0	2	28
2:00 PM	35	1	0	36
2:15 PM	33	0	0	33
2:30 PM	28	2	1	31
2:45 PM	24	1	2	27
3:00 PM	23	0	0	23
3:15 PM	29	1	1	31
3:30 PM	32	1	0	33
3:45 PM	40	0	0	40
4:00 PM	24	0	0	24
4:15 PM	40	0	1	41
4:30 PM	34	1	1	36
4:45 PM	22	0	0	22
5:00 PM	21	0	0	21
5:15 PM	20	0	0	20
5:30 PM	22	0	0	22
5:45 PM	23	0	0	23
6:00 PM	11	0	0	11
6:15 PM	10	0	0	10
6:30 PM	13	0	0	13
6:45 PM	8	0	0	8
7:00 PM	16	0	0	16
7:15 PM	9	0	0	9
7:30 PM	14	0	0	14
7:45 PM	6	0	0	6
8:00 PM	2	0	0	2
8:15 PM	8	0	0	8
8:30 PM	9	0	1	10
8:45 PM	2	0	0	2
9:00 PM	3	0	0	3
9:15 PM	5	2	0	7
9:30 PM	14	1	0	15
9:45 PM	11	1	0	12
10:00 PM	10	0	0	10
10:15 PM	4	0	0	4
10:30 PM	2	0	0	2
10:45 PM	2	0	0	2
11:00 PM	6	0	0	6
11:15 PM	2	0	0	2
11:30 PM	2	0	0	2
11:45 PM	1	0	0	1

PM Total	820	25	21	866
Percentage	94.69%	2.89%	2.42%	
PM Peak	3:45 PM	12:00 PM	12:30 PM	3:45 PM
Volume	138	11	8	141

Day Total	1530	68	56	1654
Percentage	92.50%	4.11%	3.39%	

Pleasant Valley Road
north of Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



Count Date: Wednesday, April 6, 2022
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0
12:15 AM	0	0	0	0
12:30 AM	0	0	0	0
12:45 AM	0	0	0	0
1:00 AM	0	0	0	0
1:15 AM	0	0	0	0
1:30 AM	0	0	0	0
1:45 AM	0	0	0	0
2:00 AM	0	0	0	0
2:15 AM	0	0	0	0
2:30 AM	0	0	0	0
2:45 AM	0	0	0	0
3:00 AM	0	0	0	0
3:15 AM	1	0	0	1
3:30 AM	0	0	0	0
3:45 AM	0	0	0	0
4:00 AM	1	0	0	1
4:15 AM	0	0	0	0
4:30 AM	0	0	0	0
4:45 AM	0	0	0	0
5:00 AM	0	0	0	0
5:15 AM	0	0	0	0
5:30 AM	0	0	0	0
5:45 AM	1	0	0	1
6:00 AM	1	1	0	2
6:15 AM	0	0	0	0
6:30 AM	0	0	0	0
6:45 AM	0	0	0	0
7:00 AM	1	0	0	1
7:15 AM	0	0	0	0
7:30 AM	1	0	0	1
7:45 AM	1	0	0	1
8:00 AM	3	0	0	3
8:15 AM	0	1	0	1
8:30 AM	2	0	0	2
8:45 AM	0	0	0	0
9:00 AM	1	0	0	1
9:15 AM	1	0	0	1
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
10:00 AM	3	1	0	4
10:15 AM	0	0	0	0
10:30 AM	2	0	0	2
10:45 AM	1	0	0	1
11:00 AM	2	0	0	2
11:15 AM	1	0	0	1
11:30 AM	1	0	0	1
11:45 AM	2	0	0	2

AM Total	26	3	0	29
Percentage	89.66%	10.34%	0.00%	
AM Peak	7:45 AM	5:15 AM	12:00 AM	7:45 AM
Volume	6	1	0	7

PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	2	0	0	2
12:15 PM	1	0	0	1
12:30 PM	3	0	0	3
12:45 PM	3	0	0	3
1:00 PM	3	1	1	5
1:15 PM	2	0	0	2
1:30 PM	0	0	0	0
1:45 PM	0	0	0	0
2:00 PM	2	0	0	2
2:15 PM	1	0	0	1
2:30 PM	2	0	0	2
2:45 PM	2	0	0	2
3:00 PM	2	1	0	3
3:15 PM	0	0	0	0
3:30 PM	3	0	0	3
3:45 PM	4	0	0	4
4:00 PM	1	0	0	1
4:15 PM	2	0	0	2
4:30 PM	1	0	0	1
4:45 PM	1	0	0	1
5:00 PM	1	0	0	1
5:15 PM	2	0	0	2
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
6:00 PM	1	0	0	1
6:15 PM	0	0	0	0
6:30 PM	2	0	0	2
6:45 PM	1	0	0	1
7:00 PM	0	0	0	0
7:15 PM	2	0	0	2
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	1	0	0	1
8:15 PM	1	0	0	1
8:30 PM	0	0	0	0
8:45 PM	0	0	0	0
9:00 PM	2	0	0	2
9:15 PM	0	0	0	0
9:30 PM	0	0	0	0
9:45 PM	0	0	0	0
10:00 PM	0	0	0	0
10:15 PM	0	0	0	0
10:30 PM	0	0	0	0
10:45 PM	0	0	0	0
11:00 PM	0	0	0	0
11:15 PM	0	0	0	0
11:30 PM	0	0	0	0
11:45 PM	0	0	0	0

PM Total	48	2	1	51
Percentage	94.12%	3.92%	1.96%	
PM Peak	12:30 PM	12:15 PM	12:15 PM	12:30 PM
Volume	11	1	1	13

Day Total	74	5	1	80
Percentage	92.50%	6.25%	1.25%	

Pleasant Valley Road
north of Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302



Count Date: Thursday, April 7, 2022
Direction: SB

AM	Cars	Single Unit Heavy	Multi Unit Heavy	Total	PM	Cars	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	0	0	12:00 PM	2	0	0	2
12:15 AM	0	0	0	0	12:15 PM	2	0	0	2
12:30 AM	0	0	0	0	12:30 PM	3	0	1	4
12:45 AM	0	0	0	0	12:45 PM	1	0	0	1
1:00 AM	0	0	0	0	1:00 PM	0	0	0	0
1:15 AM	0	0	0	0	1:15 PM	2	1	0	3
1:30 AM	0	0	0	0	1:30 PM	3	0	0	3
1:45 AM	0	0	0	0	1:45 PM	1	0	0	1
2:00 AM	0	0	0	0	2:00 PM	2	0	0	2
2:15 AM	0	0	0	0	2:15 PM	3	0	0	3
2:30 AM	0	0	0	0	2:30 PM	2	0	0	2
2:45 AM	0	0	0	0	2:45 PM	3	0	0	3
3:00 AM	1	0	1	2	3:00 PM	0	0	0	0
3:15 AM	0	0	0	0	3:15 PM	1	0	0	1
3:30 AM	0	0	0	0	3:30 PM	0	0	0	0
3:45 AM	0	0	0	0	3:45 PM	2	0	0	2
4:00 AM	0	0	0	0	4:00 PM	2	0	0	2
4:15 AM	0	0	0	0	4:15 PM	0	0	0	0
4:30 AM	0	0	0	0	4:30 PM	5	1	0	6
4:45 AM	1	0	0	1	4:45 PM	0	0	0	0
5:00 AM	0	0	0	0	5:00 PM	1	0	0	1
5:15 AM	0	0	0	0	5:15 PM	0	0	0	0
5:30 AM	0	0	0	0	5:30 PM	1	0	0	1
5:45 AM	0	0	0	0	5:45 PM	0	0	0	0
6:00 AM	0	0	0	0	6:00 PM	0	0	0	0
6:15 AM	1	0	0	1	6:15 PM	1	0	0	1
6:30 AM	2	0	0	2	6:30 PM	1	0	0	1
6:45 AM	1	0	0	1	6:45 PM	0	0	0	0
7:00 AM	2	0	0	2	7:00 PM	1	0	0	1
7:15 AM	1	0	0	1	7:15 PM	0	0	0	0
7:30 AM	0	0	0	0	7:30 PM	0	0	0	0
7:45 AM	1	0	0	1	7:45 PM	1	0	0	1
8:00 AM	1	2	0	3	8:00 PM	1	0	0	1
8:15 AM	0	0	0	0	8:15 PM	0	0	0	0
8:30 AM	0	0	0	0	8:30 PM	0	0	0	0
8:45 AM	2	0	0	2	8:45 PM	0	0	0	0
9:00 AM	3	0	0	3	9:00 PM	0	0	0	0
9:15 AM	2	0	0	2	9:15 PM	0	0	0	0
9:30 AM	1	0	0	1	9:30 PM	0	0	0	0
9:45 AM	3	0	0	3	9:45 PM	0	0	0	0
10:00 AM	0	0	1	1	10:00 PM	0	0	0	0
10:15 AM	0	0	0	0	10:15 PM	0	0	0	0
10:30 AM	1	0	0	1	10:30 PM	0	0	0	0
10:45 AM	1	0	0	1	10:45 PM	0	0	0	0
11:00 AM	4	0	0	4	11:00 PM	0	0	0	0
11:15 AM	5	0	0	5	11:15 PM	0	0	0	0
11:30 AM	0	0	0	0	11:30 PM	0	0	0	0
11:45 AM	2	0	0	2	11:45 PM	0	0	0	0
AM Total	35	2	2	39	PM Total	41	2	1	44
Percentage	89.74%	5.13%	5.13%		Percentage	93.18%	4.55%	2.27%	
AM Peak	10:30 AM	7:15 AM	2:15 AM	10:30 AM	PM Peak	2:00 PM	12:30 PM	12:00 PM	2:00 PM
Volume	11	2	1	11	Volume	10	1	1	10
Day Total					Day Total	76	4	3	83
Percentage					Percentage	91.57%	4.82%	3.61%	

**Pleasant Valley Road
north of Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302**



PRECISION
DATA
INDUSTRIES, LLC

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

PDI File # 228509 ATR B

Direction: NB

Weekly Report

Day Date	Wednesday 04/06/22		Thursday 04/07/22												Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	4	17	3	28	0	0	0	0	0	0	0	0	0	0	4	23
12:15	0	31	1	22	0	0	0	0	0	0	0	0	0	0	1	27
12:30	0	31	0	25	0	0	0	0	0	0	0	0	0	0	0	28
12:45	0	37	3	24	0	0	0	0	0	0	0	0	0	0	2	31
1:00	0	30	0	26	0	0	0	0	0	0	0	0	0	0	0	28
1:15	1	26	0	40	0	0	0	0	0	0	0	0	0	0	1	33
1:30	2	39	3	35	0	0	0	0	0	0	0	0	0	0	3	37
1:45	1	36	1	28	0	0	0	0	0	0	0	0	0	0	1	32
2:00	3	44	3	36	0	0	0	0	0	0	0	0	0	0	3	40
2:15	3	26	1	33	0	0	0	0	0	0	0	0	0	0	2	30
2:30	1	37	1	31	0	0	0	0	0	0	0	0	0	0	1	34
2:45	1	21	1	27	0	0	0	0	0	0	0	0	0	0	1	24
3:00	2	31	1	23	0	0	0	0	0	0	0	0	0	0	2	27
3:15	3	25	2	31	0	0	0	0	0	0	0	0	0	0	3	28
3:30	3	33	1	33	0	0	0	0	0	0	0	0	0	0	2	33
3:45	2	36	1	40	0	0	0	0	0	0	0	0	0	0	2	38
4:00	4	37	5	24	0	0	0	0	0	0	0	0	0	0	5	31
4:15	3	35	5	41	0	0	0	0	0	0	0	0	0	0	4	38
4:30	6	37	9	36	0	0	0	0	0	0	0	0	0	0	8	37
4:45	16	22	16	22	0	0	0	0	0	0	0	0	0	0	16	22
5:00	21	22	24	21	0	0	0	0	0	0	0	0	0	0	23	22
5:15	26	28	30	20	0	0	0	0	0	0	0	0	0	0	28	24
5:30	41	20	41	22	0	0	0	0	0	0	0	0	0	0	41	21
5:45	35	17	32	23	0	0	0	0	0	0	0	0	0	0	34	20
6:00	28	17	26	11	0	0	0	0	0	0	0	0	0	0	27	14
6:15	37	15	37	10	0	0	0	0	0	0	0	0	0	0	37	13
6:30	35	9	25	13	0	0	0	0	0	0	0	0	0	0	30	11
6:45	35	10	40	8	0	0	0	0	0	0	0	0	0	0	38	9
7:00	36	14	29	16	0	0	0	0	0	0	0	0	0	0	33	15
7:15	36	15	27	9	0	0	0	0	0	0	0	0	0	0	32	12
7:30	32	9	27	14	0	0	0	0	0	0	0	0	0	0	30	12
7:45	37	6	30	6	0	0	0	0	0	0	0	0	0	0	34	6
8:00	27	11	28	2	0	0	0	0	0	0	0	0	0	0	28	7
8:15	12	6	12	8	0	0	0	0	0	0	0	0	0	0	12	7
8:30	17	8	22	10	0	0	0	0	0	0	0	0	0	0	20	9
8:45	25	12	17	2	0	0	0	0	0	0	0	0	0	0	21	7
9:00	12	2	15	3	0	0	0	0	0	0	0	0	0	0	14	3
9:15	21	10	18	7	0	0	0	0	0	0	0	0	0	0	20	9
9:30	21	18	26	15	0	0	0	0	0	0	0	0	0	0	24	17
9:45	28	8	23	12	0	0	0	0	0	0	0	0	0	0	26	10
10:00	23	8	21	10	0	0	0	0	0	0	0	0	0	0	22	9
10:15	20	3	23	4	0	0	0	0	0	0	0	0	0	0	22	4
10:30	25	2	26	2	0	0	0	0	0	0	0	0	0	0	26	2
10:45	24	4	27	2	0	0	0	0	0	0	0	0	0	0	26	3
11:00	22	2	36	6	0	0	0	0	0	0	0	0	0	0	29	4
11:15	30	3	26	2	0	0	0	0	0	0	0	0	0	0	28	3
11:30	27	2	22	2	0	0	0	0	0	0	0	0	0	0	25	2
11:45	22	1	21	1	0	0	0	0	0	0	0	0	0	0	22	1
Total Day Total	810 1723	913	788 1654	866	0 0	0	0 0	0	0 0	0 0	0	0 0	0 0	0	799 1689	890
Peak HR Volume	6:15 AM 143	1:15 PM 145	5:30 AM 136	3:45 PM 141											5:30 AM 139	3:45 PM 143



PRECISION
DATA
INDUSTRIES, LLC

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

PDI File # 228509 ATR B

Direction: SB

Weekly Report

[illegible]

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	34	397	0	431	0	0	0	0	432
7:15 AM	0	0	0	0	36	401	0	437	0	0	0	0	437
7:30 AM	1	0	0	1	31	396	0	427	0	0	0	0	428
7:45 AM	1	0	0	1	37	330	0	367	0	0	0	0	368
Total	3	0	0	3	138	1524	0	1662	0	0	0	0	1665
8:00 AM	3	0	0	3	27	328	0	355	0	0	0	0	358
8:15 AM	1	0	0	1	12	292	0	304	0	0	0	0	305
8:30 AM	2	0	0	2	17	264	0	281	0	0	0	0	283
8:45 AM	0	0	0	0	25	284	0	309	0	0	0	0	309
Total	6	0	0	6	81	1168	0	1249	0	0	0	0	1255
Grand Total	9	0	0	9	219	2692	0	2911	0	0	0	0	2920
Approach %	100.0	0.0	0.0		7.5	92.5	0.0		0.0	0.0	0.0		
Total %	0.3	0.0	0.0	0.3	7.5	92.2	0.0	99.7	0.0	0.0	0.0	0.0	
Exiting Leg Total				219				0				2701	2920
Cars	8	0	0	8	196	2365	0	2561	0	0	0	0	2569
% Cars	88.9	0.0	0.0	88.9	89.5	87.9	0.0	88.0	0.0	0.0	0.0	0.0	88.0
Exiting Leg Total				196				0				2373	2569
Heavy Vehicles	1	0	0	1	23	327	0	350	0	0	0	0	351
% Heavy Vehicles	11.1	0.0	0.0	11.1	10.5	12.1	0.0	12.0	0.0	0.0	0.0	0.0	12.0
Exiting Leg Total				23				0				328	351

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

7:00 AM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	34	397	0	431	0	0	0	0	432
7:15 AM	0	0	0	0	36	401	0	437	0	0	0	0	437
7:30 AM	1	0	0	1	31	396	0	427	0	0	0	0	428
7:45 AM	1	0	0	1	37	330	0	367	0	0	0	0	368
Total Volume	3	0	0	3	138	1524	0	1662	0	0	0	0	1665
% Approach Total	100.0	0.0	0.0		8.3	91.7	0.0		0.0	0.0	0.0		
PHF	0.750	0.000	0.000	0.750	0.932	0.950	0.000	0.951	0.000	0.000	0.000	0.000	0.953
Cars	3	0	0	3	129	1360	0	1489	0	0	0	0	1492
Cars %	100.0	0.0	0.0	100.0	93.5	89.2	0.0	89.6	0.0	0.0	0.0	0.0	89.6
Heavy Vehicles	0	0	0	0	9	164	0	173	0	0	0	0	173
Heavy Vehicles %	0.0	0.0	0.0	0.0	6.5	10.8	0.0	10.4	0.0	0.0	0.0	0.0	10.4
Cars Enter Leg	3	0	0	3	129	1360	0	1489	0	0	0	0	1492
Heavy Enter Leg	0	0	0	0	9	164	0	173	0	0	0	0	173
Total Entering Leg	3	0	0	3	138	1524	0	1662	0	0	0	0	1665
Cars Exiting Leg				129				0				1363	1492
Heavy Exiting Leg				9				0				164	173
Total Exiting Leg				138				0				1527	1665

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Pleasant Valley Road					Route 146				Route 146					Total
	from North					from East				from West					
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
7:00 AM	1	0	0	0	1	30	368	0	398	0	0	0	0	399	
7:15 AM	0	0	0	0	0	35	364	0	399	0	0	0	0	399	
7:30 AM	1	0	0	0	1	29	353	0	382	0	0	0	0	383	
7:45 AM	1	0	0	0	1	35	275	0	310	0	0	0	0	311	
Total	3	0	0	0	3	129	1360	0	1489	0	0	0	0	1492	
8:00 AM	3	0	0	0	3	21	291	0	312	0	0	0	0	315	
8:15 AM	0	0	0	0	0	9	251	0	260	0	0	0	0	260	
8:30 AM	2	0	0	0	2	15	224	0	239	0	0	0	0	241	
8:45 AM	0	0	0	0	0	22	239	0	261	0	0	0	0	261	
Total	5	0	0	0	5	67	1005	0	1072	0	0	0	0	1077	
Grand Total	8	0	0	0	8	196	2365	0	2561	0	0	0	0	2569	
Approach %	100.0	0.0	0.0			7.7	92.3	0.0		0.0	0.0	0.0			
Total %	0.3	0.0	0.0	0.0	0.3	7.6	92.1	0.0	99.7	0.0	0.0	0.0	0.0		
Exiting Leg Total	196					0				2373					2569

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

7:00 AM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	1	0	0	1	30	368	0	398	0	0	0	0	399
7:15 AM	0	0	0	0	35	364	0	399	0	0	0	0	399
7:30 AM	1	0	0	1	29	353	0	382	0	0	0	0	383
7:45 AM	1	0	0	1	35	275	0	310	0	0	0	0	311
Total Volume	3	0	0	3	129	1360	0	1489	0	0	0	0	1492
% Approach Total	100.0	0.0	0.0		8.7	91.3	0.0		0.0	0.0	0.0		
PHF	0.750	0.000	0.000	0.750	0.921	0.924	0.000	0.933	0.000	0.000	0.000	0.000	0.935
Entering Leg	3	0	0	3	129	1360	0	1489	0	0	0	0	1492
Exiting Leg				129				0				1363	1492
Total				132				1489				1363	2984

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	4	29	0	33	0	0	0	0	33
7:15 AM	0	0	0	0	1	37	0	38	0	0	0	0	38
7:30 AM	0	0	0	0	2	43	0	45	0	0	0	0	45
7:45 AM	0	0	0	0	2	55	0	57	0	0	0	0	57
Total	0	0	0	0	9	164	0	173	0	0	0	0	173
8:00 AM	0	0	0	0	6	37	0	43	0	0	0	0	43
8:15 AM	1	0	0	1	3	41	0	44	0	0	0	0	45
8:30 AM	0	0	0	0	2	40	0	42	0	0	0	0	42
8:45 AM	0	0	0	0	3	45	0	48	0	0	0	0	48
Total	1	0	0	1	14	163	0	177	0	0	0	0	178
Grand Total	1	0	0	1	23	327	0	350	0	0	0	0	351
Approach %	100.0	0.0	0.0		6.6	93.4	0.0		0.0	0.0	0.0		
Total %	0.3	0.0	0.0	0.3	6.6	93.2	0.0	99.7	0.0	0.0	0.0	0.0	
Exiting Leg Total	23				0				328				351
Buses	0	0	0	0	1	2	0	3	0	0	0	0	3
% Buses	0.0	0.0	0.0	0.0	4.3	0.6	0.0	0.9	0.0	0.0	0.0	0.0	0.9
Exiting Leg Total	1				0				2				3
Single-Unit Trucks	1	0	0	1	15	147	0	162	0	0	0	0	163
% Single-Unit	100.0	0.0	0.0	100.0	65.2	45.0	0.0	46.3	0.0	0.0	0.0	0.0	46.4
Exiting Leg Total	15				0				148				163
Articulated Trucks	0	0	0	0	7	178	0	185	0	0	0	0	185
% Articulated	0.0	0.0	0.0	0.0	30.4	54.4	0.0	52.9	0.0	0.0	0.0	0.0	52.7
Exiting Leg Total	7				0				178				185

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

Peak Hour Analysis from 07:30 AM to 08:30 AM begins at:

7:30 AM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:30 AM	0	0	0	0	2	43	0	45	0	0	0	0	45
7:45 AM	0	0	0	0	2	55	0	57	0	0	0	0	57
8:00 AM	0	0	0	0	6	37	0	43	0	0	0	0	43
8:15 AM	1	0	0	1	3	41	0	44	0	0	0	0	45
Total Volume	1	0	0	1	13	176	0	189	0	0	0	0	190
% Approach Total	100.0	0.0	0.0		6.9	93.1	0.0		0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.542	0.800	0.000	0.829	0.000	0.000	0.000	0.000	0.833
Buses	0	0	0	0	1	1	0	2	0	0	0	0	2
Buses %	0.0	0.0	0.0	0.0	7.7	0.6	0.0	1.1	0.0	0.0	0.0	0.0	1.1
Single-Unit Trucks	1	0	0	1	9	80	0	89	0	0	0	0	90
Single-Unit %	100.0	0.0	0.0	100.0	69.2	45.5	0.0	47.1	0.0	0.0	0.0	0.0	47.4
Articulated Trucks	0	0	0	0	3	95	0	98	0	0	0	0	98
Articulated %	0.0	0.0	0.0	0.0	23.1	54.0	0.0	51.9	0.0	0.0	0.0	0.0	51.6
Buses	0	0	0	0	1	1	0	2	0	0	0	0	2
Single-Unit Trucks	1	0	0	1	9	80	0	89	0	0	0	0	90
Articulated Trucks	0	0	0	0	3	95	0	98	0	0	0	0	98
Total Entering Leg	1	0	0	1	13	176	0	189	0	0	0	0	190
Buses				1				0				1	2
Single-Unit Trucks				9				0				81	90
Articulated Trucks				3				0				95	98
Total Exiting Leg				13				0				177	190

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	1	2	0	3	0	0	0	0	3
Grand Total	0	0	0	0	1	2	0	3	0	0	0	0	3
Approach %	0.0	0.0	0.0		33.3	66.7	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	33.3	66.7	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1				0				2				3

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

8:00 AM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	1	2	0	3	0	0	0	0	3
% Approach Total	0.0	0.0	0.0		33.3	66.7	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.500	0.000	0.750	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	0	0	1	2	0	3	0	0	0	0	3
Exiting Leg				1				0				2	3
Total				1				3				2	6

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	3	13	0	16	0	0	0	0	16
7:15 AM	0	0	0	0	1	15	0	16	0	0	0	0	16
7:30 AM	0	0	0	0	1	15	0	16	0	0	0	0	16
7:45 AM	0	0	0	0	2	27	0	29	0	0	0	0	29
Total	0	0	0	0	7	70	0	77	0	0	0	0	77
8:00 AM	0	0	0	0	4	17	0	21	0	0	0	0	21
8:15 AM	1	0	0	1	2	21	0	23	0	0	0	0	24
8:30 AM	0	0	0	0	1	18	0	19	0	0	0	0	19
8:45 AM	0	0	0	0	1	21	0	22	0	0	0	0	22
Total	1	0	0	1	8	77	0	85	0	0	0	0	86
Grand Total	1	0	0	1	15	147	0	162	0	0	0	0	163
Approach %	100.0	0.0	0.0		9.3	90.7	0.0		0.0	0.0	0.0		
Total %	0.6	0.0	0.0	0.6	9.2	90.2	0.0	99.4	0.0	0.0	0.0	0.0	
Exiting Leg Total	15				0				148				163

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

7:45 AM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	2	27	0	29	0	0	0	0	29
8:00 AM	0	0	0	0	4	17	0	21	0	0	0	0	21
8:15 AM	1	0	0	1	2	21	0	23	0	0	0	0	24
8:30 AM	0	0	0	0	1	18	0	19	0	0	0	0	19
Total Volume	1	0	0	1	9	83	0	92	0	0	0	0	93
% Approach Total	100.0	0.0	0.0		9.8	90.2	0.0		0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.250	0.563	0.769	0.000	0.793	0.000	0.000	0.000	0.000	0.802
Entering Leg	1	0	0	1	9	83	0	92	0	0	0	0	93
Exiting Leg				9				0				84	93
Total				10				92				84	186

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Pleasant Valley Road					Route 146				Route 146				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	1	16	0	17	0	0	0	0	17
7:15 AM	0	0	0	0	0	0	22	0	22	0	0	0	0	22
7:30 AM	0	0	0	0	0	1	28	0	29	0	0	0	0	29
7:45 AM	0	0	0	0	0	0	28	0	28	0	0	0	0	28
Total	0	0	0	0	0	2	94	0	96	0	0	0	0	96
8:00 AM	0	0	0	0	0	2	19	0	21	0	0	0	0	21
8:15 AM	0	0	0	0	0	0	20	0	20	0	0	0	0	20
8:30 AM	0	0	0	0	0	1	22	0	23	0	0	0	0	23
8:45 AM	0	0	0	0	0	2	23	0	25	0	0	0	0	25
Total	0	0	0	0	0	5	84	0	89	0	0	0	0	89
Grand Total	0	0	0	0	0	7	178	0	185	0	0	0	0	185
Approach %	0.0	0.0	0.0			3.8	96.2	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0		3.8	96.2	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	7					0				178				185

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

7:15 AM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	22	0	22	0	0	0	0	22
7:30 AM	0	0	0	0	1	28	0	29	0	0	0	0	29
7:45 AM	0	0	0	0	0	28	0	28	0	0	0	0	28
8:00 AM	0	0	0	0	2	19	0	21	0	0	0	0	21
Total Volume	0	0	0	0	3	97	0	100	0	0	0	0	100
% Approach Total	0.0	0.0	0.0		3.0	97.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.375	0.866	0.000	0.862	0.000	0.000	0.000	0.000	0.862
Entering Leg	0	0	0	0	3	97	0	100	0	0	0	0	100
Exiting Leg				3				0				97	100
Total				3				100				97	200

PDI File #: 228509 A
Location: N: Pleasant Valley Road
Location: E: Route 146 W: Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302
Count Date: Wednesday, April 6, 2022
Start Time: 7:00 AM
End Time: 9:00 AM



Class: Bicycles (on Roadway and Crosswalks)

	Pleasant Valley Road						Route 146						Route 146						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

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

7:00 AM	Pleasant Valley Road						Route 146						Route 146						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**



Class: **Pedestrians**

	Pleasant Valley Road						Route 146						Route 146						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0						0						0						0

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

7:00 AM	Pleasant Valley Road						Route 146						Route 146						Total
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	1	36	335	0	371	0	0	0	0	372
4:15 PM	2	0	0	2	35	342	0	377	0	0	0	0	379
4:30 PM	1	0	0	1	37	360	0	397	0	0	0	0	398
4:45 PM	1	0	0	1	22	324	0	346	0	0	0	0	347
Total	5	0	0	5	130	1361	0	1491	0	0	0	0	1496
5:00 PM	1	0	0	1	22	251	0	273	0	0	0	0	274
5:15 PM	2	0	0	2	28	232	0	260	0	0	0	0	262
5:30 PM	1	0	0	1	20	253	0	273	0	0	0	0	274
5:45 PM	0	0	0	0	17	197	0	214	0	0	0	0	214
Total	4	0	0	4	87	933	0	1020	0	0	0	0	1024
Grand Total	9	0	0	9	217	2294	0	2511	0	0	0	0	2520
Approach %	100.0	0.0	0.0		8.6	91.4	0.0		0.0	0.0	0.0		
Total %	0.4	0.0	0.0	0.4	8.6	91.0	0.0	99.6	0.0	0.0	0.0	0.0	
Exiting Leg Total	217				0				2303				2520
Cars	9	0	0	9	214	2168	0	2382	0	0	0	0	2391
% Cars	100.0	0.0	0.0	100.0	98.6	94.5	0.0	94.9	0.0	0.0	0.0	0.0	94.9
Exiting Leg Total	214				0				2177				2391
Heavy Vehicles	0	0	0	0	3	126	0	129	0	0	0	0	129
% Heavy Vehicles	0.0	0.0	0.0	0.0	1.4	5.5	0.0	5.1	0.0	0.0	0.0	0.0	5.1
Exiting Leg Total	3				0				126				129

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

4:00 PM	Pleasant Valley Road				Route 146				Route 146				
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Total
4:00 PM	1	0	0	1	36	335	0	371	0	0	0	0	372
4:15 PM	2	0	0	2	35	342	0	377	0	0	0	0	379
4:30 PM	1	0	0	1	37	360	0	397	0	0	0	0	398
4:45 PM	1	0	0	1	22	324	0	346	0	0	0	0	347
Total Volume	5	0	0	5	130	1361	0	1491	0	0	0	0	1496
% Approach Total	100.0	0.0	0.0		8.7	91.3	0.0		0.0	0.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.878	0.945	0.000	0.939	0.000	0.000	0.000	0.000	0.940
Cars	5	0	0	5	129	1289	0	1418	0	0	0	0	1423
Cars %	100.0	0.0	0.0	100.0	99.2	94.7	0.0	95.1	0.0	0.0	0.0	0.0	95.1
Heavy Vehicles	0	0	0	0	1	72	0	73	0	0	0	0	73
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.8	5.3	0.0	4.9	0.0	0.0	0.0	0.0	4.9
Cars Enter Leg	5	0	0	5	129	1289	0	1418	0	0	0	0	1423
Heavy Enter Leg	0	0	0	0	1	72	0	73	0	0	0	0	73
Total Entering Leg	5	0	0	5	130	1361	0	1491	0	0	0	0	1496
Cars Exiting Leg				129				0				1294	1423
Heavy Exiting Leg				1				0				72	73
Total Exiting Leg				130				0				1366	1496

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Cars**

	Pleasant Valley Road					Route 146				Route 146					Total
	from North					from East				from West					
	Right	Left	U-Turn		Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0		1	36	319	0	355	0	0	0	0	356	
4:15 PM	2	0	0		2	35	325	0	360	0	0	0	0	362	
4:30 PM	1	0	0		1	37	344	0	381	0	0	0	0	382	
4:45 PM	1	0	0		1	21	301	0	322	0	0	0	0	323	
Total	5	0	0		5	129	1289	0	1418	0	0	0	0	1423	
5:00 PM	1	0	0		1	22	238	0	260	0	0	0	0	261	
5:15 PM	2	0	0		2	27	216	0	243	0	0	0	0	245	
5:30 PM	1	0	0		1	19	237	0	256	0	0	0	0	257	
5:45 PM	0	0	0		0	17	188	0	205	0	0	0	0	205	
Total	4	0	0		4	85	879	0	964	0	0	0	0	968	
Grand Total	9	0	0		9	214	2168	0	2382	0	0	0	0	2391	
Approach %	100.0	0.0	0.0			9.0	91.0	0.0		0.0	0.0	0.0			
Total %	0.4	0.0	0.0		0.4	9.0	90.7	0.0	99.6	0.0	0.0	0.0	0.0		
Exiting Leg Total					214				0				2177	2391	

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

4:00 PM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	1	0	0	1	36	319	0	355	0	0	0	0	356
4:15 PM	2	0	0	2	35	325	0	360	0	0	0	0	362
4:30 PM	1	0	0	1	37	344	0	381	0	0	0	0	382
4:45 PM	1	0	0	1	21	301	0	322	0	0	0	0	323
Total Volume	5	0	0	5	129	1289	0	1418	0	0	0	0	1423
% Approach Total	100.0	0.0	0.0		9.1	90.9	0.0		0.0	0.0	0.0		
PHF	0.625	0.000	0.000	0.625	0.872	0.937	0.000	0.930	0.000	0.000	0.000	0.000	0.931
Entering Leg	5	0	0	5	129	1289	0	1418	0	0	0	0	1423
Exiting Leg				129				0				1294	1423
Total				134				1418				1294	2846

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	16	0	16	0	0	0	0	16
4:15 PM	0	0	0	0	0	17	0	17	0	0	0	0	17
4:30 PM	0	0	0	0	0	16	0	16	0	0	0	0	16
4:45 PM	0	0	0	0	1	23	0	24	0	0	0	0	24
Total	0	0	0	0	1	72	0	73	0	0	0	0	73
5:00 PM	0	0	0	0	0	13	0	13	0	0	0	0	13
5:15 PM	0	0	0	0	1	16	0	17	0	0	0	0	17
5:30 PM	0	0	0	0	1	16	0	17	0	0	0	0	17
5:45 PM	0	0	0	0	0	9	0	9	0	0	0	0	9
Total	0	0	0	0	2	54	0	56	0	0	0	0	56
Grand Total	0	0	0	0	3	126	0	129	0	0	0	0	129
Approach %	0.0	0.0	0.0		2.3	97.7	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	2.3	97.7	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	3				0				126				129
Buses	0	0	0	0	0	1	0	1	0	0	0	0	1
% Buses	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.8
Exiting Leg Total	0				0				1				1
Single-Unit Trucks	0	0	0	0	2	39	0	41	0	0	0	0	41
% Single-Unit	0.0	0.0	0.0	0.0	66.7	31.0	0.0	31.8	0.0	0.0	0.0	0.0	31.8
Exiting Leg Total	2				0				39				41
Articulated Trucks	0	0	0	0	1	86	0	87	0	0	0	0	87
% Articulated	0.0	0.0	0.0	0.0	33.3	68.3	0.0	67.4	0.0	0.0	0.0	0.0	67.4
Exiting Leg Total	1				0				86				87

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

4:00 PM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	16	0	16	0	0	0	0	16
4:15 PM	0	0	0	0	0	17	0	17	0	0	0	0	17
4:30 PM	0	0	0	0	0	16	0	16	0	0	0	0	16
4:45 PM	0	0	0	0	1	23	0	24	0	0	0	0	24
Total Volume	0	0	0	0	1	72	0	73	0	0	0	0	73
% Approach Total	0.0	0.0	0.0		1.4	98.6	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.783	0.000	0.760	0.000	0.000	0.000	0.000	0.760
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	0	0	0	1	26	0	27	0	0	0	0	27
Single-Unit %	0.0	0.0	0.0	0.0	100.0	36.1	0.0	37.0	0.0	0.0	0.0	0.0	37.0
Articulated Trucks	0	0	0	0	0	46	0	46	0	0	0	0	46
Articulated %	0.0	0.0	0.0	0.0	0.0	63.9	0.0	63.0	0.0	0.0	0.0	0.0	63.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	0	0	0	1	26	0	27	0	0	0	0	27
Articulated Trucks	0	0	0	0	0	46	0	46	0	0	0	0	46
Total Entering Leg	0	0	0	0	1	72	0	73	0	0	0	0	73
Buses				0				0				0	0
Single-Unit Trucks				1				0				26	27
Articulated Trucks				0				0				46	46
Total Exiting Leg				1				0				72	73

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Buses

	Pleasant Valley Road					Route 146				Route 146				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Approach %	0.0	0.0	0.0			0.0	100.0	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0				1				1

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

4:30 PM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	1
% Approach Total	0.0	0.0	0.0		0.0	100.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	1	0	1	0	0	0	0	1
Exiting Leg				0				0				1	1
Total				0				1				1	2

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	8	0	8	0	0	0	0	8
4:15 PM	0	0	0	0	0	8	0	8	0	0	0	0	8
4:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	4
4:45 PM	0	0	0	0	1	6	0	7	0	0	0	0	7
Total	0	0	0	0	1	26	0	27	0	0	0	0	27
5:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	4
5:15 PM	0	0	0	0	1	5	0	6	0	0	0	0	6
5:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
5:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	0	0	0	1	13	0	14	0	0	0	0	14
Grand Total	0	0	0	0	2	39	0	41	0	0	0	0	41
Approach %	0.0	0.0	0.0		4.9	95.1	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	4.9	95.1	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	2				0				39				41

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

4:00 PM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	8	0	8	0	0	0	0	8
4:15 PM	0	0	0	0	0	8	0	8	0	0	0	0	8
4:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	4
4:45 PM	0	0	0	0	1	6	0	7	0	0	0	0	7
Total Volume	0	0	0	0	1	26	0	27	0	0	0	0	27
% Approach Total	0.0	0.0	0.0		3.7	96.3	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.813	0.000	0.844	0.000	0.000	0.000	0.000	0.844
Entering Leg	0	0	0	0	1	26	0	27	0	0	0	0	27
Exiting Leg				1				0				26	27
Total				1				27				26	54

PDI File #: **228509 A**
 Location: **N: Pleasant Valley Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Pleasant Valley Road					Route 146				Route 146				Total
	from North					from East				from West				
	Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	8	0	8	0	0	0	0	8
4:15 PM	0	0	0	0	0	0	9	0	9	0	0	0	0	9
4:30 PM	0	0	0	0	0	0	12	0	12	0	0	0	0	12
4:45 PM	0	0	0	0	0	0	17	0	17	0	0	0	0	17
Total	0	0	0	0	0	0	46	0	46	0	0	0	0	46
5:00 PM	0	0	0	0	0	0	9	0	9	0	0	0	0	9
5:15 PM	0	0	0	0	0	0	10	0	10	0	0	0	0	10
5:30 PM	0	0	0	0	0	1	14	0	15	0	0	0	0	15
5:45 PM	0	0	0	0	0	0	7	0	7	0	0	0	0	7
Total	0	0	0	0	0	1	40	0	41	0	0	0	0	41
Grand Total	0	0	0	0	0	1	86	0	87	0	0	0	0	87
Approach %	0.0	0.0	0.0			1.1	98.9	0.0		0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0		1.1	98.9	0.0	100.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	1					0				86				87

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

4:45 PM	Pleasant Valley Road				Route 146				Route 146				Total
	from North				from East				from West				
	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	
4:45 PM	0	0	0	0	0	17	0	17	0	0	0	0	17
5:00 PM	0	0	0	0	0	9	0	9	0	0	0	0	9
5:15 PM	0	0	0	0	0	10	0	10	0	0	0	0	10
5:30 PM	0	0	0	0	1	14	0	15	0	0	0	0	15
Total Volume	0	0	0	0	1	50	0	51	0	0	0	0	51
% Approach Total	0.0	0.0	0.0		2.0	98.0	0.0		0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.250	0.735	0.000	0.750	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	0	0	0	1	50	0	51	0	0	0	0	51
Exiting Leg				1				0				50	51
Total				1				51				50	102

PDI File #: 228509 A
Location: N: Pleasant Valley Road
Location: E: Route 146 W: Route 146
City, State: Sutton, MA
Client: VAI/S. Kelly
Site Code: 9302
Count Date: Wednesday, April 6, 2022
Start Time: 4:00 PM
End Time: 6:00 PM



Class: Bicycles (on Roadway and Crosswalks)

	Pleasant Valley Road						Route 146						Route 146						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0						0						0						0	

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

4:00 PM	Pleasant Valley Road						Route 146						Route 146						
	from North						from East						from West						
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: 228509 A
 Location: N: Pleasant Valley Road
 Location: E: Route 146 W: Route 146
 City, State: Sutton, MA
 Client: VAI/S. Kelly
 Site Code: 9302
 Count Date: Wednesday, April 6, 2022
 Start Time: 4:00 PM
 End Time: 6:00 PM



Class: Pedestrians

	Pleasant Valley Road						Route 146						Route 146						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0						0						0						0	

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

4:00 PM	Pleasant Valley Road						Route 146						Route 146						Total	
	from North						from East						from West							
	Right	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	U-Turn	CW-SB	CW-NB	Total	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0	
Total	0						0						0						0	

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	65	48	26	0	139	0	426	0	0	426	6	18	17	0	41	6	251	26	14	297	903
7:15 AM	58	42	23	0	123	2	486	0	0	488	16	32	26	0	74	4	295	25	10	334	1019
7:30 AM	79	23	35	0	137	0	519	0	0	519	13	25	16	0	54	10	277	31	11	329	1039
7:45 AM	48	26	36	0	110	0	529	0	0	529	13	10	19	0	42	6	310	33	5	354	1035
Total	250	139	120	0	509	2	1960	0	0	1962	48	85	78	0	211	26	1133	115	40	1314	3996
8:00 AM	43	28	35	0	106	3	405	0	0	408	12	17	13	0	42	17	265	32	10	324	880
8:15 AM	57	39	49	0	145	0	377	0	0	377	15	30	21	0	66	9	249	35	8	301	889
8:30 AM	35	17	36	0	88	2	388	0	0	390	16	41	29	0	86	6	291	23	7	327	891
8:45 AM	47	27	40	0	114	1	341	0	0	342	11	16	19	0	46	6	232	29	6	273	775
Total	182	111	160	0	453	6	1511	0	0	1517	54	104	82	0	240	38	1037	119	31	1225	3435
Grand Total	432	250	280	0	962	8	3471	0	0	3479	102	189	160	0	451	64	2170	234	71	2539	7431
Approach %	44.9	26.0	29.1	0.0		0.2	99.8	0.0	0.0		22.6	41.9	35.5	0.0		2.5	85.5	9.2	2.8		
Total %	5.8	3.4	3.8	0.0	12.9	0.1	46.7	0.0	0.0	46.8	1.4	2.5	2.2	0.0	6.1	0.9	29.2	3.1	1.0	34.2	
Exiting Leg Total	431					2552					314					4134					7431
Cars	420	236	263	0	919	7	3155	0	0	3162	97	182	156	0	435	63	1870	223	62	2218	6734
% Cars	97.2	94.4	93.9	0.0	95.5	87.5	90.9	0.0	0.0	90.9	95.1	96.3	97.5	0.0	96.5	98.4	86.2	95.3	87.3	87.4	90.6
Exiting Leg Total	412					2230					299					3793					6734
Heavy Vehicles	12	14	17	0	43	1	316	0	0	317	5	7	4	0	16	1	300	11	9	321	697
% Heavy Vehicles	2.8	5.6	6.1	0.0	4.5	12.5	9.1	0.0	0.0	9.1	4.9	3.7	2.5	0.0	3.5	1.6	13.8	4.7	12.7	12.6	9.4
Exiting Leg Total	19					322					15					341					697

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

7:00 AM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	65	48	26	0	139	0	426	0	0	426	6	18	17	0	41	6	251	26	14	297	903
7:15 AM	58	42	23	0	123	2	486	0	0	488	16	32	26	0	74	4	295	25	10	334	1019
7:30 AM	79	23	35	0	137	0	519	0	0	519	13	25	16	0	54	10	277	31	11	329	1039
7:45 AM	48	26	36	0	110	0	529	0	0	529	13	10	19	0	42	6	310	33	5	354	1035
Total Volume	250	139	120	0	509	2	1960	0	0	1962	48	85	78	0	211	26	1133	115	40	1314	3996
% Approach Total	49.1	27.3	23.6	0.0		0.1	99.9	0.0	0.0		22.7	40.3	37.0	0.0		2.0	86.2	8.8	3.0		
PHF	0.791	0.724	0.833	0.000	0.915	0.250	0.926	0.000	0.000	0.927	0.750	0.664	0.750	0.000	0.713	0.650	0.914	0.871	0.714	0.928	0.962
Cars	246	130	110	0	486	1	1806	0	0	1807	44	81	78	0	203	26	989	108	36	1159	3655
Cars %	98.4	93.5	91.7	0.0	95.5	50.0	92.1	0.0	0.0	92.1	91.7	95.3	100.0	0.0	96.2	100.0	87.3	93.9	90.0	88.2	91.5
Heavy Vehicles	4	9	10	0	23	1	154	0	0	155	4	4	0	0	8	0	144	7	4	155	341
Heavy Vehicles %	1.6	6.5	8.3	0.0	4.5	50.0	7.9	0.0	0.0	7.9	8.3	4.7	0.0	0.0	3.8	0.0	12.7	6.1	10.0	11.8	8.5
Cars Enter Leg	246	130	110	0	486	1	1806	0	0	1807	44	81	78	0	203	26	989	108	36	1159	3655
Heavy Enter Leg	4	9	10	0	23	1	154	0	0	155	4	4	0	0	8	0	144	7	4	155	341
Total Entering Leg	250	139	120	0	509	2	1960	0	0	1962	48	85	78	0	211	26	1133	115	40	1314	3996
Cars Exiting Leg	190					1143					156					2166					3655
Heavy Exiting Leg	12					158					9					162					341
Total Exiting Leg	202					1301					165					2328					3996

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	64	44	23	0	131	0	387	0	0	387	5	18	17	0	40	6	219	24	13	262	820
7:15 AM	58	41	21	0	120	1	444	0	0	445	15	30	26	0	71	4	256	24	8	292	928
7:30 AM	77	23	33	0	133	0	488	0	0	488	11	24	16	0	51	10	245	28	10	293	965
7:45 AM	47	22	33	0	102	0	487	0	0	487	13	9	19	0	41	6	269	32	5	312	942
Total	246	130	110	0	486	1	1806	0	0	1807	44	81	78	0	203	26	989	108	36	1159	3655
8:00 AM	42	26	32	0	100	3	373	0	0	376	12	17	13	0	42	17	224	31	9	281	799
8:15 AM	55	38	47	0	140	0	341	0	0	341	14	28	21	0	63	8	221	34	5	268	812
8:30 AM	35	15	36	0	86	2	347	0	0	349	16	40	28	0	84	6	242	23	7	278	797
8:45 AM	42	27	38	0	107	1	288	0	0	289	11	16	16	0	43	6	194	27	5	232	671
Total	174	106	153	0	433	6	1349	0	0	1355	53	101	78	0	232	37	881	115	26	1059	3079
Grand Total	420	236	263	0	919	7	3155	0	0	3162	97	182	156	0	435	63	1870	223	62	2218	6734
Approach %	45.7	25.7	28.6	0.0		0.2	99.8	0.0	0.0		22.3	41.8	35.9	0.0		2.8	84.3	10.1	2.8		
Total %	6.2	3.5	3.9	0.0	13.6	0.1	46.9	0.0	0.0	47.0	1.4	2.7	2.3	0.0	6.5	0.9	27.8	3.3	0.9	32.9	
Exiting Leg Total	412					2230					299					3793					6734

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

7:00 AM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	64	44	23	0	131	0	387	0	0	387	5	18	17	0	40	6	219	24	13	262	820
7:15 AM	58	41	21	0	120	1	444	0	0	445	15	30	26	0	71	4	256	24	8	292	928
7:30 AM	77	23	33	0	133	0	488	0	0	488	11	24	16	0	51	10	245	28	10	293	965
7:45 AM	47	22	33	0	102	0	487	0	0	487	13	9	19	0	41	6	269	32	5	312	942
Total Volume	246	130	110	0	486	1	1806	0	0	1807	44	81	78	0	203	26	989	108	36	1159	3655
% Approach Total	50.6	26.7	22.6	0.0		0.1	99.9	0.0	0.0		21.7	39.9	38.4	0.0		2.2	85.3	9.3	3.1		
PHF	0.799	0.739	0.833	0.000	0.914	0.250	0.925	0.000	0.000	0.926	0.733	0.675	0.750	0.000	0.715	0.650	0.919	0.844	0.692	0.929	0.947
Entering Leg	246	130	110	0	486	1	1806	0	0	1807	44	81	78	0	203	26	989	108	36	1159	3655
Exiting Leg	190					1143					156					2166					3655
Total	676					2950					359					3325					7310

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	1	4	3	0	8	0	39	0	0	39	1	0	0	0	1	0	32	2	1	35	83
7:15 AM	0	1	2	0	3	1	42	0	0	43	1	2	0	0	3	0	39	1	2	42	91
7:30 AM	2	0	2	0	4	0	31	0	0	31	2	1	0	0	3	0	32	3	1	36	74
7:45 AM	1	4	3	0	8	0	42	0	0	42	0	1	0	0	1	0	41	1	0	42	93
Total	4	9	10	0	23	1	154	0	0	155	4	4	0	0	8	0	144	7	4	155	341
8:00 AM	1	2	3	0	6	0	32	0	0	32	0	0	0	0	0	0	41	1	1	43	81
8:15 AM	2	1	2	0	5	0	36	0	0	36	1	2	0	0	3	1	28	1	3	33	77
8:30 AM	0	2	0	0	2	0	41	0	0	41	0	1	1	0	2	0	49	0	0	49	94
8:45 AM	5	0	2	0	7	0	53	0	0	53	0	0	3	0	3	0	38	2	1	41	104
Total	8	5	7	0	20	0	162	0	0	162	1	3	4	0	8	1	156	4	5	166	356
Grand Total	12	14	17	0	43	1	316	0	0	317	5	7	4	0	16	1	300	11	9	321	697
Approach %	27.9	32.6	39.5	0.0		0.3	99.7	0.0	0.0		31.3	43.8	25.0	0.0		0.3	93.5	3.4	2.8		
Total %	1.7	2.0	2.4	0.0	6.2	0.1	45.3	0.0	0.0	45.5	0.7	1.0	0.6	0.0	2.3	0.1	43.0	1.6	1.3	46.1	
Exiting Leg Total	19					322					15					341					697
Buses	1	8	1	0	10	0	1	0	0	1	3	5	1	0	9	0	3	0	1	4	24
% Buses	8.3	57.1	5.9	0.0	23.3	0.0	0.3	0.0	0.0	0.3	60.0	71.4	25.0	0.0	56.3	0.0	1.0	0.0	11.1	1.2	3.4
Exiting Leg Total	5					7					8					4					24
Single-Unit Trucks	6	4	10	0	20	0	151	0	0	151	2	1	2	0	5	1	130	9	7	147	323
% Single-Unit	50.0	28.6	58.8	0.0	46.5	0.0	47.8	0.0	0.0	47.6	40.0	14.3	50.0	0.0	31.3	100.0	43.3	81.8	77.8	45.8	46.3
Exiting Leg Total	10					142					5					166					323
Articulated Trucks	5	2	6	0	13	1	164	0	0	165	0	1	1	0	2	0	167	2	1	170	350
% Articulated	41.7	14.3	35.3	0.0	30.2	100.0	51.9	0.0	0.0	52.1	0.0	14.3	25.0	0.0	12.5	0.0	55.7	18.2	11.1	53.0	50.2
Exiting Leg Total	4					173					2					171					350

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

8:00 AM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	1	2	3	0	6	0	32	0	0	32	0	0	0	0	0	0	41	1	1	43	81
8:15 AM	2	1	2	0	5	0	36	0	0	36	1	2	0	0	3	1	28	1	3	33	77
8:30 AM	0	2	0	0	2	0	41	0	0	41	0	1	1	0	2	0	49	0	0	49	94
8:45 AM	5	0	2	0	7	0	53	0	0	53	0	0	3	0	3	0	38	2	1	41	104
Total Volume	8	5	7	0	20	0	162	0	0	162	1	3	4	0	8	1	156	4	5	166	356
% Approach Total	40.0	25.0	35.0	0.0		0.0	100.0	0.0	0.0		12.5	37.5	50.0	0.0		0.6	94.0	2.4	3.0		
PHF	0.400	0.625	0.583	0.000	0.714	0.000	0.764	0.000	0.000	0.764	0.250	0.375	0.333	0.000	0.667	0.250	0.796	0.500	0.417	0.847	0.856
Buses	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	2	0	0	2	6
Buses %	0.0	0.0	14.3	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	25.0	0.0	37.5	0.0	1.3	0.0	0.0	1.2	1.7
Single-Unit Trucks	6	3	5	0	14	0	63	0	0	63	1	0	2	0	3	1	67	4	4	76	156
Single-Unit %	75.0	60.0	71.4	0.0	70.0	0.0	38.9	0.0	0.0	38.9	100.0	0.0	50.0	0.0	37.5	100.0	42.9	100.0	80.0	45.8	43.8
Articulated Trucks	2	2	1	0	5	0	99	0	0	99	0	1	1	0	2	0	87	0	1	88	194
Articulated %	25.0	40.0	14.3	0.0	25.0	0.0	61.1	0.0	0.0	61.1	0.0	33.3	25.0	0.0	25.0	0.0	55.8	0.0	20.0	53.0	54.5
Buses	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	2	0	0	2	6
Single-Unit Trucks	6	3	5	0	14	0	63	0	0	63	1	0	2	0	3	1	67	4	4	76	156
Articulated Trucks	2	2	1	0	5	0	99	0	0	99	0	1	1	0	2	0	87	0	1	88	194
Total Entering Leg	8	5	7	0	20	0	162	0	0	162	1	3	4	0	8	1	156	4	5	166	356
Buses	2					3					0					1					6
Single-Unit Trucks	4					73					4					75					156
Articulated Trucks	1					88					2					103					194
Total Exiting Leg	7					164					6					179					356

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	5
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3
7:30 AM	1	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	1	1	4
7:45 AM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	6
Total	1	8	0	0	9	0	1	0	0	1	3	3	0	0	6	0	1	0	1	2	18
8:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	2	0	0	2	6
Grand Total	1	8	1	0	10	0	1	0	0	1	3	5	1	0	9	0	3	0	1	4	24
Approach %	10.0	80.0	10.0	0.0		0.0	100.0	0.0	0.0		33.3	55.6	11.1	0.0		0.0	75.0	0.0	25.0		
Total %	4.2	33.3	4.2	0.0	41.7	0.0	4.2	0.0	0.0	4.2	12.5	20.8	4.2	0.0	37.5	0.0	12.5	0.0	4.2	16.7	
Exiting Leg Total	5					7					8					4					24

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

7:00 AM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	4	0	0	4	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	5
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	3
7:30 AM	1	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	1	1	4
7:45 AM	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	6
Total Volume	1	8	0	0	9	0	1	0	0	1	3	3	0	0	6	0	1	0	1	2	18
% Approach Total	11.1	88.9	0.0	0.0		0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	50.0	0.0	50.0		
PHF	0.250	0.500	0.000	0.000	0.563	0.000	0.250	0.000	0.000	0.250	0.750	0.375	0.000	0.000	0.500	0.000	0.250	0.000	0.250	0.500	0.750
Entering Leg	1	8	0	0	9	0	1	0	0	1	3	3	0	0	6	0	1	0	1	2	18
Exiting Leg					3					4					8					3	18
Total	12					5					14					5					36

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	2	0	2	0	21	0	0	21	0	0	0	0	0	0	19	2	1	22	45
7:15 AM	0	1	0	0	1	0	30	0	0	30	0	0	0	0	0	0	13	0	2	15	46
7:30 AM	0	0	1	0	1	0	12	0	0	12	1	0	0	0	1	0	11	2	0	13	27
7:45 AM	0	0	2	0	2	0	25	0	0	25	0	1	0	0	1	0	20	1	0	21	49
Total	0	1	5	0	6	0	88	0	0	88	1	1	0	0	2	0	63	5	3	71	167
8:00 AM	1	1	1	0	3	0	15	0	0	15	0	0	0	0	0	0	10	1	1	12	30
8:15 AM	1	1	2	0	4	0	13	0	0	13	1	0	0	0	1	1	12	1	2	16	34
8:30 AM	0	1	0	0	1	0	14	0	0	14	0	0	0	0	0	0	27	0	0	27	42
8:45 AM	4	0	2	0	6	0	21	0	0	21	0	0	2	0	2	0	18	2	1	21	50
Total	6	3	5	0	14	0	63	0	0	63	1	0	2	0	3	1	67	4	4	76	156
Grand Total	6	4	10	0	20	0	151	0	0	151	2	1	2	0	5	1	130	9	7	147	323
Approach %	30.0	20.0	50.0	0.0		0.0	100.0	0.0	0.0		40.0	20.0	40.0	0.0		0.7	88.4	6.1	4.8		
Total %	1.9	1.2	3.1	0.0	6.2	0.0	46.7	0.0	0.0	46.7	0.6	0.3	0.6	0.0	1.5	0.3	40.2	2.8	2.2	45.5	
Exiting Leg Total	10					142					5					166					323

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

7:00 AM	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	2	0	2	0	21	0	0	21	0	0	0	0	0	0	19	2	1	22	45
7:15 AM	0	1	0	0	1	0	30	0	0	30	0	0	0	0	0	0	13	0	2	15	46
7:30 AM	0	0	1	0	1	0	12	0	0	12	1	0	0	0	1	0	11	2	0	13	27
7:45 AM	0	0	2	0	2	0	25	0	0	25	0	1	0	0	1	0	20	1	0	21	49
Total Volume	0	1	5	0	6	0	88	0	0	88	1	1	0	0	2	0	63	5	3	71	167
% Approach Total	0.0	16.7	83.3	0.0		0.0	100.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	88.7	7.0	4.2		
PHF	0.000	0.250	0.625	0.000	0.750	0.000	0.733	0.000	0.000	0.733	0.250	0.250	0.000	0.000	0.500	0.000	0.788	0.625	0.375	0.807	0.852
Entering Leg	0	1	5	0	6	0	88	0	0	88	1	1	0	0	2	0	63	5	3	71	167
Exiting Leg	6					69					1					91					167
Total	12					157					3					162					334

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	1	0	1	0	2	0	18	0	0	18	0	0	0	0	0	0	13	0	0	13	33
7:15 AM	0	0	2	0	2	1	12	0	0	13	0	0	0	0	0	0	26	1	0	27	42
7:30 AM	1	0	1	0	2	0	19	0	0	19	0	0	0	0	0	0	21	1	0	22	43
7:45 AM	1	0	1	0	2	0	16	0	0	16	0	0	0	0	0	0	20	0	0	20	38
Total	3	0	5	0	8	1	65	0	0	66	0	0	0	0	0	0	80	2	0	82	156
8:00 AM	0	1	1	0	2	0	17	0	0	17	0	0	0	0	0	0	31	0	0	31	50
8:15 AM	1	0	0	0	1	0	23	0	0	23	0	0	0	0	0	0	16	0	1	17	41
8:30 AM	0	1	0	0	1	0	27	0	0	27	0	1	0	0	1	0	21	0	0	21	50
8:45 AM	1	0	0	0	1	0	32	0	0	32	0	0	1	0	1	0	19	0	0	19	53
Total	2	2	1	0	5	0	99	0	0	99	0	1	1	0	2	0	87	0	1	88	194
Grand Total	5	2	6	0	13	1	164	0	0	165	0	1	1	0	2	0	167	2	1	170	350
Approach %	38.5	15.4	46.2	0.0		0.6	99.4	0.0	0.0		0.0	50.0	50.0	0.0		0.0	98.2	1.2	0.6		
Total %	1.4	0.6	1.7	0.0	3.7	0.3	46.9	0.0	0.0	47.1	0.0	0.3	0.3	0.0	0.6	0.0	47.7	0.6	0.3	48.6	
Exiting Leg Total	4					173					2					171					350

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

8:00 AM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
8:00 AM	0	1	1	0	2	0	17	0	0	17	0	0	0	0	0	0	31	0	0	31	50
8:15 AM	1	0	0	0	1	0	23	0	0	23	0	0	0	0	0	0	16	0	1	17	41
8:30 AM	0	1	0	0	1	0	27	0	0	27	0	1	0	0	1	0	21	0	0	21	50
8:45 AM	1	0	0	0	1	0	32	0	0	32	0	0	1	0	1	0	19	0	0	19	53
Total Volume	2	2	1	0	5	0	99	0	0	99	0	1	1	0	2	0	87	0	1	88	194
% Approach Total	40.0	40.0	20.0	0.0		0.0	100.0	0.0	0.0		0.0	50.0	50.0	0.0		0.0	98.9	0.0	1.1		
PHF	0.500	0.500	0.250	0.000	0.625	0.000	0.773	0.000	0.000	0.773	0.000	0.250	0.250	0.000	0.500	0.000	0.702	0.000	0.250	0.710	0.915
Entering Leg	2	2	1	0	5	0	99	0	0	99	0	1	1	0	2	0	87	0	1	88	194
Exiting Leg	1					88					2					103					194
Total	6					187					4					191					388

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Boston Road							Route 146							Boston Road							Route 146								
	from North							from East							from South							from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							0	

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

7:00 AM	Boston Road							Route 146							Boston Road							Route 146							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Boston Road							Route 146							Boston Road							Route 146							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							0

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

7:00 AM	Boston Road							Route 146							Boston Road							Route 146							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	48	39	76	0	163	4	306	0	0	310	15	24	14	0	53	19	403	58	13	493	1019
4:15 PM	48	33	62	0	143	1	344	0	1	346	5	24	12	0	41	17	476	59	10	562	1092
4:30 PM	55	36	60	0	151	5	340	0	0	345	7	28	13	0	48	6	460	64	13	543	1087
4:45 PM	40	55	63	0	158	2	325	0	0	327	9	22	7	0	38	19	496	65	11	591	1114
Total	191	163	261	0	615	12	1315	0	1	1328	36	98	46	0	180	61	1835	246	47	2189	4312
5:00 PM	38	46	69	0	153	2	288	0	0	290	12	27	15	0	54	21	450	59	10	540	1037
5:15 PM	46	44	63	0	153	4	337	0	0	341	14	16	4	0	34	18	507	69	8	602	1130
5:30 PM	35	35	74	0	144	6	337	0	0	343	10	20	14	0	44	11	412	54	13	490	1021
5:45 PM	42	26	47	0	115	6	297	0	0	303	6	18	13	0	37	13	378	45	4	440	895
Total	161	151	253	0	565	18	1259	0	0	1277	42	81	46	0	169	63	1747	227	35	2072	4083
Grand Total	352	314	514	0	1180	30	2574	0	1	2605	78	179	92	0	349	124	3582	473	82	4261	8395
Approach %	29.8	26.6	43.6	0.0		1.2	98.8	0.0	0.0		22.3	51.3	26.4	0.0		2.9	84.1	11.1	1.9		
Total %	4.2	3.7	6.1	0.0	14.1	0.4	30.7	0.0	0.0	31.0	0.9	2.1	1.1	0.0	4.2	1.5	42.7	5.6	1.0	50.8	
Exiting Leg Total	682					4175					438					3100					8395
Cars	347	313	502	0	1162	30	2407	0	1	2438	76	178	91	0	345	123	3394	467	78	4062	8007
% Cars	98.6	99.7	97.7	0.0	98.5	100.0	93.5	0.0	100.0	93.6	97.4	99.4	98.9	0.0	98.9	99.2	94.8	98.7	95.1	95.3	95.4
Exiting Leg Total	675					3973					436					2923					8007
Heavy Vehicles	5	1	12	0	18	0	167	0	0	167	2	1	1	0	4	1	188	6	4	199	388
% Heavy Vehicles	1.4	0.3	2.3	0.0	1.5	0.0	6.5	0.0	0.0	6.4	2.6	0.6	1.1	0.0	1.1	0.8	5.2	1.3	4.9	4.7	4.6
Exiting Leg Total	7					202					2					177					388

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

4:30 PM	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	55	36	60	0	151	5	340	0	0	345	7	28	13	0	48	6	460	64	13	543	1087
4:45 PM	40	55	63	0	158	2	325	0	0	327	9	22	7	0	38	19	496	65	11	591	1114
5:00 PM	38	46	69	0	153	2	288	0	0	290	12	27	15	0	54	21	450	59	10	540	1037
5:15 PM	46	44	63	0	153	4	337	0	0	341	14	16	4	0	34	18	507	69	8	602	1130
Total Volume	179	181	255	0	615	13	1290	0	0	1303	42	93	39	0	174	64	1913	257	42	2276	4368
% Approach Total	29.1	29.4	41.5	0.0		1.0	99.0	0.0	0.0		24.1	53.4	22.4	0.0		2.8	84.1	11.3	1.8		
PHF	0.814	0.823	0.924	0.000	0.973	0.650	0.949	0.000	0.000	0.944	0.750	0.830	0.650	0.000	0.806	0.762	0.943	0.931	0.808	0.945	0.966
Cars	177	180	252	0	609	13	1211	0	0	1224	41	92	39	0	172	63	1821	253	41	2178	4183
Cars %	98.9	99.4	98.8	0.0	99.0	100.0	93.9	0.0	0.0	93.9	97.6	98.9	100.0	0.0	98.9	98.4	95.2	98.4	97.6	95.7	95.8
Heavy Vehicles	2	1	3	0	6	0	79	0	0	79	1	1	0	0	2	1	92	4	1	98	185
Heavy Vehicles %	1.1	0.6	1.2	0.0	1.0	0.0	6.1	0.0	0.0	6.1	2.4	1.1	0.0	0.0	1.1	1.6	4.8	1.6	2.4	4.3	4.2
Cars Enter Leg	177	180	252	0	609	13	1211	0	0	1224	41	92	39	0	172	63	1821	253	41	2178	4183
Heavy Enter Leg	2	1	3	0	6	0	79	0	0	79	1	1	0	0	2	1	92	4	1	98	185
Total Entering Leg	179	181	255	0	615	13	1290	0	0	1303	42	93	39	0	174	64	1913	257	42	2276	4368
Cars Exiting Leg	358					2114					243					1468					4183
Heavy Exiting Leg	5					96					2					82					185
Total Exiting Leg	363					2210					245					1550					4368

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	47	39	71	0	157	4	277	0	0	281	15	24	13	0	52	19	373	57	13	462	952
4:15 PM	47	33	59	0	139	1	322	0	1	324	4	24	12	0	40	17	448	58	9	532	1035
4:30 PM	54	36	60	0	150	5	310	0	0	315	7	28	13	0	48	5	434	62	12	513	1026
4:45 PM	39	55	62	0	156	2	305	0	0	307	8	21	7	0	36	19	475	64	11	569	1068
Total	187	163	252	0	602	12	1214	0	1	1227	34	97	45	0	176	60	1730	241	45	2076	4081
5:00 PM	38	46	67	0	151	2	277	0	0	279	12	27	15	0	54	21	434	59	10	524	1008
5:15 PM	46	43	63	0	152	4	319	0	0	323	14	16	4	0	34	18	478	68	8	572	1081
5:30 PM	34	35	74	0	143	6	322	0	0	328	10	20	14	0	44	11	397	54	12	474	989
5:45 PM	42	26	46	0	114	6	275	0	0	281	6	18	13	0	37	13	355	45	3	416	848
Total	160	150	250	0	560	18	1193	0	0	1211	42	81	46	0	169	63	1664	226	33	1986	3926
Grand Total	347	313	502	0	1162	30	2407	0	1	2438	76	178	91	0	345	123	3394	467	78	4062	8007
Approach %	29.9	26.9	43.2	0.0		1.2	98.7	0.0	0.0		22.0	51.6	26.4	0.0		3.0	83.6	11.5	1.9		
Total %	4.3	3.9	6.3	0.0	14.5	0.4	30.1	0.0	0.0	30.4	0.9	2.2	1.1	0.0	4.3	1.5	42.4	5.8	1.0	50.7	
Exiting Leg Total	675					3973					436					2923					8007

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

4:30 PM	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	54	36	60	0	150	5	310	0	0	315	7	28	13	0	48	5	434	62	12	513	1026
4:45 PM	39	55	62	0	156	2	305	0	0	307	8	21	7	0	36	19	475	64	11	569	1068
5:00 PM	38	46	67	0	151	2	277	0	0	279	12	27	15	0	54	21	434	59	10	524	1008
5:15 PM	46	43	63	0	152	4	319	0	0	323	14	16	4	0	34	18	478	68	8	572	1081
Total Volume	177	180	252	0	609	13	1211	0	0	1224	41	92	39	0	172	63	1821	253	41	2178	4183
% Approach Total	29.1	29.6	41.4	0.0		1.1	98.9	0.0	0.0		23.8	53.5	22.7	0.0		2.9	83.6	11.6	1.9		
PHF	0.819	0.818	0.940	0.000	0.976	0.650	0.949	0.000	0.000	0.947	0.732	0.821	0.650	0.000	0.796	0.750	0.952	0.930	0.854	0.952	0.967
Entering Leg	177	180	252	0	609	13	1211	0	0	1224	41	92	39	0	172	63	1821	253	41	2178	4183
Exiting Leg	358					2114					243					1468					4183
Total	967					3338					415					3646					8366

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**



	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	0	5	0	6	0	29	0	0	29	0	0	1	0	1	0	30	1	0	31	67
4:15 PM	1	0	3	0	4	0	22	0	0	22	1	0	0	0	1	0	28	1	1	30	57
4:30 PM	1	0	0	0	1	0	30	0	0	30	0	0	0	0	0	1	26	2	1	30	61
4:45 PM	1	0	1	0	2	0	20	0	0	20	1	1	0	0	2	0	21	1	0	22	46
Total	4	0	9	0	13	0	101	0	0	101	2	1	1	0	4	1	105	5	2	113	231
5:00 PM	0	0	2	0	2	0	11	0	0	11	0	0	0	0	0	0	16	0	0	16	29
5:15 PM	0	1	0	0	1	0	18	0	0	18	0	0	0	0	0	0	29	1	0	30	49
5:30 PM	1	0	0	0	1	0	15	0	0	15	0	0	0	0	0	0	15	0	1	16	32
5:45 PM	0	0	1	0	1	0	22	0	0	22	0	0	0	0	0	0	23	0	1	24	47
Total	1	1	3	0	5	0	66	0	0	66	0	0	0	0	0	0	83	1	2	86	157
Grand Total	5	1	12	0	18	0	167	0	0	167	2	1	1	0	4	1	188	6	4	199	388
Approach %	27.8	5.6	66.7	0.0		0.0	100.0	0.0	0.0		50.0	25.0	25.0	0.0		0.5	94.5	3.0	2.0		
Total %	1.3	0.3	3.1	0.0	4.6	0.0	43.0	0.0	0.0	43.0	0.5	0.3	0.3	0.0	1.0	0.3	48.5	1.5	1.0	51.3	
Exiting Leg Total	7					202					2					177					388
Buses	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.0	1.3
Exiting Leg Total	0					2					0					3					5
Single-Unit Trucks	3	1	9	0	13	0	52	0	0	52	2	1	1	0	4	1	61	5	4	71	140
% Single-Unit	60.0	100.0	75.0	0.0	72.2	0.0	31.1	0.0	0.0	31.1	100.0	100.0	100.0	0.0	100.0	100.0	32.4	83.3	100.0	35.7	36.1
Exiting Leg Total	6					72					2					60					140
Articulated Trucks	2	0	3	0	5	0	112	0	0	112	0	0	0	0	0	0	125	1	0	126	243
% Articulated	40.0	0.0	25.0	0.0	27.8	0.0	67.1	0.0	0.0	67.1	0.0	0.0	0.0	0.0	0.0	0.0	66.5	16.7	0.0	63.3	62.6
Exiting Leg Total	1					128					0					114					243

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

4:00 PM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	0	5	0	6	0	29	0	0	29	0	0	1	0	1	0	30	1	0	31	67
4:15 PM	1	0	3	0	4	0	22	0	0	22	1	0	0	0	1	0	28	1	1	30	57
4:30 PM	1	0	0	0	1	0	30	0	0	30	0	0	0	0	0	1	26	2	1	30	61
4:45 PM	1	0	1	0	2	0	20	0	0	20	1	1	0	0	2	0	21	1	0	22	46
Total Volume	4	0	9	0	13	0	101	0	0	101	2	1	1	0	4	1	105	5	2	113	231
% Approach Total	30.8	0.0	69.2	0.0		0.0	100.0	0.0	0.0		50.0	25.0	25.0	0.0		0.9	92.9	4.4	1.8		
PHF	1.000	0.000	0.450	0.000	0.542	0.000	0.842	0.000	0.000	0.842	0.500	0.250	0.250	0.000	0.500	0.250	0.875	0.625	0.500	0.911	0.862
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.9	1.3
Single-Unit Trucks	2	0	7	0	9	0	36	0	0	36	2	1	1	0	4	1	39	4	2	46	95
Single-Unit %	50.0	0.0	77.8	0.0	69.2	0.0	35.6	0.0	0.0	35.6	100.0	100.0	100.0	0.0	100.0	100.0	37.1	80.0	100.0	40.7	41.1
Articulated Trucks	2	0	2	0	4	0	63	0	0	63	0	0	0	0	0	0	65	1	0	66	133
Articulated %	50.0	0.0	22.2	0.0	30.8	0.0	62.4	0.0	0.0	62.4	0.0	0.0	0.0	0.0	0.0	0.0	61.9	20.0	0.0	58.4	57.6
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
Single-Unit Trucks	2	0	7	0	9	0	36	0	0	36	2	1	1	0	4	1	39	4	2	46	95
Articulated Trucks	2	0	2	0	4	0	63	0	0	63	0	0	0	0	0	0	65	1	0	66	133
Total Entering Leg	4	0	9	0	13	0	101	0	0	101	2	1	1	0	4	1	105	5	2	113	231
Buses	0					1					0					2					3
Single-Unit Trucks	5					48					1					41					95
Articulated Trucks	1					67					0					65					133
Total Exiting Leg	6					116					1					108					231

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	40.0	
Exiting Leg Total	0					2					0					3					5

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

4:00 PM	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.375
Entering Leg	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
Exiting Leg	0					1					0					2					3
Total	0					3					0					3					6

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Single-Unit Trucks

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	0	5	0	6	0	10	0	0	10	0	0	1	0	1	0	14	1	0	15	32
4:15 PM	1	0	1	0	2	0	6	0	0	6	1	0	0	0	1	0	10	1	1	12	21
4:30 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	1	10	1	1	13	24
4:45 PM	0	0	1	0	1	0	9	0	0	9	1	1	0	0	2	0	5	1	0	6	18
Total	2	0	7	0	9	0	36	0	0	36	2	1	1	0	4	1	39	4	2	46	95
5:00 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	8
5:15 PM	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	0	7	1	0	8	15
5:30 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	4	0	1	5	9
5:45 PM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	6	0	1	7	13
Total	1	1	2	0	4	0	16	0	0	16	0	0	0	0	0	0	22	1	2	25	45
Grand Total	3	1	9	0	13	0	52	0	0	52	2	1	1	0	4	1	61	5	4	71	140
Approach %	23.1	7.7	69.2	0.0		0.0	100.0	0.0	0.0		50.0	25.0	25.0	0.0		1.4	85.9	7.0	5.6		
Total %	2.1	0.7	6.4	0.0	9.3	0.0	37.1	0.0	0.0	37.1	1.4	0.7	0.7	0.0	2.9	0.7	43.6	3.6	2.9	50.7	
Exiting Leg Total	6					72					2					60					140

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

4:00 PM	Boston Road					Route 146					Boston Road					Route 146					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	1	0	5	0	6	0	10	0	0	10	0	0	1	0	1	0	14	1	0	15	32
4:15 PM	1	0	1	0	2	0	6	0	0	6	1	0	0	0	1	0	10	1	1	12	21
4:30 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	1	10	1	1	13	24
4:45 PM	0	0	1	0	1	0	9	0	0	9	1	1	0	0	2	0	5	1	0	6	18
Total Volume	2	0	7	0	9	0	36	0	0	36	2	1	1	0	4	1	39	4	2	46	95
% Approach Total	22.2	0.0	77.8	0.0		0.0	100.0	0.0	0.0		50.0	25.0	25.0	0.0		2.2	84.8	8.7	4.3		
PHF	0.500	0.000	0.350	0.000	0.375	0.000	0.818	0.000	0.000	0.818	0.500	0.250	0.250	0.000	0.500	0.250	0.696	1.000	0.500	0.767	0.742
Entering Leg	2	0	7	0	9	0	36	0	0	36	2	1	1	0	4	1	39	4	2	46	95
Exiting Leg					5					48					1					41	95
Total	14					84					5					87					190

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Boston Road					Route 146					Boston Road					Route 146					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	16	0	0	16	33
4:15 PM	0	0	2	0	2	0	16	0	0	16	0	0	0	0	0	0	17	0	0	17	35
4:30 PM	1	0	0	0	1	0	19	0	0	19	0	0	0	0	0	0	16	1	0	17	37
4:45 PM	1	0	0	0	1	0	11	0	0	11	0	0	0	0	0	0	16	0	0	16	28
Total	2	0	2	0	4	0	63	0	0	63	0	0	0	0	0	0	65	1	0	66	133
5:00 PM	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	0	11	0	0	11	21
5:15 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	22	0	0	22	33
5:30 PM	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	11	0	0	11	23
5:45 PM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	16	0	0	16	33
Total	0	0	1	0	1	0	49	0	0	49	0	0	0	0	0	0	60	0	0	60	110
Grand Total	2	0	3	0	5	0	112	0	0	112	0	0	0	0	0	0	125	1	0	126	243
Approach %	40.0	0.0	60.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	99.2	0.8	0.0		
Total %	0.8	0.0	1.2	0.0	2.1	0.0	46.1	0.0	0.0	46.1	0.0	0.0	0.0	0.0	0.0	0.0	51.4	0.4	0.0	51.9	
Exiting Leg Total	1					128					0					114					243

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

4:00 PM	Boston Road					Route 146					Boston Road					Route 146						
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	16	0	0	0	16	33
4:15 PM	0	0	2	0	2	0	16	0	0	16	0	0	0	0	0	0	17	0	0	0	17	35
4:30 PM	1	0	0	0	1	0	19	0	0	19	0	0	0	0	0	0	16	1	0	0	17	37
4:45 PM	1	0	0	0	1	0	11	0	0	11	0	0	0	0	0	0	16	0	0	0	16	28
Total Volume	2	0	2	0	4	0	63	0	0	63	0	0	0	0	0	0	65	1	0	0	66	133
% Approach Total	50.0	0.0	50.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	98.5	1.5	0.0			
PHF	0.500	0.000	0.250	0.000	0.500	0.000	0.829	0.000	0.000	0.829	0.000	0.000	0.000	0.000	0.000	0.000	0.956	0.250	0.000	0.971	0.899	
Entering Leg	2	0	2	0	4	0	63	0	0	63	0	0	0	0	0	0	65	1	0	0	66	133
Exiting Leg	1					67					0					65					133	
Total	5					130					0					131					266	

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Class:

Bicycles (on Roadway and Crosswalks)

	Boston Road							Route 146							Boston Road							Route 146							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0							0							0							0							0

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

4:00 PM	Boston Road							Route 146							Boston Road							Route 146							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **228509 B**
 Location: **N: Boston Road S: Boston Road**
 Location: **E: Route 146 W: Route 146**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Wednesday, April 6, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Boston Road							Route 146							Boston Road							Route 146							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	
Exiting Leg Total	0							0							0							1							1

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

4:45 PM	Boston Road							Route 146							Boston Road							Route 146							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.250	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
Exiting Leg	0							0							0							1							1
Total	0							0							0							2							2

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars and Heavy Vehicles (Combined)

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	1	0	3	4	133	0	0	137	18	2	5	0	25	0	42	1	0	43	208
7:15 AM	9	1	4	0	14	3	122	0	0	125	39	2	6	0	47	0	57	0	0	57	243
7:30 AM	8	0	1	0	9	2	108	1	0	111	29	2	4	0	35	0	52	1	0	53	208
7:45 AM	6	0	2	0	8	2	107	0	0	109	32	2	7	0	41	1	48	1	0	50	208
Total	25	1	8	0	34	11	470	1	0	482	118	8	22	0	148	1	199	3	0	203	867
8:00 AM	11	0	3	0	14	4	116	0	0	120	22	5	9	0	36	1	65	4	0	70	240
8:15 AM	5	0	1	0	6	4	106	0	0	110	14	6	5	0	25	0	49	2	0	51	192
8:30 AM	7	0	3	2	12	1	93	2	1	97	15	0	8	0	23	1	63	1	0	65	197
8:45 AM	4	0	6	1	11	3	101	0	0	104	17	2	13	0	32	1	42	2	0	45	192
Total	27	0	13	3	43	12	416	2	1	431	68	13	35	0	116	3	219	9	0	231	821
Grand Total	52	1	21	3	77	23	886	3	1	913	186	21	57	0	264	4	418	12	0	434	1688
Approach %	67.5	1.3	27.3	3.9		2.5	97.0	0.3	0.1		70.5	8.0	21.6	0.0		0.9	96.3	2.8	0.0		
Total %	3.1	0.1	1.2	0.2	4.6	1.4	52.5	0.2	0.1	54.1	11.0	1.2	3.4	0.0	15.6	0.2	24.8	0.7	0.0	25.7	
Exiting Leg Total	59					626					8					995					1688
Cars	49	1	16	0	66	22	841	3	0	866	175	19	52	0	246	4	394	11	0	409	1587
% Cars	94.2	100.0	76.2	0.0	85.7	95.7	94.9	100.0	0.0	94.9	94.1	90.5	91.2	0.0	93.2	100.0	94.3	91.7	0.0	94.2	94.0
Exiting Leg Total	52					585					8					942					1587
Heavy Vehicles	3	0	5	3	11	1	45	0	1	47	11	2	5	0	18	0	24	1	0	25	101
% Heavy Vehicles	5.8	0.0	23.8	100.0	14.3	4.3	5.1	0.0	100.0	5.1	5.9	9.5	8.8	0.0	6.8	0.0	5.7	8.3	0.0	5.8	6.0
Exiting Leg Total	7					41					0					53					101

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

7:15 AM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	9	1	4	0	14	3	122	0	0	125	39	2	6	0	47	0	57	0	0	57	243
7:30 AM	8	0	1	0	9	2	108	1	0	111	29	2	4	0	35	0	52	1	0	53	208
7:45 AM	6	0	2	0	8	2	107	0	0	109	32	2	7	0	41	1	48	1	0	50	208
8:00 AM	11	0	3	0	14	4	116	0	0	120	22	5	9	0	36	1	65	4	0	70	240
Total Volume	34	1	10	0	45	11	453	1	0	465	122	11	26	0	159	2	222	6	0	230	899
% Approach Total	75.6	2.2	22.2	0.0		2.4	97.4	0.2	0.0		76.7	6.9	16.4	0.0		0.9	96.5	2.6	0.0		
PHF	0.773	0.250	0.625	0.000	0.804	0.688	0.928	0.250	0.000	0.930	0.782	0.550	0.722	0.000	0.846	0.500	0.854	0.375	0.000	0.821	0.925
Cars	32	1	6	0	39	10	427	1	0	438	115	10	24	0	149	2	206	6	0	214	840
Cars %	94.1	100.0	60.0	0.0	86.7	90.9	94.3	100.0	0.0	94.2	94.3	90.9	92.3	0.0	93.7	100.0	92.8	100.0	0.0	93.0	93.4
Heavy Vehicles	2	0	4	0	6	1	26	0	0	27	7	1	2	0	10	0	16	0	0	16	59
Heavy Vehicles %	5.9	0.0	40.0	0.0	13.3	9.1	5.7	0.0	0.0	5.8	5.7	9.1	7.7	0.0	6.3	0.0	7.2	0.0	0.0	7.0	6.6
Cars Enter Leg	32	1	6	0	39	10	427	1	0	438	115	10	24	0	149	2	206	6	0	214	840
Heavy Enter Leg	2	0	4	0	6	1	26	0	0	27	7	1	2	0	10	0	16	0	0	16	59
Total Entering Leg	34	1	10	0	45	11	453	1	0	465	122	11	26	0	159	2	222	6	0	230	899
Cars Exiting Leg	26					327					4					483					840
Heavy Exiting Leg	2					27					0					30					59
Total Exiting Leg	28					354					4					513					899

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	2	0	1	0	3	4	127	0	0	131	15	2	5	0	22	0	40	0	0	40	196
7:15 AM	9	1	2	0	12	3	119	0	0	122	38	2	5	0	45	0	54	0	0	54	233
7:30 AM	8	0	0	0	8	2	100	1	0	103	28	2	4	0	34	0	46	1	0	47	192
7:45 AM	5	0	2	0	7	1	99	0	0	100	28	2	6	0	36	1	46	1	0	48	191
Total	24	1	5	0	30	10	445	1	0	456	109	8	20	0	137	1	186	2	0	189	812
8:00 AM	10	0	2	0	12	4	109	0	0	113	21	4	9	0	34	1	60	4	0	65	224
8:15 AM	4	0	1	0	5	4	102	0	0	106	14	5	3	0	22	0	47	2	0	49	182
8:30 AM	7	0	2	0	9	1	87	2	0	90	15	0	7	0	22	1	60	1	0	62	183
8:45 AM	4	0	6	0	10	3	98	0	0	101	16	2	13	0	31	1	41	2	0	44	186
Total	25	0	11	0	36	12	396	2	0	410	66	11	32	0	109	3	208	9	0	220	775
Grand Total	49	1	16	0	66	22	841	3	0	866	175	19	52	0	246	4	394	11	0	409	1587
Approach %	74.2	1.5	24.2	0.0		2.5	97.1	0.3	0.0		71.1	7.7	21.1	0.0		1.0	96.3	2.7	0.0		
Total %	3.1	0.1	1.0	0.0	4.2	1.4	53.0	0.2	0.0	54.6	11.0	1.2	3.3	0.0	15.5	0.3	24.8	0.7	0.0	25.8	
Exiting Leg Total	52					585					8					942					1587

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

7:15 AM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	9	1	2	0	12	3	119	0	0	122	38	2	5	0	45	0	54	0	0	54	233
7:30 AM	8	0	0	0	8	2	100	1	0	103	28	2	4	0	34	0	46	1	0	47	192
7:45 AM	5	0	2	0	7	1	99	0	0	100	28	2	6	0	36	1	46	1	0	48	191
8:00 AM	10	0	2	0	12	4	109	0	0	113	21	4	9	0	34	1	60	4	0	65	224
Total Volume	32	1	6	0	39	10	427	1	0	438	115	10	24	0	149	2	206	6	0	214	840
% Approach Total	82.1	2.6	15.4	0.0		2.3	97.5	0.2	0.0		77.2	6.7	16.1	0.0		0.9	96.3	2.8	0.0		
PHF	0.800	0.250	0.750	0.000	0.813	0.625	0.897	0.250	0.000	0.898	0.757	0.625	0.667	0.000	0.828	0.500	0.858	0.375	0.000	0.823	0.901
Entering Leg	32	1	6	0	39	10	427	1	0	438	115	10	24	0	149	2	206	6	0	214	840
Exiting Leg	26					327					4					483					840
Total	65					765					153					697					1680

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	6	0	0	6	3	0	0	0	3	0	2	1	0	3	12
7:15 AM	0	0	2	0	2	0	3	0	0	3	1	0	1	0	2	0	3	0	0	3	10
7:30 AM	0	0	1	0	1	0	8	0	0	8	1	0	0	0	1	0	6	0	0	6	16
7:45 AM	1	0	0	0	1	1	8	0	0	9	4	0	1	0	5	0	2	0	0	2	17
Total	1	0	3	0	4	1	25	0	0	26	9	0	2	0	11	0	13	1	0	14	55
8:00 AM	1	0	1	0	2	0	7	0	0	7	1	1	0	0	2	0	5	0	0	5	16
8:15 AM	1	0	0	0	1	0	4	0	0	4	0	1	2	0	3	0	2	0	0	2	10
8:30 AM	0	0	1	2	3	0	6	0	1	7	0	0	1	0	1	0	3	0	0	3	14
8:45 AM	0	0	0	1	1	0	3	0	0	3	1	0	0	0	1	0	1	0	0	1	6
Total	2	0	2	3	7	0	20	0	1	21	2	2	3	0	7	0	11	0	0	11	46
Grand Total	3	0	5	3	11	1	45	0	1	47	11	2	5	0	18	0	24	1	0	25	101
Approach %	27.3	0.0	45.5	27.3		2.1	95.7	0.0	2.1		61.1	11.1	27.8	0.0		0.0	96.0	4.0	0.0		
Total %	3.0	0.0	5.0	3.0	10.9	1.0	44.6	0.0	1.0	46.5	10.9	2.0	5.0	0.0	17.8	0.0	23.8	1.0	0.0	24.8	
Exiting Leg Total	7					41					0					53					101
Buses	2	0	0	0	2	1	9	0	0	10	0	0	0	0	0	0	4	0	0	4	16
% Buses	66.7	0.0	0.0	0.0	18.2	100.0	20.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	16.0	15.8
Exiting Leg Total	1					4					0					11					16
Single-Unit Trucks	1	0	4	3	8	0	29	0	1	30	8	2	3	0	13	0	15	1	0	16	67
% Single-Unit	33.3	0.0	80.0	100.0	72.7	0.0	64.4	0.0	100.0	63.8	72.7	100.0	60.0	0.0	72.2	0.0	62.5	100.0	0.0	64.0	66.3
Exiting Leg Total	6					28					0					33					67
Articulated Trucks	0	0	1	0	1	0	7	0	0	7	3	0	2	0	5	0	5	0	0	5	18
% Articulated	0.0	0.0	20.0	0.0	9.1	0.0	15.6	0.0	0.0	14.9	27.3	0.0	40.0	0.0	27.8	0.0	20.8	0.0	0.0	20.0	17.8
Exiting Leg Total	0					9					0					9					18

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

7:15 AM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	2	0	2	0	3	0	0	3	1	0	1	0	2	0	3	0	0	3	10
7:30 AM	0	0	1	0	1	0	8	0	0	8	1	0	0	0	1	0	6	0	0	6	16
7:45 AM	1	0	0	0	1	1	8	0	0	9	4	0	1	0	5	0	2	0	0	2	17
8:00 AM	1	0	1	0	2	0	7	0	0	7	1	1	0	0	2	0	5	0	0	5	16
Total Volume	2	0	4	0	6	1	26	0	0	27	7	1	2	0	10	0	16	0	0	16	59
% Approach Total	33.3	0.0	66.7	0.0		3.7	96.3	0.0	0.0		70.0	10.0	20.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.500	0.000	0.500	0.000	0.750	0.250	0.813	0.000	0.000	0.750	0.438	0.250	0.500	0.000	0.500	0.000	0.667	0.000	0.000	0.667	0.868
Buses	2	0	0	0	2	1	4	0	0	5	0	0	0	0	0	0	2	0	0	2	9
Buses %	100.0	0.0	0.0	0.0	33.3	100.0	15.4	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	12.5	15.3
Single-Unit Trucks	0	0	3	0	3	0	16	0	0	16	5	1	0	0	6	0	10	0	0	10	35
Single-Unit %	0.0	0.0	75.0	0.0	50.0	0.0	61.5	0.0	0.0	59.3	71.4	100.0	0.0	0.0	60.0	0.0	62.5	0.0	0.0	62.5	59.3
Articulated Trucks	0	0	1	0	1	0	6	0	0	6	2	0	2	0	4	0	4	0	0	4	15
Articulated %	0.0	0.0	25.0	0.0	16.7	0.0	23.1	0.0	0.0	22.2	28.6	0.0	100.0	0.0	40.0	0.0	25.0	0.0	0.0	25.0	25.4
Buses	2	0	0	0	2	1	4	0	0	5	0	0	0	0	0	0	2	0	0	2	9
Single-Unit Trucks	0	0	3	0	3	0	16	0	0	16	5	1	0	0	6	0	10	0	0	10	35
Articulated Trucks	0	0	1	0	1	0	6	0	0	6	2	0	2	0	4	0	4	0	0	4	15
Total Entering Leg	2	0	4	0	6	1	26	0	0	27	7	1	2	0	10	0	16	0	0	16	59
Buses					1					2					0					6	9
Single-Unit Trucks					1					18					0					16	35
Articulated Trucks					0					7					0					8	15
Total Exiting Leg					2					27					0					30	59

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Buses

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
7:45 AM	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Total	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	0	2	0	0	2	12
8:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4
Grand Total	2	0	0	0	2	1	9	0	0	10	0	0	0	0	0	0	4	0	0	4	16
Approach %	100.0	0.0	0.0	0.0		10.0	90.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
Total %	12.5	0.0	0.0	0.0	12.5	6.3	56.3	0.0	0.0	62.5	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	
Exiting Leg Total	1					4					0					11					16

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

7:00 AM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
7:45 AM	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	4
Total Volume	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	0	2	0	0	2	12
% Approach Total	100.0	0.0	0.0	0.0		11.1	88.9	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.750
Entering Leg	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	0	2	0	0	2	12
Exiting Leg					1					2					0					9	12
Total					2					11					0					11	24

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Single-Unit Trucks

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	2	0	0	2	3	0	0	0	3	0	2	1	0	3	8
7:15 AM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	5
7:30 AM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	0	3	0	0	3	9
7:45 AM	0	0	0	0	0	0	5	0	0	5	3	0	0	0	3	0	2	0	0	2	10
Total	0	0	2	0	2	0	13	0	0	13	7	0	0	0	7	0	9	1	0	10	32
8:00 AM	0	0	1	0	1	0	5	0	0	5	1	1	0	0	2	0	3	0	0	3	11
8:15 AM	1	0	0	0	1	0	4	0	0	4	0	1	2	0	3	0	0	0	0	0	8
8:30 AM	0	0	1	2	3	0	5	0	1	6	0	0	1	0	1	0	2	0	0	2	12
8:45 AM	0	0	0	1	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4
Total	1	0	2	3	6	0	16	0	1	17	1	2	3	0	6	0	6	0	0	6	35
Grand Total	1	0	4	3	8	0	29	0	1	30	8	2	3	0	13	0	15	1	0	16	67
Approach %	12.5	0.0	50.0	37.5		0.0	96.7	0.0	3.3		61.5	15.4	23.1	0.0		0.0	93.8	6.3	0.0		
Total %	1.5	0.0	6.0	4.5	11.9	0.0	43.3	0.0	1.5	44.8	11.9	3.0	4.5	0.0	19.4	0.0	22.4	1.5	0.0	23.9	
Exiting Leg Total	6					28					0					33					67

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

7:45 AM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	0	0	0	0	0	0	5	0	0	5	3	0	0	0	3	0	2	0	0	2	10
8:00 AM	0	0	1	0	1	0	5	0	0	5	1	1	0	0	2	0	3	0	0	3	11
8:15 AM	1	0	0	0	1	0	4	0	0	4	0	1	2	0	3	0	0	0	0	0	8
8:30 AM	0	0	1	2	3	0	5	0	1	6	0	0	1	0	1	0	2	0	0	2	12
Total Volume	1	0	2	2	5	0	19	0	1	20	4	2	3	0	9	0	7	0	0	7	41
% Approach Total	20.0	0.0	40.0	40.0		0.0	95.0	0.0	5.0		44.4	22.2	33.3	0.0		0.0	100.0	0.0	0.0		
PHF	0.250	0.000	0.500	0.250	0.417	0.000	0.950	0.000	0.250	0.833	0.333	0.500	0.375	0.000	0.750	0.000	0.583	0.000	0.000	0.583	0.854
Entering Leg	1	0	2	2	5	0	19	0	1	20	4	2	3	0	9	0	7	0	0	7	41
Exiting Leg	4					14					0					23					41
Total	9					34					9					30					82

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Articulated Trucks

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	0	0	0	0	4
7:30 AM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4
7:45 AM	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	3
Total	0	0	1	0	1	0	4	0	0	4	2	0	2	0	4	0	2	0	0	2	11
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	3	0	0	3	7
Grand Total	0	0	1	0	1	0	7	0	0	7	3	0	2	0	5	0	5	0	0	5	18
Approach %	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		60.0	0.0	40.0	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	5.6	0.0	5.6	0.0	38.9	0.0	0.0	38.9	16.7	0.0	11.1	0.0	27.8	0.0	27.8	0.0	0.0	27.8	
Exiting Leg Total	0					9					0					9					18

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

7:15 AM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	0	0	0	0	0	4
7:30 AM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	4
7:45 AM	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4
Total Volume	0	0	1	0	1	0	6	0	0	6	2	0	2	0	4	0	4	0	0	4	15
% Approach Total	0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		50.0	0.0	50.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.250	0.000	0.750	0.000	0.000	0.750	0.500	0.000	0.500	0.000	0.500	0.000	0.500	0.000	0.000	0.500	0.938
Entering Leg	0	0	1	0	1	0	6	0	0	6	2	0	2	0	4	0	4	0	0	4	15
Exiting Leg	0					7					0					8					15
Total	1					13					4					12					30

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Pleasant Valley Road								Boston Road								Pleasant Valley Road								Boston Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0						
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Exiting Leg Total	0							0							0							0							0				

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

7:00 AM	Pleasant Valley Road							Boston Road							Pleasant Valley Road							Boston Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Pedestrians

	Pleasant Valley Road							Boston Road							Pleasant Valley Road							Boston Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							0

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

7:00 AM	Pleasant Valley Road							Boston Road							Pleasant Valley Road							Boston Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars and Heavy Vehicles (Combined)

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	9	0	5	0	14	2	139	1	0	142	11	2	21	0	34	2	90	2	0	94	284
4:15 PM	7	0	5	0	12	5	134	2	0	141	26	4	7	0	37	0	88	1	0	89	279
4:30 PM	12	0	8	0	20	5	142	0	0	147	19	3	15	0	37	0	101	2	0	103	307
4:45 PM	3	0	4	0	7	5	140	1	0	146	15	1	16	0	32	1	75	2	0	78	263
Total	31	0	22	0	53	17	555	4	0	576	71	10	59	0	140	3	354	7	0	364	1133
5:00 PM	8	1	9	0	18	7	156	1	0	164	20	3	14	0	37	3	94	3	0	100	319
5:15 PM	10	0	4	0	14	5	136	0	0	141	14	2	13	0	29	4	68	2	0	74	258
5:30 PM	7	0	12	0	19	2	141	0	0	143	24	1	12	0	37	0	91	6	0	97	296
5:45 PM	11	0	7	0	18	2	125	1	0	128	22	1	15	0	38	0	72	4	0	76	260
Total	36	1	32	0	69	16	558	2	0	576	80	7	54	0	141	7	325	15	0	347	1133
Grand Total	67	1	54	0	122	33	1113	6	0	1152	151	17	113	0	281	10	679	22	0	711	2266
Approach %	54.9	0.8	44.3	0.0		2.9	96.6	0.5	0.0		53.7	6.0	40.2	0.0		1.4	95.5	3.1	0.0		
Total %	3.0	0.0	2.4	0.0	5.4	1.5	49.1	0.3	0.0	50.8	6.7	0.8	5.0	0.0	12.4	0.4	30.0	1.0	0.0	31.4	
Exiting Leg Total	72					884					17					1293					2266
Cars	66	1	54	0	121	32	1093	6	0	1131	144	17	107	0	268	10	670	22	0	702	2222
% Cars	98.5	100.0	100.0	0.0	99.2	97.0	98.2	100.0	0.0	98.2	95.4	100.0	94.7	0.0	95.4	100.0	98.7	100.0	0.0	98.7	98.1
Exiting Leg Total	71					868					17					1266					2222
Heavy Vehicles	1	0	0	0	1	1	20	0	0	21	7	0	6	0	13	0	9	0	0	9	44
% Heavy Vehicles	1.5	0.0	0.0	0.0	0.8	3.0	1.8	0.0	0.0	1.8	4.6	0.0	5.3	0.0	4.6	0.0	1.3	0.0	0.0	1.3	1.9
Exiting Leg Total	1					16					0					27					44

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

4:15 PM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	7	0	5	0	12	5	134	2	0	141	26	4	7	0	37	0	88	1	0	89	279
4:30 PM	12	0	8	0	20	5	142	0	0	147	19	3	15	0	37	0	101	2	0	103	307
4:45 PM	3	0	4	0	7	5	140	1	0	146	15	1	16	0	32	1	75	2	0	78	263
5:00 PM	8	1	9	0	18	7	156	1	0	164	20	3	14	0	37	3	94	3	0	100	319
Total Volume	30	1	26	0	57	22	572	4	0	598	80	11	52	0	143	4	358	8	0	370	1168
% Approach Total	52.6	1.8	45.6	0.0		3.7	95.7	0.7	0.0		55.9	7.7	36.4	0.0		1.1	96.8	2.2	0.0		
PHF	0.625	0.250	0.722	0.000	0.713	0.786	0.917	0.500	0.000	0.912	0.769	0.688	0.813	0.000	0.966	0.333	0.886	0.667	0.000	0.898	0.915
Cars	30	1	26	0	57	22	559	4	0	585	75	11	49	0	135	4	353	8	0	365	1142
Cars %	100.0	100.0	100.0	0.0	100.0	100.0	97.7	100.0	0.0	97.8	93.8	100.0	94.2	0.0	94.4	100.0	98.6	100.0	0.0	98.6	97.8
Heavy Vehicles	0	0	0	0	0	0	13	0	0	13	5	0	3	0	8	0	5	0	0	5	26
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.2	6.3	0.0	5.8	0.0	5.6	0.0	1.4	0.0	0.0	1.4	2.2
Cars Enter Leg	30	1	26	0	57	22	559	4	0	585	75	11	49	0	135	4	353	8	0	365	1142
Heavy Enter Leg	0	0	0	0	0	0	13	0	0	13	5	0	3	0	8	0	5	0	0	5	26
Total Entering Leg	30	1	26	0	57	22	572	4	0	598	80	11	52	0	143	4	358	8	0	370	1168
Cars Exiting Leg	41					454					9					638					1142
Heavy Exiting Leg	0					10					0					16					26
Total Exiting Leg	41					464					9					654					1168

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Cars

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	8	0	5	0	13	2	136	1	0	139	11	2	21	0	34	2	88	2	0	92	278
4:15 PM	7	0	5	0	12	5	131	2	0	138	25	4	7	0	36	0	84	1	0	85	271
4:30 PM	12	0	8	0	20	5	137	0	0	142	16	3	14	0	33	0	101	2	0	103	298
4:45 PM	3	0	4	0	7	5	138	1	0	144	15	1	15	0	31	1	75	2	0	78	260
Total	30	0	22	0	52	17	542	4	0	563	67	10	57	0	134	3	348	7	0	358	1107
5:00 PM	8	1	9	0	18	7	153	1	0	161	19	3	13	0	35	3	93	3	0	99	313
5:15 PM	10	0	4	0	14	4	134	0	0	138	14	2	12	0	28	4	68	2	0	74	254
5:30 PM	7	0	12	0	19	2	141	0	0	143	22	1	11	0	34	0	89	6	0	95	291
5:45 PM	11	0	7	0	18	2	123	1	0	126	22	1	14	0	37	0	72	4	0	76	257
Total	36	1	32	0	69	15	551	2	0	568	77	7	50	0	134	7	322	15	0	344	1115
Grand Total	66	1	54	0	121	32	1093	6	0	1131	144	17	107	0	268	10	670	22	0	702	2222
Approach %	54.5	0.8	44.6	0.0		2.8	96.6	0.5	0.0		53.7	6.3	39.9	0.0		1.4	95.4	3.1	0.0		
Total %	3.0	0.0	2.4	0.0	5.4	1.4	49.2	0.3	0.0	50.9	6.5	0.8	4.8	0.0	12.1	0.5	30.2	1.0	0.0	31.6	
Exiting Leg Total	71					868					17					1266					2222

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

4:15 PM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:15 PM	7	0	5	0	12	5	131	2	0	138	25	4	7	0	36	0	84	1	0	85	271
4:30 PM	12	0	8	0	20	5	137	0	0	142	16	3	14	0	33	0	101	2	0	103	298
4:45 PM	3	0	4	0	7	5	138	1	0	144	15	1	15	0	31	1	75	2	0	78	260
5:00 PM	8	1	9	0	18	7	153	1	0	161	19	3	13	0	35	3	93	3	0	99	313
Total Volume	30	1	26	0	57	22	559	4	0	585	75	11	49	0	135	4	353	8	0	365	1142
% Approach Total	52.6	1.8	45.6	0.0		3.8	95.6	0.7	0.0		55.6	8.1	36.3	0.0		1.1	96.7	2.2	0.0		
PHF	0.625	0.250	0.722	0.000	0.713	0.786	0.913	0.500	0.000	0.908	0.750	0.688	0.817	0.000	0.938	0.333	0.874	0.667	0.000	0.886	0.912
Entering Leg	30	1	26	0	57	22	559	4	0	585	75	11	49	0	135	4	353	8	0	365	1142
Exiting Leg	41					454					9					638					1142
Total	98					1039					144					1003					2284

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	2	6
4:15 PM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	4	0	0	0	4	8
4:30 PM	0	0	0	0	0	0	5	0	0	5	3	0	1	0	4	0	0	0	0	0	0	9
4:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	3
Total	1	0	0	0	1	0	13	0	0	13	4	0	2	0	6	0	6	0	0	0	6	26
5:00 PM	0	0	0	0	0	0	3	0	0	3	1	0	1	0	2	0	1	0	0	0	1	6
5:15 PM	0	0	0	0	0	1	2	0	0	3	0	0	1	0	1	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	1	0	3	0	2	0	0	0	2	5
5:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	3
Total	0	0	0	0	0	1	7	0	0	8	3	0	4	0	7	0	3	0	0	0	3	18
Grand Total	1	0	0	0	1	1	20	0	0	21	7	0	6	0	13	0	9	0	0	0	9	44
Approach %	100.0	0.0	0.0	0.0		4.8	95.2	0.0	0.0		53.8	0.0	46.2	0.0		0.0	100.0	0.0	0.0			
Total %	2.3	0.0	0.0	0.0	2.3	2.3	45.5	0.0	0.0	47.7	15.9	0.0	13.6	0.0	29.5	0.0	20.5	0.0	0.0	0.0	20.5	
Exiting Leg Total	1					16					0					27					44	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total	0					0					0					0					0	
Single-Unit Trucks	1	0	0	0	1	1	16	0	0	17	4	0	2	0	6	0	6	0	0	0	6	30
% Single-Unit	100.0	0.0	0.0	0.0	100.0	100.0	80.0	0.0	0.0	81.0	57.1	0.0	33.3	0.0	46.2	0.0	66.7	0.0	0.0	66.7	68.2	
Exiting Leg Total	1					10					0					19					30	
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	3	0	4	0	7	0	3	0	0	0	3	14
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	19.0	42.9	0.0	66.7	0.0	53.8	0.0	33.3	0.0	0.0	33.3	31.8	
Exiting Leg Total	0					6					0					8					14	

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

4:00 PM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	0	0	0	2	6
4:15 PM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	4	0	0	0	4	8
4:30 PM	0	0	0	0	0	0	5	0	0	5	3	0	1	0	4	0	0	0	0	0	0	9
4:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	0	3
Total Volume	1	0	0	0	1	0	13	0	0	13	4	0	2	0	6	0	6	0	0	0	6	26
% Approach Total	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		66.7	0.0	33.3	0.0		0.0	100.0	0.0	0.0			
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.650	0.000	0.000	0.650	0.333	0.000	0.500	0.000	0.375	0.000	0.375	0.000	0.000	0.375	0.722	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Single-Unit Trucks	1	0	0	0	1	0	9	0	0	9	3	0	0	0	3	0	4	0	0	0	4	17
Single-Unit %	100.0	0.0	0.0	0.0	100.0	0.0	69.2	0.0	0.0	69.2	75.0	0.0	0.0	0.0	50.0	0.0	66.7	0.0	0.0	66.7	65.4	
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	2	0	0	0	2	9
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	30.8	0.0	0.0	30.8	25.0	0.0	100.0	0.0	50.0	0.0	33.3	0.0	0.0	33.3	34.6	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Single-Unit Trucks	1	0	0	0	1	0	9	0	0	9	3	0	0	0	3	0	4	0	0	0	4	17
Articulated Trucks	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	2	0	0	0	2	9
Total Entering Leg	1	0	0	0	1	0	13	0	0	13	4	0	2	0	6	0	6	0	0	0	6	26
Buses	0					0					0					0					0	
Single-Unit Trucks	0					7					0					10					17	
Articulated Trucks	0					3					0					6					9	
Total Exiting Leg	0					10					0					16					26	

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Buses

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0					0					0					0					0

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

4:00 PM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0					0					0					0					0
Total	0					0					0					0					0

PDI File #: **228509 C**
Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
Location: **E: Boston Road W: Boston Road**
City, State: **Sutton, MA**
Client: **VAI/S. Kelly**
Site Code: **9302**
Count Date: **Thursday, April 14, 2022**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:



Single-Unit Trucks

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	5
4:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	0	2	5
4:30 PM	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	0	0	0	0	0	0	7
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	9	0	0	9	3	0	0	0	3	0	4	0	0	4	17	
5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	1	0	0	0	1	5
5:15 PM	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	0	1	3
5:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	1	7	0	0	8	1	0	2	0	3	0	2	0	0	2	13	
Grand Total	1	0	0	0	1	1	16	0	0	17	4	0	2	0	6	0	6	0	0	6	30	
Approach %	100.0	0.0	0.0	0.0		5.9	94.1	0.0	0.0		66.7	0.0	33.3	0.0		0.0	100.0	0.0	0.0			
Total %	3.3	0.0	0.0	0.0	3.3	3.3	53.3	0.0	0.0	56.7	13.3	0.0	6.7	0.0	20.0	0.0	20.0	0.0	0.0	20.0		
Exiting Leg Total	1					10					0					19					30	

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

4:00 PM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total	
	from North					from East					from South					from West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	5
4:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	2	0	0	0	2	5
4:30 PM	0	0	0	0	0	0	5	0	0	5	2	0	0	0	2	0	0	0	0	0	0	7
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	9	0	0	9	3	0	0	0	3	0	4	0	0	4	17	
% Approach Total	100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0			
PHF	0.250	0.000	0.000	0.000	0.250	0.000	0.450	0.000	0.000	0.450	0.375	0.000	0.000	0.000	0.375	0.000	0.500	0.000	0.000	0.500	0.607	
Entering Leg	1	0	0	0	1	0	9	0	0	9	3	0	0	0	3	0	4	0	0	4	17	
Exiting Leg	0					7					0					10					17	
Total	1					16					3					14					34	

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Articulated Trucks

	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3
Total	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	2	0	0	2	9
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	1	0	0	1	5
Grand Total	0	0	0	0	0	0	4	0	0	4	3	0	4	0	7	0	3	0	0	3	14
Approach %	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		42.9	0.0	57.1	0.0		0.0	100.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	21.4	0.0	28.6	0.0	50.0	0.0	21.4	0.0	0.0	21.4	
Exiting Leg Total	0					6					0					8					14

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

4:00 PM	Pleasant Valley Road					Boston Road					Pleasant Valley Road					Boston Road					Total
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	0	0	0	3
Total Volume	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	2	0	0	2	9
% Approach Total	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		33.3	0.0	66.7	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.250	0.000	0.500	0.000	0.375	0.000	0.250	0.000	0.000	0.250	0.750
Entering Leg	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	2	0	0	2	9
Exiting Leg	0					3					0					6					9
Total	0					7					3					8					18

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Bicycles (on Roadway and Crosswalks)

	Pleasant Valley Road								Boston Road								Pleasant Valley Road								Boston Road								Total
	from North								from East								from South								from West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total					
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
Grand Total	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3				
Approach %	0.0	0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0						
Total %	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Exiting Leg Total	0							3							0							0							3				

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

4:45 PM	Pleasant Valley Road							Boston Road							Pleasant Valley Road							Boston Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
% Approach Total	0.0	0.0	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	
Entering Leg	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Exiting Leg	0							2							0							0							2
Total	2							2							0							0							4

PDI File #: **228509 C**
 Location: **N: Pleasant Valley Road S: Pleasant Valley Road**
 Location: **E: Boston Road W: Boston Road**
 City, State: **Sutton, MA**
 Client: **VAI/S. Kelly**
 Site Code: **9302**
 Count Date: **Thursday, April 14, 2022**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Pedestrians

	Pleasant Valley Road							Boston Road							Pleasant Valley Road							Boston Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg Total	0							0							0							0							0

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

4:00 PM	Pleasant Valley Road							Boston Road							Pleasant Valley Road							Boston Road							Total
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							0

Pleasant Valley Road
just north of Route 146
City, State: Sutton, MA
Client: VAI/ S. Kelly
Site Code: 9302



PDI File #: 228509 ATR-B (Speed)

Count Date
Tuesday, September 20, 2022

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	4	2	1	0	0	0	0	0	0	8	36.0	33.8
1:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	4	36.7	32.0
2:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	33.4	31.7
3:00 AM	0	0	0	2	0	1	0	0	0	0	0	0	0	3	33.6	30.3
4:00 AM	0	0	0	1	6	2	0	0	0	0	0	0	0	9	34.6	31.6
5:00 AM	0	0	1	19	19	3	0	0	0	0	0	0	0	42	33.0	29.6
6:00 AM	0	0	3	35	61	21	2	0	0	0	0	0	0	122	35.0	31.3
7:00 AM	0	0	4	30	68	46	3	0	0	0	0	0	0	151	36.0	32.3
8:00 AM	0	0	2	18	55	36	1	0	0	0	0	0	0	112	36.0	32.8
9:00 AM	0	0	3	19	37	17	1	0	0	0	0	0	0	77	35.0	31.4
10:00 AM	0	0	2	13	36	13	1	0	0	0	0	0	0	65	35.0	31.8
11:00 AM	0	0	0	25	50	23	0	0	0	0	0	0	0	98	35.0	31.9
12:00 PM	0	0	5	28	43	13	1	1	0	0	0	0	0	91	35.0	30.9
1:00 PM	0	1	4	25	45	15	2	0	0	0	0	0	0	92	35.0	31.0
2:00 PM	0	1	9	39	67	21	2	0	0	0	0	0	0	139	35.0	30.7
3:00 PM	0	1	1	26	58	24	2	0	0	0	0	0	0	112	35.0	31.9
4:00 PM	0	0	2	23	61	30	4	1	0	0	0	0	0	121	36.0	32.5
5:00 PM	0	0	2	30	69	25	5	0	0	0	0	0	0	131	35.5	32.0
6:00 PM	0	0	1	11	53	21	3	0	0	0	0	0	0	89	35.0	32.7
7:00 PM	0	0	3	15	30	11	0	0	0	0	0	0	0	59	35.0	31.1
8:00 PM	0	0	2	10	21	6	3	0	0	0	0	0	0	42	35.0	31.1
9:00 PM	0	0	1	8	14	3	1	1	0	0	0	0	0	28	35.0	32.0
10:00 PM	0	0	1	13	20	3	1	0	0	0	0	0	0	38	33.0	30.6
11:00 PM	0	0	0	8	7	2	0	0	0	0	0	0	0	17	33.6	30.4
Total	0	3	46	402	826	340	33	3	0	0	0	0	0	1653	35.0	31.7
Percent	0.00%	0.18%	2.78%	24.32%	49.97%	20.57%	2.00%	0.18%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak
Volume 0 0 4 35 68 46 3 0 0 0 0 0 0 151

PM Peak
Volume 0 1 9 39 69 30 5 1 0 0 0 0 0 139

15th Percentile:	28.0 MPH	Average Speed:	31.7 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	1052
85th Percentile:	35.0 MPH	Number in Pace:	1368	Percent of Vehicles > 30 MPH:	63.6%
95th Percentile:	38.0 MPH	Percent in Pace:	82.8%		

Pleasant Valley Road
just north of Route 146
City, State: Sutton, MA
Client: VAI/ S. Kelly
Site Code: 9302



PDI File #: 228509 ATR-B (Speed)

Count Date
Tuesday, September 20, 2022

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	34.0	34.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	2	23.9	23.5
5:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	26.6	25.5
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
7:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	4	30.0	28.0
8:00 AM	0	0	1	1	3	1	0	0	0	0	0	0	0	6	32.5	30.3
9:00 AM	0	0	0	6	1	1	0	0	0	0	0	0	0	8	30.9	28.9
10:00 AM	0	0	1	3	3	1	0	0	0	0	0	0	0	8	32.9	28.6
11:00 AM	0	4	2	3	2	1	0	0	0	0	0	0	0	12	32.4	25.1
12:00 PM	0	1	2	4	0	0	1	0	0	1	0	0	0	9	38.2	29.9
1:00 PM	0	0	1	3	1	0	0	0	0	1	0	0	0	6	38.0	32.2
2:00 PM	0	0	2	1	2	0	0	1	0	0	0	0	0	6	37.5	30.8
3:00 PM	0	0	1	2	1	2	0	0	0	0	1	0	0	7	37.6	34.9
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
5:00 PM	0	0	2	2	1	1	0	0	0	0	0	0	0	6	31.8	28.0
6:00 PM	0	0	0	3	3	0	0	0	0	0	0	0	0	6	31.3	29.0
7:00 PM	0	0	0	3	1	0	0	0	0	0	0	0	0	4	30.1	28.8
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
9:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	27.0	27.0
10:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	34.0	34.0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Total	0	5	15	35	22	7	1	1	0	2	1	0	0	89	34.0	29.2
Percent	0.00%	5.62%	16.85%	39.33%	24.72%	7.87%	1.12%	1.12%	0.00%	2.25%	1.12%	0.00%	0.00%			

AM Peak
Volume

11:00 AM	4:00 AM	9:00 AM	8:00 AM	8:00 AM										11:00 AM
0	4	2	6	3	1	0	0	0	0	0	0	0	0	12

PM Peak
Volume

12:00 PM	12:00 PM	12:00 PM	6:00 PM	3:00 PM	12:00 PM	2:00 PM			12:00 PM	3:00 PM				12:00 PM
0	1	2	4	3	2	1	1	0	1	1	0	0		9

15th Percentile:	24.0 MPH	Average Speed:	29.2 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	23 to 32 MPH	Number of Vehicles > 30 MPH:	29
85th Percentile:	34.0 MPH	Number in Pace:	62	Percent of Vehicles > 30 MPH:	32.6%
95th Percentile:	40.2 MPH	Percent in Pace:	69.7%		

Pleasant Valley Road
just north of Route 146
City, State: Sutton, MA
Client: VAI/ S. Kelly
Site Code: 9302



PDI File #: 228509 ATR-B (Speed)

Count Date
Tuesday, September 20, 2022

Speed (60-minute)

Combined NB and SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	5	2	1	0	0	0	0	0	0	9	35.8	33.8
1:00 AM	0	0	0	2	0	2	0	0	0	0	0	0	0	4	36.7	32.0
2:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	33.4	31.7
3:00 AM	0	0	0	2	0	1	0	0	0	0	0	0	0	3	33.6	30.3
4:00 AM	0	0	2	1	6	2	0	0	0	0	0	0	0	11	34.0	30.1
5:00 AM	0	0	2	20	19	3	0	0	0	0	0	0	0	44	33.0	29.4
6:00 AM	0	0	3	35	61	21	2	0	0	0	0	0	0	122	35.0	31.3
7:00 AM	0	0	4	32	70	46	3	0	0	0	0	0	0	155	36.0	32.2
8:00 AM	0	0	3	19	58	37	1	0	0	0	0	0	0	118	36.0	32.6
9:00 AM	0	0	3	25	38	18	1	0	0	0	0	0	0	85	35.0	31.2
10:00 AM	0	0	3	16	39	14	1	0	0	0	0	0	0	73	35.0	31.5
11:00 AM	0	4	2	28	52	24	0	0	0	0	0	0	0	110	35.0	31.1
12:00 PM	0	1	7	32	43	13	2	1	0	1	0	0	0	100	35.0	30.8
1:00 PM	0	1	5	28	46	15	2	0	0	1	0	0	0	98	35.0	31.1
2:00 PM	0	1	11	40	69	21	2	1	0	0	0	0	0	145	35.0	30.7
3:00 PM	0	1	2	28	59	26	2	0	0	0	1	0	0	119	35.0	32.1
4:00 PM	0	0	2	23	61	30	4	1	0	0	0	0	0	121	36.0	32.5
5:00 PM	0	0	4	32	70	26	5	0	0	0	0	0	0	137	35.6	31.8
6:00 PM	0	0	1	14	56	21	3	0	0	0	0	0	0	95	35.0	32.5
7:00 PM	0	0	3	18	31	11	0	0	0	0	0	0	0	63	35.0	30.9
8:00 PM	0	0	2	10	21	6	3	0	0	0	0	0	0	42	35.0	31.1
9:00 PM	0	0	1	9	14	3	1	1	0	0	0	0	0	29	34.8	31.8
10:00 PM	0	0	1	13	21	3	1	0	0	0	0	0	0	39	33.3	30.7
11:00 PM	0	0	0	8	7	2	0	0	0	0	0	0	0	17	33.6	30.4
Total	0	8	61	437	848	347	34	4	0	2	1	0	0	1742	35.0	31.5
Percent	0.00%	0.46%	3.50%	25.09%	48.68%	19.92%	1.95%	0.23%	0.00%	0.11%	0.06%	0.00%	0.00%			

AM Peak	11:00 AM	7:00 AM	6:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM							7:00 AM
Volume	0	4	4	35	70	46	3	0	0	0	0	0	0	155
PM Peak	12:00 PM	2:00 PM	2:00 PM	5:00 PM	4:00 PM	5:00 PM	12:00 PM		12:00 PM	3:00 PM				2:00 PM
Volume	0	1	11	40	70	30	5	1	0	1	1	0	0	145

15th Percentile:	27.0 MPH	Average Speed:	31.5 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	1081
85th Percentile:	35.0 MPH	Number in Pace:	1418	Percent of Vehicles > 30 MPH:	62.1%
95th Percentile:	38.0 MPH	Percent in Pace:	81.4%		

Pleasant Valley Road
just north of Route 146
City, State: Sutton, MA
Client: VAI/ S. Kelly
Site Code: 9302



PDI File #: 228509 ATR-B (Speed)

Count Date
Wednesday, September 21, 2022

Speed (60-minute)

NB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	4	0	0	0	0	0	0	0	0	5	32.4	31.2
1:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	32.0	30.7
2:00 AM	0	0	0	0	3	0	1	0	0	0	0	0	0	4	37.9	35.0
3:00 AM	0	0	1	2	1	0	1	0	0	0	0	0	0	5	35.2	30.4
4:00 AM	0	0	0	1	4	2	0	0	0	0	0	0	0	7	35.2	32.1
5:00 AM	0	0	3	8	18	4	0	0	0	0	0	0	0	33	34.0	30.4
6:00 AM	1	1	3	39	64	17	2	1	0	0	0	0	0	128	35.0	30.7
7:00 AM	0	0	2	16	70	43	4	0	0	0	0	0	0	135	36.0	33.1
8:00 AM	0	0	0	11	69	31	2	0	0	0	0	0	0	113	36.0	33.1
9:00 AM	0	0	3	24	28	22	1	0	0	0	0	0	0	78	36.0	31.5
10:00 AM	1	1	3	20	38	16	0	0	0	0	0	0	0	79	35.0	30.7
11:00 AM	0	0	1	18	37	16	2	0	0	0	0	0	0	74	36.0	32.0
12:00 PM	0	0	5	20	49	14	0	0	0	0	0	0	0	88	35.0	31.3
1:00 PM	0	1	2	24	39	14	2	0	0	0	0	0	0	82	35.0	31.1
2:00 PM	0	0	2	41	69	24	4	0	0	0	0	0	0	140	35.0	31.6
3:00 PM	0	0	0	27	72	22	2	0	0	0	0	0	0	123	35.0	32.0
4:00 PM	0	0	1	32	83	18	5	0	0	0	0	0	0	139	35.0	31.8
5:00 PM	0	1	0	28	60	48	3	0	0	0	0	0	0	140	37.0	32.8
6:00 PM	0	0	3	17	61	19	0	0	0	0	0	0	0	100	35.0	31.9
7:00 PM	0	0	2	19	28	9	0	0	0	0	0	0	0	58	34.5	31.2
8:00 PM	0	0	0	8	21	8	1	0	0	0	0	0	0	38	35.5	32.0
9:00 PM	0	0	1	4	21	7	1	0	0	0	0	0	0	34	36.1	32.3
10:00 PM	0	0	0	11	16	6	2	1	0	0	0	0	0	36	35.8	32.2
11:00 PM	0	0	0	2	6	5	0	0	0	0	0	0	0	13	35.2	33.3
Total	2	4	32	374	863	345	33	2	0	0	0	0	0	1655	36.0	31.9
Percent	0.12%	0.24%	1.93%	22.60%	52.15%	20.85%	1.99%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	6:00 AM	5:00 AM	6:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM							7:00 AM
Volume	1	1	3	39	70	43	4	1	0	0	0	0	0	0	135

PM Peak		1:00 PM	12:00 PM	2:00 PM	4:00 PM	5:00 PM	4:00 PM	10:00 PM							2:00 PM
Volume	0	1	5	41	83	48	5	1	0	0	0	0	0	140	

15th Percentile:	28.0 MPH	Average Speed:	31.9 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	1107
85th Percentile:	36.0 MPH	Number in Pace:	1391	Percent of Vehicles > 30 MPH:	66.9%
95th Percentile:	38.0 MPH	Percent in Pace:	84.0%		

Pleasant Valley Road
just north of Route 146
City, State: Sutton, MA
Client: VAI/ S. Kelly
Site Code: 9302



PDI File #: 228509 ATR-B (Speed)

Count Date
Wednesday, September 21, 2022

Speed (60-minute)

SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26.0	26.0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
6:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	4	31.1	28.8
7:00 AM	1	0	0	2	2	1	0	0	0	0	0	0	0	6	33.0	27.8
8:00 AM	0	0	1	2	2	1	0	0	0	0	0	0	0	6	33.5	29.2
9:00 AM	0	0	1	3	3	2	0	0	0	0	0	0	0	9	35.6	30.1
10:00 AM	0	0	1	3	2	0	0	0	0	0	0	0	0	6	30.0	28.0
11:00 AM	0	0	2	3	2	0	1	0	0	0	0	0	0	8	32.9	29.4
12:00 PM	0	0	2	4	1	0	0	0	0	0	0	0	0	7	29.1	26.7
1:00 PM	0	0	0	3	2	1	0	0	0	0	0	0	0	6	31.8	30.2
2:00 PM	1	1	2	1	1	0	0	0	0	0	0	0	0	6	28.0	22.2
3:00 PM	0	1	2	1	1	1	0	0	0	0	0	0	0	6	34.0	27.2
4:00 PM	1	1	1	6	5	2	1	0	0	0	0	0	0	17	35.8	28.5
5:00 PM	0	0	0	4	3	0	0	0	0	0	0	0	0	7	32.1	29.3
6:00 PM	0	0	0	2	5	1	0	0	0	0	0	0	0	8	33.0	31.0
7:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28.0	28.0
8:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	2	30.1	28.0
9:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28.0	28.0
10:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	27.0	27.0
11:00 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	2	27.6	26.5
Total	3	3	12	43	32	9	2	0	0	0	0	0	0	104	33.0	28.4
Percent	2.88%	2.88%	11.54%	41.35%	30.77%	8.65%	1.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	7:00 AM		11:00 AM	9:00 AM	9:00 AM	9:00 AM	11:00 AM							9:00 AM
Volume	1	0	2	3	3	2	1	0	0	0	0	0	0	9

PM Peak	2:00 PM	2:00 PM	12:00 PM	4:00 PM	4:00 PM	4:00 PM	4:00 PM							4:00 PM
Volume	1	1	2	6	5	2	1	0	0	0	0	0	0	17

15th Percentile:	24.0 MPH	Average Speed:	28.4 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 30 MPH:	30
85th Percentile:	33.0 MPH	Number in Pace:	77	Percent of Vehicles > 30 MPH:	28.8%
95th Percentile:	36.9 MPH	Percent in Pace:	74.0%		

Pleasant Valley Road
just north of Route 146
City, State: Sutton, MA
Client: VAI/ S. Kelly
Site Code: 9302



PDI File #: 228509 ATR-B (Speed)

Count Date
Wednesday, September 21, 2022

Speed (60-minute)

Combined NB and SB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	0	0	0	1	4	0	0	0	0	0	0	0	0	5	32.4	31.2
1:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	3	32.0	30.7
2:00 AM	0	0	0	0	3	0	1	0	0	0	0	0	0	4	37.9	35.0
3:00 AM	0	0	1	2	1	0	1	0	0	0	0	0	0	5	35.2	30.4
4:00 AM	0	0	0	2	4	2	0	0	0	0	0	0	0	8	34.9	31.4
5:00 AM	0	0	3	8	18	4	0	0	0	0	0	0	0	33	34.0	30.4
6:00 AM	1	1	3	41	66	17	2	1	0	0	0	0	0	132	34.4	30.7
7:00 AM	1	0	2	18	72	44	4	0	0	0	0	0	0	141	36.0	32.8
8:00 AM	0	0	1	13	71	32	2	0	0	0	0	0	0	119	36.0	32.9
9:00 AM	0	0	4	27	31	24	1	0	0	0	0	0	0	87	36.0	31.4
10:00 AM	1	1	4	23	40	16	0	0	0	0	0	0	0	85	35.0	30.5
11:00 AM	0	0	3	21	39	16	3	0	0	0	0	0	0	82	35.9	31.8
12:00 PM	0	0	7	24	50	14	0	0	0	0	0	0	0	95	34.0	31.0
1:00 PM	0	1	2	27	41	15	2	0	0	0	0	0	0	88	35.0	31.0
2:00 PM	1	1	4	42	70	24	4	0	0	0	0	0	0	146	35.0	31.2
3:00 PM	0	1	2	28	73	23	2	0	0	0	0	0	0	129	35.0	31.8
4:00 PM	1	1	2	38	88	20	6	0	0	0	0	0	0	156	35.0	31.4
5:00 PM	0	1	0	32	63	48	3	0	0	0	0	0	0	147	37.0	32.6
6:00 PM	0	0	3	19	66	20	0	0	0	0	0	0	0	108	35.0	31.8
7:00 PM	0	0	2	20	28	9	0	0	0	0	0	0	0	59	34.3	31.2
8:00 PM	0	0	0	9	22	8	1	0	0	0	0	0	0	40	35.2	31.8
9:00 PM	0	0	1	5	21	7	1	0	0	0	0	0	0	35	36.0	32.2
10:00 PM	0	0	0	12	16	6	2	1	0	0	0	0	0	37	35.6	32.1
11:00 PM	0	0	0	4	6	5	0	0	0	0	0	0	0	15	35.0	32.4
Total	5	7	44	417	895	354	35	2	0	0	0	0	0	1759	35.0	31.7
Percent	0.28%	0.40%	2.50%	23.71%	50.88%	20.13%	1.99%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	6:00 AM	6:00 AM	9:00 AM	6:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM						7:00 AM
Volume	1	1	4	41	72	44	4	1	0	0	0	0	0	141
PM Peak	2:00 PM	1:00 PM	12:00 PM	2:00 PM	4:00 PM	5:00 PM	4:00 PM	10:00 PM						4:00 PM
Volume	1	1	7	42	88	48	6	1	0	0	0	0	0	156

15th Percentile:	28.0 MPH	Average Speed:	31.7 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	32.0 MPH	10 MPH Pace:	27 to 36 MPH	Number of Vehicles > 30 MPH:	1137
85th Percentile:	35.0 MPH	Number in Pace:	1456	Percent of Vehicles > 30 MPH:	64.6%
95th Percentile:	38.0 MPH	Percent in Pace:	82.8%		

APPENDIX B – MOTOR VEHICLE CRASH DATA



#	Crash Number	City Town Name	Crash Date	Crash Severity	Time	Max Injury Severity Reported	Number of	Light Conditions	Manner of Collision	Road Surface	Condition	Weather Conditions	Street Number	Roadway	Near Intersection Roadway
71	4621522	SUTTON	Sunday, October 28, 2018	Non-fatal injury	6:35 PM	Non-fatal injury - Non-incapacitating	2	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
75	4647471	SUTTON	Saturday, November 17, 2018	Non-fatal injury	9:28 PM	Non-fatal injury - Non-incapacitating	2	Dark - lighted roadway	Angle	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE	
38	4343699	SUTTON	Thursday, March 2, 2017	Non-fatal injury	1:20 AM	Non-fatal injury - Possible	2	Dark - roadway not lighted	Sideswipe, same direction	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 N	BOSTON ROAD
5	4191473	SUTTON	Monday, May 16, 2016	Non-fatal injury	2:50 PM	Non-fatal injury - Non-incapacitating	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
13	4232796	SUTTON	Monday, July 11, 2016	Non-fatal injury	8:10 AM	Non-fatal injury - Possible	2	Daylight	Rear-end	Dry	Dry	Cloudy		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
16	4229000	SUTTON	Tuesday, August 2, 2016	Non-fatal injury	2:40 PM	Non-fatal injury - Possible	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
19	4245489	SUTTON	Tuesday, September 6, 2016	Non-fatal injury	4:44 PM	Non-fatal injury - Non-incapacitating	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 N	BOSTON ROAD
23	4259816	SUTTON	Wednesday, October 5, 2016	Non-fatal injury	10:37 AM	Non-fatal injury - Possible	2	Daylight	Rear-end	Dry	Dry	Clear		Rte 146 S	BOSTON ROAD
24	4284835	SUTTON	Monday, October 10, 2016	Non-fatal injury	2:03 PM	Non-fatal injury - Non-incapacitating	6	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE	BOSTON ROAD
37	4347930	SUTTON	Thursday, February 16, 2017	Non-fatal injury	9:20 AM	Non-fatal injury - Possible	3	Daylight	Rear-end	Dry	Dry	Cloudy		Rte 146	BOSTON ROAD
41	4378167	SUTTON	Wednesday, June 7, 2017	Non-fatal injury	5:55 PM	Non-fatal injury - Possible	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 S / BOSTON ROAD /	
43	4412665	SUTTON	Sunday, August 6, 2017	Non-fatal injury	2:40 PM	Non-fatal injury - Possible	2	Daylight	Sideswipe, same direction	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 S / BOSTON ROAD	
56	4520693	SUTTON	Saturday, March 31, 2018	Non-fatal injury	10:30 AM	Non-fatal injury - Non-incapacitating	2	Daylight	Angle	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
64	4583497	SUTTON	Sunday, August 5, 2018	Non-fatal injury	5:45 PM	Non-fatal injury - Non-incapacitating	2	Daylight	Rear-end	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
67	4608665	SUTTON	Thursday, September 27, 2018	Non-fatal injury	6:31 AM	Non-fatal injury - Possible	2	Daylight	Angle	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	
86	4674645	SUTTON	Saturday, March 2, 2019	Non-fatal injury	5:58 PM	Suspected Minor Injury (B)	2	Daylight	Rear-end	Dry	Dry	Cloudy		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	
87	4692400	SUTTON	Thursday, April 4, 2019	Non-fatal injury	9:15 AM	Non-fatal injury - Possible	4	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	BOSTON ROAD
88	4690116	SUTTON	Saturday, April 13, 2019	Non-fatal injury	3:38 PM	Suspected Minor Injury (B)	4	Daylight	Angle	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
94	4761507	SUTTON	Sunday, July 28, 2019	Non-fatal injury	6:21 AM	Possible Injury (C)	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
95	4761507	SUTTON	Sunday, July 28, 2019	Non-fatal injury	6:21 AM	Possible Injury (C)	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
96	4761507	SUTTON	Sunday, July 28, 2019	Non-fatal injury	6:21 AM	Possible Injury (C)	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
97	4754854	SUTTON	Saturday, August 17, 2019	Non-fatal injury	10:43 AM	Possible Injury (C)	2	Daylight	Rear-end	Dry	Dry	Cloudy		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
113	4838195	SUTTON	Friday, April 17, 2020	Non-fatal injury	6:47 PM	Suspected Minor Injury (B)	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
117	4845198	SUTTON	Tuesday, May 12, 2020	Non-fatal injury	2:30 PM	Possible Injury (C)	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
118	4869584	SUTTON	Saturday, July 18, 2020	Non-fatal injury	1:54 PM	Possible Injury (C)	2	Daylight	Angle	Dry	Dry	Clear		BOSTON ROAD / PLEASANT VALLEY ROAD	
120	4870782	SUTTON	Thursday, August 6, 2020	Non-fatal injury	11:46 AM	Suspected Minor Injury (B)	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
83	4678471	SUTTON	Wednesday, February 13, 2019	Non-fatal injury	7:25 AM	Non-fatal injury - Possible	2	Daylight	Rear-end	Ice		Sleet, hail (freezing rain or drizzle)/Snow		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
34	4344209	SUTTON	Tuesday, January 24, 2017	Non-fatal injury	3:18 AM	Non-fatal injury - Possible	1	Dark - lighted roadway	Angle	Dry	Dry	Cloudy/Sleet, hail (freezing rain or drizzle)		WORCESTER PROVIDENCE TURNPIKE Rte 146 S	BOSTON ROAD
48	4454704	SUTTON	Tuesday, October 24, 2017	Non-fatal injury	4:12 AM	Non-fatal injury - Non-incapacitating	3	Dark - roadway not lighted	Single vehicle crash	Wet	Rain			Rte 146 S	BOSTON ROAD
103	4780626	SUTTON	Tuesday, October 22, 2019	Non-fatal injury	6:04 AM	Suspected Minor Injury (B)	2	Dark - roadway not lighted	Rear-end	Wet		Cloudy/Rain		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte 146	
115	4838489	SUTTON	Sunday, April 26, 2020	Non-fatal injury	8:45 PM	Suspected Minor Injury (B)	2	Dark - roadway not lighted	Sideswipe, same direction	Wet	Rain			WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	BOSTON ROAD
30	4322595	SUTTON	Sunday, December 11, 2016	Non-fatal injury	10:22 PM	Non-fatal injury - Non-incapacitating	1	Dark - unknown roadway lighting	Single vehicle crash	Wet	Rain			WORCESTER PROVIDENCE TURNPIKE Rte 146 S	BOSTON ROAD
46	4427977	SUTTON	Wednesday, September 20, 2017	Non-fatal injury	8:20 AM	Non-fatal injury - Non-incapacitating	4	Daylight	Single vehicle crash	Wet	Rain			BOSTON ROAD	
100	4764045	SUTTON	Friday, October 11, 2019	Non-fatal injury	4:28 PM	Possible Injury (C)	4	Daylight	Rear-end	Wet		Cloudy/Rain		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
114	4851289	SUTTON	Saturday, April 18, 2020	Non-fatal injury	5:35 PM	Possible Injury (C)	2	Daylight	Rear to Side	Wet		Rain/Snow		WORCESTER PROVIDENCE TURNPIKE Rte 146 / BOSTON ROAD	
91	4731164	SUTTON	Monday, June 10, 2019	Property damage only (none injured)	10:19 PM	No Apparent Injury (O)	1	Dark - lighted roadway	Single vehicle crash			Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	BOSTON ROAD
90	4729244	SUTTON	Saturday, May 25, 2019	Property damage only (none injured)	3:02 PM	No injury	2	Daylight	Rear-end			Clear		WORCESTER PROVIDENCE TURNPIKE	BOSTON ROAD
517	4732604	SUTTON	Tuesday, July 16, 2019	Property damage only (none injured)	9:11 AM	No Apparent Injury (O)	2	Daylight	Rear-end			Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146	
25	4266802	SUTTON	Friday, October 14, 2016	Property damage only (none injured)	7:30 PM	No injury	2	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
31	4319644	SUTTON	Tuesday, December 20, 2016	Property damage only (none injured)	2:15 AM	No injury	1	Dark - lighted roadway	Single vehicle crash	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
39	4341064	SUTTON	Friday, March 3, 2017	Property damage only (none injured)	6:18 PM	No injury	2	Dark - lighted roadway	Sideswipe, same direction	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 S	ARMSBY ROAD
44	4411938	SUTTON	Saturday, August 26, 2017	Property damage only (none injured)	5:45 AM	No injury	1	Dark - lighted roadway	Single vehicle crash	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 N	Rte 146
49	4503124	SUTTON	Saturday, November 25, 2017	Property damage only (none injured)	9:05 PM	No injury	1	Dark - lighted roadway	Single vehicle crash	Dry		Clear/Unknown		WORCESTER PROVIDENCE TURNPIKE Rte 146	BOSTON ROAD
52	4482362	SUTTON	Saturday, December 16, 2017	Property damage only (none injured)	1:25 AM	No injury	3	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		Rte 146 S	BOSTON ROAD
55	4517859	SUTTON	Sunday, March 18, 2018	Property damage only (none injured)	1:00 AM	No injury	1	Dark - lighted roadway	Single vehicle crash	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	BOSTON ROAD
61	4569733	SUTTON	Thursday, June 21, 2018	Property damage only (none injured)	1:44 PM	No injury	2	Dark - lighted roadway	Single vehicle crash	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE	
62	4586125	SUTTON	Sunday, July 15, 2018	Property damage only (none injured)	9:05 PM	No injury	2	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 N / BOSTON ROAD	
63	4578210	SUTTON	Sunday, July 29, 2018	Property damage only (none injured)	10:30 PM	No injury	2	Dark - lighted roadway	Rear-end	Dry	Dry	Cloudy		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
66	4610487	SUTTON	Monday, September 24, 2018	Property damage only (none injured)	5:46 AM	No injury	2	Dark - lighted roadway	Rear-end	Dry	Dry	Cloudy		BOSTON ROAD	GALAXY PASS
77	4642069	SUTTON	Saturday, December 1, 2018	Property damage only (none injured)	6:05 PM	No injury	2	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	
92	4720082	SUTTON	Friday, June 21, 2019	Property damage only (none injured)	10:49 PM	No Apparent Injury (O)	2	Dark - lighted roadway	Sideswipe, same direction	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	
106	4796469	SUTTON	Saturday, December 21, 2019	Property damage only (none injured)	9:40 PM	No Apparent Injury (O)	2	Dark - lighted roadway	Sideswipe, same direction	Dry	Dry	Cloudy		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	BOSTON ROAD
108	4813761	SUTTON	Sunday, January 12, 2020	Property damage only (none injured)	10:11 PM	No Apparent Injury (O)	2	Dark - lighted roadway	Single vehicle crash	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE	
110	4828139	SUTTON	Wednesday, March 11, 2020	Property damage only (none injured)	8:21 PM	No Apparent Injury (O)	2	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 S / BOSTON ROAD	
122	4926400	SUTTON	Tuesday, November 17, 2020	Property damage only (none injured)	5:17 PM	No Apparent Injury (O)	2	Dark - lighted roadway	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	
22	4251047	SUTTON	Sunday, September 11, 2016	Property damage only (none injured)	2:35 AM	No injury	2	Dark - roadway not lighted	Rear-end	Dry	Dry	Clear		Rte 146 N	BOSTON ROAD
35	4341780	SUTTON	Wednesday, February 1, 2017	Property damage only (none injured)	5:31 PM	No injury	2	Dark - roadway not lighted	Rear-end	Dry	Dry	Clear		BOSTON ROAD	WORCESTER PROVIDENCE TURNPIKE Rte 146 S
51	4500326	SUTTON	Thursday, December 14, 2017	Property damage only (none injured)	6:54 PM	No injury	3	Dark - roadway not lighted	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
101	4708627	SUTTON	Friday, October 11, 2019	Property damage only (none injured)	6:40 AM	No Apparent Injury (O)	2	Daylight	Angle	Dry	Dry	Clear		BOSTON ROAD	
4	4176180	SUTTON	Saturday, April 9, 2016	Property damage only (none injured)	2:42 PM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		// Rte 146 N	BOSTON ROAD
6	4204759	SUTTON	Wednesday, May 25, 2016	Property damage only (none injured)	7:10 AM	No injury	2	Daylight	Sideswipe, same direction	Dry	Dry	Clear		Rte 146	BOSTON ROAD
7	4202489	SUTTON	Saturday, May 28, 2016	Property damage only (none injured)	3:40 PM	No injury	2	Daylight	Sideswipe, same direction	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
9	4203552	SUTTON	Monday, June 6, 2016	Property damage only (none injured)	4:25 PM	No injury	5	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 S	BOSTON ROAD
10	4222204	SUTTON	Thursday, June 9, 2016	Property damage only (none injured)	5:56 PM	No injury	3	Daylight	Rear-end	Dry	Dry	Clear		// Rte 146 N	BOSTON ROAD
12	4233195	SUTTON	Tuesday, June 14, 2016	Property damage only (none injured)	4:33 PM	No injury	2	Daylight	Sideswipe, same direction	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD / Rte 146	
14	4228177	SUTTON	Tuesday, July 19, 2016	Property damage only (none injured)	3:44 PM	No injury	2	Daylight	Sideswipe, same direction	Dry	Dry	Clear		WORCESTER PROVIDENCE ROAD Rte 146 N	Rte 122A
17	4253957	SUTTON	Thursday, August 11, 2016	Property damage only (none injured)	2:23 PM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		BOSTON ROAD	
18	4238787	SUTTON	Friday, August 12, 2016	Property damage only (none injured)	11:15 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Not Reported		Rte 146 N	BOSTON ROAD
20	4251115	SUTTON	Thursday, September 8, 2016	Property damage only (none injured)	10:20 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Cloudy		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
21	4265073	SUTTON	Friday, September 9, 2016	Property damage only (none injured)	6:00 PM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		BOSTON ROAD	
26	4288661	SUTTON	Thursday, October 27, 2016	Property damage only (none injured)	9:03 AM	No injury	1	Daylight	Single vehicle crash	Dry	Dry	Not Reported		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
27	4312175	SUTTON	Tuesday, November 1, 2016	Property damage only (none injured)	11:05 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
29	4297273	SUTTON	Monday, November 28, 2016	Property damage only (none injured)	2:29 PM	No injury	2	Daylight	Angle	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte 146 / BOSTON ROAD	
36	4347062	SUTTON	Tuesday, February 14, 2017	Property damage only (none injured)	8:20 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE	
47	4448224	SUTTON	Tuesday, October 3, 2017	Property damage only (none injured)	7:10 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Cloudy		WORCESTER PROVIDENCE TURNPIKE Rte 146 S / BOSTON ROAD	
50	4495371	SUTTON	Wednesday, December 6, 2017	Property damage only (none injured)	2:07 PM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE	BOSTON ROAD
54	4516064	SUTTON	Sunday, January 7, 2018	Property damage only (none injured)	11:50 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear/Unknown		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
57	4532340	SUTTON	Tuesday, April 10, 2018	Property damage only (none injured)	2:55 PM	No injury	2	Daylight	Angle	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	BOSTON ROAD
59	4553144	SUTTON	Wednesday, May 23, 2018	Property damage only (none injured)	2:06 PM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE / Rte 146	
60	4575161	SUTTON	Monday, June 18, 2018	Property damage only (none injured)	10:09 AM	No injury	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD / Rte 146	
65	4607103	SUTTON	Sunday, September 16, 2018	Property damage only (none injured)	10:20 AM	No injury	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE ROAD / BOSTON ROAD	
68	4633867	SUTTON	Friday, October 12, 2018	Property damage only (none injured)	11:24 AM	No injury	2	Daylight	Rear-end	Dry	Dry	Cloudy/Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
69	4623140	SUTTON	Saturday, October 13, 2018	Property damage only (none injured)	1:17 PM	No injury	2	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
71	4619714	SUTTON	Thursday, October 19, 2018	Property damage only (none injured)	5:42 PM	No injury	3	Daylight	Rear-end	Dry	Dry	Clear		WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	BOSTON ROAD Rte BOSTON

123	4915393	SUTTON	Friday, December 18, 2020	Property damage only (none injured)	1:05 PM	No Apparent Injury (O)	3	Daylight	Angle	Dry	Cloudy	Rte 146 N	BOSTON ROAD
73	4619718	SUTTON	Wednesday, October 31, 2018	Property damage only (none injured)	6:48 PM	No injury	2	Dusk	Sideswipe, same direction	Dry	Clear	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
11	4858966	SUTTON	Wednesday, June 24, 2020	Property damage only (none injured)	6:30 PM	No Apparent Injury (O)	2	Dusk	Front to Front	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	
2	4140070	SUTTON	Sunday, January 17, 2016	Property damage only (none injured)	10:25 PM	No injury	3	Dark - lighted roadway	Rear-end	Snow	Snow/Sleet, hail (freezing rain or drizzle)	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
74	4627423	SUTTON	Thursday, November 15, 2018	Property damage only (none injured)	7:18 PM	No injury	2	Dark - lighted roadway	Rear-end	Snow	Snow	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
104	4788042	SUTTON	Sunday, December 1, 2019	Property damage only (none injured)	6:00 PM	No Apparent Injury (O)	2	Dark - lighted roadway	Sideswipe, same direction	Snow	Snow	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
107	4797606	SUTTON	Monday, December 30, 2019	Property damage only (none injured)	7:29 PM	No Apparent Injury (O)	3	Dark - lighted roadway	Rear-end	Snow	Snow	WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	BOSTON ROAD
3	4191345	SUTTON	Monday, April 4, 2016	Property damage only (none injured)	8:40 AM	No injury	3	Daylight	Rear-end	Snow	Cloudy/Snow	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE	
33	4324757	SUTTON	Saturday, January 7, 2017	Property damage only (none injured)	1:30 PM	No injury	2	Daylight	Rear-end	Snow	Snow	Rte 146 S	BOSTON ROAD
32	4323849	SUTTON	Saturday, January 7, 2017	Property damage only (none injured)	1:55 PM	No injury	1	Daylight	Single vehicle crash	Snow	Snow	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
53	4502931	SUTTON	Monday, December 25, 2017	Property damage only (none injured)	10:24 AM	No injury	2	Daylight	Rear-end	Snow	Clear	WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
1	4139961	SUTTON	Thursday, January 14, 2016	Property damage only (none injured)	7:24 AM	No injury	2	Daylight	Rear-end	Wet	Clear	WORCESTER PROVIDENCE TURNPIKE	BOSTON ROAD
8	4204867	SUTTON	Sunday, June 5, 2016	Property damage only (none injured)	5:00 PM	No injury	2	Daylight	Rear-end	Wet	Cloudy/Rain	WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
11	4233194	SUTTON	Saturday, June 11, 2016	Property damage only (none injured)	1:12 PM	No injury	2	Daylight	Rear-end	Wet	Rain	WORCESTER PROVIDENCE TURNPIKE Rte 146	BOSTON ROAD
15	4253961	SUTTON	Friday, July 29, 2016	Property damage only (none injured)	9:27 AM	No injury	2	Daylight	Rear-end	Wet	Rain	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE	
28	4294465	SUTTON	Sunday, November 20, 2016	Property damage only (none injured)	9:28 AM	No injury	2	Daylight	Unknown	Wet	Cloudy	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE	
40	4358511	SUTTON	Tuesday, April 25, 2017	Property damage only (none injured)	3:10 PM	No injury	2	Daylight	Angle	Wet	Cloudy/Rain	WORCESTER PROVIDENCE TURNPIKE Rte SR146 N / BOSTON ROAD	
42	4407428	SUTTON	Saturday, August 5, 2017	Property damage only (none injured)	12:50 PM	No injury	3	Daylight	Rear-end	Wet	Rain	WORCESTER PROVIDENCE TURNPIKE Rte 146 N / BOSTON ROAD Rte	
58	4536315	SUTTON	Thursday, April 19, 2018	Property damage only (none injured)	3:04 PM	No injury	2	Daylight	Rear-end	Wet	Cloudy	BOSTON ROAD Rte 146 / WORCESTER PROVIDENCE TURNPIKE	
70	4642266	SUTTON	Monday, October 15, 2018	Property damage only (none injured)	11:28 AM	No injury	2	Daylight	Rear-end	Wet	Cloudy/Rain	WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
84	4686909	SUTTON	Monday, February 18, 2019	Property damage only (none injured)	1:16 PM	No injury	2	Daylight	Rear-end	Wet	Snow/Rain	WORCESTER PROVIDENCE TURNPIKE	BOSTON ROAD
105	4788045	SUTTON	Friday, December 6, 2019	Property damage only (none injured)	8:25 AM	No Apparent Injury (O)	1	Daylight	Single vehicle crash	Wet	Clear	BOSTON ROAD / WORCESTER PROVIDENCE TURNPIKE Rte SR146 S	
111	4843210	SUTTON	Friday, March 20, 2020	Property damage only (none injured)	2:29 PM	No Apparent Injury (O)	2	Daylight	Front to Rear	Wet	Cloudy/Rain	WORCESTER PROVIDENCE TURNPIKE Rte SR146 N	BOSTON ROAD
112	4838863	SUTTON	Sunday, March 29, 2020	Property damage only (none injured)	10:03 AM	No Apparent Injury (O)	2	Daylight	Sideswipe, same direction	Wet	Cloudy/Rain	WORCESTER PROVIDENCE TURNPIKE / BOSTON ROAD	
45	4420355	SUTTON	Sunday, September 3, 2017	Property damage only (none injured)	5:00 PM	No injury	2	Dusk	Rear-end	Wet	Rain	WORCESTER PROVIDENCE TURNPIKE Rte 146 S / BOSTON ROAD	

#	Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	Max Injury Severity Reported	of Vehicles	Light Conditions	Manner of Collision	Road Surface Condition	Weather Conditions	Roadway	Near Intersection Roadway
1	4212484	SUTTON	Friday, June 3, 2016	Property damage only (none injured)	7:42 PM	No injury	2	Daylight	Angle	Dry	Cloudy	BOSTON ROAD / DUDLEY ROAD	
2	4243992	SUTTON	Wednesday, July 27, 2016	Non-fatal injury	12:39 PM	Non-fatal injury - Non-incapacitating	2	Daylight	Angle	Dry	Clear	DUDLEY ROAD	BOSTON ROAD
3	4307910	SUTTON	Wednesday, December 21, 2016	Property damage only (none injured)	5:38 PM	No injury	2	Dark - roadway not lighted	Sideswipe, same direction	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	
4	4358379	SUTTON	Friday, March 17, 2017	Property damage only (none injured)	2:54 PM	No injury	2	Daylight	Angle	Dry	Clear	BOSTON ROAD / GALAXY PASS	
5	4386757	SUTTON	Thursday, June 1, 2017	Non-fatal injury	7:29 PM	Non-fatal injury - Possible	2	Daylight	Angle	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	
6	4509763	SUTTON	Saturday, January 27, 2018	Property damage only (none injured)	1:25 PM	No injury	2	Daylight	Angle	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	
7	4754484	SUTTON	Friday, September 13, 2019	Property damage only (none injured)	4:55 PM	No Apparent Injury (O)	2	Daylight	Angle	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	
8	4838748	SUTTON	Wednesday, February 12, 2020	Property damage only (none injured)	9:50 AM	No Apparent Injury (O)	2	Daylight	Sideswipe, same direction	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	
9	4822197	SUTTON	Sunday, February 16, 2020	Non-fatal injury	10:17 AM	Possible Injury (C)	2	Daylight	Angle	Dry	Clear	PLEASANT VALLEY ROAD	BOSTON ROAD
10	4851492	SUTTON	Monday, May 25, 2020	Property damage only (none injured)	11:04 AM	No Apparent Injury (O)	2	Daylight	Angle	Dry	Clear	BOSTON ROAD / PLEASANT VALLEY ROAD	

#	Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	of Vehicles	Light Conditions	Manner of Collision	Surface Condition	Condition s	Roadway	Near Intersection Roadway
1	4316817	SUTTON	Tuesday, December 13, 2016	Property damage only (none injured)	3:33 PM	1	Daylight	Single vehicle crash	Dry	Clear	PLEASANT VALLEY ROAD	Rte 146
2	4643577	SUTTON	Tuesday, December 11, 2018	Property damage only (none injured)	7:00 AM	2	Dawn	Rear-end	Dry	Clear	PLEASANT VALLEY ROAD / WORCESTER PROVIDENCE TURNPIKE	Rte SR146 N

Masshighway

CRASH RATE WORKSHEET

CITY/TOWN : SUTTON COUNT DATE : 2022

DISTRICT : 3 UNSIGNALIZED : ☐ SIGNALIZED : ☒

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : ROUTE 146

ST #

MINOR STREET(S) : BOSTON ROAD

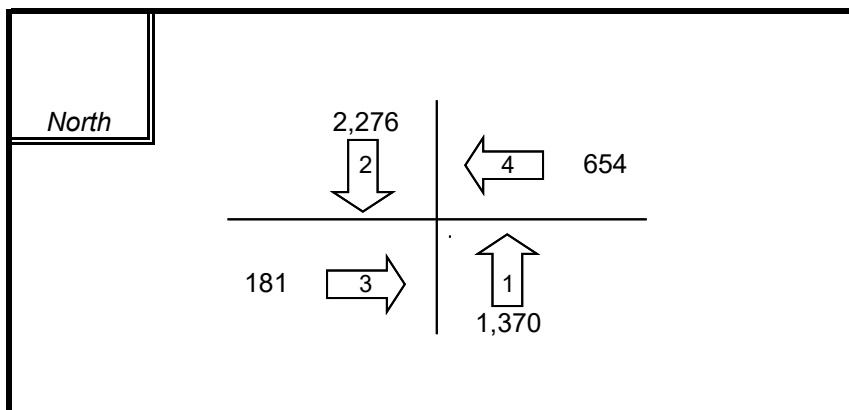
ST #

ST #

ST #

ST #

**INTERSECTION
DIAGRAM**
(Label Approaches)



INTERSECTION

REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	1,370	2,276	181	654		4,481

" K " FACTOR : **0.090** APPROACH ADT : **49,789** ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : **126** # OF YEARS : **5** AVERAGE # OF ACCIDENTS (A) : **25.20**

CRASH RATE CALCULATION : **1.39** RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$

Comments : Accident Rate for District 3 signalized intersections = 0.89

Accident Rate for District 3 unsignalized intersections = 0.61

Masshighway

CRASH RATE WORKSHEET

CITY/TOWN : SUTTON COUNT DATE : 2022

DISTRICT : 3 UNSIGNALIZED : ☒ SIGNALIZED : ☐

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : BOSTON ROAD

ST #

MINOR STREET(S) : PLEASANT VALLEY ROAD

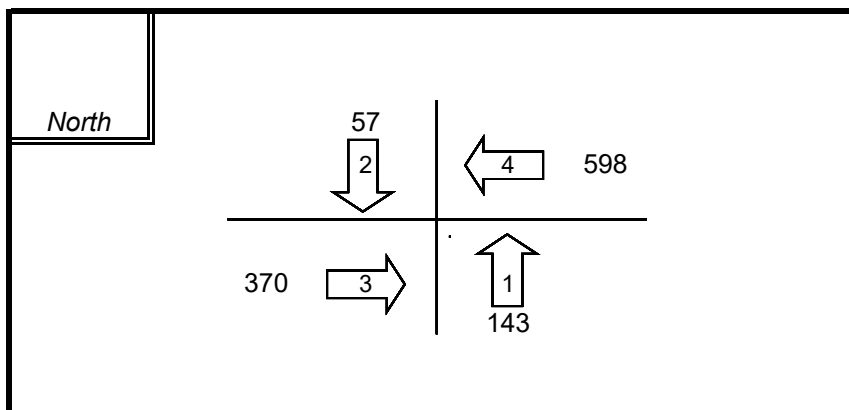
ST #

ST #

ST #

ST #

**INTERSECTION
DIAGRAM**
(Label Approaches)



INTERSECTION
REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	143	57	370	598		1,168

" K " FACTOR : APPROACH ADT : ADT = TOTAL VOL/"K" FACT.

TOTAL # OF
ACCIDENTS : # OF
YEARS : AVERAGE # OF
ACCIDENTS (A) :

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

Comments : Accident Rate for District 3 signalized intersections = 0.89

Accident Rate for District 3 unsignalized intersections = 0.61

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : SUTTON COUNT DATE : 2022

DISTRICT : 3 UNSIGNALIZED : ☒ X SIGNALIZED : ☐

MHD USE ONLY

Source #

~ INTERSECTION DATA ~

MAJOR STREET : ROUTE 146

MINOR STREET(S) : PLEASANT VALLEY ROAD

ST #

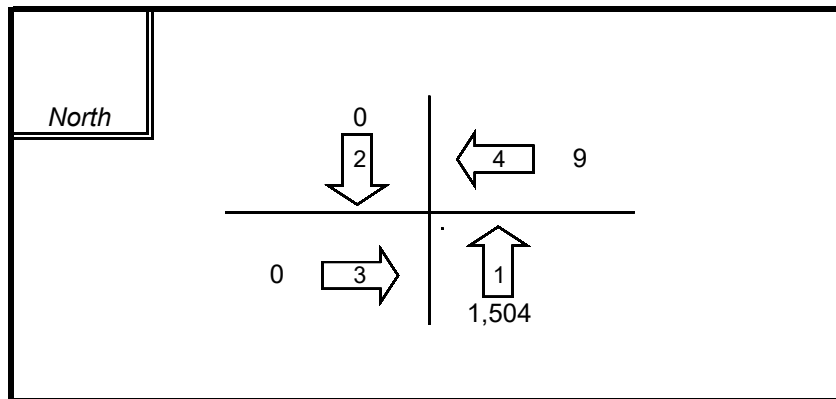
ST #

ST #

ST #

ST #

**INTERSECTION
DIAGRAM**
(Label Approaches)



INTERSECTION
REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	1,504			9		1,513

" K " FACTOR : APPROACH ADT : ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : # OF YEARS : AVERAGE # OF ACCIDENTS (A) :

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

Comments : Accident Rate for District 3 signalized intersections = 0.89
Accident Rate for District 3 unsignalized intersections = 0.61

APPENDIX C – TRIP-GENERATION CALCULATIONS



Institute of Transportation Engineers (ITE)

Trip Generation, 11 th Edition

Land Use Code (LUC) 720 - Medical-Dental Office Building - Stand Alone

Average Vehicle Trips Ends vs: 1000 Sq. Feet Gross Floor Area
Independent Variable (X): 5.15

AVERAGE WEEKDAY DAILY

$$T = 36.00 * (X)$$

$$T = 36.00 * 5.15$$

$$T = 185.33$$

$$T = 186 \text{ vehicle trips}$$

with 50% (93 vpd) entering and 50% (93 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 3.10 * (X)$$

$$T = 3.10 * (5.15)$$

$$T = 15.96$$

$$T = 16 \text{ vehicle trips}$$

with 79% (13 vph) entering and 21% (3 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

$$T = 3.93 * (X)$$

$$T = 3.93 * (5.15)$$

$$T = 20.23$$

$$T = 20 \text{ vehicle trips}$$

with 30% (6 vph) entering and 70% (14 vph) exiting.

SATURDAY DAILY

$$T = 13.78 * (X)$$

$$T = 13.78 * 5.15$$

$$T = 70.94$$

$$T = 70 \text{ vehicle trips}$$

with 50% (35 vpd) entering and 50% (35 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

$$T = 3.02 * (X)$$

$$T = 3.02 * 5.15$$

$$T = 15.55$$

$$T = 16 \text{ vehicle trips}$$

with 57% (9 vph) entering and 43% (7 vph) exiting.

APPENDIX D – CAPACITY ANALYSIS WORKSHEETS



Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗↗↗	↗		↗↗↗
Traffic Vol, veh/h	0	3	2107	201	0	0
Future Vol, veh/h	0	3	2107	201	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	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	0	3	2290	218	0	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	1145	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	166	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	166	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	27.1	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	166
HCM Lane V/C Ratio	-	-	0.02
HCM Control Delay (s)	-	-	27.1
HCM Lane LOS	-	-	D
HCM 95th %tile Q(veh)	-	-	0.1

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 AM EX
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	84	127	51	163	178	331	0	2108	2	43	156	1236
Future Volume (vph)	84	127	51	163	178	331	0	2108	2	43	156	1236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		275	330		280	0		0		530	
Storage Lanes	1		1	2		1	0		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.91	0.91	0.97	0.91
Frt			0.850			0.850						
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1805	1810	1495	3242	1776	1583	0	4801	0	0	3277	4590
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1805	1810	1495	3242	1776	1583	0	4801	0	0	3277	4590
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			72			182						
Link Speed (mph)		30			30			30				30
Link Distance (ft)		704			858			716				1707
Travel Time (s)		16.0			19.5			16.3				38.8
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	8%	8%	7%	2%	0%	8%	50%	10%	6%	13%
Adj. Flow (vph)	118	179	72	177	193	360	0	2267	2	46	168	1329
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	179	72	177	193	360	0	2269	0	0	214	1329
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2	1	1	2	1		2		1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right		Thru		Left	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20		100		20	20	100
Trailing Detector (ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20		6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	custom	Prot	NA	custom		NA		Prot	Prot	NA
Protected Phases	3	8	8	7	4	4		2		1	1	6

Lane Group	SBR
Left Configurations	
Traffic Volume (vph)	28
Future Volume (vph)	28
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	85
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.93
Heavy Vehicles (%)	0%
Adj. Flow (vph)	30
Shared Lane Traffic (%)	
Lane Group Flow (vph)	30
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 AM EX
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	3			4								
Detector Phase	3	8	8	7	4	4	2			1	1	6
Switch Phase												
Minimum Initial (s)	6.7	6.7	6.7	6.0	6.0	6.0	20.0			7.0	7.0	20.0
Minimum Split (s)	14.8	14.8	14.8	14.8	14.8	14.8	26.3			13.4	13.4	26.3
Total Split (s)	28.0	22.5	22.5	27.0	21.5	21.5	86.0			27.0	27.0	113.0
Total Split (%)	17.2%	13.8%	13.8%	16.6%	13.2%	13.2%	52.9%			16.6%	16.6%	69.5%
Maximum Green (s)	20.2	14.7	14.7	19.2	13.7	13.7	79.7			20.6	20.6	106.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.3			3.4	3.4	3.3
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0				-2.0	-2.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.3				4.4	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max			None	None	Max
Act Effct Green (s)	17.3	17.3	34.6	15.9	16.0	16.0	86.8				17.6	108.7
Actuated g/C Ratio	0.11	0.11	0.22	0.10	0.10	0.10	0.55				0.11	0.69
v/c Ratio	0.60	0.90	0.19	0.54	1.08	1.11	0.86				0.59	0.42
Control Delay	79.6	111.3	10.1	73.9	153.6	114.1	35.5				73.5	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0
Total Delay	79.6	111.3	10.1	73.9	153.6	114.1	35.5				73.5	11.5
LOS	E	F	B	E	F	F	D				E	B
Approach Delay	81.5			114.8			35.5			19.7		
Approach LOS	F			F			D			B		

Intersection Summary

Area Type: Other

Cycle Length: 162.5

Actuated Cycle Length: 157.9

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 45.6

Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 13: Boston Road & Route 146

			
Ø1	Ø2	Ø3	Ø4
27 s	86 s	28 s	21.5 s
			
Ø6		Ø7	Ø8
113 s		27 s	22.5 s

Lane Group	SBR
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	20.0
Minimum Split (s)	26.3
Total Split (s)	113.0
Total Split (%)	69.5%
Maximum Green (s)	106.7
Yellow Time (s)	3.0
All-Red Time (s)	3.3
Lost Time Adjust (s)	-2.0
Total Lost Time (s)	4.3
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Act Effct Green (s)	108.7
Actuated g/C Ratio	0.69
v/c Ratio	0.03
Control Delay	0.0
Queue Delay	0.0
Total Delay	0.0
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	278	1	1	505	12	131	42	28	11	1	36
Future Vol, veh/h	6	278	1	1	505	12	131	42	28	11	1	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	302	1	1	549	13	142	46	30	12	1	39
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	549	0	0	303	0	0	594	868	152	739	868	275
Stage 1	-	-	-	-	-	-	317	317	-	551	551	-
Stage 2	-	-	-	-	-	-	277	551	-	188	317	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1017	-	-	1255	-	-	389	289	867	306	289	722
Stage 1	-	-	-	-	-	-	669	653	-	486	514	-
Stage 2	-	-	-	-	-	-	706	514	-	796	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1017	-	-	1255	-	-	364	286	867	257	286	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	364	286	-	257	286	-
Stage 1	-	-	-	-	-	-	664	648	-	482	513	-
Stage 2	-	-	-	-	-	-	666	513	-	708	648	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			27.4			13.1		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	373	1017	-	-	1255	-	-	499				
HCM Lane V/C Ratio	0.586	0.006	-	-	0.001	-	-	0.105				
HCM Control Delay (s)	27.4	8.6	0	-	7.9	0	-	13.1				
HCM Lane LOS	D	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	3.6	0	-	-	0	-	-	0.3				

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	1	0	2	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1622	-	1021	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	1021	1084
Mov Cap-2 Maneuver	-	-	-	-	1021	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1022	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	-	-	-	1622	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	0	-	-	0	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 AM NB
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	84	127	51	163	178	331	0	2108	2	43	156	1236
Future Volume (vph)	84	127	51	163	178	331	0	2108	2	43	156	1236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		275	330		280	0		0		530	
Storage Lanes	1		1	2		1	0		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.91	0.91	0.97	0.91
Frt			0.850			0.850						
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1805	1810	1495	3242	1776	1583	0	4801	0	0	3277	4590
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1805	1810	1495	3242	1776	1583	0	4801	0	0	3277	4590
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			72			182						
Link Speed (mph)		30			30			30				30
Link Distance (ft)		704			858			716				1707
Travel Time (s)		16.0			19.5			16.3				38.8
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	8%	8%	7%	2%	0%	8%	50%	10%	6%	13%
Adj. Flow (vph)	118	179	72	177	193	360	0	2267	2	46	168	1329
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	179	72	177	193	360	0	2269	0	0	214	1329
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2	1	1	2	1		2		1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right		Thru		Left	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20		100		20	20	100
Trailing Detector (ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20		6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	custom	Prot	NA	custom		NA		Prot	Prot	NA
Protected Phases	3	8	8	7	4	4		2		1	1	6

Lane Group	SBR
Lane Configurations	↑↑↑
Traffic Volume (vph)	28
Future Volume (vph)	28
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	85
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.93
Heavy Vehicles (%)	0%
Adj. Flow (vph)	30
Shared Lane Traffic (%)	
Lane Group Flow (vph)	30
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 AM NB
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	3			4								
Detector Phase	3	8	8	7	4	4	2			1	1	6
Switch Phase												
Minimum Initial (s)	6.7	6.7	6.7	6.0	6.0	6.0	20.0			7.0	7.0	20.0
Minimum Split (s)	14.8	14.8	14.8	14.8	14.8	14.8	26.3			13.4	13.4	26.3
Total Split (s)	28.0	22.5	22.5	27.0	21.5	21.5	86.0			27.0	27.0	113.0
Total Split (%)	17.2%	13.8%	13.8%	16.6%	13.2%	13.2%	52.9%			16.6%	16.6%	69.5%
Maximum Green (s)	20.2	14.7	14.7	19.2	13.7	13.7	79.7			20.6	20.6	106.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.3			3.4	3.4	3.3
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0				-2.0	-2.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.3				4.4	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max			None	None	Max
Act Effct Green (s)	17.3	17.3	34.6	15.9	16.0	16.0	86.8				17.6	108.7
Actuated g/C Ratio	0.11	0.11	0.22	0.10	0.10	0.10	0.55				0.11	0.69
v/c Ratio	0.60	0.90	0.19	0.54	1.08	1.11	0.86				0.59	0.42
Control Delay	79.6	111.3	10.1	73.9	153.6	114.1	35.5				73.5	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0
Total Delay	79.6	111.3	10.1	73.9	153.6	114.1	35.5				73.5	11.5
LOS	E	F	B	E	F	F	D				E	B
Approach Delay	81.5			114.8			35.5			19.7		
Approach LOS	F			F			D			B		

Intersection Summary

Area Type: Other

Cycle Length: 162.5

Actuated Cycle Length: 157.9

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 45.6

Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 13: Boston Road & Route 146

			
Ø1	Ø2	Ø3	Ø4
27 s	86 s	28 s	21.5 s
			
Ø6		Ø7	Ø8
113 s		27 s	22.5 s

Lane Group	SBR
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	20.0
Minimum Split (s)	26.3
Total Split (s)	113.0
Total Split (%)	69.5%
Maximum Green (s)	106.7
Yellow Time (s)	3.0
All-Red Time (s)	3.3
Lost Time Adjust (s)	-2.0
Total Lost Time (s)	4.3
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Act Effct Green (s)	108.7
Actuated g/C Ratio	0.69
v/c Ratio	0.03
Control Delay	0.0
Queue Delay	0.0
Total Delay	0.0
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔	↔		↔			↔	
Traffic Vol, veh/h	6	278	1	1	505	12	131	42	28	11	1	36
Future Vol, veh/h	6	278	1	1	505	12	131	42	28	11	1	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	302	1	1	549	13	142	46	30	12	1	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	549	0	0	303	0	0	594	868	152	739	868	275
Stage 1	-	-	-	-	-	-	317	317	-	551	551	-
Stage 2	-	-	-	-	-	-	277	551	-	188	317	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1017	-	-	1255	-	-	389	289	867	306	289	722
Stage 1	-	-	-	-	-	-	669	653	-	486	514	-
Stage 2	-	-	-	-	-	-	706	514	-	796	653	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1017	-	-	1255	-	-	364	286	867	257	286	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	364	286	-	257	286	-
Stage 1	-	-	-	-	-	-	664	648	-	482	513	-
Stage 2	-	-	-	-	-	-	666	513	-	708	648	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	27.4	13.1
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1017	-	-	1255	-	-	499
HCM Lane V/C Ratio	0.586	0.006	-	-	0.001	-	-	0.105
HCM Control Delay (s)	27.4	8.6	0	-	7.9	0	-	13.1
HCM Lane LOS	D	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	3.6	0	-	-	0	-	-	0.3

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	201	0	8	3	1	2
Future Vol, veh/h	201	0	8	3	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	218	0	9	3	1	2
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	218	0	239	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1352	-	749	822
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1352	-	744	822
Mov Cap-2 Maneuver	-	-	-	-	744	-
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	995	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	5.6	9.6			
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	794	-	-	1352	-	
HCM Lane V/C Ratio	0.004	-	-	0.006	-	
HCM Control Delay (s)	9.6	-	-	7.7	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 AM BU
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	84	128	51	164	178	331	0	2109	2	43	160	1236
Future Volume (vph)	84	128	51	164	178	331	0	2109	2	43	160	1236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		275	330		280	0		0		530	
Storage Lanes	1		1	2		1	0		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.91	0.91	0.97	0.91
Frt			0.850			0.850						
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1805	1810	1495	3242	1776	1583	0	4801	0	0	3277	4590
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1805	1810	1495	3242	1776	1583	0	4801	0	0	3277	4590
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			72			182						
Link Speed (mph)		30			30			30				30
Link Distance (ft)		704			858			716				1707
Travel Time (s)		16.0			19.5			16.3				38.8
Peak Hour Factor	0.71	0.71	0.71	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	8%	8%	7%	2%	0%	8%	50%	10%	6%	13%
Adj. Flow (vph)	118	180	72	178	193	360	0	2268	2	46	172	1329
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	180	72	178	193	360	0	2270	0	0	218	1329
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2	1	1	2	1		2		1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right		Thru		Left	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20		100		20	20	100
Trailing Detector (ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20		6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	custom	Prot	NA	custom		NA		Prot	Prot	NA
Protected Phases	3	8	8	7	4	4		2		1	1	6

Lane Group	SBR
Left Configurations	Left
Traffic Volume (vph)	28
Future Volume (vph)	28
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1615
Flt Permitted	
Satd. Flow (perm)	1615
Right Turn on Red	Yes
Satd. Flow (RTOR)	85
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.93
Heavy Vehicles (%)	0%
Adj. Flow (vph)	30
Shared Lane Traffic (%)	
Lane Group Flow (vph)	30
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 AM BU
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	3			4								
Detector Phase	3	8	8	7	4	4	2			1	1	6
Switch Phase												
Minimum Initial (s)	6.7	6.7	6.7	6.0	6.0	6.0	20.0			7.0	7.0	20.0
Minimum Split (s)	14.8	14.8	14.8	14.8	14.8	14.8	26.3			13.4	13.4	26.3
Total Split (s)	28.0	22.5	22.5	27.0	21.5	21.5	86.0			27.0	27.0	113.0
Total Split (%)	17.2%	13.8%	13.8%	16.6%	13.2%	13.2%	52.9%			16.6%	16.6%	69.5%
Maximum Green (s)	20.2	14.7	14.7	19.2	13.7	13.7	79.7			20.6	20.6	106.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.3			3.4	3.4	3.3
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0				-2.0	-2.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.3				4.4	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max			None	None	Max
Act Effct Green (s)	17.3	17.3	34.6	16.0	16.0	16.0	86.6				17.8	108.7
Actuated g/C Ratio	0.11	0.11	0.22	0.10	0.10	0.10	0.55				0.11	0.69
v/c Ratio	0.60	0.91	0.19	0.54	1.08	1.11	0.86				0.59	0.42
Control Delay	79.6	112.7	10.1	73.9	153.2	113.9	35.7				73.4	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0
Total Delay	79.6	112.7	10.1	73.9	153.2	113.9	35.7				73.4	11.5
LOS	E	F	B	E	F	F	D				E	B
Approach Delay	82.2			114.5			35.7			19.8		
Approach LOS	F			F			D			B		

Intersection Summary

Area Type: Other

Cycle Length: 162.5

Actuated Cycle Length: 157.9

Natural Cycle: 100

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 45.8

Intersection LOS: D

Intersection Capacity Utilization 89.6%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 13: Boston Road & Route 146

			
Ø1	Ø2	Ø3	Ø4
27 s	86 s	28 s	21.5 s
			
Ø6		Ø7	Ø8
113 s		27 s	22.5 s

Lane Group	SBR
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	20.0
Minimum Split (s)	26.3
Total Split (s)	113.0
Total Split (%)	69.5%
Maximum Green (s)	106.7
Yellow Time (s)	3.0
All-Red Time (s)	3.3
Lost Time Adjust (s)	-2.0
Total Lost Time (s)	4.3
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Act Effct Green (s)	108.7
Actuated g/C Ratio	0.69
v/c Ratio	0.03
Control Delay	0.0
Queue Delay	0.0
Total Delay	0.0
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	278	6	4	505	12	132	42	29	11	1	36
Future Vol, veh/h	6	278	6	4	505	12	132	42	29	11	1	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	302	7	4	549	13	143	46	32	12	1	39
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	549	0	0	309	0	0	603	877	155	745	880	275
Stage 1	-	-	-	-	-	-	320	320	-	557	557	-
Stage 2	-	-	-	-	-	-	283	557	-	188	323	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1017	-	-	1248	-	-	383	285	863	302	284	722
Stage 1	-	-	-	-	-	-	666	651	-	482	510	-
Stage 2	-	-	-	-	-	-	700	510	-	796	649	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1017	-	-	1248	-	-	358	281	863	252	280	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	358	281	-	252	280	-
Stage 1	-	-	-	-	-	-	661	646	-	478	507	-
Stage 2	-	-	-	-	-	-	657	507	-	707	644	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			28.4			13.1		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	368	1017	-	-	1248	-	-	494				
HCM Lane V/C Ratio	0.6	0.006	-	-	0.003	-	-	0.106				
HCM Control Delay (s)	28.4	8.6	0	-	7.9	0	-	13.1				
HCM Lane LOS	D	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	3.7	0	-	-	0	-	-	0.4				

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑	↗		↑↑↑
Traffic Vol, veh/h	0	9	1361	143	0	0
Future Vol, veh/h	0	9	1361	143	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	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	0	10	1479	155	0	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	740	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	308	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	308	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	308
HCM Lane V/C Ratio	-	-	0.032
HCM Control Delay (s)	-	-	17.1
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.1

Lanes, Volumes, Timings
13: Boston Road & Route 146

2022 PM EX
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	39	100	42	270	193	191	0	1357	13	42	257	1913
Future Volume (vph)	39	100	42	270	193	191	0	1357	13	42	257	1913
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		275	330		280	0		0		530	
Storage Lanes	1		1	2		1	0		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.91	0.91	0.97	0.91
Frt			0.850			0.850		0.999				
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1805	1881	1583	3467	1881	1599	0	4937	0	0	3433	4940
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1805	1881	1583	3467	1881	1599	0	4937	0	0	3433	4940
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			60			197		1				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		704			858			716				1707
Travel Time (s)		16.0			19.5			16.3				38.8
Peak Hour Factor	0.81	0.81	0.81	0.97	0.97	0.97	0.94	0.94	0.94	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%	0%	5%	0%	2%	2%	5%
Adj. Flow (vph)	48	123	52	278	199	197	0	1444	14	44	271	2014
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	123	52	278	199	197	0	1458	0	0	315	2014
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2	1	1	2	1		2		1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right		Thru		Left	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20		100		20	20	100
Trailing Detector (ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20		6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	custom	Prot	NA	custom		NA		Prot	Prot	NA
Protected Phases	3	8	8	7	4	4		2		1	1	6

Lane Group	SBR
Lane Configurations	↑↑↑
Traffic Volume (vph)	64
Future Volume (vph)	64
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	78
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	2%
Adj. Flow (vph)	67
Shared Lane Traffic (%)	
Lane Group Flow (vph)	67
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2022 PM EX
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	3			4								
Detector Phase	3	8	8	7	4	4	2			1	1	6
Switch Phase												
Minimum Initial (s)	6.7	6.7	6.7	6.0	6.0	6.0	20.0			7.0	7.0	20.0
Minimum Split (s)	14.8	14.8	14.8	14.8	14.8	14.8	26.3			13.4	13.4	26.3
Total Split (s)	28.0	37.0	37.0	27.0	36.0	36.0	86.0			26.0	26.0	112.0
Total Split (%)	15.9%	21.0%	21.0%	15.3%	20.5%	20.5%	48.9%			14.8%	14.8%	63.6%
Maximum Green (s)	20.2	29.2	29.2	19.2	28.2	28.2	79.7			19.6	19.6	105.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.3			3.4	3.4	3.3
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0				-2.0	-2.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.3				4.4	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max			None	None	Max
Act Effct Green (s)	11.8	17.9	27.9	19.1	28.3	28.3	83.3				20.2	107.8
Actuated g/C Ratio	0.07	0.11	0.17	0.12	0.18	0.18	0.52				0.13	0.67
v/c Ratio	0.36	0.59	0.16	0.68	0.60	0.44	0.57				0.73	0.61
Control Delay	79.7	79.8	8.5	77.2	70.9	10.4	28.5				79.0	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0
Total Delay	79.7	79.8	8.5	77.2	70.9	10.4	28.5				79.0	16.3
LOS	E	E	A	E	E	B	C				E	B
Approach Delay	63.1			55.8			28.5			24.2		
Approach LOS	E			E			C			C		

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 160.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 31.8

Intersection LOS: C

Intersection Capacity Utilization 69.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 13: Boston Road & Route 146

			
Ø1	Ø2	Ø3	Ø4
26 s	86 s	28 s	36 s
			
Ø6		Ø7	Ø8
112 s		27 s	37 s

Lane Group	SBR
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	20.0
Minimum Split (s)	26.3
Total Split (s)	112.0
Total Split (%)	63.6%
Maximum Green (s)	105.7
Yellow Time (s)	3.0
All-Red Time (s)	3.3
Lost Time Adjust (s)	-2.0
Total Lost Time (s)	4.3
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Act Effct Green (s)	107.8
Actuated g/C Ratio	0.67
v/c Ratio	0.06
Control Delay	1.7
Queue Delay	0.0
Total Delay	1.7
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕	↗		↕↕			↕↕	
Traffic Vol, veh/h	8	358	4	4	572	22	52	11	80	26	1	30
Future Vol, veh/h	8	358	4	4	572	22	52	11	80	26	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	389	4	4	622	24	57	12	87	28	1	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	622	0	0	393	0	0	729	1039	197	849	1041	311
Stage 1	-	-	-	-	-	-	409	409	-	630	630	-
Stage 2	-	-	-	-	-	-	320	630	-	219	411	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	955	-	-	1162	-	-	311	229	811	254	229	685
Stage 1	-	-	-	-	-	-	590	594	-	436	473	-
Stage 2	-	-	-	-	-	-	666	473	-	763	593	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	955	-	-	1162	-	-	291	225	811	215	225	685
Mov Cap-2 Maneuver	-	-	-	-	-	-	291	225	-	215	225	-
Stage 1	-	-	-	-	-	-	583	587	-	431	471	-
Stage 2	-	-	-	-	-	-	630	471	-	659	586	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			17.7			18.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	438	955	-	-	1162	-	-	337				
HCM Lane V/C Ratio	0.355	0.009	-	-	0.004	-	-	0.184				
HCM Control Delay (s)	17.7	8.8	0.1	-	8.1	0	-	18.1				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.6	0	-	-	0	-	-	0.7				

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑	↗		↑↑↑
Traffic Vol, veh/h	0	14	1483	171	0	0
Future Vol, veh/h	0	14	1483	171	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	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	0	15	1612	186	0	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	806	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	279	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	279	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	279
HCM Lane V/C Ratio	-	-	0.055
HCM Control Delay (s)	-	-	18.6
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.2

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	171	0	4	9	5	9
Future Vol, veh/h	171	0	4	9	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	186	0	4	10	5	10
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	186	0	204	186
Stage 1	-	-	-	-	186	-
Stage 2	-	-	-	-	18	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1388	-	784	856
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	1005	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1388	-	782	856
Mov Cap-2 Maneuver	-	-	-	-	782	-
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	1002	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	2.3		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	828	-	-	1388	-	
HCM Lane V/C Ratio	0.018	-	-	0.003	-	
HCM Control Delay (s)	9.4	-	-	7.6	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 PM NB
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	42	112	45	329	216	241	0	1483	14	45	296	2058
Future Volume (vph)	42	112	45	329	216	241	0	1483	14	45	296	2058
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		275	330		280	0		0		530	
Storage Lanes	1		1	2		1	0		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.91	0.91	0.97	0.91
Frt			0.850			0.850		0.999				
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1805	1881	1583	3467	1881	1599	0	4937	0	0	3433	4940
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1805	1881	1583	3467	1881	1599	0	4937	0	0	3433	4940
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			60			222		1				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		704			858			716				1707
Travel Time (s)		16.0			19.5			16.3				38.8
Peak Hour Factor	0.81	0.81	0.81	0.97	0.97	0.97	0.94	0.94	0.94	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%	0%	5%	0%	2%	2%	5%
Adj. Flow (vph)	52	138	56	339	223	248	0	1578	15	47	312	2166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	138	56	339	223	248	0	1593	0	0	359	2166
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2	1	1	2	1		2		1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right		Thru		Left	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20		100		20	20	100
Trailing Detector (ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20		6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	custom	Prot	NA	custom		NA		Prot	Prot	NA
Protected Phases	3	8	8	7	4	4		2		1	1	6

Lane Group	SBR
Left Configurations	Left
Traffic Volume (vph)	69
Future Volume (vph)	69
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	78
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	2%
Adj. Flow (vph)	73
Shared Lane Traffic (%)	
Lane Group Flow (vph)	73
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 PM NB
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	3			4			2			1		
Detector Phase	3	8	8	7	4	4		2		1	1	6
Switch Phase												
Minimum Initial (s)	6.7	6.7	6.7	6.0	6.0	6.0		20.0		7.0	7.0	20.0
Minimum Split (s)	14.8	14.8	14.8	14.8	14.8	14.8		26.3		13.4	13.4	26.3
Total Split (s)	28.0	37.0	37.0	27.0	36.0	36.0		86.0		26.0	26.0	112.0
Total Split (%)	15.9%	21.0%	21.0%	15.3%	20.5%	20.5%		48.9%		14.8%	14.8%	63.6%
Maximum Green (s)	20.2	29.2	29.2	19.2	28.2	28.2		79.7		19.6	19.6	105.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
All-Red Time (s)	4.8	4.8	4.8	4.8	4.8	4.8		3.3		3.4	3.4	3.3
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0		-2.0			-2.0	-2.0
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8		4.3			4.4	4.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None		Max		None	None	Max
Act Effect Green (s)	12.2	19.4	29.7	20.5	30.8	30.8		82.3			21.1	107.8
Actuated g/C Ratio	0.07	0.12	0.18	0.13	0.19	0.19		0.50			0.13	0.66
v/c Ratio	0.39	0.62	0.17	0.78	0.63	0.52		0.64			0.81	0.67
Control Delay	81.3	81.1	9.3	82.9	71.5	14.2		32.0			84.7	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	81.3	81.1	9.3	82.9	71.5	14.2		32.0			84.7	18.8
LOS	F	F	A	F	E	B		C			F	B
Approach Delay	64.8			58.8				32.0		27.4		
Approach LOS	E			E				C		C		

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 163.7

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 35.4

Intersection LOS: D

Intersection Capacity Utilization 76.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: Boston Road & Route 146

 Ø1	 Ø2	 Ø3	 Ø4
26 s	86 s	28 s	36 s
 Ø6		 Ø7	 Ø8
112 s		27 s	37 s



Lane Group	SBR
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	20.0
Minimum Split (s)	26.3
Total Split (s)	112.0
Total Split (%)	63.6%
Maximum Green (s)	105.7
Yellow Time (s)	3.0
All-Red Time (s)	3.3
Lost Time Adjust (s)	-2.0
Total Lost Time (s)	4.3
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Act Effct Green (s)	107.8
Actuated g/C Ratio	0.66
v/c Ratio	0.07
Control Delay	2.1
Queue Delay	0.0
Total Delay	2.1
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔	↔		↔			↔	
Traffic Vol, veh/h	9	406	4	4	692	24	56	29	86	28	1	32
Future Vol, veh/h	9	406	4	4	692	24	56	29	86	28	1	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	441	4	4	752	26	61	32	93	30	1	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	752	0	0	445	0	0	848	1223	223	1017	1225	376
Stage 1	-	-	-	-	-	-	463	463	-	760	760	-
Stage 2	-	-	-	-	-	-	385	760	-	257	465	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	853	-	-	1112	-	-	255	178	780	192	178	622
Stage 1	-	-	-	-	-	-	548	562	-	364	413	-
Stage 2	-	-	-	-	-	-	610	413	-	725	561	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	853	-	-	1112	-	-	236	174	780	143	174	622
Mov Cap-2 Maneuver	-	-	-	-	-	-	236	174	-	143	174	-
Stage 1	-	-	-	-	-	-	539	553	-	358	411	-
Stage 2	-	-	-	-	-	-	571	411	-	592	552	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	28.6	25.5
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	333	853	-	-	1112	-	-	241
HCM Lane V/C Ratio	0.558	0.011	-	-	0.004	-	-	0.275
HCM Control Delay (s)	28.6	9.3	0.1	-	8.2	0	-	25.5
HCM Lane LOS	D	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3.2	0	-	-	0	-	-	1.1

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑↑	↗		↑↑↑
Traffic Vol, veh/h	0	14	1483	171	0	0
Future Vol, veh/h	0	14	1483	171	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	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	0	15	1612	186	0	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	806	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	279	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	279	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.6	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	279
HCM Lane V/C Ratio	-	-	0.055
HCM Control Delay (s)	-	-	18.6
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.2

Intersection

Int Delay, s/veh 0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	171	0	4	9	5	9
Future Vol, veh/h	171	0	4	9	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	186	0	4	10	5	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	186
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1388
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1388
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	828	-	-	1388	-
HCM Lane V/C Ratio	0.018	-	-	0.003	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 PM BU
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	42	112	45	329	216	241	0	1483	14	45	296	2058
Future Volume (vph)	42	112	45	329	216	241	0	1483	14	45	296	2058
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		275	330		280	0		0		530	
Storage Lanes	1		1	2		1	0		0		2	
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.91	0.91	0.97	0.91
Frt			0.850			0.850		0.999				
Flt Protected	0.950			0.950							0.950	
Satd. Flow (prot)	1805	1881	1583	3467	1881	1599	0	4937	0	0	3433	4940
Flt Permitted	0.950			0.950							0.950	
Satd. Flow (perm)	1805	1881	1583	3467	1881	1599	0	4937	0	0	3433	4940
Right Turn on Red			Yes			Yes			Yes			
Satd. Flow (RTOR)			60			222		1				
Link Speed (mph)		30			30			30				30
Link Distance (ft)		704			858			716				1707
Travel Time (s)		16.0			19.5			16.3				38.8
Peak Hour Factor	0.81	0.81	0.81	0.97	0.97	0.97	0.94	0.94	0.94	0.95	0.95	0.95
Heavy Vehicles (%)	0%	1%	2%	1%	1%	1%	0%	5%	0%	2%	2%	5%
Adj. Flow (vph)	52	138	56	339	223	248	0	1578	15	47	312	2166
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	138	56	339	223	248	0	1593	0	0	359	2166
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	R NA	Left	Left
Median Width(ft)		24			24			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	9	15	
Number of Detectors	1	2	1	1	2	1		2		1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right		Thru		Left	Left	Thru
Leading Detector (ft)	20	100	20	20	100	20		100		20	20	100
Trailing Detector (ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0		0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20		6		20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	custom	Prot	NA	custom		NA		Prot	Prot	NA
Protected Phases	3	8	8	7	4	4		2		1	1	6

Lane Group	SBR
Left Configurations	Left
Traffic Volume (vph)	69
Future Volume (vph)	69
Ideal Flow (vphpl)	1900
Storage Length (ft)	225
Storage Lanes	1
Taper Length (ft)	
Lane Util. Factor	1.00
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1583
Flt Permitted	
Satd. Flow (perm)	1583
Right Turn on Red	Yes
Satd. Flow (RTOR)	78
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	0.95
Heavy Vehicles (%)	2%
Adj. Flow (vph)	73
Shared Lane Traffic (%)	
Lane Group Flow (vph)	73
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	1
Detector Template	Right
Leading Detector (ft)	20
Trailing Detector (ft)	0
Detector 1 Position(ft)	0
Detector 1 Size(ft)	20
Detector 1 Type	Cl+Ex
Detector 1 Channel	
Detector 1 Extend (s)	0.0
Detector 1 Queue (s)	0.0
Detector 1 Delay (s)	0.0
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	Perm
Protected Phases	

Lanes, Volumes, Timings
13: Boston Road & Route 146

2029 PM BU
10/28/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Permitted Phases	3			4			2			1	1	6
Detector Phase	3	8	8	7	4	4	2			1	1	6
Switch Phase												
Minimum Initial (s)	6.7	6.7	6.7	6.0	6.0	6.0	20.0			7.0	7.0	20.0
Minimum Split (s)	14.8	14.8	14.8	14.8	14.8	14.8	26.3			13.4	13.4	26.3
Total Split (s)	28.0	37.0	37.0	27.0	36.0	36.0	86.0			26.0	26.0	112.0
Total Split (%)	15.9%	21.0%	21.0%	15.3%	20.5%	20.5%	48.9%			14.8%	14.8%	63.6%
Maximum Green (s)	20.2	29.2	29.2	19.2	28.2	28.2	79.7			19.6	19.6	105.7
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
All-Red Time (s)	4.8	4.8	4.8	4.8	4.8	4.8	3.3			3.4	3.4	3.3
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0			-2.0		
Total Lost Time (s)	5.8	5.8	5.8	5.8	5.8	5.8	4.3			4.4		
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lag			Lead	Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Max			None	None	Max
Act Effct Green (s)	12.2	19.4	29.7	20.5	30.8	30.8	82.3			21.1		
Actuated g/C Ratio	0.07	0.12	0.18	0.13	0.19	0.19	0.50			0.13		
v/c Ratio	0.39	0.62	0.17	0.78	0.63	0.52	0.64			0.81		
Control Delay	81.3	81.1	9.3	82.9	71.5	14.2	32.0			84.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
Total Delay	81.3	81.1	9.3	82.9	71.5	14.2	32.0			84.7		
LOS	F	F	A	F	E	B	C			F		
Approach Delay	64.8			58.8			32.0			27.4		
Approach LOS	E			E			C			C		

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 163.7

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 35.4

Intersection LOS: D

Intersection Capacity Utilization 76.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: Boston Road & Route 146

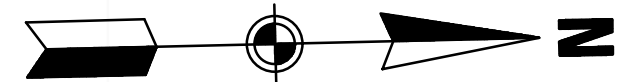
 Ø1	 Ø2	 Ø3	 Ø4
26 s	86 s	28 s	36 s
 Ø6		 Ø7	 Ø8
112 s		27 s	37 s

Lane Group	SBR
Permitted Phases	6
Detector Phase	6
Switch Phase	
Minimum Initial (s)	20.0
Minimum Split (s)	26.3
Total Split (s)	112.0
Total Split (%)	63.6%
Maximum Green (s)	105.7
Yellow Time (s)	3.0
All-Red Time (s)	3.3
Lost Time Adjust (s)	-2.0
Total Lost Time (s)	4.3
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Act Effct Green (s)	107.8
Actuated g/C Ratio	0.66
v/c Ratio	0.07
Control Delay	2.1
Queue Delay	0.0
Total Delay	2.1
LOS	A
Approach Delay	
Approach LOS	
Intersection Summary	

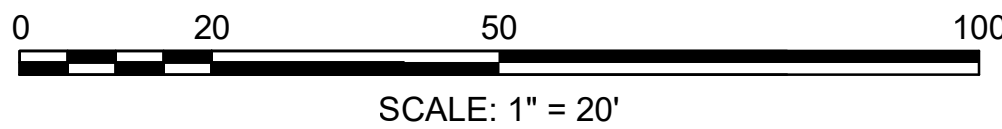
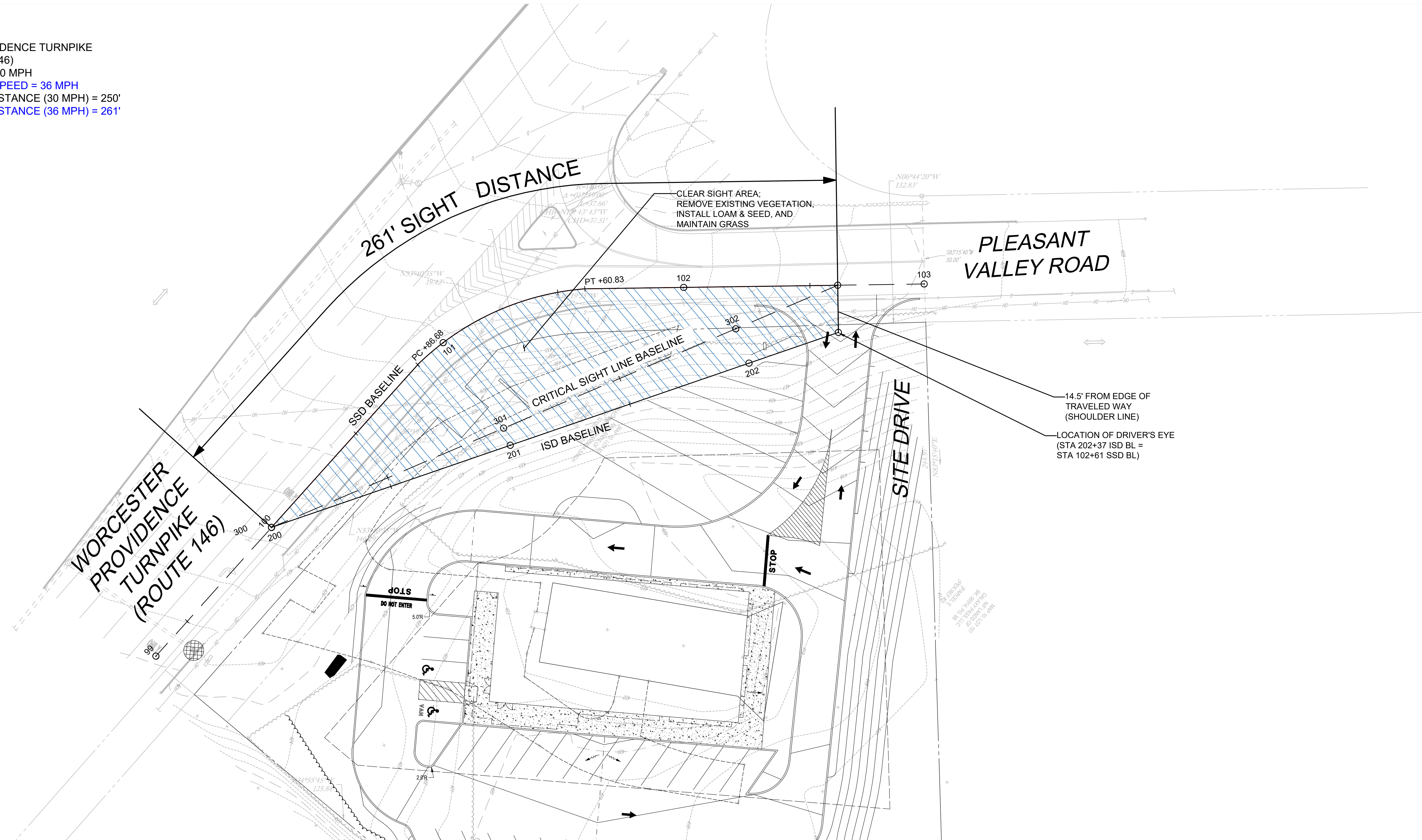
Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	406	7	5	692	24	62	29	89	28	1	32
Future Vol, veh/h	9	406	7	5	692	24	62	29	89	28	1	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Yield	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	441	8	5	752	26	67	32	97	30	1	35
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	752	0	0	449	0	0	852	1227	225	1019	1231	376
Stage 1	-	-	-	-	-	-	465	465	-	762	762	-
Stage 2	-	-	-	-	-	-	387	762	-	257	469	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	853	-	-	1108	-	-	253	177	778	191	176	622
Stage 1	-	-	-	-	-	-	547	561	-	363	412	-
Stage 2	-	-	-	-	-	-	608	412	-	725	559	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	853	-	-	1108	-	-	233	173	778	141	172	622
Mov Cap-2 Maneuver	-	-	-	-	-	-	233	173	-	141	172	-
Stage 1	-	-	-	-	-	-	538	552	-	357	409	-
Stage 2	-	-	-	-	-	-	568	409	-	589	550	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			31			25.9		
HCM LOS							D			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	328	853	-	-	1108	-	-	238				
HCM Lane V/C Ratio	0.597	0.011	-	-	0.005	-	-	0.279				
HCM Control Delay (s)	31	9.3	0.1	-	8.3	0	-	25.9				
HCM Lane LOS	D	A	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	3.6	0	-	-	0	-	-	1.1				

APPENDIX E – SIGHT DISTANCE ANALYSIS





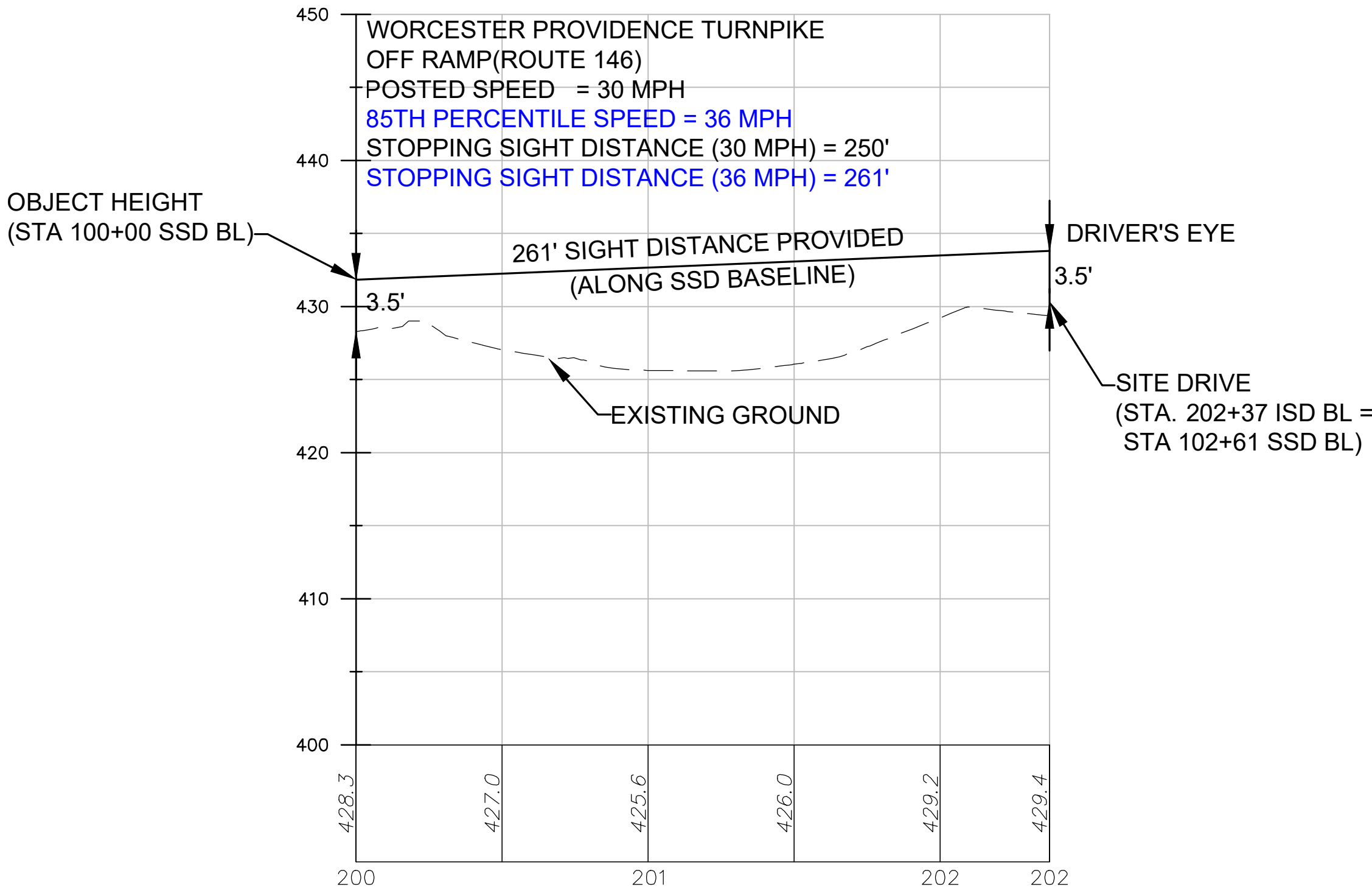
WORCESTER PROVIDENCE TURNPIKE
OFF RAMP(ROUTE 146)
POSTED SPEED = 30 MPH
85TH PERCENTILE SPEED = 36 MPH
STOPPING SIGHT DISTANCE (30 MPH) = 250'
STOPPING SIGHT DISTANCE (36 MPH) = 261'



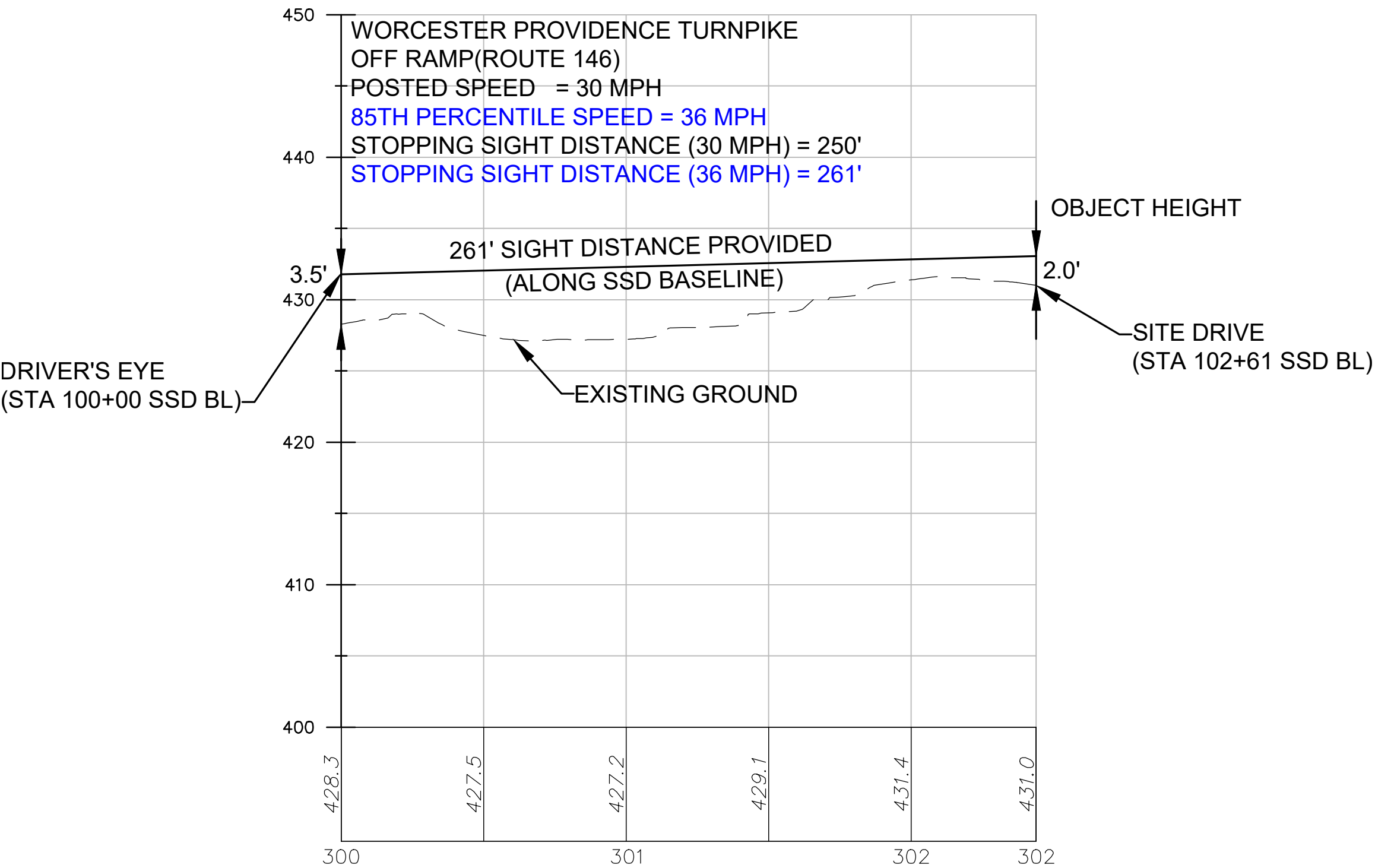
NOTES: 1. THIS PLAN IS FOR REVIEW PURPOSES ONLY
AND IS NOT INTENDED FOR CONSTRUCTION.

SIGHT DISTANCE STUDY

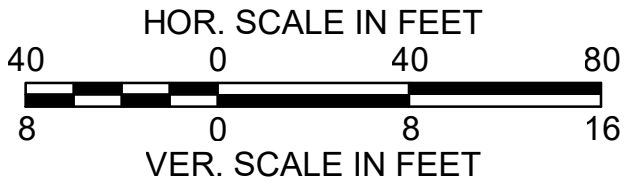
PROJECT: PROPOSED MEDICAL OFFICE SUTTON, MA			
PROPOSED BY: TORRINGTON PROPERTIES INC.			
NO.	REVISIONS	DATE	 Vanasse & Associates, Inc. Transportation Engineers & Planners 35 New England Business Center Drive Suite 140 Andover, MA 01810 Office (978) 474-8800 WWW.RDVA.COM
DESIGNED BY:	TWO	DATE:	10/28/22
DRAWN BY:	TWO	SCALE:	1" = 20'
CHECKED BY:	JPC	SHEET	1 OF 2



INTERSECTION SIGHT DISTANCE PROFILE
(ISD BASELINE)



CRITICAL SIGHT LINE



NOTES: 1. THIS PLAN IS FOR REVIEW PURPOSES ONLY
AND IS NOT INTENDED FOR CONSTRUCTION.

SIGHT DISTANCE STUDY

PROJECT: PROPOSED MEDICAL OFFICE SUTTON, MA			
PROPOSER: TORRINGTON PROPERTIES INC.			
NO.	REVISIONS	DATE	Vai Vanasse & Associates, Inc. Transportation Engineers & Planners 35 New England Business Center Drive Suite 140 Andover, MA 01810 Office (978) 474-8800 WWW.RDVA.COM
	DESIGNED BY: TWO	DATE: 10/28/22	
	DRAWN BY: TWO	SCALE: 1" = 40'	
	CHECKED BY: JPC	SHEET 2 OF 2	