



Memorandum

To: Art Mahassel, President and CEO
UGPG RE Sutton, LLC
223 Worcester Highway
Sutton, MA 01590

Date: March 30, 2022

Project #: 15047.01

Cc: Matt Piekarski

From: Vinod K. Kalikiri, PE, PTOE
Michael A. Santos, PE, PTOE

Re: Proposed Warehouse and Distribution Facilities
Traffic Impact Evaluation for Buildings 2 and 3
105 Providence Road, Sutton, Massachusetts

VHB has prepared this Traffic Impact Evaluation (hereinafter referred to as “the Study”) to summarize the anticipated traffic impacts associated with two proposed warehousing and distribution buildings (the Project) to be located at 105 Providence Road (the Site). These buildings are referred to as Buildings 2 and 3 in the Project filings. In total, the two buildings will support approximately 995,000 square feet (sf) of warehouse and distribution space. The two buildings will not house e-commerce last-mile home delivery operations.

A third building (referred to as Building 1) that is part of the overall development plan for the Site is currently in the planning stages, and is not part of the current filing or traffic analysis. A separate detailed traffic impact and access study will be prepared as part of a future filing for Building 1 that will include a cumulative impact analysis of all three proposed buildings.

Access to the Site will be provided by a proposed subdivision road, referred to in as Unified Parkway, that will connect Boston Road in the south with Providence Road (Route 122A) in the north, as documented in the Town of Sutton’s Planning Board Certificate of Approval of a Definitive Subdivision Plan dated January 12, 2022. Unified Parkway will intersect Boston Road approximately 800 feet to the east of the Galaxy Pass traffic signal. The Site location in relation to the surrounding roadways is shown on Figure 1.

As documented in this Study, the Project is not expected to have significant impacts on the surrounding roadway network and will not trigger traffic improvements on roadways and at intersections under the control of by the Massachusetts Department of Transportation (MassDOT). Nonetheless, the Study has been prepared in conformance to both MassDOT along with the Town of Sutton requirements.

In total, the Project is expected to generate approximately 1,406 trips over the course of an average weekday, 130 trips (102 entering and 28 exiting) during the Project’s operational weekday morning peak hour and 171 trips (58 entering and 113 exiting) during the Project’s operational weekday evening peak hour. The estimated peak hour site generated traffic will result in relatively minor increases to the traffic volumes at the study area intersections. Additionally, it is expected that the Project’s peak hours of operations will not coincide with the peak hours of the adjacent roadway network, further minimizing the impacts to the most critical time periods for traffic volumes.

Notwithstanding this finding, the geometry of the proposed intersection of Boston Road/Unified Parkway has been designed to support the future full build-out of the Site even though the application only covers Buildings 2 and 3 at this time. Further review of the cumulative traffic impacts and traffic mitigation needs will be discussed in the future traffic impact and access study that will be prepared as part of the future filing for Building 1.

Overall, this Study finds that Buildings 2 and 3 will have a minimal effect on traffic flow and operations in the area, and the development can be supported by the area roadway system without the need for capacity improvements or other mitigation measures.

Existing Conditions

A study area for the Project was developed based on the traffic characteristics of the proposed uses and an understanding of the surrounding transportation network that will serve the Project site.

Existing conditions for the Study were developed by conducting field reconnaissance and obtaining traffic volumes at the study locations listed below.

- Providence Turnpike (Route 146) at Boston Road
- Boston Road at Dudley Road/Pleasant Valley Road
- Boston Road at Galaxy Pass
- Providence Road (Route 122A) at Boston Road
- Boston Road at Site Driveway (Build conditions only)

Intersection Geometry

The existing traffic control and lane usage for the study area intersections is presented on Figure 2. The following sections describe each of the study area intersections.

Route 146 at Boston Road

Boston Road intersects Route 146 from the east and west to form a four-legged signalized intersection under MassDOT jurisdiction. The Boston Road eastbound approach consists of an exclusive left-turn lane, a through lane, and an exclusive channelized right-turn lane under yield-sign control. The Boston Road westbound approach consists of two exclusive left-turn lanes, a through lane, and an exclusive right-turn lane. The Route 146 southbound approach consists of two exclusive left-turn lanes, three through lanes, and an exclusive right-turn lane. The Route 146 northbound approach consists of two through lanes and a shared through/right-turn lane. Left-turns along the Route 146 northbound approach are accommodated by Pleasant Valley Road, immediately south of the intersection, that serves as a jug handle-type movement. The directions of travel along Boston Road are separated by a double-yellow centerline and the directions of travel along Route 146 are separated by a raised median. Pedestrian and bicycle facilities are not provided at the intersection. Land uses at the intersection primarily consist of commercial properties.

Boston Road at Dudley Road/Pleasant Valley Road

Dudley Road and Pleasant Valley Road intersect Boston Road from the north and south, respectively, to form this four-legged unsignalized intersection under Town of Sutton jurisdiction. The Boston Road eastbound and westbound approaches both consist of a shared left-turn/through lane and a through/right-turn lane. The Boston Road approaches are freely operating movements. The Dudley Road southbound and Pleasant Valley northbound approaches both consist of a single travel lane under stop-sign control. The Pleasant Valley Road northbound approach also serves vehicles traveling along Route 146 northbound destined to Boston Road westbound due to the lack of left-turn lanes along the northbound approach at the intersection of Route 146 at Boston Road. Directions of travel along all approaches are separated by a double-yellow centerline. Pedestrian and bicycle facilities are not provided at the intersection. Land uses at the intersection consist of residential uses, wooded areas, and undeveloped land.

Boston Road at Galaxy Pass

Galaxy Pass intersects Boston Road from the south to form this three-legged signalized intersection under Town of Sutton jurisdiction. The Galaxy Pass northbound approach consists of an exclusive left-turn lane and a shared left-turn/right-turn lane. Galaxy Pass serves as the primary driveway to a commercial and retail plaza containing a Market 32 supermarket, several restaurants, and various other commercial businesses. The Boston Road eastbound approach consists of a through lane and a shared through/right-turn lane. The Boston Road westbound approach consists of a shared left-turn/through lane and a through lane. Directions of travel along all approaches are separated by a double-yellow centerline. Pedestrian and bicycle facilities are not provided at the intersection. Land uses at the intersection consist of the shopping plaza served by Galaxy Pass, wooded areas, and undeveloped land.

Providence Road at Boston Road

Boston Road intersects Providence Road from the south to form a three-legged unsignalized intersection under Town of Sutton jurisdiction. Two private driveways are also located along the north side of Boston Road, opposite Boston Road at the intersection. All three approaches to the intersection consist of a single lane. The Boston Road northbound approach operates under stop-sign control and the Providence Road approaches operate as free movements. Directions of travel along all approaches are separated by a double-yellow centerline. A sidewalk is provided along the east side of Boston Road and the south side of Providence Road, east of the intersection. A marked crosswalk is also provided approximately 125 feet east of the intersection. Land uses at the intersection consist of residential and commercial properties.

Traffic Volumes

Traffic volume data was collected at the study area intersections and along Boston Road to determine the existing travel patterns throughout the study area. Manual turning movement counts (TMCs) were conducted at the four study area intersections in October 2021 from 6:00 AM to 7:00 PM.

Traffic Volume Adjustment Factors

COVID-19 Pandemic Adjustments

In accordance with MassDOT guidelines, traffic counts collected after March 13, 2020 may not be representative of typical traffic volumes due to the coronavirus disease 2019 (COVID-19) pandemic.^{1, 2} To account for the impact of the COVID-19 pandemic on traffic volumes, the MassDOT Transportation Data Management System (TDMS) was used to conduct a review of historical traffic count data from nearby count stations along Route 146 and Boston Road to determine if any adjustments to the 2021 data were necessary. Based on this review, traffic count data dating back to 2014 was used to develop the appropriate adjustment factors to apply to the 2021 traffic data. The 2021 weekday morning peak hour counts were lower than the historical traffic data obtained from the TDMS and a factor of 1.11 was applied to the 2021 counts. The 2021 weekday evening peak hour counts were higher than the historical traffic data obtained from the TDMS and a factor of 0.77 would be applied to the 2021 counts to adjust to pre-pandemic conditions. To provide a true existing conditions evaluation for the weekday evening peak hour, this evaluation did

¹ Chief Engineer Patricia Leavenworth. MassDOT Engineering Directive E-20-005 – Guidance on Traffic Count Data. 11 May 2020.

² Massachusetts Department of Transportation, Highway Division. Guidance on Traffic Count Data. Apr 2020.

not adjust the weekday evening traffic volumes downward to reflect pre-pandemic conditions. The detailed COVID-19 pandemic adjustment calculations are provided in the Appendix.

Seasonal Variation Adjustments

Traffic on a given roadway typically fluctuates throughout the year depending on the area and the type of roadway. Based on MassDOT guidelines for the preparation of a traffic study, existing traffic volumes must represent annual average-month conditions. Based on MassDOT 2019 Weekday Seasonal Adjustment Factors, June and October traffic volumes along Urban Principal Arterials³ are approximately 7 to 9 percent higher than average annual conditions. June and October traffic volumes along Urban Minor Arterials⁴ are approximately 6 to 14 percent higher than average annual conditions. Therefore, the June and October 2021 traffic counts were used without a seasonal adjustment. The MassDOT seasonal adjustment factors are provided in the Appendix.

Existing Traffic Volumes

Figure 3 depicts the existing condition weekday morning and weekday evening peak hour traffic volumes at the study area intersections.

Crash Analysis

Crash data for the study area intersections were obtained from MassDOT for the most recent five-year period for which complete data is available (between 2015 and 2019).

In addition to the collision summary, incident occurrence was compared to the volume of traffic through a particular intersection to determine significance and if there are existing safety issues. Accordingly, the crash rates were calculated for each study area intersection and compared with the statewide and district-wide (MassDOT District 3) averages. For signalized intersections, the statewide average is 0.78 collisions per million entering vehicles (c/mev) and the district-wide average is 0.89 c/mev. For unsignalized intersections, the statewide average is 0.57 c/mev and the district-wide average is 0.61 c/mev. The crash rate worksheets are provided in the Appendix. A summary of the MassDOT crash data at the study area intersections is provided in Table 1.

³ Route 146 in Sutton in the vicinity of the site is classified as an Urban Other Principal Arterial (U3) that is under MassDOT jurisdiction.

⁴ Boston Road in Sutton in the vicinity of the site is classified as an Urban Minor Arterial (U4) that is under Town of Sutton jurisdiction.

Table 1 Motor Vehicle Crash Data Summary

Condition	Route 146 at Boston Road	Boston Road at Dudley Road/ Pleasant Valley Road
Year		
2015	18	2
2016	29	3
2017	19	2
2018	25	1
2019	17	1
Total	108	9
Crash Rate	1.03	0.37
Crash Type		
Property Damage Only	80	7
Personal Injury	28	2
Crash Manner		
Angle	10	8
Rear End	74	0
Sideswipe	13	1
Single Vehicle	10	0
Other	1	0
Roadway Condition		
Dry	79	9
Wet	18	0
Snow/Ice	9	0
Other	2	0
Time Period		
Weekday AM Commuter ^a	14	0
Weekday PM Commuter ^b	12	2
Non-Commuter	82	7

Source: MassDOT's IMPACT Crash Data Portal, Data Query and Visualization tool

^a Weekday between 7:00-9:00 AM

^b Weekday between 4:00-6:00 PM

Table 1 (continued) Motor Vehicle Crash Data Summary

Condition	Boston Road at Galaxy Pass	Providence Road at Boston Road
Year		
<i>2015</i>	0	0
<i>2016</i>	0	1
<i>2017</i>	2	0
<i>2018</i>	3	0
<i>2019</i>	3	1
Total	8	2
Crash Rate	0.31	0.11
Crash Type		
<i>Property Damage Only</i>	6	2
<i>Personal Injury</i>	2	0
Crash Manner		
<i>Angle</i>	4	1
<i>Rear End</i>	0	1
<i>Sideswipe</i>	3	0
<i>Single Vehicle</i>	1	0
Roadway Condition		
<i>Dry</i>	7	0
<i>Wet</i>	1	2
Time Period		
<i>Weekday AM Commuter^b</i>	0	1
<i>Weekday PM Commuter^c</i>	4	0
<i>Non-Commuter</i>	4	1

Source: MassDOT's IMPACT Crash Data Portal, Data Query and Visualization tool

^a Weekday between 7:00-9:00 AM

^b Weekday between 4:00-6:00 PM

Based on the MassDOT IMPACT website, the study area intersections experienced a total of 127 motor vehicle collisions between 2015 – 2019, the five years of complete data that is available from MassDOT.

A total of 108 crashes occurred at the intersection of Route 146 at Boston Road. This intersection experienced a crash rate of 1.03 c/mev, which is above the District 3 average for signalized intersections. This intersection was also identified as a Top 200 Crash Cluster for the years 2017 – 2019 by MassDOT as part of their Highway Safety Improvement Program (HSIP), indicating that the intersection has a crash rate in the top 5 percent of the area served by the Central Massachusetts Regional Planning Commission (CMRPC). The most prevalent crash type at this intersection were rear-end collisions, which may be a result of high levels of congestion, queuing, and unexpected stops at the traffic signal.

The remaining three study area intersections experienced crash rates well below the District 3 average for signalized and unsignalized intersections. The intersection of Boston Road at Dudley Road/Pleasant Valley Road experienced a total of 9 crashes during the review period, with the majority being angle-type collisions. The intersection of Boston Road at Galaxy Pass experienced a total of 8 collisions during the review period, with the majority being angle and sideswipe collisions. The intersection of Providence Road at Boston Road experienced a total of 2 collisions during the review period. Based on a review of the crash data, no apparent trends or patterns were identified at the study area intersections.

Future Conditions

To estimate the impact of the proposed development's traffic on the adjacent roadway system, existing traffic volumes were projected to the year 2029. This design horizon represents a seven-year projection from the year of this traffic study that is in accordance with MassDOT guidelines for transportation impact assessments. Traffic volumes at that time would include existing traffic, new traffic due to normal traffic growth, and traffic related to significant development by others that are expected to be completed within the design horizons. The incremental impacts of the proposed development may then be determined by adding site-generated traffic volumes (Build conditions) and making comparisons to the baseline (No-Build) conditions.

No-Build Conditions

Traffic growth is a function of the expected land development in a region. To predict a rate at which traffic can be expected to grow during the forecast periods, both historical growth and planned areas developments were examined.

Historical Growth

To develop future baseline traffic volume conditions, two components of traffic growth were considered. First, an annual average traffic-growth percentage was determined based on a review of recent traffic studies that were submitted for nearby projects. A recent traffic study⁵ prepared for another project in the town that went through MassDOT review was reviewed and it was determined that a one percent annual traffic growth rate for future traffic

⁵ *Traffic Impact and Access Study – Blackstone Logistics Center, Sutton, Douglas, and Uxbridge, Massachusetts*; VHB; January 11, 2021.

projections is appropriate. Accordingly, the one percent annual traffic growth rate was applied to the existing conditions traffic volumes.

Background Developments

Traffic to be generated by planned developments anticipated to add substantial traffic volumes through the study area were considered in projecting future traffic volumes. Specifically, traffic volumes from the following development were included within the future traffic-volumes as part of this Study.

- Blackstone Logistics Center – 40 and 100 Lackey Dam Road: A 640,000 sf warehouse is proposed at 40 and 100 Lackey Dam Road in the Town of Uxbridge, adjacent to the Town of Sutton. Project generated traffic for this project was obtained from the traffic study and added to the future conditions traffic volumes networks.

In addition to this project, traffic volumes from a few planned relatively smaller residential developments at 19 Canal Street and 15-17 Rice Road in Millbury and some additional development potential at the Pleasant Valley Crossing Phase III project off Galaxy Pass in Sutton were assumed to be accounted for in the one percent annual traffic growth rate.

No-Build Traffic Volumes

The 2029 No-Build peak hour traffic volumes were accordingly developed by applying a one percent compounded annual traffic growth rate to the 2022 Existing volumes and adding estimated traffic associated with the background developments. The 2029 No-Build traffic volumes are shown graphically for the study area intersections on Figure 4 for the weekday morning and weekday evening peak hours.

Build Conditions

The Project will consist of the construction of two buildings (referred to as Buildings 2 and 3) that will support warehouse and distribution uses, encompassing a total of approximately 995,000 sf⁶ of space. As discussed earlier, access to the Site will be provided by Unified Parkway, a newly approved subdivision roadway that connects Providence Road (Route 122A) in the north to Boston Road in the south. Unified Parkway will intersection Boston Road from the north, at a location approximately 800 feet east of the Galaxy Pass signalized intersection.

Trip Generation

For trip generation estimates, two sources of information were considered. The Proponent identified two exiting sites in Massachusetts (one in Sutton and the other in Lancaster) that have operations similar to those anticipated for Buildings 2 and 3, albeit with building sizes smaller than the proposed buildings on the Site. Additionally, trip rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual⁷ were reviewed. Based on a review of available information, it was determined that ITE Land Use Code (LUC) 154 – High Cube Warehouse and Short-Term Storage Warehouse is an appropriate land use to estimate Project-generated trips.

The trip-generation summary based is summarized in Table 2 and the corresponding calculations are provided in the Appendix. Based on the ITE trip generation guidelines for LUC 154, the Project is expected to generate 1,406 trips over

⁶ Trip generation estimates in this study have been prepared for a slightly larger development size of 1,005,000 sf

⁷ Institute of Transportation Engineers. Trip Generation Manual, 10th ed. Washington, DC, 2017.

the course of an average weekday, with 130 trips (102 entering and 28 exiting) during its weekday morning peak hour of operations and 171 trips (58 entering and 113 exiting) during its weekday evening peak hour of operations. To provide a conservatively worse case analysis, it was assumed that the peak of traffic operations for the two buildings occurs at the same time as the peak of the roadway traffic. A review of the data for the two empirical sites indicated that the peak hour trip rates for sites were lower than the numbers presented in Table 2.

Table 2 Trip Generation Summary

Time Period/Direction	Estimated Trips ^a
<i>Weekday Daily</i>	<i>1,406</i>
<i>Weekday Morning Peak Hour</i>	
Enter	102
Exit	28
<i>Total</i>	<i>130</i>
<i>Weekday Evening Peak Hour</i>	
Enter	58
Exit	113
<i>Total</i>	<i>171</i>

a Based on ITE LUC 154 (High-Cube Transload and Short-Term Storage Warehouse)

Trip Distribution

The directional distribution of the vehicular traffic approaching and departing the Site is a function of the land use, population densities, the location of employment, existing travel patterns, and the efficiency of the existing roadway system. The trip distribution for the Project was developed based on the most recent U.S. Census Journey-to-Work data for employees working in Sutton. The trip distribution patterns are shown in Table 3 and Figure 5.

Table 3 Trip Distribution Summary

Direction (to/from)	Routes Used	Percentage of Trips
<i>North</i>	Route 146	32%
<i>South</i>	Route 146	31%
<i>West</i>	Boston Road	7%
<i>South/East</i>	Providence Road	18%
<i>North/West</i>	Providence Road	12%

The trip distribution patterns shown in Table 3 were applied to the Project-generated trips to develop the trip assignments by turning movement. The Project-generated traffic volume networks are shown in Figure 6 for the weekday morning and evening peak hours.

Build Traffic Volumes

The Project-generated traffic volumes were added to the No-Build traffic volumes to develop the Build peak-hour traffic-volume networks. The 2029 Build weekday morning and evening peak-hour traffic volumes are presented in Figure 7.

Site Access

As noted earlier, access to the Site is proposed via the intersections at either end of the proposed subdivision roadway referred to as Unified Parkway. It is expected that a higher proportion of the Site traffic will use the intersection of Unified Parkway/Boston Road, which is located approximately 800 feet to the east of Galaxy Pass. While the current Project only seeks review and approval for Buildings 2 and 3, the Applicant plan to size the proposed intersection of Unified Parkway/Boston Road to support traffic that would be generated by the full build-out of the Site. Analysis indicates that expected traffic volumes from Buildings 2 and 3 would not exceed the Warrants for the installation of a traffic signal at the intersection. The intersection is therefore depicted as an unsignalized, stop controlled intersection in the Project submittal. Final traffic control and configuration of the intersection will be further refined as part of a future traffic study after the details of Building 1 are further developed.

Traffic Operations Analysis

Capacity Analysis Methodology

Capacity analyses were performed for the study area intersections with the 2022 Existing, 2029 No-Build, and 2029 Build traffic volumes during the weekday morning and evening peak hours based on the concepts and procedures in the Highway Capacity Manual (HCM)⁸ using the *Trafficware Synchro Software* computer program. This software program is a MassDOT approved traffic analysis tools for determining intersection capacity operations.

The analysis results are categorized in terms of Level of Service (LOS), which describes the qualitative intersection operational conditions based on the calculated average delay per vehicle. The relationship between LOS and delay is summarized in Table 5.

⁸ Transportation Research Board. Highway Capacity Manual. 2000.

Table 5 **Level of Service Criteria**

Level of Service	Unsignalized Intersection Criteria Average Total Delay (Seconds per Vehicle)	Signalized Intersection Criteria Average Total Delay (Seconds per Vehicle)
<i>A</i>	< 10.0	< 10.0
<i>B</i>	10.1 to 15.0	10.1 to 20.0
<i>C</i>	15.1 to 25.0	20.1 to 35.0
<i>D</i>	25.1 to 35.0	35.1 to 55.0
<i>E</i>	35.1 to 50.0	55.1 to 80.0
<i>F</i>	> 50.0	> 80.0

Source: Highway Capacity Manual 2000.

Queue Length Methodology

The study area intersections were also evaluated with respect to vehicle queuing. For signalized intersections, the quantitative measures of vehicle queue length are defined as the 50th and the 95th percentile queues. The 50th percentile queue represents the average queue length and the 95th percentile queue represents the calculated maximum back of queue that has a probability of 5 percent or less of being exceeded during the peak hour.

For unsignalized intersections, the quantitative measure of vehicle queue length is defined as the 95th percentile queue. The 95th percentile queue represents the percent of time during the peak period being analyzed that the calculated maximum back of queue would be equal to or less than the percentile estimate (i.e., the maximum queue length that would be exceeded only 5 percent of the time).

Intersection Operational Results

The capacity and queue length analysis results are summarized in Table 6 for the 2022 Existing, 2029 No-Build, and 2029 Build traffic-volume conditions. The analysis shows that Buildings 2 and 3, in and of themselves, would not trigger the need for any substantive improvements on the area roadway system. The computer-generated analysis reports are provided in the Appendix.

Table 6 Operations Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing					2029 No-Build					2029 Build				
	v/c	Delay	LOS	50 th % Queue	95 th % Queue	v/c	Delay	LOS	50 th % Queue	95 th % Queue	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Route 146 at Boston Road															
Weekday Morning:															
Boston Road EB L	0.77	88	F	155	180	0.68	80	F	117	201	0.68	82	F	121	201
Boston Road EB T	0.56	65	E	162	185	0.47	64	E	122	202	0.50	66	E	132	216
Boston Road EB R	0.05	58	E	0	0	0.04	59	E	0	4	0.04	60	E	0	4
Boston Road WB L	0.61	76	E	95	136	0.62	74	E	94	146	0.63	75	E	103	153
Boston Road WB T	0.71	77	E	180	262	0.73	78	E	178	280	0.72	77	E	183	283
Boston Road WB R	0.81	88	F	169	273	0.77	83	F	148	281	0.80	87	F	164	313
Route 146 NB T/R	1.02	65	E	1,036	1,240	1.05	72	E	1,050	1,330	1.06	79	E	1,115	1,330
Route 146 SB L	0.64	76	E	113	160	0.64	74	E	109	165	0.70	77	E	131	189
Route 146 SB T	0.54	17	B	343	404	0.53	16	B	317	425	0.53	16	B	336	425
Route 146 SB R	0.03	4	A	0	11	0.03	4	A	0	11	0.03	4	A	0	11
Overall Intersection	0.92	53	D			0.92	56	E			0.93	59	E		
Weekday Evening:															
Boston Road EB L	0.61	78	E	97	160	0.62	81	F	99	167	0.62	82	F	101	167
Boston Road EB T	0.53	69	E	125	192	0.55	71	E	131	204	0.56	72	E	136	210
Boston Road EB R	0.03	62	E	0	0	0.03	64	E	0	0	0.03	65	E	0	0
Boston Road WB L	0.73	76	E	146	210	0.77	81	F	160	225	0.84	87	F	186	271
Boston Road WB T	0.78	80	F	212	319	0.81	85	F	229	341	0.81	85	F	241	359
Boston Road WB R	0.59	69	E	113	229	0.68	76	E	145	272	0.83	91	F	198	375
Route 146 NB T/R	0.86	40	D	695	862	0.90	44	D	793	959	0.91	46	D	819	959
Route 146 SB L	0.83	82	F	189	290	0.89	92	F	208	323	0.93	100	F	225	349
Route 146 SB T	0.70	19	B	534	699	0.75	21	C	638	795	0.75	22	C	670	795
Route 146 SB R	0.04	5	A	0	13	0.05	5	A	0	14	0.05	5	A	0	14
Overall Intersection	0.85	40	D			0.89	44	D			0.92	47	D		

v/c = volume-to-capacity ratio
Delay in seconds
Queue lengths in feet

Table 6 (continued) Operations Analysis Summary

Intersection/Peak Hour/Lane Group	2022 Existing					2029 No-Build					2029 Build				
	v/c	Delay	LOS	50 th % Queue	95 th % Queue	v/c	Delay	LOS	50 th % Queue	95 th % Queue	v/c	Delay	LOS	50 th % Queue	95 th % Queue
Boston Road at Galaxy Pass															
Weekday Morning:															
Boston Road EB T/R	0.26	5	A	17	34	0.26	5	A	16	36	0.31	5	A	21	44
Boston Road WB L/T	0.42	6	A	28	52	0.41	6	A	28	55	0.42	6	A	29	58
Galaxy Pass NB L/R	0.25	11	B	9	25	0.23	11	B	8	28	0.23	11	B	8	28
Overall Intersection	0.47	7	A			0.45	7	A			0.47	7	A		
Weekday Evening:															
Boston Road EB T/R	0.34	6	A	21	43	0.34	6	A	21	47	0.35	6	A	25	53
Boston Road WB L/T	0.47	7	A	29	58	0.47	7	A	30	63	0.51	7	A	36	75
Galaxy Pass NB L/R	0.31	10	A	13	40	0.32	10	A	14	43	0.33	10	B	16	48
Overall Intersection	0.54	7	A			0.55	7	A			0.57	7	A		
Boston Road at Dudley Road/Pleasant Valley Road															
Weekday Morning:															
Boston Road EB L	0.02	9	A	--	3	0.02	9	A	--	3	0.02	9	A	--	3
Boston Road WB L	0.00	8	A	--	0	0.00	8	A	--	0	0.00	8	A	--	0
Pleasant Valley Road NB L/T/R	0.32	14	B	--	35	0.35	14	B	--	38	0.41	16	C	--	50
Dudley Road SB L/T/R	0.15	16	C	--	13	0.15	17	C	--	13	0.16	18	C	--	15
Weekday Evening:															
Boston Road EB L	0.02	9	A	--	3	0.02	9	A	--	3	0.03	10	A	--	3
Boston Road WB L	0.00	8	A	--	0	0.01	8	A	--	0	0.01	8	A	--	0
Pleasant Valley Road NB L/T/R	0.45	22	C	--	55	0.50	25	C	--	68	0.58	29	D	--	88
Dudley Road SB L/T/R	0.27	20	C	--	28	0.26	20	C	--	25	0.31	25	C	--	33
Providence Road at Boston Road															
Weekday Morning:															
Providence Road WB L	0.19	8	A	--	18	0.22	8	A	--	20	0.23	8	A	--	23
Boston Road NB Approach	0.39	12	B	--	45	0.44	14	B	--	58	0.47	14	B	--	63
Weekday Evening:															
Providence Road WB L	0.27	9	A	--	28	0.29	9	A	--	30	0.30	9	A	--	33
Boston Road NB Approach	0.49	16	C	--	68	0.55	18	C	--	83	0.69	25	D	--	135

v/c = volume-to-capacity ratio.
Delay in seconds.
Queue lengths in feet.

Table 6 (continued) Operations Analysis Summary

Intersection/Peak Hour/Lane Group	2029 Build			
	v/c	Delay	LOS	95 th % Queue
Boston Road at Unified Parkway				
<i>Weekday Morning:</i>				
Boston Road EB L	0.08	9	A	8
Unified Parkway SB Approach	0.09	17	C	8
<i>Weekday Evening:</i>				
Boston Road EB L	0.04	9	A	3
Unified Parkway SB Approach	0.35	20	C	38

v/c = volume-to-capacity ratio.

Delay in seconds.

Queue lengths in feet.

Route 146 at Boston Road

Based on the operations analysis, the intersection of Route 146 at Boston Road currently operates at an overall LOS D during both the weekday morning and evening peak hours. Under the 2029 No-Build and Build conditions, the intersection is expected to operate at an overall LOS E during the weekday morning peak hour and will continue to operate at LOS D during the weekday evening peak hour. Capacity constraints⁹ are currently experienced along most approaches and movements at the intersection. The existing traffic signal timing at the intersection results in a cycle length of approximately 180 seconds, or approximately three minutes, when each phase of the cycle reaches the maximum amount of allotted green time. Long cycle lengths are typically used at intersections with high volumes and multiple turning and through lanes along some or all approaches. A result of longer cycle lengths such as the one at this intersection is high delays due to the amount of red time each phase experiences. However, a long cycle length is necessary to efficiently process the level of traffic at this intersection. The longest queues at the intersection occur along the Route 146 northbound approach under all scenarios and during both time periods.

Based on the results of the operations analysis, the Project is not expected to have a significant impact on traffic operations.

Boston Road at Galaxy Pass

The intersection of Boston Road at Galaxy Pass currently operates at an overall LOS A and is expected to continue to operate at LOS A under the future conditions with or without the Project. The Project is expected to have minimal impact on traffic operations at this intersection. The traffic volumes at the intersection are well below the operational capacity under all conditions during both the weekday morning and evening peak hours. Queues at the intersection

⁹ Volume-to-capacity (v/c) ratios > 1.00, long vehicle delays (LOS F), and/or long vehicle queues.

are not expected to exceed 75 feet (three passenger vehicles) during both peak periods under all scenarios. Mitigation measures are not necessary at this intersection to accommodate the Project.

Boston Road at Dudley Road/Pleasant Valley Road

The critical movements at the unsignalized intersection of Boston Road at Dudley Road and Pleasant Valley Road currently operate at LOS C or better. The Project is not expected to have a significant impact on traffic operations at this intersection. The Pleasant Valley Road northbound and Dudley Road southbound approaches are expected to have increases in delays of 4 and 5 seconds, respectively, with the addition of Project-related traffic and will continue to operate well below their capacity during both peak hours under the 2029 Build conditions scenarios. Mitigation measures are not necessary at this intersection to accommodate the Project.

Providence Road at Boston Road

The critical movements at the unsignalized intersection of Providence Road at Boston Road currently operate at LOS C or better. The Project is not expected to have a significant impact on traffic operations at the intersection. The Boston Road northbound approach may experience an increase of 7 seconds of delay during the weekday evening peak hour due to exiting traffic from the Project site. This approach is expected to continue to operate well below its capacity and may experience maximum queues of up to 135 feet (between 5 and 6 vehicles, on average) during the weekday evening peak hour. Mitigation measures are not necessary at this intersection to accommodate the Project.

Boston Road at Unified Parkway

The critical movements at the proposed intersection of Boston Road at the Site Driveway are expected to operate at LOS C during the weekday morning and evening peak hours. Based on the operations analysis, single lane approaches along Boston Road and the site driveway are sufficient to accommodate the overall levels of traffic and turning movements at this intersection as part of the development of Buildings 2 and 3. Additional changes may be studied for this location as part of the future filing for Building 1.

Summary of Findings

Existing and future conditions in the study area have been described, analyzed, and evaluated with respect to traffic operations and the impact of the proposed Project. Based on the findings of this traffic study, the Project is expected to generate approximately 1,406 trips over the course of an average weekday, 130 trips (102 entering and 28 exiting) during the weekday morning peak hour and 171 trips (58 entering and 113 exiting) during the weekday evening peak hour, resulting in only minor increases to the traffic volumes at the study area intersections.

The traffic operations analysis indicates that there may be minor traffic volume increases and related minor increases in delay and that the existing transportation infrastructure can accommodate these small increases in traffic volumes and delay.

The analysis contained within this traffic study concludes that the Project, comprised of Buildings 2 and 3, can operate without the need for any traffic mitigation or capacity improvements at the study area locations. Improvements to the proposed intersection of Boston Road/Unified Parkway are aimed at addressing the full build-out geometry needs for the intersection. Further review of the cumulative traffic impacts and off-site traffic mitigation needs will be discussed in the future traffic impact and access study that will be prepared as part of the future filing for Building 1.

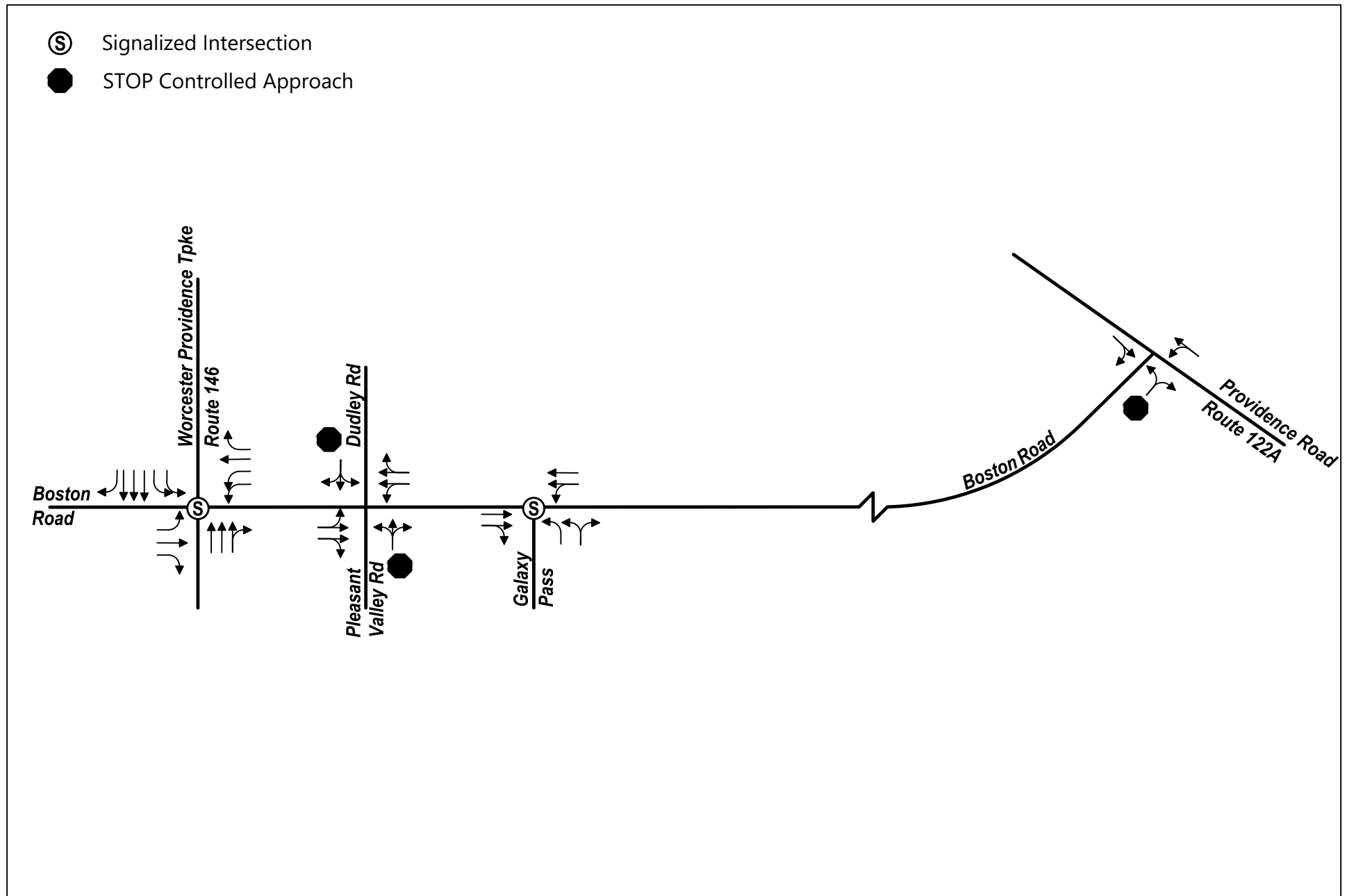


Not to Scale



Project Location &
Study Area Intersections
TKG Unified
Sutton, Massachusetts

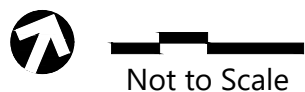
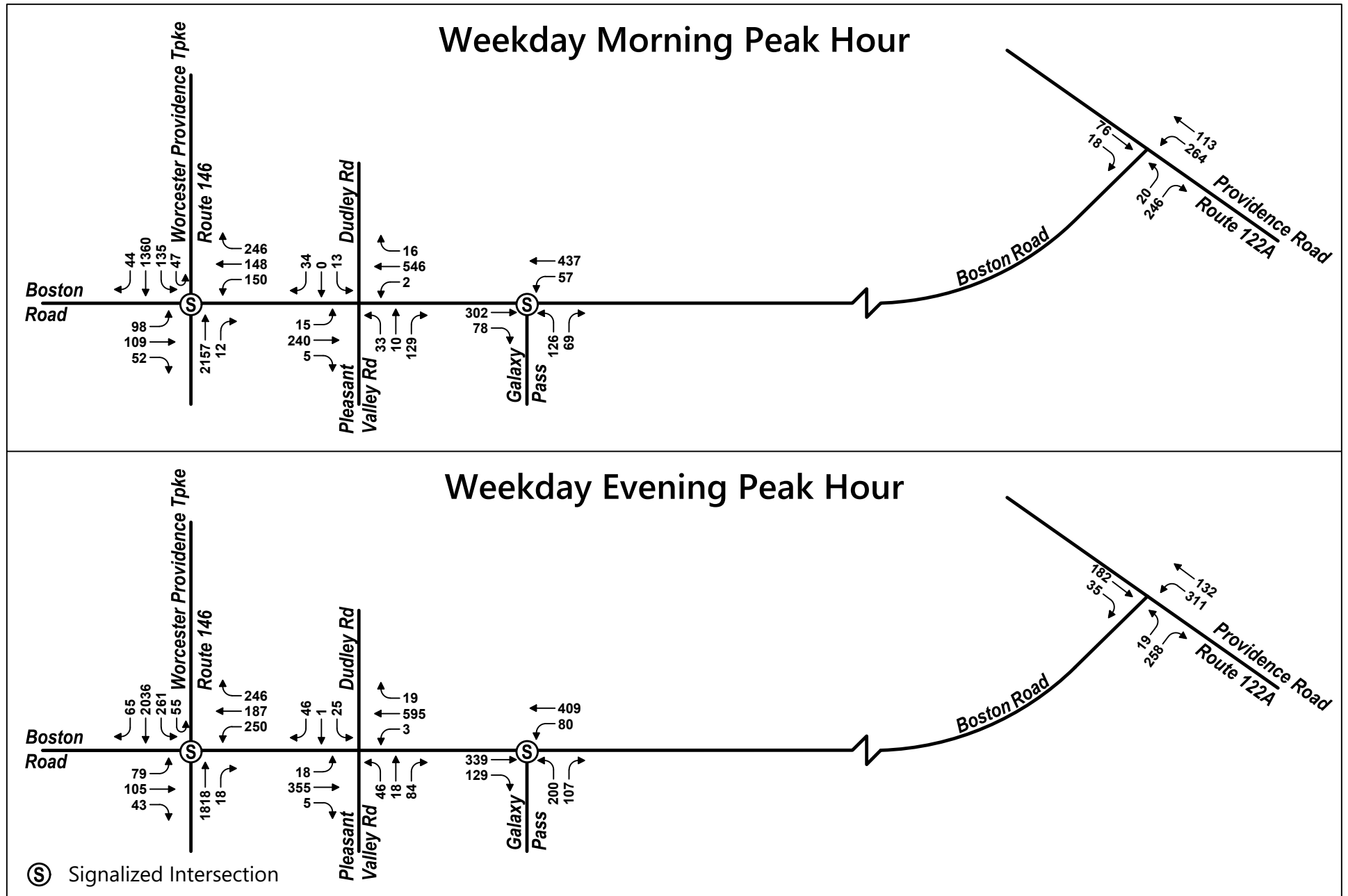
Figure 1



Traffic Control and Lane Usage

Figure 2

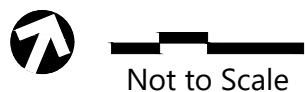
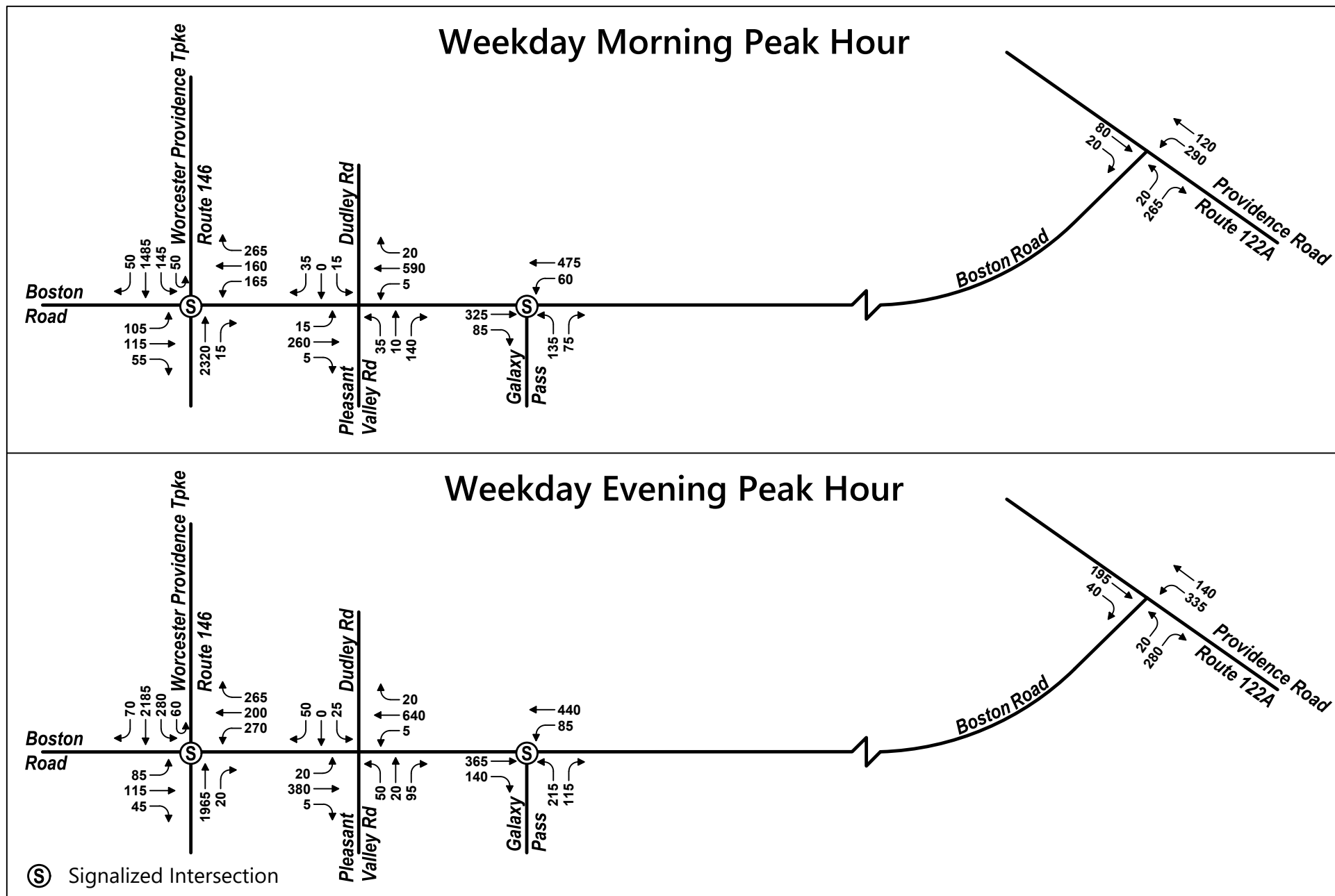
TKG Unified
Sutton, Massachusetts



2022 Existing Traffic Volumes

Figure 3

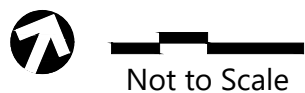
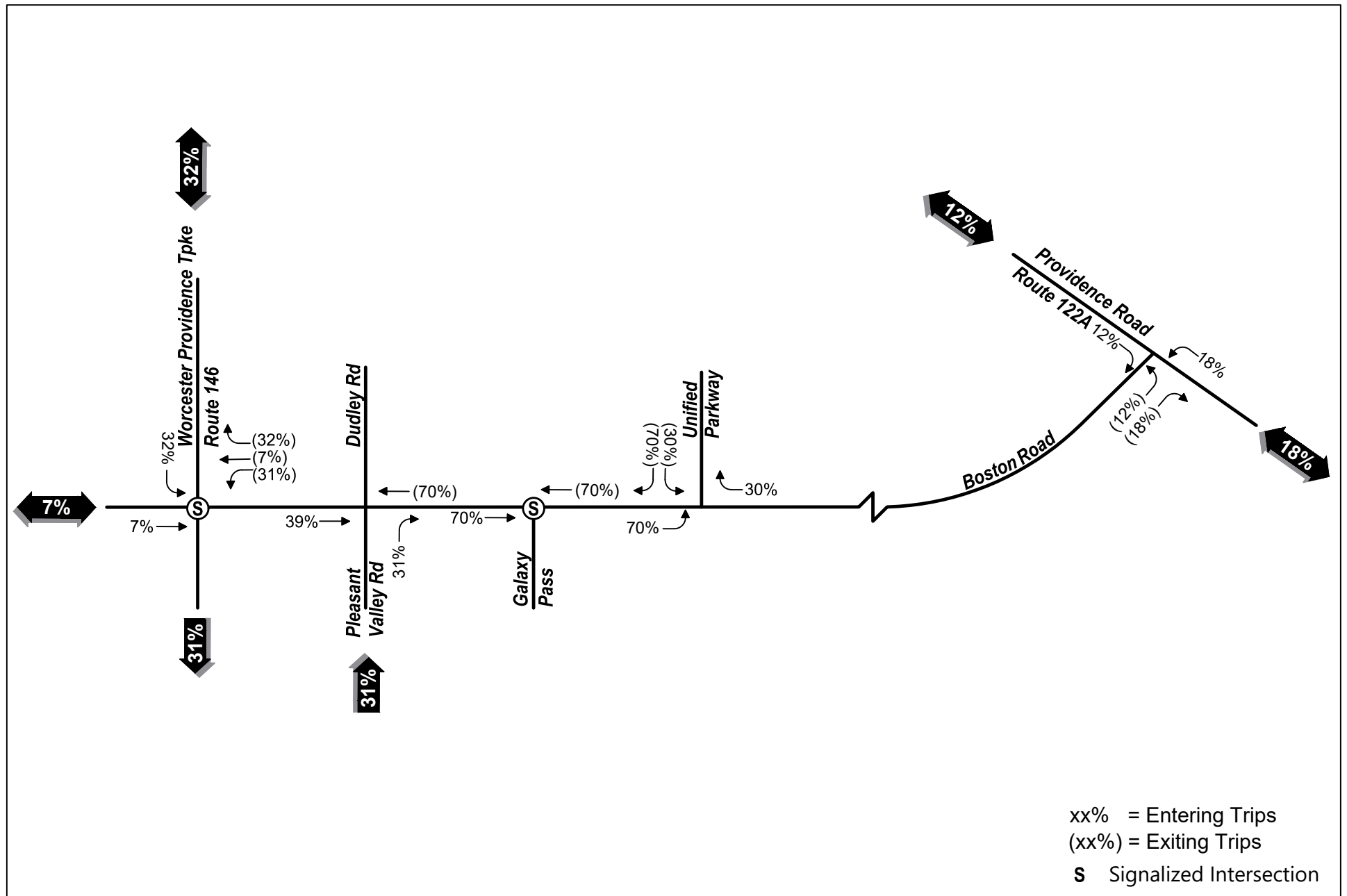
TKG Unified
Sutton, Massachusetts



2028 No-Build Traffic Volumes

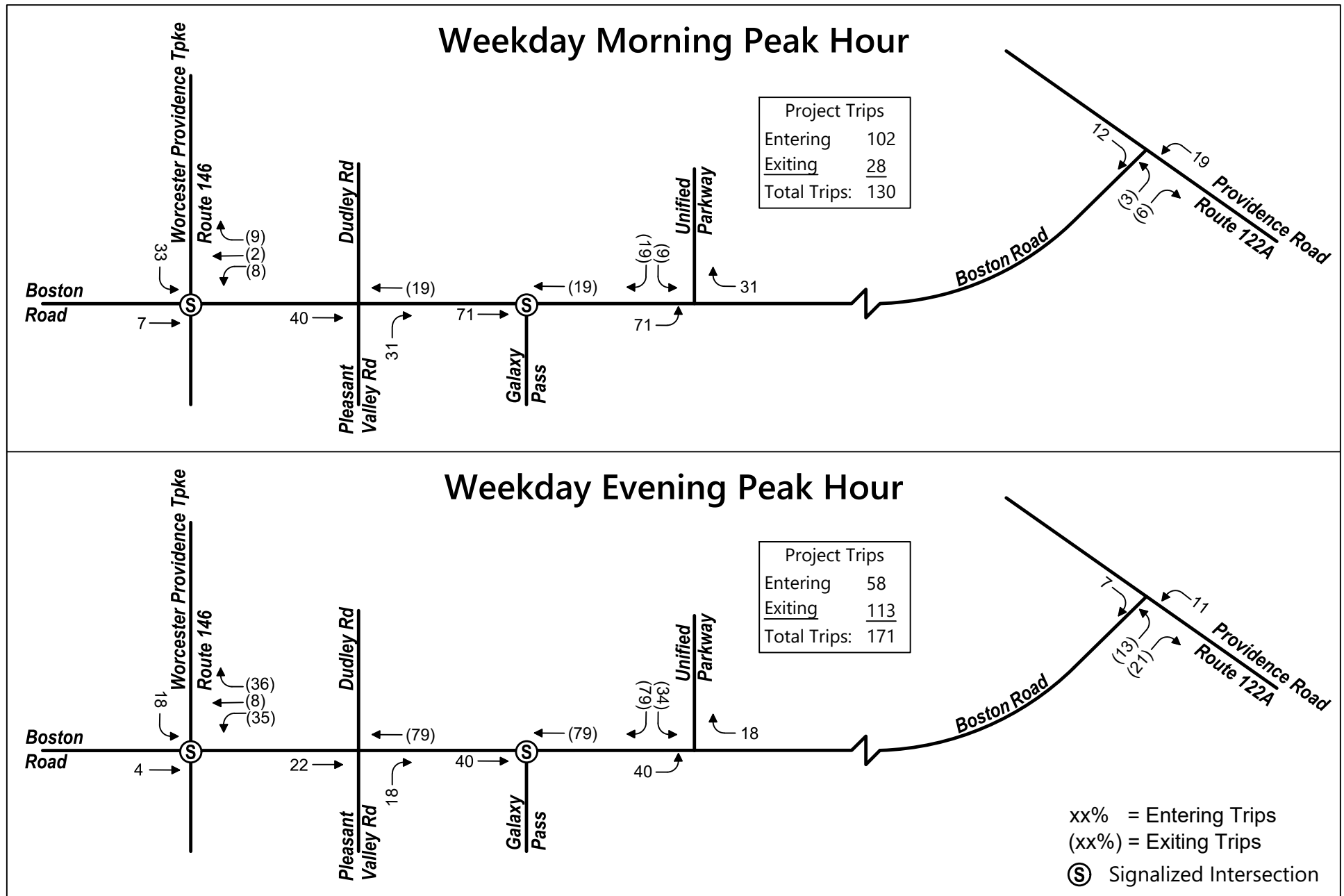
Figure 4

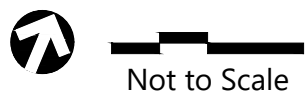
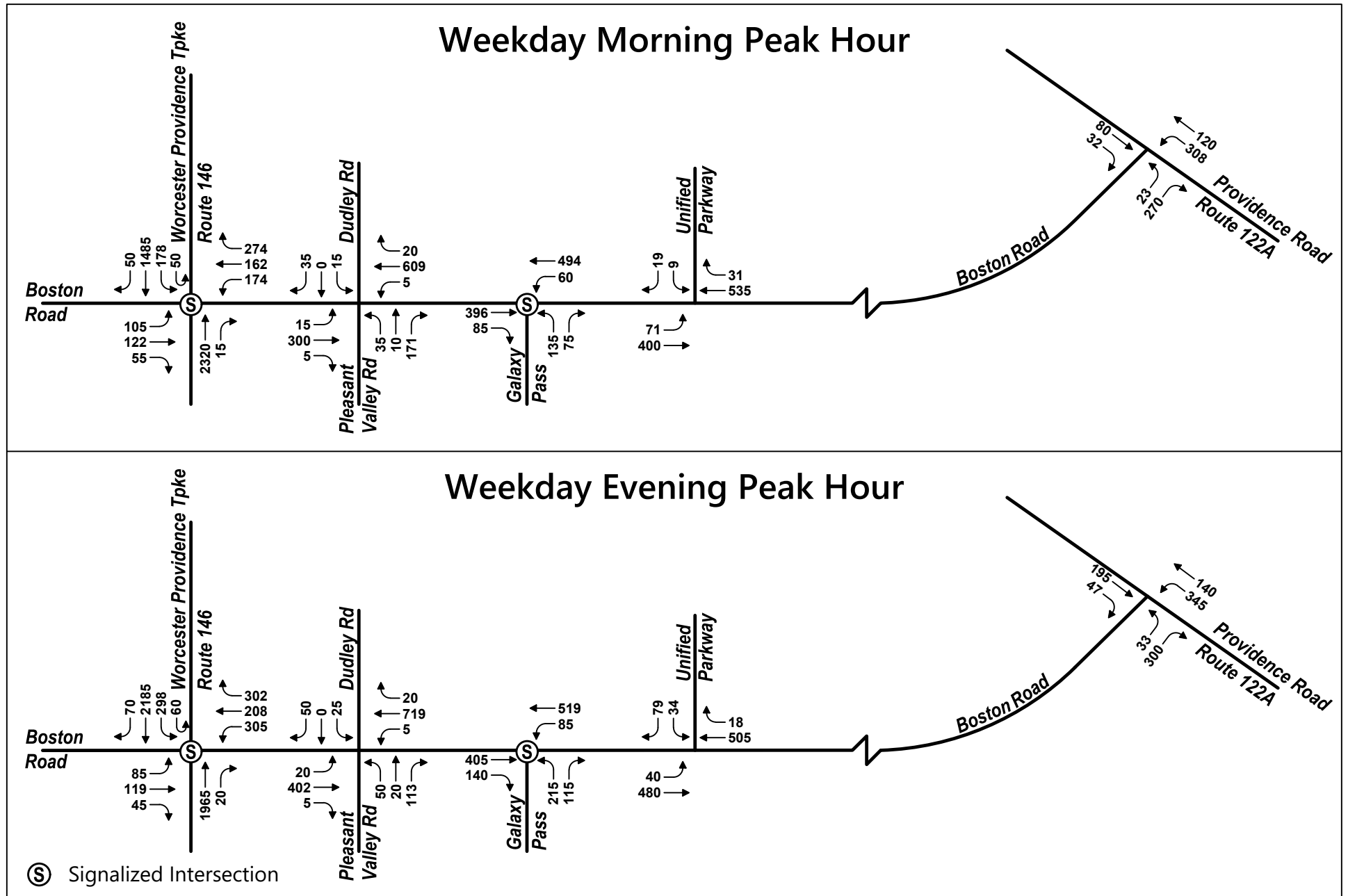
TKG Unified
Sutton, Massachusetts



Personal Vehicle
Trip Distribution
TKG Sutton
Sutton, Massachusetts

Figure 5





2028 Build Traffic Volumes

Figure 7

TKG Sutton
Sutton, Massachusetts

Appendix

- › Traffic Count Data
- › Traffic Volume Adjustments
- › Crash Data
- › Trip Generation
- › Synchro Capacity Analysis

Traffic Count Data

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 1

Groups Printed- Cars - Trucks

	Route 146 From North				Boston Rd From East			Route 146 From South			Boston Rd From West			
Start Time	Left	Thru	Right	U-Tr	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	9	196	1	0	16	4	28	0	309	2	7	9	5	586
06:15 AM	17	239	3	10	30	4	34	0	409	1	17	8	8	780
06:30 AM	18	261	7	8	43	14	47	0	451	2	8	5	8	872
06:45 AM	27	305	6	14	30	17	53	0	440	3	16	13	8	932
Total	71	1001	17	32	119	39	162	0	1609	8	48	35	29	3170
07:00 AM	25	297	9	7	27	46	69	0	452	2	19	14	9	976
07:15 AM	33	298	7	9	47	33	51	0	500	1	30	34	23	1066
07:30 AM	28	289	9	9	39	22	31	0	539	3	20	27	8	1024
07:45 AM	35	341	14	17	22	32	70	0	452	4	19	23	6	1035
Total	121	1225	39	42	135	133	221	0	1943	10	88	98	46	4101
08:00 AM	34	283	15	8	44	35	55	0	426	1	14	19	14	948
08:15 AM	35	281	5	11	31	30	48	0	408	3	16	35	11	914
08:30 AM	37	269	6	15	40	23	49	0	383	5	20	35	17	899
08:45 AM	41	259	13	13	39	28	49	0	348	2	14	22	5	833
Total	147	1092	39	47	154	116	201	0	1565	11	64	111	47	3594
09:00 AM	30	267	4	12	33	31	41	0	355	4	19	26	8	830
09:15 AM	29	264	13	15	26	11	47	0	354	5	15	14	9	802
09:30 AM	30	261	8	4	46	19	46	0	312	3	15	17	6	767
09:45 AM	34	281	5	5	39	22	37	0	325	3	15	14	5	785
Total	123	1073	30	36	144	83	171	0	1346	15	64	71	28	3184
10:00 AM	31	246	6	7	27	21	30	0	291	2	16	10	5	692
10:15 AM	28	226	13	6	39	30	50	0	282	4	16	14	11	719
10:30 AM	33	264	6	10	45	29	23	0	293	4	13	19	11	750
10:45 AM	34	235	14	13	27	32	29	0	306	2	14	43	7	756
Total	126	971	39	36	138	112	132	0	1172	12	59	86	34	2917
11:00 AM	33	269	7	12	22	28	34	0	279	3	16	23	4	730
11:15 AM	44	314	12	16	35	44	26	0	285	4	14	14	7	815
11:30 AM	36	271	16	7	45	22	39	0	270	6	23	22	7	764
11:45 AM	46	287	8	13	41	30	35	0	279	1	30	36	14	820
Total	159	1141	43	48	143	124	134	0	1113	14	83	95	32	3129
12:00 PM	41	292	8	7	42	33	47	0	278	11	19	23	8	809
12:15 PM	34	312	8	13	55	46	43	0	287	3	16	20	11	848
12:30 PM	39	267	11	18	45	27	56	0	270	7	17	21	8	786
12:45 PM	32	308	10	16	59	48	36	0	307	5	9	26	26	882
Total	146	1179	37	54	201	154	182	0	1142	26	61	90	53	3325
01:00 PM	39	286	17	13	51	35	27	0	262	2	20	27	17	796
01:15 PM	61	351	15	13	37	29	44	0	295	2	17	24	10	898
01:30 PM	34	399	7	12	49	30	43	0	321	5	19	17	8	944
01:45 PM	46	384	7	12	45	26	45	0	302	1	21	19	6	914
Total	180	1420	46	50	182	120	159	0	1180	10	77	87	41	3552
02:00 PM	37	392	11	12	48	27	47	0	345	3	9	16	8	955
02:15 PM	33	422	16	7	44	36	33	0	369	7	14	25	20	1026
02:30 PM	59	395	17	7	86	37	40	0	355	10	21	27	15	1069
02:45 PM	86	465	9	10	63	38	51	0	338	3	14	28	11	1116
Total	215	1674	53	36	241	138	171	0	1407	23	58	96	54	4166
03:00 PM	81	520	14	11	63	43	34	0	422	7	21	26	23	1265
03:15 PM	84	509	15	9	63	23	59	0	376	5	23	17	14	1197
03:30 PM	49	470	18	13	87	36	60	0	432	5	15	24	6	1215
03:45 PM	63	513	18	16	71	26	55	0	468	7	13	20	10	1280
Total	277	2012	65	49	284	128	208	0	1698	24	72	87	53	4957
04:00 PM	55	532	14	15	56	45	67	0	462	3	12	16	14	1291

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 2

Groups Printed- Cars - Trucks

	Route 146 From North				Boston Rd From East			Route 146 From South			Boston Rd From West			Int. Total
Start Time	Left	Thru	Right	U-Tr	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:15 PM	62	527	13	9	60	44	60	0	426	0	19	18	12	1250
04:30 PM	69	462	12	15	62	52	68	0	385	5	25	30	10	1195
04:45 PM	51	511	15	14	59	49	75	0	505	5	16	31	9	1340
Total	237	2032	54	53	237	190	270	0	1778	13	72	95	45	5076
05:00 PM	79	536	25	17	69	42	43	0	502	8	19	26	12	1378
05:15 PM	65	487	18	9	58	54	42	0	430	4	16	17	11	1211
05:30 PM	64	497	20	12	72	33	40	0	417	4	15	28	15	1217
05:45 PM	75	507	13	16	62	42	42	0	335	5	14	24	12	1147
Total	283	2027	76	54	261	171	167	0	1684	21	64	95	50	4953
06:00 PM	54	418	21	8	49	40	40	0	294	8	14	25	9	980
06:15 PM	54	402	13	8	39	37	48	0	303	3	13	20	11	951
06:30 PM	65	356	11	9	58	40	24	0	288	9	21	19	15	915
06:45 PM	52	272	16	7	39	26	29	0	267	4	14	26	7	759
Total	225	1448	61	32	185	143	141	0	1152	24	62	90	42	3605
Grand Total	2310	18295	599	569	2424	1651	2319	0	18789	211	872	1136	554	49729
Apprch %	10.6	84	2.8	2.6	37.9	25.8	36.3	0	98.9	1.1	34	44.3	21.6	
Total %	4.6	36.8	1.2	1.1	4.9	3.3	4.7	0	37.8	0.4	1.8	2.3	1.1	
Cars	2269	16543	587	551	2353	1615	2262	0	17036	207	855	1113	541	45932
% Cars	98.2	90.4	98	96.8	97.1	97.8	97.5	0	90.7	98.1	98.1	98	97.7	92.4
Trucks	41	1752	12	18	71	36	57	0	1753	4	17	23	13	3797
% Trucks	1.8	9.6	2	3.2	2.9	2.2	2.5	0	9.3	1.9	1.9	2	2.3	7.6

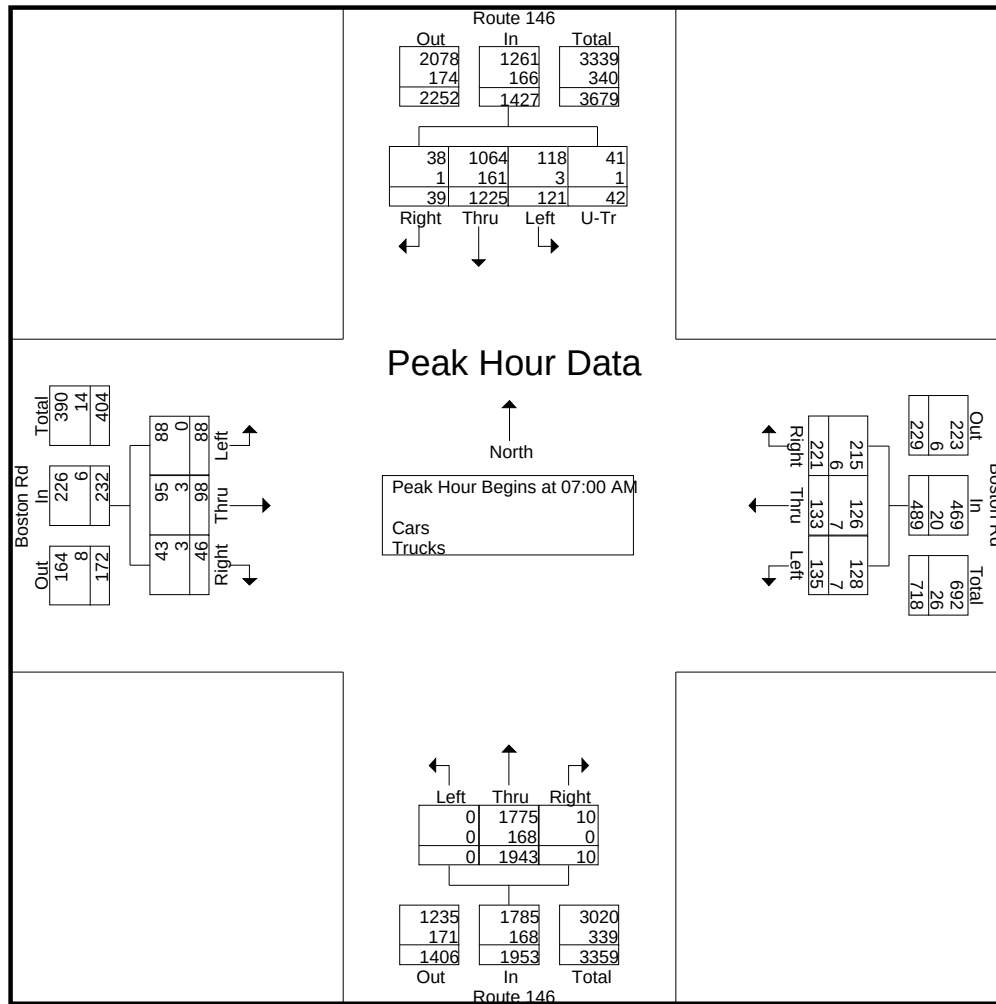
	Route 146 From North					Boston Rd From East				Route 146 From South				Boston Rd From West				
Start Time	Left	Thru	Right	U-Tr	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	25	297	9	7	338	27	46	69	142	0	452	2	454	19	14	9	42	976
07:15 AM	33	298	7	9	347	47	33	51	131	0	500	1	501	30	34	23	87	1066
07:30 AM	28	289	9	9	335	39	22	31	92	0	539	3	542	20	27	8	55	1024
07:45 AM	35	341	14	17	407	22	32	70	124	0	452	4	456	19	23	6	48	1035
Total Volume	121	1225	39	42	1427	135	133	221	489	0	1943	10	1953	88	98	46	232	4101
% App. Total	8.5	85.8	2.7	2.9		27.6	27.2	45.2		0	99.5	0.5		37.9	42.2	19.8		
PHF	.864	.898	.696	.618	.877	.718	.723	.789	.861	.000	.901	.625	.901	.733	.721	.500	.667	.962
Cars	118	1064	38	41	1261	128	126	215	469	0	1775	10	1785	88	95	43	226	3741
% Cars	97.5	86.9	97.4	97.6	88.4	94.8	94.7	97.3	95.9	0	91.4	100	91.4	100	96.9	93.5	97.4	91.2
Trucks	3	161	1	1	166	7	7	6	20	0	168	0	168	0	3	3	6	360
% Trucks	2.5	13.1	2.6	2.4	11.6	5.2	5.3	2.7	4.1	0	8.6	0	8.6	0	3.1	6.5	2.6	8.8

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 3



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

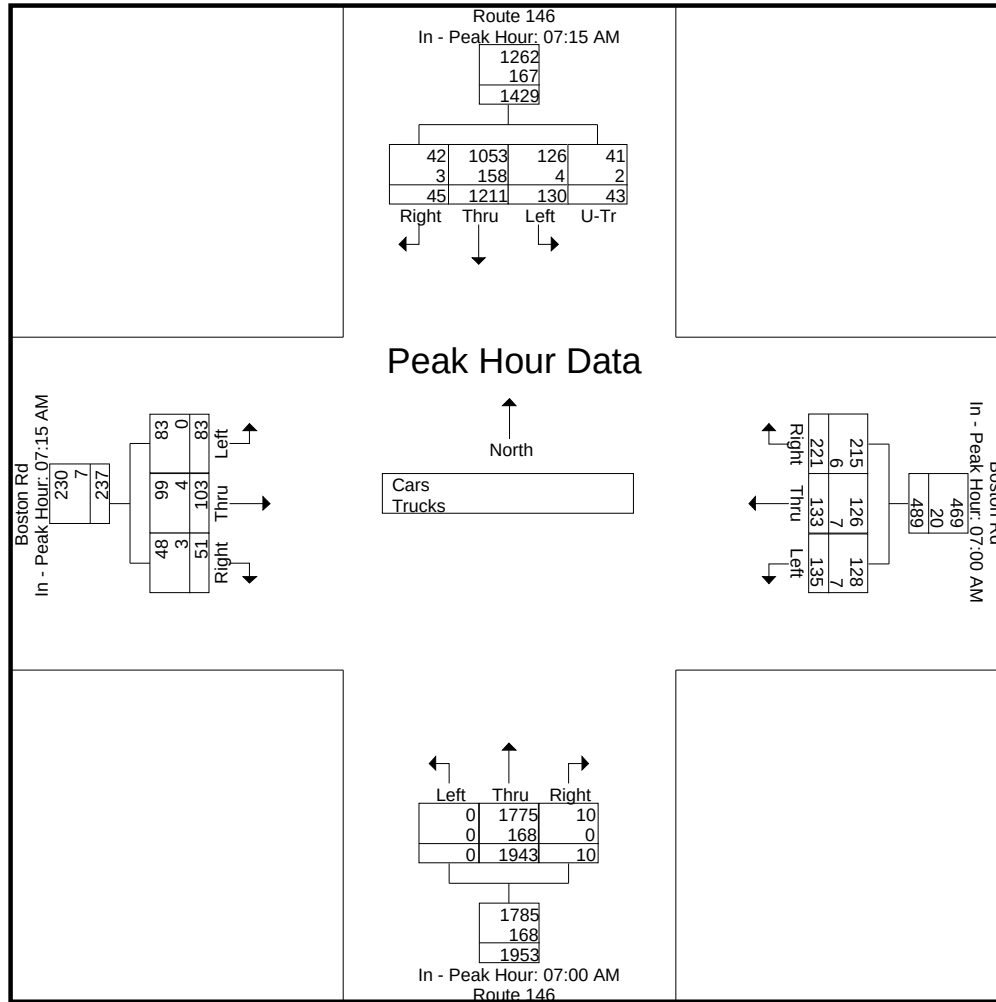
	07:15 AM					07:00 AM				07:00 AM				07:15 AM			
+0 mins.	33	298	7	9	347	27	46	69	142	0	452	2	454	30	34	23	87
+15 mins.	28	289	9	9	335	47	33	51	131	0	500	1	501	20	27	8	55
+30 mins.	35	341	14	17	407	39	22	31	92	0	539	3	542	19	23	6	48
+45 mins.	34	283	15	8	340	22	32	70	124	0	452	4	456	14	19	14	47
Total Volume	130	1211	45	43	1429	135	133	221	489	0	1943	10	1953	83	103	51	237
% App. Total	9.1	84.7	3.1	3		27.6	27.2	45.2		0	99.5	0.5		35	43.5	21.5	
PHF	.929	.888	.750	.632	.878	.718	.723	.789	.861	.000	.901	.625	.901	.692	.757	.554	.681
Cars	126	1053	42	41	1262	128	126	215	469	0	1775	10	1785	83	99	48	230
% Cars	96.9	87	93.3	95.3	88.3	94.8	94.7	97.3	95.9	0	91.4	100	91.4	100	96.1	94.1	97
Trucks	4	158	3	2	167	7	7	6	20	0	168	0	168	0	4	3	7
% Trucks	3.1	13	6.7	4.7	11.7	5.2	5.3	2.7	4.1	0	8.6	0	8.6	0	3.9	5.9	3

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 4



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 01:00 PM

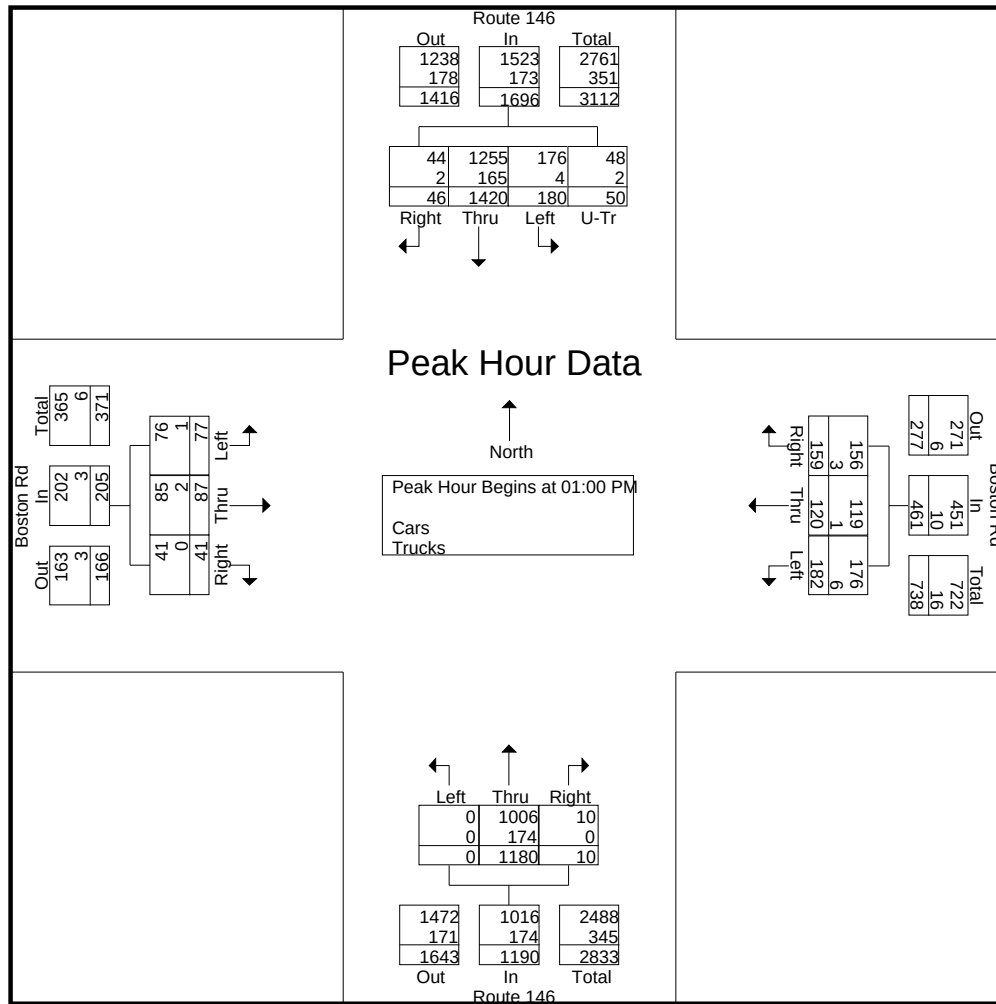
01:00 PM	39	286	17	13	355	51	35	27	113	0	262	2	264	20	27	17	64	796
01:15 PM	61	351	15	13	440	37	29	44	110	0	295	2	297	17	24	10	51	898
01:30 PM	34	399	7	12	452	49	30	43	122	0	321	5	326	19	17	8	44	944
01:45 PM	46	384	7	12	449	45	26	45	116	0	302	1	303	21	19	6	46	914
Total Volume	180	1420	46	50	1696	182	120	159	461	0	1180	10	1190	77	87	41	205	3552
% App. Total	10.6	83.7	2.7	2.9		39.5	26	34.5		0	99.2	0.8		37.6	42.4	20		
PHF	.738	.890	.676	.962	.938	.892	.857	.883	.945	.000	.919	.500	.913	.917	.806	.603	.801	.941
Cars	176	1255	44	48	1523	176	119	156	451	0	1006	10	1016	76	85	41	202	3192
% Cars	97.8	88.4	95.7	96.0	89.8	96.7	99.2	98.1	97.8	0	85.3	100	85.4	98.7	97.7	100	98.5	89.9
Trucks	4	165	2	2	173	6	1	3	10	0	174	0	174	1	2	0	3	360
% Trucks	2.2	11.6	4.3	4.0	10.2	3.3	0.8	1.9	2.2	0	14.7	0	14.6	1.3	2.3	0	1.5	10.1

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 5



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

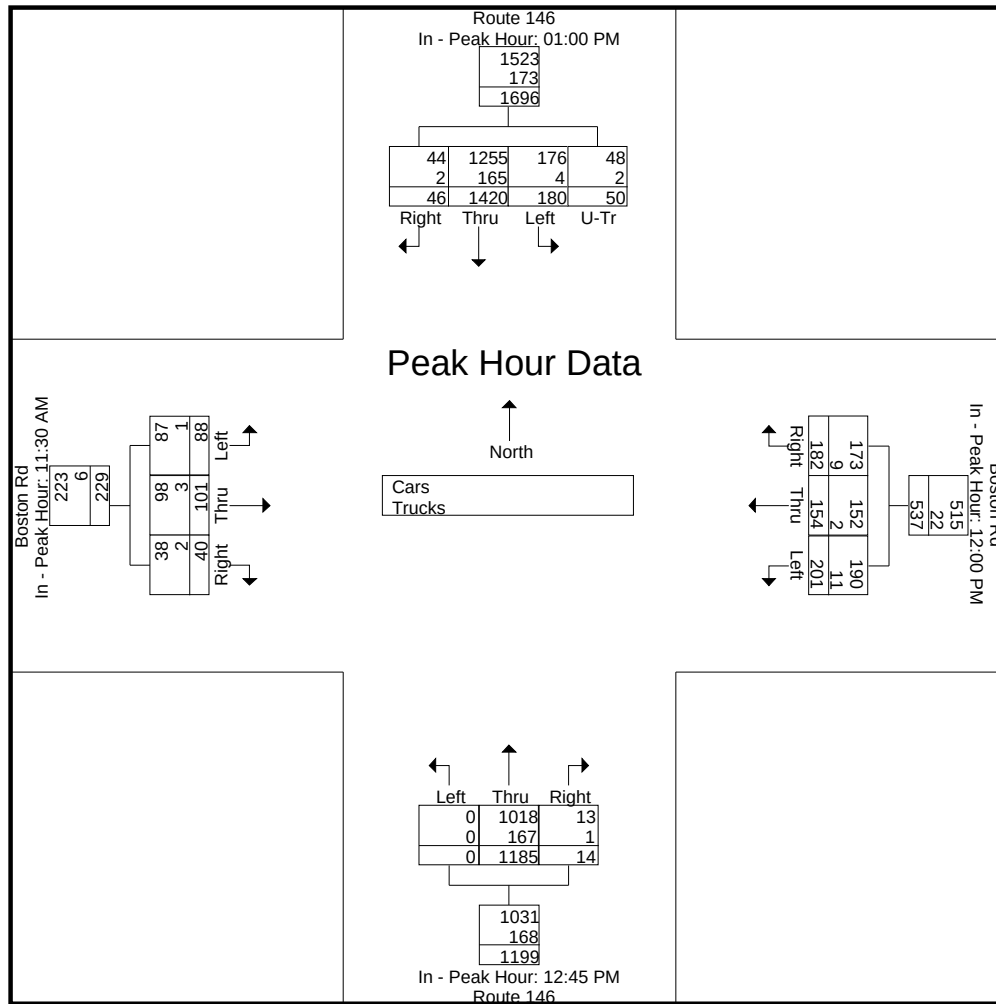
	01:00 PM					12:00 PM				12:45 PM				11:30 AM			
+0 mins.	39	286	17	13	355	42	33	47	122	0	307	5	312	23	22	7	52
+15 mins.	61	351	15	13	440	55	46	43	144	0	262	2	264	30	36	14	80
+30 mins.	34	399	7	12	452	45	27	56	128	0	295	2	297	19	23	8	50
+45 mins.	46	384	7	12	449	59	48	36	143	0	321	5	326	16	20	11	47
Total Volume	180	1420	46	50	1696	201	154	182	537	0	1185	14	1199	88	101	40	229
% App. Total	10.6	83.7	2.7	2.9		37.4	28.7	33.9		0	98.8	1.2		38.4	44.1	17.5	
PHF	.738	.890	.676	.962	.938	.852	.802	.813	.932	.000	.923	.700	.919	.733	.701	.714	.716
Cars	176	1255	44	48	1523	190	152	173	515	0	1018	13	1031	87	98	38	223
% Cars	97.8	88.4	95.7	96	89.8	94.5	98.7	95.1	95.9	0	85.9	92.9	86	98.9	97	95	97.4
Trucks	4	165	2	2	173	11	2	9	22	0	167	1	168	1	3	2	6
% Trucks	2.2	11.6	4.3	4	10.2	5.5	1.3	4.9	4.1	0	14.1	7.1	14	1.1	3	5	2.6

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 6



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:15 PM

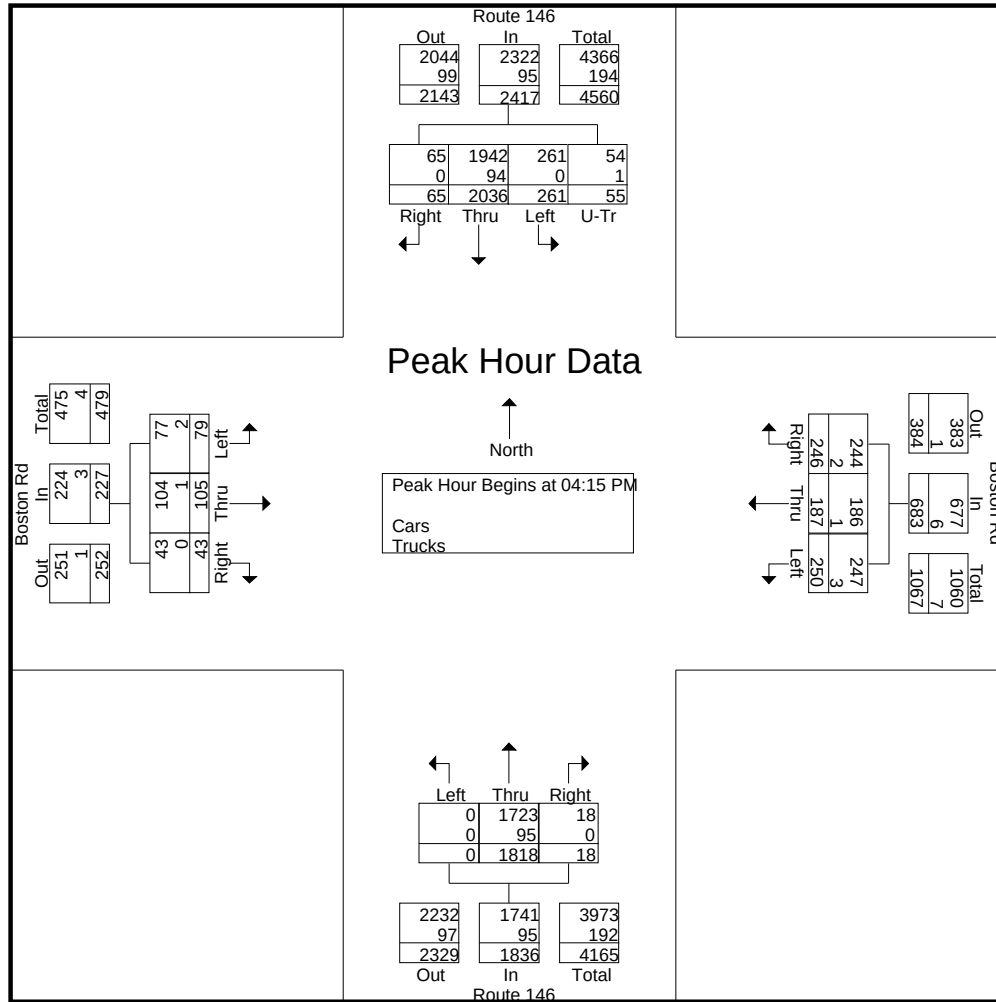
04:15 PM	62	527	13	9	611	60	44	60	164	0	426	0	426	19	18	12	49	1250
04:30 PM	69	462	12	15	558	62	52	68	182	0	385	5	390	25	30	10	65	1195
04:45 PM	51	511	15	14	591	59	49	75	183	0	505	5	510	16	31	9	56	1340
05:00 PM	79	536	25	17	657	69	42	43	154	0	502	8	510	19	26	12	57	1378
Total Volume	261	2036	65	55	2417	250	187	246	683	0	1818	18	1836	79	105	43	227	5163
% App. Total	10.8	84.2	2.7	2.3		36.6	27.4	36		0	99	1		34.8	46.3	18.9		
PHF	.826	.950	.650	.809	.920	.906	.899	.820	.933	.000	.900	.563	.900	.790	.847	.896	.873	.937
Cars	261	1942	65	54	2322	247	186	244	677	0	1723	18	1741	77	104	43	224	4964
% Cars	100	95.4	100	98.2	96.1	98.8	99.5	99.2	99.1	0	94.8	100	94.8	97.5	99.0	100	98.7	96.1
Trucks	0	94	0	1	95	3	1	2	6	0	95	0	95	2	1	0	3	199
% Trucks	0	4.6	0	1.8	3.9	1.2	0.5	0.8	0.9	0	5.2	0	5.2	2.5	1.0	0	1.3	3.9

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 7

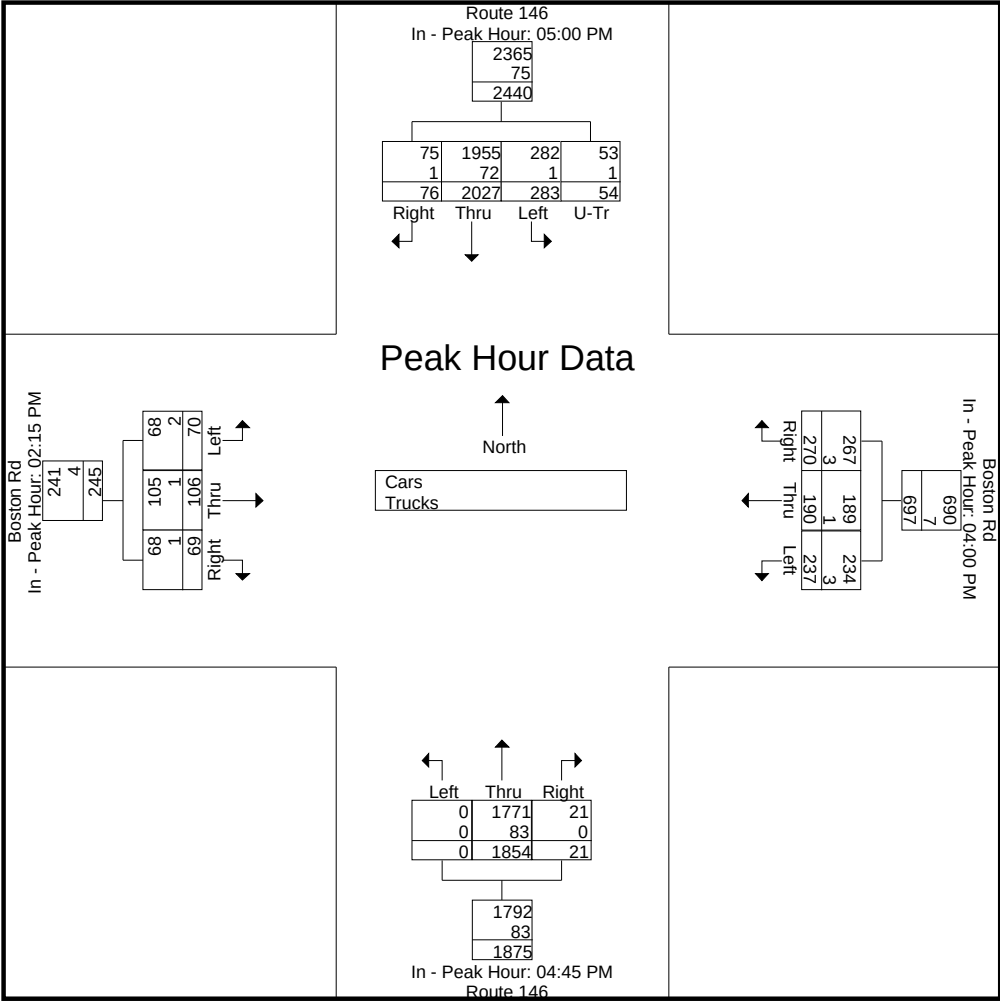


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					04:00 PM				04:45 PM				02:15 PM			
+0 mins.	79	536	25	17	657	56	45	67	168	0	505	5	510	14	25	20	59
+15 mins.	65	487	18	9	579	60	44	60	164	0	502	8	510	21	27	15	63
+30 mins.	64	497	20	12	593	62	52	68	182	0	430	4	434	14	28	11	53
+45 mins.	75	507	13	16	611	59	49	75	183	0	417	4	421	21	26	23	70
Total Volume	283	2027	76	54	2440	237	190	270	697	0	1854	21	1875	70	106	69	245
% App. Total	11.6	83.1	3.1	2.2		34	27.3	38.7		0	98.9	1.1		28.6	43.3	28.2	
PHF	.896	.945	.760	.794	.928	.956	.913	.900	.952	.000	.918	.656	.919	.833	.946	.750	.875
Cars	282	1955	75	53	2365	234	189	267	690	0	1771	21	1792	68	105	68	241
% Cars	99.6	96.4	98.7	98.1	96.9	98.7	99.5	98.9	99	0	95.5	100	95.6	97.1	99.1	98.6	98.4
Trucks	1	72	1	1	75	3	1	3	7	0	83	0	83	2	1	1	4
% Trucks	0.4	3.6	1.3	1.9	3.1	1.3	0.5	1.1	1	0	4.5	0	4.4	2.9	0.9	1.4	1.6

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 1

Groups Printed- Cars

	Route 146 From North				Boston Rd From East			Route 146 From South			Boston Rd From West			
Start Time	Left	Thru	Right	U-Tr	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	8	174	1	0	16	4	27	0	285	2	7	9	5	538
06:15 AM	17	203	2	9	25	4	34	0	380	1	17	7	8	707
06:30 AM	17	233	7	8	39	14	47	0	423	2	7	5	8	810
06:45 AM	25	272	6	14	29	16	50	0	400	3	16	12	8	851
Total	67	882	16	31	109	38	158	0	1488	8	47	33	29	2906
07:00 AM	25	255	9	7	27	42	66	0	416	2	19	14	9	891
07:15 AM	33	251	7	9	45	33	51	0	449	1	30	34	21	964
07:30 AM	27	262	9	9	35	21	31	0	498	3	20	24	7	946
07:45 AM	33	296	13	16	21	30	67	0	412	4	19	23	6	940
Total	118	1064	38	41	128	126	215	0	1775	10	88	95	43	3741
08:00 AM	33	244	13	7	44	32	54	0	388	1	14	18	14	862
08:15 AM	32	229	5	11	31	30	48	0	366	3	15	34	11	815
08:30 AM	37	232	6	15	37	22	49	0	333	5	19	33	17	805
08:45 AM	40	224	13	13	39	28	48	0	305	2	14	22	5	753
Total	142	929	37	46	151	112	199	0	1392	11	62	107	47	3235
09:00 AM	29	228	3	12	32	30	40	0	308	4	19	25	8	738
09:15 AM	29	222	13	14	25	11	45	0	312	5	14	14	8	712
09:30 AM	28	227	7	4	45	18	44	0	283	3	15	17	5	696
09:45 AM	34	241	5	5	37	21	36	0	288	3	15	14	5	704
Total	120	918	28	35	139	80	165	0	1191	15	63	70	26	2850
10:00 AM	30	208	6	7	22	20	28	0	255	2	16	10	4	608
10:15 AM	28	186	12	6	39	30	50	0	237	4	16	14	11	633
10:30 AM	33	234	6	9	42	27	22	0	261	4	13	15	11	677
10:45 AM	34	190	14	13	26	28	29	0	258	2	13	42	7	656
Total	125	818	38	35	129	105	129	0	1011	12	58	81	33	2574
11:00 AM	33	236	7	11	22	23	32	0	233	2	13	23	4	639
11:15 AM	42	274	12	15	34	43	26	0	246	4	14	14	7	731
11:30 AM	35	238	16	7	43	22	37	0	227	6	23	22	6	682
11:45 AM	45	250	8	13	40	30	34	0	237	0	30	34	13	734
Total	155	998	43	46	139	118	129	0	943	12	80	93	30	2786
12:00 PM	39	250	8	7	40	33	43	0	224	11	19	22	8	704
12:15 PM	33	267	7	13	52	44	41	0	253	3	15	20	11	759
12:30 PM	36	229	11	16	43	27	53	0	231	6	17	21	8	698
12:45 PM	32	271	10	16	55	48	36	0	269	4	9	26	25	801
Total	140	1017	36	52	190	152	173	0	977	24	60	89	52	2962
01:00 PM	38	247	16	12	49	35	26	0	213	2	20	26	17	701
01:15 PM	59	307	15	12	37	28	44	0	255	2	17	24	10	810
01:30 PM	34	358	7	12	47	30	43	0	281	5	19	16	8	860
01:45 PM	45	343	6	12	43	26	43	0	257	1	20	19	6	821
Total	176	1255	44	48	176	119	156	0	1006	10	76	85	41	3192
02:00 PM	35	351	11	11	48	26	45	0	308	3	9	16	7	870
02:15 PM	32	378	16	6	42	35	32	0	335	7	14	24	19	940
02:30 PM	59	355	17	7	82	36	40	0	322	10	20	27	15	990
02:45 PM	85	419	9	10	63	38	51	0	312	3	14	28	11	1043
Total	211	1503	53	34	235	135	168	0	1277	23	57	95	52	3843
03:00 PM	80	484	14	10	60	43	34	0	393	7	20	26	23	1194
03:15 PM	82	475	15	9	62	23	56	0	346	5	23	17	14	1127
03:30 PM	48	442	17	12	87	36	58	0	404	5	14	24	6	1153
03:45 PM	63	482	18	15	70	26	52	0	434	7	13	19	10	1209
Total	273	1883	64	46	279	128	200	0	1577	24	70	86	53	4683
04:00 PM	53	515	14	14	55	45	65	0	434	3	12	16	14	1240

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 2

Groups Printed- Cars

	Route 146 From North				Boston Rd From East			Route 146 From South			Boston Rd From West			
Start Time	Left	Thru	Right	U-Tr	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:15 PM	62	497	13	9	60	43	59	0	402	0	19	18	12	1194
04:30 PM	69	443	12	15	61	52	68	0	361	5	24	30	10	1150
04:45 PM	51	484	15	14	58	49	75	0	476	5	16	31	9	1283
Total	235	1939	54	52	234	189	267	0	1673	13	71	95	45	4867
05:00 PM	79	518	25	16	68	42	42	0	484	8	18	25	12	1337
05:15 PM	65	472	18	9	58	54	41	0	412	4	16	17	11	1177
05:30 PM	64	478	19	12	72	33	40	0	399	4	14	28	15	1178
05:45 PM	74	487	13	16	62	42	42	0	321	5	14	24	12	1112
Total	282	1955	75	53	260	171	165	0	1616	21	62	94	50	4804
06:00 PM	54	400	21	8	49	40	39	0	283	8	14	25	9	950
06:15 PM	54	386	13	8	39	36	46	0	294	3	12	20	9	920
06:30 PM	65	340	11	9	57	40	24	0	278	9	21	19	15	888
06:45 PM	52	256	16	7	39	26	29	0	255	4	14	26	7	731
Total	225	1382	61	32	184	142	138	0	1110	24	61	90	40	3489
Grand Total	2269	16543	587	551	2353	1615	2262	0	17036	207	855	1113	541	45932
Apprch %	11.4	82.9	2.9	2.8	37.8	25.9	36.3	0	98.8	1.2	34.1	44.4	21.6	
Total %	4.9	36	1.3	1.2	5.1	3.5	4.9	0	37.1	0.5	1.9	2.4	1.2	

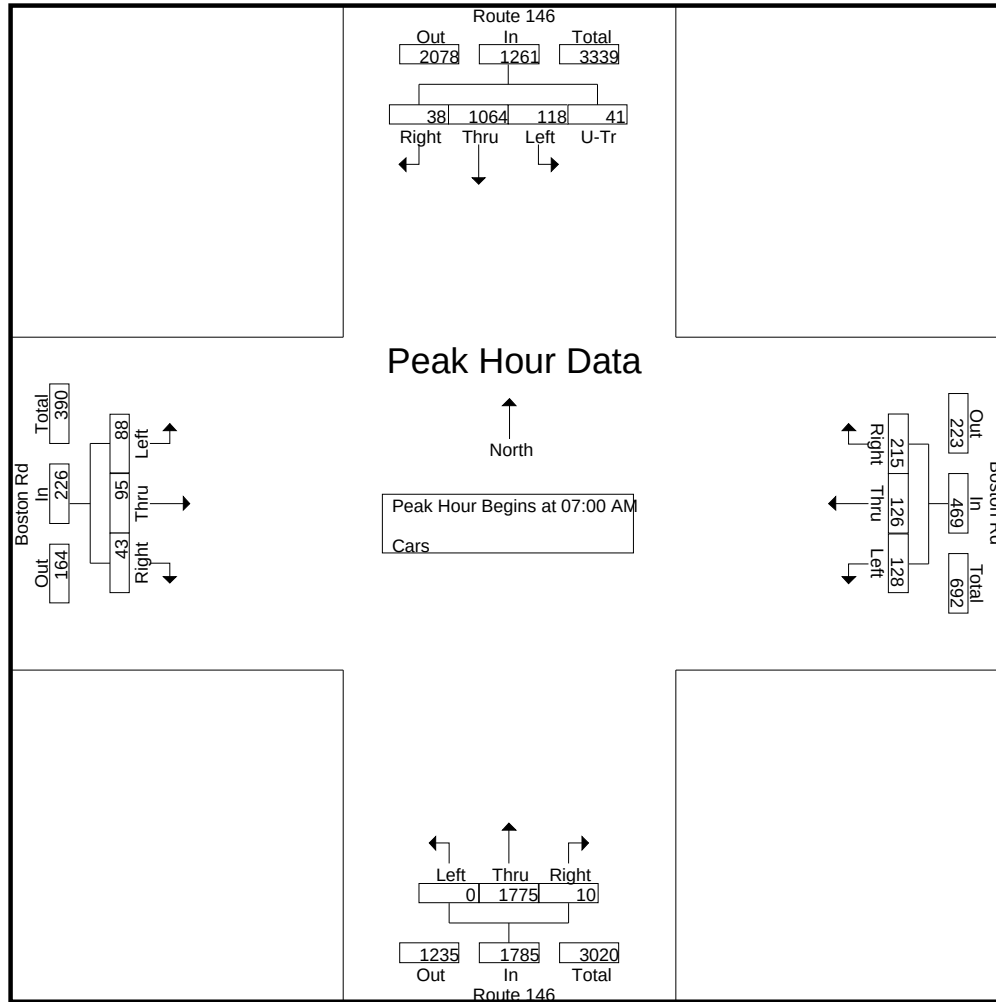
	Route 146 From North					Boston Rd From East				Route 146 From South				Boston Rd From West				
Start Time	Left	Thru	Right	U-Tr	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	25	255	9	7	296	27	42	66	135	0	416	2	418	19	14	9	42	891
07:15 AM	33	251	7	9	300	45	33	51	129	0	449	1	450	30	34	21	85	964
07:30 AM	27	262	9	9	307	35	21	31	87	0	498	3	501	20	24	7	51	946
07:45 AM	33	296	13	16	358	21	30	67	118	0	412	4	416	19	23	6	48	940
Total Volume	118	1064	38	41	1261	128	126	215	469	0	1775	10	1785	88	95	43	226	3741
% App. Total	9.4	84.4	3	3.3		27.3	26.9	45.8		0	99.4	0.6		38.9	42	19		
PHF	.894	.899	.731	.641	.881	.711	.750	.802	.869	.000	.891	.625	.891	.733	.699	.512	.665	.970

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 3



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

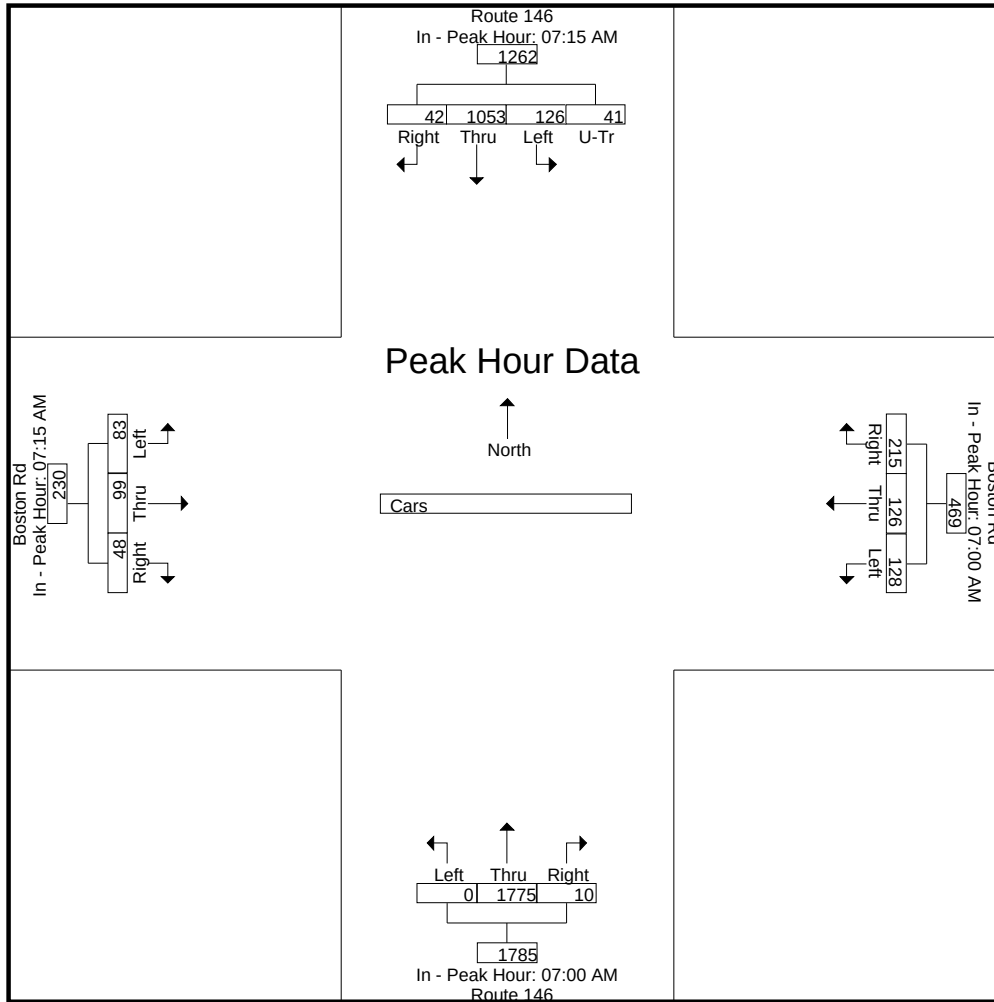
	07:15 AM					07:00 AM					07:00 AM					07:15 AM				
+0 mins.	33	251	7	9	300	27	42	66	135		0	416	2	418		30	34	21	85	
+15 mins.	27	262	9	9	307	45	33	51	129		0	449	1	450		20	24	7	51	
+30 mins.	33	296	13	16	358	35	21	31	87		0	498	3	501		19	23	6	48	
+45 mins.	33	244	13	7	297	21	30	67	118		0	412	4	416		14	18	14	46	
Total Volume	126	1053	42	41	1262	128	126	215	469		0	1775	10	1785		83	99	48	230	
% App. Total	10	83.4	3.3	3.2		27.3	26.9	45.8			0	99.4	0.6			36.1	43	20.9		
PHF	.955	.889	.808	.641	.881	.711	.750	.802	.869		.000	.891	.625	.891		.692	.728	.571	.676	

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 4



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 01:00 PM

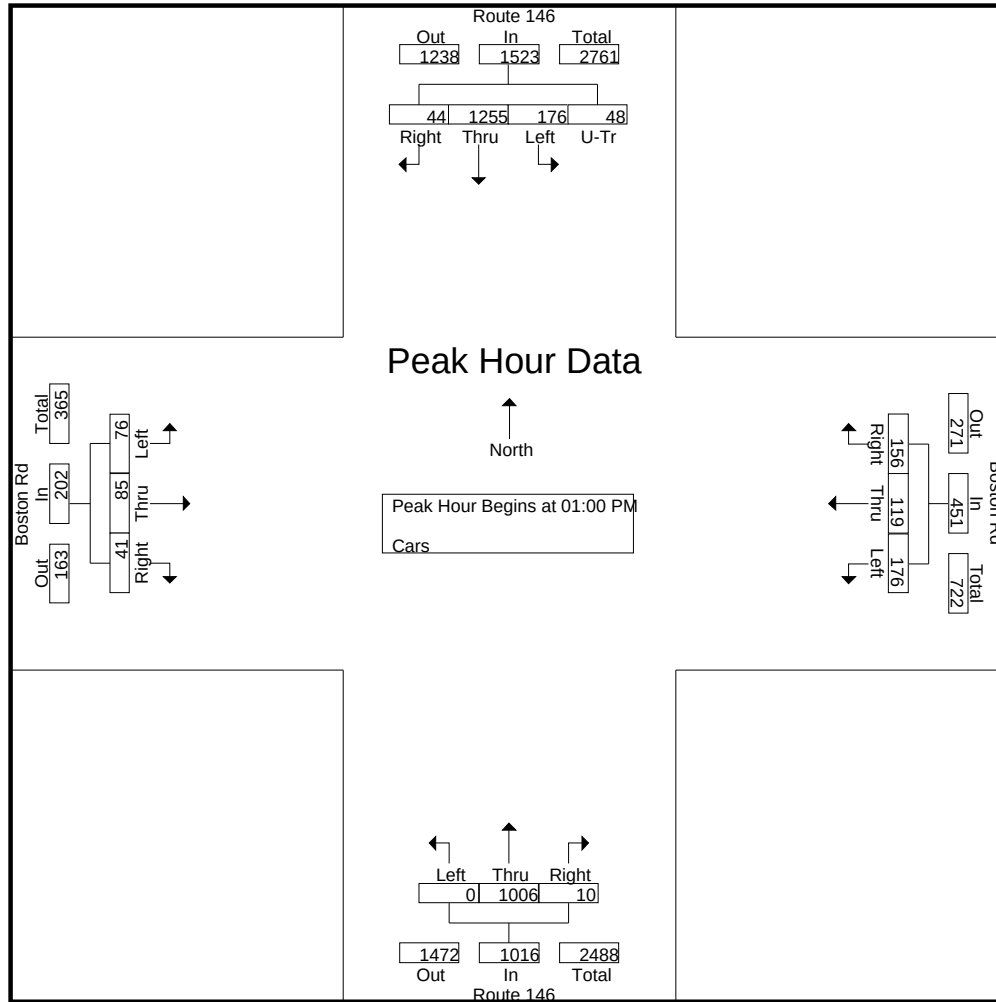
01:00 PM	38	247	16	12	313	49	35	26	110	0	213	2	215	20	26	17	63	701
01:15 PM	59	307	15	12	393	37	28	44	109	0	255	2	257	17	24	10	51	810
01:30 PM	34	358	7	12	411	47	30	43	120	0	281	5	286	19	16	8	43	860
01:45 PM	45	343	6	12	406	43	26	43	112	0	257	1	258	20	19	6	45	821
Total Volume	176	1255	44	48	1523	176	119	156	451	0	1006	10	1016	76	85	41	202	3192
% App. Total	11.6	82.4	2.9	3.2		39	26.4	34.6		0	99	1		37.6	42.1	20.3		
PHF	.746	.876	.688	1.00	.926	.898	.850	.886	.940	.000	.895	.500	.888	.950	.817	.603	.802	.928

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 5



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

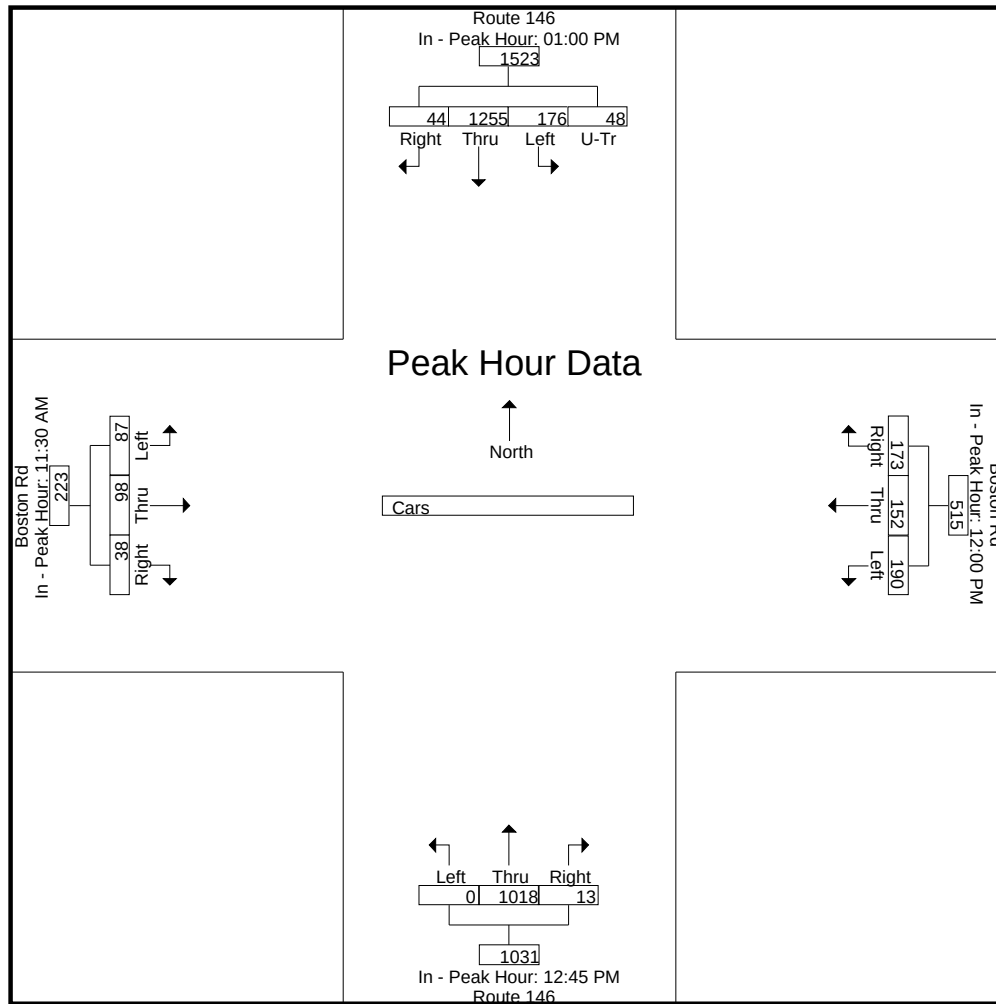
	01:00 PM					12:00 PM					12:45 PM					11:30 AM				
+0 mins.	38	247	16	12	313	40	33	43	116		0	269	4	273		23	22	6	51	
+15 mins.	59	307	15	12	393	52	44	41	137		0	213	2	215		30	34	13	77	
+30 mins.	34	358	7	12	411	43	27	53	123		0	255	2	257		19	22	8	49	
+45 mins.	45	343	6	12	406	55	48	36	139		0	281	5	286		15	20	11	46	
Total Volume	176	1255	44	48	1523	190	152	173	515		0	1018	13	1031		87	98	38	223	
% App. Total	11.6	82.4	2.9	3.2		36.9	29.5	33.6			0	98.7	1.3			39	43.9	17		
PHF	.746	.876	.688	1.000	.926	.864	.792	.816	.926		.000	.906	.650	.901		.725	.721	.731	.724	

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 6



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:45 PM

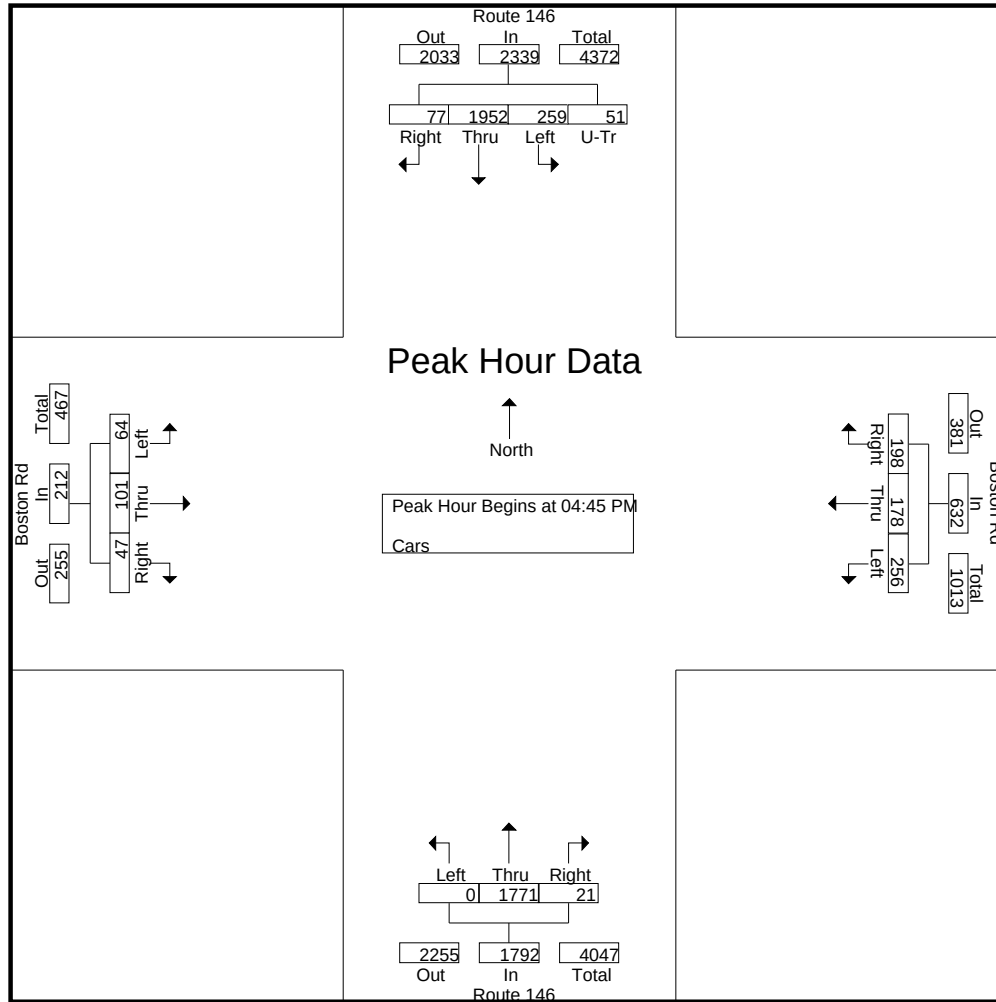
04:45 PM	51	484	15	14	564	58	49	75	182	0	476	5	481	16	31	9	56	1283
05:00 PM	79	518	25	16	638	68	42	42	152	0	484	8	492	18	25	12	55	1337
05:15 PM	65	472	18	9	564	58	54	41	153	0	412	4	416	16	17	11	44	1177
05:30 PM	64	478	19	12	573	72	33	40	145	0	399	4	403	14	28	15	57	1178
Total Volume	259	1952	77	51	2339	256	178	198	632	0	1771	21	1792	64	101	47	212	4975
% App. Total	11.1	83.5	3.3	2.2		40.5	28.2	31.3		0	98.8	1.2		30.2	47.6	22.2		
PHF	.820	.942	.770	.797	.917	.889	.824	.660	.868	.000	.915	.656	.911	.889	.815	.783	.930	.930

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 7



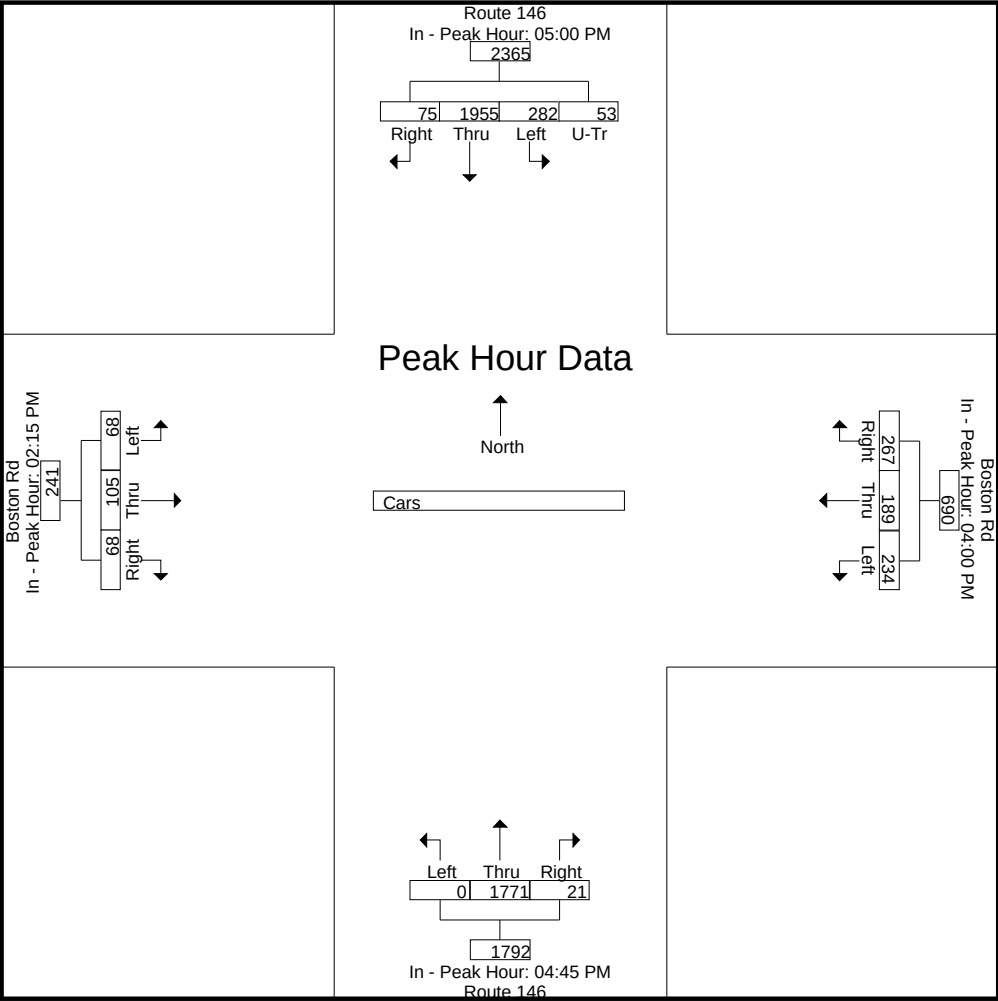
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM					04:00 PM				04:45 PM				02:15 PM			
+0 mins.	79	518	25	16	638	55	45	65	165	0	476	5	481	14	24	19	57
+15 mins.	65	472	18	9	564	60	43	59	162	0	484	8	492	20	27	15	62
+30 mins.	64	478	19	12	573	61	52	68	181	0	412	4	416	14	28	11	53
+45 mins.	74	487	13	16	590	58	49	75	182	0	399	4	403	20	26	23	69
Total Volume	282	1955	75	53	2365	234	189	267	690	0	1771	21	1792	68	105	68	241
% App. Total	11.9	82.7	3.2	2.2		33.9	27.4	38.7		0	98.8	1.2		28.2	43.6	28.2	
PHF	.892	.944	.750	.828	.927	.959	.909	.890	.948	.000	.915	.656	.911	.850	.938	.739	.873

Accurate Counts
978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 1

Groups Printed- Trucks

	Route 146 From North				Boston Rd From East			Route 146 From South			Boston Rd From West			
Start Time	Left	Thru	Right	U-Tr	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	1	22	0	0	0	0	1	0	24	0	0	0	0	48
06:15 AM	0	36	1	1	5	0	0	0	29	0	0	1	0	73
06:30 AM	1	28	0	0	4	0	0	0	28	0	1	0	0	62
06:45 AM	2	33	0	0	1	1	3	0	40	0	0	1	0	81
Total	4	119	1	1	10	1	4	0	121	0	1	2	0	264
07:00 AM	0	42	0	0	0	4	3	0	36	0	0	0	0	85
07:15 AM	0	47	0	0	2	0	0	0	51	0	0	0	2	102
07:30 AM	1	27	0	0	4	1	0	0	41	0	0	3	1	78
07:45 AM	2	45	1	1	1	2	3	0	40	0	0	0	0	95
Total	3	161	1	1	7	7	6	0	168	0	0	3	3	360
08:00 AM	1	39	2	1	0	3	1	0	38	0	0	1	0	86
08:15 AM	3	52	0	0	0	0	0	0	42	0	1	1	0	99
08:30 AM	0	37	0	0	3	1	0	0	50	0	1	2	0	94
08:45 AM	1	35	0	0	0	0	1	0	43	0	0	0	0	80
Total	5	163	2	1	3	4	2	0	173	0	2	4	0	359
09:00 AM	1	39	1	0	1	1	1	0	47	0	0	1	0	92
09:15 AM	0	42	0	1	1	0	2	0	42	0	1	0	1	90
09:30 AM	2	34	1	0	1	1	2	0	29	0	0	0	1	71
09:45 AM	0	40	0	0	2	1	1	0	37	0	0	0	0	81
Total	3	155	2	1	5	3	6	0	155	0	1	1	2	334
10:00 AM	1	38	0	0	5	1	2	0	36	0	0	0	1	84
10:15 AM	0	40	1	0	0	0	0	0	45	0	0	0	0	86
10:30 AM	0	30	0	1	3	2	1	0	32	0	0	4	0	73
10:45 AM	0	45	0	0	1	4	0	0	48	0	1	1	0	100
Total	1	153	1	1	9	7	3	0	161	0	1	5	1	343
11:00 AM	0	33	0	1	0	5	2	0	46	1	3	0	0	91
11:15 AM	2	40	0	1	1	1	0	0	39	0	0	0	0	84
11:30 AM	1	33	0	0	2	0	2	0	43	0	0	0	1	82
11:45 AM	1	37	0	0	1	0	1	0	42	1	0	2	1	86
Total	4	143	0	2	4	6	5	0	170	2	3	2	2	343
12:00 PM	2	42	0	0	2	0	4	0	54	0	0	1	0	105
12:15 PM	1	45	1	0	3	2	2	0	34	0	1	0	0	89
12:30 PM	3	38	0	2	2	0	3	0	39	1	0	0	0	88
12:45 PM	0	37	0	0	4	0	0	0	38	1	0	0	1	81
Total	6	162	1	2	11	2	9	0	165	2	1	1	1	363
01:00 PM	1	39	1	1	2	0	1	0	49	0	0	1	0	95
01:15 PM	2	44	0	1	0	1	0	0	40	0	0	0	0	88
01:30 PM	0	41	0	0	2	0	0	0	40	0	0	1	0	84
01:45 PM	1	41	1	0	2	0	2	0	45	0	1	0	0	93
Total	4	165	2	2	6	1	3	0	174	0	1	2	0	360
02:00 PM	2	41	0	1	0	1	2	0	37	0	0	0	1	85
02:15 PM	1	44	0	1	2	1	1	0	34	0	0	1	1	86
02:30 PM	0	40	0	0	4	1	0	0	33	0	1	0	0	79
02:45 PM	1	46	0	0	0	0	0	0	26	0	0	0	0	73
Total	4	171	0	2	6	3	3	0	130	0	1	1	2	323
03:00 PM	1	36	0	1	3	0	0	0	29	0	1	0	0	71
03:15 PM	2	34	0	0	1	0	3	0	30	0	0	0	0	70
03:30 PM	1	28	1	1	0	0	2	0	28	0	1	0	0	62
03:45 PM	0	31	0	1	1	0	3	0	34	0	0	1	0	71
Total	4	129	1	3	5	0	8	0	121	0	2	1	0	274
04:00 PM	2	17	0	1	1	0	2	0	28	0	0	0	0	51

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 2

Groups Printed- Trucks

	Route 146 From North				Boston Rd From East			Route 146 From South			Boston Rd From West			
Start Time	Left	Thru	Right	U-Tr	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:15 PM	0	30	0	0	0	1	1	0	24	0	0	0	0	56
04:30 PM	0	19	0	0	1	0	0	0	24	0	1	0	0	45
04:45 PM	0	27	0	0	1	0	0	0	29	0	0	0	0	57
Total	2	93	0	1	3	1	3	0	105	0	1	0	0	209
05:00 PM	0	18	0	1	1	0	1	0	18	0	1	1	0	41
05:15 PM	0	15	0	0	0	0	1	0	18	0	0	0	0	34
05:30 PM	0	19	1	0	0	0	0	0	18	0	1	0	0	39
05:45 PM	1	20	0	0	0	0	0	0	14	0	0	0	0	35
Total	1	72	1	1	1	0	2	0	68	0	2	1	0	149
06:00 PM	0	18	0	0	0	0	1	0	11	0	0	0	0	30
06:15 PM	0	16	0	0	0	1	2	0	9	0	1	0	2	31
06:30 PM	0	16	0	0	1	0	0	0	10	0	0	0	0	27
06:45 PM	0	16	0	0	0	0	0	0	12	0	0	0	0	28
Total	0	66	0	0	1	1	3	0	42	0	1	0	2	116
Grand Total	41	1752	12	18	71	36	57	0	1753	4	17	23	13	3797
Apprch %	2.2	96.1	0.7	1	43.3	22	34.8	0	99.8	0.2	32.1	43.4	24.5	
Total %	1.1	46.1	0.3	0.5	1.9	0.9	1.5	0	46.2	0.1	0.4	0.6	0.3	

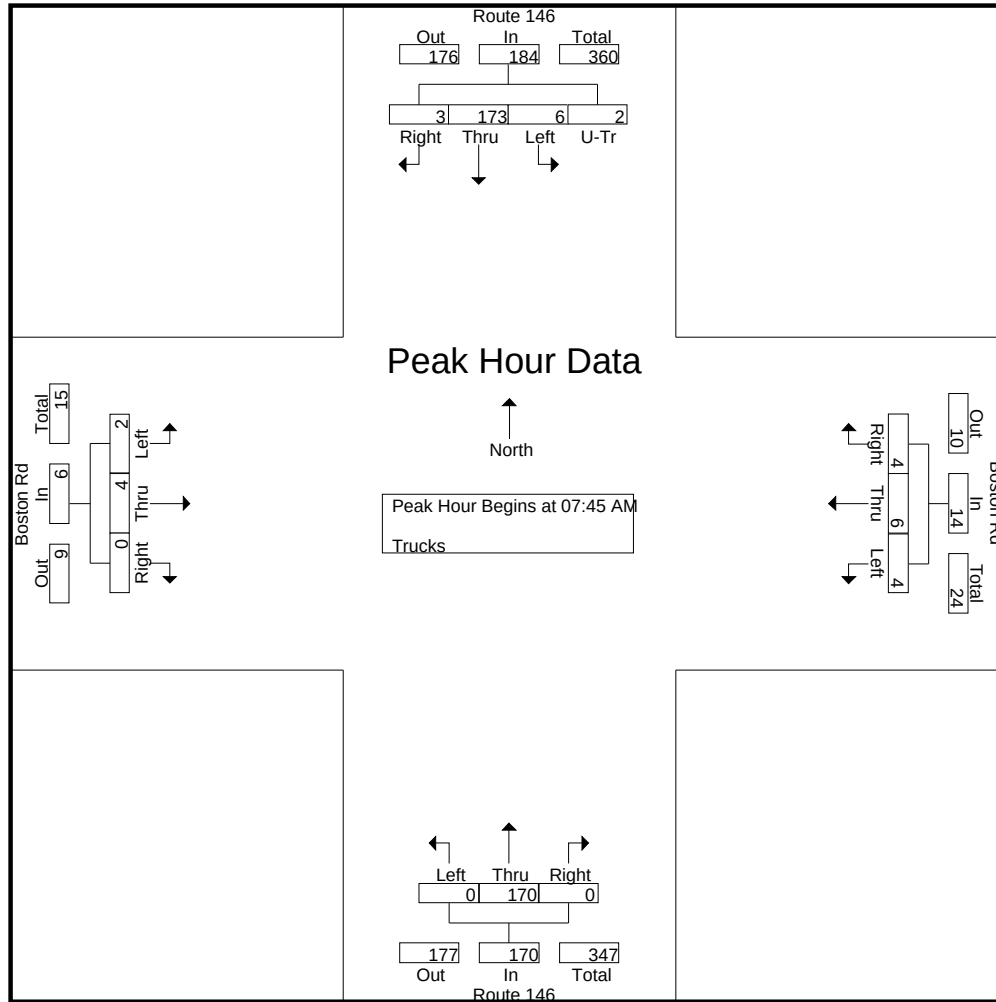
	Route 146 From North					Boston Rd From East				Route 146 From South				Boston Rd From West				
Start Time	Left	Thru	Right	U-Tr	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:45 AM																		
07:45 AM	2	45	1	1	49	1	2	3	6	0	40	0	40	0	0	0	0	95
08:00 AM	1	39	2	1	43	0	3	1	4	0	38	0	38	0	1	0	1	86
08:15 AM	3	52	0	0	55	0	0	0	0	0	42	0	42	1	1	0	2	99
08:30 AM	0	37	0	0	37	3	1	0	4	0	50	0	50	1	2	0	3	94
Total Volume	6	173	3	2	184	4	6	4	14	0	170	0	170	2	4	0	6	374
% App. Total	3.3	94	1.6	1.1		28.6	42.9	28.6		0	100	0		33.3	66.7	0		
PHF	.500	.832	.375	.500	.836	.333	.500	.333	.583	.000	.850	.000	.850	.500	.500	.000	.500	.944

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 3



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

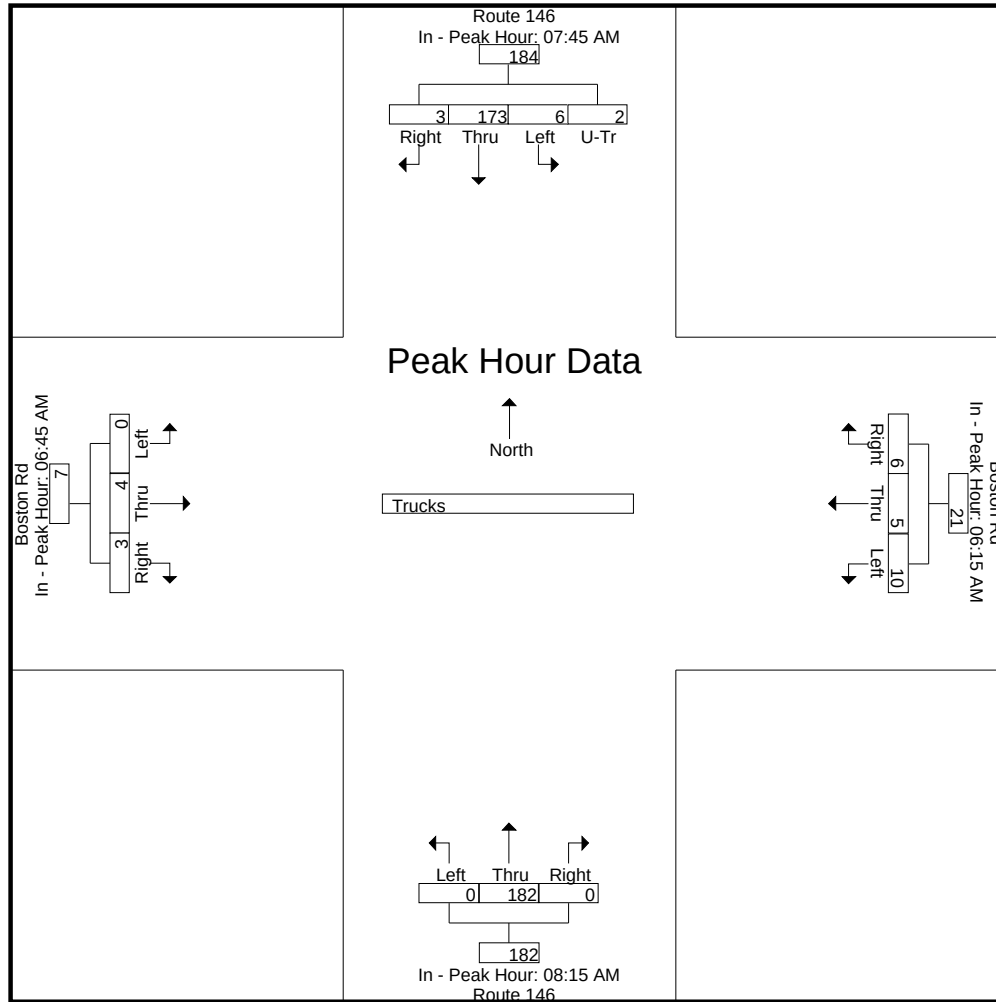
	07:45 AM					06:15 AM					08:15 AM					06:45 AM				
+0 mins.	2	45	1	1	49	5	0	0	5		0	42	0	42		0	1	0	1	
+15 mins.	1	39	2	1	43	4	0	0	4		0	50	0	50		0	0	0	0	
+30 mins.	3	52	0	0	55	1	1	3	5		0	43	0	43		0	0	2	2	
+45 mins.	0	37	0	0	37	0	4	3	7		0	47	0	47		0	3	1	4	
Total Volume	6	173	3	2	184	10	5	6	21		0	182	0	182		0	4	3	7	
% App. Total	3.3	94	1.6	1.1		47.6	23.8	28.6			0	100	0			0	57.1	42.9		
PHF	.500	.832	.375	.500	.836	.500	.313	.500	.750		.000	.910	.000	.910		.000	.333	.375	.438	

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 4



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 11:45 AM

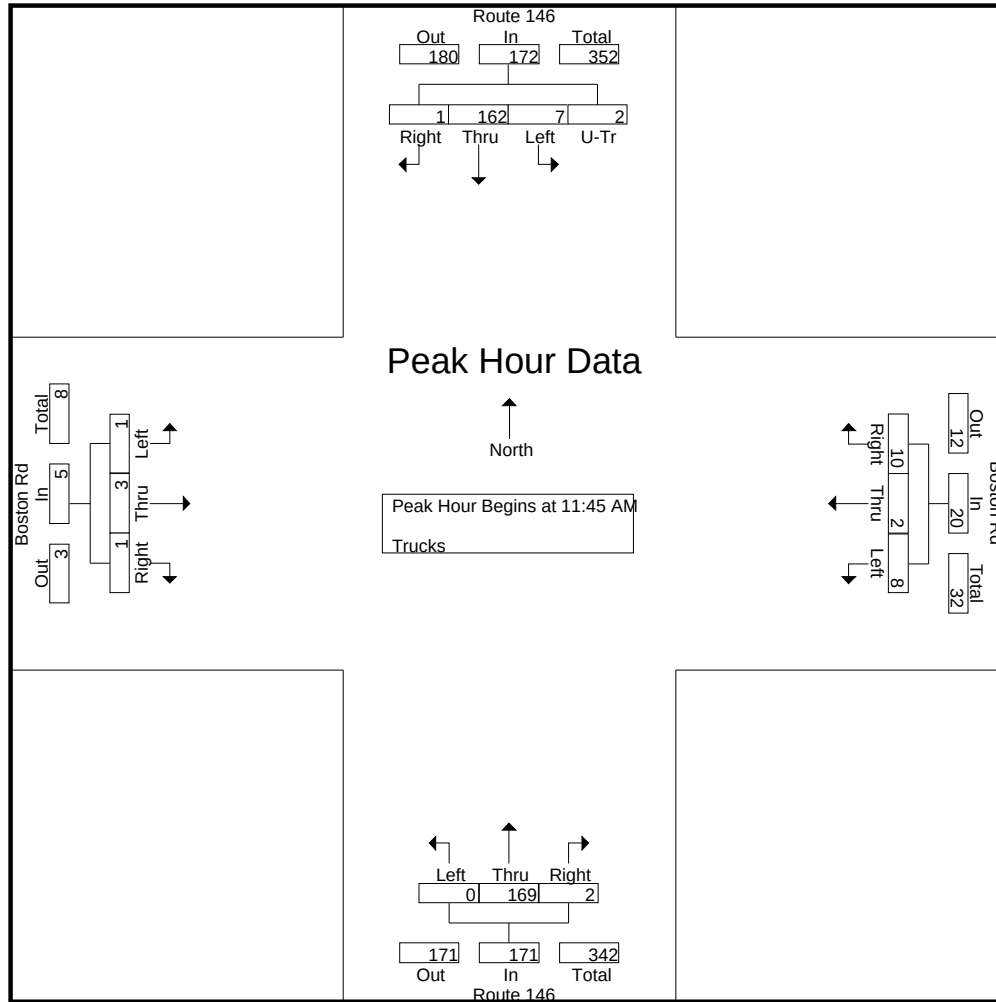
11:45 AM	1	37	0	0	38	1	0	1	2	0	42	1	43	0	2	1	3	86
12:00 PM	2	42	0	0	44	2	0	4	6	0	54	0	54	0	1	0	1	105
12:15 PM	1	45	1	0	47	3	2	2	7	0	34	0	34	1	0	0	1	89
12:30 PM	3	38	0	2	43	2	0	3	5	0	39	1	40	0	0	0	0	88
Total Volume	7	162	1	2	172	8	2	10	20	0	169	2	171	1	3	1	5	368
% App. Total	4.1	94.2	0.6	1.2		40	10	50		0	98.8	1.2		20	60	20		
PHF	.583	.900	.250	.250	.915	.667	.250	.625	.714	.000	.782	.500	.792	.250	.375	.250	.417	.876

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
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Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

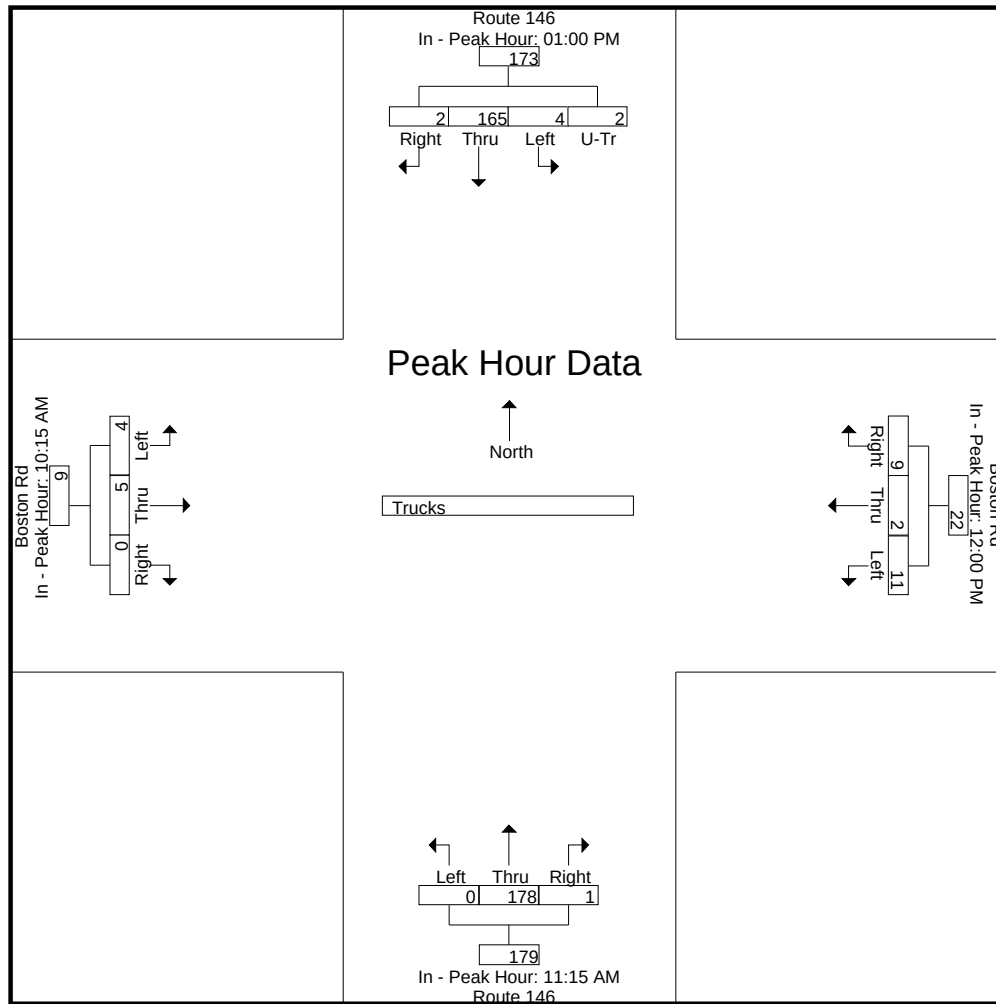
	01:00 PM					12:00 PM					11:15 AM					10:15 AM				
+0 mins.	1	39	1	1	42	2	0	4	6		0	39	0	39		0	0	0	0	
+15 mins.	2	44	0	1	47	3	2	2	7		0	43	0	43		0	4	0	4	
+30 mins.	0	41	0	0	41	2	0	3	5		0	42	1	43		1	1	0	2	
+45 mins.	1	41	1	0	43	4	0	0	4		0	54	0	54		3	0	0	3	
Total Volume	4	165	2	2	173	11	2	9	22		0	178	1	179		4	5	0	9	
% App. Total	2.3	95.4	1.2	1.2		50	9.1	40.9			0	99.4	0.6			44.4	55.6	0		
PHF	.500	.938	.500	.500	.920	.688	.250	.563	.786		.000	.824	.250	.829		.333	.313	.000	.563	

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
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Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 02:00 PM

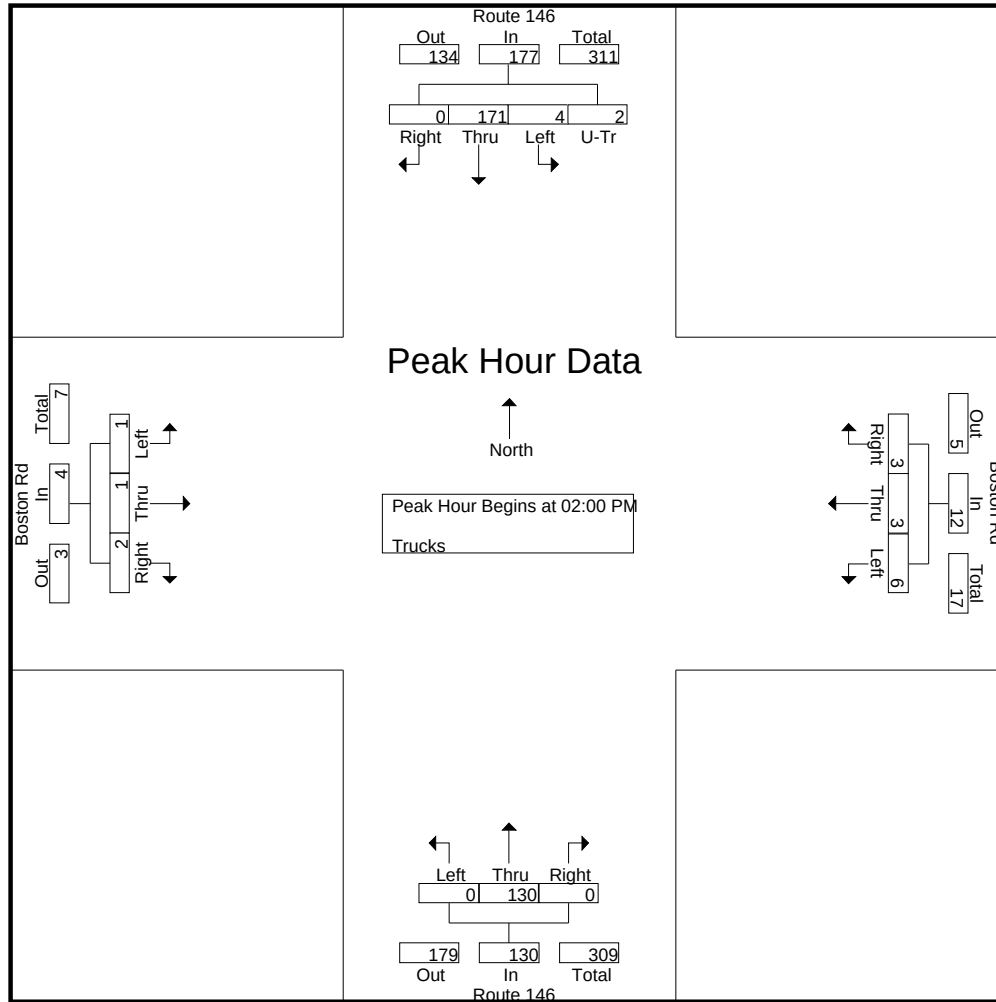
02:00 PM	2	41	0	1	44	0	1	2	3	0	37	0	37	0	0	1	1	85
02:15 PM	1	44	0	1	46	2	1	1	4	0	34	0	34	0	1	1	2	86
02:30 PM	0	40	0	0	40	4	1	0	5	0	33	0	33	1	0	0	1	79
02:45 PM	1	46	0	0	47	0	0	0	0	0	26	0	26	0	0	0	0	73
Total Volume	4	171	0	2	177	6	3	3	12	0	130	0	130	1	1	2	4	323
% App. Total	2.3	96.6	0	1.1		50	25	25		0	100	0		25	25	50		
PHF	.500	.929	.000	.500	.941	.375	.750	.375	.600	.000	.878	.000	.878	.250	.250	.500	.500	.939

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 7

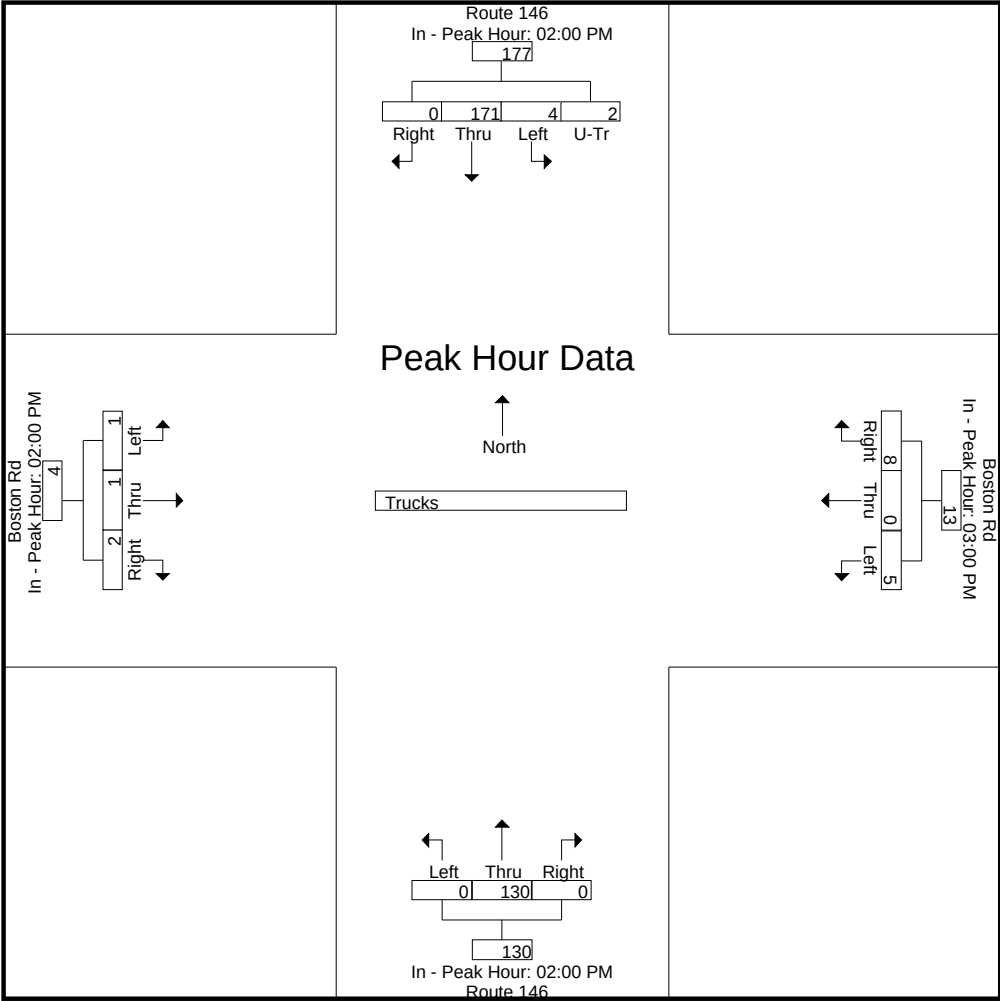


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM					03:00 PM					02:00 PM					02:00 PM				
+0 mins.	2	41	0	1	44	3	0	0	3		0	37	0	37		0	0	1	1	
+15 mins.	1	44	0	1	46	1	0	3	4		0	34	0	34		0	1	1	2	
+30 mins.	0	40	0	0	40	0	0	2	2		0	33	0	33		1	0	0	1	
+45 mins.	1	46	0	0	47	1	0	3	4		0	26	0	26		0	0	0	0	
Total Volume	4	171	0	2	177	5	0	8	13		0	130	0	130		1	1	2	4	
% App. Total	2.3	96.6	0	1.1		38.5	0	61.5			0	100	0			25	25	50		
PHF	.500	.929	.000	.500	.941	.417	.000	.667	.813		.000	.878	.000	.878		.250	.250	.500	.500	

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 8



Accurate Counts
978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 1

Groups Printed- Bikes Peds

[illegible]

978-664-2565

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 2

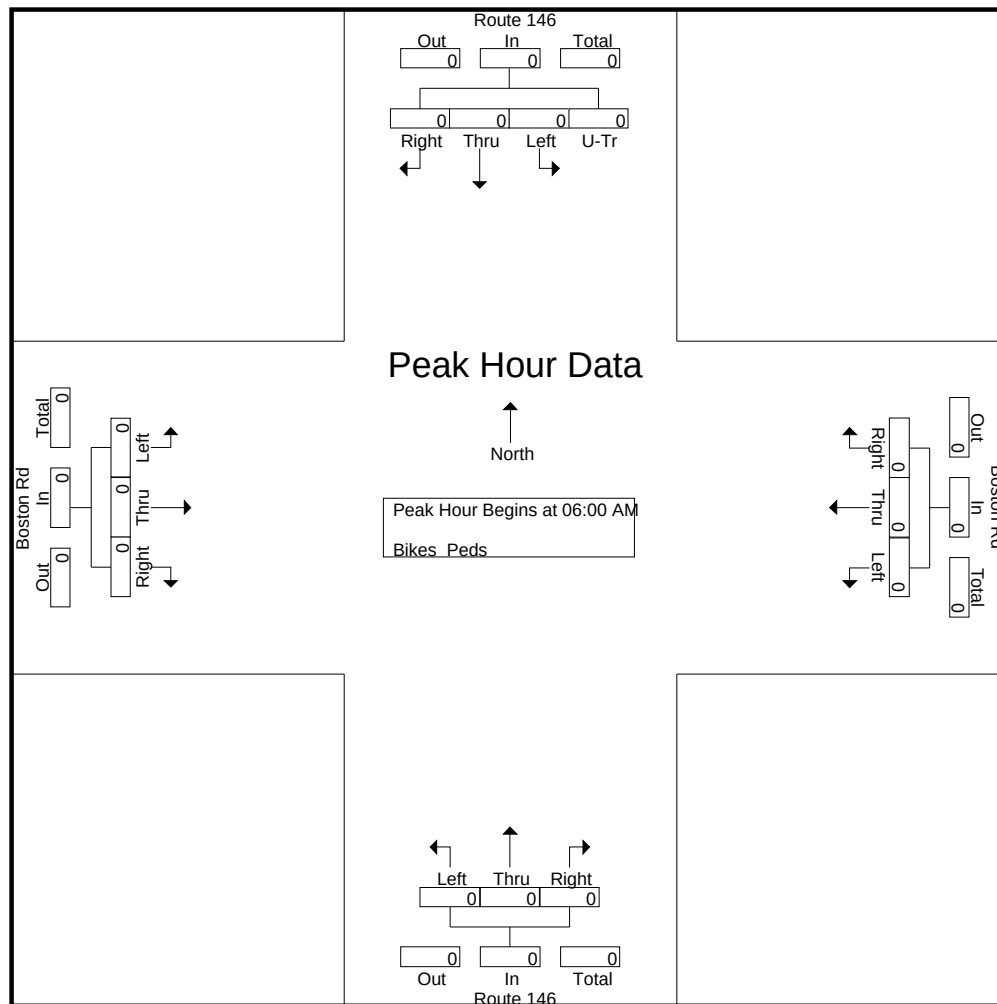
	Route 146 From North				Boston Rd From East				Route 146 From South				Boston Rd From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Apprch %	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	100	0		50	50	

[illegible]

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 3



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

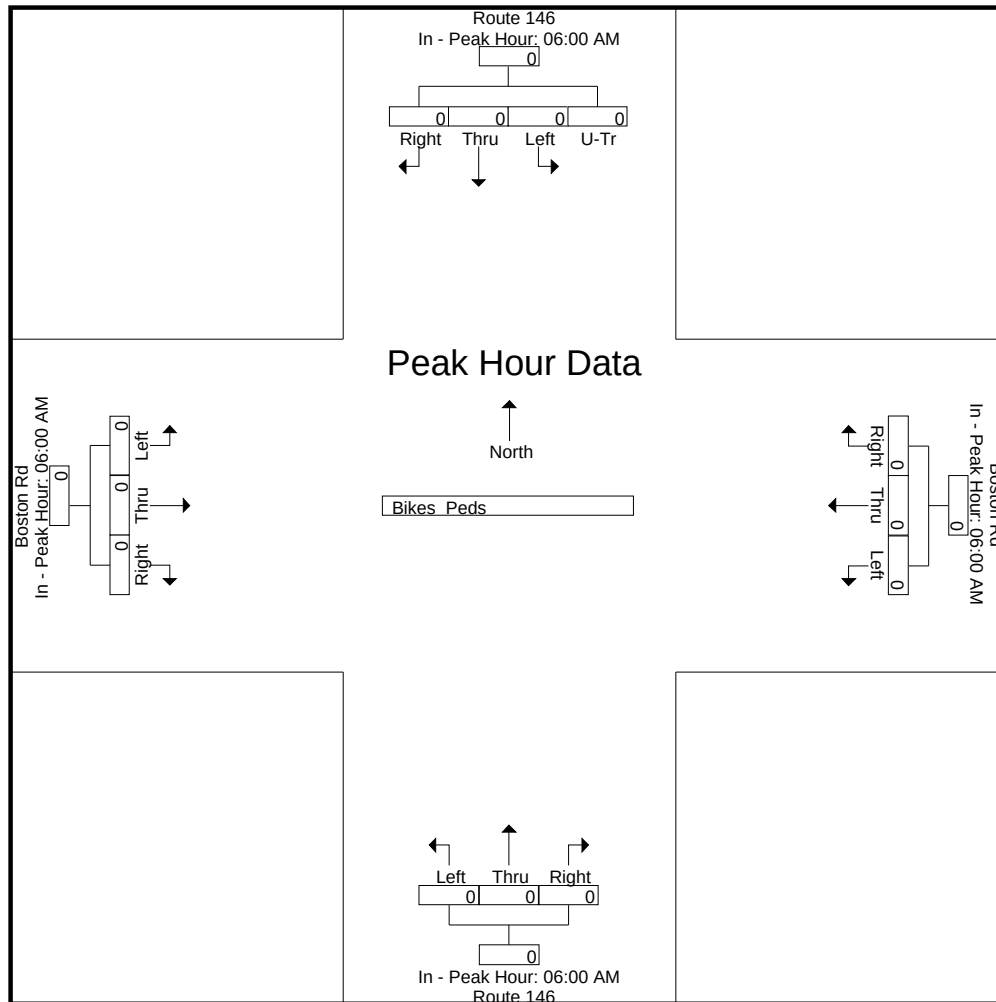
Peak Hour for Each Approach Begins at:																				
	06:00 AM					06:00 AM					06:00 AM					06:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 4



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 10:00 AM

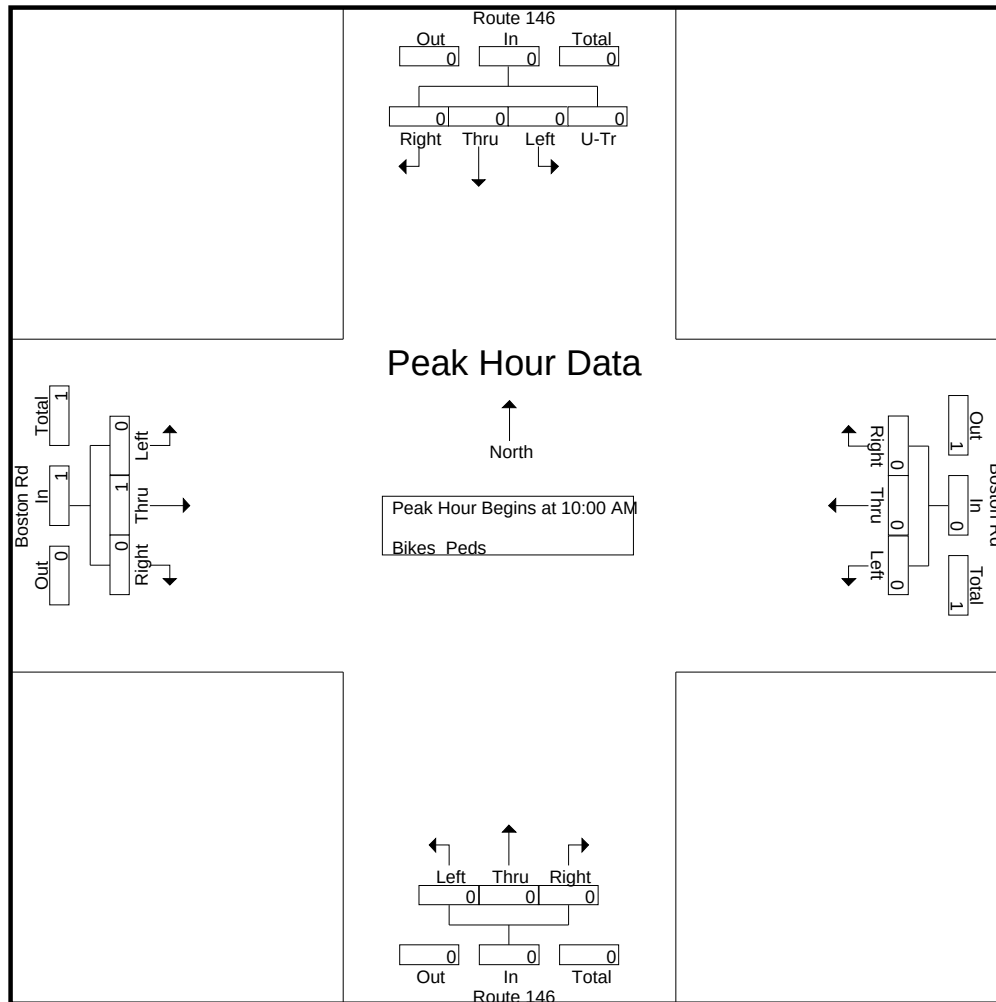
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250	.250

Accurate Counts

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 5



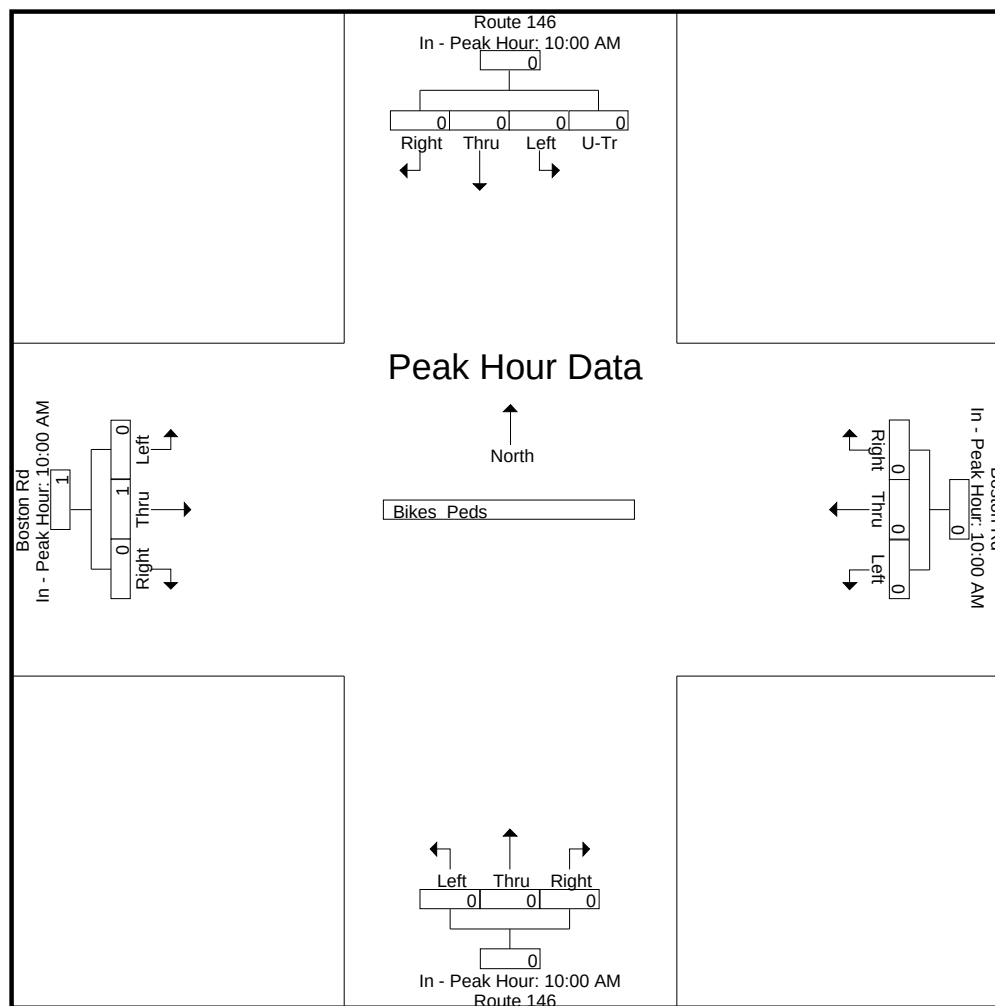
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:00 AM					10:00 AM					10:00 AM					10:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	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	1	0	1	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
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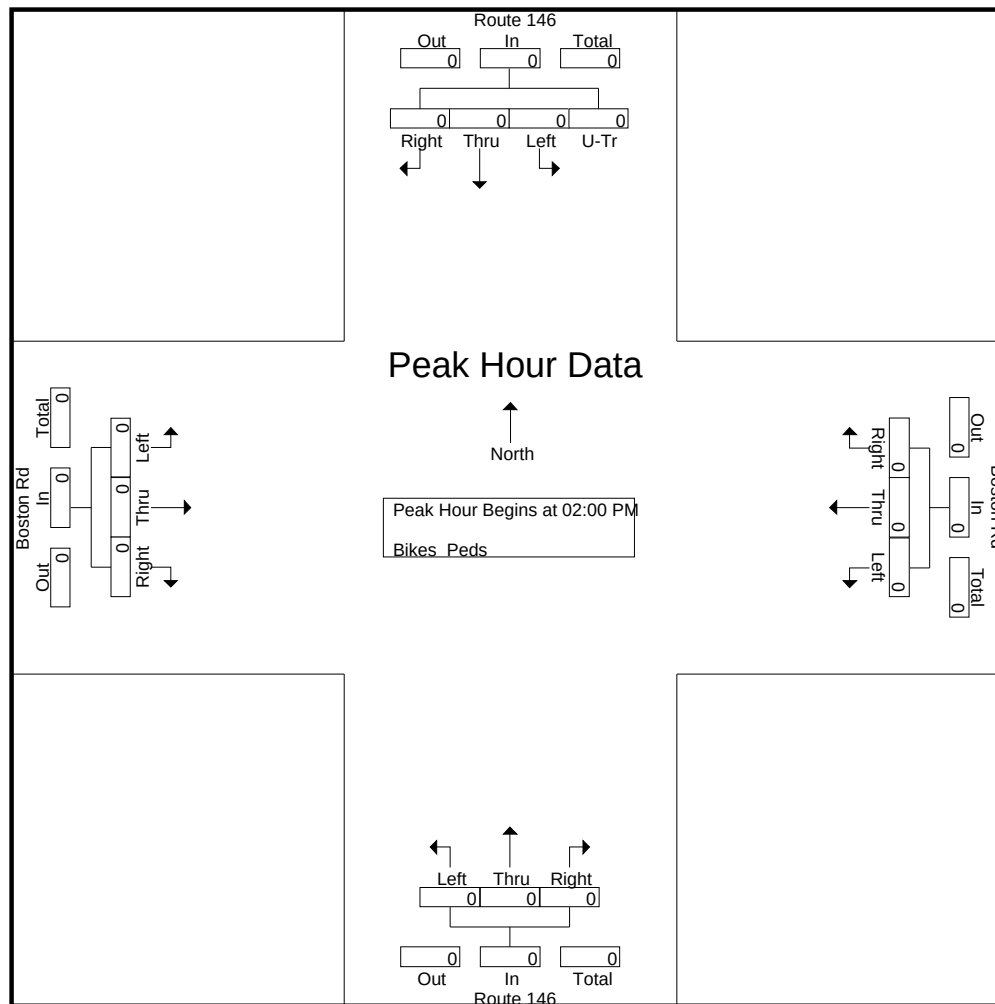
Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 02:00 PM

Peak Hour for Entire Intersection Begins at 02:00 PM																	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	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
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

978-664-2565

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 7

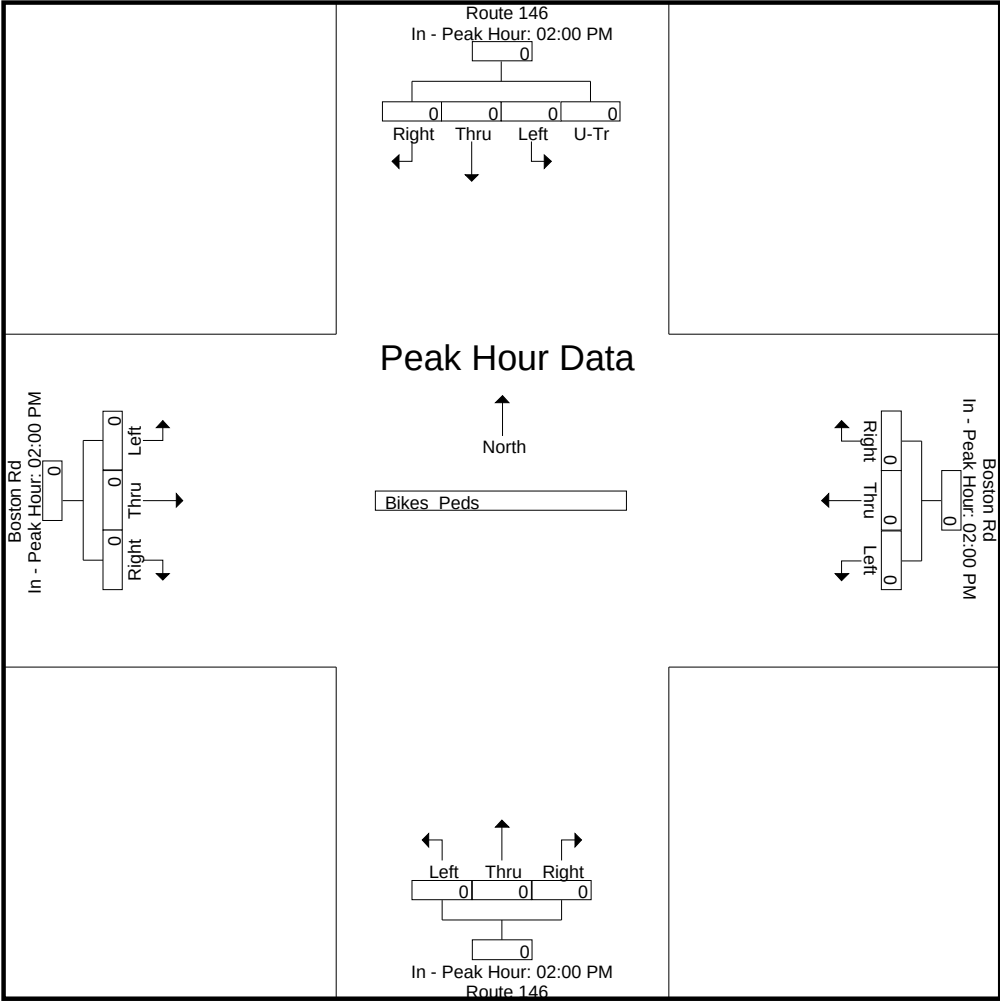


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

Peak Hour for Each Approach Begins at:																				
	02:00 PM					02:00 PM					02:00 PM					02:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
+45 mins.	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			
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			

N/S Street : Route 146
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018001
Site Code : 21018001
Start Date : 10/7/2021
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 1

Groups Printed- Cars - Trucks

	Boston Rd From East		Galaxy Pass From South		Boston Rd From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
06:00 AM	4	41	7	3	34	5	94
06:15 AM	3	61	13	4	46	8	135
06:30 AM	9	72	20	4	43	8	156
06:45 AM	8	75	17	13	60	9	182
Total	24	249	57	24	183	30	567
07:00 AM	9	124	21	11	56	21	242
07:15 AM	11	94	35	12	84	17	253
07:30 AM	13	88	24	16	65	10	216
07:45 AM	18	87	33	23	67	22	250
Total	51	393	113	62	272	70	961
08:00 AM	12	80	28	15	67	19	221
08:15 AM	14	75	33	10	67	21	220
08:30 AM	8	64	32	15	65	23	207
08:45 AM	12	72	34	14	53	29	214
Total	46	291	127	54	252	92	862
09:00 AM	15	50	34	11	41	28	179
09:15 AM	17	60	33	14	46	29	199
09:30 AM	10	45	40	19	52	21	187
09:45 AM	15	61	32	17	39	29	193
Total	57	216	139	61	178	107	758
10:00 AM	10	41	29	11	38	22	151
10:15 AM	8	70	37	13	36	20	184
10:30 AM	10	67	29	14	50	21	191
10:45 AM	22	48	32	18	62	31	213
Total	50	226	127	56	186	94	739
11:00 AM	19	50	21	18	41	20	169
11:15 AM	23	44	38	18	42	17	182
11:30 AM	13	65	38	16	54	36	222
11:45 AM	12	58	42	22	67	34	235
Total	67	217	139	74	204	107	808
12:00 PM	13	58	58	18	58	39	244
12:15 PM	17	64	53	18	50	32	234
12:30 PM	22	61	64	31	51	34	263
12:45 PM	17	71	53	28	59	31	259
Total	69	254	228	95	218	136	1000
01:00 PM	14	58	37	16	56	24	205
01:15 PM	12	57	54	13	66	35	237
01:30 PM	12	59	48	28	51	27	225
01:45 PM	17	51	47	25	51	38	229
Total	55	225	186	82	224	124	896
02:00 PM	19	61	46	20	42	31	219
02:15 PM	20	63	29	17	66	25	220
02:30 PM	11	81	54	18	74	38	276
02:45 PM	11	73	50	19	75	47	275
Total	61	278	179	74	257	141	990
03:00 PM	27	81	65	33	105	37	348
03:15 PM	18	84	44	34	70	33	283
03:30 PM	20	90	60	22	72	33	297
03:45 PM	15	101	56	17	77	42	308
Total	80	356	225	106	324	145	1236
04:00 PM	13	89	60	23	80	31	296

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 2

Groups Printed- Cars - Trucks

	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			
Start Time	Left	Thru		Left	Right		Thru	Right		Int. Total
04:15 PM	17	107		40	24		82	30		300
04:30 PM	16	105		53	25		63	38		300
04:45 PM	27	114		53	25		89	28		336
Total	73	415		206	97		314	127		1232
05:00 PM	20	83		54	33		105	33		328
05:15 PM	22	81		45	40		67	34		289
05:30 PM	24	81		54	30		74	41		304
05:45 PM	14	75		68	25		66	46		294
Total	80	320		221	128		312	154		1215
06:00 PM	23	61		62	36		66	30		278
06:15 PM	12	69		49	21		60	32		243
06:30 PM	15	53		41	24		63	23		219
06:45 PM	11	44		42	19		68	22		206
Total	61	227		194	100		257	107		946
Grand Total	774	3667		2141	1013		3181	1434		12210
Apprch %	17.4	82.6		67.9	32.1		68.9	31.1		
Total %	6.3	30		17.5	8.3		26.1	11.7		
Cars	771	3557		2119	1009		3087	1422		11965
% Cars	99.6	97		99	99.6		97	99.2		98
Trucks	3	110		22	4		94	12		245
% Trucks	0.4	3		1	0.4		3	0.8		2

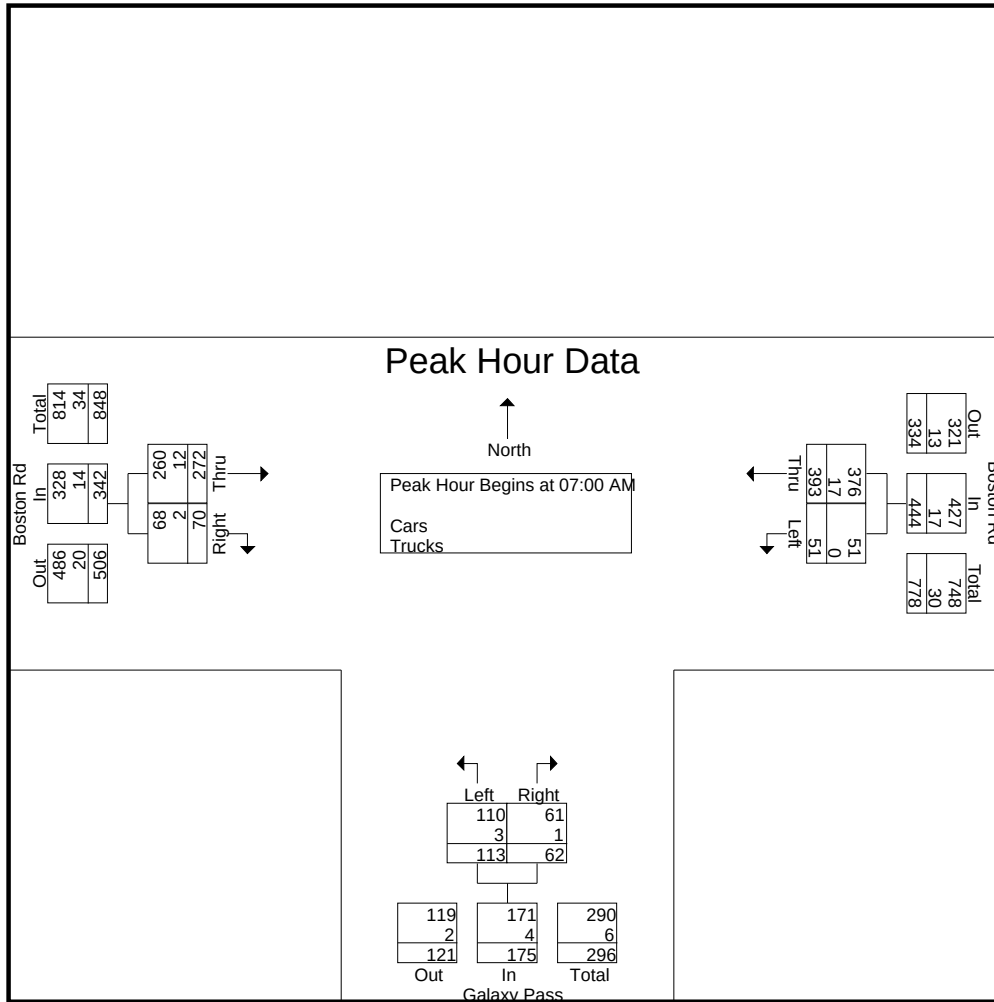
	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	9	124	133	21	11	32	56	21	77	242
07:15 AM	11	94	105	35	12	47	84	17	101	253
07:30 AM	13	88	101	24	16	40	65	10	75	216
07:45 AM	18	87	105	33	23	56	67	22	89	250
Total Volume	51	393	444	113	62	175	272	70	342	961
% App. Total	11.5	88.5		64.6	35.4		79.5	20.5		
PHF	.708	.792	.835	.807	.674	.781	.810	.795	.847	.950
Cars	51	376	427	110	61	171	260	68	328	926
% Cars	100	95.7	96.2	97.3	98.4	97.7	95.6	97.1	95.9	96.4
Trucks	0	17	17	3	1	4	12	2	14	35
% Trucks	0	4.3	3.8	2.7	1.6	2.3	4.4	2.9	4.1	3.6

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 3

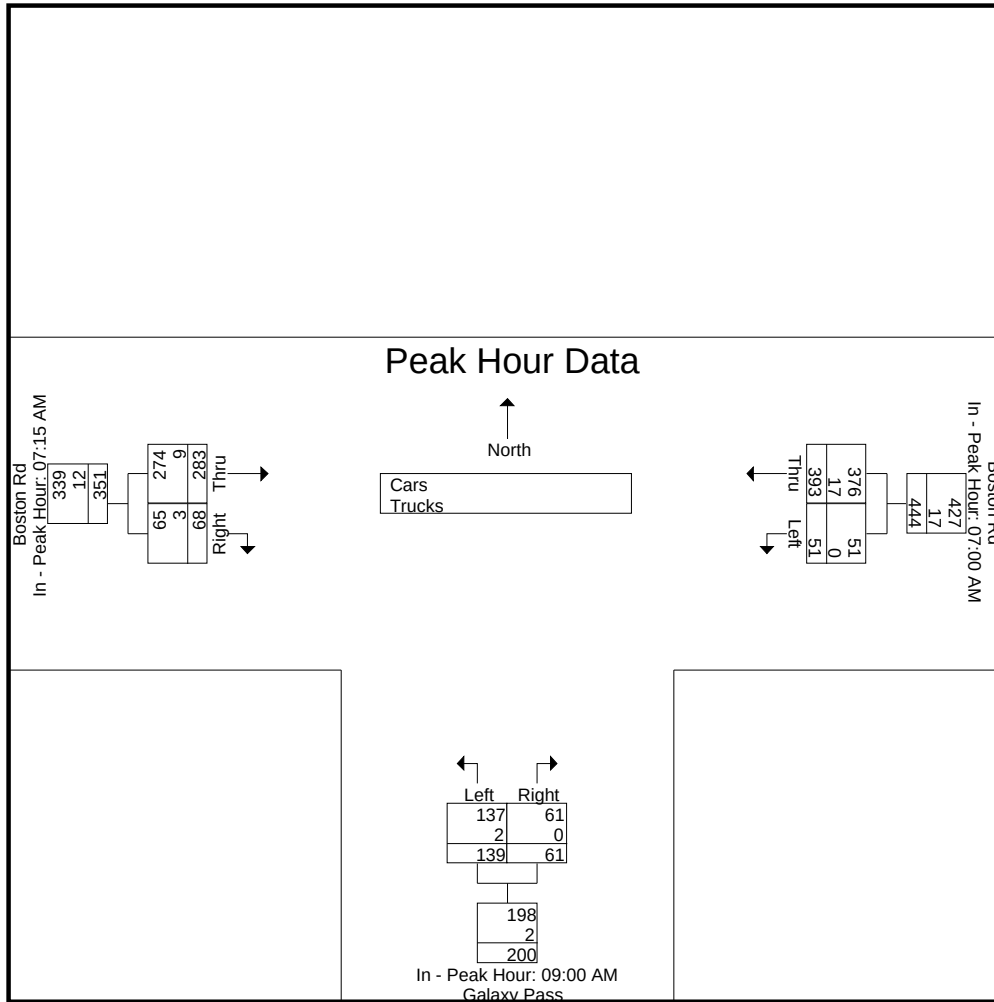


Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			09:00 AM			07:15 AM		
+0 mins.	9	124	133	34	11	45	84	17	101
+15 mins.	11	94	105	33	14	47	65	10	75
+30 mins.	13	88	101	40	19	59	67	22	89
+45 mins.	18	87	105	32	17	49	67	19	86
Total Volume	51	393	444	139	61	200	283	68	351
% App. Total	11.5	88.5		69.5	30.5		80.6	19.4	
PHF	.708	.792	.835	.869	.803	.847	.842	.773	.869
Cars	51	376	427	137	61	198	274	65	339
% Cars	100	95.7	96.2	98.6	100	99	96.8	95.6	96.6
Trucks	0	17	17	2	0	2	9	3	12
% Trucks	0	4.3	3.8	1.4	0	1	3.2	4.4	3.4

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 4

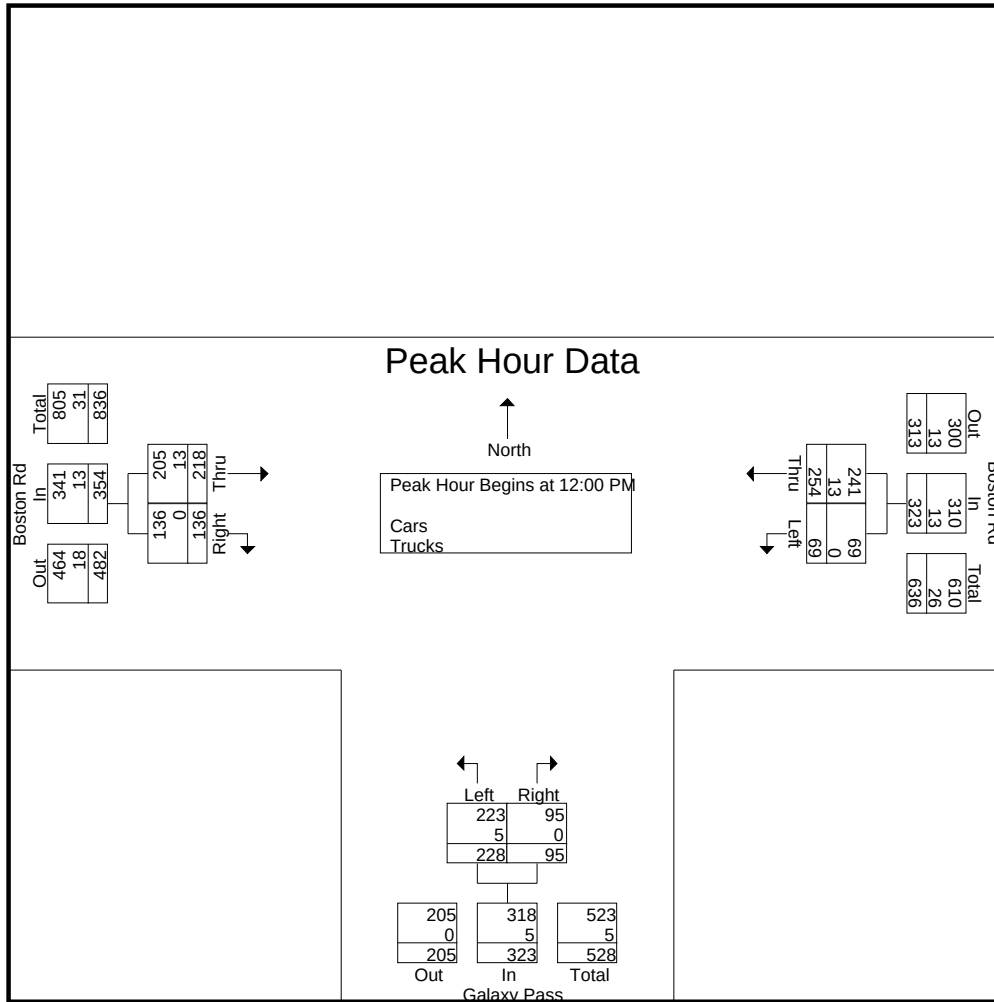


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	13	58	71	58	18	76	58	39	97	244
12:15 PM	17	64	81	53	18	71	50	32	82	234
12:30 PM	22	61	83	64	31	95	51	34	85	263
12:45 PM	17	71	88	53	28	81	59	31	90	259
Total Volume	69	254	323	228	95	323	218	136	354	1000
% App. Total	21.4	78.6		70.6	29.4		61.6	38.4		
PHF	.784	.894	.918	.891	.766	.850	.924	.872	.912	.951
Cars	69	241	310	223	95	318	205	136	341	969
% Cars	100	94.9	96.0	97.8	100	98.5	94.0	100	96.3	96.9
Trucks	0	13	13	5	0	5	13	0	13	31
% Trucks	0	5.1	4.0	2.2	0	1.5	6.0	0	3.7	3.1

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 5

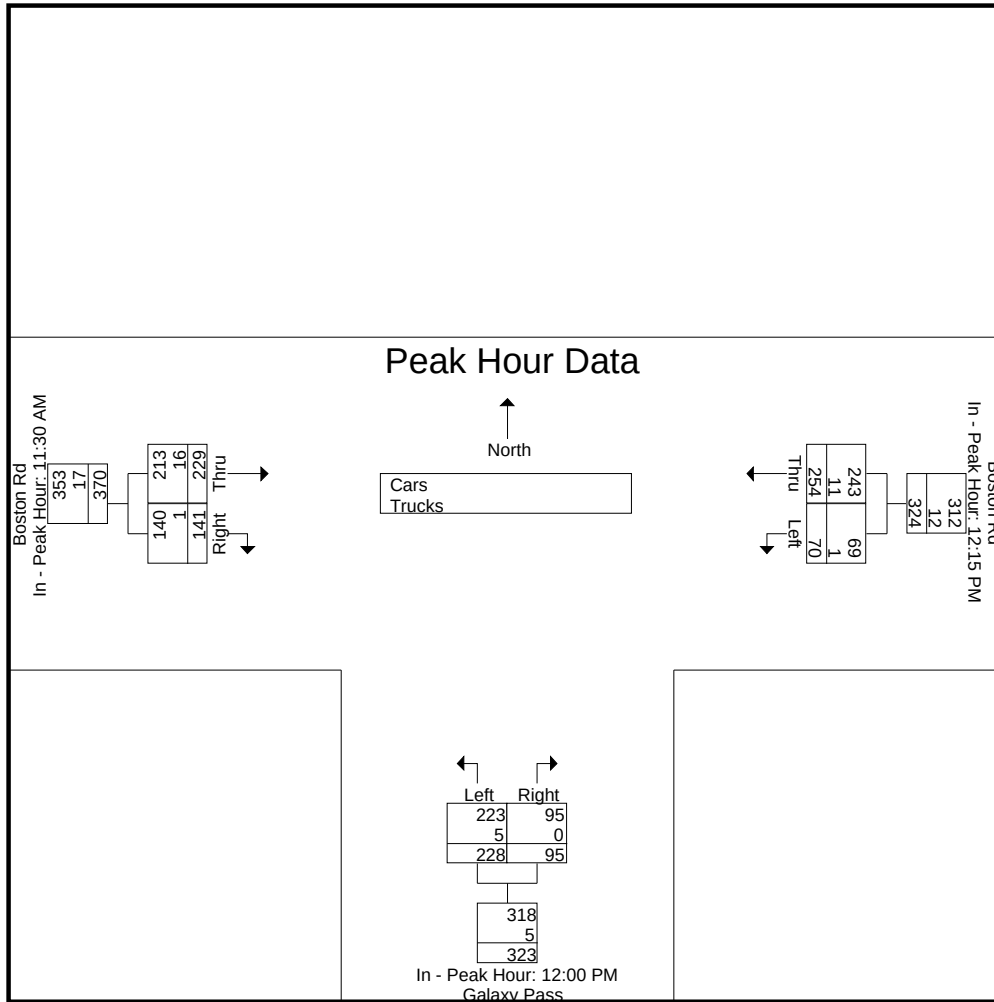


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM			12:00 PM			11:30 AM		
+0 mins.	17	64	81	58	18	76	54	36	90
+15 mins.	22	61	83	53	18	71	67	34	101
+30 mins.	17	71	88	64	31	95	58	39	97
+45 mins.	14	58	72	53	28	81	50	32	82
Total Volume	70	254	324	228	95	323	229	141	370
% App. Total	21.6	78.4		70.6	29.4		61.9	38.1	
PHF	.795	.894	.920	.891	.766	.850	.854	.904	.916
Cars	69	243	312	223	95	318	213	140	353
% Cars	98.6	95.7	96.3	97.8	100	98.5	93	99.3	95.4
Trucks	1	11	12	5	0	5	16	1	17
% Trucks	1.4	4.3	3.7	2.2	0	1.5	7	0.7	4.6

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
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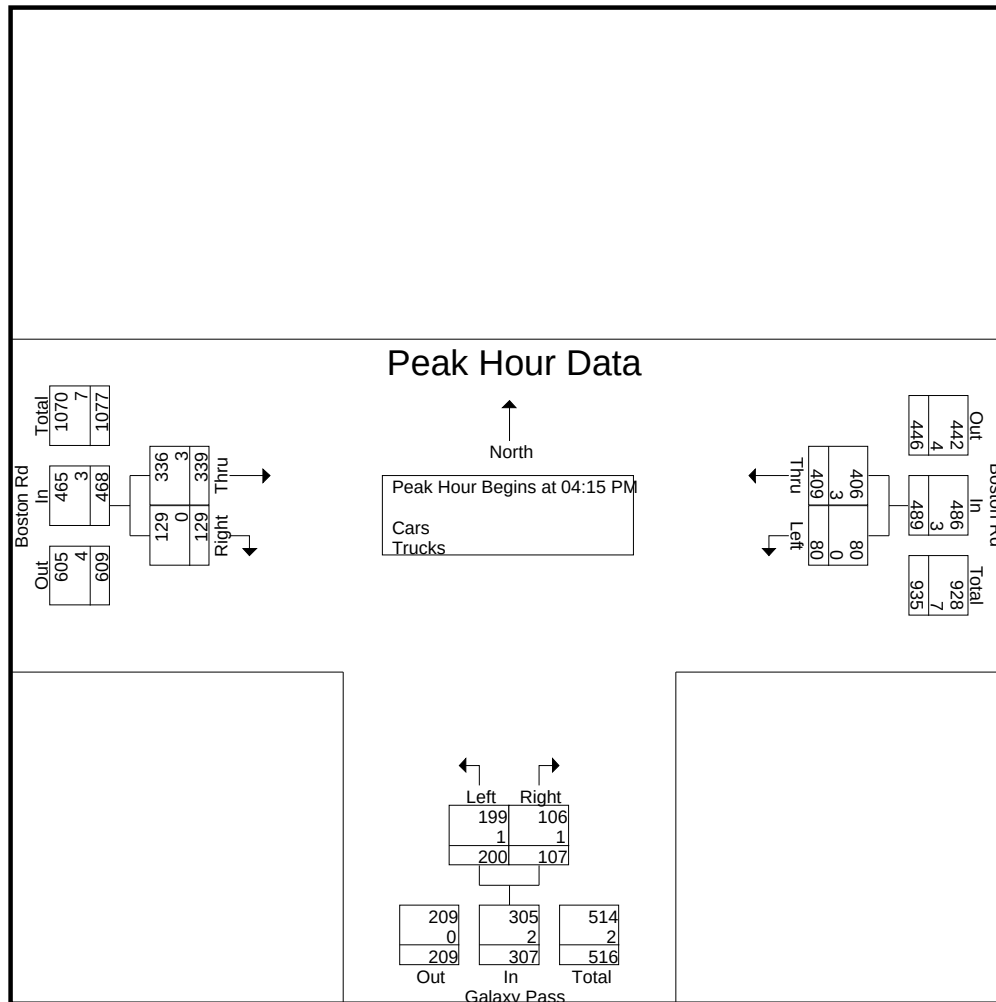


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	17	107	124	40	24	64	82	30	112	300
04:30 PM	16	105	121	53	25	78	63	38	101	300
04:45 PM	27	114	141	53	25	78	89	28	117	336
05:00 PM	20	83	103	54	33	87	105	33	138	328
Total Volume	80	409	489	200	107	307	339	129	468	1264
% App. Total	16.4	83.6		65.1	34.9		72.4	27.6		
PHF	.741	.897	.867	.926	.811	.882	.807	.849	.848	.940
Cars	80	406	486	199	106	305	336	129	465	1256
% Cars	100	99.3	99.4	99.5	99.1	99.3	99.1	100	99.4	99.4
Trucks	0	3	3	1	1	2	3	0	3	8
% Trucks	0	0.7	0.6	0.5	0.9	0.7	0.9	0	0.6	0.6

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 7

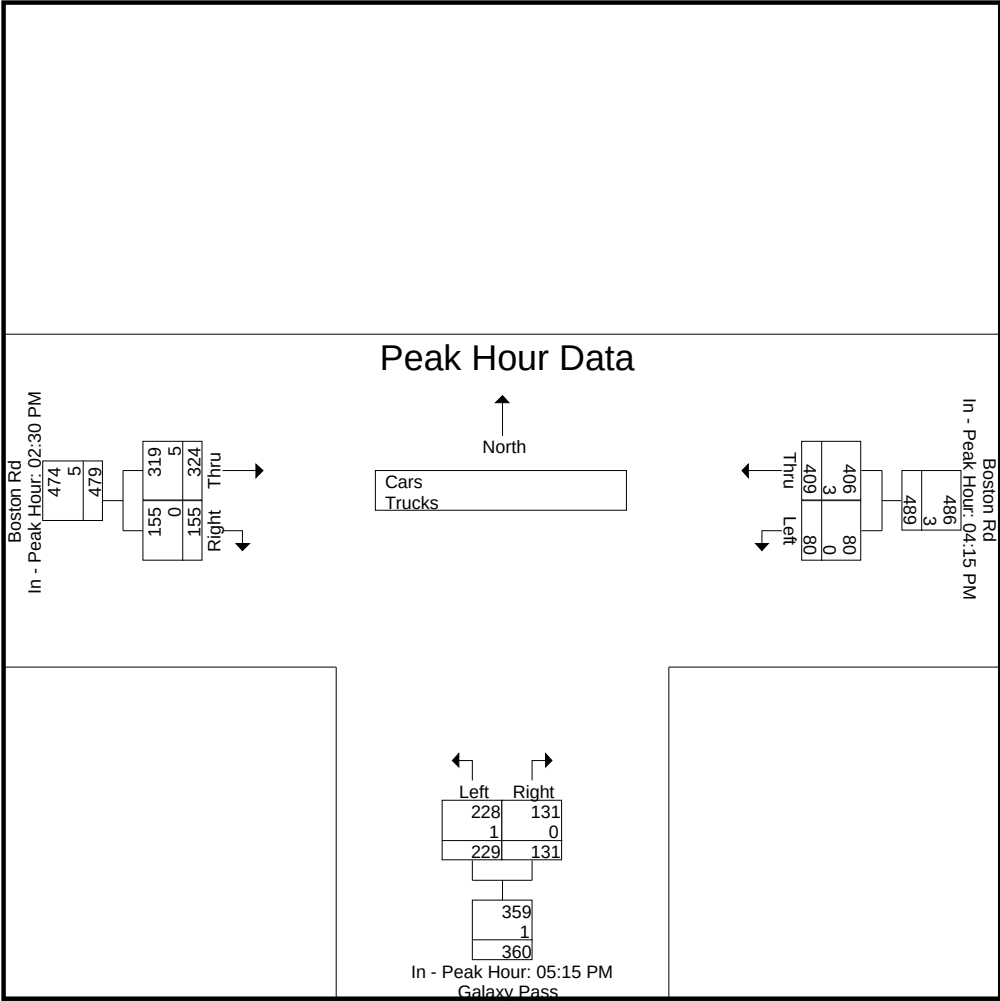


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			05:15 PM			02:30 PM		
+0 mins.	17	107	124	45	40	85	74	38	112
+15 mins.	16	105	121	54	30	84	75	47	122
+30 mins.	27	114	141	68	25	93	105	37	142
+45 mins.	20	83	103	62	36	98	70	33	103
Total Volume	80	409	489	229	131	360	324	155	479
% App. Total	16.4	83.6		63.6	36.4		67.6	32.4	
PHF	.741	.897	.867	.842	.819	.918	.771	.824	.843
Cars	80	406	486	228	131	359	319	155	474
% Cars	100	99.3	99.4	99.6	100	99.7	98.5	100	99
Trucks	0	3	3	1	0	1	5	0	5
% Trucks	0	0.7	0.6	0.4	0	0.3	1.5	0	1

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Galaxy Pass

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018002

Site Code : 21018002

Start Date : 10/7/2021

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Groups Printed- Cars

	Boston Rd From East		Galaxy Pass From South		Boston Rd From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
06:00 AM	4	41	6	3	31	4	89
06:15 AM	3	57	13	4	45	8	130
06:30 AM	9	69	20	3	40	8	149
06:45 AM	8	74	16	13	57	8	176
Total	24	241	55	23	173	28	544
07:00 AM	9	118	20	11	53	20	231
07:15 AM	11	92	35	12	82	17	249
07:30 AM	13	82	23	16	61	10	205
07:45 AM	18	84	32	22	64	21	241
Total	51	376	110	61	260	68	926
08:00 AM	12	78	28	15	67	17	217
08:15 AM	14	74	33	10	65	19	215
08:30 AM	8	64	30	15	62	23	202
08:45 AM	12	68	34	13	52	29	208
Total	46	284	125	53	246	88	842
09:00 AM	15	47	34	11	38	27	172
09:15 AM	17	58	32	14	46	29	196
09:30 AM	10	44	39	19	48	21	181
09:45 AM	14	58	32	17	39	29	189
Total	56	207	137	61	171	106	738
10:00 AM	10	35	28	11	36	22	142
10:15 AM	8	68	37	13	34	20	180
10:30 AM	10	62	29	14	45	21	181
10:45 AM	22	44	32	18	62	31	209
Total	50	209	126	56	177	94	712
11:00 AM	19	47	21	18	38	20	163
11:15 AM	23	44	38	18	40	17	180
11:30 AM	13	62	38	16	50	36	215
11:45 AM	12	57	42	22	63	33	229
Total	67	210	139	74	191	106	787
12:00 PM	13	56	56	18	54	39	236
12:15 PM	17	59	53	18	46	32	225
12:30 PM	22	59	61	31	49	34	256
12:45 PM	17	67	53	28	56	31	252
Total	69	241	223	95	205	136	969
01:00 PM	13	58	36	16	54	24	201
01:15 PM	12	57	53	13	65	35	235
01:30 PM	12	58	48	28	51	27	224
01:45 PM	17	47	47	25	49	38	223
Total	54	220	184	82	219	124	883
02:00 PM	19	60	45	20	41	31	216
02:15 PM	20	60	29	17	65	24	215
02:30 PM	11	77	53	18	73	38	270
02:45 PM	11	73	50	19	72	47	272
Total	61	270	177	74	251	140	973
03:00 PM	27	78	65	33	105	37	345
03:15 PM	18	82	44	34	69	33	280
03:30 PM	19	90	60	22	69	33	293
03:45 PM	15	98	55	17	74	42	301
Total	79	348	224	106	317	145	1219
04:00 PM	13	87	60	23	78	31	292
04:15 PM	17	106	39	24	80	30	296
04:30 PM	16	104	53	25	62	38	298

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 10

Groups Printed- Cars

	Boston Rd From East		Galaxy Pass From South		Boston Rd From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:45 PM	27	114	53	24	89	28	335
Total	73	411	205	96	309	127	1221
05:00 PM	20	82	54	33	105	33	327
05:15 PM	22	80	45	40	67	34	288
05:30 PM	24	80	54	30	74	41	303
05:45 PM	14	75	68	25	66	45	293
Total	80	317	221	128	312	153	1211
06:00 PM	23	61	61	36	65	30	276
06:15 PM	12	66	49	21	60	32	240
06:30 PM	15	52	41	24	63	23	218
06:45 PM	11	44	42	19	68	22	206
Total	61	223	193	100	256	107	940
Grand Total	771	3557	2119	1009	3087	1422	11965
Apprch %	17.8	82.2	67.7	32.3	68.5	31.5	
Total %	6.4	29.7	17.7	8.4	25.8	11.9	

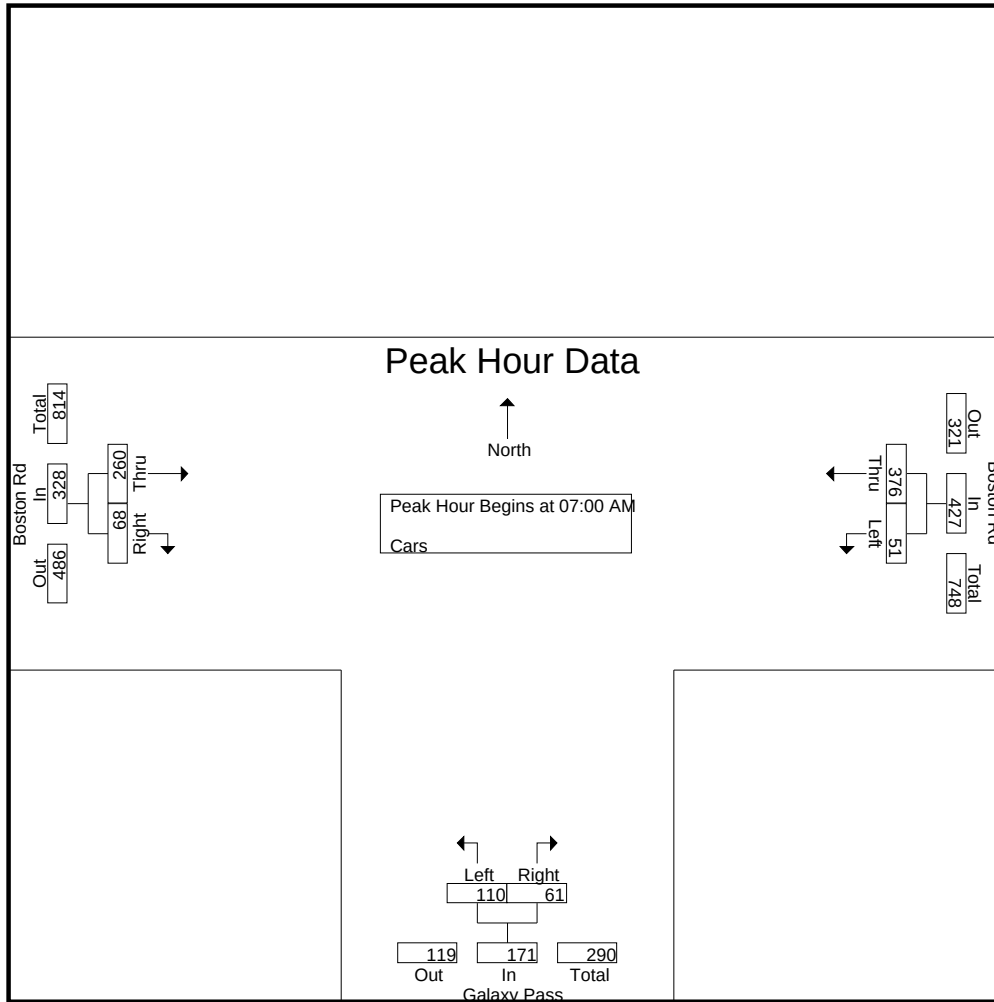
	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	9	118	127	20	11	31	53	20	73	231
07:15 AM	11	92	103	35	12	47	82	17	99	249
07:30 AM	13	82	95	23	16	39	61	10	71	205
07:45 AM	18	84	102	32	22	54	64	21	85	241
Total Volume	51	376	427	110	61	171	260	68	328	926
% App. Total	11.9	88.1		64.3	35.7		79.3	20.7		
PHF	.708	.797	.841	.786	.693	.792	.793	.810	.828	.930

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 11



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

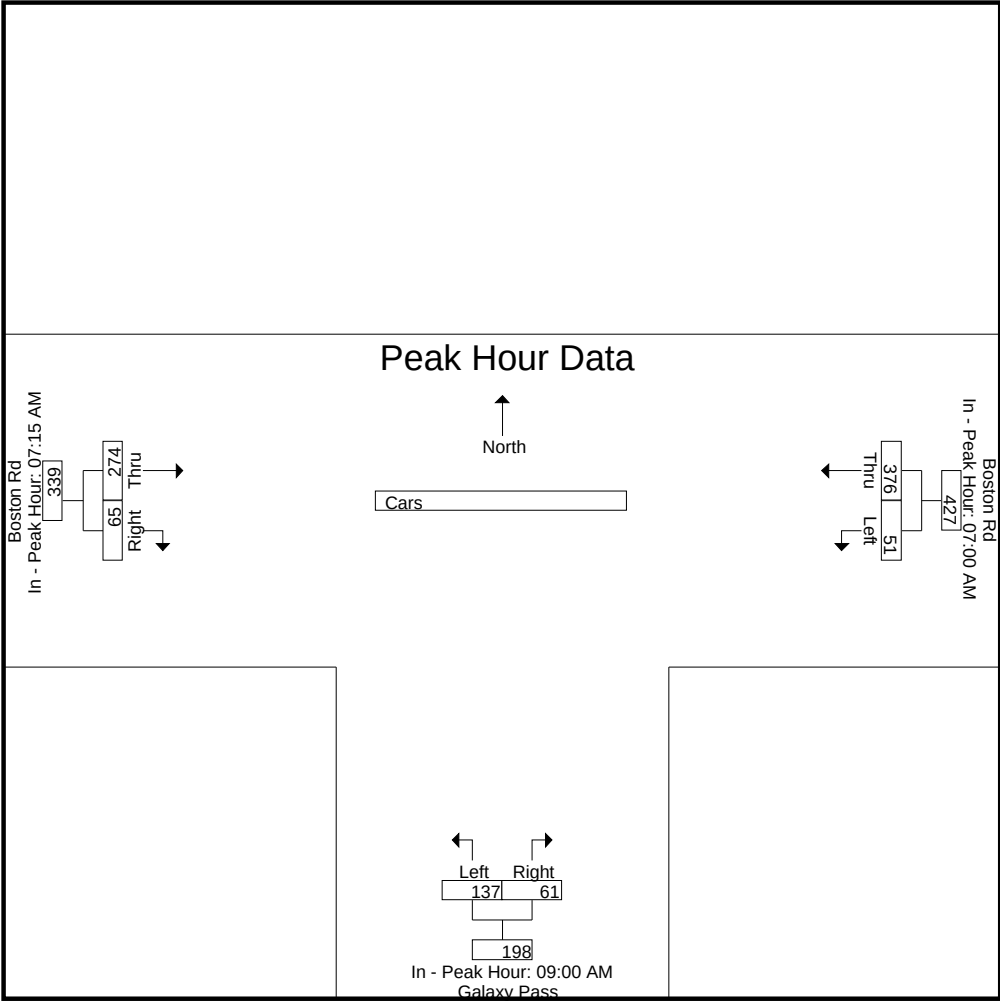
	07:00 AM			09:00 AM			07:15 AM		
+0 mins.	9	118	127	34	11	45	82	17	99
+15 mins.	11	92	103	32	14	46	61	10	71
+30 mins.	13	82	95	39	19	58	64	21	85
+45 mins.	18	84	102	32	17	49	67	17	84
Total Volume	51	376	427	137	61	198	274	65	339
% App. Total	11.9	88.1		69.2	30.8		80.8	19.2	
PHF	.708	.797	.841	.878	.803	.853	.835	.774	.856

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018002
 Site Code : 21018002
 Start Date : 10/7/2021
 Page No : 12



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:00 PM

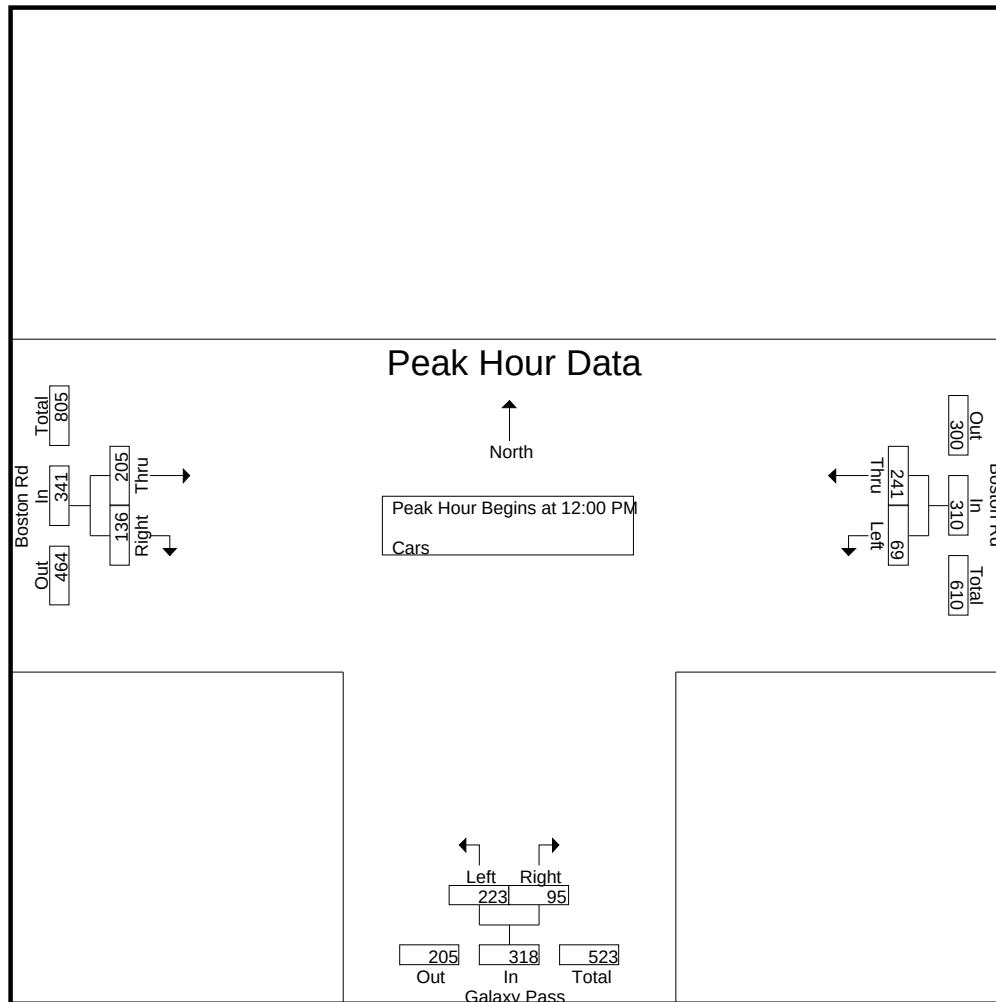
12:00 PM	13	56	69	56	18	74	54	39	93	236
12:15 PM	17	59	76	53	18	71	46	32	78	225
12:30 PM	22	59	81	61	31	92	49	34	83	256
12:45 PM	17	67	84	53	28	81	56	31	87	252
Total Volume	69	241	310	223	95	318	205	136	341	969
% App. Total	22.3	77.7		70.1	29.9		60.1	39.9		
PHF	.784	.899	.923	.914	.766	.864	.915	.872	.917	.946

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 13

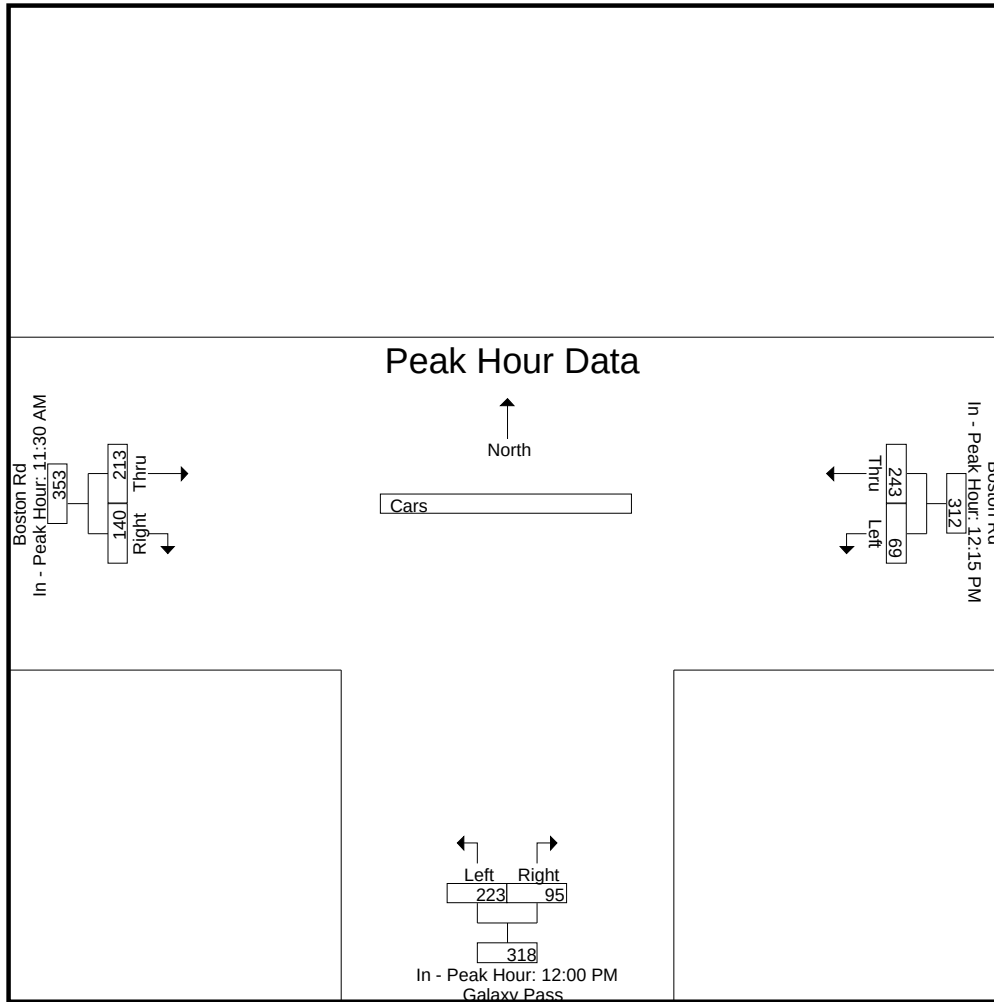


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM			12:00 PM			11:30 AM		
+0 mins.	17	59	76	56	18	74	50	36	86
+15 mins.	22	59	81	53	18	71	63	33	96
+30 mins.	17	67	84	61	31	92	54	39	93
+45 mins.	13	58	71	53	28	81	46	32	78
Total Volume	69	243	312	223	95	318	213	140	353
% App. Total	22.1	77.9		70.1	29.9		60.3	39.7	
PHF	.784	.907	.929	.914	.766	.864	.845	.897	.919

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 14



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:15 PM

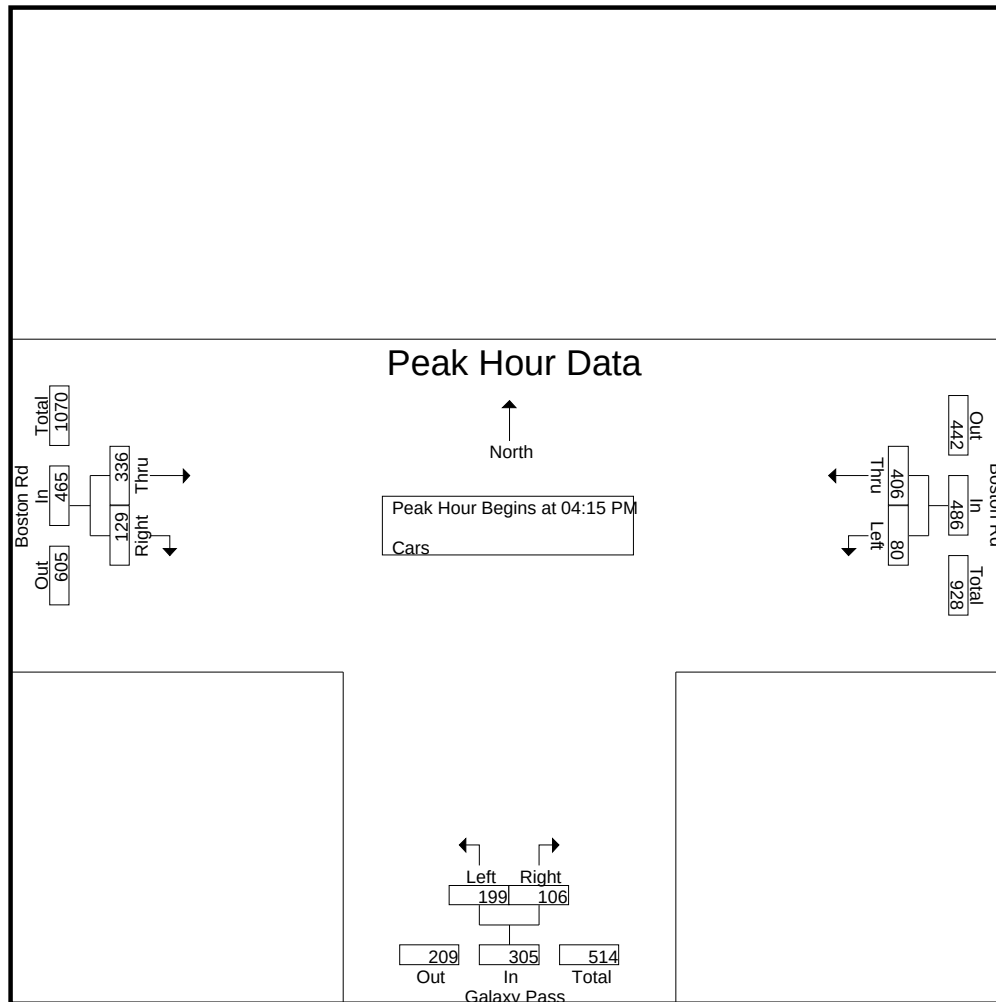
04:15 PM	17	106	123	39	24	63	80	30	110	296
04:30 PM	16	104	120	53	25	78	62	38	100	298
04:45 PM	27	114	141	53	24	77	89	28	117	335
05:00 PM	20	82	102	54	33	87	105	33	138	327
Total Volume	80	406	486	199	106	305	336	129	465	1256
% App. Total	16.5	83.5		65.2	34.8		72.3	27.7		
PHF	.741	.890	.862	.921	.803	.876	.800	.849	.842	.937

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018002
 Site Code : 21018002
 Start Date : 10/7/2021
 Page No : 15

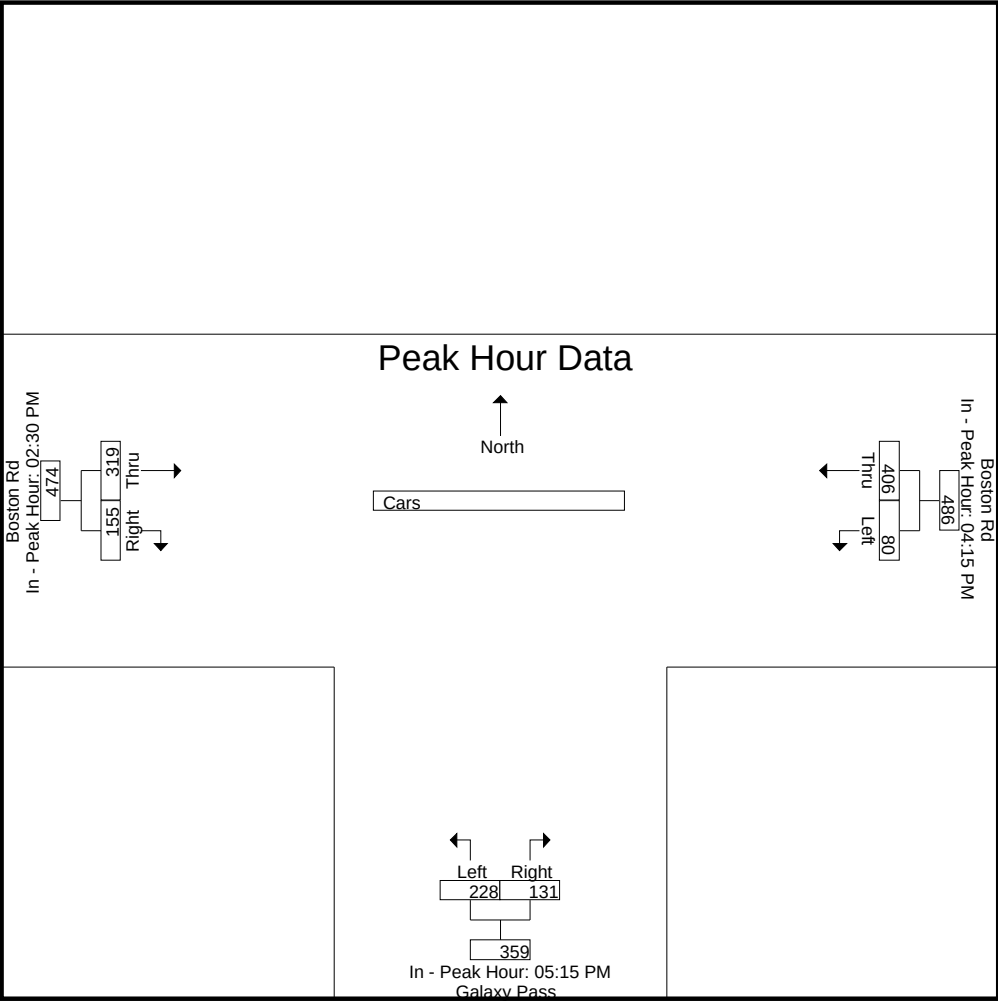


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:15 PM			05:15 PM			02:30 PM		
+0 mins.	17	106	123	45	40	85	73	38	111
+15 mins.	16	104	120	54	30	84	72	47	119
+30 mins.	27	114	141	68	25	93	105	37	142
+45 mins.	20	82	102	61	36	97	69	33	102
Total Volume	80	406	486	228	131	359	319	155	474
% App. Total	16.5	83.5		63.5	36.5		67.3	32.7	
PHF	.741	.890	.862	.838	.819	.925	.760	.824	.835

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 16



Accurate Counts

978-664-2565

N/S Street : Galaxy Pass

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018002

Site Code : 21018002

Start Date : 10/7/2021

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Groups Printed- Trucks

	Boston Rd From East		Galaxy Pass From South		Boston Rd From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
06:00 AM	0	0	1	0	3	1	5
06:15 AM	0	4	0	0	1	0	5
06:30 AM	0	3	0	1	3	0	7
06:45 AM	0	1	1	0	3	1	6
Total	0	8	2	1	10	2	23
07:00 AM	0	6	1	0	3	1	11
07:15 AM	0	2	0	0	2	0	4
07:30 AM	0	6	1	0	4	0	11
07:45 AM	0	3	1	1	3	1	9
Total	0	17	3	1	12	2	35
08:00 AM	0	2	0	0	0	2	4
08:15 AM	0	1	0	0	2	2	5
08:30 AM	0	0	2	0	3	0	5
08:45 AM	0	4	0	1	1	0	6
Total	0	7	2	1	6	4	20
09:00 AM	0	3	0	0	3	1	7
09:15 AM	0	2	1	0	0	0	3
09:30 AM	0	1	1	0	4	0	6
09:45 AM	1	3	0	0	0	0	4
Total	1	9	2	0	7	1	20
10:00 AM	0	6	1	0	2	0	9
10:15 AM	0	2	0	0	2	0	4
10:30 AM	0	5	0	0	5	0	10
10:45 AM	0	4	0	0	0	0	4
Total	0	17	1	0	9	0	27
11:00 AM	0	3	0	0	3	0	6
11:15 AM	0	0	0	0	2	0	2
11:30 AM	0	3	0	0	4	0	7
11:45 AM	0	1	0	0	4	1	6
Total	0	7	0	0	13	1	21
12:00 PM	0	2	2	0	4	0	8
12:15 PM	0	5	0	0	4	0	9
12:30 PM	0	2	3	0	2	0	7
12:45 PM	0	4	0	0	3	0	7
Total	0	13	5	0	13	0	31
01:00 PM	1	0	1	0	2	0	4
01:15 PM	0	0	1	0	1	0	2
01:30 PM	0	1	0	0	0	0	1
01:45 PM	0	4	0	0	2	0	6
Total	1	5	2	0	5	0	13
02:00 PM	0	1	1	0	1	0	3
02:15 PM	0	3	0	0	1	1	5
02:30 PM	0	4	1	0	1	0	6
02:45 PM	0	0	0	0	3	0	3
Total	0	8	2	0	6	1	17
03:00 PM	0	3	0	0	0	0	3
03:15 PM	0	2	0	0	1	0	3
03:30 PM	1	0	0	0	3	0	4
03:45 PM	0	3	1	0	3	0	7
Total	1	8	1	0	7	0	17
04:00 PM	0	2	0	0	2	0	4
04:15 PM	0	1	1	0	2	0	4
04:30 PM	0	1	0	0	1	0	2

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018002

Site Code : 21018002

Start Date : 10/7/2021

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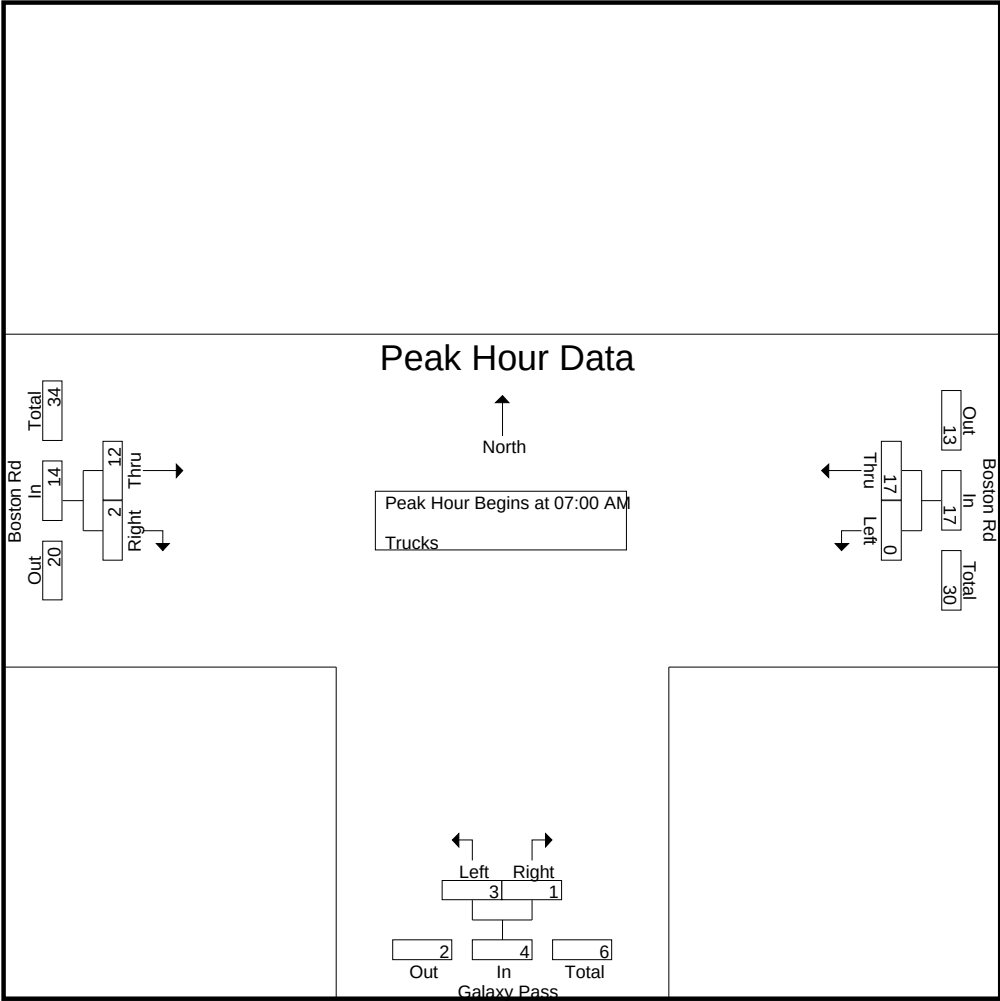
Groups Printed- Trucks

	Boston Rd From East		Galaxy Pass From South		Boston Rd From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
04:45 PM	0	0	0	1	0	0	1
Total	0	4	1	1	5	0	11
05:00 PM	0	1	0	0	0	0	1
05:15 PM	0	1	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	1
Total	0	3	0	0	0	1	4
06:00 PM	0	0	1	0	1	0	2
06:15 PM	0	3	0	0	0	0	3
06:30 PM	0	1	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0
Total	0	4	1	0	1	0	6
Grand Total	3	110	22	4	94	12	245
Apprch %	2.7	97.3	84.6	15.4	88.7	11.3	
Total %	1.2	44.9	9	1.6	38.4	4.9	

	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	6	6	1	0	1	3	1	4	11
07:15 AM	0	2	2	0	0	0	2	0	2	4
07:30 AM	0	6	6	1	0	1	4	0	4	11
07:45 AM	0	3	3	1	1	2	3	1	4	9
Total Volume	0	17	17	3	1	4	12	2	14	35
% App. Total	0	100		75	25		85.7	14.3		
PHF	.000	.708	.708	.750	.250	.500	.750	.500	.875	.795

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
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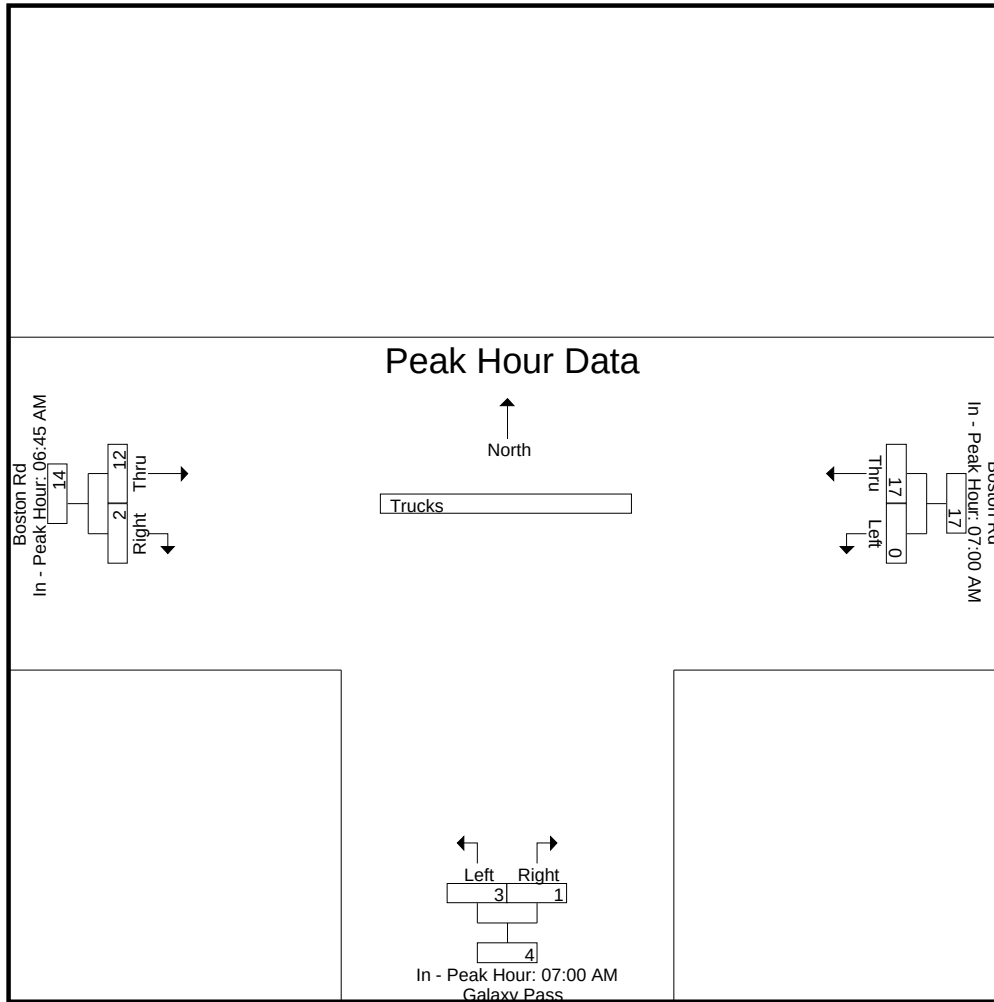


Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			06:45 AM		
+0 mins.	0	6	6	1	0	1	3	1	4
+15 mins.	0	2	2	0	0	0	3	1	4
+30 mins.	0	6	6	1	0	1	2	0	2
+45 mins.	0	3	3	1	1	2	4	0	4
Total Volume	0	17	17	3	1	4	12	2	14
% App. Total	0	100		75	25		85.7	14.3	
PHF	.000	.708	.708	.750	.250	.500	.750	.500	.875

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 20

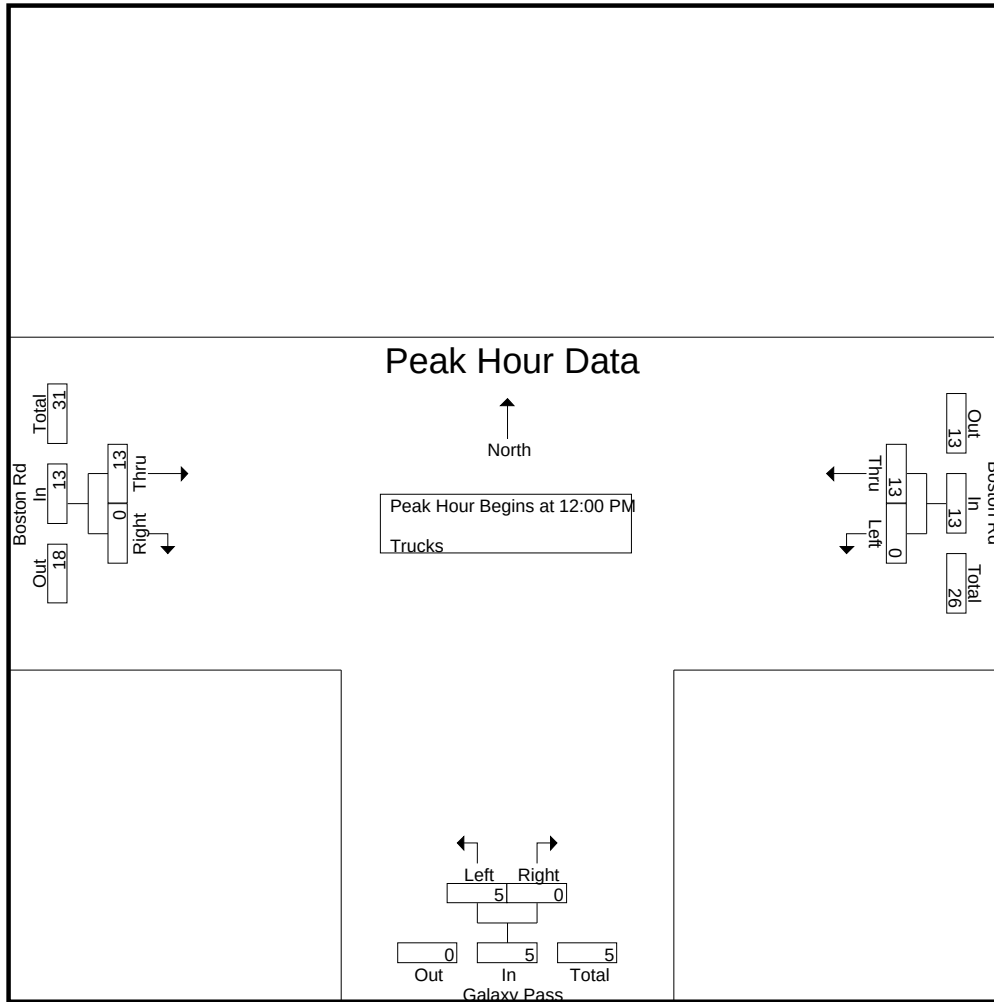


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	0	2	2	2	0	2	4	0	4	8
12:15 PM	0	5	5	0	0	0	4	0	4	9
12:30 PM	0	2	2	3	0	3	2	0	2	7
12:45 PM	0	4	4	0	0	0	3	0	3	7
Total Volume	0	13	13	5	0	5	13	0	13	31
% App. Total	0	100		100	0		100	0		
PHF	.000	.650	.650	.417	.000	.417	.813	.000	.813	.861

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 21

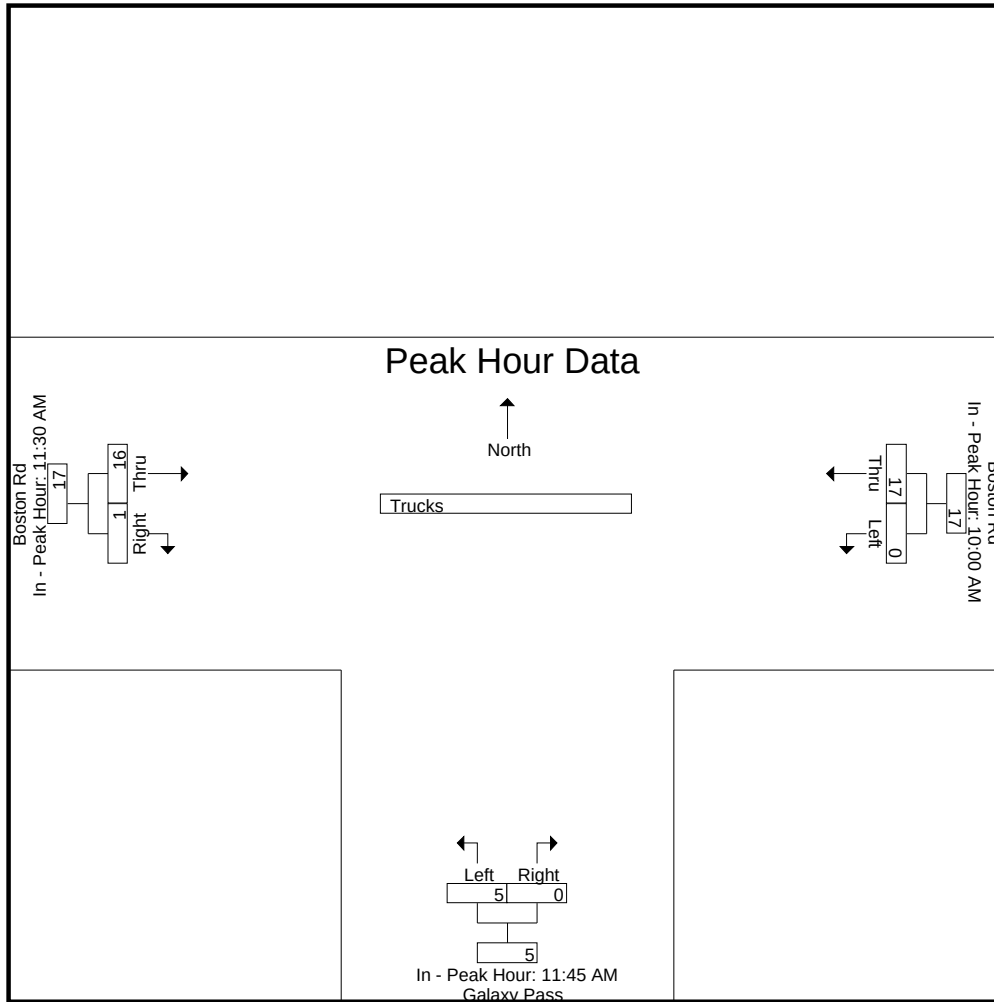


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:00 AM			11:45 AM			11:30 AM		
+0 mins.	0	6	6	0	0	0	4	0	4
+15 mins.	0	2	2	2	0	2	4	1	5
+30 mins.	0	5	5	0	0	0	4	0	4
+45 mins.	0	4	4	3	0	3	4	0	4
Total Volume	0	17	17	5	0	5	16	1	17
% App. Total	0	100		100	0		94.1	5.9	
PHF	.000	.708	.708	.417	.000	.417	1.000	.250	.850

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 22

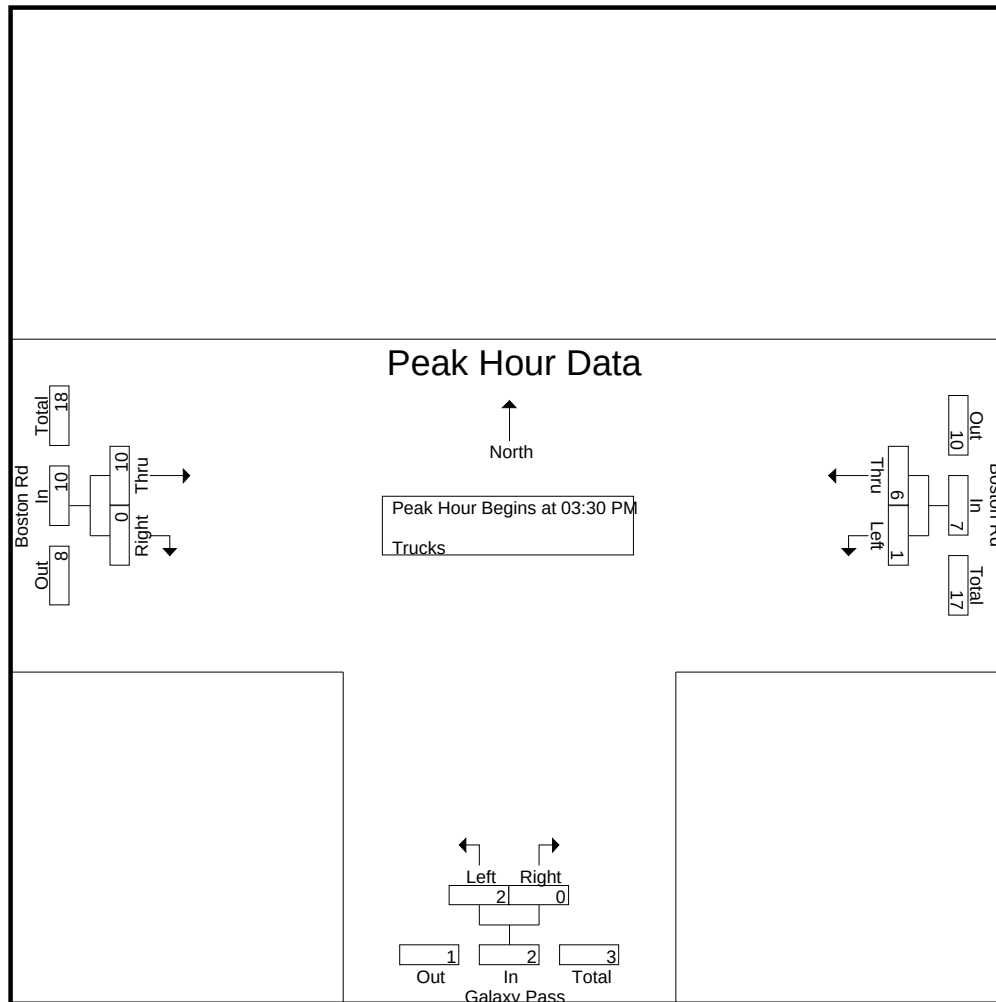


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 03:30 PM

03:30 PM	1	0	1	0	0	0	3	0	3	4
03:45 PM	0	3	3	1	0	1	3	0	3	7
04:00 PM	0	2	2	0	0	0	2	0	2	4
04:15 PM	0	1	1	1	0	1	2	0	2	4
Total Volume	1	6	7	2	0	2	10	0	10	19
% App. Total	14.3	85.7		100	0		100	0		
PHF	.250	.500	.583	.500	.000	.500	.833	.000	.833	.679

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 23

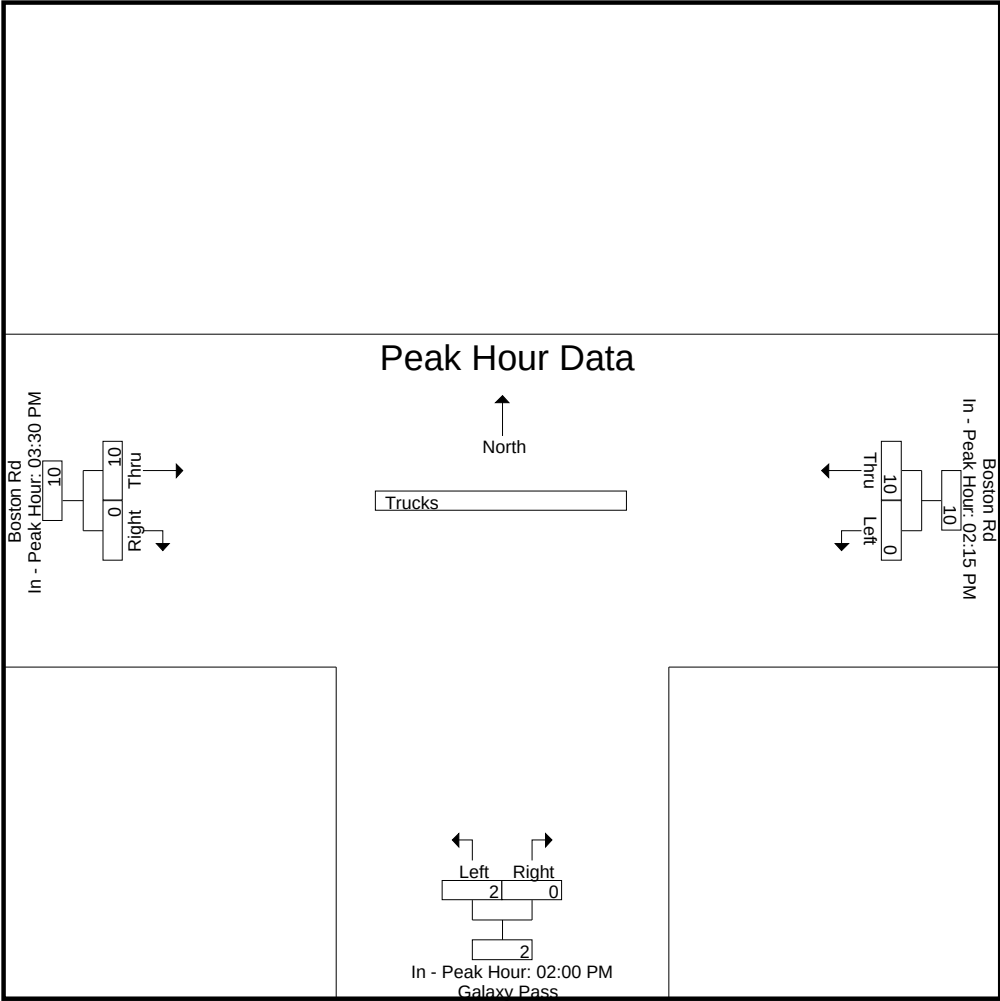


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM			02:00 PM			03:30 PM		
+0 mins.	0	3	3	1	0	1	3	0	3
+15 mins.	0	4	4	0	0	0	3	0	3
+30 mins.	0	0	0	1	0	1	2	0	2
+45 mins.	0	3	3	0	0	0	2	0	2
Total Volume	0	10	10	2	0	2	10	0	10
% App. Total	0	100		100	0		100	0	
PHF	.000	.625	.625	.500	.000	.500	.833	.000	.833

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 24



Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 25

Groups Printed- Bikes Peds

	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			Exclu. Total	Inclu. Total	Int. Total
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
06:00 AM	0	0	0	0	0	0	1	0	0	0	1	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	1	1
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	1	0	1	0	0	0	2	2
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	2	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	4	0	0	0	4	4
Total	0	0	0	0	0	0	4	0	0	0	4	4
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	1	0	0	0	0	0	1	1

Accurate Counts

978-664-2565

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 26

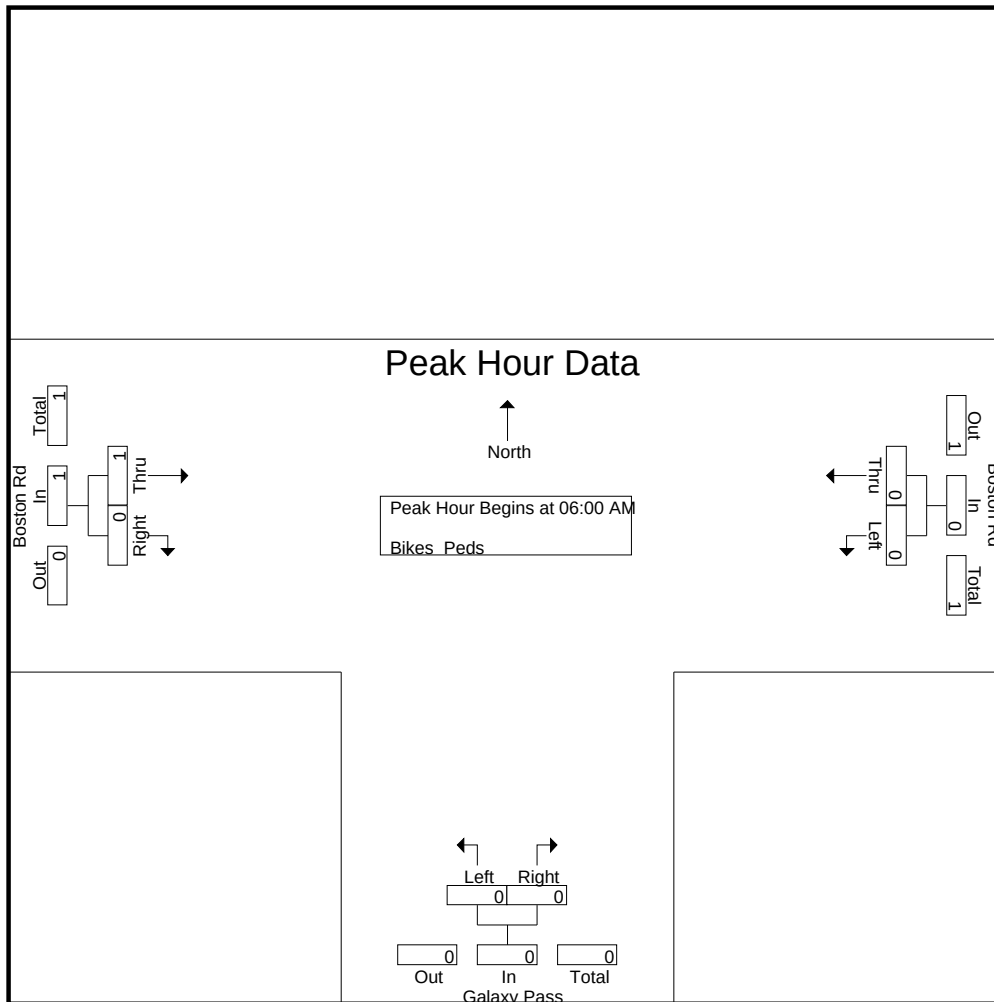
Groups Printed- Bikes Peds

	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			Exclu. Total	Inclu. Total	Int. Total
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	1	1
05:00 PM	0	5	0	0	0	0	0	0	0	0	5	5
05:15 PM	0	0	0	0	0	0	1	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	5	0	0	0	0	1	0	0	0	6	6
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	5	0	0	2	0	7	0	0	0	14	14
Apprch %	0	100		0	100		100	0				
Total %	0	35.7		0	14.3		50	0		0	100	

	Boston Rd From East			Galaxy Pass From South			Boston Rd From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 06:00 AM										
06:00 AM	0	0	0	0	0	0	1	0	1	1
06:15 AM	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 27

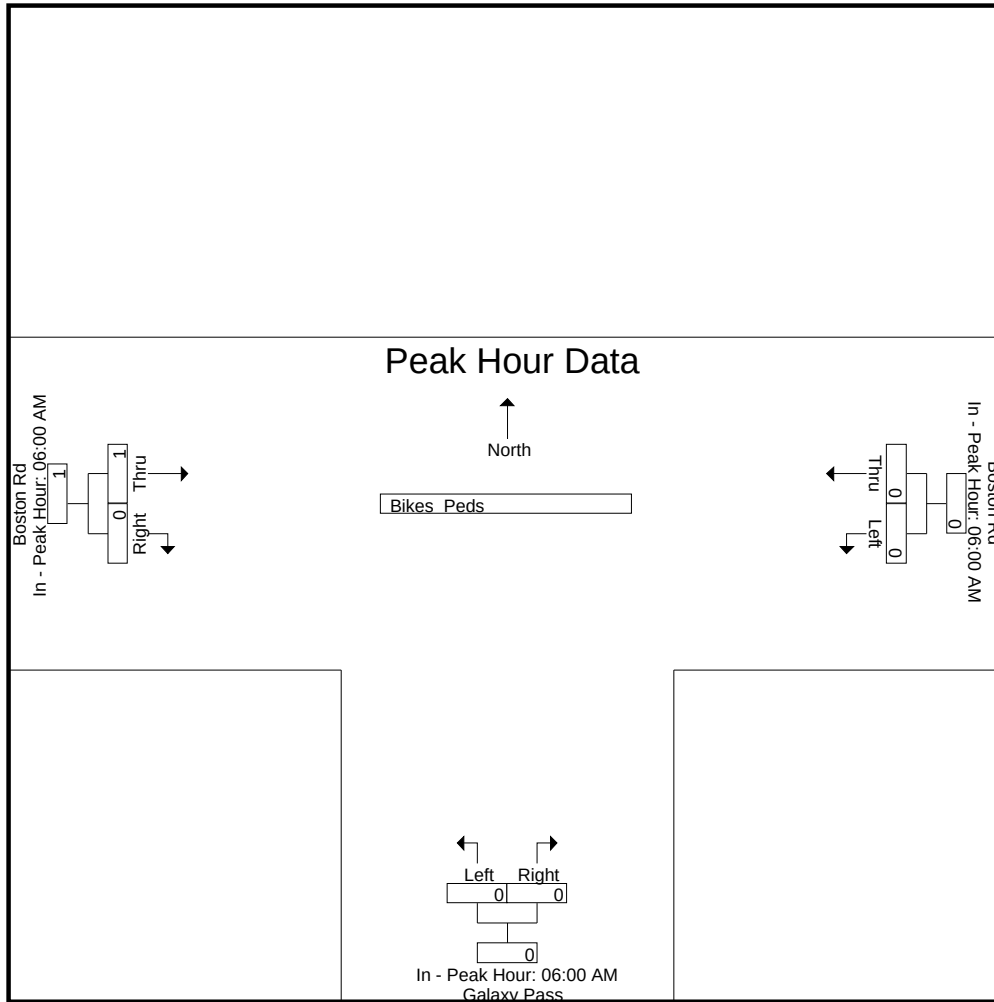


Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	06:00 AM			06:00 AM			06:00 AM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1
% App. Total	0	0		0	0		100	0	
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 28

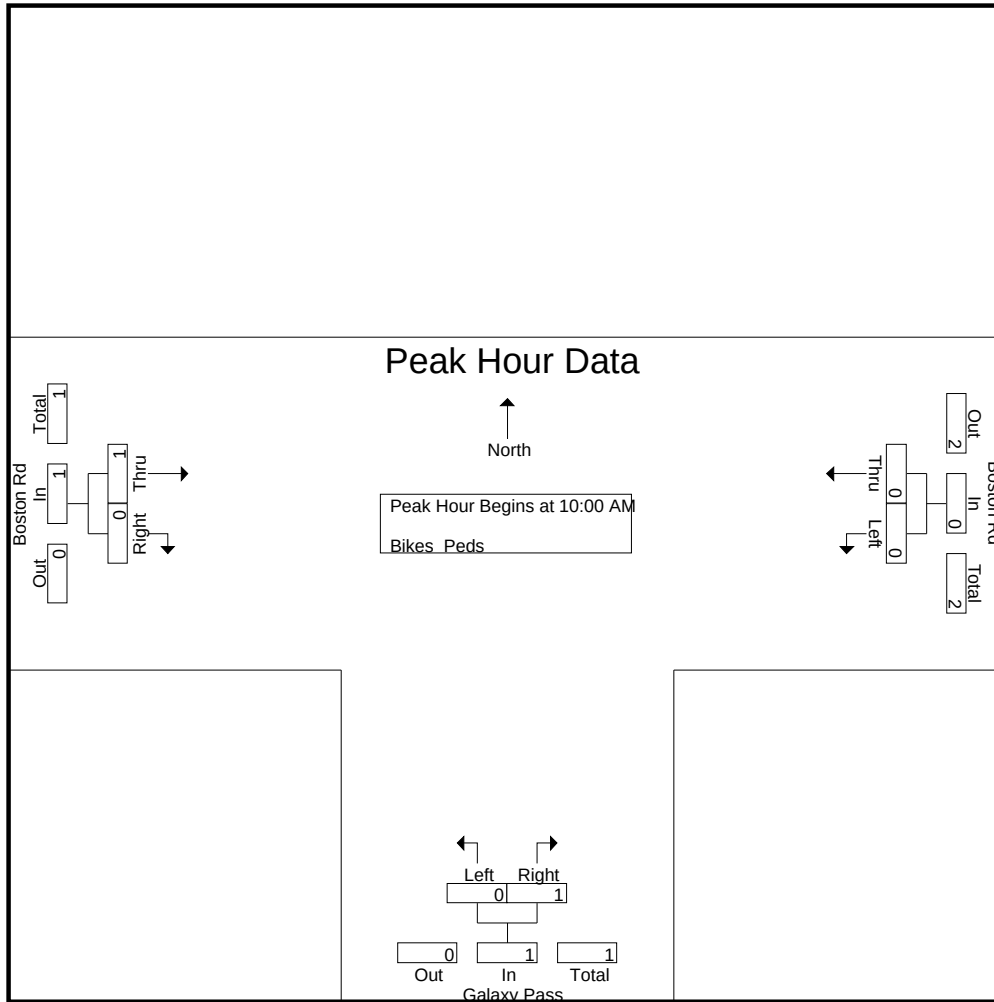


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 10:00 AM

10:00 AM	0	0	0	0	1	1	1	0	1	2
10:15 AM	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	1	0	1	2
% App. Total	0	0		0	100		100	0		
PHF	.000	.000	.000	.000	.250	.250	.250	.000	.250	.250

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 29

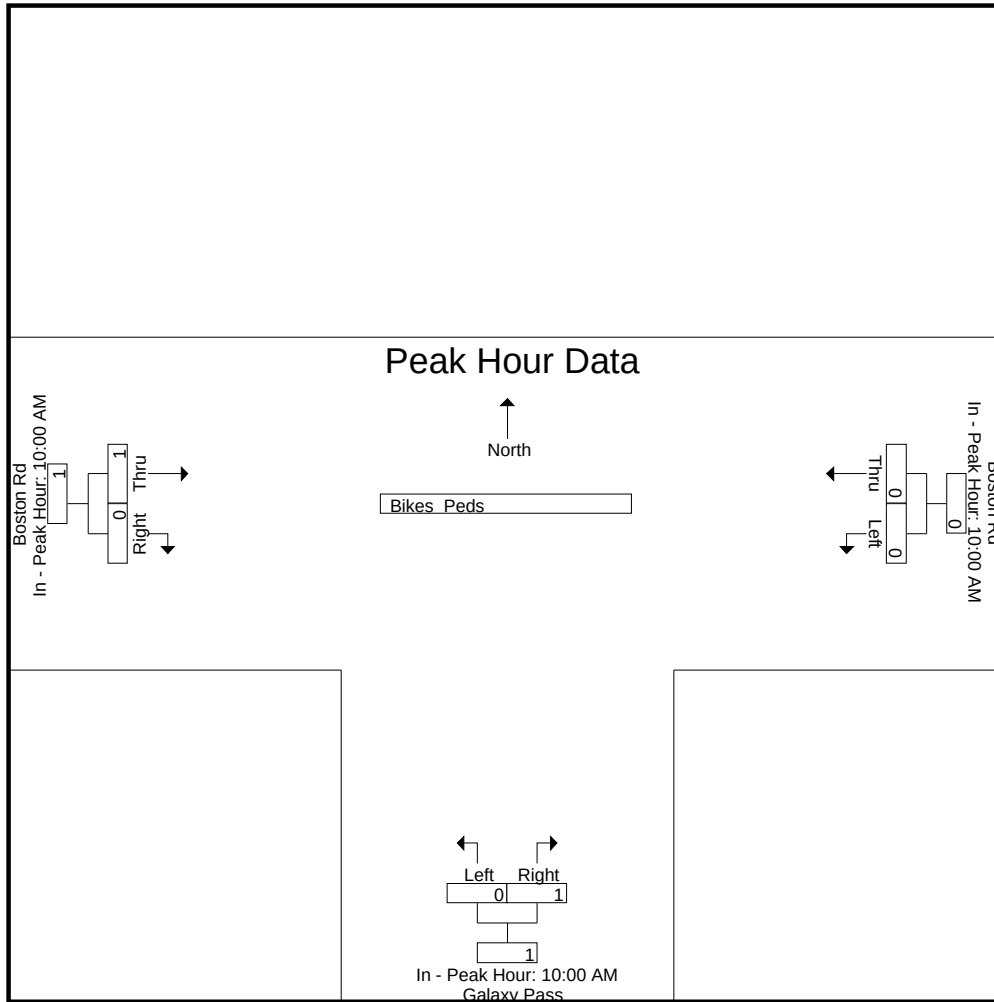


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:00 AM			10:00 AM			10:00 AM		
+0 mins.	0	0	0	0	1	1	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	1	0	1
% App. Total	0	0		0	100		100	0	
PHF	.000	.000	.000	.000	.250	.250	.250	.000	.250

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 30

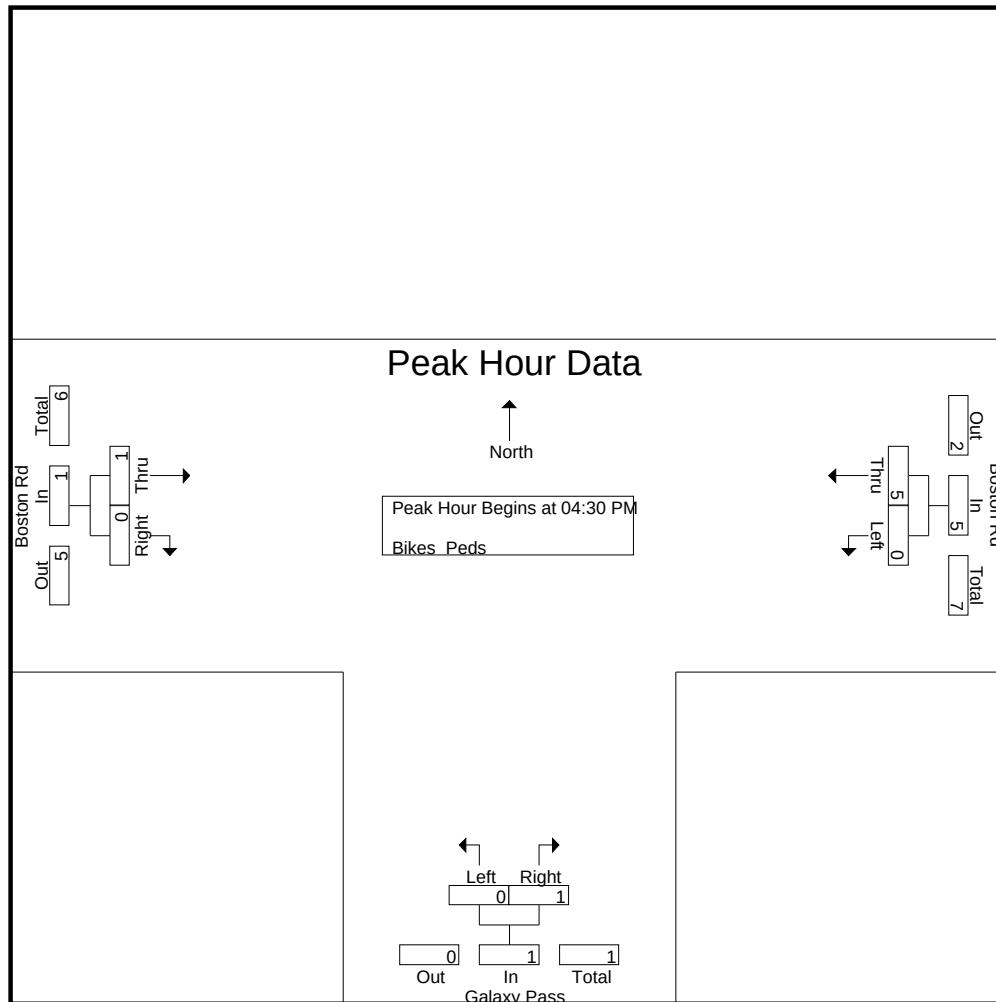


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

04:30 PM	0	0	0	0	1	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	5	5	0	0	0	0	0	0	5
05:15 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	5	5	0	1	1	1	0	1	7
% App. Total	0	100		0	100		100	0		
PHF	.000	.250	.250	.000	.250	.250	.250	.000	.250	.350

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 31

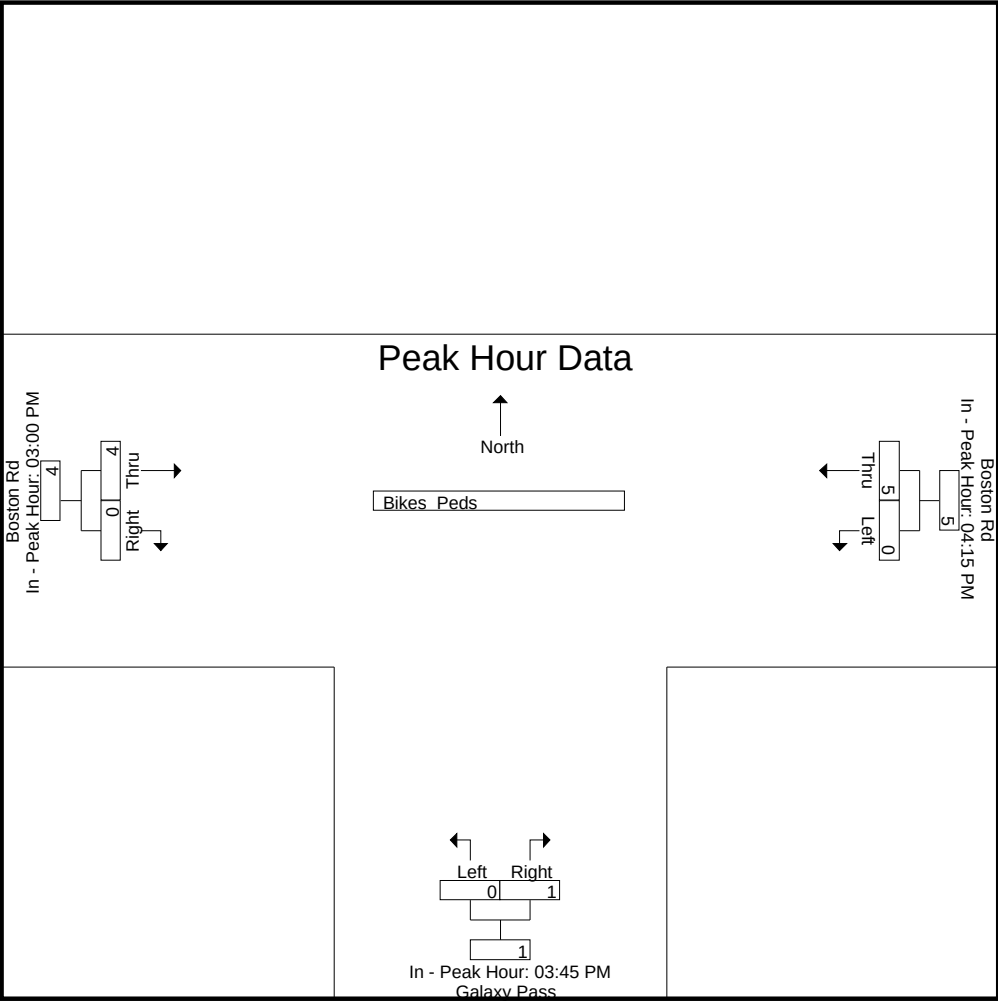


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			03:45 PM			03:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	5	5	0	1	1	4	0	4
Total Volume	0	5	5	0	1	1	4	0	4
% App. Total	0	100		0	100		100	0	
PHF	.000	.250	.250	.000	.250	.250	.250	.000	.250

N/S Street : Galaxy Pass
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018002
Site Code : 21018002
Start Date : 10/7/2021
Page No : 32



Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 1

Groups Printed- Cars - Trucks

	Dudley Rd From North			Boston Rd From East			Pleasant Valley Rd From South			Boston Rd From West			Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
06:00 AM	3	0	2	0	47	1	4	2	21	1	22	0	103
06:15 AM	2	0	1	1	69	3	4	1	23	1	30	0	135
06:30 AM	4	0	5	0	89	3	14	3	30	0	24	1	173
06:45 AM	2	1	7	1	88	1	5	4	25	2	37	1	174
Total	11	1	15	2	293	8	27	10	99	4	113	2	585
07:00 AM	4	0	6	0	143	1	7	2	31	2	43	1	240
07:15 AM	3	0	10	1	126	4	7	3	33	1	63	1	252
07:30 AM	1	0	6	0	110	3	9	2	25	4	51	1	212
07:45 AM	3	0	8	0	112	6	6	2	27	6	59	1	230
Total	11	0	30	1	491	14	29	9	116	13	216	4	934
08:00 AM	5	0	9	1	105	3	8	4	28	2	53	1	219
08:15 AM	3	0	3	0	105	4	11	2	21	7	66	2	224
08:30 AM	4	0	6	1	91	3	9	1	15	2	69	0	201
08:45 AM	5	0	12	0	100	5	12	0	14	2	61	1	212
Total	17	0	30	2	401	15	40	7	78	13	249	4	856
09:00 AM	2	0	5	0	83	2	10	0	18	3	51	2	176
09:15 AM	1	0	5	0	91	2	7	3	14	4	58	1	186
09:30 AM	3	0	6	1	84	1	14	1	22	2	48	2	184
09:45 AM	5	0	5	1	87	5	5	4	13	3	50	1	179
Total	11	0	21	2	345	10	36	8	67	12	207	6	725
10:00 AM	3	0	9	2	68	3	4	2	14	1	43	0	149
10:15 AM	4	0	7	0	102	4	5	1	10	5	42	1	181
10:30 AM	3	0	5	1	91	4	6	1	13	5	55	1	185
10:45 AM	4	0	6	0	79	1	6	1	18	5	70	5	195
Total	14	0	27	3	340	12	21	5	55	16	210	7	710
11:00 AM	4	0	8	0	69	3	5	5	8	4	50	2	158
11:15 AM	2	0	15	1	79	2	13	1	9	6	47	4	179
11:30 AM	5	1	3	1	95	6	8	1	19	0	67	1	207
11:45 AM	8	0	10	1	97	3	9	3	10	6	83	0	230
Total	19	1	36	3	340	14	35	10	46	16	247	7	774
12:00 PM	12	0	8	1	106	8	11	2	14	8	68	5	243
12:15 PM	6	0	10	0	113	4	16	1	13	4	63	2	232
12:30 PM	5	0	8	1	116	6	9	2	19	6	63	1	236
12:45 PM	7	1	8	1	116	3	13	4	15	6	60	3	237
Total	30	1	34	3	451	21	49	9	61	24	254	11	948
01:00 PM	5	0	11	0	96	4	9	0	14	6	60	0	205
01:15 PM	3	1	3	0	106	4	5	2	14	4	86	0	228
01:30 PM	2	0	10	2	98	6	7	1	14	5	56	5	206
01:45 PM	5	0	11	0	95	2	12	2	15	1	68	0	211
Total	15	1	35	2	395	16	33	5	57	16	270	5	850
02:00 PM	5	0	8	0	101	7	8	2	12	4	56	3	206
02:15 PM	10	1	4	2	83	5	27	0	19	7	62	3	223
02:30 PM	3	0	5	0	127	6	20	4	30	3	72	5	275
02:45 PM	4	1	7	0	119	6	15	6	23	2	100	3	286
Total	22	2	24	2	430	24	70	12	84	16	290	14	990
03:00 PM	5	0	8	0	136	9	17	2	23	4	108	2	314
03:15 PM	4	1	7	1	123	4	13	3	20	3	80	3	262
03:30 PM	10	0	15	2	148	4	14	3	19	4	75	1	295
03:45 PM	13	0	8	2	153	5	10	2	24	7	80	1	305
Total	32	1	38	5	560	22	54	10	86	18	343	7	1176
04:00 PM	9	0	10	0	145	3	14	3	25	2	75	4	290

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 2

Groups Printed- Cars - Trucks

	Dudley Rd From North			Boston Rd From East			Pleasant Valley Rd From South			Boston Rd From West			Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:15 PM	7	0	11	1	145	2	7	8	25	3	78	0	287
04:30 PM	2	0	14	1	150	6	12	2	14	4	90	3	298
04:45 PM	8	0	8	1	164	4	11	6	20	5	84	1	312
Total	26	0	43	3	604	15	44	19	84	14	327	8	1187
05:00 PM	8	1	13	0	136	7	16	2	25	6	103	1	318
05:15 PM	11	0	13	1	123	3	21	0	15	4	78	0	269
05:30 PM	9	0	9	1	133	4	15	2	20	1	84	5	283
05:45 PM	5	0	3	2	140	3	12	2	14	2	91	1	275
Total	33	1	38	4	532	17	64	6	74	13	356	7	1145
06:00 PM	6	0	10	0	112	10	10	3	14	3	76	1	245
06:15 PM	8	0	2	2	116	2	15	1	13	3	71	1	234
06:30 PM	1	0	7	1	93	4	13	1	12	4	74	1	211
06:45 PM	4	0	3	0	81	3	2	1	17	3	71	0	185
Total	19	0	22	3	402	19	40	6	56	13	292	3	875
Grand Total	260	8	393	35	5584	207	542	116	963	188	3374	85	11755
Apprch %	39.3	1.2	59.5	0.6	95.8	3.6	33.4	7.2	59.4	5.2	92.5	2.3	
Total %	2.2	0.1	3.3	0.3	47.5	1.8	4.6	1	8.2	1.6	28.7	0.7	
Cars	255	8	386	35	5449	204	516	113	915	188	3311	83	11463
% Cars	98.1	100	98.2	100	97.6	98.6	95.2	97.4	95	100	98.1	97.6	97.5
Trucks	5	0	7	0	135	3	26	3	48	0	63	2	292
% Trucks	1.9	0	1.8	0	2.4	1.4	4.8	2.6	5	0	1.9	2.4	2.5

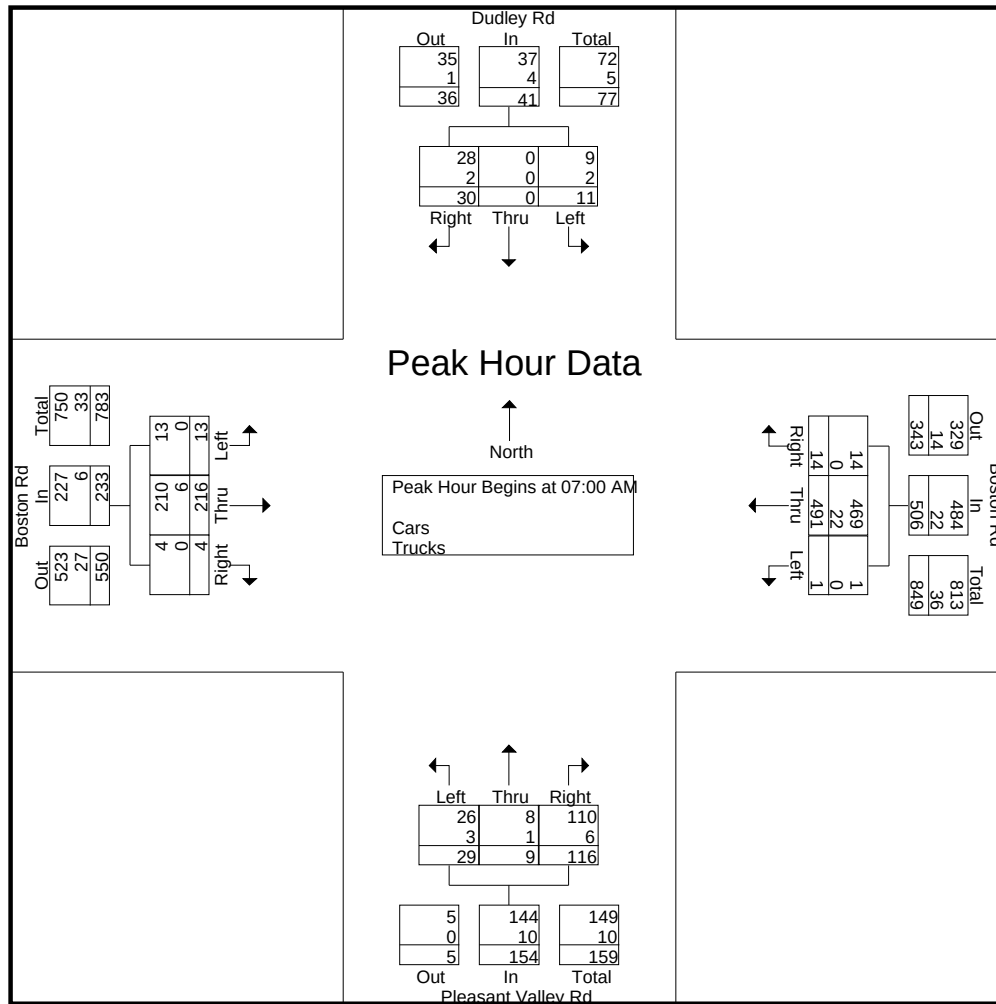
	Dudley Rd From North				Boston Rd From East				Pleasant Valley Rd From South				Boston Rd From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	4	0	6	10	0	143	1	144	7	2	31	40	2	43	1	46	240
07:15 AM	3	0	10	13	1	126	4	131	7	3	33	43	1	63	1	65	252
07:30 AM	1	0	6	7	0	110	3	113	9	2	25	36	4	51	1	56	212
07:45 AM	3	0	8	11	0	112	6	118	6	2	27	35	6	59	1	66	230
Total Volume	11	0	30	41	1	491	14	506	29	9	116	154	13	216	4	233	934
% App. Total	26.8	0	73.2		0.2	97	2.8		18.8	5.8	75.3		5.6	92.7	1.7		
PHF	.688	.000	.750	.788	.250	.858	.583	.878	.806	.750	.879	.895	.542	.857	1.00	.883	.927
Cars	9	0	28	37	1	469	14	484	26	8	110	144	13	210	4	227	892
% Cars	81.8	0	93.3	90.2	100	95.5	100	95.7	89.7	88.9	94.8	93.5	100	97.2	100	97.4	95.5
Trucks	2	0	2	4	0	22	0	22	3	1	6	10	0	6	0	6	42
% Trucks	18.2	0	6.7	9.8	0	4.5	0	4.3	10.3	11.1	5.2	6.5	0	2.8	0	2.6	4.5

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 3



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

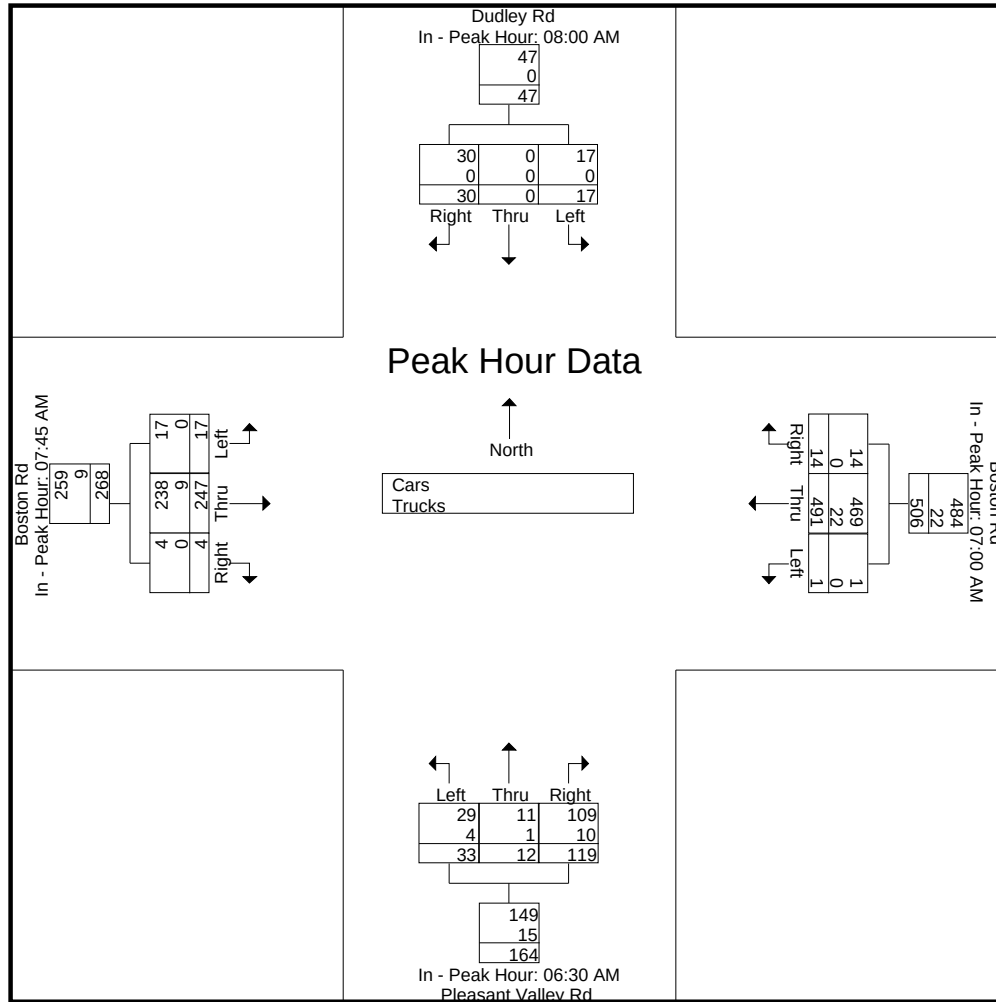
	08:00 AM				07:00 AM				06:30 AM				07:45 AM			
+0 mins.	5	0	9	14	0	143	1	144	14	3	30	47	6	59	1	66
+15 mins.	3	0	3	6	1	126	4	131	5	4	25	34	2	53	1	56
+30 mins.	4	0	6	10	0	110	3	113	7	2	31	40	7	66	2	75
+45 mins.	5	0	12	17	0	112	6	118	7	3	33	43	2	69	0	71
Total Volume	17	0	30	47	1	491	14	506	33	12	119	164	17	247	4	268
% App. Total	36.2	0	63.8		0.2	97	2.8		20.1	7.3	72.6		6.3	92.2	1.5	
PHF	.850	.000	.625	.691	.250	.858	.583	.878	.589	.750	.902	.872	.607	.895	.500	.893
Cars	17	0	30	47	1	469	14	484	29	11	109	149	17	238	4	259
% Cars	100	0	100	100	100	95.5	100	95.7	87.9	91.7	91.6	90.9	100	96.4	100	96.6
Trucks	0	0	0	0	0	22	0	22	4	1	10	15	0	9	0	9
% Trucks	0	0	0	0	0	4.5	0	4.3	12.1	8.3	8.4	9.1	0	3.6	0	3.4

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 4



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:00 PM

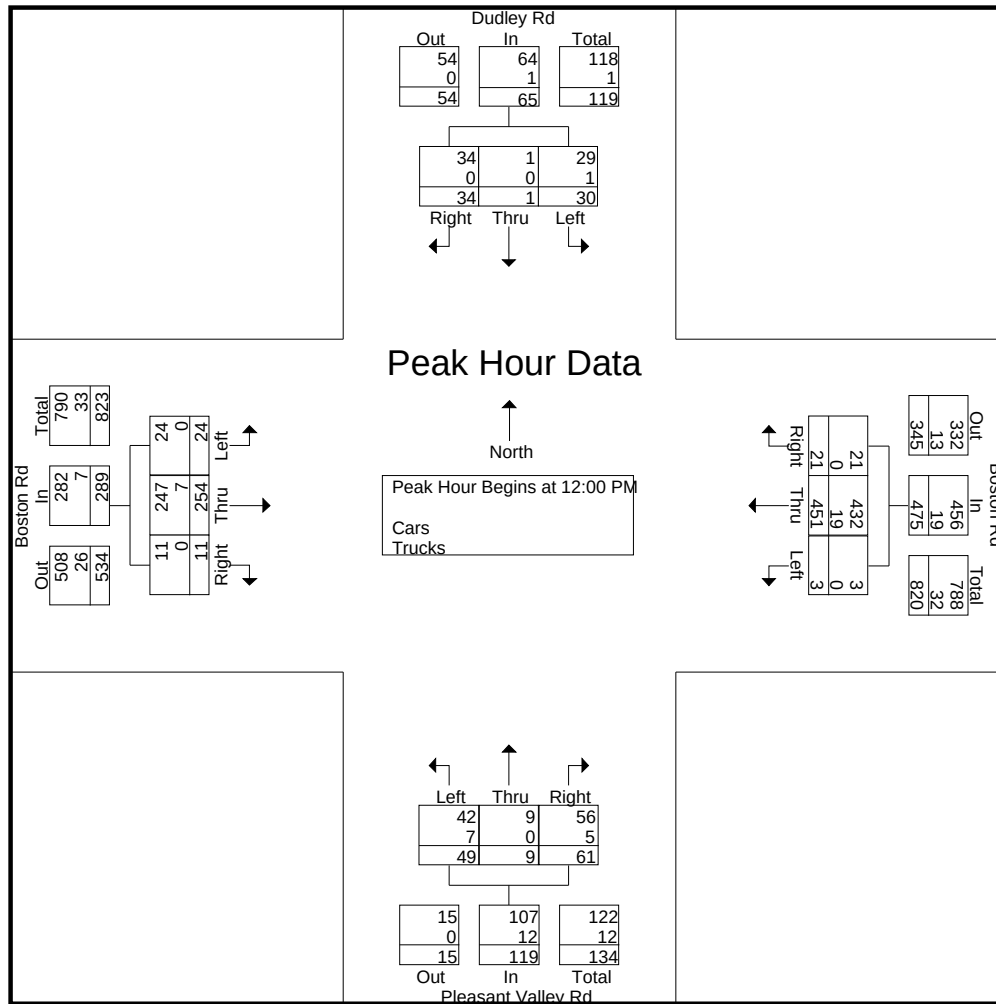
12:00 PM	12	0	8	20	1	106	8	115	11	2	14	27	8	68	5	81	243
12:15 PM	6	0	10	16	0	113	4	117	16	1	13	30	4	63	2	69	232
12:30 PM	5	0	8	13	1	116	6	123	9	2	19	30	6	63	1	70	236
12:45 PM	7	1	8	16	1	116	3	120	13	4	15	32	6	60	3	69	237
Total Volume	30	1	34	65	3	451	21	475	49	9	61	119	24	254	11	289	948
% App. Total	46.2	1.5	52.3		0.6	94.9	4.4		41.2	7.6	51.3		8.3	87.9	3.8		
PHF	.625	.250	.850	.813	.750	.972	.656	.965	.766	.563	.803	.930	.750	.934	.550	.892	.975
Cars	29	1	34	64	3	432	21	456	42	9	56	107	24	247	11	282	909
% Cars	96.7	100	100	98.5	100	95.8	100	96.0	85.7	100	91.8	89.9	100	97.2	100	97.6	95.9
Trucks	1	0	0	1	0	19	0	19	7	0	5	12	0	7	0	7	39
% Trucks	3.3	0	0	1.5	0	4.2	0	4.0	14.3	0	8.2	10.1	0	2.8	0	2.4	4.1

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 5



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

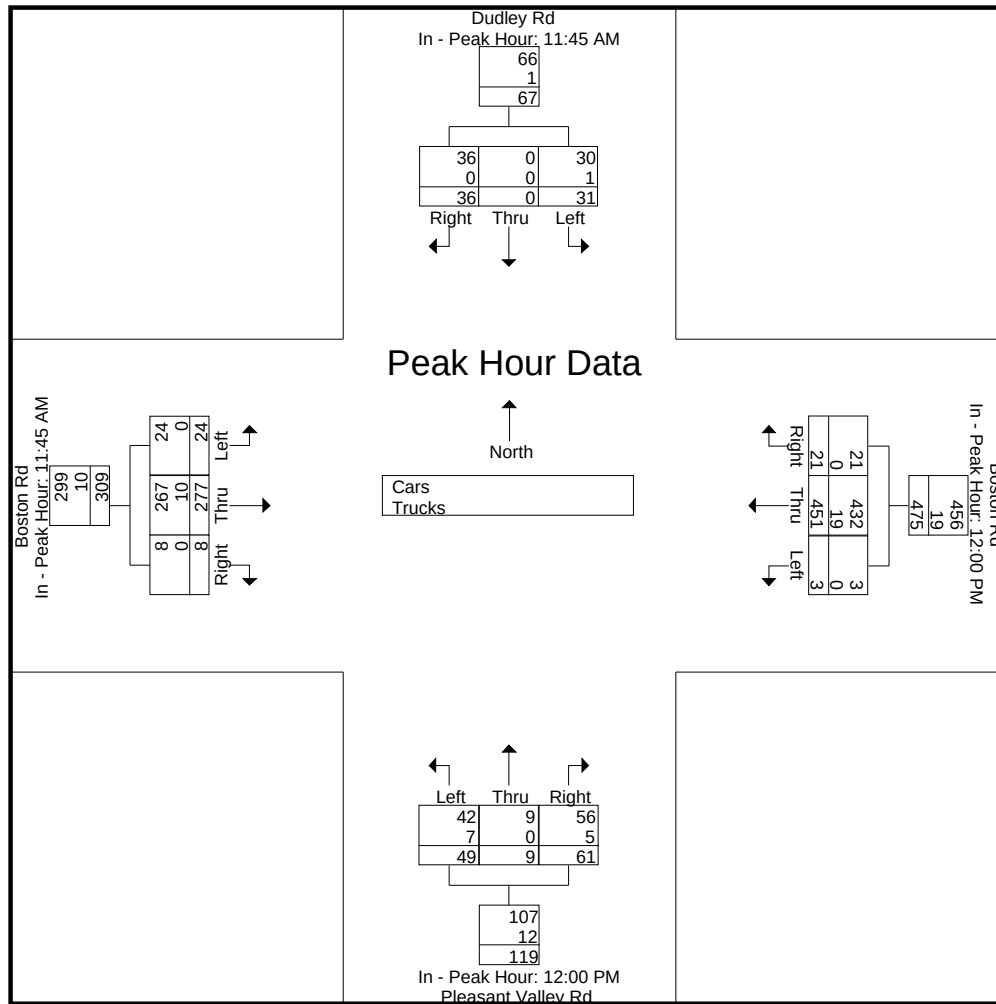
	11:45 AM				12:00 PM				12:00 PM				11:45 AM			
+0 mins.	8	0	10	18	1	106	8	115	11	2	14	27	6	83	0	89
+15 mins.	12	0	8	20	0	113	4	117	16	1	13	30	8	68	5	81
+30 mins.	6	0	10	16	1	116	6	123	9	2	19	30	4	63	2	69
+45 mins.	5	0	8	13	1	116	3	120	13	4	15	32	6	63	1	70
Total Volume	31	0	36	67	3	451	21	475	49	9	61	119	24	277	8	309
% App. Total	46.3	0	53.7		0.6	94.9	4.4		41.2	7.6	51.3		7.8	89.6	2.6	
PHF	.646	.000	.900	.838	.750	.972	.656	.965	.766	.563	.803	.930	.750	.834	.400	.868
Cars	30	0	36	66	3	432	21	456	42	9	56	107	24	267	8	299
% Cars	96.8	0	100	98.5	100	95.8	100	96	85.7	100	91.8	89.9	100	96.4	100	96.8
Trucks	1	0	0	1	0	19	0	19	7	0	5	12	0	10	0	10
% Trucks	3.2	0	0	1.5	0	4.2	0	4	14.3	0	8.2	10.1	0	3.6	0	3.2

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 6



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:15 PM

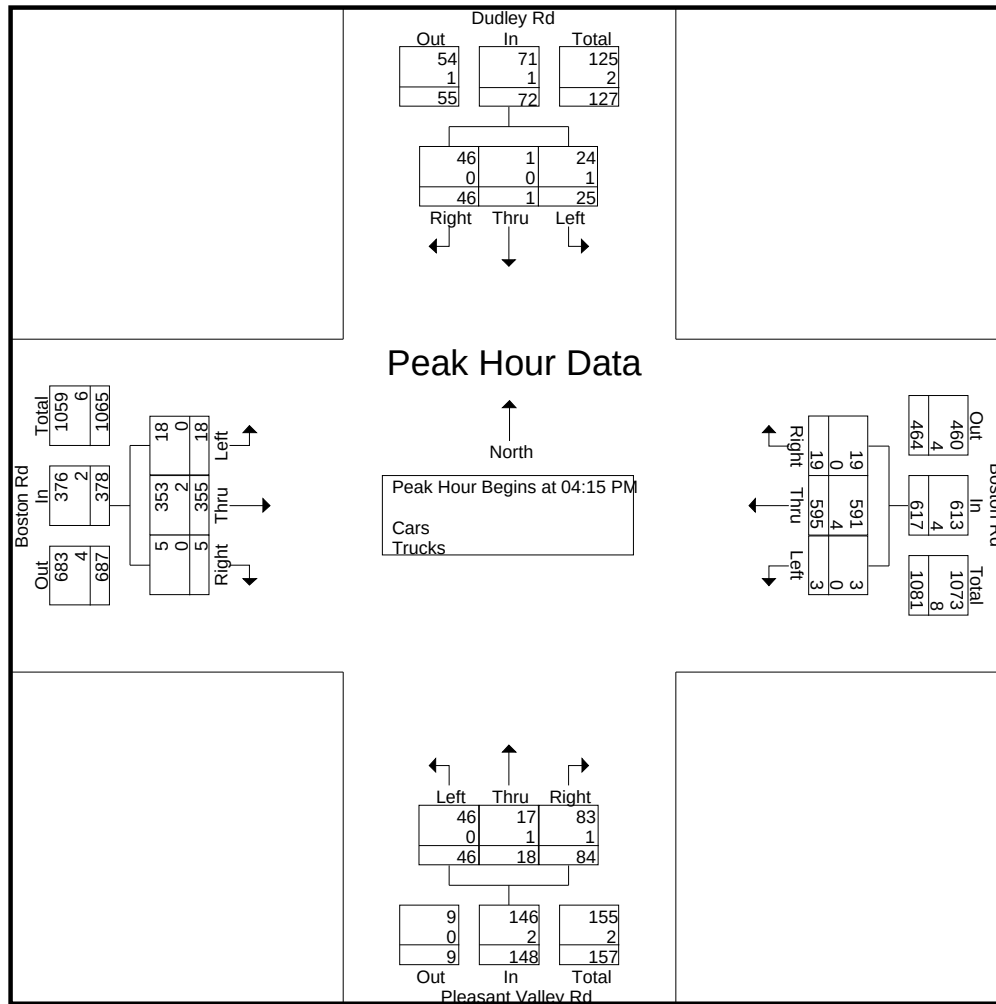
04:15 PM	7	0	11	18	1	145	2	148	7	8	25	40	3	78	0	81	287
04:30 PM	2	0	14	16	1	150	6	157	12	2	14	28	4	90	3	97	298
04:45 PM	8	0	8	16	1	164	4	169	11	6	20	37	5	84	1	90	312
05:00 PM	8	1	13	22	0	136	7	143	16	2	25	43	6	103	1	110	318
Total Volume	25	1	46	72	3	595	19	617	46	18	84	148	18	355	5	378	1215
% App. Total	34.7	1.4	63.9		0.5	96.4	3.1		31.1	12.2	56.8		4.8	93.9	1.3		
PHF	.781	.250	.821	.818	.750	.907	.679	.913	.719	.563	.840	.860	.750	.862	.417	.859	.955
Cars	24	1	46	71	3	591	19	613	46	17	83	146	18	353	5	376	1206
% Cars	96.0	100	100	98.6	100	99.3	100	99.4	100	94.4	98.8	98.6	100	99.4	100	99.5	99.3
Trucks	1	0	0	1	0	4	0	4	0	1	1	2	0	2	0	2	9
% Trucks	4.0	0	0	1.4	0	0.7	0	0.6	0	5.6	1.2	1.4	0	0.6	0	0.5	0.7

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 7

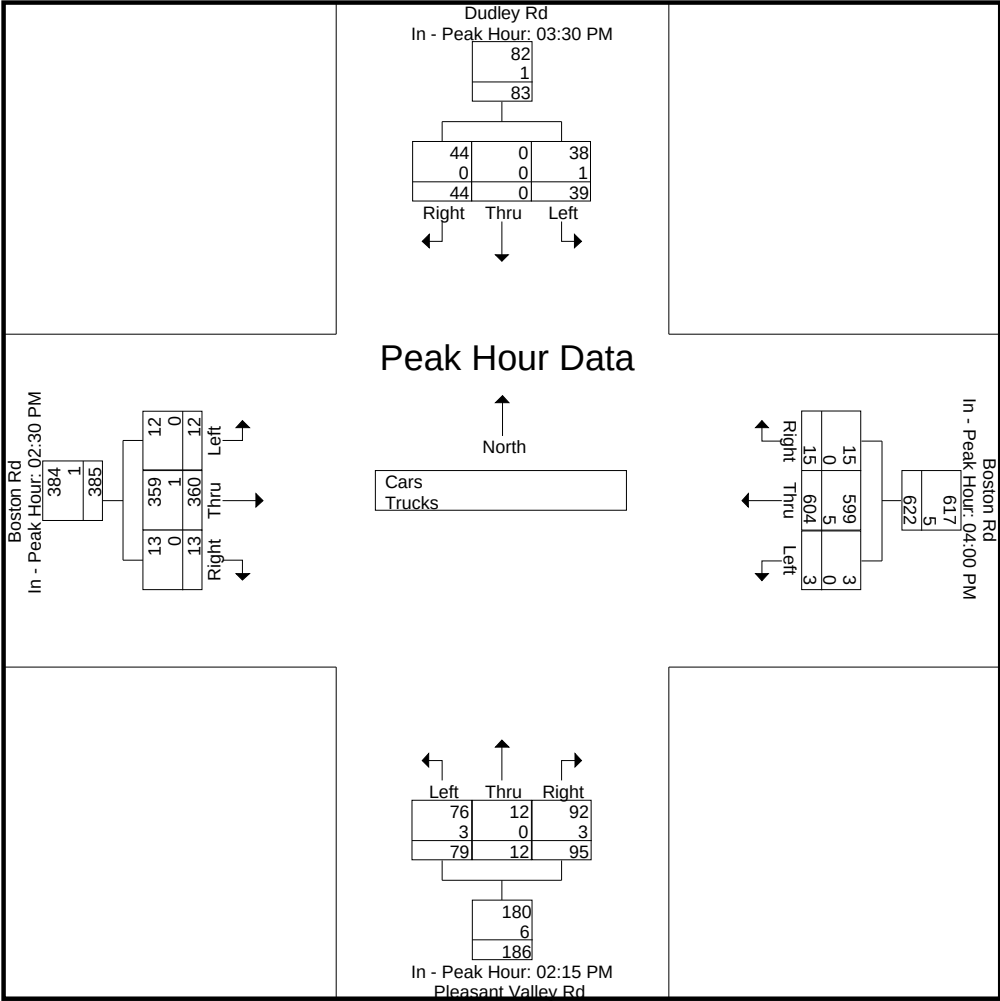


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	03:30 PM				04:00 PM				02:15 PM				02:30 PM			
+0 mins.	10	0	15	25	0	145	3	148	27	0	19	46	3	72	5	80
+15 mins.	13	0	8	21	1	145	2	148	20	4	30	54	2	100	3	105
+30 mins.	9	0	10	19	1	150	6	157	15	6	23	44	4	108	2	114
+45 mins.	7	0	11	18	1	164	4	169	17	2	23	42	3	80	3	86
Total Volume	39	0	44	83	3	604	15	622	79	12	95	186	12	360	13	385
% App. Total	47	0	53		0.5	97.1	2.4		42.5	6.5	51.1		3.1	93.5	3.4	
PHF	.750	.000	.733	.830	.750	.921	.625	.920	.731	.500	.792	.861	.750	.833	.650	.844
Cars	38	0	44	82	3	599	15	617	76	12	92	180	12	359	13	384
% Cars	97.4	0	100	98.8	100	99.2	100	99.2	96.2	100	96.8	96.8	100	99.7	100	99.7
Trucks	1	0	0	1	0	5	0	5	3	0	3	6	0	1	0	1
% Trucks	2.6	0	0	1.2	0	0.8	0	0.8	3.8	0	3.2	3.2	0	0.3	0	0.3

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 9

Groups Printed- Cars

	Dudley Rd From North			Boston Rd From East			Pleasant Valley Rd From South			Boston Rd From West			Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
06:00 AM	3	0	2	0	44	1	4	2	19	1	20	0	96
06:15 AM	2	0	1	1	65	3	4	1	22	1	29	0	129
06:30 AM	4	0	5	0	86	3	13	3	27	0	23	1	165
06:45 AM	2	1	6	1	86	1	4	4	23	2	33	1	164
Total	11	1	14	2	281	8	25	10	91	4	105	2	554
07:00 AM	3	0	6	0	136	1	6	2	29	2	42	1	228
07:15 AM	3	0	10	1	123	4	6	2	30	1	63	1	244
07:30 AM	1	0	5	0	103	3	9	2	25	4	47	1	200
07:45 AM	2	0	7	0	107	6	5	2	26	6	58	1	220
Total	9	0	28	1	469	14	26	8	110	13	210	4	892
08:00 AM	5	0	9	1	103	3	8	4	28	2	51	1	215
08:15 AM	3	0	3	0	105	3	11	2	21	7	63	2	220
08:30 AM	4	0	6	1	89	3	7	1	15	2	66	0	194
08:45 AM	5	0	12	0	97	5	12	0	14	2	60	1	208
Total	17	0	30	2	394	14	38	7	78	13	240	4	837
09:00 AM	2	0	5	0	79	2	9	0	15	3	50	2	167
09:15 AM	1	0	5	0	87	2	7	3	14	4	58	1	182
09:30 AM	2	0	6	1	82	1	13	0	18	2	46	2	173
09:45 AM	5	0	5	1	84	5	4	4	13	3	50	1	175
Total	10	0	21	2	332	10	33	7	60	12	204	6	697
10:00 AM	3	0	9	2	61	3	3	2	13	1	41	0	138
10:15 AM	4	0	7	0	100	4	5	1	10	5	41	1	178
10:30 AM	3	0	5	1	86	4	5	1	12	5	51	1	174
10:45 AM	4	0	6	0	77	1	5	1	17	5	69	5	190
Total	14	0	27	3	324	12	18	5	52	16	202	7	680
11:00 AM	4	0	7	0	63	3	5	5	6	4	49	2	148
11:15 AM	2	0	14	1	78	2	13	1	8	6	46	4	175
11:30 AM	5	1	3	1	93	6	7	1	16	0	67	0	200
11:45 AM	8	0	10	1	96	3	8	3	9	6	79	0	223
Total	19	1	34	3	330	14	33	10	39	16	241	6	746
12:00 PM	12	0	8	1	102	8	9	2	14	8	65	5	234
12:15 PM	6	0	10	0	108	4	13	1	10	4	61	2	219
12:30 PM	4	0	8	1	112	6	7	2	18	6	62	1	227
12:45 PM	7	1	8	1	110	3	13	4	14	6	59	3	229
Total	29	1	34	3	432	21	42	9	56	24	247	11	909
01:00 PM	5	0	11	0	96	4	9	0	13	6	58	0	202
01:15 PM	3	1	3	0	105	4	5	2	14	4	85	0	226
01:30 PM	2	0	9	2	97	6	7	1	14	5	55	5	203
01:45 PM	5	0	10	0	91	1	11	2	15	1	68	0	204
Total	15	1	33	2	389	15	32	5	56	16	266	5	835
02:00 PM	5	0	8	0	99	7	8	2	11	4	56	2	202
02:15 PM	10	1	4	2	82	5	26	0	19	7	60	3	219
02:30 PM	3	0	5	0	122	5	20	4	29	3	72	5	268
02:45 PM	4	1	7	0	119	6	15	6	21	2	99	3	283
Total	22	2	24	2	422	23	69	12	80	16	287	13	972
03:00 PM	5	0	8	0	133	9	15	2	23	4	108	2	309
03:15 PM	4	1	7	1	121	4	13	3	19	3	80	3	259
03:30 PM	10	0	15	2	147	4	14	3	18	4	73	1	291
03:45 PM	13	0	8	2	149	5	10	2	22	7	79	1	298
Total	32	1	38	5	550	22	52	10	82	18	340	7	1157
04:00 PM	9	0	10	0	143	3	14	3	24	2	73	4	285
04:15 PM	6	0	11	1	143	2	7	8	25	3	77	0	283
04:30 PM	2	0	14	1	149	6	12	2	13	4	89	3	295

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 10

Groups Printed- Cars

	Dudley Rd From North			Boston Rd From East			Pleasant Valley Rd From South			Boston Rd From West			Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:45 PM	8	0	8	1	164	4	11	6	20	5	84	1	312
Total	25	0	43	3	599	15	44	19	82	14	323	8	1175
05:00 PM	8	1	13	0	135	7	16	1	25	6	103	1	316
05:15 PM	11	0	13	1	122	3	21	0	15	4	77	0	267
05:30 PM	9	0	9	1	133	4	15	2	20	1	84	5	283
05:45 PM	5	0	3	2	140	3	12	2	14	2	90	1	274
Total	33	1	38	4	530	17	64	5	74	13	354	7	1140
06:00 PM	6	0	10	0	111	10	10	3	13	3	76	1	243
06:15 PM	8	0	2	2	113	2	15	1	13	3	71	1	231
06:30 PM	1	0	7	1	92	4	13	1	12	4	74	1	210
06:45 PM	4	0	3	0	81	3	2	1	17	3	71	0	185
Total	19	0	22	3	397	19	40	6	55	13	292	3	869
Grand Total	255	8	386	35	5449	204	516	113	915	188	3311	83	11463
Apprch %	39.3	1.2	59.5	0.6	95.8	3.6	33.4	7.3	59.3	5.2	92.4	2.3	
Total %	2.2	0.1	3.4	0.3	47.5	1.8	4.5	1	8	1.6	28.9	0.7	

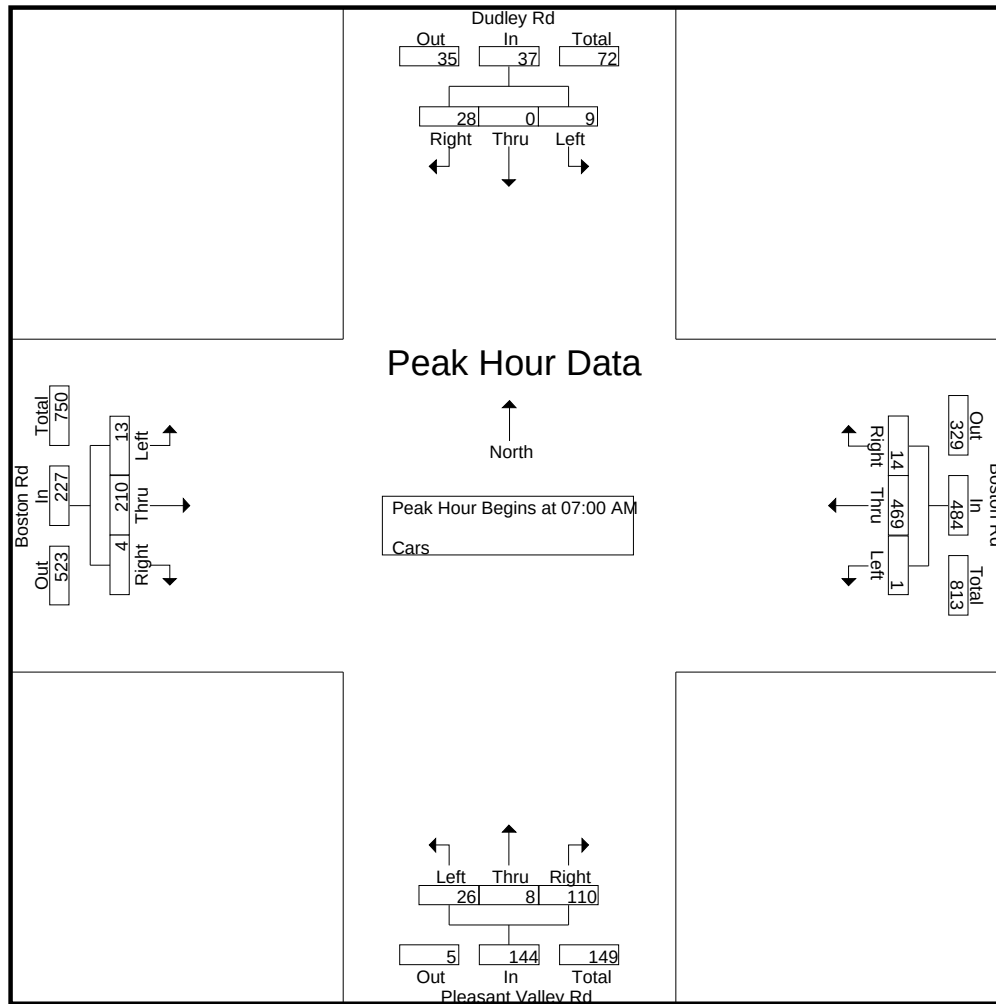
	Dudley Rd From North				Boston Rd From East				Pleasant Valley Rd From South				Boston Rd From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	0	6	9	0	136	1	137	6	2	29	37	2	42	1	45	228
07:15 AM	3	0	10	13	1	123	4	128	6	2	30	38	1	63	1	65	244
07:30 AM	1	0	5	6	0	103	3	106	9	2	25	36	4	47	1	52	200
07:45 AM	2	0	7	9	0	107	6	113	5	2	26	33	6	58	1	65	220
Total Volume	9	0	28	37	1	469	14	484	26	8	110	144	13	210	4	227	892
% App. Total	24.3	0	75.7		0.2	96.9	2.9		18.1	5.6	76.4		5.7	92.5	1.8		
PHF	.750	.000	.700	.712	.250	.862	.583	.883	.722	1.00	.917	.947	.542	.833	1.00	.873	.914

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 11



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

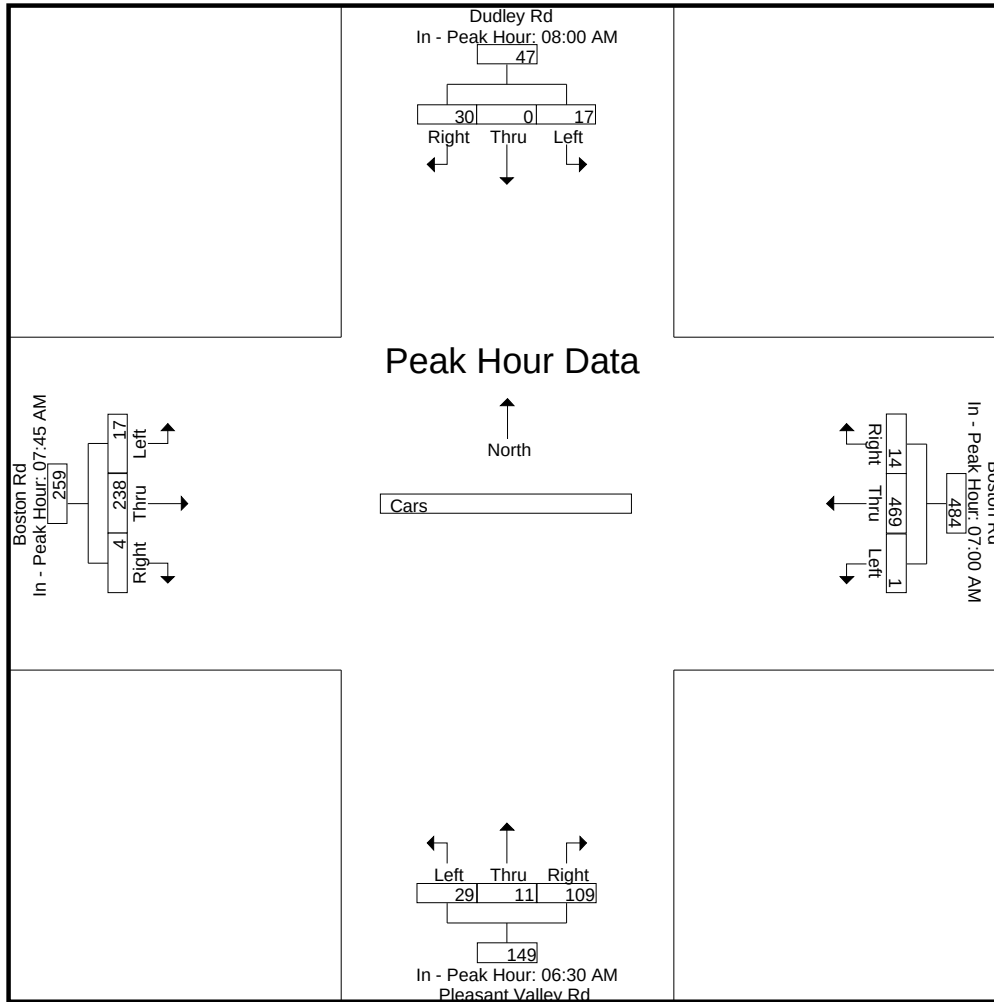
	08:00 AM				07:00 AM				06:30 AM				07:45 AM			
+0 mins.	5	0	9	14	0	136	1	137	13	3	27	43	6	58	1	65
+15 mins.	3	0	3	6	1	123	4	128	4	4	23	31	2	51	1	54
+30 mins.	4	0	6	10	0	103	3	106	6	2	29	37	7	63	2	72
+45 mins.	5	0	12	17	0	107	6	113	6	2	30	38	2	66	0	68
Total Volume	17	0	30	47	1	469	14	484	29	11	109	149	17	238	4	259
% App. Total	36.2	0	63.8		0.2	96.9	2.9		19.5	7.4	73.2		6.6	91.9	1.5	
PHF	.850	.000	.625	.691	.250	.862	.583	.883	.558	.688	.908	.866	.607	.902	.500	.899

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 12



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:00 PM

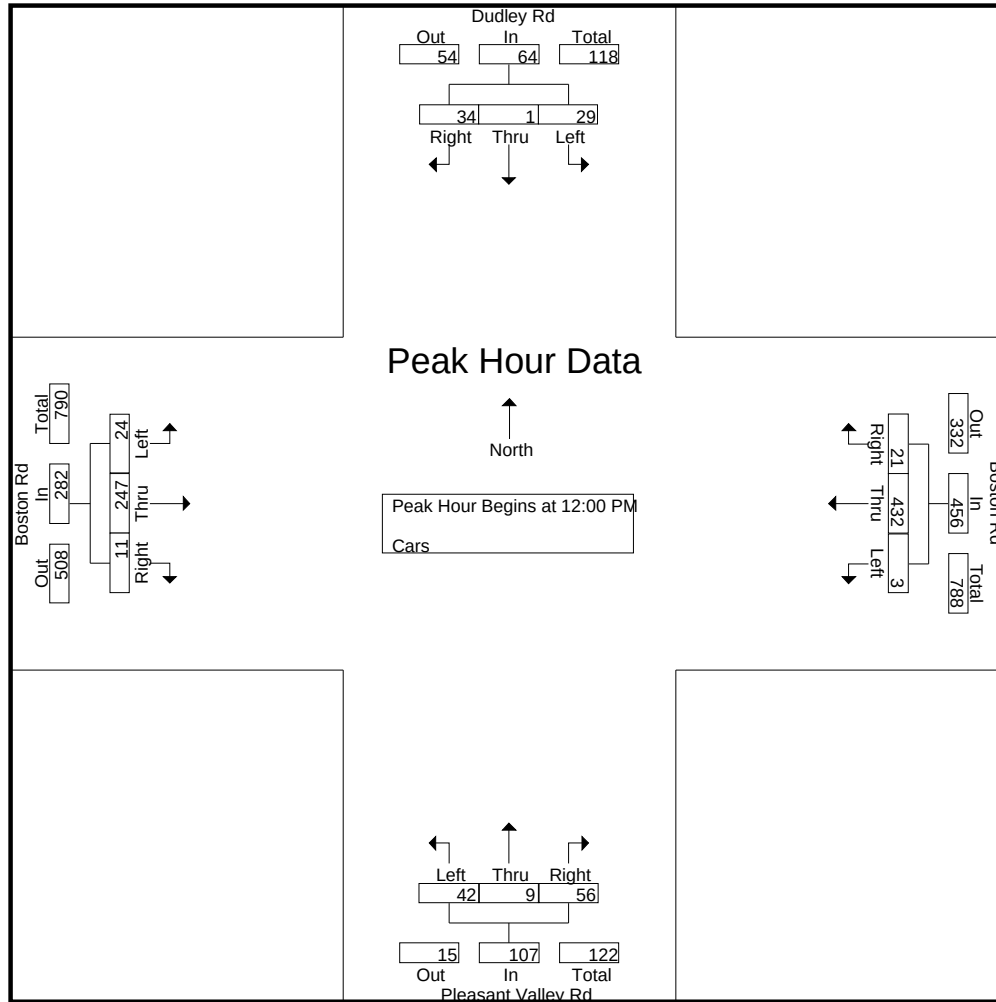
12:00 PM	12	0	8	20	1	102	8	111	9	2	14	25	8	65	5	78	234
12:15 PM	6	0	10	16	0	108	4	112	13	1	10	24	4	61	2	67	219
12:30 PM	4	0	8	12	1	112	6	119	7	2	18	27	6	62	1	69	227
12:45 PM	7	1	8	16	1	110	3	114	13	4	14	31	6	59	3	68	229
Total Volume	29	1	34	64	3	432	21	456	42	9	56	107	24	247	11	282	909
% App. Total	45.3	1.6	53.1		0.7	94.7	4.6		39.3	8.4	52.3		8.5	87.6	3.9		
PHF	.604	.250	.850	.800	.750	.964	.656	.958	.808	.563	.778	.863	.750	.950	.550	.904	.971

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 13



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

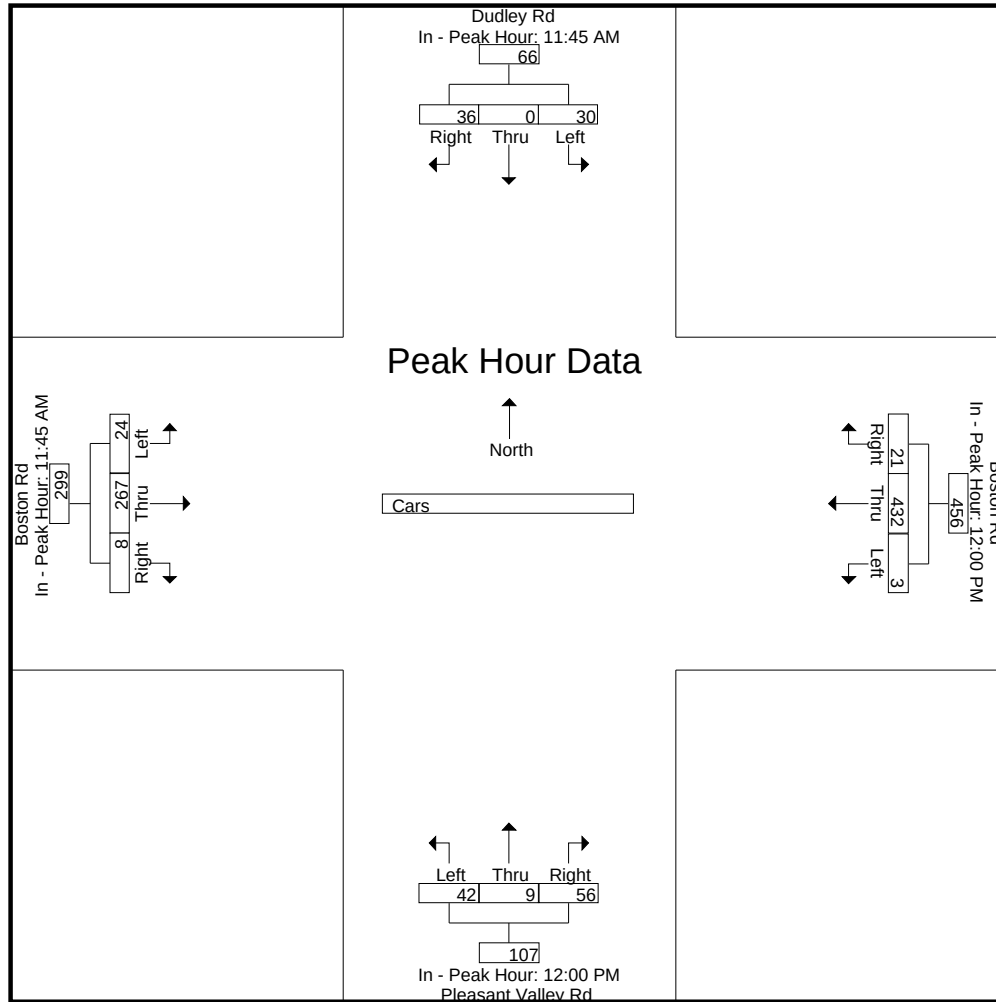
	11:45 AM				12:00 PM				12:00 PM				11:45 AM			
+0 mins.	8	0	10	18	1	102	8	111	9	2	14	25	6	79	0	85
+15 mins.	12	0	8	20	0	108	4	112	13	1	10	24	8	65	5	78
+30 mins.	6	0	10	16	1	112	6	119	7	2	18	27	4	61	2	67
+45 mins.	4	0	8	12	1	110	3	114	13	4	14	31	6	62	1	69
Total Volume	30	0	36	66	3	432	21	456	42	9	56	107	24	267	8	299
% App. Total	45.5	0	54.5		0.7	94.7	4.6		39.3	8.4	52.3		8	89.3	2.7	
PHF	.625	.000	.900	.825	.750	.964	.656	.958	.808	.563	.778	.863	.750	.845	.400	.879

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 14

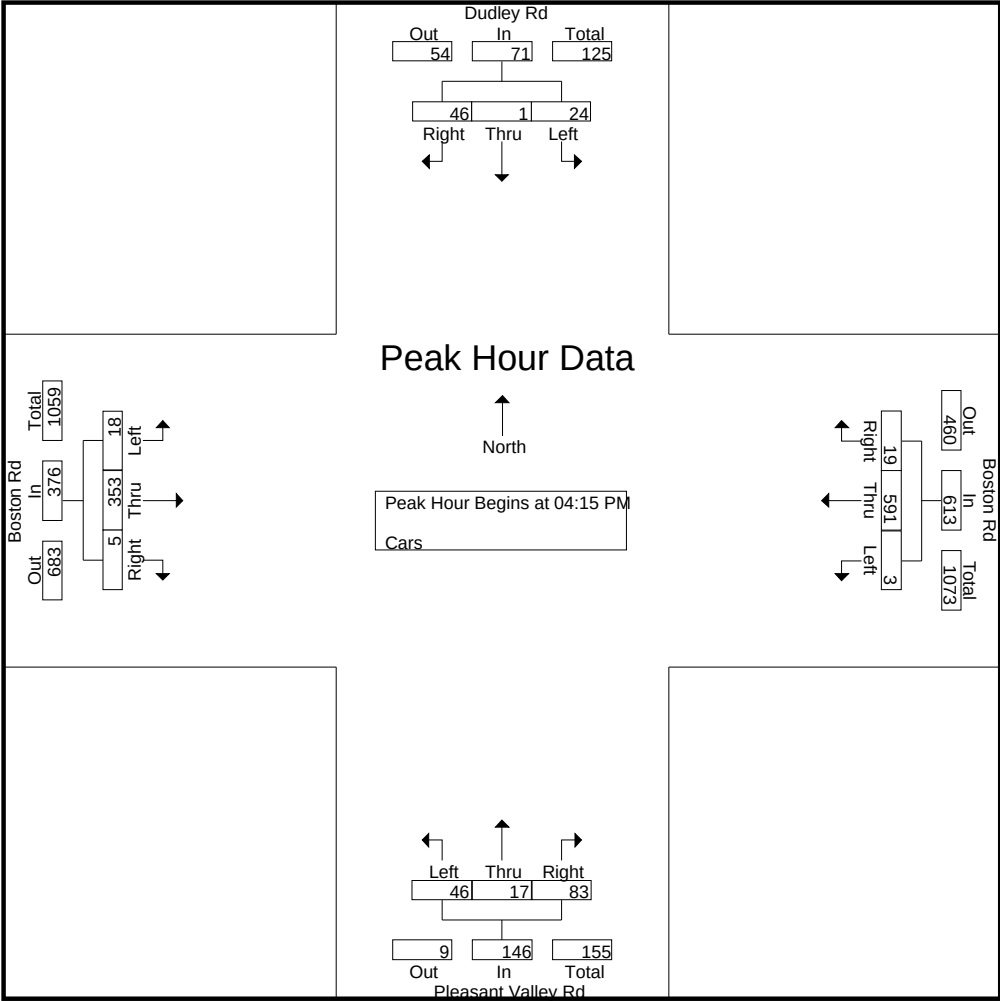


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

04:15 PM	6	0	11	17	1	143	2	146	7	8	25	40	3	77	0	80	283
04:30 PM	2	0	14	16	1	149	6	156	12	2	13	27	4	89	3	96	295
04:45 PM	8	0	8	16	1	164	4	169	11	6	20	37	5	84	1	90	312
05:00 PM	8	1	13	22	0	135	7	142	16	1	25	42	6	103	1	110	316
Total Volume	24	1	46	71	3	591	19	613	46	17	83	146	18	353	5	376	1206
% App. Total	33.8	1.4	64.8		0.5	96.4	3.1		31.5	11.6	56.8		4.8	93.9	1.3		
PHF	.750	.250	.821	.807	.750	.901	.679	.907	.719	.531	.830	.869	.750	.857	.417	.855	.954

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 15

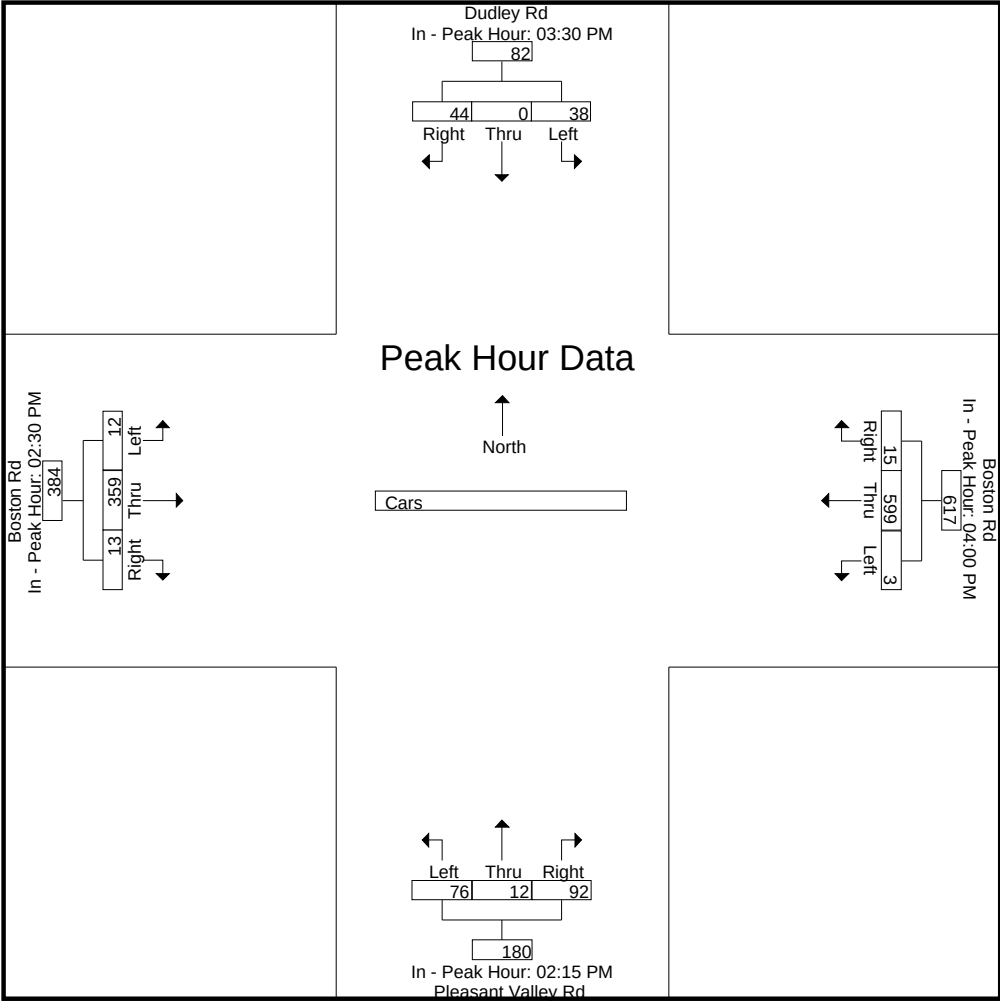


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				04:00 PM				02:15 PM				02:30 PM			
+0 mins.	10	0	15	25	0	143	3	146	26	0	19	45	3	72	5	80
+15 mins.	13	0	8	21	1	143	2	146	20	4	29	53	2	99	3	104
+30 mins.	9	0	10	19	1	149	6	156	15	6	21	42	4	108	2	114
+45 mins.	6	0	11	17	1	164	4	169	15	2	23	40	3	80	3	86
Total Volume	38	0	44	82	3	599	15	617	76	12	92	180	12	359	13	384
% App. Total	46.3	0	53.7		0.5	97.1	2.4		42.2	6.7	51.1		3.1	93.5	3.4	
PHF	.731	.000	.733	.820	.750	.913	.625	.913	.731	.500	.793	.849	.750	.831	.650	.842

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 16



Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 17

Groups Printed- Trucks

	Dudley Rd From North			Boston Rd From East			Pleasant Valley Rd From South			Boston Rd From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	0	0	0	0	3	0	0	0	2	0	2	0	7
06:15 AM	0	0	0	0	4	0	0	0	1	0	1	0	6
06:30 AM	0	0	0	0	3	0	1	0	3	0	1	0	8
06:45 AM	0	0	1	0	2	0	1	0	2	0	4	0	10
Total	0	0	1	0	12	0	2	0	8	0	8	0	31
07:00 AM	1	0	0	0	7	0	1	0	2	0	1	0	12
07:15 AM	0	0	0	0	3	0	1	1	3	0	0	0	8
07:30 AM	0	0	1	0	7	0	0	0	0	0	4	0	12
07:45 AM	1	0	1	0	5	0	1	0	1	0	1	0	10
Total	2	0	2	0	22	0	3	1	6	0	6	0	42
08:00 AM	0	0	0	0	2	0	0	0	0	0	2	0	4
08:15 AM	0	0	0	0	0	1	0	0	0	0	3	0	4
08:30 AM	0	0	0	0	2	0	2	0	0	0	3	0	7
08:45 AM	0	0	0	0	3	0	0	0	0	0	1	0	4
Total	0	0	0	0	7	1	2	0	0	0	9	0	19
09:00 AM	0	0	0	0	4	0	1	0	3	0	1	0	9
09:15 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
09:30 AM	1	0	0	0	2	0	1	1	4	0	2	0	11
09:45 AM	0	0	0	0	3	0	1	0	0	0	0	0	4
Total	1	0	0	0	13	0	3	1	7	0	3	0	28
10:00 AM	0	0	0	0	7	0	1	0	1	0	2	0	11
10:15 AM	0	0	0	0	2	0	0	0	0	0	1	0	3
10:30 AM	0	0	0	0	5	0	1	0	1	0	4	0	11
10:45 AM	0	0	0	0	2	0	1	0	1	0	1	0	5
Total	0	0	0	0	16	0	3	0	3	0	8	0	30
11:00 AM	0	0	1	0	6	0	0	0	2	0	1	0	10
11:15 AM	0	0	1	0	1	0	0	0	1	0	1	0	4
11:30 AM	0	0	0	0	2	0	1	0	3	0	0	1	7
11:45 AM	0	0	0	0	1	0	1	0	1	0	4	0	7
Total	0	0	2	0	10	0	2	0	7	0	6	1	28
12:00 PM	0	0	0	0	4	0	2	0	0	0	3	0	9
12:15 PM	0	0	0	0	5	0	3	0	3	0	2	0	13
12:30 PM	1	0	0	0	4	0	2	0	1	0	1	0	9
12:45 PM	0	0	0	0	6	0	0	0	1	0	1	0	8
Total	1	0	0	0	19	0	7	0	5	0	7	0	39
01:00 PM	0	0	0	0	0	0	0	0	1	0	2	0	3
01:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
01:30 PM	0	0	1	0	1	0	0	0	0	0	1	0	3
01:45 PM	0	0	1	0	4	1	1	0	0	0	0	0	7
Total	0	0	2	0	6	1	1	0	1	0	4	0	15
02:00 PM	0	0	0	0	2	0	0	0	1	0	0	1	4
02:15 PM	0	0	0	0	1	0	1	0	0	0	2	0	4
02:30 PM	0	0	0	0	5	1	0	0	1	0	0	0	7
02:45 PM	0	0	0	0	0	0	0	0	2	0	1	0	3
Total	0	0	0	0	8	1	1	0	4	0	3	1	18
03:00 PM	0	0	0	0	3	0	2	0	0	0	0	0	5
03:15 PM	0	0	0	0	2	0	0	0	1	0	0	0	3
03:30 PM	0	0	0	0	1	0	0	0	1	0	2	0	4
03:45 PM	0	0	0	0	4	0	0	0	2	0	1	0	7
Total	0	0	0	0	10	0	2	0	4	0	3	0	19
04:00 PM	0	0	0	0	2	0	0	0	1	0	2	0	5
04:15 PM	1	0	0	0	2	0	0	0	0	0	1	0	4
04:30 PM	0	0	0	0	1	0	0	0	1	0	1	0	3

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

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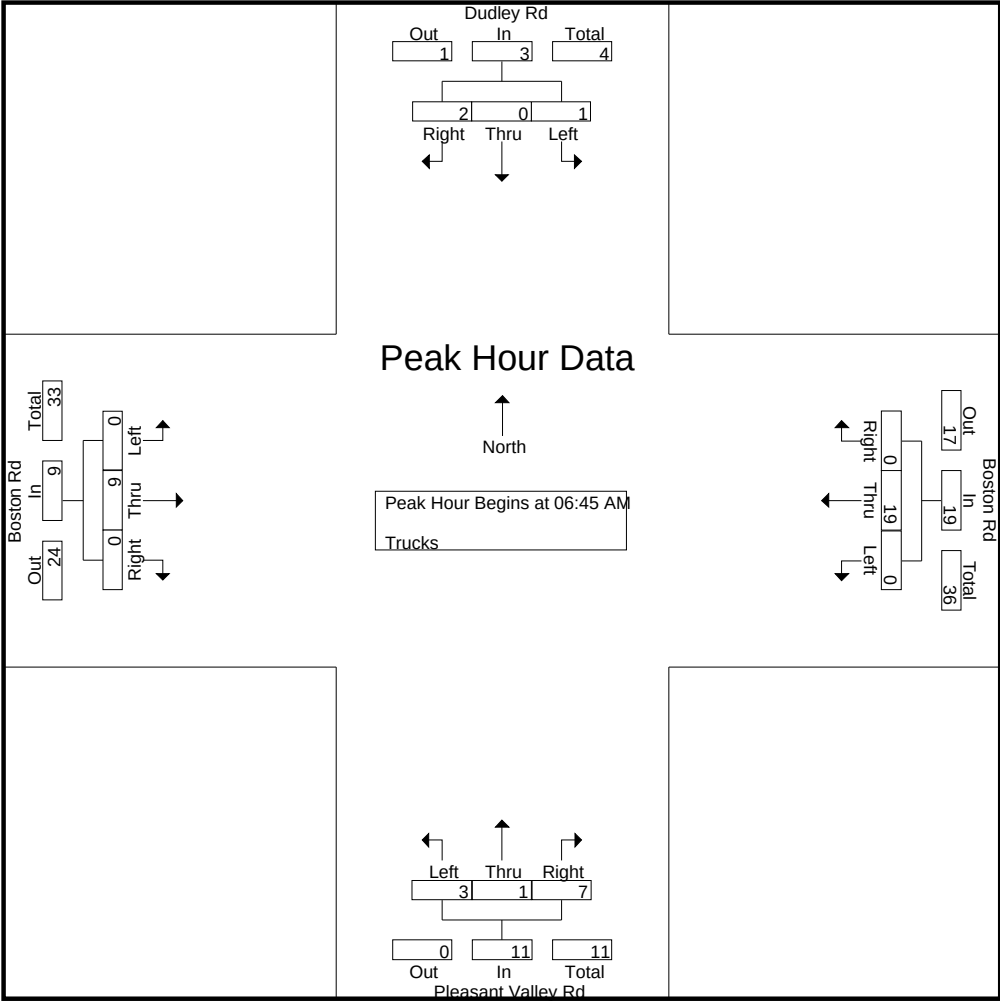
Groups Printed- Trucks

	Dudley Rd From North			Boston Rd From East			Pleasant Valley Rd From South			Boston Rd From West			Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	5	0	0	0	2	0	4	0	12
05:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	2	0	0	1	0	0	2	0	5
06:00 PM	0	0	0	0	1	0	0	0	1	0	0	0	2
06:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
06:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	5	0	0	0	1	0	0	0	6
Grand Total	5	0	7	0	135	3	26	3	48	0	63	2	292
Apprch %	41.7	0	58.3	0	97.8	2.2	33.8	3.9	62.3	0	96.9	3.1	
Total %	1.7	0	2.4	0	46.2	1	8.9	1	16.4	0	21.6	0.7	

	Dudley Rd From North				Boston Rd From East				Pleasant Valley Rd From South				Boston Rd From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:45 AM																	
06:45 AM	0	0	1	1	0	2	0	2	1	0	2	3	0	4	0	4	10
07:00 AM	1	0	0	1	0	7	0	7	1	0	2	3	0	1	0	1	12
07:15 AM	0	0	0	0	0	3	0	3	1	1	3	5	0	0	0	0	8
07:30 AM	0	0	1	1	0	7	0	7	0	0	0	0	0	4	0	4	12
Total Volume	1	0	2	3	0	19	0	19	3	1	7	11	0	9	0	9	42
% App. Total	33.3	0	66.7		0	100	0		27.3	9.1	63.6		0	100	0		
PHF	.250	.000	.500	.750	.000	.679	.000	.679	.750	.250	.583	.550	.000	.563	.000	.563	.875

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 19



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

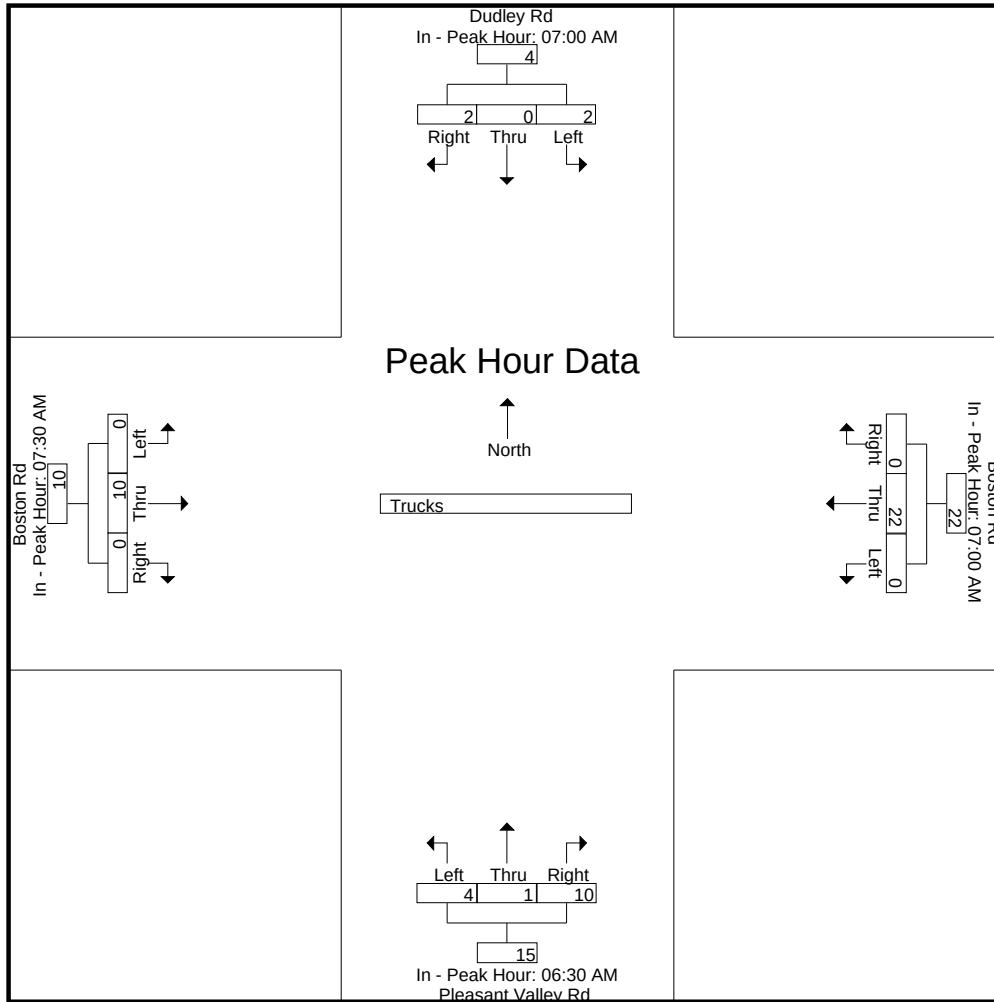
	07:00 AM				07:00 AM				06:30 AM				07:30 AM			
+0 mins.	1	0	0	1	0	7	0	7	1	0	3	4	0	4	0	4
+15 mins.	0	0	0	0	0	3	0	3	1	0	2	3	0	1	0	1
+30 mins.	0	0	1	1	0	7	0	7	1	0	2	3	0	2	0	2
+45 mins.	1	0	1	2	0	5	0	5	1	1	3	5	0	3	0	3
Total Volume	2	0	2	4	0	22	0	22	4	1	10	15	0	10	0	10
% App. Total	50	0	50		0	100	0		26.7	6.7	66.7		0	100	0	
PHF	.500	.000	.500	.500	.000	.786	.000	.786	1.000	.250	.833	.750	.000	.625	.000	.625

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 20



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:00 PM

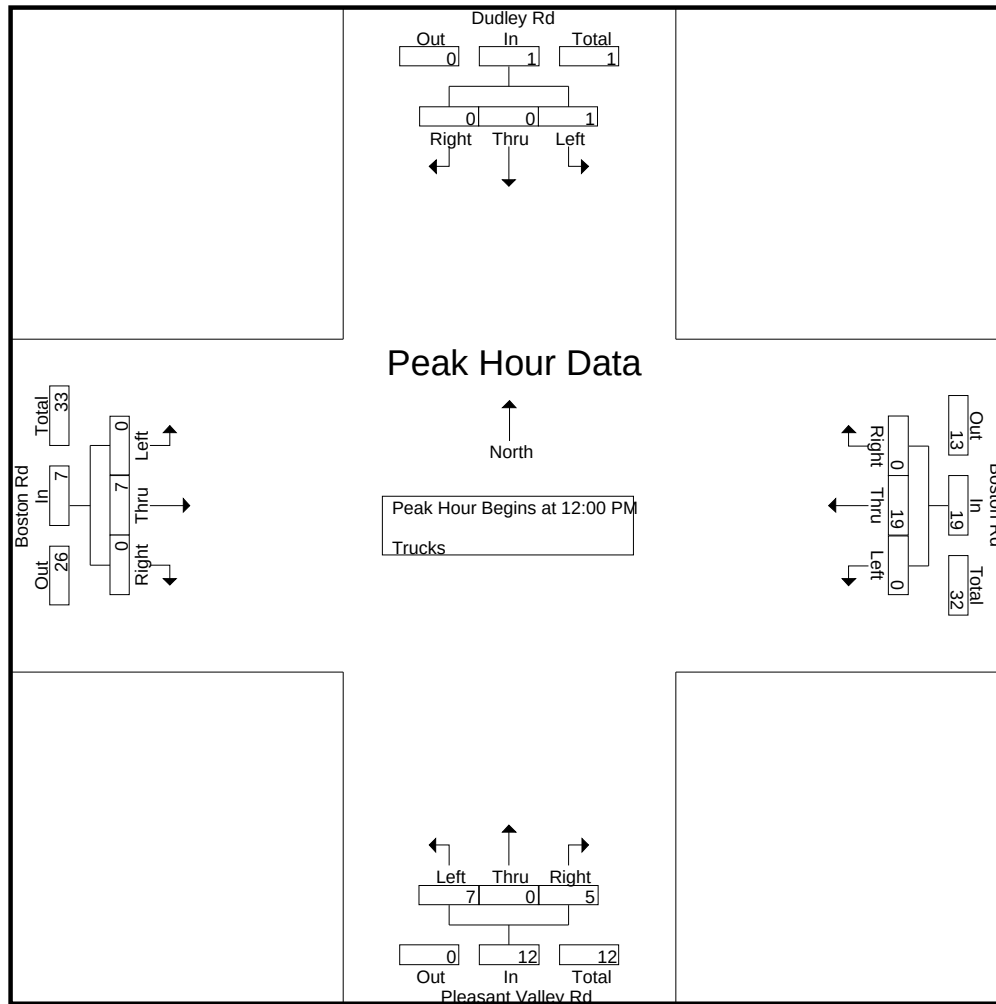
12:00 PM	0	0	0	0	0	4	0	4	2	0	0	2	0	3	0	3	9
12:15 PM	0	0	0	0	0	5	0	5	3	0	3	6	0	2	0	2	13
12:30 PM	1	0	0	1	0	4	0	4	2	0	1	3	0	1	0	1	9
12:45 PM	0	0	0	0	0	6	0	6	0	0	1	1	0	1	0	1	8
Total Volume	1	0	0	1	0	19	0	19	7	0	5	12	0	7	0	7	39
% App. Total	100	0	0		0	100	0		58.3	0	41.7		0	100	0		
PHF	.250	.000	.000	.250	.000	.792	.000	.792	.583	.000	.417	.500	.000	.583	.000	.583	.750

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 21



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

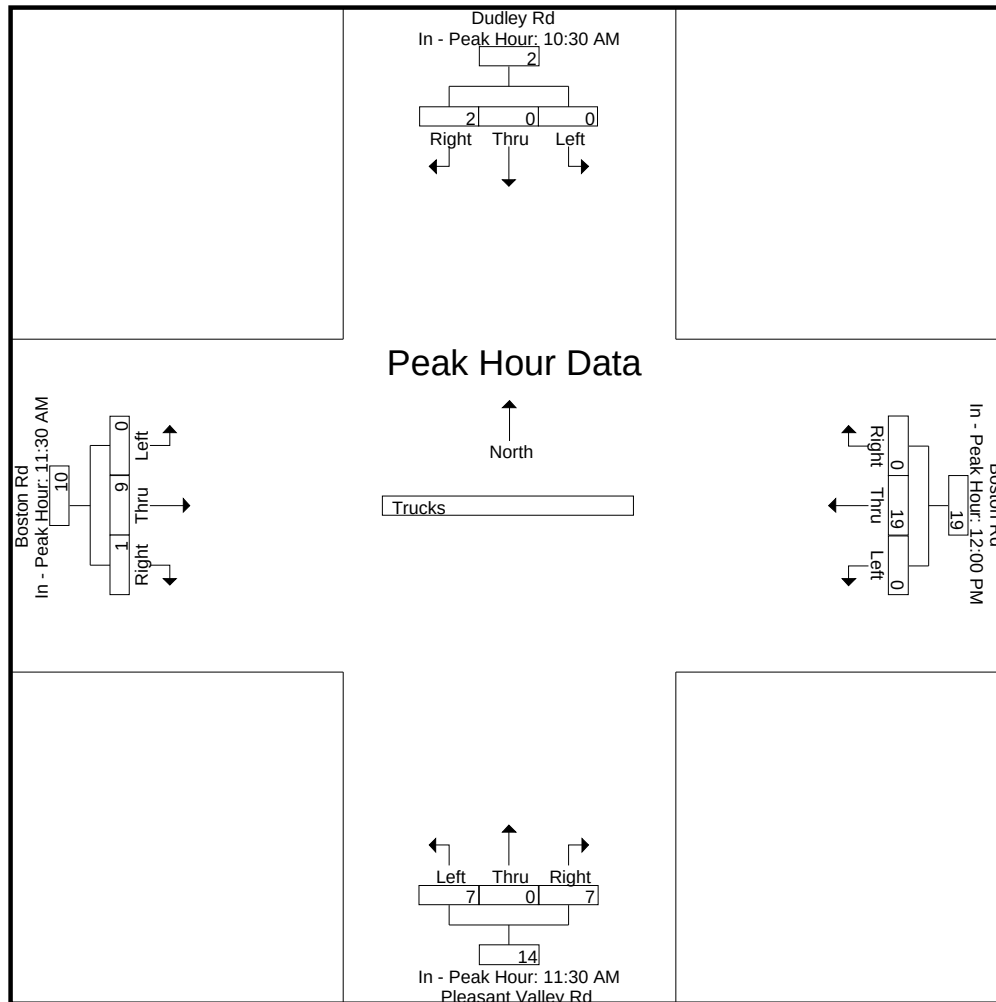
	10:30 AM				12:00 PM				11:30 AM				11:30 AM			
+0 mins.	0	0	0	0	0	4	0	4	1	0	3	4	0	0	1	1
+15 mins.	0	0	0	0	0	5	0	5	1	0	1	2	0	4	0	4
+30 mins.	0	0	1	1	0	4	0	4	2	0	0	2	0	3	0	3
+45 mins.	0	0	1	1	0	6	0	6	3	0	3	6	0	2	0	2
Total Volume	0	0	2	2	0	19	0	19	7	0	7	14	0	9	1	10
% App. Total	0	0	100		0	100	0		50	0	50		0	90	10	
PHF	.000	.000	.500	.500	.000	.792	.000	.792	.583	.000	.583	.583	.000	.563	.250	.625

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 22



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 03:30 PM

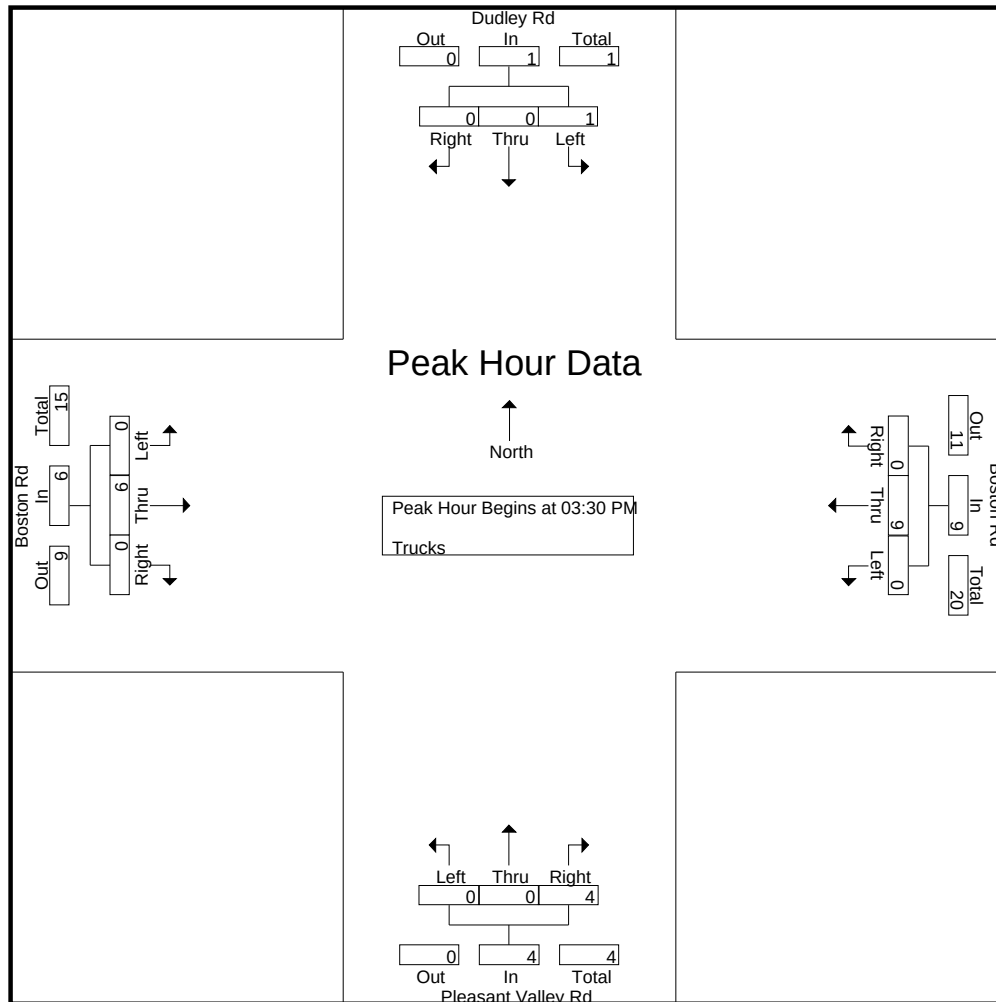
03:30 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	2	0	2	4
03:45 PM	0	0	0	0	0	4	0	4	0	0	2	2	0	1	0	1	7
04:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	2	0	2	5
04:15 PM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
Total Volume	1	0	0	1	0	9	0	9	0	0	4	4	0	6	0	6	20
% App. Total	100	0	0		0	100	0		0	0	100		0	100	0		
PHF	.250	.000	.000	.250	.000	.563	.000	.563	.000	.000	.500	.500	.000	.750	.000	.750	.714

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 23

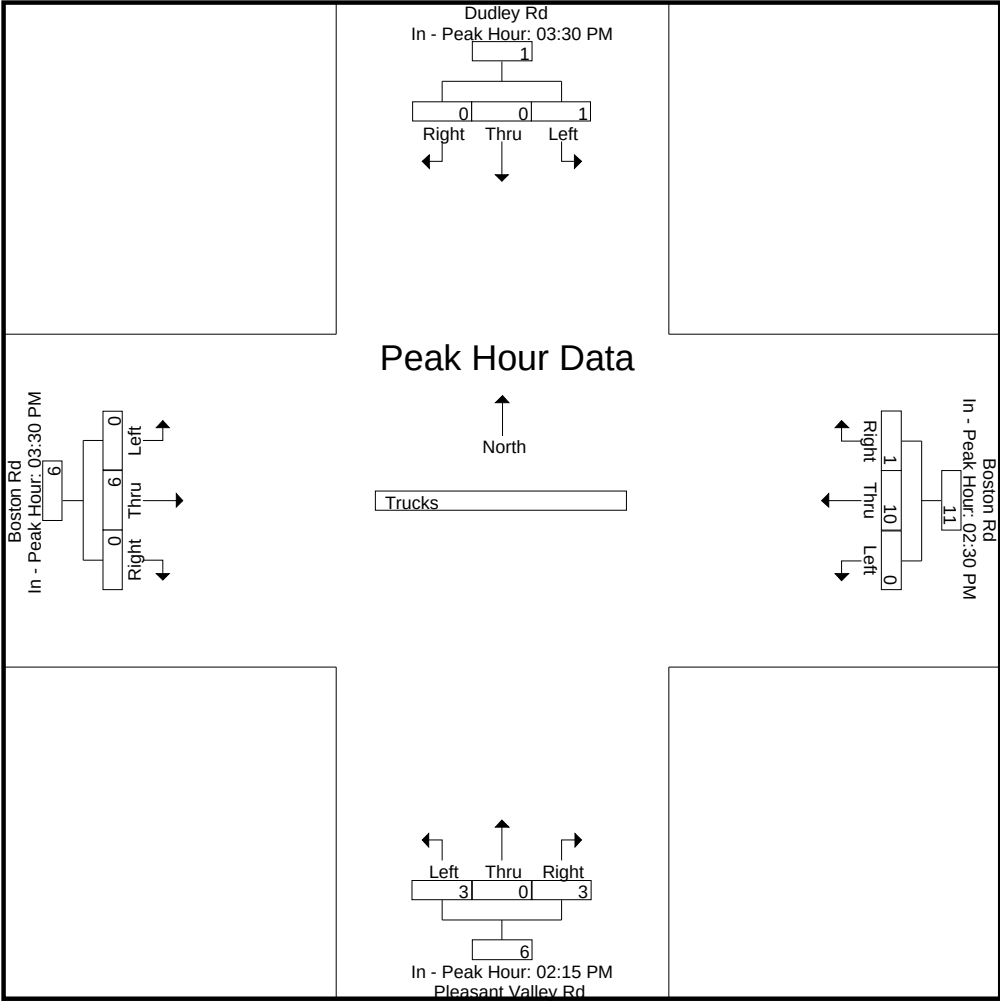


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	03:30 PM				02:30 PM				02:15 PM				03:30 PM			
+0 mins.	0	0	0	0	0	5	1	6	1	0	0	1	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
+30 mins.	0	0	0	0	0	3	0	3	0	0	2	2	0	2	0	2
+45 mins.	1	0	0	1	0	2	0	2	2	0	0	2	0	1	0	1
Total Volume	1	0	0	1	0	10	1	11	3	0	3	6	0	6	0	6
% App. Total	100	0	0		0	90.9	9.1		50	0	50		0	100	0	
PHF	.250	.000	.000	.250	.000	.500	.250	.458	.375	.000	.375	.750	.000	.750	.000	.750

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
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978-664-2565

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 25

Groups	Printed-	Bikes	Peds
1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1
6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	1	1	1
11	1	1	1
12	1	1	1
13	1	1	1
14	1	1	1
15	1	1	1
16	1	1	1
17	1	1	1
18	1	1	1
19	1	1	1
20	1	1	1
21	1	1	1
22	1	1	1
23	1	1	1
24	1	1	1
25	1	1	1
26	1	1	1
27	1	1	1
28	1	1	1
29	1	1	1
30	1	1	1
31	1	1	1
32	1	1	1
33	1	1	1
34	1	1	1
35	1	1	1
36	1	1	1
37	1	1	1
38	1	1	1
39	1	1	1
40	1	1	1
41	1	1	1
42	1	1	1
43	1	1	1
44	1	1	1
45	1	1	1
46	1	1	1
47	1	1	1
48	1	1	1
49	1	1	1
50	1	1	1
51	1	1	1
52	1	1	1
53	1	1	1
54	1	1	1
55	1	1	1
56	1	1	1
57	1	1	1
58	1	1	1
59	1	1	1
60	1	1	1
61	1	1	1
62	1	1	1
63	1	1	1
64	1	1	1
65	1	1	1
66	1	1	1
67	1	1	1
68	1	1	1
69	1	1	1
70	1	1	1
71	1	1	1
72	1	1	1
73	1	1	1
74	1	1	1
75	1	1	1
76	1	1	1
77	1	1	1
78	1	1	1
79	1	1	1
80	1	1	1
81	1	1	1
82	1	1	1
83	1	1	1
84	1	1	1
85	1	1	1
86	1	1	1
87	1	1	1
88	1	1	1
89	1	1	1
90	1	1	1
91	1	1	1
92	1	1	1
93	1	1	1
94	1	1	1
95	1	1	1
96	1	1	1
97	1	1	1
98	1	1	1
99	1	1	1
100	1	1	1

[illegible]

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd

E/W Street : Boston Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018003

Site Code : 21018003

Start Date : 10/7/2021

Page No : 26

Groups	Printed-	Bikes	Peds
1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1
6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	1	1	1
11	1	1	1
12	1	1	1
13	1	1	1
14	1	1	1
15	1	1	1
16	1	1	1
17	1	1	1
18	1	1	1
19	1	1	1
20	1	1	1
21	1	1	1
22	1	1	1
23	1	1	1
24	1	1	1
25	1	1	1
26	1	1	1
27	1	1	1
28	1	1	1
29	1	1	1
30	1	1	1
31	1	1	1
32	1	1	1
33	1	1	1
34	1	1	1
35	1	1	1
36	1	1	1
37	1	1	1
38	1	1	1
39	1	1	1
40	1	1	1
41	1	1	1
42	1	1	1
43	1	1	1
44	1	1	1
45	1	1	1
46	1	1	1
47	1	1	1
48	1	1	1
49	1	1	1
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51	1	1	1
52	1	1	1
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54	1	1	1
55	1	1	1
56	1	1	1
57	1	1	1
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61	1	1	1
62	1	1	1
63	1	1	1
64	1	1	1
65	1	1	1
66	1	1	1
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68	1	1	1
69	1	1	1
70	1	1	1
71	1	1	1
72	1	1	1
73	1	1	1
74	1	1	1
75	1	1	1
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77	1	1	1
78	1	1	1
79	1	1	1
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81	1	1	1
82	1	1	1
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85	1	1	1
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87	1	1	1
88	1	1	1
89	1	1	1
90	1	1	1
91	1	1	1
92	1	1	1
93	1	1	1
94	1	1	1
95	1	1	1
96	1	1	1
97	1	1	1
98	1	1	1
99	1	1	1
100	1	1	1

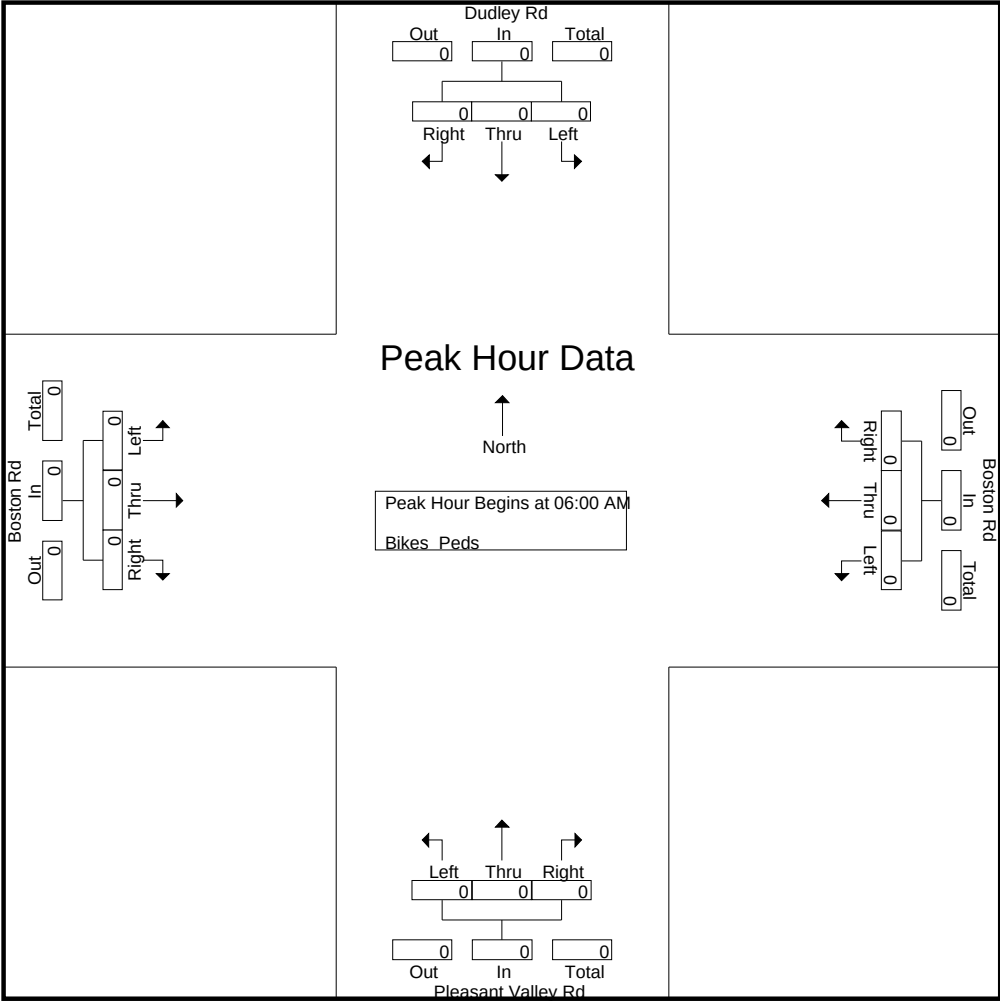
	Dudley Rd From North				Boston Rd From East				Pleasant Valley Rd From South				Boston Rd From West						
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	1	1	0	2	0	0	0	0	0	0	0	6	0	0	1	10	11
Apprch %	50	0	50		0	100	0		0	0	0		0	100	0				
Total %	10	0	10		0	20	0		0	0	0		0	60	0		9.1	90.9	

[illegible]

Accurate Counts
978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 27



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

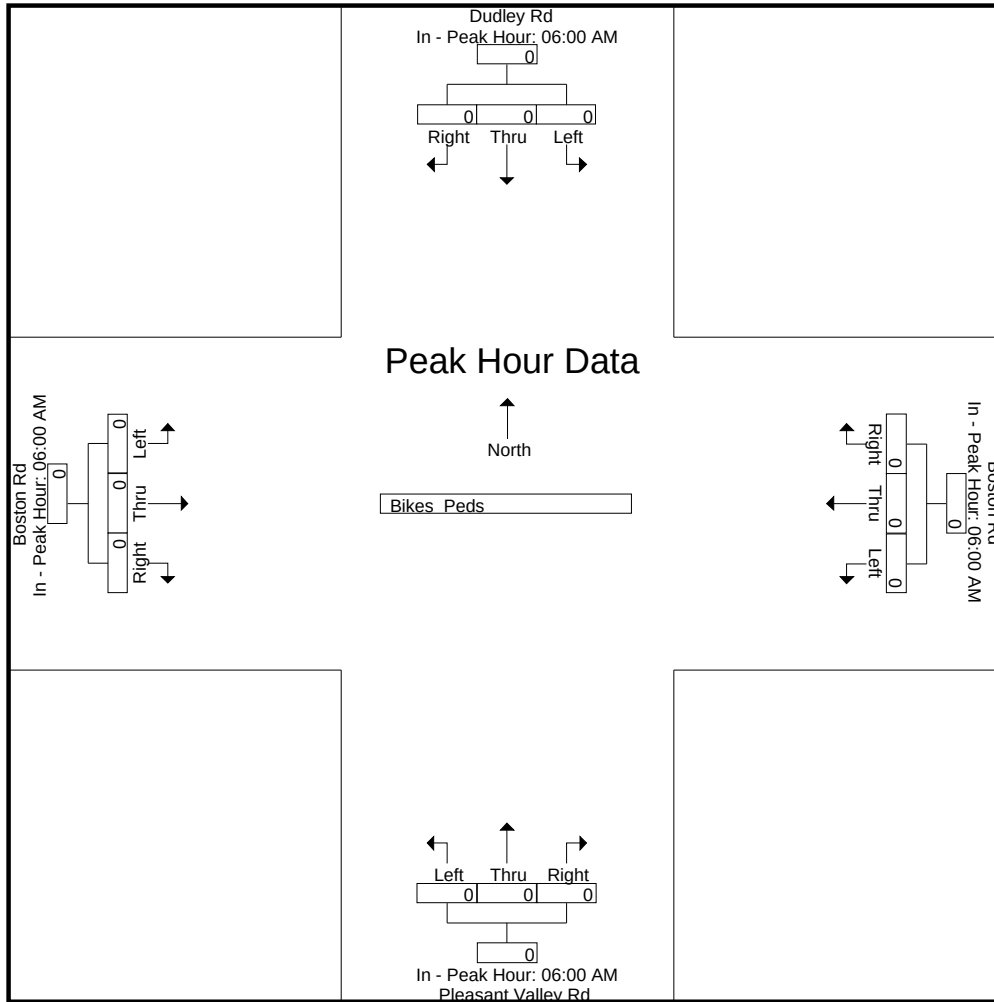
[illegible]

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 28



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 10:00 AM

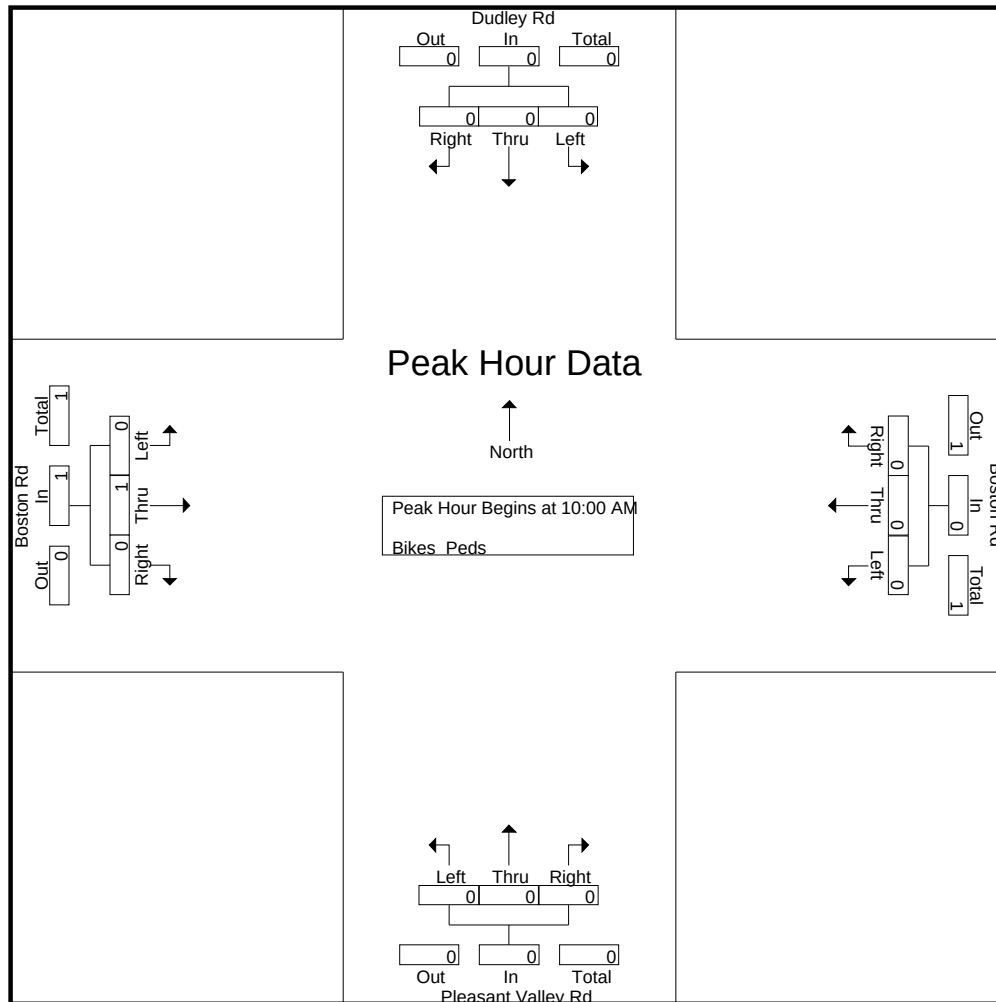
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 29



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

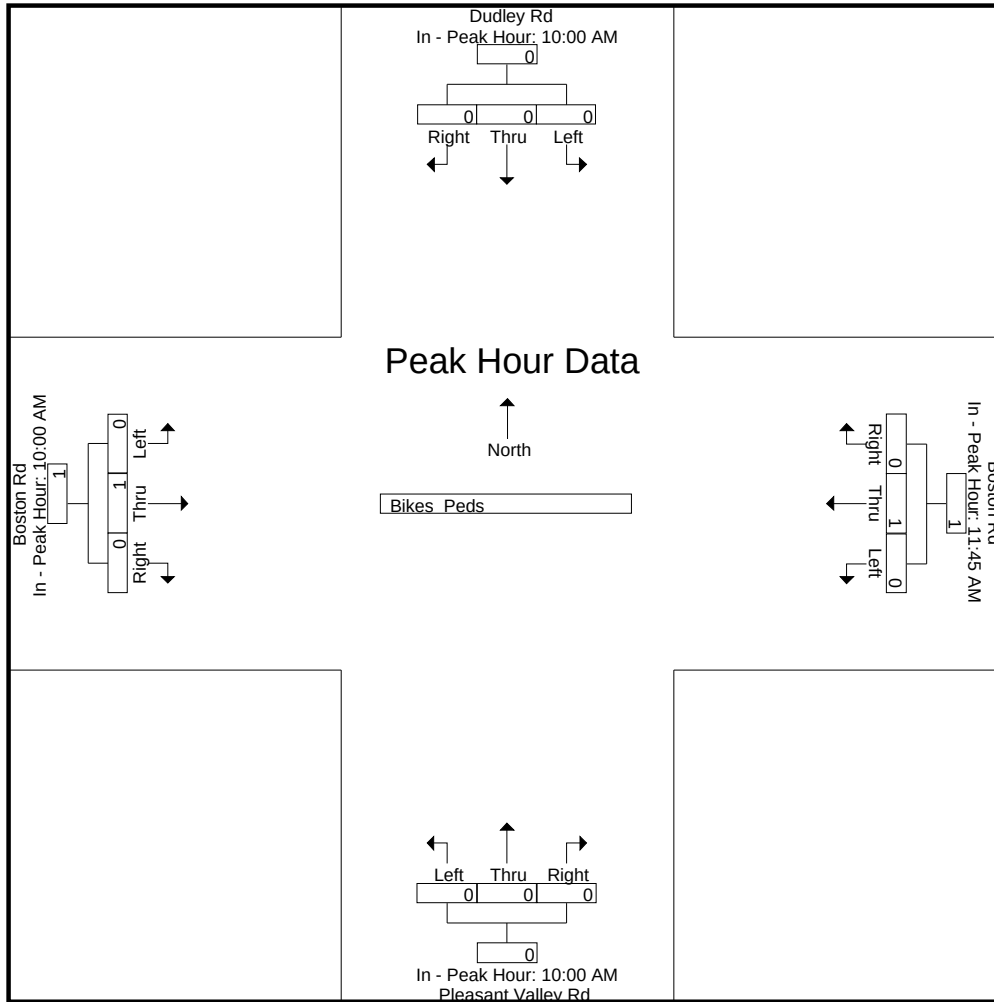
	10:00 AM				11:45 AM				10:00 AM				10:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	100	0		0	0	0	0	0	100	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 30



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 03:00 PM

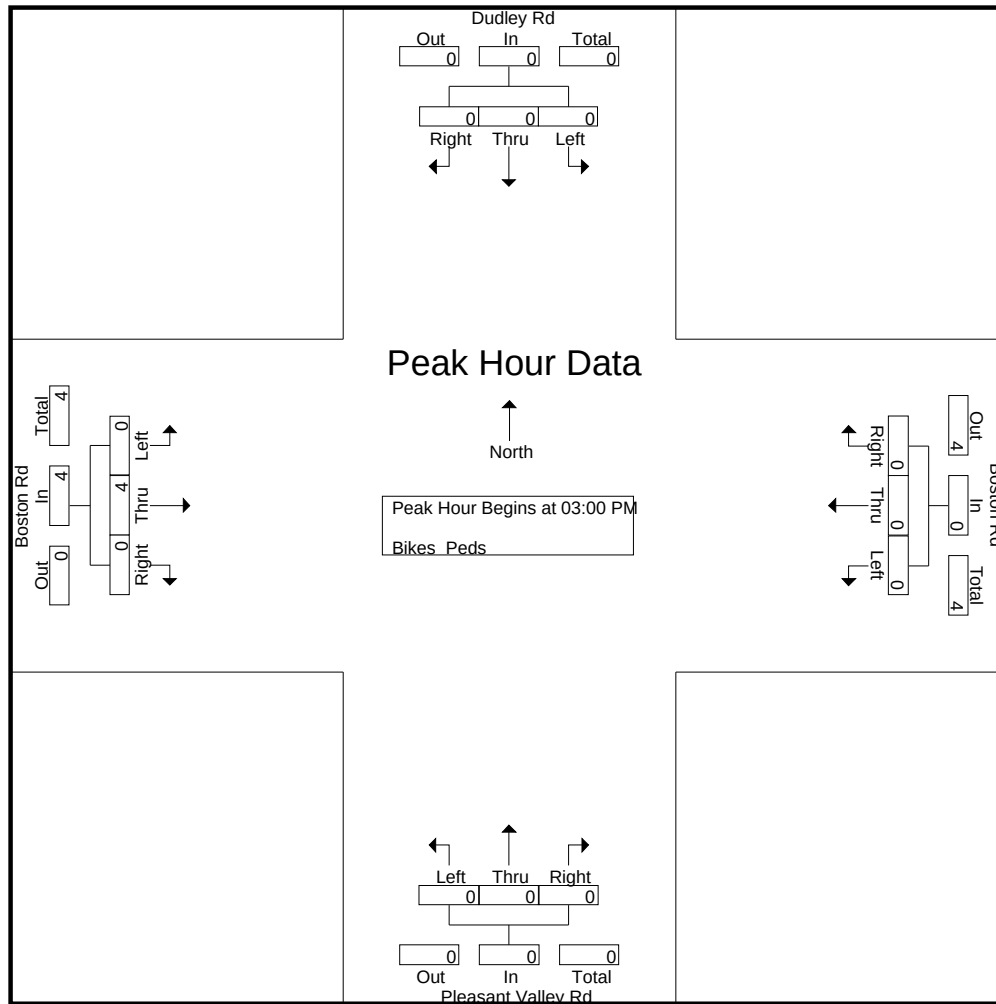
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

Accurate Counts

978-664-2565

N/S Street : Dudley Rd / Pleasant Valley Rd
 E/W Street : Boston Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018003
 Site Code : 21018003
 Start Date : 10/7/2021
 Page No : 31

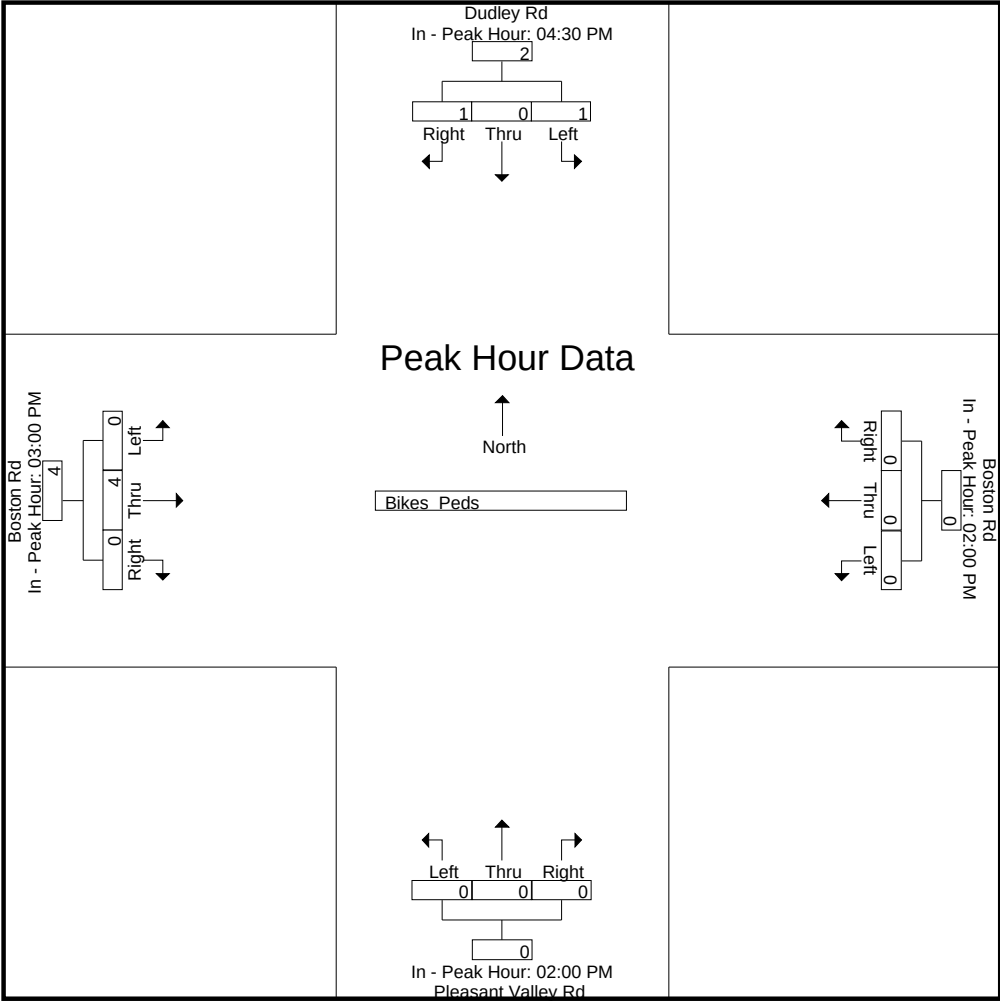


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				02:00 PM				02:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	1	2	0	0	0	0	0	0	0	0	0	4	0	4
Total Volume	1	0	1	2	0	0	0	0	0	0	0	0	0	4	0	4
% App. Total	50	0	50		0	0	0		0	0	0		0	100	0	
PHF	.250	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

N/S Street : Dudley Rd / Pleasant Valley Rd
E/W Street : Boston Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018003
Site Code : 21018003
Start Date : 10/7/2021
Page No : 32



Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd

E/W Street : Providence Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

Page No : 1

Groups Printed- Cars - Trucks

	Dwy From North			Providence Rd From East			Boston Rd From South			Providence Rd From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	0	0	0	32	11	0	5	1	23	0	10	1	83
06:15 AM	1	1	0	29	20	0	4	0	26	0	10	6	97
06:30 AM	1	0	0	38	16	0	5	0	37	1	7	5	110
06:45 AM	0	0	0	45	24	0	3	2	40	0	15	1	130
Total	2	1	0	144	71	0	17	3	126	1	42	13	420
07:00 AM	0	0	0	68	23	0	6	0	63	0	10	3	173
07:15 AM	0	0	0	54	22	0	5	0	46	0	19	4	150
07:30 AM	0	0	0	51	35	0	3	0	61	0	23	6	179
07:45 AM	0	0	0	64	21	0	4	0	51	0	16	3	159
Total	0	0	0	237	101	0	18	0	221	0	68	16	661
08:00 AM	0	0	0	43	24	0	2	1	62	0	13	7	152
08:15 AM	0	0	0	60	30	0	5	0	41	0	22	4	162
08:30 AM	0	0	0	36	19	0	8	0	59	0	12	5	139
08:45 AM	0	0	0	50	28	0	6	0	44	0	25	3	156
Total	0	0	0	189	101	0	21	1	206	0	72	19	609
09:00 AM	0	0	0	39	25	0	7	0	35	0	17	3	126
09:15 AM	0	0	0	54	24	0	5	0	33	0	15	6	137
09:30 AM	1	1	0	47	24	1	10	0	40	0	13	0	137
09:45 AM	0	0	0	40	24	0	6	0	28	0	26	9	133
Total	1	1	0	180	97	1	28	0	136	0	71	18	533
10:00 AM	0	0	0	31	21	0	2	0	33	0	20	9	116
10:15 AM	0	0	0	45	22	0	6	0	32	0	27	6	138
10:30 AM	0	0	0	42	26	0	3	1	29	0	24	8	133
10:45 AM	0	1	0	42	20	0	7	0	51	0	20	4	145
Total	0	1	0	160	89	0	18	1	145	0	91	27	532
11:00 AM	0	0	0	39	23	0	4	0	43	0	23	2	134
11:15 AM	1	0	0	36	27	0	2	0	34	0	28	4	132
11:30 AM	0	0	0	45	34	0	4	1	45	0	21	6	156
11:45 AM	0	0	0	38	29	0	2	0	43	0	26	12	150
Total	1	0	0	158	113	0	12	1	165	0	98	24	572
12:00 PM	0	0	0	39	30	0	6	0	42	0	28	8	153
12:15 PM	0	0	0	38	25	0	6	0	41	0	23	10	143
12:30 PM	0	0	0	49	27	0	6	0	52	0	21	10	165
12:45 PM	0	0	0	45	24	0	9	0	45	0	34	6	163
Total	0	0	0	171	106	0	27	0	180	0	106	34	624
01:00 PM	0	0	0	45	26	0	6	0	42	0	31	9	159
01:15 PM	0	0	0	41	36	0	4	0	51	0	32	5	169
01:30 PM	0	0	0	36	18	1	7	0	51	0	28	5	146
01:45 PM	1	0	0	36	17	0	6	0	35	1	21	4	121
Total	1	0	0	158	97	1	23	0	179	1	112	23	595
02:00 PM	0	0	0	47	38	0	5	0	28	0	32	8	158
02:15 PM	0	0	0	54	21	0	9	0	44	0	30	7	165
02:30 PM	0	0	0	41	33	0	7	0	51	0	34	6	172
02:45 PM	0	1	0	45	28	0	5	0	60	0	32	8	179
Total	0	1	0	187	120	0	26	0	183	0	128	29	674
03:00 PM	0	0	2	68	25	0	6	0	76	0	31	12	220
03:15 PM	0	0	0	60	40	0	5	0	62	0	23	1	191
03:30 PM	0	0	0	72	30	1	8	0	45	0	26	14	196
03:45 PM	0	0	1	69	39	0	9	0	58	0	27	7	210
Total	0	0	3	269	134	1	28	0	241	0	107	34	817
04:00 PM	0	1	0	64	34	0	4	0	58	0	33	5	199

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 2

Groups Printed- Cars - Trucks

	Dwy From North			Providence Rd From East			Boston Rd From South			Providence Rd From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:15 PM	0	0	0	98	32	0	6	0	55	0	37	7	235
04:30 PM	0	0	0	80	34	0	3	0	50	0	40	7	214
04:45 PM	0	0	0	96	34	0	7	0	57	0	45	9	248
Total	0	1	0	338	134	0	20	0	220	0	155	28	896
05:00 PM	0	0	0	66	34	0	4	0	75	0	41	8	228
05:15 PM	0	0	0	72	38	0	4	0	73	0	49	10	246
05:30 PM	0	0	0	77	26	0	4	1	53	0	47	8	216
05:45 PM	0	0	0	55	24	0	5	0	49	0	32	10	175
Total	0	0	0	270	122	0	17	1	250	0	169	36	865
06:00 PM	0	0	0	49	31	0	4	0	48	0	29	4	165
06:15 PM	0	0	0	48	25	0	3	0	47	0	26	3	152
06:30 PM	0	0	0	36	17	0	5	0	49	0	25	6	138
06:45 PM	0	0	0	40	18	0	2	0	42	0	26	6	134
Total	0	0	0	173	91	0	14	0	186	0	106	19	589
Grand Total	5	5	3	2634	1376	3	269	7	2438	2	1325	320	8387
Apprch %	38.5	38.5	23.1	65.6	34.3	0.1	9.9	0.3	89.8	0.1	80.4	19.4	
Total %	0.1	0.1	0	31.4	16.4	0	3.2	0.1	29.1	0	15.8	3.8	
Cars	5	5	3	2581	1336	3	215	7	2397	2	1297	271	8122
% Cars	100	100	100	98	97.1	100	79.9	100	98.3	100	97.9	84.7	96.8
Trucks	0	0	0	53	40	0	54	0	41	0	28	49	265
% Trucks	0	0	0	2	2.9	0	20.1	0	1.7	0	2.1	15.3	3.2

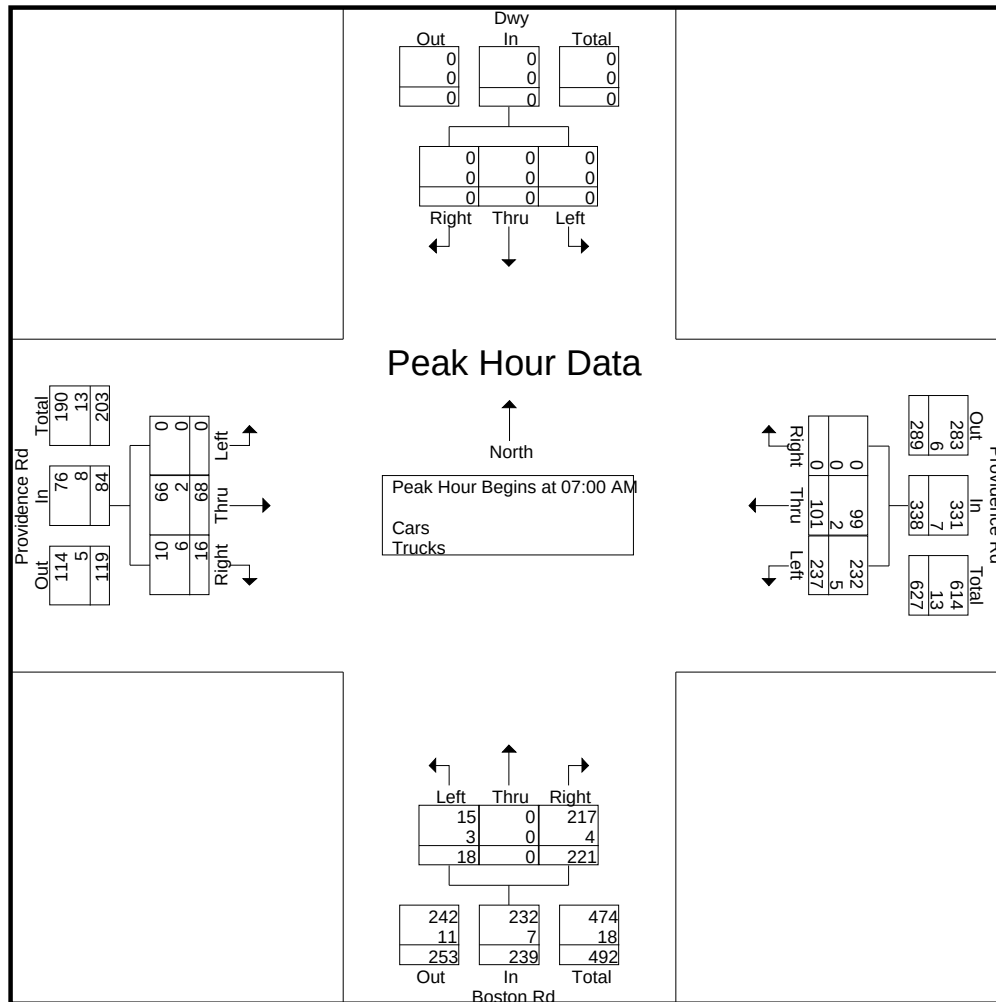
	Dwy From North				Providence Rd From East				Boston Rd From South				Providence Rd From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	68	23	0	91	6	0	63	69	0	10	3	13	173
07:15 AM	0	0	0	0	54	22	0	76	5	0	46	51	0	19	4	23	150
07:30 AM	0	0	0	0	51	35	0	86	3	0	61	64	0	23	6	29	179
07:45 AM	0	0	0	0	64	21	0	85	4	0	51	55	0	16	3	19	159
Total Volume	0	0	0	0	237	101	0	338	18	0	221	239	0	68	16	84	661
% App. Total	0	0	0	0	70.1	29.9	0		7.5	0	92.5		0	81	19		
PHF	.000	.000	.000	.000	.871	.721	.000	.929	.750	.000	.877	.866	.000	.739	.667	.724	.923
Cars	0	0	0	0	232	99	0	331	15	0	217	232	0	66	10	76	639
% Cars	0	0	0	0	97.9	98.0	0	97.9	83.3	0	98.2	97.1	0	97.1	62.5	90.5	96.7
Trucks	0	0	0	0	5	2	0	7	3	0	4	7	0	2	6	8	22
% Trucks	0	0	0	0	2.1	2.0	0	2.1	16.7	0	1.8	2.9	0	2.9	37.5	9.5	3.3

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 3



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

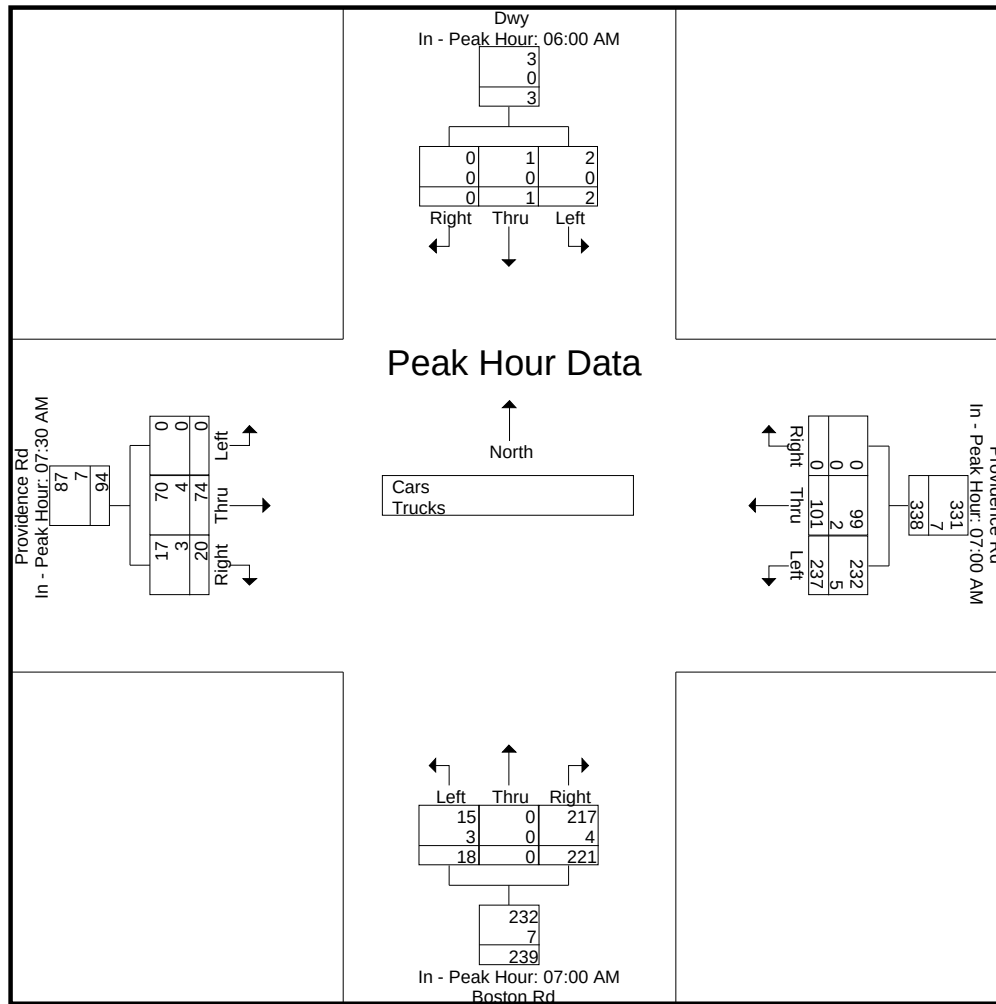
	06:00 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	0	0	0	68	23	0	91	6	0	63	69	0	23	6	29
+15 mins.	1	1	0	2	54	22	0	76	5	0	46	51	0	16	3	19
+30 mins.	1	0	0	1	51	35	0	86	3	0	61	64	0	13	7	20
+45 mins.	0	0	0	0	64	21	0	85	4	0	51	55	0	22	4	26
Total Volume	2	1	0	3	237	101	0	338	18	0	221	239	0	74	20	94
% App. Total	66.7	33.3	0		70.1	29.9	0		7.5	0	92.5		0	78.7	21.3	
PHF	.500	.250	.000	.375	.871	.721	.000	.929	.750	.000	.877	.866	.000	.804	.714	.810
Cars	2	1	0	3	232	99	0	331	15	0	217	232	0	70	17	87
% Cars	100	100	0	100	97.9	98	0	97.9	83.3	0	98.2	97.1	0	94.6	85	92.6
Trucks	0	0	0	0	5	2	0	7	3	0	4	7	0	4	3	7
% Trucks	0	0	0	0	2.1	2	0	2.1	16.7	0	1.8	2.9	0	5.4	15	7.4

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 4



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:30 PM

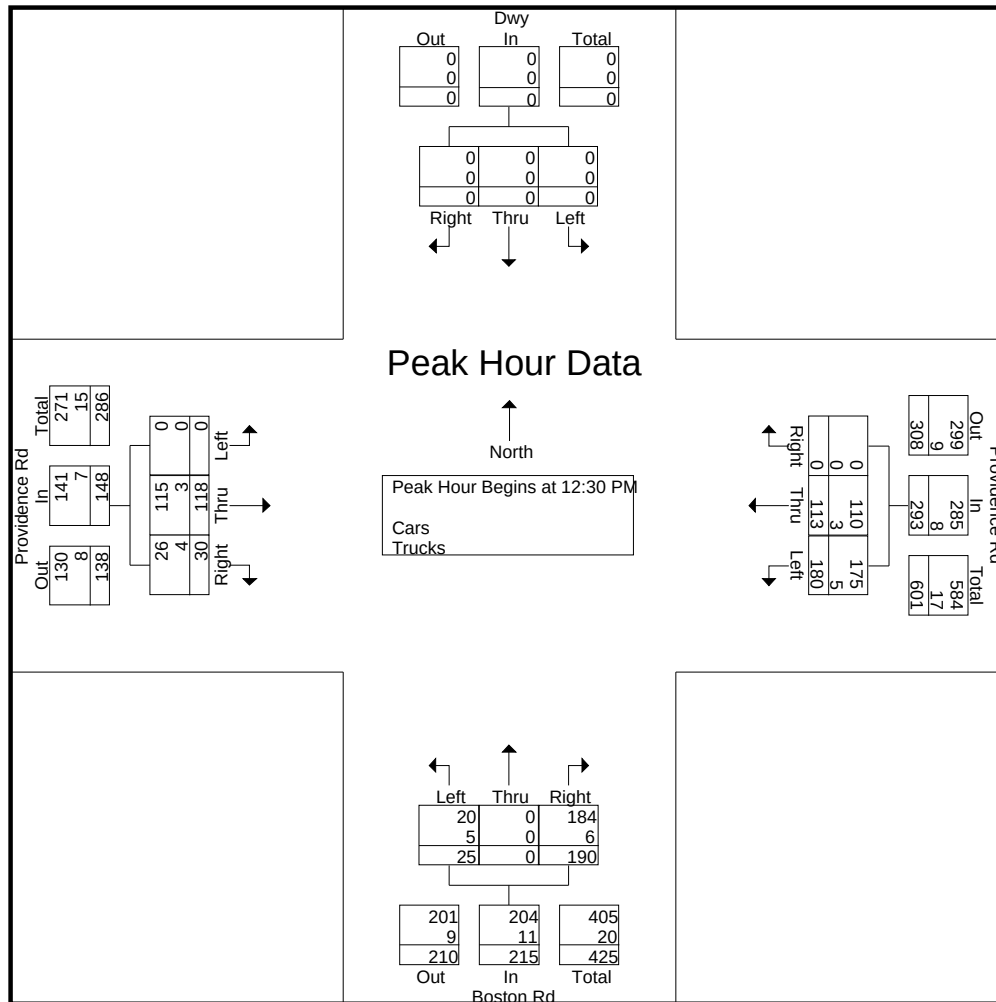
12:30 PM	0	0	0	0	49	27	0	76	6	0	52	58	0	21	10	31	165
12:45 PM	0	0	0	0	45	24	0	69	9	0	45	54	0	34	6	40	163
01:00 PM	0	0	0	0	45	26	0	71	6	0	42	48	0	31	9	40	159
01:15 PM	0	0	0	0	41	36	0	77	4	0	51	55	0	32	5	37	169
Total Volume	0	0	0	0	180	113	0	293	25	0	190	215	0	118	30	148	656
% App. Total	0	0	0	0	61.4	38.6	0		11.6	0	88.4		0	79.7	20.3		
PHF	.000	.000	.000	.000	.918	.785	.000	.951	.694	.000	.913	.927	.000	.868	.750	.925	.970
Cars	0	0	0	0	175	110	0	285	20	0	184	204	0	115	26	141	630
% Cars	0	0	0	0	97.2	97.3	0	97.3	80.0	0	96.8	94.9	0	97.5	86.7	95.3	96.0
Trucks	0	0	0	0	5	3	0	8	5	0	6	11	0	3	4	7	26
% Trucks	0	0	0	0	2.8	2.7	0	2.7	20.0	0	3.2	5.1	0	2.5	13.3	4.7	4.0

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 5



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

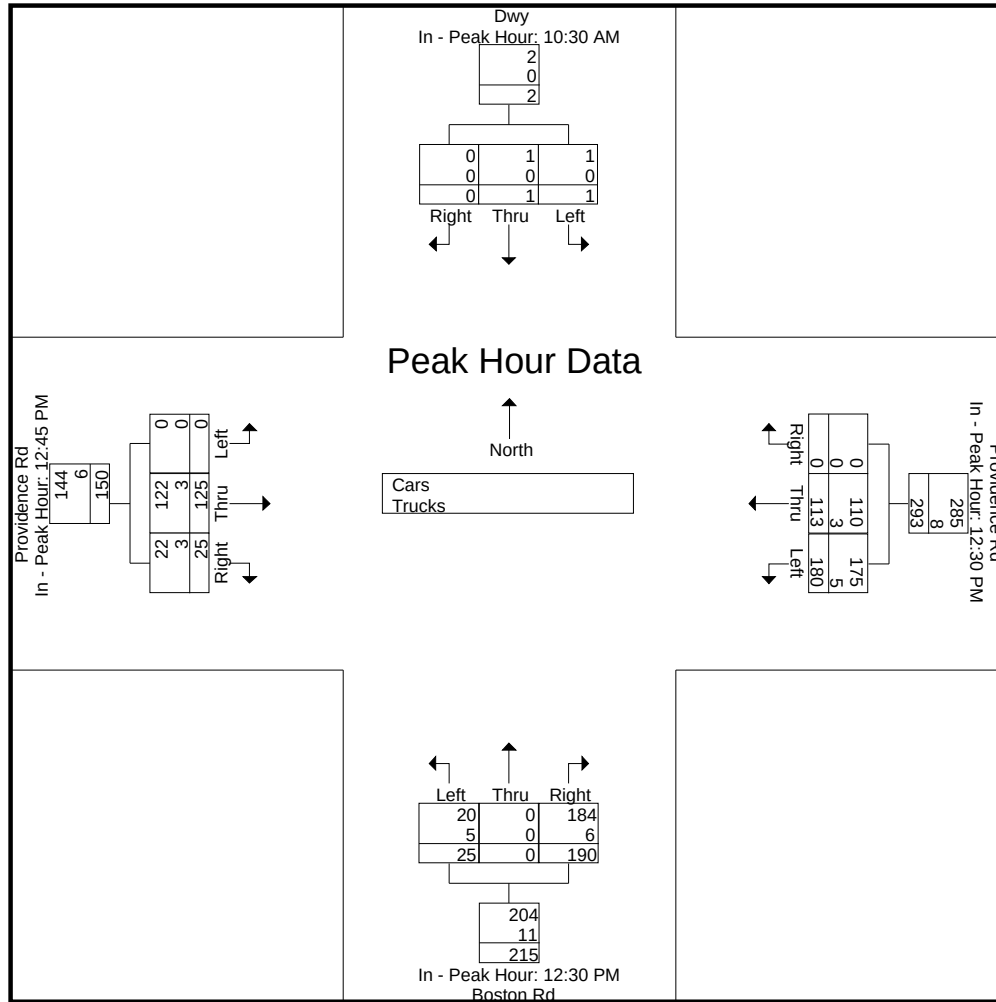
	10:30 AM				12:30 PM				12:30 PM				12:45 PM			
+0 mins.	0	0	0	0	49	27	0	76	6	0	52	58	0	34	6	40
+15 mins.	0	1	0	1	45	24	0	69	9	0	45	54	0	31	9	40
+30 mins.	0	0	0	0	45	26	0	71	6	0	42	48	0	32	5	37
+45 mins.	1	0	0	1	41	36	0	77	4	0	51	55	0	28	5	33
Total Volume	1	1	0	2	180	113	0	293	25	0	190	215	0	125	25	150
% App. Total	50	50	0		61.4	38.6	0		11.6	0	88.4		0	83.3	16.7	
PHF	.250	.250	.000	.500	.918	.785	.000	.951	.694	.000	.913	.927	.000	.919	.694	.938
Cars	1	1	0	2	175	110	0	285	20	0	184	204	0	122	22	144
% Cars	100	100	0	100	97.2	97.3	0	97.3	80	0	96.8	94.9	0	97.6	88	96
Trucks	0	0	0	0	5	3	0	8	5	0	6	11	0	3	3	6
% Trucks	0	0	0	0	2.8	2.7	0	2.7	20	0	3.2	5.1	0	2.4	12	4

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 6



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

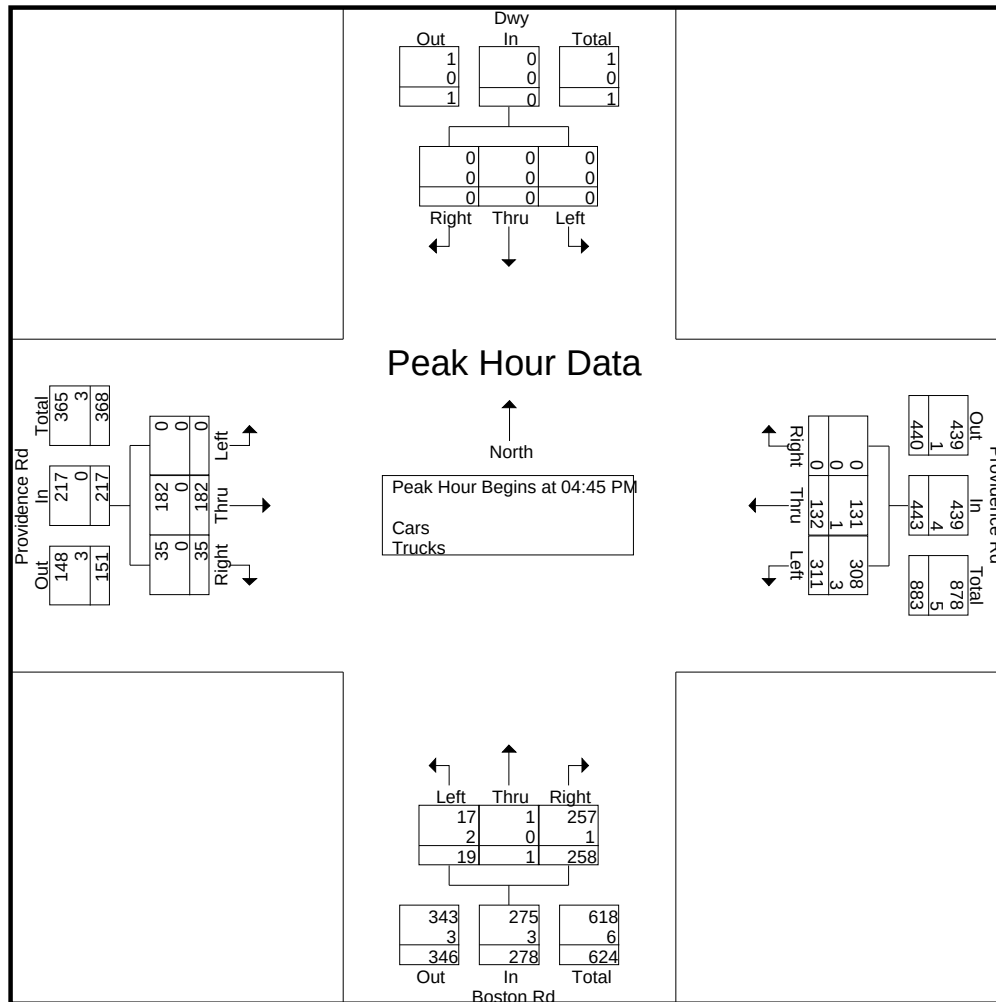
04:45 PM	0	0	0	0	96	34	0	130	7	0	57	64	0	45	9	54	248
05:00 PM	0	0	0	0	66	34	0	100	4	0	75	79	0	41	8	49	228
05:15 PM	0	0	0	0	72	38	0	110	4	0	73	77	0	49	10	59	246
05:30 PM	0	0	0	0	77	26	0	103	4	1	53	58	0	47	8	55	216
Total Volume	0	0	0	0	311	132	0	443	19	1	258	278	0	182	35	217	938
% App. Total	0	0	0	0	70.2	29.8	0		6.8	0.4	92.8		0	83.9	16.1		
PHF	.000	.000	.000	.000	.810	.868	.000	.852	.679	.250	.860	.880	.000	.929	.875	.919	.946
Cars	0	0	0	0	308	131	0	439	17	1	257	275	0	182	35	217	931
% Cars	0	0	0	0	99.0	99.2	0	99.1	89.5	100	99.6	98.9	0	100	100	100	99.3
Trucks	0	0	0	0	3	1	0	4	2	0	1	3	0	0	0	0	7
% Trucks	0	0	0	0	1.0	0.8	0	0.9	10.5	0	0.4	1.1	0	0	0	0	0.7

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 7

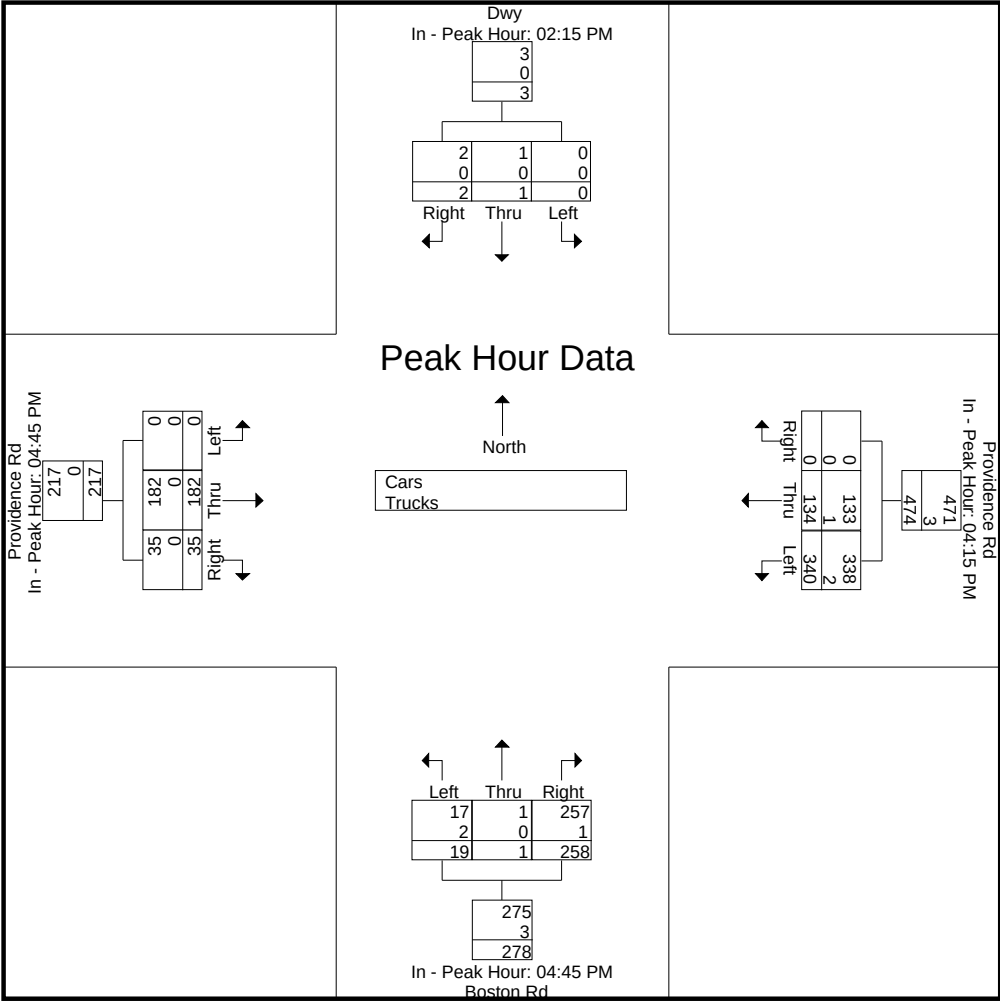


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:15 PM				04:15 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	98	32	0	130	7	0	57	64	0	45	9	54
+15 mins.	0	0	0	0	80	34	0	114	4	0	75	79	0	41	8	49
+30 mins.	0	1	0	1	96	34	0	130	4	0	73	77	0	49	10	59
+45 mins.	0	0	2	2	66	34	0	100	4	1	53	58	0	47	8	55
Total Volume	0	1	2	3	340	134	0	474	19	1	258	278	0	182	35	217
% App. Total	0	33.3	66.7		71.7	28.3	0		6.8	0.4	92.8		0	83.9	16.1	
PHF	.000	.250	.250	.375	.867	.985	.000	.912	.679	.250	.860	.880	.000	.929	.875	.919
Cars	0	1	2	3	338	133	0	471	17	1	257	275	0	182	35	217
% Cars	0	100	100	100	99.4	99.3	0	99.4	89.5	100	99.6	98.9	0	100	100	100
Trucks	0	0	0	0	2	1	0	3	2	0	1	3	0	0	0	0
% Trucks	0	0	0	0	0.6	0.7	0	0.6	10.5	0	0.4	1.1	0	0	0	0

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 8



Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd

E/W Street : Providence Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

Page No : 9

Groups Printed- Cars

	Dwy From North			Providence Rd From East			Boston Rd From South			Providence Rd From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	0	0	0	31	9	0	2	1	23	0	10	1	77
06:15 AM	1	1	0	28	20	0	4	0	24	0	8	2	88
06:30 AM	1	0	0	38	16	0	3	0	36	1	7	3	105
06:45 AM	0	0	0	43	23	0	1	2	39	0	15	1	124
Total	2	1	0	140	68	0	10	3	122	1	40	7	394
07:00 AM	0	0	0	66	22	0	4	0	61	0	10	3	166
07:15 AM	0	0	0	54	22	0	5	0	45	0	19	1	146
07:30 AM	0	0	0	49	35	0	2	0	60	0	21	3	170
07:45 AM	0	0	0	63	20	0	4	0	51	0	16	3	157
Total	0	0	0	232	99	0	15	0	217	0	66	10	639
08:00 AM	0	0	0	43	23	0	1	1	61	0	11	7	147
08:15 AM	0	0	0	60	29	0	5	0	40	0	22	4	160
08:30 AM	0	0	0	36	17	0	8	0	54	0	11	5	131
08:45 AM	0	0	0	46	27	0	6	0	42	0	23	2	146
Total	0	0	0	185	96	0	20	1	197	0	67	18	584
09:00 AM	0	0	0	37	25	0	5	0	34	0	16	3	120
09:15 AM	0	0	0	53	21	0	4	0	33	0	15	5	131
09:30 AM	1	1	0	46	24	1	7	0	39	0	13	0	132
09:45 AM	0	0	0	38	22	0	4	0	28	0	25	6	123
Total	1	1	0	174	92	1	20	0	134	0	69	14	506
10:00 AM	0	0	0	29	20	0	2	0	32	0	18	6	107
10:15 AM	0	0	0	44	21	0	5	0	31	0	25	6	132
10:30 AM	0	0	0	40	25	0	2	1	28	0	23	5	124
10:45 AM	0	1	0	40	20	0	5	0	51	0	20	3	140
Total	0	1	0	153	86	0	14	1	142	0	86	20	503
11:00 AM	0	0	0	36	23	0	2	0	43	0	22	2	128
11:15 AM	1	0	0	35	27	0	1	0	33	0	27	4	128
11:30 AM	0	0	0	44	33	0	2	1	43	0	21	5	149
11:45 AM	0	0	0	37	29	0	1	0	43	0	26	12	148
Total	1	0	0	152	112	0	6	1	162	0	96	23	553
12:00 PM	0	0	0	39	29	0	4	0	42	0	28	5	147
12:15 PM	0	0	0	37	24	0	4	0	40	0	23	7	135
12:30 PM	0	0	0	49	26	0	3	0	50	0	21	8	157
12:45 PM	0	0	0	40	24	0	7	0	44	0	33	4	152
Total	0	0	0	165	103	0	18	0	176	0	105	24	591
01:00 PM	0	0	0	45	25	0	6	0	40	0	30	9	155
01:15 PM	0	0	0	41	35	0	4	0	50	0	31	5	166
01:30 PM	0	0	0	36	15	1	5	0	50	0	28	4	139
01:45 PM	1	0	0	35	16	0	6	0	34	1	20	2	115
Total	1	0	0	157	91	1	21	0	174	1	109	20	575
02:00 PM	0	0	0	46	34	0	4	0	28	0	32	8	152
02:15 PM	0	0	0	53	21	0	9	0	43	0	28	5	159
02:30 PM	0	0	0	40	32	0	6	0	51	0	34	5	168
02:45 PM	0	1	0	45	28	0	3	0	59	0	30	8	174
Total	0	1	0	184	115	0	22	0	181	0	124	26	653
03:00 PM	0	0	2	65	25	0	5	0	76	0	31	9	213
03:15 PM	0	0	0	60	38	0	5	0	62	0	23	1	189
03:30 PM	0	0	0	72	28	1	6	0	45	0	26	11	189
03:45 PM	0	0	1	68	39	0	7	0	56	0	27	7	205
Total	0	0	3	265	130	1	23	0	239	0	107	28	796
04:00 PM	0	1	0	64	34	0	3	0	58	0	32	5	197
04:15 PM	0	0	0	97	31	0	5	0	53	0	37	7	230
04:30 PM	0	0	0	80	34	0	3	0	50	0	39	6	212

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd

E/W Street : Providence Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

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Groups Printed- Cars

	Dwy From North			Providence Rd From East			Boston Rd From South			Providence Rd From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
04:45 PM	0	0	0	96	34	0	5	0	57	0	45	9	246
Total	0	1	0	337	133	0	16	0	218	0	153	27	885
05:00 PM	0	0	0	65	34	0	4	0	74	0	41	8	226
05:15 PM	0	0	0	71	37	0	4	0	73	0	49	10	244
05:30 PM	0	0	0	76	26	0	4	1	53	0	47	8	215
05:45 PM	0	0	0	55	24	0	5	0	49	0	32	10	175
Total	0	0	0	267	121	0	17	1	249	0	169	36	860
06:00 PM	0	0	0	49	30	0	3	0	48	0	29	4	163
06:15 PM	0	0	0	45	25	0	3	0	47	0	26	3	149
06:30 PM	0	0	0	36	17	0	5	0	49	0	25	5	137
06:45 PM	0	0	0	40	18	0	2	0	42	0	26	6	134
Total	0	0	0	170	90	0	13	0	186	0	106	18	583
Grand Total	5	5	3	2581	1336	3	215	7	2397	2	1297	271	8122
Apprch %	38.5	38.5	23.1	65.8	34.1	0.1	8.2	0.3	91.5	0.1	82.6	17.3	
Total %	0.1	0.1	0	31.8	16.4	0	2.6	0.1	29.5	0	16	3.3	

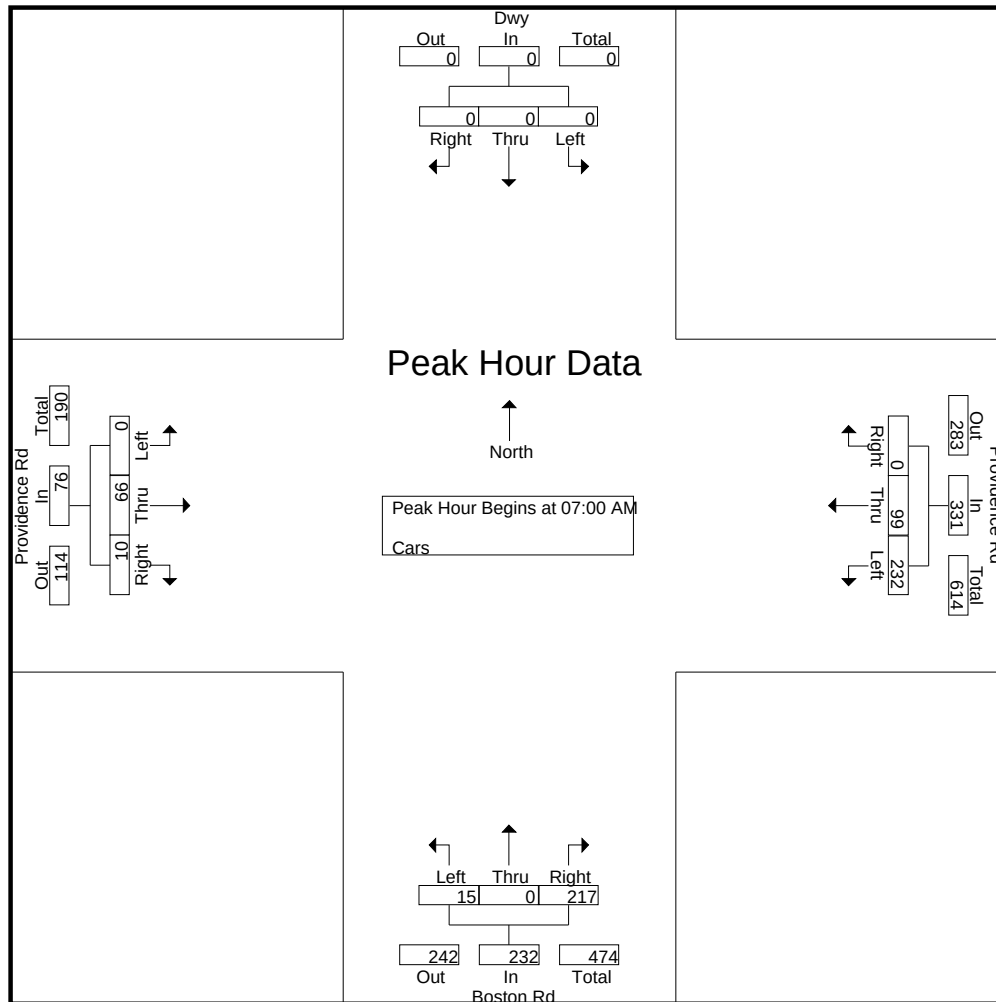
	Dwy From North				Providence Rd From East				Boston Rd From South				Providence Rd From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	66	22	0	88	4	0	61	65	0	10	3	13	166
07:15 AM	0	0	0	0	54	22	0	76	5	0	45	50	0	19	1	20	146
07:30 AM	0	0	0	0	49	35	0	84	2	0	60	62	0	21	3	24	170
07:45 AM	0	0	0	0	63	20	0	83	4	0	51	55	0	16	3	19	157
Total Volume	0	0	0	0	232	99	0	331	15	0	217	232	0	66	10	76	639
% App. Total	0	0	0		70.1	29.9	0		6.5	0	93.5		0	86.8	13.2		
PHF	.000	.000	.000	.000	.879	.707	.000	.940	.750	.000	.889	.892	.000	.786	.833	.792	.940

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 11



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

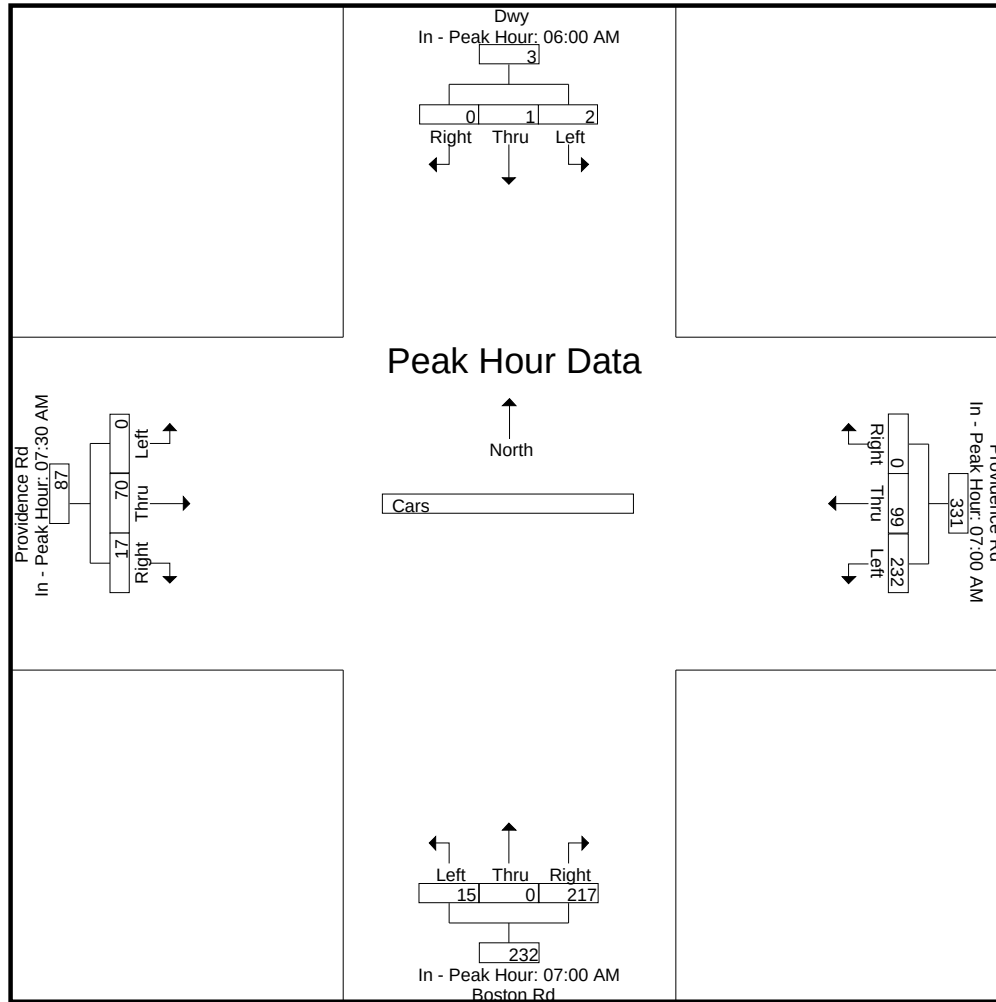
	06:00 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	0	0	0	66	22	0	88	4	0	61	65	0	21	3	24
+15 mins.	1	1	0	2	54	22	0	76	5	0	45	50	0	16	3	19
+30 mins.	1	0	0	1	49	35	0	84	2	0	60	62	0	11	7	18
+45 mins.	0	0	0	0	63	20	0	83	4	0	51	55	0	22	4	26
Total Volume	2	1	0	3	232	99	0	331	15	0	217	232	0	70	17	87
% App. Total	66.7	33.3	0		70.1	29.9	0		6.5	0	93.5		0	80.5	19.5	
PHF	.500	.250	.000	.375	.879	.707	.000	.940	.750	.000	.889	.892	.000	.795	.607	.837

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 12

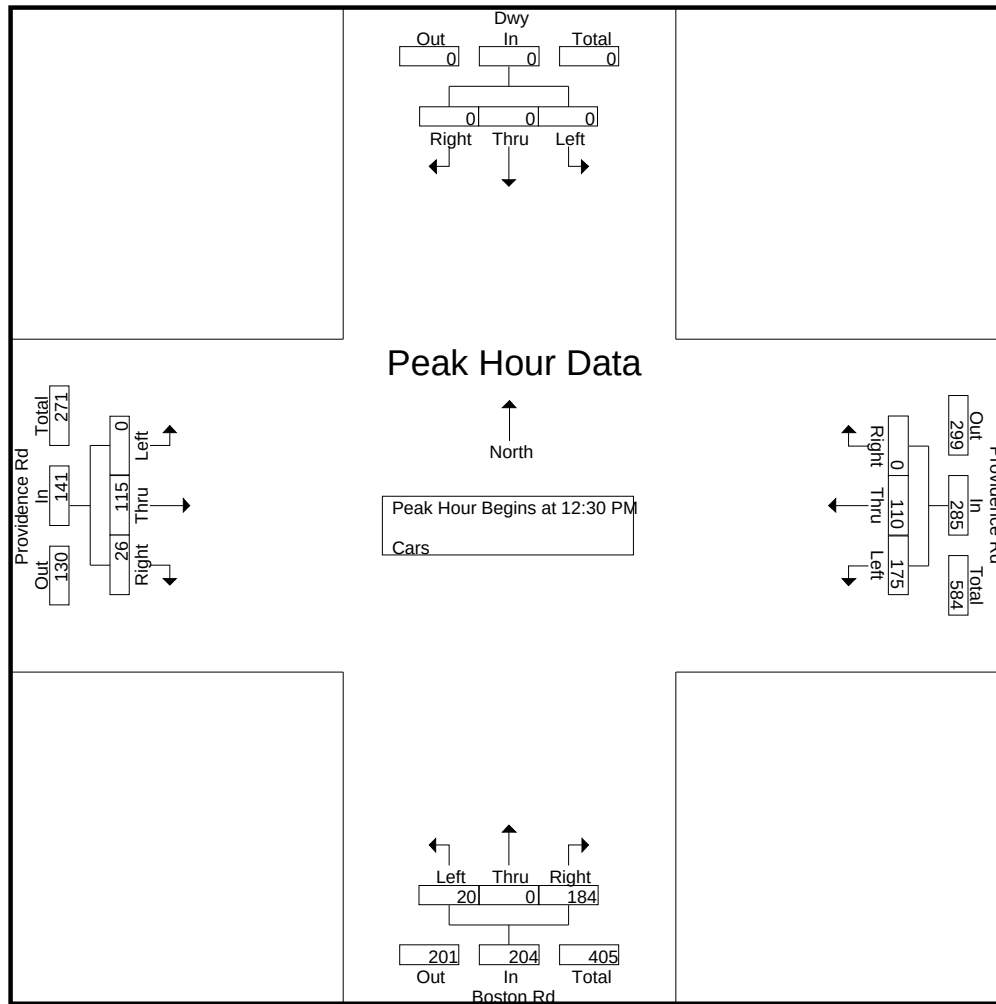


Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:30 PM

12:30 PM	0	0	0	0	49	26	0	75	3	0	50	53	0	21	8	29	157
12:45 PM	0	0	0	0	40	24	0	64	7	0	44	51	0	33	4	37	152
01:00 PM	0	0	0	0	45	25	0	70	6	0	40	46	0	30	9	39	155
01:15 PM	0	0	0	0	41	35	0	76	4	0	50	54	0	31	5	36	166
Total Volume	0	0	0	0	175	110	0	285	20	0	184	204	0	115	26	141	630
% App. Total	0	0	0	0	61.4	38.6	0		9.8	0	90.2		0	81.6	18.4		
PHF	.000	.000	.000	.000	.893	.786	.000	.938	.714	.000	.920	.944	.000	.871	.722	.904	.949

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 13



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

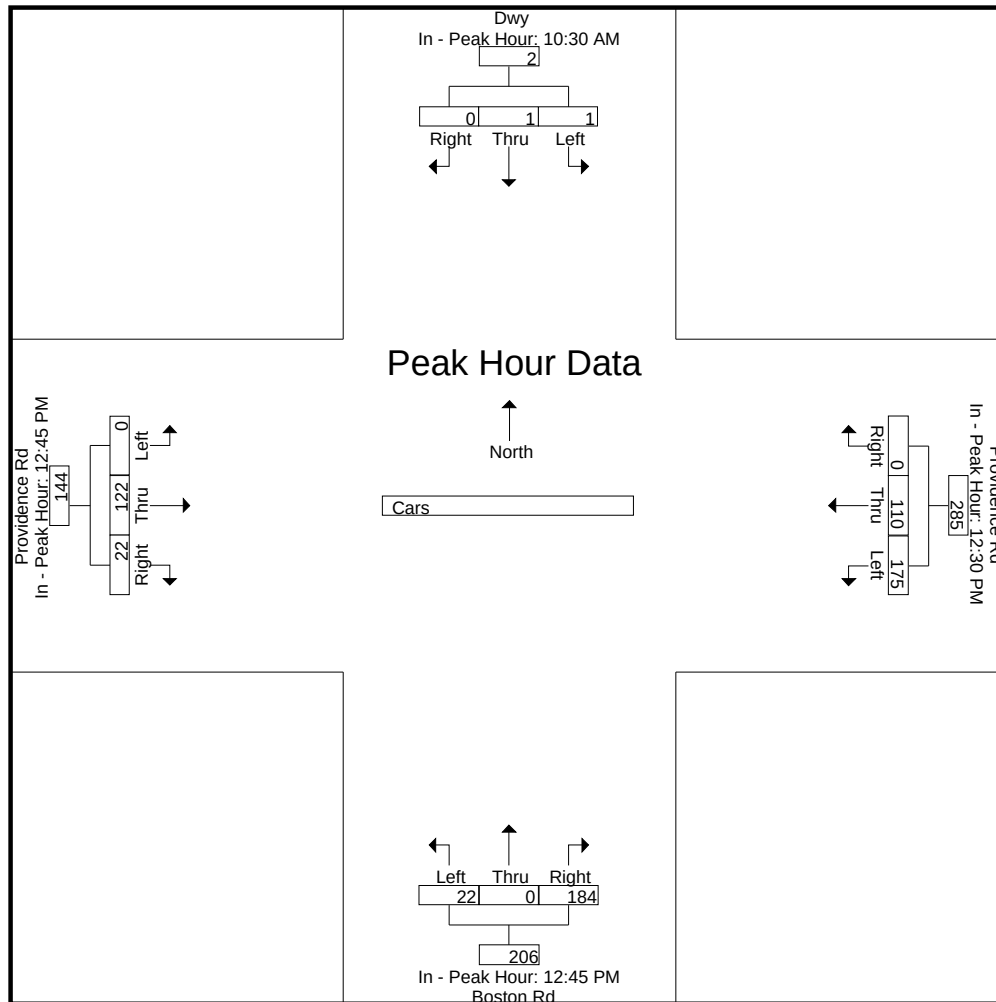
	10:30 AM				12:30 PM				12:45 PM				12:45 PM			
+0 mins.	0	0	0	0	49	26	0	75	7	0	44	51	0	33	4	37
+15 mins.	0	1	0	1	40	24	0	64	6	0	40	46	0	30	9	39
+30 mins.	0	0	0	0	45	25	0	70	4	0	50	54	0	31	5	36
+45 mins.	1	0	0	1	41	35	0	76	5	0	50	55	0	28	4	32
Total Volume	1	1	0	2	175	110	0	285	22	0	184	206	0	122	22	144
% App. Total	50	50	0		61.4	38.6	0		10.7	0	89.3		0	84.7	15.3	
PHF	.250	.250	.000	.500	.893	.786	.000	.938	.786	.000	.920	.936	.000	.924	.611	.923

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 14



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

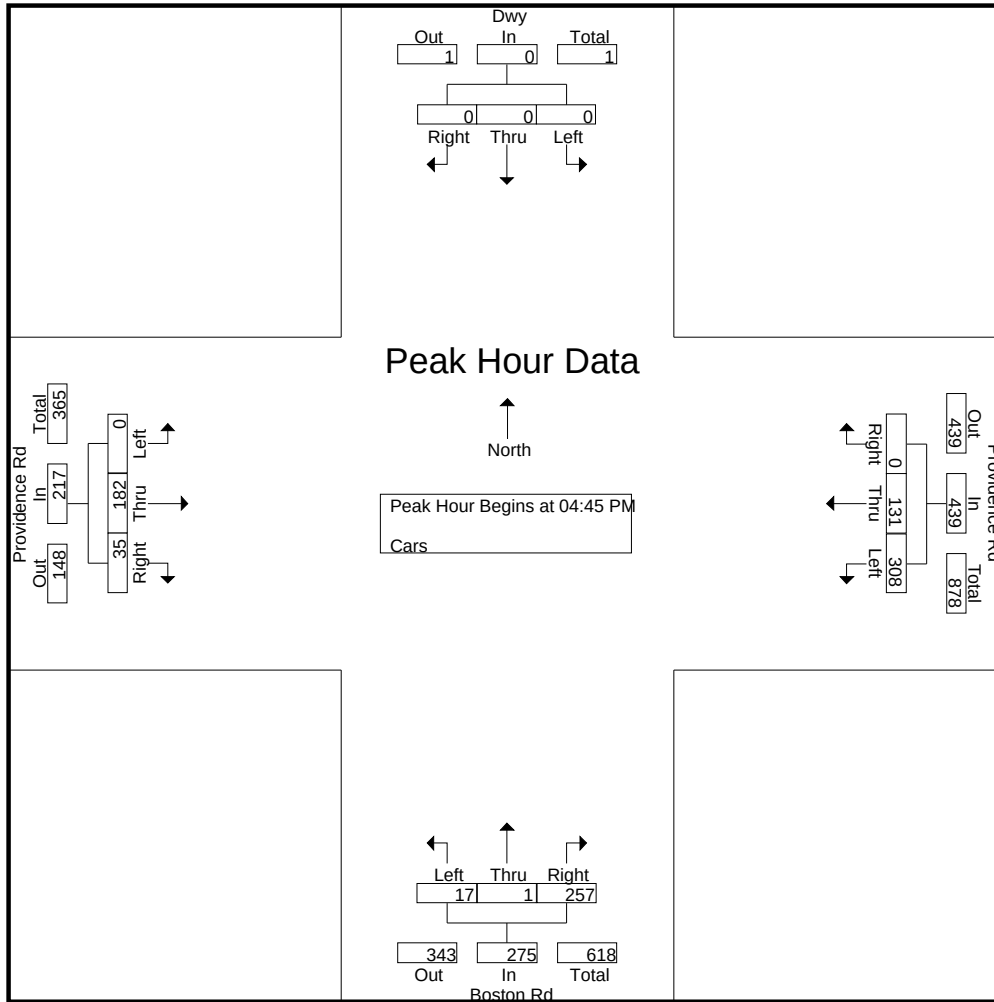
04:45 PM	0	0	0	0	96	34	0	130	5	0	57	62	0	45	9	54	246
05:00 PM	0	0	0	0	65	34	0	99	4	0	74	78	0	41	8	49	226
05:15 PM	0	0	0	0	71	37	0	108	4	0	73	77	0	49	10	59	244
05:30 PM	0	0	0	0	76	26	0	102	4	1	53	58	0	47	8	55	215
Total Volume	0	0	0	0	308	131	0	439	17	1	257	275	0	182	35	217	931
% App. Total	0	0	0	0	70.2	29.8	0		6.2	0.4	93.5		0	83.9	16.1		
PHF	.000	.000	.000	.000	.802	.885	.000	.844	.850	.250	.868	.881	.000	.929	.875	.919	.946

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 15

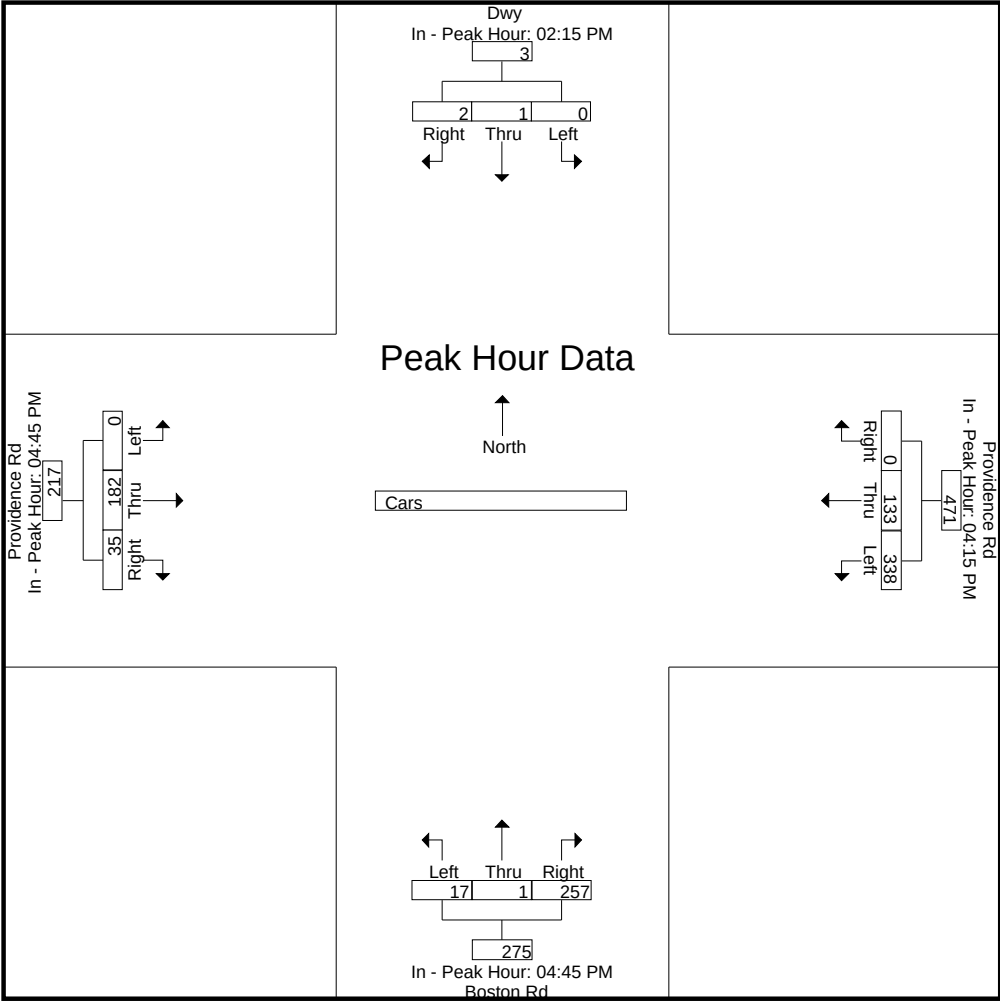


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:15 PM				04:15 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	97	31	0	128	5	0	57	62	0	45	9	54
+15 mins.	0	0	0	0	80	34	0	114	4	0	74	78	0	41	8	49
+30 mins.	0	1	0	1	96	34	0	130	4	0	73	77	0	49	10	59
+45 mins.	0	0	2	2	65	34	0	99	4	1	53	58	0	47	8	55
Total Volume	0	1	2	3	338	133	0	471	17	1	257	275	0	182	35	217
% App. Total	0	33.3	66.7		71.8	28.2	0		6.2	0.4	93.5		0	83.9	16.1	
PHF	.000	.250	.250	.375	.871	.978	.000	.906	.850	.250	.868	.881	.000	.929	.875	.919

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 16



978-664-2565

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

Page No : 17

Groups Printed- Trucks

	Dwy			Providence Rd			Boston Rd			Providence Rd			
	From North			From East			From South			From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
06:00 AM	0	0	0	1	2	0	3	0	0	0	0	0	6
06:15 AM	0	0	0	1	0	0	0	0	2	0	2	4	9
06:30 AM	0	0	0	0	0	0	2	0	1	0	0	2	5
06:45 AM	0	0	0	2	1	0	2	0	1	0	0	0	6
Total	0	0	0	4	3	0	7	0	4	0	2	6	26
07:00 AM	0	0	0	2	1	0	2	0	2	0	0	0	7
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	3	4
07:30 AM	0	0	0	2	0	0	1	0	1	0	2	3	9
07:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	2
Total	0	0	0	5	2	0	3	0	4	0	2	6	22
08:00 AM	0	0	0	0	1	0	1	0	1	0	2	0	5
08:15 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
08:30 AM	0	0	0	0	2	0	0	0	5	0	1	0	8
08:45 AM	0	0	0	4	1	0	0	0	2	0	2	1	10
Total	0	0	0	4	5	0	1	0	9	0	5	1	25
09:00 AM	0	0	0	2	0	0	2	0	1	0	1	0	6
09:15 AM	0	0	0	1	3	0	1	0	0	0	0	1	6
09:30 AM	0	0	0	1	0	0	3	0	1	0	0	0	5
09:45 AM	0	0	0	2	2	0	2	0	0	0	1	3	10
Total	0	0	0	6	5	0	8	0	2	0	2	4	27
10:00 AM	0	0	0	2	1	0	0	0	1	0	2	3	9
10:15 AM	0	0	0	1	1	0	1	0	1	0	2	0	6
10:30 AM	0	0	0	2	1	0	1	0	1	0	1	3	9
10:45 AM	0	0	0	2	0	0	2	0	0	0	0	1	5
Total	0	0	0	7	3	0	4	0	3	0	5	7	29
11:00 AM	0	0	0	3	0	0	2	0	0	0	1	0	6
11:15 AM	0	0	0	1	0	0	1	0	1	0	1	0	4
11:30 AM	0	0	0	1	1	0	2	0	2	0	0	1	7
11:45 AM	0	0	0	1	0	0	1	0	0	0	0	0	2
Total	0	0	0	6	1	0	6	0	3	0	2	1	19
12:00 PM	0	0	0	0	1	0	2	0	0	0	0	3	6
12:15 PM	0	0	0	1	1	0	2	0	1	0	0	3	8
12:30 PM	0	0	0	0	1	0	3	0	2	0	0	2	8
12:45 PM	0	0	0	5	0	0	2	0	1	0	1	2	11
Total	0	0	0	6	3	0	9	0	4	0	1	10	33
01:00 PM	0	0	0	0	1	0	0	0	2	0	1	0	4
01:15 PM	0	0	0	0	1	0	0	0	1	0	1	0	3
01:30 PM	0	0	0	0	3	0	2	0	1	0	0	1	7
01:45 PM	0	0	0	1	1	0	0	0	1	0	1	2	6
Total	0	0	0	1	6	0	2	0	5	0	3	3	20
02:00 PM	0	0	0	1	4	0	1	0	0	0	0	0	6
02:15 PM	0	0	0	1	0	0	0	0	1	0	2	2	6
02:30 PM	0	0	0	1	1	0	1	0	0	0	0	1	4
02:45 PM	0	0	0	0	0	0	2	0	1	0	2	0	5
Total	0	0	0	3	5	0	4	0	2	0	4	3	21
03:00 PM	0	0	0	3	0	0	1	0	0	0	0	3	7
03:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
03:30 PM	0	0	0	0	2	0	2	0	0	0	0	3	7
03:45 PM	0	0	0	1	0	0	2	0	2	0	0	0	5
Total	0	0	0	4	4	0	5	0	2	0	0	6	21
04:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
04:15 PM	0	0	0	1	1	0	1	0	2	0	0	0	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	2

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd

E/W Street : Providence Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

Page No : 18

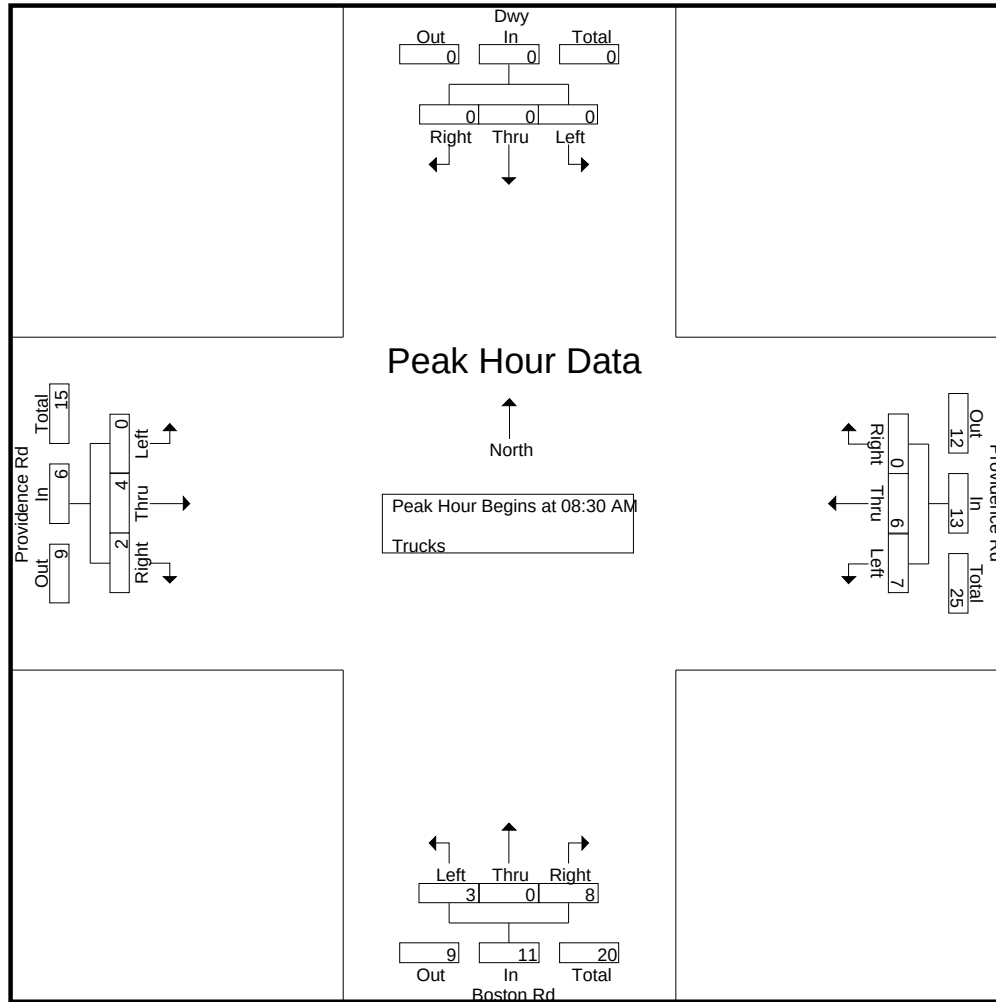
Groups Printed- Trucks

	Dwy From North			Providence Rd From East			Boston Rd From South			Providence Rd From West			Int. Total
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	2
Total	0	0	0	1	1	0	4	0	2	0	2	1	11
05:00 PM	0	0	0	1	0	0	0	0	1	0	0	0	2
05:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	1	0	0	0	1	0	0	0	5
06:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
06:15 PM	0	0	0	3	0	0	0	0	0	0	0	0	3
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	1	0	1	0	0	0	0	1	6
Grand Total	0	0	0	53	40	0	54	0	41	0	28	49	265
Apprch %	0	0	0	57	43	0	56.8	0	43.2	0	36.4	63.6	
Total %	0	0	0	20	15.1	0	20.4	0	15.5	0	10.6	18.5	

	Dwy From North				Providence Rd From East				Boston Rd From South				Providence Rd From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:30 AM																	
08:30 AM	0	0	0	0	0	2	0	2	0	0	5	5	0	1	0	1	8
08:45 AM	0	0	0	0	4	1	0	5	0	0	2	2	0	2	1	3	10
09:00 AM	0	0	0	0	2	0	0	2	2	0	1	3	0	1	0	1	6
09:15 AM	0	0	0	0	1	3	0	4	1	0	0	1	0	0	1	1	6
Total Volume	0	0	0	0	7	6	0	13	3	0	8	11	0	4	2	6	30
% App. Total	0	0	0		53.8	46.2	0		27.3	0	72.7		0	66.7	33.3		
PHF	.000	.000	.000	.000	.438	.500	.000	.650	.375	.000	.400	.550	.000	.500	.500	.500	.750

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 19



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

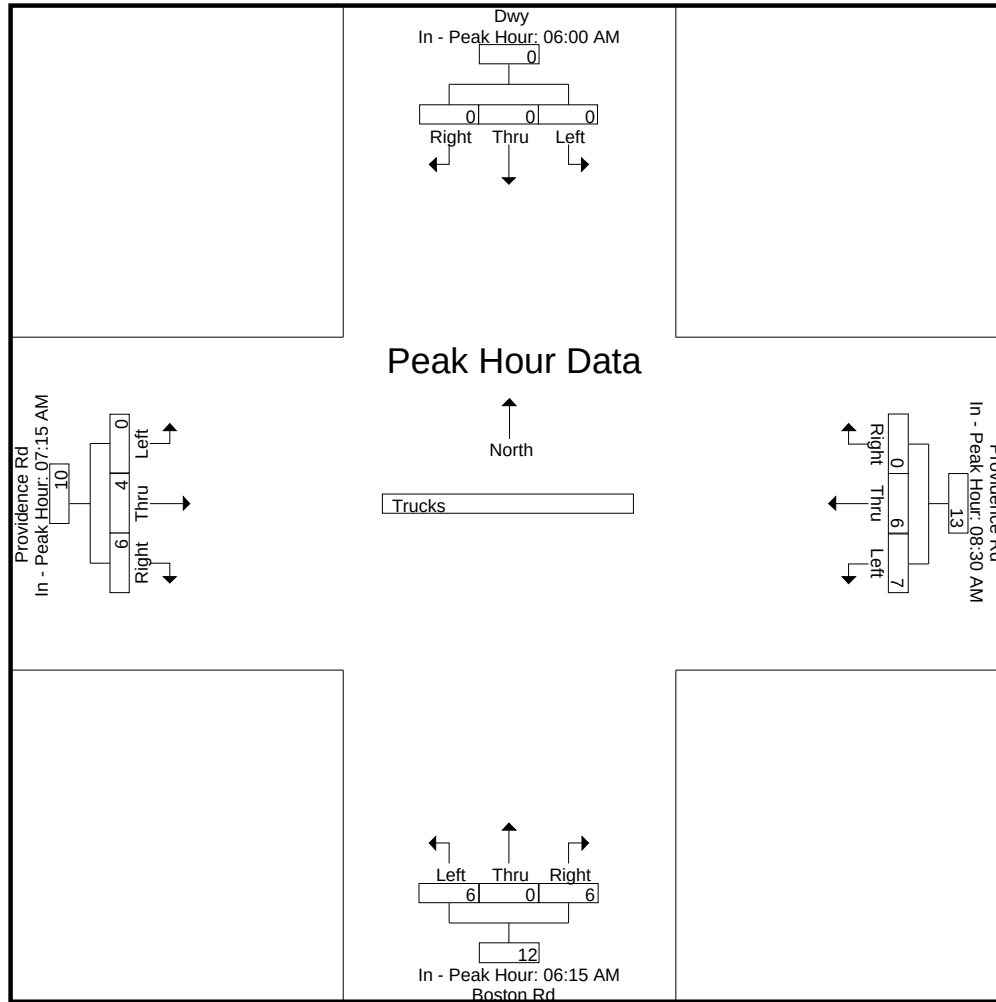
	06:00 AM				08:30 AM				06:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	2	2	0	0	3	3
+15 mins.	0	0	0	0	4	1	0	5	2	0	1	3	0	2	3	5
+30 mins.	0	0	0	0	2	0	0	2	2	0	1	3	0	0	0	0
+45 mins.	0	0	0	0	1	3	0	4	2	0	2	4	0	2	0	2
Total Volume	0	0	0	0	7	6	0	13	6	0	6	12	0	4	6	10
% App. Total	0	0	0		53.8	46.2	0		50	0	50		0	40	60	
PHF	.000	.000	.000	.000	.438	.500	.000	.650	.750	.000	.750	.750	.000	.500	.500	.500

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 20



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:00 PM

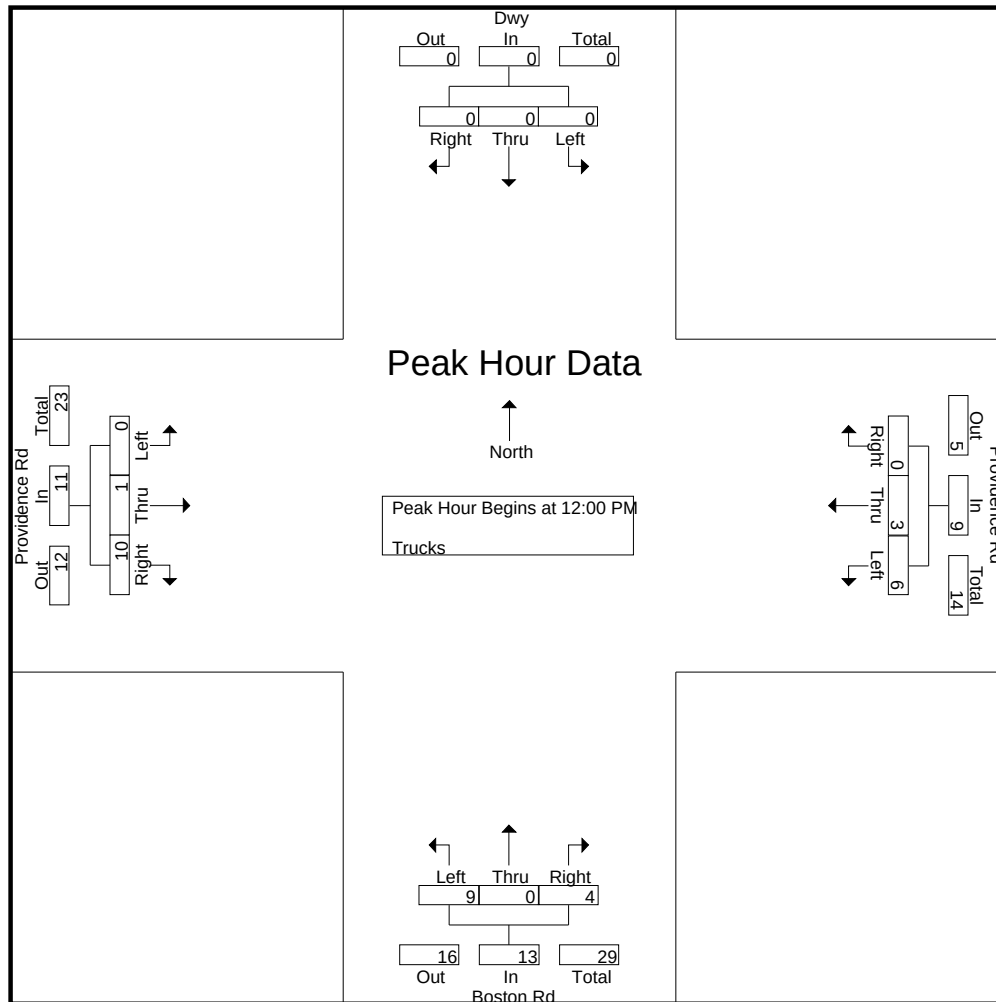
12:00 PM	0	0	0	0	0	1	0	1	2	0	0	2	0	0	3	3	6
12:15 PM	0	0	0	0	1	1	0	2	2	0	1	3	0	0	3	3	8
12:30 PM	0	0	0	0	0	1	0	1	3	0	2	5	0	0	2	2	8
12:45 PM	0	0	0	0	5	0	0	5	2	0	1	3	0	1	2	3	11
Total Volume	0	0	0	0	6	3	0	9	9	0	4	13	0	1	10	11	33
% App. Total	0	0	0	0	66.7	33.3	0		69.2	0	30.8		0	9.1	90.9		
PHF	.000	.000	.000	.000	.300	.750	.000	.450	.750	.000	.500	.650	.000	.250	.833	.917	.750

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 21



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

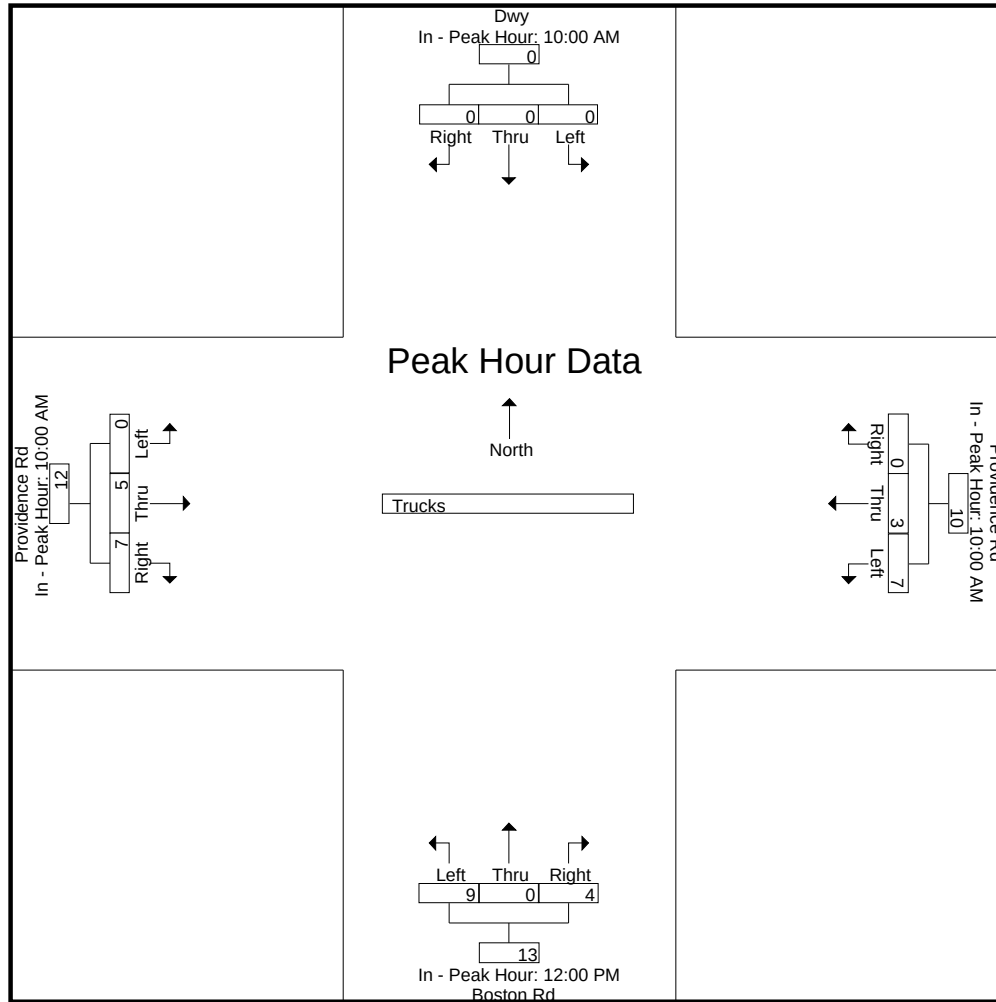
	10:00 AM				10:00 AM				12:00 PM				10:00 AM			
+0 mins.	0	0	0	0	2	1	0	3	2	0	0	2	0	2	3	5
+15 mins.	0	0	0	0	1	1	0	2	2	0	1	3	0	2	0	2
+30 mins.	0	0	0	0	2	1	0	3	3	0	2	5	0	1	3	4
+45 mins.	0	0	0	0	2	0	0	2	2	0	1	3	0	0	1	1
Total Volume	0	0	0	0	7	3	0	10	9	0	4	13	0	5	7	12
% App. Total	0	0	0		70	30	0		69.2	0	30.8		0	41.7	58.3	
PHF	.000	.000	.000	.000	.875	.750	.000	.833	.750	.000	.500	.650	.000	.625	.583	.600

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 22



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 02:15 PM

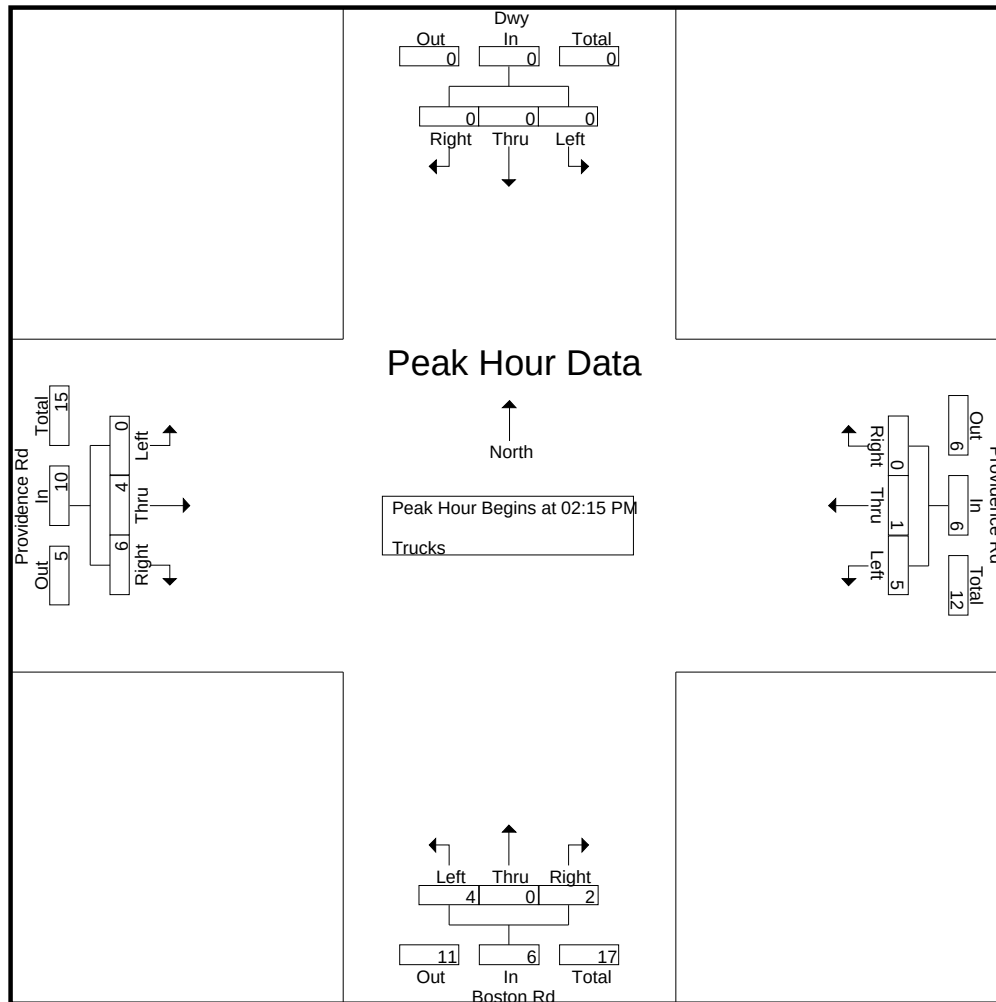
02:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	2	2	4	6
02:30 PM	0	0	0	0	1	1	0	2	1	0	0	1	0	0	1	1	4
02:45 PM	0	0	0	0	0	0	0	0	2	0	1	3	0	2	0	2	5
03:00 PM	0	0	0	0	3	0	0	3	1	0	0	1	0	0	3	3	7
Total Volume	0	0	0	0	5	1	0	6	4	0	2	6	0	4	6	10	22
% App. Total	0	0	0	0	83.3	16.7	0		66.7	0	33.3		0	40	60		
PHF	.000	.000	.000	.000	.417	.250	.000	.500	.500	.000	.500	.500	.000	.500	.500	.625	.786

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 23

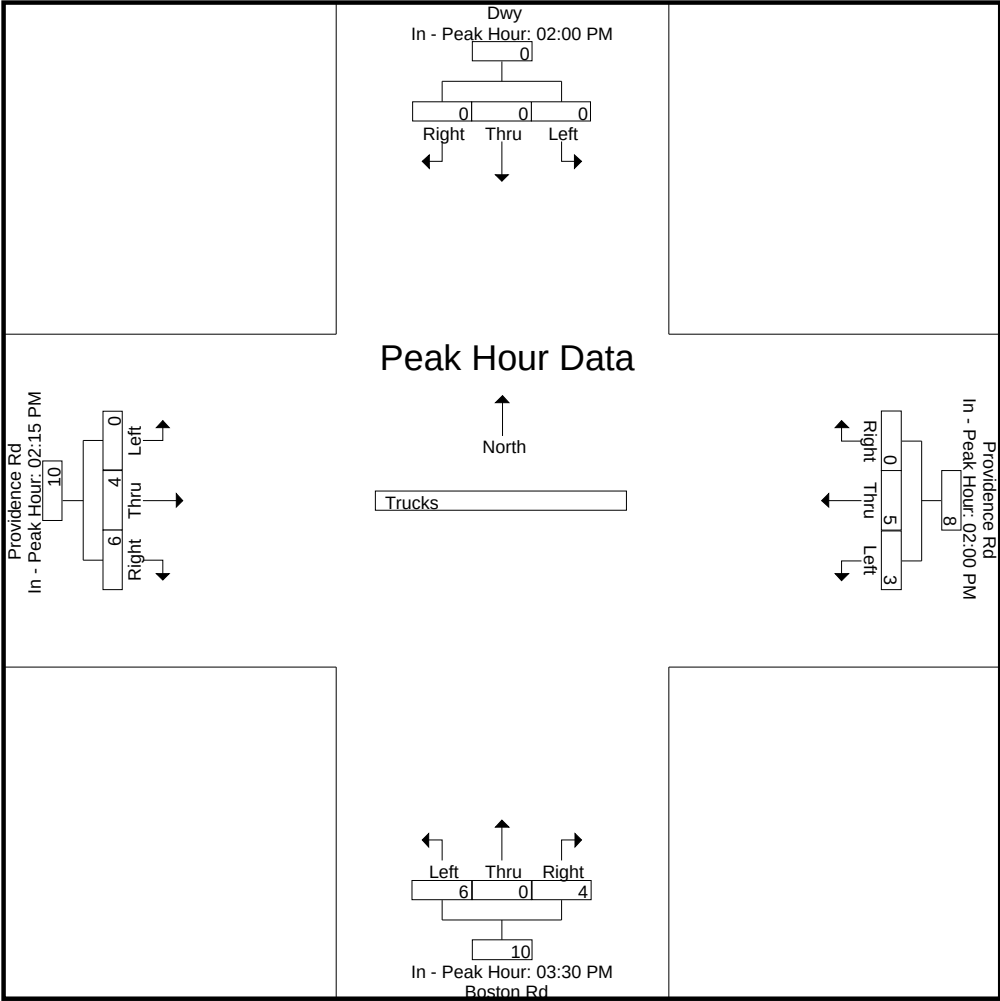


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:00 PM				02:00 PM				03:30 PM				02:15 PM			
+0 mins.	0	0	0	0	1	4	0	5	2	0	0	2	0	2	2	4
+15 mins.	0	0	0	0	1	0	0	1	2	0	2	4	0	0	1	1
+30 mins.	0	0	0	0	1	1	0	2	1	0	0	1	0	2	0	2
+45 mins.	0	0	0	0	0	0	0	0	1	0	2	3	0	0	3	3
Total Volume	0	0	0	0	3	5	0	8	6	0	4	10	0	4	6	10
% App. Total	0	0	0	0	37.5	62.5	0		60	0	40		0	40	60	
PHF	.000	.000	.000	.000	.750	.313	.000	.400	.750	.000	.500	.625	.000	.500	.500	.625

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 24



Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd

E/W Street : Providence Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

Page No : 25

Groups Printed- Bikes Peds

	Dwy From North				Providence Rd From East				Boston Rd From South				Providence Rd From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
06:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 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	1	0	0	1	0	0	0	0	0	1	1	2
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	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
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
10:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	2
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2	1	3
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 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	2	0	0	0	0	0	0	0	0	0	0	0	2	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
02:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2	2
02:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	4	4
03:00 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	3
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	5	5
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd

E/W Street : Providence Road

City/State : Sutton, MA

Weather : Clear

File Name : 21018004

Site Code : 21018004

Start Date : 10/7/2021

Page No : 26

Groups Printed- Bikes Peds

	Dwy From North				Providence Rd From East				Boston Rd From South				Providence Rd From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	1	3	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	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
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Grand Total	0	0	0	4	1	6	0	1	3	0	3	0	0	5	1	1	6	19	25
Apprch %	0	0	0		14.3	85.7	0		50	0	50		0	83.3	16.7				
Total %	0	0	0		5.3	31.6	0		15.8	0	15.8		0	26.3	5.3		24	76	

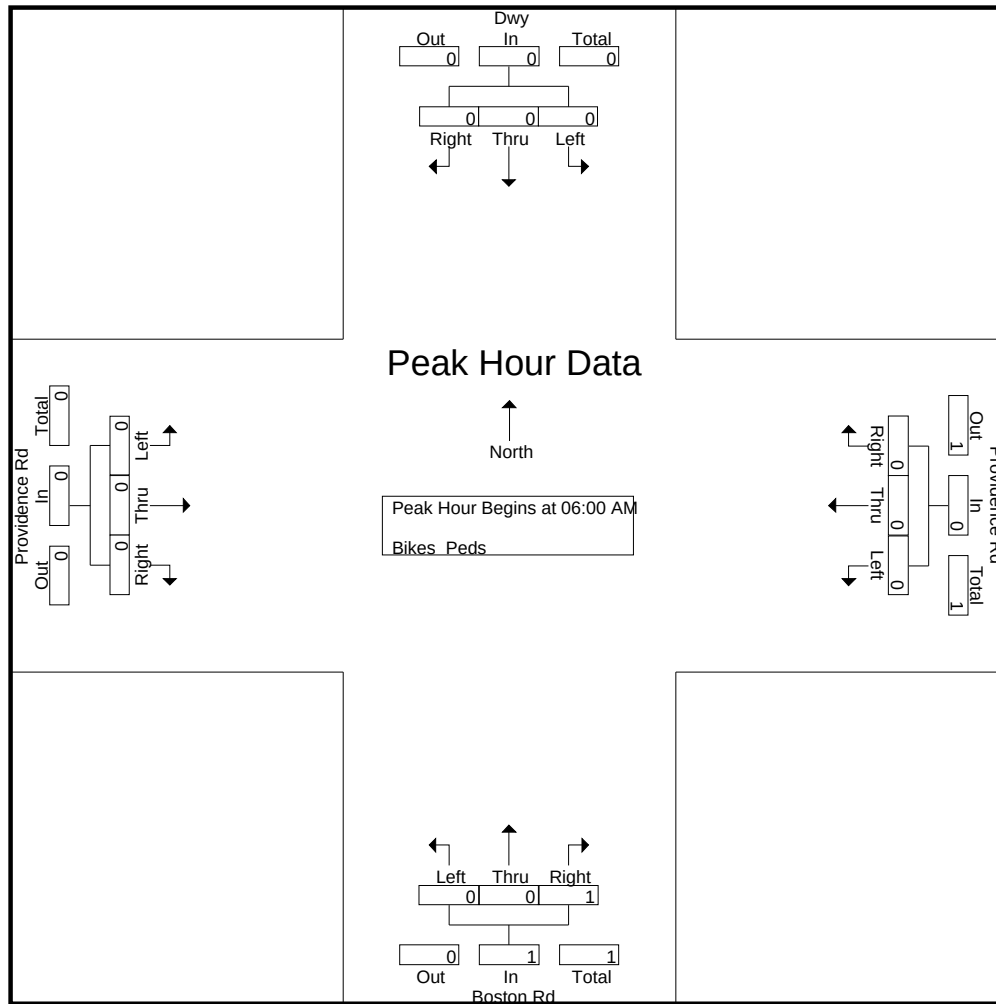
	Dwy From North				Providence Rd From East				Boston Rd From South				Providence Rd From West						
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total			Int. Total
Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 06:00 AM																			
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
06:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0			1
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0
06:45 AM	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	1	1	0	0	0	0			1
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0				
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000			.250

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 27



Peak Hour Analysis From 06:00 AM to 09:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	06:00 AM				06:00 AM				06:00 AM				06:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	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	1	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000

978-664-2565

Weather : Clear

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Peak Hour for Entire Intersection Begins at 10:30 AM

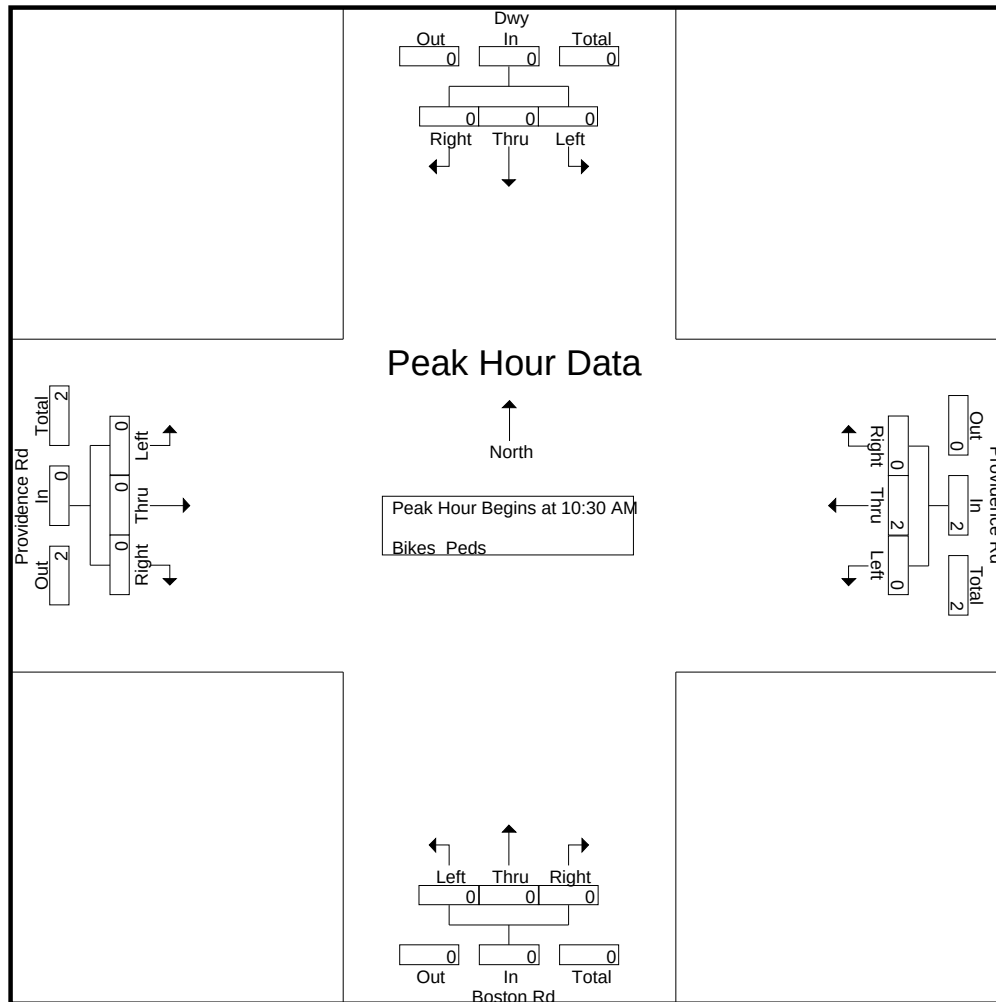
[illegible]

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 29



Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

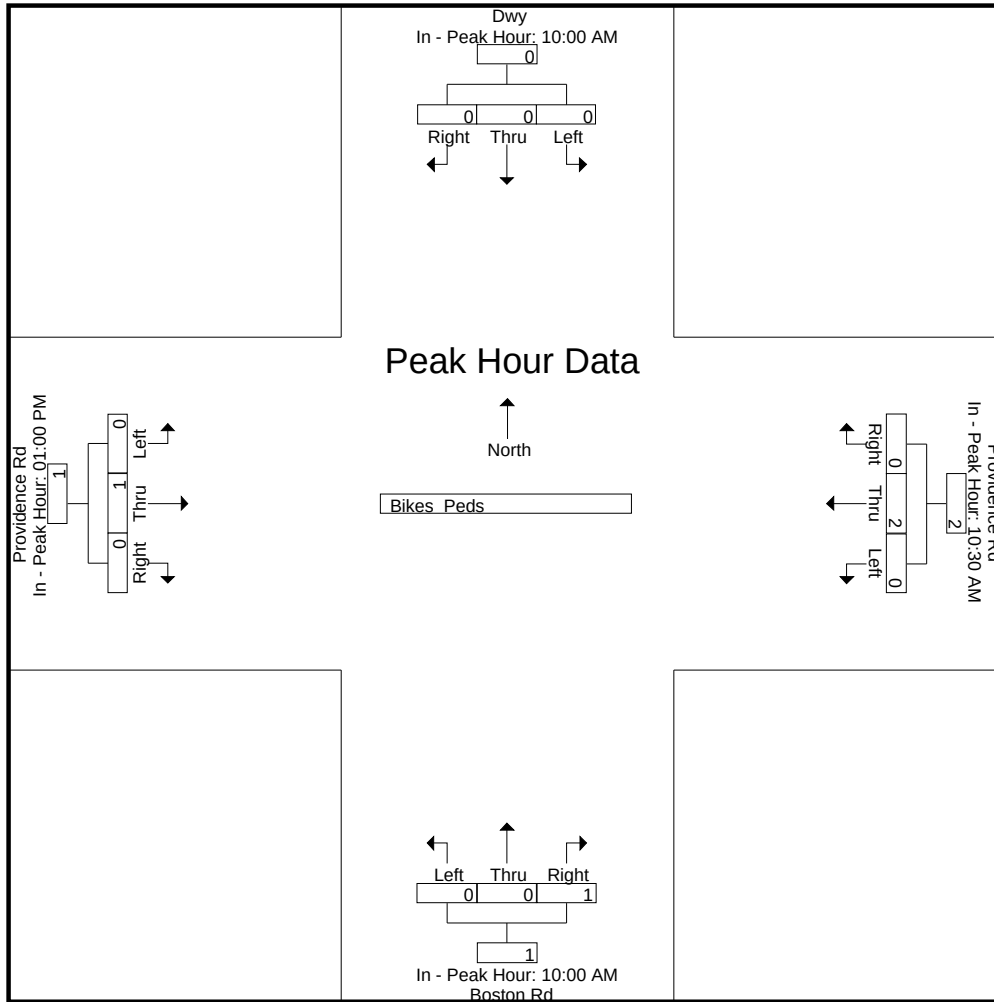
	10:00 AM				10:30 AM				10:00 AM				01:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	1	1	0	1	0	1
% App. Total	0	0	0	0	0	100	0	0	0	0	100	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.250	.250	.000	.250	.000	.250

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 30



Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 02:15 PM

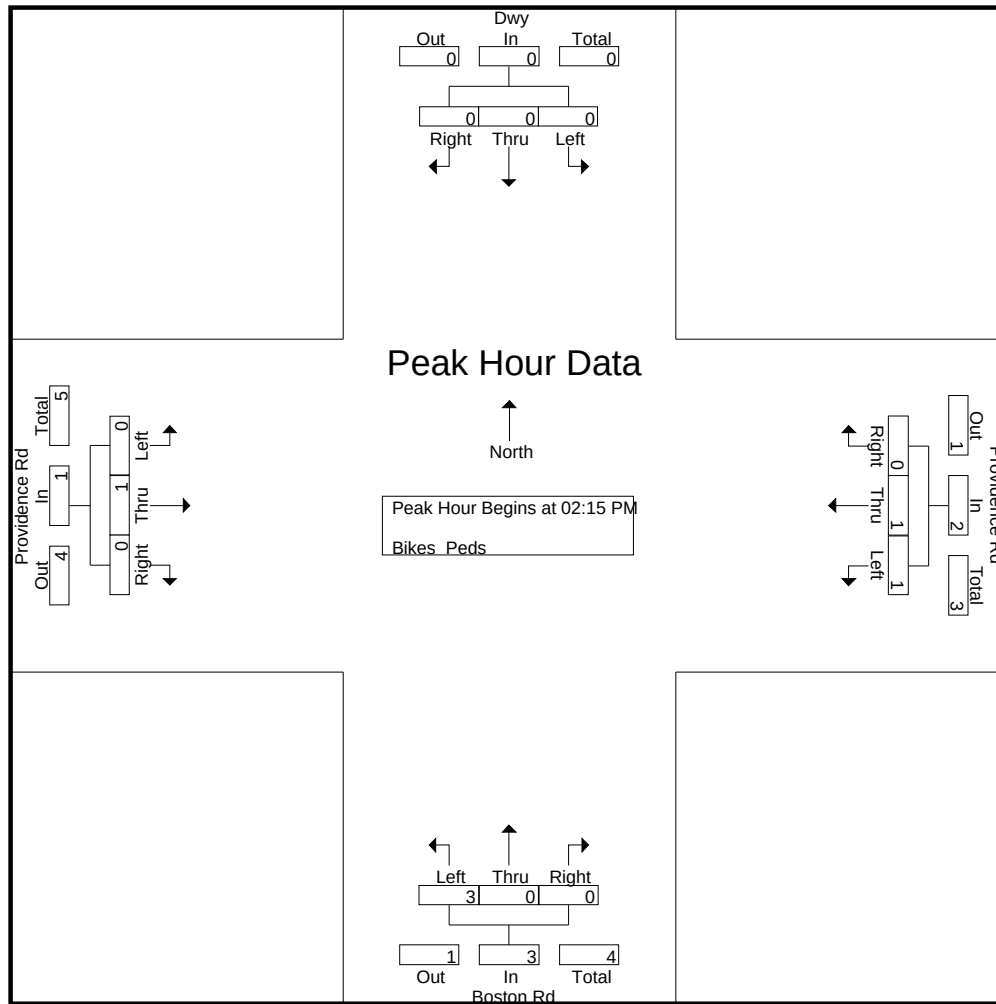
02:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	3
Total Volume	0	0	0	0	1	1	0	2	3	0	0	3	0	1	0	1	6
% App. Total	0	0	0	0	50	50	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.000	.250	.000	.250	.000	.250	.500

Accurate Counts

978-664-2565

N/S Street : Driveway / Boston Rd
 E/W Street : Providence Road
 City/State : Sutton, MA
 Weather : Clear

File Name : 21018004
 Site Code : 21018004
 Start Date : 10/7/2021
 Page No : 31

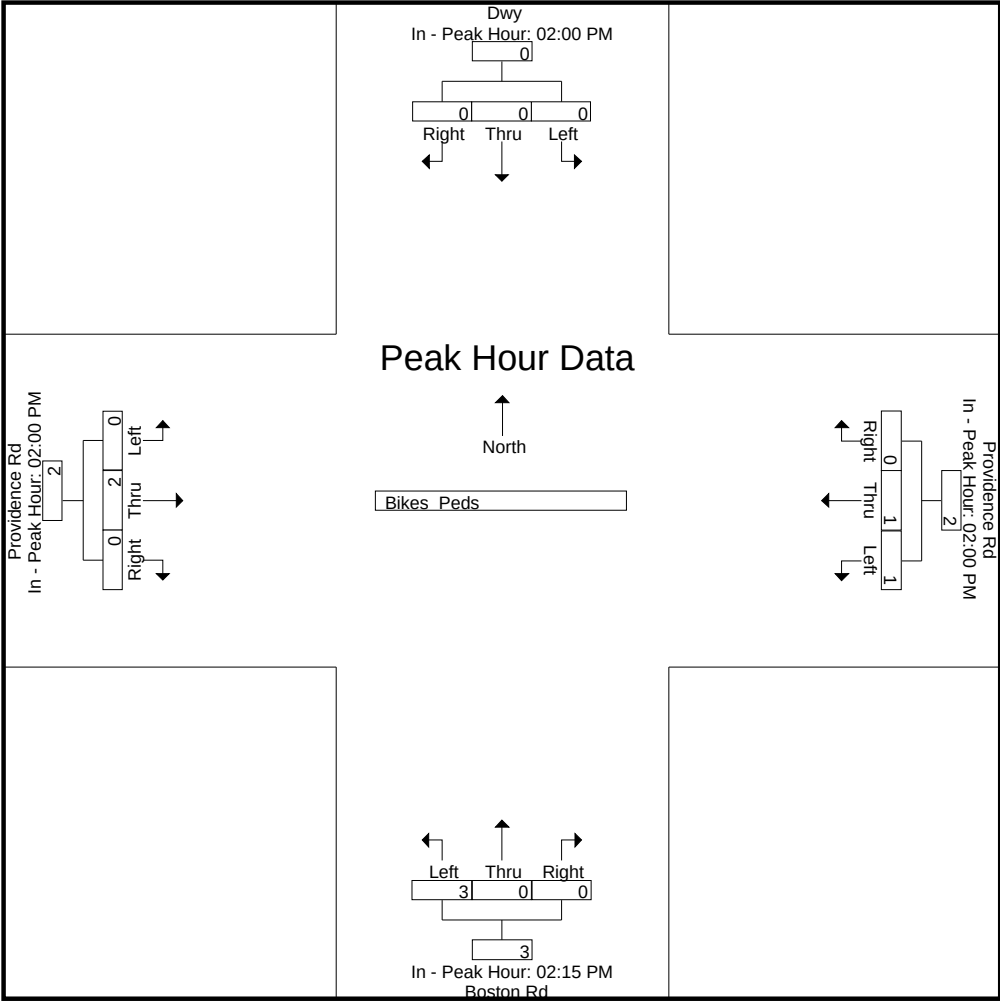


Peak Hour Analysis From 02:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:00 PM				02:00 PM				02:15 PM				02:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	3	0	0	3	0	2	0	2
% App. Total	0	0	0	0	50	50	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.000	.250	.000	.500	.000	.500

N/S Street : Driveway / Boston Rd
E/W Street : Providence Road
City/State : Sutton, MA
Weather : Clear

File Name : 21018004
Site Code : 21018004
Start Date : 10/7/2021
Page No : 32



Traffic Volume Adjustments

COVID-19 Adjustment Factors

AM Peak Hour
7:00-8:00 AM

Route 146/Boston Road

Roadway	TDMS Count Station ID	TDMS Count Year	TDMS Count Volume	TDMS Count Volume Adjusted (2019)	October 2021 Counts
Route 146 NB	3193	2014	1901	2154	1953
Route 146 SB	3193	2014	1124	1274	1427
Route 146 NB On-Ramp	R26536	2016	253	258	-
Route 146 SB Off Ramp	R26514	2016	137	141	-
Boston Road WB	236300	2017	472	473	489
Boston Road EB	236301	2017	248	249	232
Total				4549	4101
COVID-19 Adjustment Factor				1.11	

* TDMS counts were inflated using the MassDOT "Guidance on Traffic Count Data"

PM Peak Hour
4:15-5:15 PM

Route 146/Boston Road

Roadway	TDMS Count Station ID	TDMS Count Year	TDMS Count Volume	TDMS Count Volume Adjusted (2019)	October 2021 Counts
Route 146 NB	3193	2014	1502	1704	1836
Route 146 SB	3193	2014	1054	1196	2417
Route 146 NB On-Ramp	R26536	2016	156	160	-
Route 146 SB Off Ramp	R26514	2016	303	309	-
Boston Road WB	236300	2017	388	389	683
Boston Road EB	236301	2017	204	205	227
Total				3963	5163
COVID-19 Adjustment Factor				0.77	

* TDMS counts were inflated using the MassDOT "Guidance on Traffic Count Data"

Massachusetts Highway Department
Statewide Traffic Data Collection
2019 Weekday Seasonal Factors

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

Round off:

0-999 = 10

>1000 = 100

U = Urban

R = Rural

1 - Interstate

2 - Freeway and Expressway

3 - Other Principal Arterial

4 - Minor Arterial

5 - Major Collector

6 - Minor Collector

7 - Local Road and Street

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

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

Crash Data

Worcester & Providence Turnpike at Boston Road

Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Light Conditions	Manner of Collision	RMV Document Numbers	Road Surface Condition	Weather Conditions	X	Y	Latitude	Longitude
4788045	12/06/2019	Property damage only (none injured)	8:25 AM	2019	Daylight	Single vehicle crash	PW201935000625	Wet	Clear	180266.7019	879026.082	42.16142059	-71.73879199
4788042	12/01/2019	Property damage only (none injured)	6:00 PM	2019	Dark - lighted roadway	Sideswipe, same direction	PW201935000622	Snow	Snow	180266.7019	879026.082	42.16142059	-71.73879199
4780626	10/22/2019	Non-fatal injury	6:04 AM	2019	Dark - roadway not lighted	Rear-end	PR201930100140	Wet	Cloudy/Rain	180275.6405	879040.1251	42.16154724	-71.7386843
4764045	10/11/2019	Non-fatal injury	4:28 PM	2019	Daylight	Rear-end	PW201929600612	Wet	Cloudy/Rain	180266.7019	879026.082	42.16142059	-71.73879199
4758293	09/30/2019	Property damage only (none injured)	5:17 PM	2019	Daylight	Rear-end	PR201928100223	Dry	Clear	180275.6405	879040.1251	42.16154724	-71.7386843
4754854	08/17/2019	Non-fatal injury	10:43 AM	2019	Daylight	Rear-end	PW201927300434	Dry	Cloudy	180275.5769	879041.082	42.16155586	-71.73868511
4748019	09/10/2019	Property damage only (none injured)	3:50 PM	2019	Daylight	Rear-end	PW201925500302	Dry	Clear	180275.6405	879040.1251	42.16154724	-71.7386843
4732604	07/16/2019	Property damage only (none injured)	9:11 AM	2019	Daylight	Rear-end	PW201921700604		Clear	180275.5769	879041.082	42.16155586	-71.73868511
4729244	05/25/2019	Property damage only (none injured)	3:02 PM	2019	Daylight	Rear-end	PR201919600125		Clear	180275.6405	879040.1251	42.16154724	-71.7386843
4720082	06/21/2019	Property damage only (none injured)	10:49 PM	2019	Dark - lighted roadway	Sideswipe, same direction	PW201918500254	Dry	Clear	180275.5769	879041.082	42.16155586	-71.73868511
4694334	04/25/2019	Property damage only (none injured)	10:55 AM	2019	Daylight	Sideswipe, same direction	PW201911900691	Dry	Clear	180266.7657	879025.1251	42.16141197	-71.73879119
4692400	04/04/2019	Non-fatal injury	9:19 AM	2019	Daylight	Rear-end	PR201910700106	Dry	Clear	180266.7657	879025.1251	42.16141197	-71.73879119
4690116	04/13/2019	Non-fatal injury	3:38 PM	2019	Daylight	Angle	PW201910800340	Dry	Clear	180266.7019	879026.082	42.16142059	-71.73879199
4686909	02/18/2019	Property damage only (none injured)	1:16 PM	2019	Daylight	Rear-end	PR201905800132	Wet	Snow/Rain	180266.7657	879025.1251	42.16141197	-71.73879119
4678471	02/13/2019	Non-fatal injury	7:25 AM	2019	Daylight	Rear-end	PR201905800249	Ice	Sleet, hail (freezing rain or drizzle)/Snow	180266.7655	879025.1251	42.16141197	-71.73879119
4674645	03/02/2019	Non-fatal injury	5:58 PM	2019	Daylight	Rear-end	PW201907100445	Dry	Cloudy	180275.5769	879041.082	42.16155586	-71.73868511
4654599	12/17/2018	Property damage only (none injured)	1:56 PM	2018	Daylight	Rear-end	PR201835800242	Dry	Cloudy	180275.6407	879040.1251	42.16154724	-71.7386843
4647471	11/17/2018	Non-fatal injury	9:28 PM	2018	Dark - lighted roadway	Angle	PR201833800238	Clear	Clear	180275.6407	879040.1251	42.16154724	-71.7386843
4645210	12/18/2018	Property damage only (none injured)	8:30 AM	2018	Daylight	Rear-end	PW201900401229	Dry	Clear	180219.799	879061.6476	42.1617396	-71.73936077
4642724	12/06/2018	Property damage only (none injured)	7:23 AM	2018	Daylight	Sideswipe, same direction	PW201836500643	Dry	Clear	180275.5769	879041.082	42.16155586	-71.73868511
4642266	10/15/2018	Property damage only (none injured)	11:28 AM	2018	Daylight	Rear-end	PR201835800112	Wet	Cloudy/Rain	180275.6407	879040.1251	42.16154724	-71.7386843
4642069	12/01/2018	Property damage only (none injured)	6:05 PM	2018	Dark - lighted roadway	Rear-end	PW201836200425	Dry	Clear	180266.7019	879026.082	42.16142059	-71.73879199
4633867	10/12/2018	Property damage only (none injured)	11:24 AM	2018	Daylight	Rear-end	PR201829600145	Dry	Cloudy/Clear	180275.5769	879041.082	42.16155586	-71.73868511
4627423	11/15/2018	Property damage only (none injured)	7:18 PM	2018	Dark - lighted roadway	Rear-end	PW201833100369	Snow	Snow	180266.7019	879026.082	42.16142059	-71.73879199
4623140	10/13/2018	Property damage only (none injured)	1:17 PM	2018	Daylight	Rear-end	PR201831200528	Dry	Clear	180275.6407	879040.1251	42.16154724	-71.7386843
4621522	10/28/2018	Non-fatal injury	6:35 PM	2018	Dark - lighted roadway	Rear-end	PW201831900513	Dry	Clear	180275.5769	879041.082	42.16155586	-71.73868511
4619718	10/31/2018	Property damage only (none injured)	6:48 PM	2018	Dusk	Sideswipe, same direction	PW201831600626	Dry	Clear	180266.7019	879026.082	42.16142059	-71.73879199
4619714	10/19/2018	Property damage only (none injured)	5:42 PM	2018	Daylight	Rear-end	PW201831600622	Dry	Clear	180236.3188	879049.1209	42.16162724	-71.73916044
4608665	09/27/2018	Non-fatal injury	6:31 AM	2018	Daylight	Angle	PW201828801418	Dry	Clear	180275.5769	879041.082	42.16155586	-71.73868511
4607103	09/16/2018	Property damage only (none injured)	10:20 AM	2018	Daylight	Rear-end	PR201827500136	Dry	Clear	180275.5769	879041.082	42.16155586	-71.73868511
4586125	07/15/2018	Property damage only (none injured)	9:05 PM	2018	Dark - lighted roadway	Rear-end	PW201823400106	Dry	Clear	180275.6407	879040.1251	42.16154724	-71.7386843
4583497	08/05/2018	Non-fatal injury	5:45 PM	2018	Daylight	Rear-end	PW201823400384	Dry	Clear	180266.7019	879026.082	42.16142059	-71.73879199
4578210	07/29/2018	Property damage only (none injured)	10:30 PM	2018	Dark - lighted roadway	Rear-end	PR201821800318	Dry	Cloudy	180275.6407	879040.1251	42.16154724	-71.7386843
4575161	06/18/2018	Property damage only (none injured)	10:09 AM	2018	Daylight	Rear-end	PR201821100104	Dry	Clear	180275.6407	879040.1251	42.16154724	-71.7386843
4569733	06/21/2018	Property damage only (none injured)	1:44 PM	2018	Dark - lighted roadway	Single vehicle crash	PR201819800619	Dry	Clear	180345.8962	878986.7696	42.16106865	-71.73783234
4553144	05/23/2018	Property damage only (none injured)	2:06 PM	2018	Daylight	Rear-end	PR201816401122	Dry	Clear	180275.6407	879040.1251	42.16154724	-71.7386843
4536315	04/19/2018	Property damage only (none injured)	3:04 PM	2018	Daylight	Rear-end	PR201811300135	Wet	Cloudy	180275.6407	879040.1251	42.16154724	-71.7386843
4532340	04/10/2018	Property damage only (none injured)	2:55 PM	2018	Daylight	Angle	PW201812200334	Dry	Clear	180264.7237	879027.5818	42.16143404	-71.73881598
4520693	03/31/2018	Non-fatal injury	10:30 AM	2018	Daylight	Angle	PW201809200642	Dry	Clear	180266.7019	879026.082	42.16142059	-71.73879199
4517859	03/18/2018	Property damage only (none injured)	1:00 AM	2018	Dark - lighted roadway	Single vehicle crash	PW201808500461	Dry	Clear	180212.9354	879066.8521	42.16178629	-71.739444
4516064	01/07/2018	Property damage only (none injured)	11:50 AM	2018	Daylight	Rear-end	PR201806800222	Dry	Clear/Unknown	180275.6407	879040.1251	42.16154724	-71.7386843
4502931	12/25/2017	Property damage only (none injured)	10:24 AM	2017	Daylight	Rear-end	PR201803200307	Snow	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4500326	12/14/2017	Property damage only (none injured)	6:54 PM	2017	Dark - roadway not lighted	Rear-end	PR201801200323	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4500324	11/25/2017	Property damage only (none injured)	9:05 PM	2017	Dark - lighted roadway	Single vehicle crash	PR201801200321	Dry	Clear/Unknown	180275.6406	879040.1253	42.16154613	-71.73867995
4495371	12/06/2017	Property damage only (none injured)	2:07 PM	2017	Daylight	Rear-end	PR201736000215 / PR201803200244	Dry	Clear	180311.839	879012.1957	42.16129494	-71.73824337
4482362	12/16/2017	Property damage only (none injured)	1:25 AM	2017	Dark - lighted roadway	Rear-end	PW201735900428	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4454704	10/24/2017	Non-fatal injury	4:12 AM	2017	Dark - roadway not lighted	Single vehicle crash	PW201732000118	Wet	Rain	180266.7659	879025.1249	42.16141085	-71.73878835
4443924	10/03/2017	Property damage only (none injured)	7:10 AM	2017	Daylight	Rear-end	PW201729900920	Dry	Cloudy	180266.3428	879024.2074	42.1614037	-71.73879627
4420355	09/03/2017	Property damage only (none injured)	5:00 PM	2017	Dusk	Rear-end	PW201725600917	Wet	Rain	180244.3819	879042.0981	42.16156422	-71.73906263
4419398	08/26/2017	Property damage only (none injured)	5:45 AM	2017	Dark - lighted roadway	Single vehicle crash	PR201724900345	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4412665	08/06/2017	Non-fatal injury	2:40 PM	2017	Daylight	Sideswipe, same direction	PW201724001311	Dry	Clear	180217.4335	879062.5325	42.16174751	-71.73938942
4407428	08/05/2017	Property damage only (none injured)	12:50 PM	2017	Daylight	Rear-end	PW201722701525	Wet	Rain	180267.1424	879024.8664	42.16140965	-71.73878662
4378167	06/07/2017	Non-fatal injury	5:55 PM	2017	Daylight	Rear-end	PW201717000819	Dry	Clear	180266.4651	879024.4727	42.16140609	-71.7387948
4358511	04/25/2017	Property damage only (none injured)	3:10 PM	2017	Daylight	Angle	PW201712400158	Wet	Cloudy/Rain	180275.6407	879040.1251	42.16154613	-71.73867995
4347930	02/16/2017	Non-fatal injury	9:20 AM	2017	Daylight	Rear-end	PW201709600725	Dry	Cloudy	180275.6406	879040.1253	42.16154613	-71.73867995
4344209	01/24/2017	Non-fatal injury	3:18 AM	2017	Dark - lighted roadway	Angle	PR201707500343	Snow	Cloudy/Sleet, hail (freezing rain or drizzle)	180266.1817	879025.5679	42.16141983	-71.73880048
4341780	02/01/2017	Property damage only (none injured)	5:31 PM	2017	Dark - roadway not lighted	Rear-end	PR201704700330	Dry	Clear	180266.4887	879024.524	42.16141083	-71.73880045
4334699	03/02/2017	Non-fatal injury	1:20 AM	2017	Dark - roadway not lighted	Sideswipe, same direction	PW201706700269	Dry	Clear	180266.7659	879025.1249	42.16141197	-71.73879119
4324757	01/07/2017	Property damage only (none injured)	1:30 PM	2017	Daylight	Rear-end	PW201703900753	Snow	Snow	180266.7657	879025.1251	42.16141085	-71.73878835
4323849	01/07/2017	Property damage only (none injured)	1:55 PM	2017	Daylight	Single vehicle crash	PW201704401218	Snow	Snow	180275.6407	879040.1251	42.16154613	-71.73867995
4322595	12/11/2016	Non-fatal injury	10:22 PM	2016	Dark - unknown roadway lighting	Single vehicle crash	PW201703902165	Wet	Rain	180266.7657	879025.1251	42.16141197	-71.73879119
4319644	12/20/2016	Property damage only (none injured)	2:15 AM	2016	Dark - lighted roadway	Single vehicle crash	PR201701000147	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4312175	11/01/2016	Property damage only (none injured)	11:05 AM	2016	Daylight	Rear-end	PW201701902898	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4297273	11/28/2016	Property damage only (none injured)	2:29 PM	2016	Daylight	Angle	PR201634100337	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4294465	11/20/2016	Property damage only (none injured)	9:28 AM	2016	Daylight	Unknown	PR201633600236	Wet	Cloudy	180275.6407	879040.1251	42.16154613	-71.73867995

Worcester & Providence Turnpike at Boston Road Continued

4288661	10/27/2016	Property damage only (none injured)	9:03 AM	2016	Daylight	Single vehicle crash	PW201633000547	Dry	Not Reported	180275.6407	879040.1251	42.16154613	-71.73867995
4284835	10/10/2016	Non-fatal injury	2:03 PM	2016	Daylight	Rear-end	PR201631500211	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4266802	10/14/2016	Property damage only (none injured)	7:30 PM	2016	Dark - lighted roadway	Rear-end	PW201629500259	Dry	Clear	180282.5769	879034.7735	42.16150129	-71.73859507
4265073	09/09/2016	Property damage only (none injured)	6:00 PM	2016	Daylight	Rear-end	PR201626700122	Dry	Clear	180257.0624	879006.3629	42.16123954	-71.73890871
4259816	10/05/2016	Non-fatal injury	10:37 AM	2016	Daylight	Rear-end	PW201628500751	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4253961	07/29/2016	Property damage only (none injured)	9:27 AM	2016	Daylight	Rear-end	PR201627000239	Wet	Rain	180275.6407	879040.1251	42.16154613	-71.73867995
4251115	09/08/2016	Property damage only (none injured)	10:20 AM	2016	Daylight	Rear-end	PR201626000223	Dry	Cloudy	180275.6407	879040.1251	42.16154613	-71.73867995
4251047	09/11/2016	Property damage only (none injured)	2:35 AM	2016	Dark - roadway not lighted	Rear-end	PW201626600339	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4245489	09/06/2016	Non-fatal injury	4:44 PM	2016	Daylight	Rear-end	PW201625600627	Dry	Clear	180307.9554	879015.1922	42.16132185	-71.73829187
4238787	08/12/2016	Property damage only (none injured)	11:15 AM	2016	Daylight	Rear-end	PW201624300736	Dry	Not Reported	180275.6406	879040.1253	42.16154613	-71.73867995
4233195	06/14/2016	Property damage only (none injured)	4:33 PM	2016	Daylight	Sideswipe, same direction	PR201622100613	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4233194	06/11/2016	Property damage only (none injured)	1:32 PM	2016	Daylight	Rear-end	PR201622100612	Wet	Rain	180275.6406	879040.1253	42.16154613	-71.73867995
4232796	07/11/2016	Non-fatal injury	8:10 AM	2016	Daylight	Rear-end	PR201622100608	Dry	Cloudy	180275.6407	879040.1251	42.16154613	-71.73867995
4229000	08/02/2016	Non-fatal injury	2:40 PM	2016	Daylight	Rear-end	PW201622201029	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4222204	06/09/2016	Property damage only (none injured)	5:56 PM	2016	Daylight	Rear-end	PW201620401584	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4204867	06/05/2016	Property damage only (none injured)	5:00 PM	2016	Daylight	Rear-end	PW201616700124	Wet	Cloudy/Rain	180275.6407	879040.1251	42.16154613	-71.73867995
4204759	05/25/2016	Property damage only (none injured)	7:10 AM	2016	Daylight	Sideswipe, same direction	PW201616201033	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4203552	06/06/2016	Property damage only (none injured)	4:25 PM	2016	Daylight	Rear-end	PW201616500322	Dry	Clear	180244.5431	879041.9758	42.16156335	-71.73905515
4202489	05/28/2016	Property damage only (none injured)	3:40 PM	2016	Daylight	Sideswipe, same direction	PW201616201036	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4191473	05/16/2016	Non-fatal injury	2:50 PM	2016	Daylight	Rear-end	PW201613900621	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4191345	04/04/2016	Property damage only (none injured)	8:40 AM	2016	Daylight	Rear-end	PR201611600118	Snow	Cloudy/Snow	180275.6407	879040.1251	42.16154613	-71.73867995
4176180	04/09/2016	Property damage only (none injured)	2:42 PM	2016	Daylight	Rear-end	PW201610500176	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4151712	11/09/2015	Property damage only (none injured)	5:36 PM	2015	Dawn	Rear-end	PR201533600523	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4144306	10/28/2015	Property damage only (none injured)	8:14 AM	2015	Daylight	Rear-end	PR201535100121	Dry	Cloudy	180275.6406	879040.1253	42.16154613	-71.73867995
4140070	01/17/2016	Property damage only (none injured)	10:25 PM	2016	Dark - lighted roadway	Rear-end	PW201602600405	Snow	Snow/Sleet, hail (freezing rain or drizzle)	180266.7657	879025.1251	42.16141085	-71.73878835
4139961	01/14/2016	Property damage only (none injured)	7:24 AM	2016	Daylight	Rear-end	PR201601100615	Wet	Clear	180299.773	879021.5054	42.16138467	-71.73838892
4119935	11/24/2015	Non-fatal injury	9:30 AM	2015	Daylight	Rear-end	PW201534300554	Dry	Clear	180275.6411	879040.1249	42.16154613	-71.73867995
4116669	10/01/2015	Property damage only (none injured)	3:01 AM	2015	Dark - lighted roadway	Rear-end	PR201532401141	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4112945	11/20/2015	Property damage only (none injured)	7:23 AM	2015	Daylight	Sideswipe, same direction	PW201532700207	Wet	Not Reported	180266.7657	879025.1251	42.16141085	-71.73878835
4108524	11/07/2015	Property damage only (none injured)	5:17 PM	2015	Dark - lighted roadway	Angle	PW201531600221	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4102569	10/12/2015	Non-fatal injury	2:28 PM	2015	Daylight	Angle	PR201530300148	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4089875	09/21/2015	Property damage only (none injured)	1:55 PM	2015	Daylight	Rear-end	PW201527200436	Dry	Clear	180266.7659	879025.1249	42.16141085	-71.73878835
4073562	07/31/2015	Property damage only (none injured)	7:01 AM	2015	Daylight	Rear-end	PW201522900220	Dry	Clear	180275.6407	879040.1251	42.16154613	-71.73867995
4071746	07/28/2015	Property damage only (none injured)	12:16 PM	2015	Daylight	Sideswipe, same direction	PW201522300524	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4071079	05/13/2015	Property damage only (none injured)	6:36 AM	2015	Daylight	Rear-end	PR201516100203	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4061685	05/20/2015	Property damage only (none injured)	5:10 PM	2015	Dusk	Rear-end	PW201519401915	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4059481	07/02/2015	Property damage only (none injured)	6:15 PM	2015	Daylight	Rear-end	PW201519402121	Dry	Clear	180305.5402	879017.0556	42.16133981	-71.73831614
4052598	03/28/2015	Property damage only (none injured)	4:57 PM	2015	Daylight	Rear-end	PR201511200111	Wet	Rain	180266.7657	879025.1251	42.16141085	-71.73878835
4045009	05/21/2015	Property damage only (none injured)	8:20 AM	2015	Daylight	Rear-end	PW201514700401	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
4039611	05/05/2015	Property damage only (none injured)	2:10 PM	2015	Daylight	Rear-end	PW201512800313	Dry	Clear	180275.6406	879040.1253	42.16154613	-71.73867995
4022857	03/20/2015	Property damage only (none injured)	9:15 AM	2015	Daylight	Rear-end	PW201508201307	Dry	Clear	180266.7657	879025.1251	42.16141085	-71.73878835
3994660	01/13/2015	Property damage only (none injured)	8:10 AM	2015	Daylight	Sideswipe, same direction	PW201501500309	Dry	Clear	180275.6411	879040.1249	42.16154613	-71.73867995
4761507	07/28/2019	Non-fatal injury	6:21 AM	2019	Daylight	Rear-end	PR201929000104	Dry	Clear	180275.6405	879040.1251	42.16154724	-71.7386843

Data Level:
Query Type:
Criteria:

Boston Road at Dudley Road at Pleasant Valley Road

Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Light Conditions	Manner of Collision	RMV Document Numbers	Road Surface Condition	Weather Conditions	X	Y	Latitude	Longitude
4043467	05/02/2015	Property damage only (none injured)	5:43 PM	2015	Daylight	Angle	PR201513900150	Dry	Clear	180452.656	879157.8749	42.16261293	-71.73654204
4096080	10/01/2015	Property damage only (none injured)	6:55 PM	2015	Dark - lighted roadway	Angle	PR201521900250	Dry	Cloudy	180488.2344	879174.5001	42.16276685	-71.73611907
4212484	06/03/2016	Property damage only (none injured)	7:42 PM	2016	Daylight	Angle	PR201616900147	Dry	Cloudy	180488.2344	879174.5001	42.16276685	-71.73611907
4243992	07/27/2016	Non-fatal injury	12:39 PM	2016	Daylight	Angle	PR201624300924	Dry	Clear	180488.2344	879174.5001	42.16276685	-71.73611907
4307910	12/21/2016	Property damage only (none injured)	5:38 PM	2016	Dark - roadway not lighted	Sideswipe, same direction	PR201700500921	Dry	Clear	180452.656	879157.8749	42.16261293	-71.73654204
4358379	03/17/2017	Property damage only (none injured)	2:54 PM	2017	Daylight	Angle	PR201712100423	Dry	Clear	180488.2344	879174.5001	42.16276685	-71.73611907
4386757	06/01/2017	Non-fatal injury	7:29 PM	2017	Daylight	Angle	PR201717800223	Dry	Clear	180452.656	879157.8749	42.16261293	-71.73654204
4509763	01/27/2018	Property damage only (none injured)	1:25 PM	2018	Daylight	Angle	PR201804000841	Dry	Clear	180452.656	879157.8749	42.16261179	-71.7365462
4754484	09/13/2019	Property damage only (none injured)	4:55 PM	2019	Daylight	Angle	PR201926900122	Dry	Clear	180452.656	879157.8749	42.16261179	-71.7365462

Data Level:
Query Type:
Criteria:

Boston Road at Galaxy Pass

Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Light Conditions	Manner of Collision	RMV Document Numbers	Road Surface Condition	Weather Conditions	X	Y	Latitude	Longitude
4406381	07/06/2017	Property damage only (none injured)	5:00:00 PM	2017	Daylight	Sideswipe, same direction	PR201721300224	Dry	Clear	180544.5548	879201.3432	42.16300235	-71.73543018
4413534	07/10/2017	Property damage only (none injured)	3:36:00 PM	2017	Daylight	Angle	PR201722800121	Dry	Clear	180533.6054	879195.7852	42.16295706	-71.73556312
4516088	02/27/2018	Property damage only (none injured)	2:51:00 AM	2018	Dark - lighted roadway	Single vehicle crash	PR201806800241	Dry	Clear	180531.0278	879194.5449	42.16294389	-71.73559904
4522082	03/20/2018	Property damage only (none injured)	5:56:00 AM	2018	Dark - lighted roadway	Sideswipe, opposite direction	PR201809300105	Dry	Clear	180521.7293	879190.0708	42.16290338	-71.73571141
4674907	11/28/2018	Property damage only (none injured)	4:48:00 PM	2018	Dark - lighted roadway	Angle	PR201905900127	Dry	Clear	180526.9092	879193.5508	42.16293484	-71.73564885
4686910	02/13/2019	Property damage only (none injured)	5:25:00 PM	2019	Daylight	Sideswipe, same direction	PR201905800133	Dry	Cloudy/Clear	180552.9575	879206.9854	42.16305644	-71.73533408
4780084	10/17/2019	Non-fatal injury	10:41:00 AM	2019	Daylight	Angle	PR201930100139	Wet	Rain/Cloudy	180526.9727	879192.5938	42.16292622	-71.73564805
4806086	12/19/2019	Non-fatal injury	5:57:00 PM	2019	Dark - lighted roadway	Angle	PR202001000217	Dry	Clear	180526.9727	879192.5938	42.16292622	-71.73564805

Data Level:
Query Type:
Criteria:

Boston Road at Unified Parkway

Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Light Conditions	Manner of Collision	RMV Document Numbers	Road Surface Condition	Weather Conditions	X	Y	Latitude	Longitude
4447422	09/23/2017	Property damage only (none injured)	1:09:00 PM	2017	Daylight	Rear-end	PR201729600119	Dry	Clear	180732.4902	879364.336	42.16447448	-71.73317264
4614771	08/07/2018	Property damage only (none injured)	7:57:00 AM	2018	Daylight	Single vehicle crash	PR201828500145	Dry	Clear	180733.2954	879364.9553	42.16448312	-71.733157

Data Level:
Query Type:
Criteria:

Boston Road at Providence Road

Crash Number	Crash Date	Crash Severity	Crash Time	Crash Year	Light Conditions	Manner of Collision	RMV Document Numbers	Road Surface Condition	Weather Conditions	X	Y	Latitude	Longitude
4191384	03/28/2016	Property damage only (none injured)	7:38:00 AM	2016	Daylight	Angle	PR201611600134	Wet	Rain	181615.7342	880516.9374	42.1748763	-71.72251132
4686911	02/18/2019	Property damage only (none injured)	1:24:00 PM	2019	Daylight	Rear-end	PR201905800134	Wet	Snow	181615.7342	880516.9374	42.17487573	-71.72251454

Data Level:
Query Type:
Criteria:



INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sutton COUNT DATE : 10/7/2021

DISTRICT : 3 UNSIGNALIZED :

x

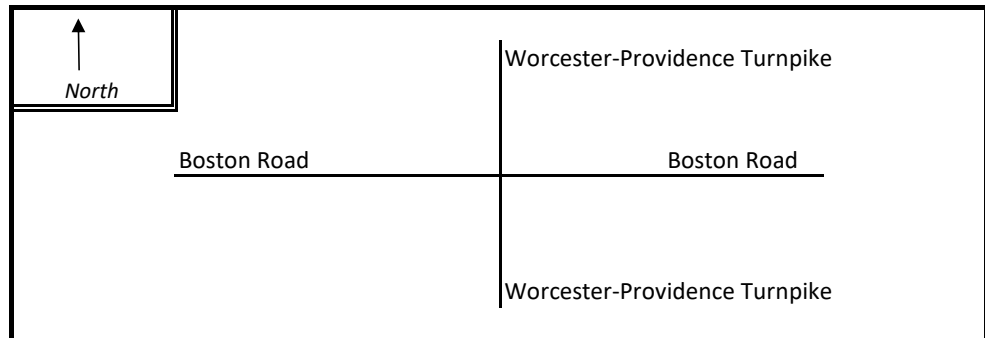
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~ INTERSECTION DATA ~

NS Street Worcester-Providence Turnpike

EW Street Boston Road

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4		Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	1,836	2,417	227	683		5,163

" K " FACTOR :

0.090

INTERSECTION ADT (V) =
TOTAL DAILY APPROACH VOLUME :

57,367

TOTAL # OF CRASHES :

108

OF YEARS :

5

AVERAGE # OF CRASHES PER
YEAR (A) :

21.60

CRASH RATE CALCULATION :

1.03

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

Comments : MassDOT Accident Data (2015-2019)
Project Title & Date: 15047.00 Unified Sutton

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sutton COUNT DATE : 10/7/2021

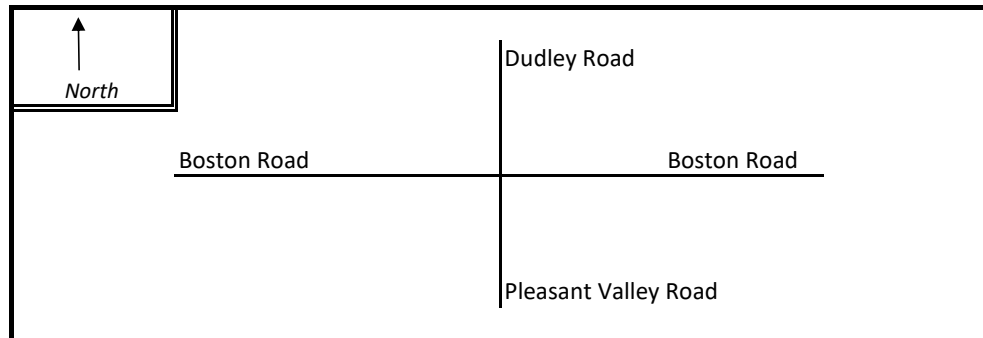
DISTRICT : 3 UNSIGNALIZED : SIGNALIZED : 0.89

~ INTERSECTION DATA ~

NS Street Dudley Road

EW Street Boston Road

INTERSECTION
DIAGRAM
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (AM/PM) :	148	72	378	617		1,215

" K " FACTOR :

0.090

INTERSECTION ADT (V) =
TOTAL DAILY APPROACH VOLUME :

13,500

TOTAL # OF CRASHES :

9

OF YEARS :

5

AVERAGE # OF CRASHES PER
YEAR (A) :

1.80

CRASH RATE CALCULATION :

0.37

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

Comments : MassDOT Accident Data (2015-2019)
 Project Title & Date: 15047.00 Unified Sutton



INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sutton COUNT DATE : 10/7/2021

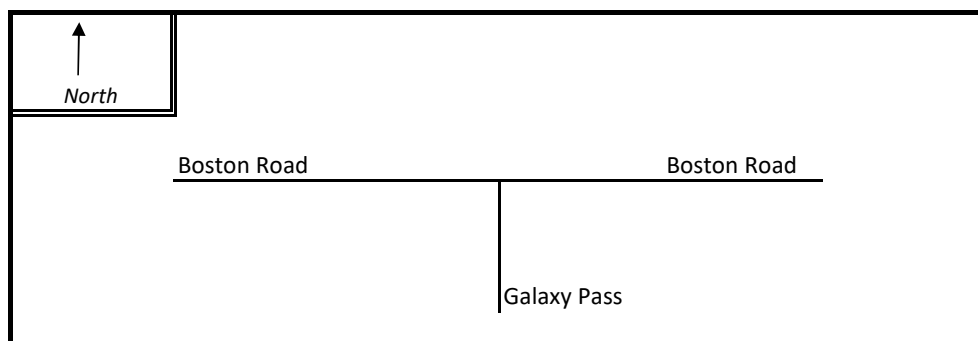
DISTRICT : 3 UNSIGNALIZED : SIGNALIZED : 0.89

~ INTERSECTION DATA ~

NS Street Galaxy Pass

EW Street Boston Road

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	307	468	489			1,264

" K " FACTOR :

0.090

INTERSECTION ADT (V) =
TOTAL DAILY APPROACH VOLUME :

14,044

TOTAL # OF CRASHES :

8

OF YEARS :

5

AVERAGE # OF CRASHES PER
YEAR (A) :

1.60

CRASH RATE CALCULATION :

0.31

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

Comments : MassDOT Accident Data (2015-2019)
Project Title & Date: 15047.00 Unified Sutton

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sutton COUNT DATE : 10/7/2021

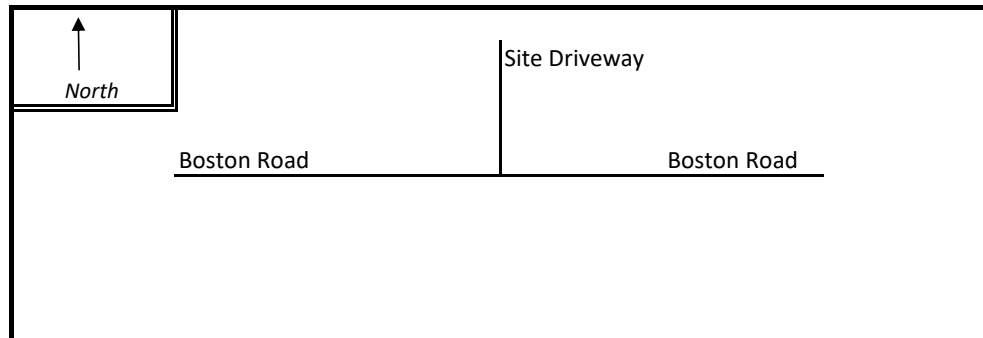
DISTRICT : 3 UNSIGNALIZED : SIGNALIZED :
 0.61 0.89

~ INTERSECTION DATA ~

NS Street Site Driveway

EW Street Boston Road

INTERSECTION
 DIAGRAM
 (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	SB	EB	WB			
PEAK HOURLY VOLUMES (AM/PM) :	0	446	468			914

" K " FACTOR :

0.090

INTERSECTION ADT (V) =
 TOTAL DAILY APPROACH VOLUME :

10,156

TOTAL # OF CRASHES :

2

OF YEARS :

5

AVERAGE # OF CRASHES PER
 YEAR (A) :

0.40

CRASH RATE CALCULATION :

0.11

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

Comments : MassDOT Accident Data (2015-2019)
 Project Title & Date: 15047.00 Unified Sutton

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Sutton COUNT DATE : 10/7/2021

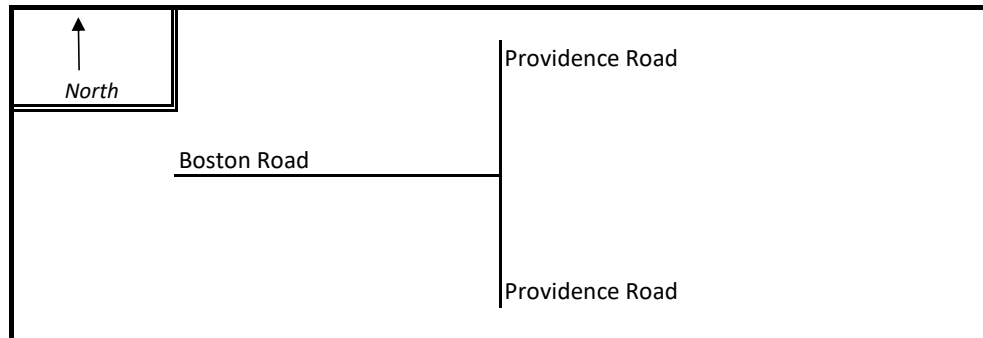
DISTRICT : 3 UNSIGNALIZED : SIGNALIZED : 0.89

~ INTERSECTION DATA ~

NS Street Providence Road

EW Street Boston Road

INTERSECTION
DIAGRAM
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB			
PEAK HOURLY VOLUMES (AM/PM) :	443	217	277			937

" K " FACTOR :

0.090

INTERSECTION ADT (V) =
TOTAL DAILY APPROACH VOLUME :

10,411

TOTAL # OF CRASHES :

2

OF YEARS :

5

AVERAGE # OF CRASHES PER
YEAR (A) :

0.40

CRASH RATE CALCULATION :

0.11

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

Comments : MassDOT Accident Data (2015-2019)
 Project Title & Date: 15047.00 Unified Sutton

Trip Generation

ITE TRIP GENERATION WORKSHEET

(11th Edition, Updated 2021)

LANDUSE: High-Cube Transload and Short-Term Storage
LANDUSE CODE: 154 Independent Variable --- 1,000 Sq. Feet Gross Floor Area
LOCATION: General Urban / Suburban
JOB NAME:
JOB NUMBER:

FLOOR AREA (KSF): 1,005.000 Note: Proposed development size is approximately 995,000 sf

WEEKDAY

RATES:		# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
				Average	Low	High	Average	Low	High	Enter	Exit
	DAILY	91	--	1.40	0.20	4.32	798	240	1,820	50%	50%
	AM PEAK OF GENERATOR	31	--	0.13	0.02	0.24	1,048	300	2,900	78%	22%
	PM PEAK OF GENERATOR	34	--	0.17	0.07	0.31	1,023	300	2,900	34%	66%
	AM PEAK (ADJACENT ST)	102	--	0.08	0.01	0.31	846	240	2,900	77%	23%
	PM PEAK (ADJACENT ST)	103	--	0.10	0.00	0.25	840	240	2,900	28%	72%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	1,407	704	704	n/a	n/a	n/a
AM PEAK OF GENERATOR	131	102	29	n/a	n/a	n/a
PM PEAK OF GENERATOR	171	58	113	n/a	n/a	n/a
AM PEAK (ADJACENT ST)	80	62	18	n/a	n/a	n/a
PM PEAK (ADJACENT ST)	101	28	72	n/a	n/a	n/a

SATURDAY

RATES:		# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
				Average	Low	High	Average	Low	High	Enter	Exit
	DAILY	10	--	0.94	0.04	1.65	847	300	1,200	50%	50%
	PEAK OF GENERATOR	9	--	0.12	0.01	0.23	905	300	1,200	50%	50%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	945	472	472	n/a	n/a	n/a
PEAK OF GENERATOR	121	60	60	n/a	n/a	n/a

SUNDAY

RATES:		# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
				Average	Low	High	Average	Low	High	Enter	Exit
	DAILY	10	--	0.87	0.01	1.49	847	300	1,200	50%	50%
	PEAK OF GENERATOR	9	--	0.12	0.01	0.21	905	300	1,200	50%	50%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	874	437	437	n/a	n/a	n/a
PEAK OF GENERATOR	121	60	60	n/a	n/a	n/a

Traffic Operations Analysis

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	98	109	52	150	148	246	0	2157	12	47	135	1360	44
Future Volume (vph)	98	109	52	150	148	246	0	2157	12	47	135	1360	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		300	300		300	0		0		550		225
Storage Lanes	1		1	1		1	0		0		2		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		1384			734			2194				1721	
Travel Time (s)		31.5			16.7			49.9				39.1	
Peak Hour Factor	0.67	0.67	0.67	0.86	0.86	0.86	0.90	0.90	0.90	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	3%	7%	5%	5%	3%	0%	9%	0%	2%	0%	13%	3%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	146	163	78	174	172	286	0	2410	0	0	206	1545	50
Turn Type	Prot	NA	Prot	Prot	NA	Prot	NA	NA	Prot	Prot	NA	pt+ov	23
Protected Phases	3	8	8	7	4	4		6		5	5	2	23
Permitted Phases													
Detector Phase	3	8	8	7	4	4		6		5	5	2	23
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0		20.0		7.0	7.0	20.0	
Minimum Split (s)	14.5	14.8	14.8	13.8	14.8	14.8		26.3		13.4	13.4	26.3	
Total Split (s)	27.5	35.8	35.8	26.8	35.8	35.8		86.3		26.4	26.4	86.3	
Total Split (%)	15.6%	20.3%	20.3%	15.2%	20.3%	20.3%		49.0%		15.0%	15.0%	49.0%	
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)	4.5	4.8	4.8	3.8	4.8	4.8		3.3		3.4	3.4	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3		6.4	6.3	6.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead		
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	None	None		Min		None	None	Min	
v/c Ratio	0.77	0.56	0.24	0.61	0.71	0.88		1.02			0.64	0.54	0.04
Control Delay	97.6	71.4	6.1	82.6	84.3	63.3		64.9			81.9	18.7	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	97.6	71.4	6.1	82.6	84.3	63.3		64.9			81.9	18.7	1.3
Queue Length 50th (ft)	155	162	0	95	180	169		~1036			113	343	0
Queue Length 95th (ft)	180	185	0	136	262	273		#1240			160	404	11
Internal Link Dist (ft)		1304			654			2114				1641	
Turn Bay Length (ft)	450		300	300		300				550		225	
Base Capacity (vph)	223	340	361	412	313	382		2355		431	3022	1240	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0	
Reduced v/c Ratio	0.65	0.48	0.22	0.42	0.55	0.75		1.02			0.48	0.51	0.04

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 162.5

Natural Cycle: 130

Control Type: Actuated-Uncoordinated

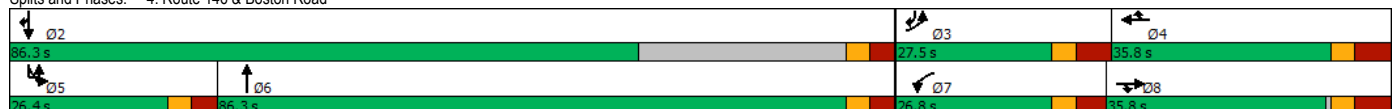
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: Route 146 & Boston Road



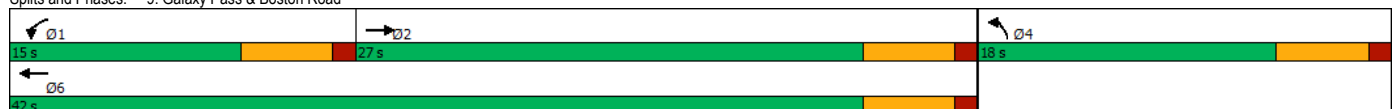
													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	98	109	52	150	148	246	0	2157	12	47	135	1360	44
Future Volume (vph)	98	109	52	150	148	246	0	2157	12	47	135	1360	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	6.3
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00		0.91			0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (prot)	1805	1845	1509	3335	1810	1568		4757			3484	4590	1568
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (perm)	1805	1845	1509	3335	1810	1568		4757			3484	4590	1568
Peak-hour factor, PHF	0.67	0.67	0.67	0.86	0.86	0.86	0.90	0.90	0.90	0.88	0.88	0.88	0.88
Adj. Flow (vph)	146	163	78	174	172	286	0	2397	13	53	153	1545	50
RTOR Reduction (vph)	0	0	66	0	0	116	0	1	0	0	0	0	11
Lane Group Flow (vph)	146	163	12	174	172	170	0	2409	0	0	206	1545	39
Heavy Vehicles (%)	0%	3%	7%	5%	5%	3%	0%	9%	0%	2%	0%	13%	3%
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Actuated Green, G (s)	17.1	25.8	25.8	13.8	21.8	21.8		80.5			15.0	101.9	125.3
Effective Green, g (s)	17.1	25.8	25.8	13.8	21.8	21.8		80.5			15.0	101.9	125.3
Actuated g/C Ratio	0.11	0.16	0.16	0.08	0.13	0.13		0.50			0.09	0.63	0.77
Clearance Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)	190	293	239	283	242	210		2357			321	2880	1209
v/s Ratio Prot	c0.08	c0.09	0.01	0.05	0.10	c0.11		c0.51			0.06	c0.34	0.02
v/s Ratio Perm													
v/c Ratio	0.77	0.56	0.05	0.61	0.71	0.81		1.02			0.64	0.54	0.03
Uniform Delay, d1	70.7	63.0	57.9	71.7	67.3	68.3		41.0			71.1	17.0	4.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00	1.00
Incremental Delay, d2	16.9	2.3	0.1	3.9	9.4	20.1		24.4			4.3	0.2	0.0
Delay (s)	87.6	65.3	58.0	75.7	76.7	88.3		65.4			75.5	17.2	4.4
Level of Service	F	E	E	E	E	F		E			E	B	A
Approach Delay (s)		72.2			81.7			65.4				23.5	
Approach LOS		E			F			E				C	
Intersection Summary													
HCM 2000 Control Delay			53.4										
HCM 2000 Level of Service													D
HCM 2000 Volume to Capacity ratio			0.92										
Actuated Cycle Length (s)			162.4										28.0
Intersection Capacity Utilization			92.2%										F
ICU Level of Service													
Analysis Period (min)			15										
c Critical Lane Group													

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	302	78	57	437	126	69
Future Volume (vph)	302	78	57	437	126	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red	Yes					Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	280			831	853	
Travel Time (s)	6.4			18.9	19.4	
Peak Hour Factor	0.85	0.85	0.84	0.84	0.78	0.78
Heavy Vehicles (%)	5%	3%	0%	4%	3%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	447	0	0	588	250	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	6.0		4.0	6.0	6.0	
Minimum Split (s)	11.0		9.0	11.0	11.0	
Total Split (s)	27.0		15.0	42.0	18.0	
Total Split (%)	45.0%		25.0%	70.0%	30.0%	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min		None	Min	None	
v/c Ratio	0.28			0.42	0.31	
Control Delay	5.3			7.0	7.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.3			7.0	7.9	
Queue Length 50th (ft)	17			28	9	
Queue Length 95th (ft)	34			52	25	
Internal Link Dist (ft)	200			751	773	
Turn Bay Length (ft)						
Base Capacity (vph)	2332			2974	1391	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.19			0.20	0.18	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 32.5
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Galaxy Pass & Boston Road



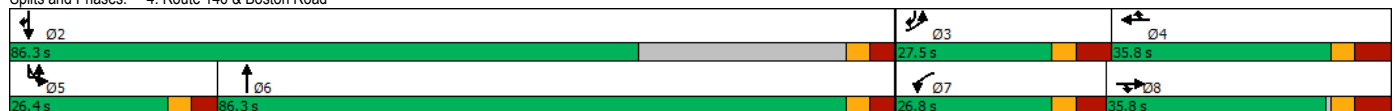
	→	↖	↗	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕			↕↕	↕↕	
Traffic Volume (vph)	302	78	57	437	126	69
Future Volume (vph)	302	78	57	437	126	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.97			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3345			3467	3295	
Flt Permitted	1.00			0.86	0.97	
Satd. Flow (perm)	3345			3002	3295	
Peak-hour factor, PHF	0.85	0.85	0.84	0.84	0.78	0.78
Adj. Flow (vph)	355	92	68	520	162	88
RTOR Reduction (vph)	32	0	0	0	68	0
Lane Group Flow (vph)	415	0	0	588	182	0
Heavy Vehicles (%)	5%	3%	0%	4%	3%	2%
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Actuated Green, G (s)	15.2			15.2	7.2	
Effective Green, g (s)	15.2			15.2	7.2	
Actuated g/C Ratio	0.47			0.47	0.22	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1569			1408	732	
v/s Ratio Prot	0.12				c0.06	
v/s Ratio Perm				c0.20		
v/c Ratio	0.26			0.42	0.25	
Uniform Delay, d1	5.2			5.7	10.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.2	
Delay (s)	5.3			5.9	10.5	
Level of Service	A			A	B	
Approach Delay (s)	5.3			5.9	10.5	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			6.6	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio			0.47			
Actuated Cycle Length (s)			32.4	Sum of lost time (s)	15.0	
Intersection Capacity Utilization			42.8%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						

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	15	240	5	2	546	16	33	10	129	13	0	34
Future Vol, veh/h	15	240	5	2	546	16	33	10	129	13	0	34
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	90	90	90	79	79	79
Heavy Vehicles, %	0	3	0	0	5	0	10	11	5	18	0	7
Mvmt Flow	17	273	6	2	620	18	37	11	143	16	0	43
Major/Minor	Major1	Major2				Minor1			Minor2			
Conflicting Flow All	638	0	0	279	0	0	624	952	140	809	946	319
Stage 1	-	-	-	-	-	-	310	310	-	633	633	-
Stage 2	-	-	-	-	-	-	314	642	-	176	313	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.72	7	7.86	6.5	7.04
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.72	-	6.86	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.72	-	6.86	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.6	4.11	3.35	3.68	4	3.37
Pot Cap-1 Maneuver	956	-	-	1295	-	-	354	243	873	246	264	662
Stage 1	-	-	-	-	-	-	653	636	-	398	476	-
Stage 2	-	-	-	-	-	-	650	446	-	764	661	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	956	-	-	1295	-	-	325	237	873	195	258	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	325	237	-	195	258	-
Stage 1	-	-	-	-	-	-	639	623	-	390	475	-
Stage 2	-	-	-	-	-	-	607	445	-	614	647	-
Approach	EB	WB				NB			SB			
HCM Control Delay, s	0.6	0				14			15.6			
HCM LOS						B			C			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	590	956	-	-	1295	-	-	398				
HCM Lane V/C Ratio	0.324	0.018	-	-	0.002	-	-	0.149				
HCM Control Delay (s)	14	8.8	0.1	-	7.8	0	-	15.6				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	0.5				

Intersection						
Int Delay, s/veh	7.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	76	18	264	113	20	246
Future Vol, veh/h	76	18	264	113	20	246
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	78	78	93	93	87	87
Heavy Vehicles, %	3	38	2	2	17	2
Mvmt Flow	97	23	284	122	23	283
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	120	0	799	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	690	-
Critical Hdwy	-	-	4.12	-	6.57	6.22
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.218	-	3.653	3.318
Pot Cap-1 Maneuver	-	-	1468	-	335	945
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1468	-	266	945
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	374	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	5.6	12.4			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	793	-	-	1468	-	
HCM Lane V/C Ratio	0.386	-	-	0.193	-	
HCM Control Delay (s)	12.4	-	-	8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	1.8	-	-	0.7	-	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	79	105	43	250	187	246	0	1818	18	55	261	2036	65
Future Volume (vph)	79	105	43	250	187	246	0	1818	18	55	261	2036	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		300	300		300	0		0		550		225
Storage Lanes	1		1	1		1	0		0		2		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		1384			734			2194				1721	
Travel Time (s)		31.5			16.7			49.9				39.1	
Peak Hour Factor	0.87	0.87	0.87	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	0%	5%	0%	2%	0%	5%	0%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	91	121	49	269	201	265	0	2040	0	0	344	2213	71
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	23
Permitted Phases													
Detector Phase	3	8	8	7	4	4		6		5	5	2	23
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0		20.0		7.0	7.0	20.0	
Minimum Split (s)	14.5	14.8	14.8	13.8	14.8	14.8		26.3		13.4	13.4	26.3	
Total Split (s)	27.5	35.8	35.8	26.8	35.8	35.8		86.3		26.4	26.4	86.3	
Total Split (%)	15.6%	20.3%	20.3%	15.2%	20.3%	20.3%		49.0%		15.0%	15.0%	49.0%	
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)	4.5	4.8	4.8	3.8	4.8	4.8		3.3		3.4	3.4	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3		6.4	6.4	6.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead		
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	None	None		Min		None	None	Min	
v/c Ratio	0.61	0.53	0.17	0.73	0.78	0.74		0.86			0.83	0.70	0.06
Control Delay	90.0	76.1	1.3	83.0	88.6	40.5		42.4			87.4	21.2	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	90.0	76.1	1.3	83.0	88.6	40.5		42.4			87.4	21.2	1.1
Queue Length 50th (ft)	97	125	0	146	212	113		695			189	534	0
Queue Length 95th (ft)	160	192	0	210	319	229		862			#290	699	13
Internal Link Dist (ft)		1304			654			2114				1641	
Turn Bay Length (ft)	450		300	300		300					550		225
Base Capacity (vph)	219	338	374	435	330	411		2478			437	3298	1314
Starvation Cap Reductn	0	0	0	0	0	0		0			0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0			0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0			0	0	0
Reduced v/c Ratio	0.42	0.36	0.13	0.62	0.61	0.64		0.82			0.79	0.67	0.05
Intersection Summary													
Area Type:	Other												
Cycle Length:	176												
Actuated Cycle Length:	160.9												
Natural Cycle:	90												
Control Type:	Actuated-Uncoordinated												
#	95th percentile volume exceeds capacity, queue may be longer.												
	Queue shown is maximum after two cycles.												

Splits and Phases: 4: Route 146 & Boston Road



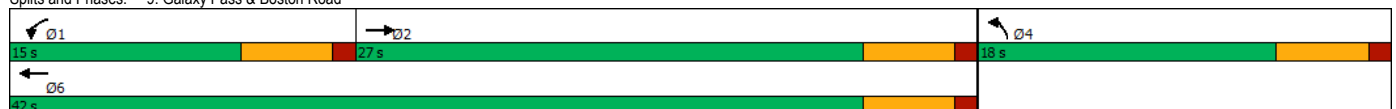
													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	79	105	43	250	187	246	0	1818	18	55	261	2036	65
Future Volume (vph)	79	105	43	250	187	246	0	1818	18	55	261	2036	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	6.3
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00		0.91			0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (prot)	1752	1881	1615	3467	1881	1599		4935			3490	4940	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (perm)	1752	1881	1615	3467	1881	1599		4935			3490	4940	1615
Peak-hour factor, PHF	0.87	0.87	0.87	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	121	49	269	201	265	0	2020	20	60	284	2213	71
RTOR Reduction (vph)	0	0	43	0	0	136	0	1	0	0	0	0	17
Lane Group Flow (vph)	91	121	6	269	201	129	0	2039	0	0	344	2213	54
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	0%	5%	0%	2%	0%	5%	0%
Turn Type	Prot	NA	Prot	Prot	NA	Prot	NA	NA	Prot	Prot	NA	pt+ov	
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Actuated Green, G (s)	13.8	19.5	19.5	17.2	22.2	22.2		77.5			19.2	103.1	123.2
Effective Green, g (s)	13.8	19.5	19.5	17.2	22.2	22.2		77.5			19.2	103.1	123.2
Actuated g/C Ratio	0.09	0.12	0.12	0.11	0.14	0.14		0.48			0.12	0.64	0.77
Clearance Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)	150	228	195	371	259	220		2379			416	3169	1238
v/s Ratio Prot	0.05	0.06	0.00	c0.08	c0.11	0.08		c0.41			0.10	c0.45	0.03
v/s Ratio Perm													
v/c Ratio	0.61	0.53	0.03	0.73	0.78	0.59		0.86			0.83	0.70	0.04
Uniform Delay, d1	70.8	66.3	62.3	69.5	66.9	64.9		36.7			69.1	18.7	4.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00	1.00
Incremental Delay, d2	6.8	2.4	0.1	6.9	13.5	3.9		3.3			12.7	0.7	0.0
Delay (s)	77.6	68.7	62.3	76.3	80.4	68.9		40.0			81.8	19.4	4.5
Level of Service	E	E	E	E	F	E		D			F	B	A
Approach Delay (s)		70.6			74.8			40.0				27.2	
Approach LOS		E			E			D				C	
Intersection Summary													
HCM 2000 Control Delay			40.0										
HCM 2000 Level of Service													D
HCM 2000 Volume to Capacity ratio			0.85										
Actuated Cycle Length (s)			160.7										28.0
Intersection Capacity Utilization			88.9%										E
ICU Level of Service													
Analysis Period (min)			15										
c Critical Lane Group													

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	339	129	80	409	200	107
Future Volume (vph)	339	129	80	409	200	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red	Yes					Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	280			831	853	
Travel Time (s)	6.4			18.9	19.4	
Peak Hour Factor	0.85	0.85	0.87	0.87	0.88	0.88
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	551	0	0	562	349	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	6.0		4.0	6.0	6.0	
Minimum Split (s)	11.0		9.0	11.0	11.0	
Total Split (s)	27.0		15.0	42.0	18.0	
Total Split (%)	45.0%		25.0%	70.0%	30.0%	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min		None	Min	None	
v/c Ratio	0.37			0.47	0.38	
Control Delay	5.7			8.0	7.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.7			8.0	7.9	
Queue Length 50th (ft)	21			29	13	
Queue Length 95th (ft)	43			58	40	
Internal Link Dist (ft)	200			751	773	
Turn Bay Length (ft)						
Base Capacity (vph)	2534			2821	1513	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.22			0.20	0.23	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 30.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Galaxy Pass & Boston Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	339	129	80	409	200	107
Future Volume (vph)	339	129	80	409	200	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.96			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3436			3551	3349	
Flt Permitted	1.00			0.79	0.97	
Satd. Flow (perm)	3436			2839	3349	
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.88	0.88
Adj. Flow (vph)	399	152	92	470	227	122
RTOR Reduction (vph)	60	0	0	0	92	0
Lane Group Flow (vph)	491	0	0	562	257	0
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Actuated Green, G (s)	12.9			12.9	7.6	
Effective Green, g (s)	12.9			12.9	7.6	
Actuated g/C Ratio	0.42			0.42	0.25	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1453			1200	834	
v/s Ratio Prot	0.14				c0.08	
v/s Ratio Perm				c0.20		
v/c Ratio	0.34			0.47	0.31	
Uniform Delay, d1	5.9			6.3	9.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.3	0.2	
Delay (s)	6.1			6.6	9.5	
Level of Service	A			A	A	
Approach Delay (s)	6.1			6.6	9.5	
Approach LOS	A			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.1	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			30.5	Sum of lost time (s)	15.0	
Intersection Capacity Utilization			48.7%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕ ↕↕ ↕↕											
Traffic Vol, veh/h	18	355	5	3	595	19	46	18	84	25	1	46
Future Vol, veh/h	18	355	5	3	595	19	46	18	84	25	1	46
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	91	91	91	86	86	86	82	82	82
Heavy Vehicles, %	0	1	0	0	1	0	0	6	1	4	0	0
Mvmt Flow	21	413	6	3	654	21	53	21	98	30	1	56
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	675	0	0	419	0	0	792	1139	210	930	1132	338
Stage 1	-	-	-	-	-	-	458	458	-	671	671	-
Stage 2	-	-	-	-	-	-	334	681	-	259	461	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.62	6.92	7.58	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.62	-	6.58	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.62	-	6.58	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4.06	3.31	3.54	4	3.3
Pot Cap-1 Maneuver	926	-	-	1151	-	-	283	194	799	219	205	664
Stage 1	-	-	-	-	-	-	557	555	-	407	458	-
Stage 2	-	-	-	-	-	-	659	439	-	718	569	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	926	-	-	1151	-	-	251	187	799	171	198	664
Mov Cap-2 Maneuver	-	-	-	-	-	-	251	187	-	171	198	-
Stage 1	-	-	-	-	-	-	540	538	-	395	456	-
Stage 2	-	-	-	-	-	-	599	437	-	588	552	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0			21.7			20.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	385		926	-	-	1151	-	-	326			
HCM Lane V/C Ratio	0.447		0.023	-	-	0.003	-	-	0.269			
HCM Control Delay (s)	21.7		9	0.1	-	8.1	0	-	20.1			
HCM Lane LOS	C		A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	2.2		0.1	-	-	0	-	-	1.1			

Intersection						
Int Delay, s/veh	7.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	182	35	311	132	19	258
Future Vol, veh/h	182	35	311	132	19	258
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	85	85	88	88
Heavy Vehicles, %	0	0	1	1	11	1
Mvmt Flow	198	38	366	155	22	293
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	236	0	1104	217
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	887	-
Critical Hdwy	-	-	4.11	-	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	-	-	2.209	-	3.599	3.309
Pot Cap-1 Maneuver	-	-	1337	-	224	825
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	388	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1337	-	157	825
Mov Cap-2 Maneuver	-	-	-	-	157	-
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	272	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.1		16	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	639	-	-	1337	-	
HCM Lane V/C Ratio	0.493	-	-	0.274	-	
HCM Control Delay (s)	16	-	-	8.7	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	2.7	-	-	1.1	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	105	115	55	165	160	265	0	2320	15	50	145	1485	50
Future Volume (vph)	105	115	55	165	160	265	0	2320	15	50	145	1485	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		300	300		300	0		0		550		225
Storage Lanes	1		1	1		1	0		0		2		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		1384			734			2194				1721	
Travel Time (s)		31.5			16.7			49.9				39.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	6%	5%	5%	3%	0%	9%	0%	0%	4%	13%	0%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	114	125	60	179	174	288	0	2511	0	0	206	1563	53
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Detector Phase	3	8	8	7	4	4		6		5	5	2	2 3
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0		20.0		7.0	7.0	20.0	
Minimum Split (s)	14.5	14.8	14.8	13.8	14.8	14.8		26.3		13.4	13.4	26.3	
Total Split (s)	27.5	35.8	35.8	26.8	35.8	35.8		86.3		26.4	26.4	86.3	
Total Split (%)	15.6%	20.3%	20.3%	15.2%	20.3%	20.3%		49.0%		15.0%	15.0%	49.0%	
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)	4.5	4.8	4.8	3.8	4.8	4.8		3.3		3.4	3.4	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3		6.4	6.3	6.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead		
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	None	None		Min		None	None	Min	
v/c Ratio	0.68	0.47	0.20	0.62	0.73	0.85		1.05			0.65	0.53	0.04
Control Delay	92.1	69.6	2.1	81.2	85.5	55.9		71.6			80.9	17.7	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	92.1	69.6	2.1	81.2	85.5	55.9		71.6			80.9	17.7	1.2
Queue Length 50th (ft)	117	122	0	94	178	148		~1050			109	317	0
Queue Length 95th (ft)	201	202	4	146	280	281		#1330			165	425	11
Internal Link Dist (ft)		1304			654			2114				1641	
Turn Bay Length (ft)	450		300	300		300					550		225
Base Capacity (vph)	222	340	364	419	318	399		2392			427	3070	1309
Starvation Cap Reductn	0	0	0	0	0	0		0			0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0			0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0			0	0	0
Reduced v/c Ratio	0.51	0.37	0.16	0.43	0.55	0.72		1.05			0.48	0.51	0.04

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 160.1

Natural Cycle: 130

Control Type: Actuated-Uncoordinated

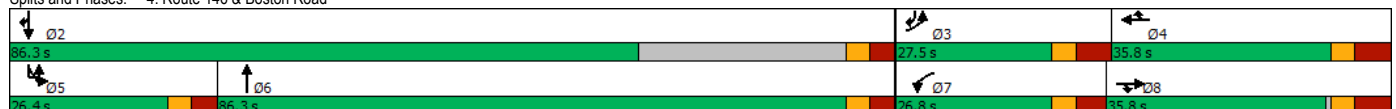
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: Route 146 & Boston Road



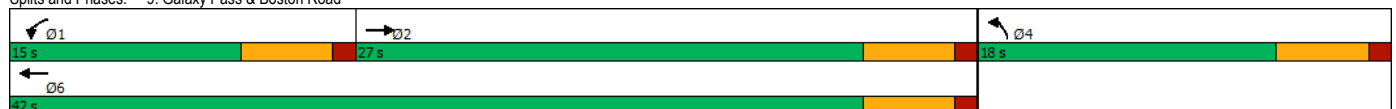
													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	105	115	55	165	160	265	0	2320	15	50	145	1485	50
Future Volume (vph)	105	115	55	165	160	265	0	2320	15	50	145	1485	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	6.3
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00		0.91			0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (prot)	1770	1845	1524	3335	1810	1568		4757			3401	4590	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (perm)	1770	1845	1524	3335	1810	1568		4757			3401	4590	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	125	60	179	174	288	0	2495	16	53	153	1563	53
RTOR Reduction (vph)	0	0	51	0	0	130	0	0	0	0	0	0	12
Lane Group Flow (vph)	114	125	9	179	174	158	0	2511	0	0	206	1563	41
Heavy Vehicles (%)	2%	3%	6%	5%	5%	3%	0%	9%	0%	0%	4%	13%	0%
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Actuated Green, G (s)	15.2	23.0	23.0	14.0	21.1	21.1		80.5			15.1	102.0	123.5
Effective Green, g (s)	15.2	23.0	23.0	14.0	21.1	21.1		80.5			15.1	102.0	123.5
Actuated g/C Ratio	0.10	0.14	0.14	0.09	0.13	0.13		0.50			0.09	0.64	0.77
Clearance Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)	168	265	219	291	238	206		2394			321	2927	1247
v/s Ratio Prot	c0.06	0.07	0.01	0.05	0.10	c0.10		c0.53			0.06	c0.34	0.03
v/s Ratio Perm													
v/c Ratio	0.68	0.47	0.04	0.62	0.73	0.77		1.05			0.64	0.53	0.03
Uniform Delay, d1	70.0	62.9	58.9	70.4	66.7	67.0		39.7			69.8	15.9	4.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00	1.00
Incremental Delay, d2	10.4	1.3	0.1	3.8	11.0	15.6		32.7			4.3	0.2	0.0
Delay (s)	80.4	64.2	59.0	74.2	77.6	82.6		72.4			74.1	16.1	4.3
Level of Service	F	E	E	E	E	F		E			E	B	A
Approach Delay (s)		69.3			78.9			72.4				22.3	
Approach LOS		E			E			E				C	
Intersection Summary													
HCM 2000 Control Delay			55.7										
HCM 2000 Volume to Capacity ratio			0.92										
Actuated Cycle Length (s)			159.9										
Intersection Capacity Utilization			96.6%										
Analysis Period (min)			15										
c Critical Lane Group													

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕			↕↕	↕↕	
Traffic Volume (vph)	325	85	60	475	135	75
Future Volume (vph)	325	85	60	475	135	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red	Yes					Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	280			831	853	
Travel Time (s)	6.4			18.9	19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	0%	4%	3%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	445	0	0	581	229	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	6.0		4.0	6.0	6.0	
Minimum Split (s)	11.0		9.0	11.0	11.0	
Total Split (s)	27.0		15.0	42.0	18.0	
Total Split (%)	45.0%		25.0%	70.0%	30.0%	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min		None	Min	None	
v/c Ratio	0.28			0.41	0.30	
Control Delay	5.2			6.9	7.8	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.2			6.9	7.8	
Queue Length 50th (ft)	16			28	8	
Queue Length 95th (ft)	36			55	28	
Internal Link Dist (ft)	200			751	773	
Turn Bay Length (ft)						
Base Capacity (vph)	2318			2988	1369	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.19			0.19	0.17	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 32.5
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Galaxy Pass & Boston Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕			↕↕	↕↕	
Traffic Volume (vph)	325	85	60	475	135	75
Future Volume (vph)	325	85	60	475	135	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.97			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3331			3467	3258	
Flt Permitted	1.00			0.87	0.97	
Satd. Flow (perm)	3331			3017	3258	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	353	92	65	516	147	82
RTOR Reduction (vph)	32	0	0	0	64	0
Lane Group Flow (vph)	413	0	0	581	165	0
Heavy Vehicles (%)	5%	5%	0%	4%	3%	5%
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Actuated Green, G (s)	15.3			15.3	7.1	
Effective Green, g (s)	15.3			15.3	7.1	
Actuated g/C Ratio	0.47			0.47	0.22	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1572			1424	713	
v/s Ratio Prot	0.12				c0.05	
v/s Ratio Perm				c0.19		
v/c Ratio	0.26			0.41	0.23	
Uniform Delay, d1	5.2			5.6	10.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.2	
Delay (s)	5.2			5.8	10.6	
Level of Service	A			A	B	
Approach Delay (s)	5.2			5.8	10.6	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			6.5	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio			0.45			
Actuated Cycle Length (s)			32.4	Sum of lost time (s)	15.0	
Intersection Capacity Utilization			45.3%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	260	5	5	590	20	35	10	140	15	0	35
Future Vol, veh/h	15	260	5	5	590	20	35	10	140	15	0	35
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	5	0	10	11	5	18	0	7
Mvmt Flow	16	283	5	5	641	22	38	11	152	16	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	288	0	0	649	991	144	841	982	332
Stage 1	-	-	-	-	-	-	318	318	-	662	662	-
Stage 2	-	-	-	-	-	-	331	673	-	179	320	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.72	7	7.86	6.5	7.04
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.72	-	6.86	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.72	-	6.86	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.6	4.11	3.35	3.68	4	3.37
Pot Cap-1 Maneuver	935	-	-	1286	-	-	339	230	868	232	251	649
Stage 1	-	-	-	-	-	-	646	630	-	381	462	-
Stage 2	-	-	-	-	-	-	634	431	-	761	656	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	935	-	-	1286	-	-	313	224	868	181	244	649
Mov Cap-2 Maneuver	-	-	-	-	-	-	313	224	-	181	244	-
Stage 1	-	-	-	-	-	-	633	617	-	373	459	-
Stage 2	-	-	-	-	-	-	593	428	-	604	643	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6	-	-	0.1	-	-	14.4	-	-	16.6	-	-
HCM LOS	-	-	-	-	-	-	B	-	-	C	-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	582	935	-	-	1286	-	-	365
HCM Lane V/C Ratio	0.346	0.017	-	-	0.004	-	-	0.149
HCM Control Delay (s)	14.4	8.9	0.1	-	7.8	0	-	16.6
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0	-	-	0.5

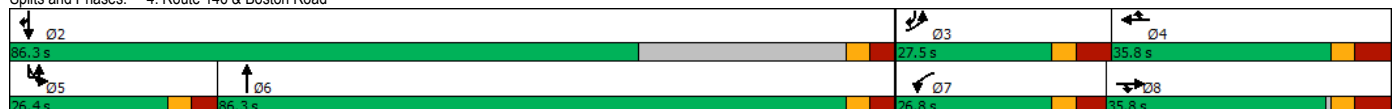
Intersection						
Int Delay, s/veh	7.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	82	20	289	122	22	266
Future Vol, veh/h	82	20	289	122	22	266
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	93	93	87	87
Heavy Vehicles, %	3	38	2	2	17	2
Mvmt Flow	112	27	311	131	25	306
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	139	0	879	126
Stage 1	-	-	-	-	126	-
Stage 2	-	-	-	-	753	-
Critical Hdwy	-	-	4.12	-	6.57	6.22
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.218	-	3.653	3.318
Pot Cap-1 Maneuver	-	-	1445	-	299	924
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	440	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1445	-	230	924
Mov Cap-2 Maneuver	-	-	-	-	230	-
Stage 1	-	-	-	-	864	-
Stage 2	-	-	-	-	338	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		5.7		13.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	751	-	-	1445	-	
HCM Lane V/C Ratio	0.441	-	-	0.215	-	
HCM Control Delay (s)	13.5	-	-	8.2	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	2.3	-	-	0.8	-	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	85	115	45	270	200	265	0	1965	20	60	280	2185	70
Future Volume (vph)	85	115	45	270	200	265	0	1965	20	60	280	2185	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		300	300		300	0		0		550		225
Storage Lanes	1		1	1		1	0		0		2		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red		Yes			Yes			Yes				Yes	
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		1384			734			2194				1721	
Travel Time (s)		31.5			16.7			49.9				39.1	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	0%	5%	0%	2%	0%	5%	0%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	92	125	49	290	215	285	0	2158	0	0	369	2375	76
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	23
Permitted Phases													
Detector Phase	3	8	8	7	4	4		6		5	5	2	23
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0		20.0		7.0	7.0	20.0	
Minimum Split (s)	14.5	14.8	14.8	13.8	14.8	14.8		26.3		13.4	13.4	26.3	
Total Split (s)	27.5	35.8	35.8	26.8	35.8	35.8		86.3		26.4	26.4	86.3	
Total Split (%)	15.6%	20.3%	20.3%	15.2%	20.3%	20.3%		49.0%		15.0%	15.0%	49.0%	
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)	4.5	4.8	4.8	3.8	4.8	4.8		3.3		3.4	3.4	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3		6.4	6.3	6.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead		
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	None	None		Min		None	None	Min	
v/c Ratio	0.62	0.55	0.17	0.78	0.81	0.80		0.90			0.89	0.75	0.06
Control Delay	92.1	77.4	1.3	87.3	92.6	49.2		46.0			95.0	23.3	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	92.1	77.4	1.3	87.3	92.6	49.2		46.0			95.0	23.3	1.1
Queue Length 50th (ft)	99	131	0	160	229	145		793			208	638	0
Queue Length 95th (ft)	167	204	0	225	341	272		#959			#323	795	14
Internal Link Dist (ft)		1304			654			2114				1641	
Turn Bay Length (ft)	450		300	300		300					550		225
Base Capacity (vph)	212	327	365	420	319	397		2395			423	3190	1313
Starvation Cap Reductn	0	0	0	0	0	0		0			0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0			0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0			0	0	0
Reduced v/c Ratio	0.43	0.38	0.13	0.69	0.67	0.72		0.90			0.87	0.74	0.06

Intersection Summary

Area Type: Other
Cycle Length: 176
Actuated Cycle Length: 165.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: Route 146 & Boston Road



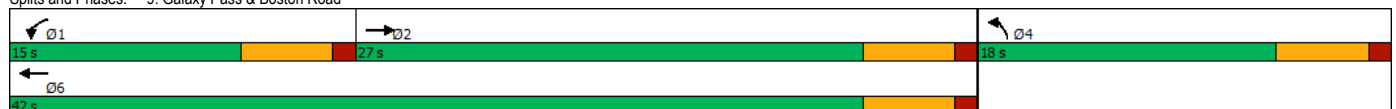
													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	85	115	45	270	200	265	0	1965	20	60	280	2185	70
Future Volume (vph)	85	115	45	270	200	265	0	1965	20	60	280	2185	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	6.3
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00		0.91			0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (prot)	1752	1881	1615	3467	1881	1599		4935			3489	4940	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (perm)	1752	1881	1615	3467	1881	1599		4935			3489	4940	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	125	49	290	215	285	0	2136	22	65	304	2375	76
RTOR Reduction (vph)	0	0	43	0	0	130	0	1	0	0	0	0	18
Lane Group Flow (vph)	92	125	6	290	215	155	0	2157	0	0	369	2375	58
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	0%	5%	0%	2%	0%	5%	0%
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Actuated Green, G (s)	14.0	20.2	20.2	17.9	23.4	23.4		80.2			19.7	106.3	126.6
Effective Green, g (s)	14.0	20.2	20.2	17.9	23.4	23.4		80.2			19.7	106.3	126.6
Actuated g/C Ratio	0.08	0.12	0.12	0.11	0.14	0.14		0.49			0.12	0.64	0.77
Clearance Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)	148	229	197	375	266	226		2394			415	3176	1236
v/s Ratio Prot	0.05	0.07	0.00	c0.08	c0.11	0.10		c0.44			0.11	c0.48	0.04
v/s Ratio Perm													
v/c Ratio	0.62	0.55	0.03	0.77	0.81	0.68		0.90			0.89	0.75	0.05
Uniform Delay, d1	73.1	68.2	63.9	71.7	68.8	67.4		38.9			71.7	20.3	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00	1.00
Incremental Delay, d2	7.9	2.6	0.1	9.6	16.3	8.3		5.2			20.1	1.0	0.0
Delay (s)	81.0	70.9	64.0	81.3	85.1	75.7		44.1			91.8	21.3	4.7
Level of Service	F	E	E	F	F	E		D			F	C	A
Approach Delay (s)		73.1			80.3			44.1				30.1	
Approach LOS		E			F			D				C	
Intersection Summary													
HCM 2000 Control Delay			43.5										D
HCM 2000 Volume to Capacity ratio			0.89										
Actuated Cycle Length (s)			165.3										28.0
Intersection Capacity Utilization			93.7%										F
Analysis Period (min)			15										
c Critical Lane Group													

	→	↖	↗	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	365	140	85	440	215	115
Future Volume (vph)	365	140	85	440	215	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red	Yes					Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	280			831	853	
Travel Time (s)	6.4			18.9	19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	2%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	549	0	0	570	359	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	6.0		4.0	6.0	6.0	
Minimum Split (s)	11.0		9.0	11.0	11.0	
Total Split (s)	27.0		15.0	42.0	18.0	
Total Split (%)	45.0%		25.0%	70.0%	30.0%	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min		None	Min	None	
v/c Ratio	0.36			0.48	0.39	
Control Delay	5.7			8.1	8.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.7			8.1	8.1	
Queue Length 50th (ft)	21			30	14	
Queue Length 95th (ft)	47			63	43	
Internal Link Dist (ft)	200			751	773	
Turn Bay Length (ft)						
Base Capacity (vph)	2490			2798	1500	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.22			0.20	0.24	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 31
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Galaxy Pass & Boston Road



	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕			↕↕	↕↕	
Traffic Volume (vph)	365	140	85	440	215	115
Future Volume (vph)	365	140	85	440	215	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.96			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3411			3522	3350	
Flt Permitted	1.00			0.80	0.97	
Satd. Flow (perm)	3411			2824	3350	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	397	152	92	478	234	125
RTOR Reduction (vph)	60	0	0	0	94	0
Lane Group Flow (vph)	489	0	0	570	265	0
Heavy Vehicles (%)	2%	0%	0%	2%	1%	1%
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Actuated Green, G (s)	13.2			13.2	7.7	
Effective Green, g (s)	13.2			13.2	7.7	
Actuated g/C Ratio	0.43			0.43	0.25	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1457			1206	834	
v/s Ratio Prot	0.14				c0.08	
v/s Ratio Perm				c0.20		
v/c Ratio	0.34			0.47	0.32	
Uniform Delay, d1	5.9			6.4	9.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.3	0.2	
Delay (s)	6.1			6.6	9.7	
Level of Service	A			A	A	
Approach Delay (s)	6.1			6.6	9.7	
Approach LOS	A			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.2		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.55			
Actuated Cycle Length (s)			30.9		Sum of lost time (s)	15.0
Intersection Capacity Utilization			51.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	380	5	5	640	20	50	20	95	25	0	50
Future Vol, veh/h	20	380	5	5	640	20	50	20	95	25	0	50
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	4	0	0	4	0	14	0	8	3	0	0
Mvmt Flow	22	413	5	5	696	22	54	22	103	27	0	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	718	0	0	418	0	0	818	1188	209	979	1179	359
Stage 1	-	-	-	-	-	-	460	460	-	717	717	-
Stage 2	-	-	-	-	-	-	358	728	-	262	462	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.78	6.5	7.06	7.56	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.5	-	6.56	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.5	-	6.56	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.64	4	3.38	3.53	4	3.3
Pot Cap-1 Maneuver	892	-	-	1152	-	-	248	190	779	203	192	643
Stage 1	-	-	-	-	-	-	520	569	-	384	437	-
Stage 2	-	-	-	-	-	-	601	432	-	717	568	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	892	-	-	1152	-	-	220	183	779	155	185	643
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	183	-	155	185	-
Stage 1	-	-	-	-	-	-	503	551	-	372	434	-
Stage 2	-	-	-	-	-	-	546	429	-	578	550	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			24.5			20.4		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	360	892	-	-	1152	-	-	314
HCM Lane V/C Ratio	0.498	0.024	-	-	0.005	-	-	0.26
HCM Control Delay (s)	24.5	9.1	0.1	-	8.1	0	-	20.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	2.7	0.1	-	-	0	-	-	1

Intersection						
Int Delay, s/veh	8.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	169	38	336	142	21	279
Future Vol, veh/h	169	38	336	142	21	279
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	85	85	88	88
Heavy Vehicles, %	0	0	1	1	11	1
Mvmt Flow	184	41	395	167	24	317
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	225	0	1162	205
Stage 1	-	-	-	-	205	-
Stage 2	-	-	-	-	957	-
Critical Hdwy	-	-	4.11	-	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	-	-	2.209	-	3.599	3.309
Pot Cap-1 Maneuver	-	-	1350	-	207	838
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	359	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1350	-	140	838
Mov Cap-2 Maneuver	-	-	-	-	140	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	243	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.2		17.6	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	621	-	-	1350	-	
HCM Lane V/C Ratio	0.549	-	-	0.293	-	
HCM Control Delay (s)	17.6	-	-	8.8	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	3.3	-	-	1.2	-	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	105	122	55	174	162	274	0	2320	15	50	178	1485	50
Future Volume (vph)	105	122	55	174	162	274	0	2320	15	50	178	1485	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		300	300		300	0		0		550		225
Storage Lanes	1		1	1		1	0		0		2		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		1384			734			2194				1721	
Travel Time (s)		31.5			16.7			49.9				39.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	3%	6%	5%	5%	3%	0%	9%	0%	0%	4%	13%	0%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	114	133	60	189	176	298	0	2511	0	0	240	1563	53
Turn Type	Prot	NA	Prot	Prot	NA	Prot	NA	NA	Prot	Prot	NA	pt+ov	2.3
Protected Phases	3	8	8	7	4	4		6		5	5	2	2.3
Permitted Phases													
Detector Phase	3	8	8	7	4	4		6		5	5	2	2.3
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0		20.0		7.0	7.0	20.0	
Minimum Split (s)	14.5	14.8	14.8	13.8	14.8	14.8		26.3		13.4	13.4	26.3	
Total Split (s)	27.5	35.8	35.8	26.8	35.8	35.8		86.3		26.4	26.4	86.3	
Total Split (%)	15.6%	20.3%	20.3%	15.2%	20.3%	20.3%		49.0%		15.0%	15.0%	49.0%	
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)	4.5	4.8	4.8	3.8	4.8	4.8		3.3		3.4	3.4	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3		6.4	6.3	6.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead		
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	None	None		Min		None	None	Min	
v/c Ratio	0.68	0.50	0.20	0.63	0.72	0.88		1.06			0.70	0.53	0.04
Control Delay	93.3	71.5	2.1	82.3	85.3	59.7		77.3			83.2	18.0	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	93.3	71.5	2.1	82.3	85.3	59.7		77.3			83.2	18.0	1.2
Queue Length 50th (ft)	121	132	0	103	183	164		~1115			131	336	0
Queue Length 95th (ft)	201	216	4	153	283	#313		#1330			189	425	11
Internal Link Dist (ft)		1304			654			2114				1641	
Turn Bay Length (ft)	450		300	300		300					550		225
Base Capacity (vph)	219	333	359	413	314	396		2361			421	3029	1296
Starvation Cap Reductn	0	0	0	0	0	0		0			0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0			0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0			0	0	0
Reduced v/c Ratio	0.52	0.40	0.17	0.46	0.56	0.75		1.06			0.57	0.52	0.04

Intersection Summary

Area Type: Other

Cycle Length: 176

Actuated Cycle Length: 162.2

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

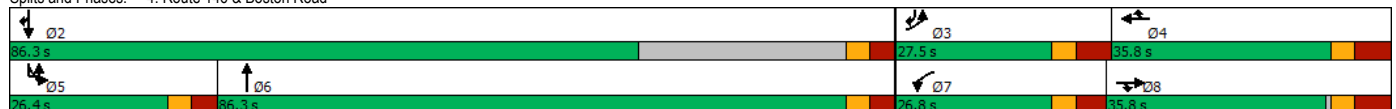
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: Route 146 & Boston Road



													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	105	122	55	174	162	274	0	2320	15	50	178	1485	50
Future Volume (vph)	105	122	55	174	162	274	0	2320	15	50	178	1485	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	6.3
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00		0.91			0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (prot)	1770	1845	1524	3335	1810	1568		4757			3396	4590	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (perm)	1770	1845	1524	3335	1810	1568		4757			3396	4590	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	133	60	189	176	298	0	2495	16	53	187	1563	53
RTOR Reduction (vph)	0	0	51	0	0	130	0	1	0	0	0	0	12
Lane Group Flow (vph)	114	133	9	189	176	168	0	2510	0	0	240	1563	41
Heavy Vehicles (%)	2%	3%	6%	5%	5%	3%	0%	9%	0%	0%	4%	13%	0%
Turn Type	Prot	NA	Prot	Prot	NA	Prot	NA	NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Actuated Green, G (s)	15.3	23.3	23.3	14.6	21.9	21.9		80.5			16.4	103.3	124.9
Effective Green, g (s)	15.3	23.3	23.3	14.6	21.9	21.9		80.5			16.4	103.3	124.9
Actuated g/C Ratio	0.09	0.14	0.14	0.09	0.14	0.14		0.50			0.10	0.64	0.77
Clearance Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)	167	265	219	300	244	211		2362			343	2925	1244
v/s Ratio Prot	c0.06	0.07	0.01	0.06	0.10	c0.11		c0.53			c0.07	0.34	0.03
v/s Ratio Perm													
v/c Ratio	0.68	0.50	0.04	0.63	0.72	0.80		1.06			0.70	0.53	0.03
Uniform Delay, d1	71.0	64.0	59.8	71.1	67.2	68.0		40.8			70.5	16.2	4.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00	1.00
Incremental Delay, d2	10.9	1.5	0.1	4.3	10.0	18.6		37.9			6.1	0.2	0.0
Delay (s)	82.0	65.5	59.8	75.4	77.2	86.5		78.7			76.6	16.4	4.4
Level of Service	F	E	E	E	E	F		E			E	B	A
Approach Delay (s)		70.5			80.9			78.7				23.8	
Approach LOS		E			F			E				C	
Intersection Summary													
HCM 2000 Control Delay			59.4										
HCM 2000 Level of Service													E
HCM 2000 Volume to Capacity ratio			0.93										
Actuated Cycle Length (s)			162.1										28.0
Intersection Capacity Utilization			97.8%										F
ICU Level of Service													
Analysis Period (min)			15										
c Critical Lane Group													

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕			↕↕	↕↕	
Traffic Volume (vph)	396	85	60	494	135	75
Future Volume (vph)	396	85	60	494	135	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	0		2	0
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	298			234	853	
Travel Time (s)	6.8			5.3	19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	0%	4%	3%	5%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	522	0	0	602	229	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	6.0		4.0	6.0	6.0	
Minimum Split (s)	11.0		9.0	11.0	11.0	
Total Split (s)	27.0		15.0	42.0	18.0	
Total Split (%)	45.0%		25.0%	70.0%	30.0%	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min		None	Min	None	
v/c Ratio	0.32			0.42	0.30	
Control Delay	5.6			7.0	8.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.6			7.0	8.0	
Queue Length 50th (ft)	21			29	8	
Queue Length 95th (ft)	44			58	28	
Internal Link Dist (ft)	218			154	773	
Turn Bay Length (ft)						
Base Capacity (vph)	2306			2958	1357	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.23			0.20	0.17	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 32.8

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Galaxy Pass & Boston Road



	→	↖	↗	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	396	85	60	494	135	75
Future Volume (vph)	396	85	60	494	135	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.97			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3347			3467	3258	
Flt Permitted	1.00			0.86	0.97	
Satd. Flow (perm)	3347			2987	3258	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	430	92	65	537	147	82
RTOR Reduction (vph)	25	0	0	0	64	0
Lane Group Flow (vph)	497	0	0	602	165	0
Heavy Vehicles (%)	5%	5%	0%	4%	3%	5%
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Actuated Green, G (s)	15.6			15.6	7.1	
Effective Green, g (s)	15.6			15.6	7.1	
Actuated g/C Ratio	0.48			0.48	0.22	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1596			1424	707	
v/s Ratio Prot	0.15				c0.05	
v/s Ratio Perm				c0.20		
v/c Ratio	0.31			0.42	0.23	
Uniform Delay, d1	5.3			5.6	10.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.2	
Delay (s)	5.4			5.8	10.7	
Level of Service	A			A	B	
Approach Delay (s)	5.4			5.8	10.7	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			6.5	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio			0.47			
Actuated Cycle Length (s)			32.7	Sum of lost time (s)	15.0	
Intersection Capacity Utilization			47.8%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						

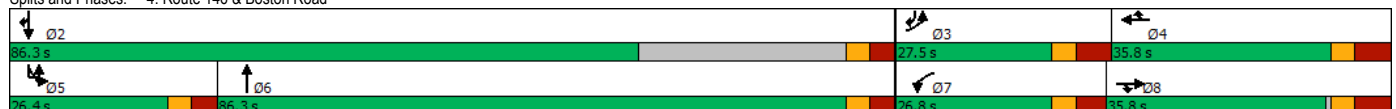
Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	71	400	535	31	9	19
Future Vol, veh/h	71	400	535	31	9	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage 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	77	435	582	34	10	21
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	616	0	-	0	1188	599
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	589	-
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	964	-	-	-	208	502
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	554	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	964	-	-	-	186	502
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	554	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		17.2		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	964	-	-	-	325	
HCM Lane V/C Ratio	0.08	-	-	-	0.094	
HCM Control Delay (s)	9.1	0	-	-	17.2	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3	

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕			↕↕			↕↕			↕↕		
Traffic Vol, veh/h	15	300	5	5	609	20	35	10	171	15	0	35
Future Vol, veh/h	15	300	5	5	609	20	35	10	171	15	0	35
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	3	0	0	5	0	10	11	5	18	0	7
Mvmt Flow	16	326	5	5	662	22	38	11	186	16	0	38
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	684	0	0	331	0	0	702	1055	166	884	1046	342
Stage 1	-	-	-	-	-	-	361	361	-	683	683	-
Stage 2	-	-	-	-	-	-	341	694	-	201	363	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.7	6.72	7	7.86	6.5	7.04
Critical Hdwy Stg 1	-	-	-	-	-	-	6.7	5.72	-	6.86	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.72	-	6.86	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.6	4.11	3.35	3.68	4	3.37
Pot Cap-1 Maneuver	919	-	-	1240	-	-	310	210	840	216	230	640
Stage 1	-	-	-	-	-	-	608	602	-	370	452	-
Stage 2	-	-	-	-	-	-	626	421	-	738	628	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	919	-	-	1240	-	-	286	204	840	158	224	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	286	204	-	158	224	-
Stage 1	-	-	-	-	-	-	595	589	-	362	449	-
Stage 2	-	-	-	-	-	-	585	418	-	552	615	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.1			15.5			17.9		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	576		919	-	-	1240	-	-	334			
HCM Lane V/C Ratio	0.408		0.018	-	-	0.004	-	-	0.163			
HCM Control Delay (s)	15.5		9	0.1	-	7.9	0	-	17.9			
HCM Lane LOS	C		A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	2		0.1	-	-	0	-	-	0.6			

Intersection						
Int Delay, s/veh	7.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱↲	↱↲	
Traffic Vol, veh/h	82	32	308	122	23	270
Future Vol, veh/h	82	32	308	122	23	270
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	73	73	93	93	87	87
Heavy Vehicles, %	3	38	2	2	17	2
Mvmt Flow	112	44	331	131	26	310
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	156	0	927	134
Stage 1	-	-	-	-	134	-
Stage 2	-	-	-	-	793	-
Critical Hdwy	-	-	4.12	-	6.57	6.22
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.218	-	3.653	3.318
Pot Cap-1 Maneuver	-	-	1424	-	280	915
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1424	-	210	915
Mov Cap-2 Maneuver	-	-	-	-	210	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	315	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		5.9		14.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	724	-	-	1424	-	
HCM Lane V/C Ratio	0.465	-	-	0.233	-	
HCM Control Delay (s)	14.2	-	-	8.3	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	2.5	-	-	0.9	-	

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	85	119	45	305	208	302	0	1965	20	60	298	2185	70
Future Volume (vph)	85	119	45	305	208	302	0	1965	20	60	298	2185	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	450		300	300		300	0		0		550		225
Storage Lanes	1		1	1		1	0		0		2		1
Taper Length (ft)	25			25			25				25		
Right Turn on Red			Yes			Yes			Yes				Yes
Link Speed (mph)		30			30			30				30	
Link Distance (ft)		1384			734			2194				1721	
Travel Time (s)		31.5			16.7			49.9				39.1	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	0%	5%	0%	2%	0%	5%	0%
Shared Lane Traffic (%)													
Lane Group Flow (vph)	92	129	49	328	224	325	0	2158	0	0	389	2375	76
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	23
Permitted Phases													
Detector Phase	3	8	8	7	4	4		6		5	5	2	23
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0		20.0		7.0	7.0	20.0	
Minimum Split (s)	14.5	14.8	14.8	13.8	14.8	14.8		26.3		13.4	13.4	26.3	
Total Split (s)	27.5	35.8	35.8	26.8	35.8	35.8		86.3		26.4	26.4	86.3	
Total Split (%)	15.6%	20.3%	20.3%	15.2%	20.3%	20.3%		49.0%		15.0%	15.0%	49.0%	
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)	4.5	4.8	4.8	3.8	4.8	4.8		3.3		3.4	3.4	3.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3		6.4	6.4	6.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag		Lag		Lead	Lead		
Lead-Lag Optimize?													
Recall Mode	None	None	None	None	None	None		Min		None	None	Min	
v/c Ratio	0.62	0.56	0.17	0.84	0.81	0.89		0.91			0.93	0.75	0.06
Control Delay	92.8	78.5	1.3	91.4	91.8	63.2		47.5			101.4	23.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Delay	92.8	78.5	1.3	91.4	91.8	63.2		47.5			101.4	23.9	1.1
Queue Length 50th (ft)	101	136	0	186	241	198		819			225	670	0
Queue Length 95th (ft)	167	210	0	#271	#359	#375		#959			#349	795	14
Internal Link Dist (ft)		1304			654			2114				1641	
Turn Bay Length (ft)	450		300	300		300				550		225	
Base Capacity (vph)	210	324	362	416	316	395		2370			419	3156	1313
Starvation Cap Reductn	0	0	0	0	0	0		0			0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0			0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0			0	0	0
Reduced v/c Ratio	0.44	0.40	0.14	0.79	0.71	0.82		0.91			0.93	0.75	0.06
Intersection Summary													
Area Type:	Other												
Cycle Length:	176												
Actuated Cycle Length:	166.9												
Natural Cycle:	110												
Control Type:	Actuated-Uncoordinated												
#	95th percentile volume exceeds capacity, queue may be longer.												
	Queue shown is maximum after two cycles.												

Splits and Phases: 4: Route 146 & Boston Road



													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	85	119	45	305	208	302	0	1965	20	60	298	2185	70
Future Volume (vph)	85	119	45	305	208	302	0	1965	20	60	298	2185	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	6.3
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00		0.91			0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00			1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (prot)	1752	1881	1615	3467	1881	1599		4935			3490	4940	1615
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.95	1.00	1.00
Satd. Flow (perm)	1752	1881	1615	3467	1881	1599		4935			3490	4940	1615
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	129	49	328	224	325	0	2136	22	65	324	2375	76
RTOR Reduction (vph)	0	0	43	0	0	130	0	1	0	0	0	0	18
Lane Group Flow (vph)	92	129	6	328	224	195	0	2157	0	0	389	2375	58
Heavy Vehicles (%)	3%	1%	0%	1%	1%	1%	0%	5%	0%	2%	0%	5%	0%
Turn Type	Prot	NA	Prot	Prot	NA	Prot		NA		Prot	Prot	NA	pt+ov
Protected Phases	3	8	8	7	4	4		6		5	5	2	2 3
Permitted Phases													
Actuated Green, G (s)	14.1	20.4	20.4	18.9	24.5	24.5		80.3			20.0	106.7	127.1
Effective Green, g (s)	14.1	20.4	20.4	18.9	24.5	24.5		80.3			20.0	106.7	127.1
Actuated g/C Ratio	0.08	0.12	0.12	0.11	0.15	0.15		0.48			0.12	0.64	0.76
Clearance Time (s)	7.5	7.8	7.8	6.8	7.8	7.8		6.3			6.4	6.3	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	3.0	
Lane Grp Cap (vph)	148	229	197	392	276	234		2374			418	3158	1229
v/s Ratio Prot	0.05	0.07	0.00	c0.09	0.12	c0.12		c0.44			c0.11	0.48	0.04
v/s Ratio Perm													
v/c Ratio	0.62	0.56	0.03	0.84	0.81	0.83		0.91			0.93	0.75	0.05
Uniform Delay, d1	73.8	69.1	64.5	72.5	69.0	69.2		39.9			72.8	20.9	4.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00			1.00	1.00	1.00
Incremental Delay, d2	7.9	3.2	0.1	14.3	16.4	21.9		5.6			27.3	1.0	0.0
Delay (s)	81.7	72.2	64.6	86.8	85.4	91.1		45.5			100.1	22.0	4.9
Level of Service	F	E	E	F	F	F		D			F	C	A
Approach Delay (s)		74.1			88.0			45.5				32.2	
Approach LOS		E			F			D				C	
Intersection Summary													
HCM 2000 Control Delay			46.7		HCM 2000 Level of Service							D	
HCM 2000 Volume to Capacity ratio			0.92										
Actuated Cycle Length (s)			166.9		Sum of lost time (s)							28.0	
Intersection Capacity Utilization			96.5%		ICU Level of Service							F	
Analysis Period (min)			15										
c Critical Lane Group													

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↖↗	
Traffic Volume (vph)	405	140	85	519	215	115
Future Volume (vph)	405	140	85	519	215	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	0		2	0
Taper Length (ft)			25		25	
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			208	853	
Travel Time (s)	6.7			4.7	19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	0%	2%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	592	0	0	656	359	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Detector Phase	2		1	6	4	
Switch Phase						
Minimum Initial (s)	6.0		4.0	6.0	6.0	
Minimum Split (s)	11.0		9.0	11.0	11.0	
Total Split (s)	27.0		15.0	42.0	18.0	
Total Split (%)	45.0%		25.0%	70.0%	30.0%	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.0			5.0	5.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Recall Mode	Min		None	Min	None	
v/c Ratio	0.37			0.51	0.40	
Control Delay	5.8			8.1	8.8	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.8			8.1	8.8	
Queue Length 50th (ft)	25			36	16	
Queue Length 95th (ft)	53			75	48	
Internal Link Dist (ft)	213			128	773	
Turn Bay Length (ft)						
Base Capacity (vph)	2374			2784	1432	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.25			0.24	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 32.8
Natural Cycle: 40
Control Type: Actuated-Uncoordinated

Splits and Phases: 9: Galaxy Pass & Boston Road



	→	↖	↗	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	405	140	85	519	215	115
Future Volume (vph)	405	140	85	519	215	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	0.95			0.95	0.97	
Frt	0.96			1.00	0.95	
Flt Protected	1.00			0.99	0.97	
Satd. Flow (prot)	3420			3524	3350	
Flt Permitted	1.00			0.80	0.97	
Satd. Flow (perm)	3420			2854	3350	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	440	152	92	564	234	125
RTOR Reduction (vph)	49	0	0	0	95	0
Lane Group Flow (vph)	543	0	0	656	264	0
Heavy Vehicles (%)	2%	0%	0%	2%	1%	1%
Turn Type	NA		custom	NA	Prot	
Protected Phases	2		1	6	4	
Permitted Phases			1			
Actuated Green, G (s)	14.7			14.7	7.8	
Effective Green, g (s)	14.7			14.7	7.8	
Actuated g/C Ratio	0.45			0.45	0.24	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	1546			1290	804	
v/s Ratio Prot	0.16				c0.08	
v/s Ratio Perm				c0.23		
v/c Ratio	0.35			0.51	0.33	
Uniform Delay, d1	5.8			6.3	10.2	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.3	0.2	
Delay (s)	5.9			6.6	10.4	
Level of Service	A			A	B	
Approach Delay (s)	5.9			6.6	10.4	
Approach LOS	A			A	B	
Intersection Summary						
HCM 2000 Control Delay			7.2	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio			0.57			
Actuated Cycle Length (s)			32.5	Sum of lost time (s)	15.0	
Intersection Capacity Utilization			54.7%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	480	505	18	34	79
Future Vol, veh/h	40	480	505	18	34	79
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	43	522	549	20	37	86
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	569	0	-	0	1167	559
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	608	-
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	1003	-	-	-	214	529
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1003	-	-	-	201	529
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	543	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.7	0		20.4		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1003	-	-	-	355	
HCM Lane V/C Ratio	0.043	-	-	-	0.346	
HCM Control Delay (s)	8.8	0	-	-	20.4	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5	

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕	
Traffic Vol, veh/h	20	402	5	5	719	20	50	20	113	25	0	50
Future Vol, veh/h	20	402	5	5	719	20	50	20	113	25	0	50
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	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	4	0	0	4	0	14	0	8	3	0	0
Mvmt Flow	22	437	5	5	782	22	54	22	123	27	0	54
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	804	0	0	442	0	0	885	1298	221	1077	1289	402
Stage 1	-	-	-	-	-	-	484	484	-	803	803	-
Stage 2	-	-	-	-	-	-	401	814	-	274	486	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.78	6.5	7.06	7.56	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.78	5.5	-	6.56	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.78	5.5	-	6.56	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.64	4	3.38	3.53	4	3.3
Pot Cap-1 Maneuver	829	-	-	1129	-	-	221	163	765	172	165	604
Stage 1	-	-	-	-	-	-	503	555	-	341	399	-
Stage 2	-	-	-	-	-	-	565	394	-	706	554	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	829	-	-	1129	-	-	194	156	765	125	158	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	194	156	-	125	158	-
Stage 1	-	-	-	-	-	-	485	536	-	329	396	-
Stage 2	-	-	-	-	-	-	510	391	-	549	535	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.1			29			24.5		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	343		829	-	-	1129	-	-	265			
HCM Lane V/C Ratio	0.58		0.026	-	-	0.005	-	-	0.308			
HCM Control Delay (s)	29		9.5	0.2	-	8.2	0	-	24.5			
HCM Lane LOS	D		A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	3.5		0.1	-	-	0	-	-	1.3			

Intersection						
Int Delay, s/veh	11					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	169	47	345	142	33	300
Future Vol, veh/h	169	47	345	142	33	300
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	85	85	88	88
Heavy Vehicles, %	0	0	1	1	11	1
Mvmt Flow	184	51	406	167	38	341
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	235	0	1189	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	979	-
Critical Hdwy	-	-	4.11	-	6.51	6.21
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	-	-	2.209	-	3.599	3.309
Pot Cap-1 Maneuver	-	-	1338	-	199	833
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	351	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1338	-	133	833
Mov Cap-2 Maneuver	-	-	-	-	133	-
Stage 1	-	-	-	-	804	-
Stage 2	-	-	-	-	234	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		6.3		25	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	547	-	-	1338	-	
HCM Lane V/C Ratio	0.692	-	-	0.303	-	
HCM Control Delay (s)	25	-	-	8.9	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	5.4	-	-	1.3	-	