

MEMORANDUM

TO: Mr. Domenic Longobardi
Director of Non-Gaming Operations
Plainridge Park Casino
301 Washington Street
Plainville, Massachusetts 02762

FROM: Mr. Jeffrey S. Dirk, P.E., PTOE, FITE
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DATE: September 26, 2019

RE: 6964

SUBJECT: 2019 Traffic Monitoring Program
Plainridge Park Casino
Plainville, Massachusetts

Vanasse & Associates, Inc. (VAI) has completed the 2019 Traffic Monitoring Program for the Plainridge Park Casino located at 301 Washington Street (Route 1) in Plainville, Massachusetts (hereafter referred to as the "Project"). The 2019 Traffic Monitoring Program is the latest update to the monitoring studies that have been completed subsequent to the opening of the Project in 2016 pursuant to the Massachusetts Department of Transportation (MassDOT) Section 61 Finding. Consistent with the prior traffic monitoring reports, this report includes a review of: i) traffic volumes; ii) trip patterns; iii) traffic operations; and iv) safety; along Route 1 and at defined intersections. In addition, an updated summary of the elements of the Transportation Demand Management (TDM) program that have been implemented for employees and patrons is provided, along with the results from a recent survey of employee and patron travel modes. As required by the MassDOT Section 61 Finding, the results of the 2019 Traffic Monitoring Program are being submitted to MassDOT, the Town of Plainville, the Southeastern Regional Planning and Economic Development District (SRPEDD), the Greater Attleboro Taunton Regional Transit Authority (GATRA) and the Secretary of Energy and Environmental Affairs.

Based on a review of the results of the 2019 Traffic Monitoring Program, we have noted the following with respect to the Project:

1. The *measured* traffic volumes associated with the Project were found to be approximately four (4) percent lower on an average weekday, 52 percent higher during the weekday morning peak-hour, 28 percent higher during the Friday evening peak-hour and four (4) percent higher during the Saturday afternoon peak-hour when compared to the traffic volume *projections* for the Project. As documented herein, sufficient capacity is afforded at the Project site driveway intersection with Route 1 and at the monitored intersections to accommodate the variation in traffic volumes associated with the Project;
2. The 2019 observed peak-hour traffic volumes within the study area were found to be similar to the conditions that were documented in the 2015 Baseline Study;

3. A review of motor vehicle crash data indicates that the study intersections exhibited similar crash patterns before and after the opening of the Project and, with the exception of the Route 1/Route 152 intersection, were found to have motor vehicle crash rates that were below both the MassDOT statewide and District averages for a signalized or unsignalized intersection, as appropriate, for the MassDOT Highway Division District in which the intersections are located (District 5);
4. The Route 1/Route 152 intersection was found to have experienced a decrease in the number of reported crashes after the opening of the Project (17 crashes in 2015 vs. 10 crashes in 2017); however, the calculated motor vehicle crash rate continues to be above the MassDOT average crash rate (statewide and District 5) for a signalized intersection. The majority of the crashes occurring at the intersection were reported as rear-end type collisions that resulted in property damage only. A Road Safety Audit (RSA) was conducted for this intersection in 2014 as a part of the Project and a number of the recommendations from the RSA have been implemented. It is likely that these improvements have contributed to the reduction in the number of motor vehicle crashes occurring at the intersection;
5. Eighteen motor vehicle crashes were reported to have occurred at the Route 1/Plainridge Park Casino driveway intersection over the 5-year review period, the majority of which occurred on a weekday, involved rear-end type collisions that were attributed to driver error, and resulted in property damage only. The calculated motor vehicle crash rate at the intersection was found to be below the MassDOT average crash rates for a signalized intersection;
6. Operating conditions at the majority of the monitored intersections were found to be similar to the conditions that were documented as a part of the 2015 Baseline Study, indicating that the opening of the Project and the associated increase in traffic volumes did not result in a significant increase in motorist delays or vehicle queuing over the conditions that existed prior to the opening of the Project with consideration of the noted traffic volume differentials during the peak hours;
7. The intersection of Route 1 at the Plainridge Park Casino driveway was shown to operate at an overall level-of-service (LOS) B or better during both the weekday evening and Saturday afternoon peak hours, with all movements reported to be operating at LOS C or better where a LOS of “D” or better is considered “acceptable” operating conditions;
8. Approximately 92 percent of patrons and employees arrive to the Project site alone in a private automobile, with approximately 70 percent indicating that they were not aware of public transportation or car/vanpool opportunities. The majority of patrons and employees indicated that they would not use or participate in a shuttle program from an off-site parking facility and would not walk or bicycle to the Project site if sidewalks and bicycle lanes were available; and
9. Twenty-four (24) percent of employees indicated that they were not aware of the corporate Transportation Demand Management (TDM) program but would participate. This indicates a distinct opportunity to increase employee participation in the TDM program.

In consideration of these findings, we have concluded that the measured impact of the Project on traffic volumes, trip patterns, motor vehicle crash trends, and traffic operations (levels of service, motorist delays and vehicle queuing) has been relatively minor, with operating conditions at the monitored intersections found to be similar to the conditions that were documented as a part of the 2015 Baseline Study. Further, opportunities exist to increase employee participation in the TDM program and the use of public transportation services and car/vanpool participation by both patrons and employees.

The following summarizes the results of the 2019 Traffic Monitoring Program.



EXISTING CONDITIONS

An updated field inventory of existing conditions within the study area was conducted in June 2019. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area for the 2019 Traffic Monitoring Program was developed in consultation with MassDOT and includes the major roadway that provide access to the Project site, Washington Street (Route 1), as well as six (6) major intersections (including the Project site driveway) through which Project related traffic will travel which are listed below and depicted on Figure 1.

1. Route 1 at Madison Street (Wrentham)
2. Route 1 at the I-495 Northbound Ramps (Plainville)
3. Route 1 at the I-495 Southbound Ramps (Plainville)
4. Route 1 at the Plainridge park casino Drive (Plainville)
5. Route 152 at Route 1 Southbound Jughandle (Plainville)
6. Route 1 at Route 152 (Plainville)

The following describes existing conditions within the study area.

Roadway

Washington Street (Route 1)

- Four-lane roadway under the jurisdiction of MassDOT that is functionally classified as an urban principal arterial roadway north of I-495 and as an urban minor arterial to the south
- Provides full access interchanges with I-495 (Exit 14) and I-95 (Exit 9) to the north of the Project site and with I-295 to the south (Exit 1)
- Provides two 11 to 23-foot wide travel lanes per direction that are separated by a raised median or double-yellow centerline with variable width marked shoulders and additional travel lanes provided at major intersections
- Sidewalks are not provided within the study area
- Provides sufficient width (combined travel lane and shoulder) to support bicycle travel in a shared traveled-way configuration¹ with marked bicycle lanes provided between Taunton Street (Route 152) and the I-495 southbound ramps
- The posted speed limit within the study area is 45 miles per hour (mph)

Intersections

Table 1 and Figure 2 summarize lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections.

¹A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

Legend:

-  Signalized Intersection
-  Unsignalized Intersection
-  Ramp Junction

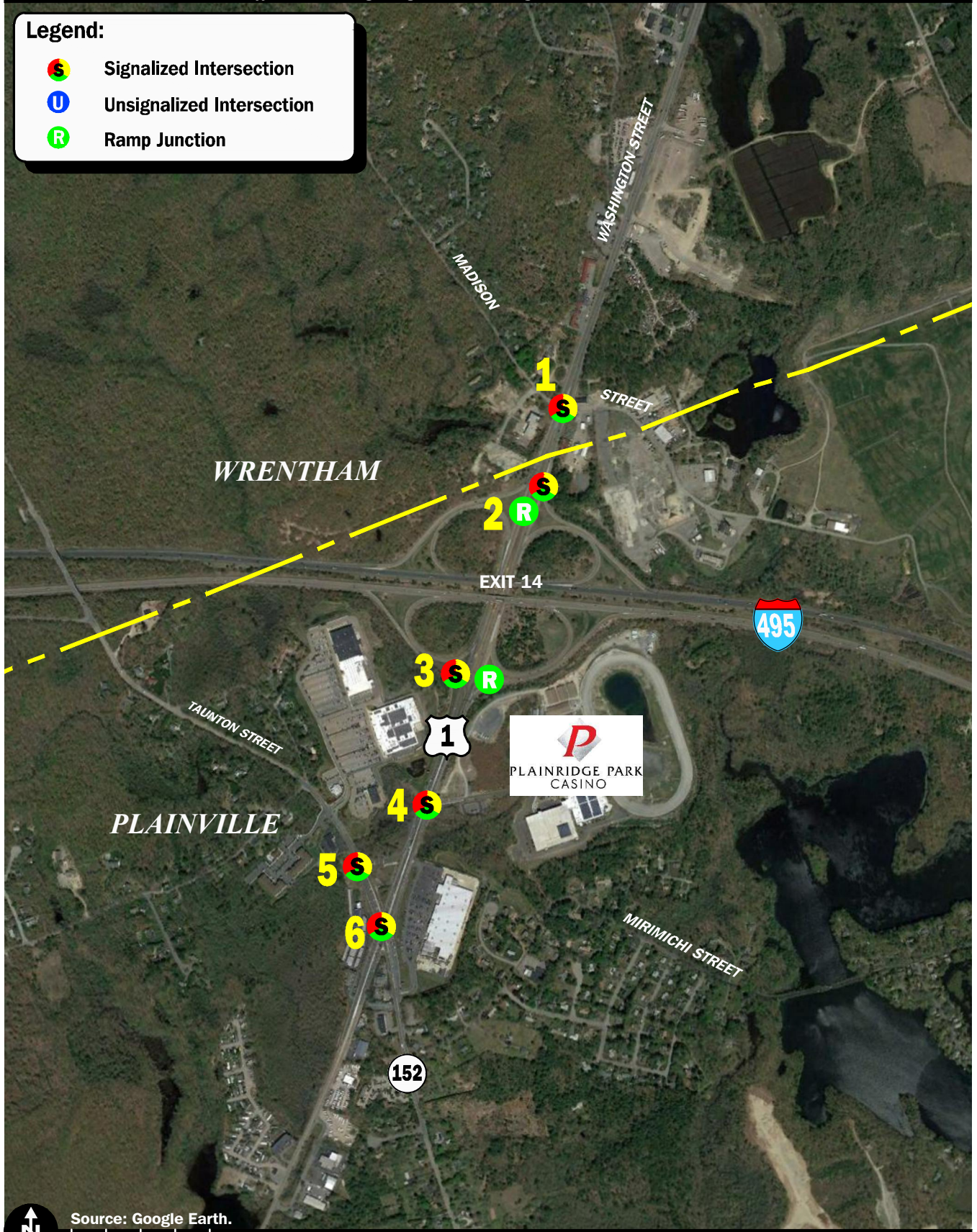


Figure 1

Study Area Map

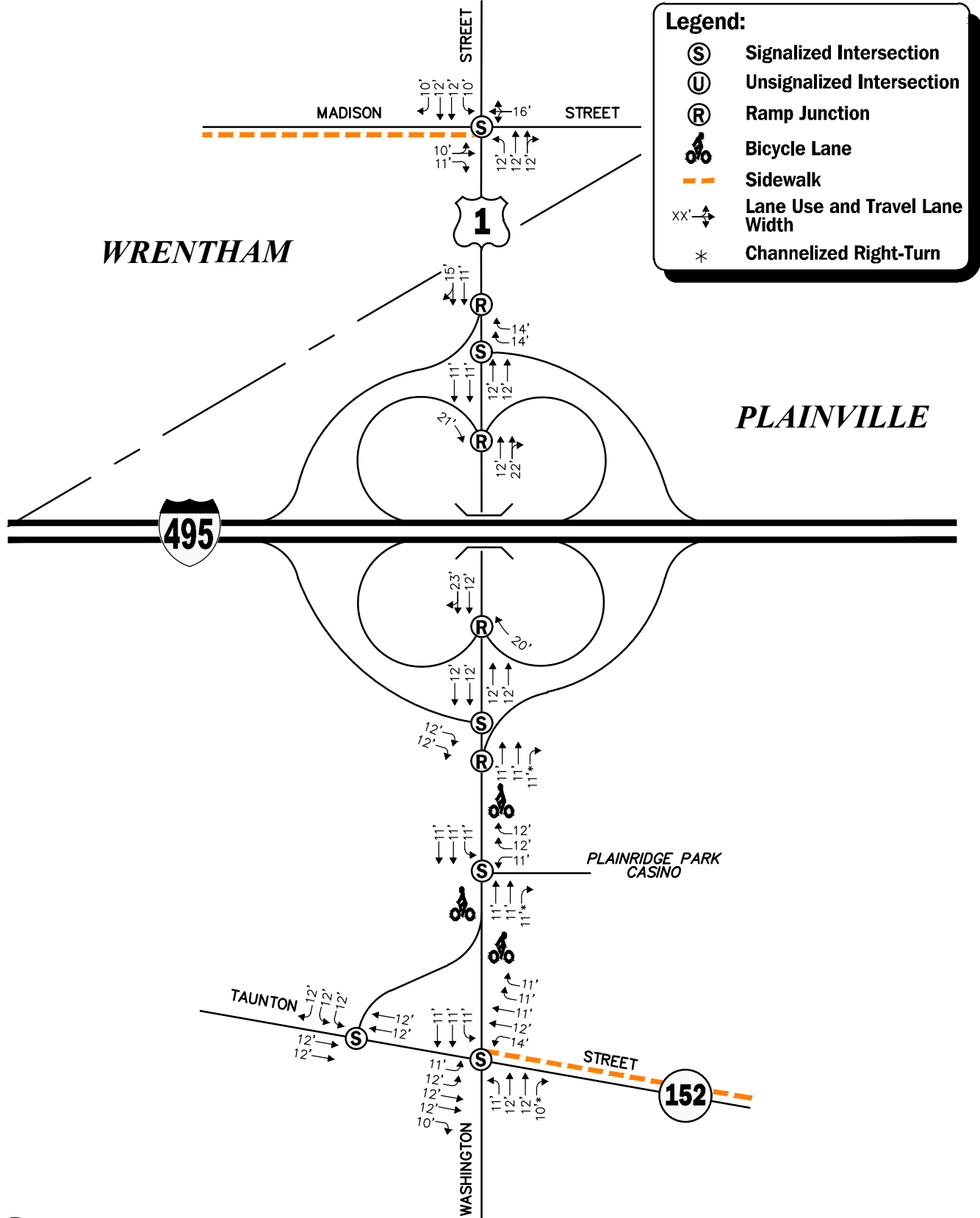
Table 1
STUDY AREA INTERSECTION DESCRIPTION

No.	Intersection	Traffic Control Type ^a	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
1.	Route 1/ Madison Street	TS	2 per direction on Route 1 with turn lanes; 1 left/thru lane and 1 right-turn lane on Madison Street eastbound and 1 general-purpose lane on Madison Street westbound	Yes – 1 to 15 feet on Route 1	No	Yes - Shared traveled-way ^b
2.	Route 1/I-495 Northbound Ramps	F	2 per direction on Route 1 with turn lanes; 1 per direction on I-495 ramps	Yes – 2 to 3 feet on all approaches	No	Yes - Shared traveled-way
2A.	Route 1 Northbound/ I-495 Northbound Off-Ramp	TS	2 per direction on Route 1 and I-495 Northbound Off-Ramp	Yes – 1 to 12 feet on all approaches	No	Yes – Shared traveled-way
3.	Route 1/I-495 Southbound Ramps	F	2 per direction on Route 1 with turn lanes; 1 per direction on I-495 ramps	Yes – 2 to 3 feet on all approaches	No	Yes - Shared traveled-way
3A.	Route 1 Southbound/ I-495 Southbound Off-Ramp	TS	2 per direction on Route 1 and I-495 Southbound Off-ramp	Yes – 1 to 12 feet on all approaches	No	Yes – Bicycle lane on Route 1 Southbound
4.	Route 1/ Plainridge Park Casino Drive	TS	2 per direction on Route 1 with turn lanes; 1 left-turn lane and 2 right-turn lanes on Plainridge Park Casino Drive	Yes – 1 to 5 feet on all approaches	No	Yes – Bicycle lane on Route 1 and shared traveled-way on Plainridge Park Casino Driveway with “sharrow” pavement markings; bicycle detection on all approaches
5.	Route 152/ Route 1 Southbound Jughandle	TS	2 per direction on Route 1; 2 left-turn lanes and 1 right-turn lane on Route 1 Southbound Jughandle	Yes – 1 to 2 feet on all approaches	No	Yes – Bicycle detection on all approaches
6.	Route 152/ Route 106	TS	1 per direction on Route 152 with turn lanes; 1 per direction on Route 106 with turn lanes	Yes – 1 to 4 feet on all approaches	Yes – Sidewalks along both sides of Route 152 and Route 106; crosswalks on all approaches; exclusive pedestrian phase with pushbutton actuation	Yes - Shared traveled-way

^aTS = traffic signal control; S = STOP-sign control; Y = Yield-sign control; F = free-flow (added lane).

^bCombined shoulder and travel lane width equal to or exceeds 14 feet.





Not To Scale

Figure 2
Existing Intersection Lane Use,
Travel Lane Width and
Pedestrian Facilities



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EXISTING TRAFFIC VOLUMES

Traffic volume data for the 2019 Traffic Monitoring Program was obtained from automatic traffic recorder (ATR) counts and manual turning movement counts (TMCs) conducted in June 2019. The ATR counts were completed over a continuous seven-day, week-long period on the driveway that serves the Project site, with weekday evening (4:00 to 7:00 PM) and Saturday afternoon (2:00 to 5:00 PM) peak-period manual TMCs performed at the study area intersections. These time periods were selected as they are representative of the peak traffic volume periods for both the Project and the proximate roadway network.

Traffic Volume Adjustments

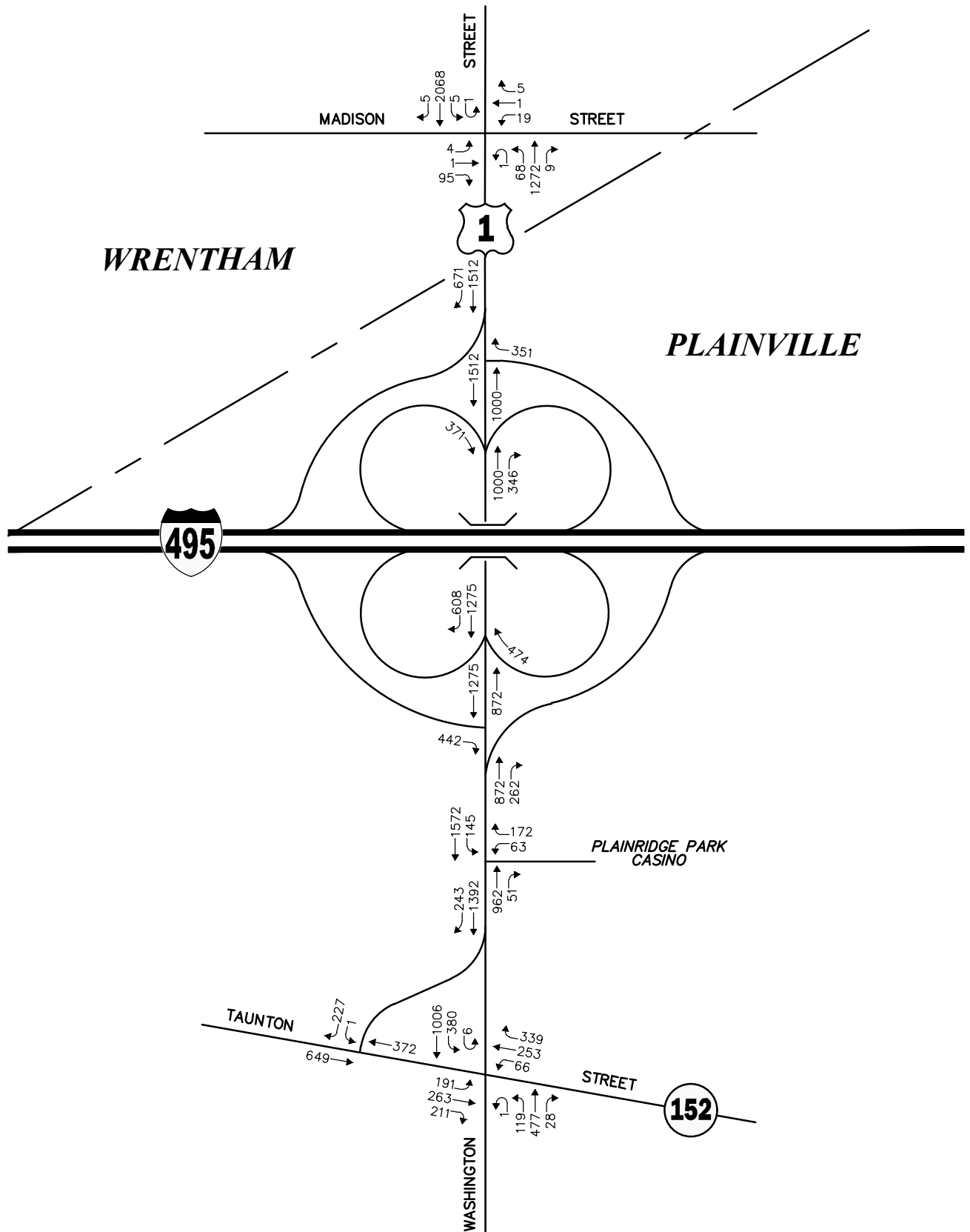
In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, monthly traffic volumes obtained from the closest MassDOT permanent count station to the Project site were reviewed (Permanent Count Station No. 6248 located on Interstate-95 (I-95), north of Interstate-495 (I-495), in Foxborough).² Based on a review of the count station data, it was determined that traffic volumes for the month of June are approximately 8.5 percent above average-month conditions. In order to allow for a comparison between the 2019 traffic volume data and the traffic volume data that was collected in conjunction with the 2015 Baseline Study (which was adjusted to average-month conditions), the June traffic volume data was adjusted downward by 8.5 percent in order to be representative of average-month traffic volume conditions. The 2019 weekday evening and Saturday afternoon peak-hour traffic volumes are graphically depicted on Figures 3 and 4, respectively. A review of the 2019 traffic volume data indicates that the peak-hour traffic volumes are similar to or slightly lower than those that were reported in the 2015 Baseline Study. Copies of the peak-hour traffic volume networks from the 2015 Baseline Study are included in the Appendix for reference.

Motor Vehicle Crash Data

Motor vehicle crash information for the study intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2013 through 2017, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, and day of occurrence, and presented in Table 2.

As can be seen in Table 2, with the exception of the Route 1/Route 152 intersection, the study intersections were found to have a calculated crash rate below the MassDOT statewide and District 5 averages for a signalized or unsignalized intersection, as appropriate. The majority of the crashes reported at the intersections involved property damage only; occurred on a weekday; and were reported as either angle or rear-end-type collisions.

²MassDOT Traffic Volumes for the Commonwealth of Massachusetts; 2019.

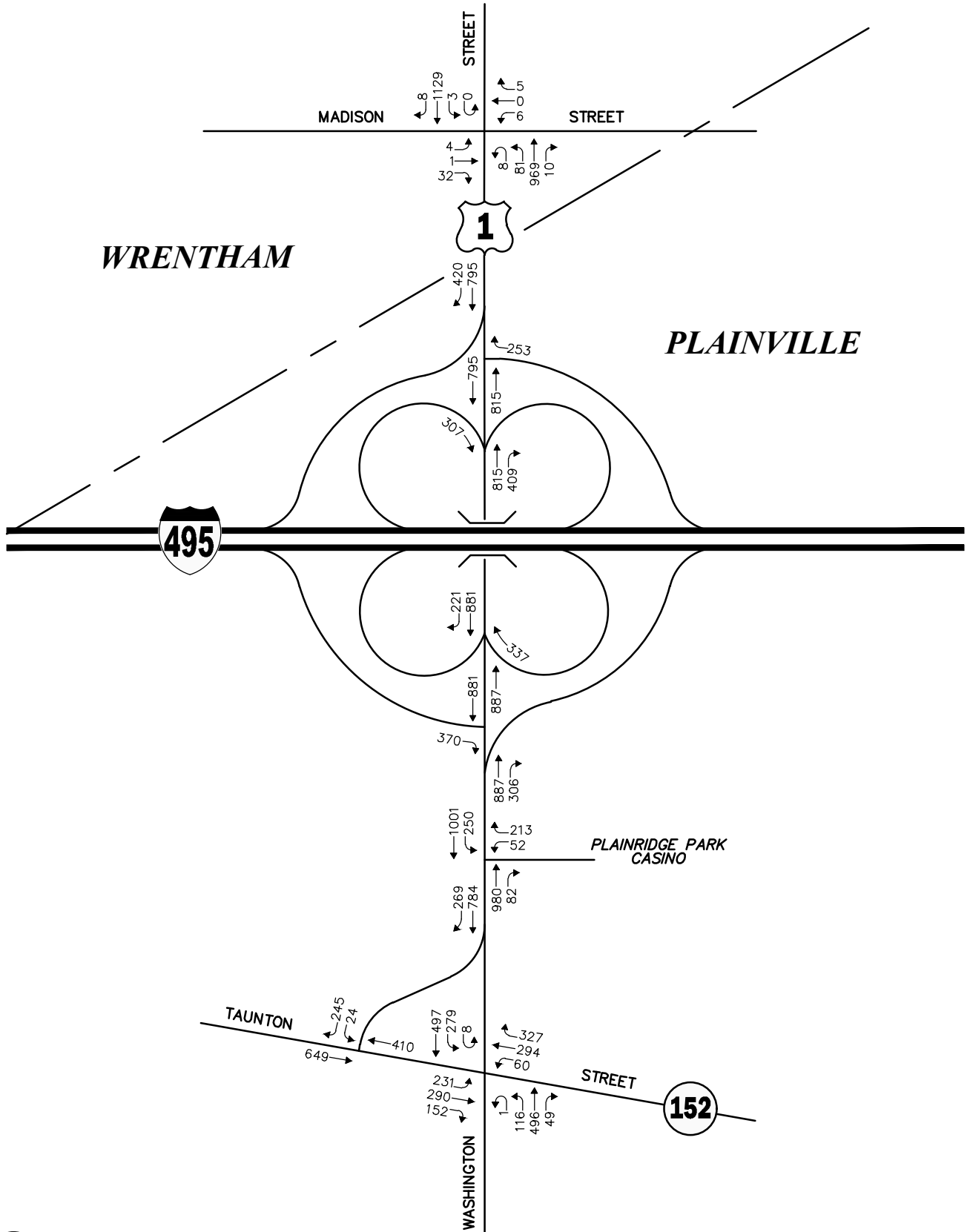


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Figure 3
2019 Existing
Weekday Evening
Peak Hour Traffic Volumes
Average-Month Conditions

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Not To Scale



Figure 4
2019 Existing Saturday Midday Peak Hour Traffic Volumes Average-Month Conditions

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Table 2
MOTOR VEHICLE CRASH DATA SUMMARY^a

	Route 1/ Madison Street	Route 1/ I-495 Northbound Ramps	Route 1/ I-495 Southbound Ramps	Route 1/ Plainridge Park Casino Drive	Route 1/ Route 152	Route 152/ Route 1 Southbound Jughandle
<i>Traffic Control Type^b:</i>	U	I	I/TS	TS	TS	TS
<i>Year:</i>						
2013	6	2	6	0	15	1
2014	6	8	2	0	15	0
2015	6	1	7	5	17	2
2016	5	1	4	5	10	1
<u>2017</u>	<u>8</u>	<u>0</u>	<u>8</u>	<u>8</u>	<u>10</u>	<u>0</u>
Total	31	12	27	18	67	4
Average	6.20	2.40	5.40	3.60	13.40	0.80
Rate ^c	0.43	0.14	0.34	0.30	0.99	0.16
MassDOT Crash Rate ^d	0.57/0.57	0.57/0.57	0.57/0.57	0.78/0.75	0.78/0.75	0.78/0.75
Significant? ^e	No	No	No	No	Yes	No
<i>Type:</i>						
Angle	9	0	0	1	22	0
Rear-End	12	2	12	14	39	2
Head-On	2	0	0	1	1	0
Fixed Object	1	0	3	0	2	1
Sideswipe	7	2	6	0	2	1
Pedestrian	0	0	0	0	0	0
<u>Other/Unknown</u>	<u>0</u>	<u>8</u>	<u>6</u>	<u>2</u>	<u>1</u>	<u>0</u>
Total	31	12	27	18	67	4
<i>Severity:</i>						
Property Damage Only	22	8	25	13	52	4
Personal Injury	9	4	2	5	15	0
<u>Fatal</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	31	12	27	18	67	4
<i>Day of Week:</i>						
Monday through Friday	23	10	22	14	51	3
Saturday	4	1	1	3	8	1
<u>Sunday</u>	<u>4</u>	<u>1</u>	<u>4</u>	<u>1</u>	<u>8</u>	<u>0</u>
Total	31	12	27	18	67	4

^aSource: MassDOT Safety Management/Traffic Operations Unit records, 2013 through 2017.

^bTraffic Control Type: TS = traffic signal; U = unsignalized; I = Interchange.

^cCrash rate per million vehicles entering the intersection.

^d2018 Statewide/District crash rate.

^eThe intersection crash rate is significant if it is found to exceed MassDOT statewide or District crash rate for the MassDOT Highway Division District in which the intersection is located (District 5).

The Route 1/Route 152 intersection was reported to have experienced a total of 67 motor vehicle crashes over the five-year review period, the majority of which resulted in property damage only, occurred on a weekday and were classified as rear-end type crashes. A review of the crash data before and after the opening of the Project (2016) indicates that the intersection has experienced a reduction in the number of reported crashes (17 crashes in 2015 vs. 10 crashes in 2017); however, the calculated motor vehicle crash rate continues to be above the MassDOT average crash rate (statewide and District 5) for a signalized intersection. A Road Safety Audit (RSA) was conducted for this intersection in 2014 as a part of the Project and a number of the recommendations from the RSA have been implemented at the intersection. It is likely that these improvements have contributed to the reduction in the number of motor vehicle crashes occurring at the intersection.

The Project site driveway intersection with Route 1 was reported to have experienced a total of 18 motor vehicle crashes over the five-year review period, the majority of which occurred on a weekday, involved rear-end type collisions that were attributed to driver error, and resulted in property damage only. The calculated motor vehicle crash rate at the intersection was found to be below the MassDOT average crash rates for a signalized intersection.

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

The detailed MassDOT Crash Rate Worksheets and High Crash Location mapping are provided in the Appendix.

PLAINRIDGE PARK CASINO TRAFFIC CHARACTERISTICS

Table 3 summarizes the traffic volume data as measured on the Plainridge Park Casino driveway, the sole access to the Project site, in June 2019, and compares the measured traffic volumes to the traffic volume projections for the Project as presented in the March 2013 *Traffic Impact Study* (the "March 2013 TIS") that was prepared in support of the Project.³ The traffic volumes presented in Table 3 represent average-month conditions and include traffic volumes associated with the horse racetrack operation as well as the casino.

³*Traffic Impact Study for the Plainridge Racecourse Expansion*, 301 Washington Street (Route 1), Plainville, Massachusetts; McMahon Associates; March 2013.

Table 3
PLAINRIDGE PARK CASINO
TRAFFIC VOLUME SUMMARY AND COMPARISON

	(A) June 2019 Measured Traffic Volumes ^a	(B) Projected Traffic Volumes ^b	(C = A-B) Difference
Average Weekday Daily	6,232	6,512	-280
<i>Weekday Morning Peak-Hour</i>	161	106	+55
<i>Friday Evening Peak-Hour</i>	627	489	+138
Saturday	8,152	-- ^c	-- ^c
<i>Saturday Afternoon Peak-Hour</i>	630	603	+27

^aTraffic volumes as measured on the Plainridge Park Casino driveway in June 2019.

^bAs presented in the March 2013 TIS.

^cSaturday trip estimates for the Project were not presented as a part of the March 2013 TIS.

As can be seen in Table 3, the Project was shown to generate approximately 6,232 vehicle trips on an average weekday (two-way, 24-hour volume) as *measured* in June 2019, with 161 vehicle trips *measured* during the weekday morning peak-hour and 627 vehicle trips *measured* during the Friday evening peak-hour. On a Saturday, the Project was shown to generate approximately 8,152 vehicle trips as *measured* in June 2019, with 630 vehicle trips *measured* during the Saturday afternoon peak-hour.

In comparison to the traffic volume *projections* for the Project that were presented in the March 2013 TIS, the actual *measured* traffic volumes were found to be 280 vehicle trips lower (approximately 4 percent) on an average weekday when compared to the trip estimates for the Project. During the weekday morning and Friday evening peak hours, the *measured* traffic volumes were found to be 55 vehicle trips higher (approximately 52 percent) and 138 vehicle trips higher (approximately 28 percent), respectively, than the traffic volume *projections* for the Project. During the Saturday afternoon peak-hour, the actual *measured* traffic volumes were found to be 27 vehicle trips higher (approximately four (4) percent) when compared to the trip estimates for the Project.

With the exception of the weekday morning and Friday evening peak hours, the measured traffic volumes were found to be within a 10 percent variation of the projected traffic volumes, which is within the range of normal daily and seasonal traffic volume fluctuations and not unexpected. The traffic volume differentials during the weekday morning and Friday evening peak hours exceeded normal variations; however, as identified in the Traffic Operations Analysis section of this assessment (discussion follows), operating conditions at the Project site access were found to be acceptable (defined as a level-of-service of “D” or better), with the balance of the intersections within the traffic monitoring program study area found to be operating under similar or improved conditions from those that were documented as a part of the 2015 Baseline Study.

TRAFFIC OPERATIONS ANALYSIS

In order to evaluate traffic operations at the study intersections, a detailed traffic operations and vehicle queue analysis (“LOS analysis”) was performed for the weekday evening and Saturday afternoon peak hours using the 2019 traffic volume data presented on Figures 3 and 4. Capacity analyses provide an indication of how well transportation facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from “A” to “F”, with a level-of-service (LOS) “A” representing the best operating conditions and a LOS “F” representing congested or constrained operations. A LOS “E” is representative of a transportation facility that is operating at its design capacity with a LOS “D” generally defined as the limit of “acceptable” traffic operations. Since the level-of-service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year.

The Synchro® intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the 2010 *Highway Capacity Manual* (HCM),⁴ was used to complete the level-of-service and vehicle queue analyses at the signalized and unsignalized intersections. The levels of service for signalized intersections were calculated using the operational analysis methodology of the 2000 Highway Capacity Manual and implemented as a part of the Synchro® software as suggested by MassDOT. The Highway Capacity Manual (HCM) analysis software was used to complete the level-of-service analysis at the ramp junction intersections (interchange areas).

The results of the 2019 traffic operations analysis are summarized in Tables 4, 5 and 6 along with the corresponding operating conditions that were reported as a part of the 2015 Baseline Study. The detailed analysis worksheets are provided in the Appendix.

2019 Traffic Operations Analysis Summary

Signalized Intersections

As can be seen in Table 4, all four (4) signalized intersections within the study area were shown to operate at an overall LOS C or better under all analysis periods with the following of note:

- **Route 1/Route 152** – During the weekday evening peak-hour, left-turn movements on the Route 152 eastbound approach were shown to be operating at their design capacity (LOS E) with vehicle queues of up to 5 vehicles.
- **Route 1/Plainridge Park Driveway** – Overall intersection operations were reported at LOS B or better with individual movements operating at LOS C or better.

⁴*Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2010.

Table 4
SIGNALIZED INTERSECTION LEVEL-OF-SERVICE
AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak Hour/Movement	2015 Baseline				2019 Existing			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d Avg./95 th	V/C	Delay	LOS	Queue ^d Avg./95 th
Route 1 at the I-495 Northbound Off-Ramp								
<i>Weekday Evening:</i>								
I-495 Northbound Off-Ramp WB RT					0.31	25.2	C	2/4
Route 1 NB TH					0.49	10.1	B	7/9
Overall					--	6.7	A	--
<i>Saturday Midday:</i>								
		(See Table 6)						
I-495 Northbound Off-Ramp WB RT					0.19	36.8	D	1/2
Route 1 NB TH					0.33	4.4	A	3/6
Overall					--	7.0	A	--
Route 1 at Madison Street								
<i>Weekday Evening:</i>								
Madison Street EB LT/TH					0.05	37.5	D	0/1
Madison Street EB RT					0.22	28.0	C	1/3
Madison Street WB LT/TH/RT					0.26	39.0	D	1/1
Route 1 NB UT/LT					0.29	46.3	D	2/3
Route 1 NB TH/RT					0.51	5.5	A	3/15
Route 1 SB UT/LT					0.07	41.2	D	0/1
Route 1 SB TH					0.96	22.4	C	24/36
Route 1 SB RT		(See Table 5)			0.00	6.0	A	0/0
Overall					--	19.6	B	--
<i>Saturday Midday:</i>								
Madison Street EB LT/TH					0.07	44.0	D	0/1
Madison Street EB RT					0.03	33.0	C	0/1
Madison Street WB LT/TH/RT					0.01	44.5	D	0/0
Route 1 NB UT/LT					0.42	47.8	D	3/5
Route 1 NB TH/RT					0.38	2.7	A	0/4
Route 1 SB UT/LT					0.04	46.1	D	0/1
Route 1 SB TH					0.51	7.9	A	5/12
Route 1 SB RT					0.01	4.7	A	0/0
Overall					--	8.0	A	--

See notes at end of table.



Table 4 (Continued)
SIGNALIZED INTERSECTION LEVEL-OF-SERVICE
AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak Hour/Movement	2015 Baseline				2019 Existing			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d Avg./95 th	V/C	Delay	LOS	Queue ^d Avg./95 th
Route 1 at the I-495 Southbound Off-Ramp								
<i>Weekday Evening:</i>								
I-495 Southbound Off-Ramp EB RT					0.67	30.5	C	5/6
Route 1 SB TH					0.56	8.2	A	7/10
Route 1 SB RT					0.40	0.7	A	0/0
Overall		(See Table 6)			--	11.0	B	--
<i>Saturday Midday:</i>								
I-495 Southbound Off-Ramp EB RT					0.46	26.4	C	2/3
Route 1 SB TH					0.37	4.5	A	3/5
Route 1 SB RT					0.20	0.3	A	0/0
Overall					--	9.0	A	--
Route 1 at the Plainridge Park Casino Driveway								
<i>Weekday Evening:</i>								
Plainridge Park Casino Driveway WB LT					0.32	33.4	C	1/3
Plainridge park casino Driveway WB RT					0.14	21.1	C	1/2
Route 1 NB TH					0.51	11.7	B	7/11
Route 1 NB RT					0.03	0.0	A	0/0
Route 1 SB LT					0.48	32.8	C	3/5
Route 1 SB TH					0.58	2.8	A	4/5
Overall		(Baseline conditions not assessed as Project was under construction)			--	8.8	A	--
<i>Saturday Midday:</i>								
Plainridge Park Casino Driveway WB LT					0.32	30.0	C	1/2
Plainridge Park Casino Driveway WB RT					0.21	16.2	B	2/2
Route 1 NB TH					0.67	15.9	B	8/13
Route 1 NB RT					0.06	0.1	A	0/0
Route 1 SB LT					0.61	27.2	C	4/7
Route 1 SB TH					0.37	2.2	A	2/3
Overall					--	11.7	B	--

See notes at end of table.



Table 4 (Continued)
SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

Signalized Intersection/ Peak Hour/Movement	2015 Baseline				2019 Existing			
	V/C ^a	Delay ^b	LOS ^c	Queue ^d Avg./95 th	V/C	Delay	LOS	Queue Avg./95 th
Route 1 at Route 152								
<i>Weekday Evening:</i>								
Route 152 EB LT	0.77	41.4	D	4/6	0.65	62.4	E	3/5
Route 152 EB TH	0.90	42.5	D	6/12	0.47	43.9	D	3/6
Route 152 EB RT	0.42	9.3	A	1/3	0.15	35.9	D	0/2
Route 152 WB LT	0.34	33.4	C	1/3	0.49	46.7	D	2/4
Route 152 WB TH	0.53	30.2	C	¾	0.50	39.7	D	4/5
Route 152 WB RT	0.42	5.7	A	0/2	0.14	36.7	D	0/2
Route 1 NB UT/LT	0.45	34.2	C	2/4	0.59	46.2	D	3/6
Route 1 NB TH	0.29	10.2	B	¾	0.49	31.7	C	6/8
Route 1 NB RT	0.00	0.0	A	0/0	0.02	0.0	A	0/0
Route 1 SB UT/LT	--	--	--	--	0.80	39.2	D	11/13
Route 1 SB TH	0.78	27.4	C	9/12	0.69	22.7	C	12/14
Overall	--	27.3	C	--	--	34.1	C	--
<i>Saturday MIDDAY:</i>								
Route 152 EB LT	0.59	29.3	C	3/5	0.53	30.7	C	3/4
Route 152 EB TH	0.50	21.1	C	5/6	0.40	24.7	C	3/5
Route 152 EB RT	0.34	4.2	A	0/1	0.11	47.1	D	0/2
Route 152 WB LT	0.27	36.3	D	1/3	0.33	34.1	C	1/3
Route 152 WB TH	0.57	34.5	C	4/5	0.48	29.4	C	3/5
Route 152 WB RT	0.36	6.0	A	0/2	0.13	27.0	C	0/2
Route 1 NB UT/LT	0.56	36.5	D	4/6	0.54	34.8	C	3/5
Route 1 NB TH	0.34	13.7	B	4/6	0.60	29.5	C	5/8
Route 1 NB RT	0.00	0.0	A	0/0	0.04	0.0	A	0/0
Route 1 SB UT/LT	--	--	--	--	0.77	37.5	D	6/10
Route 1 SB TH	0.54	28.8	C	5/6	0.44	21.7	C	5/7
Overall	--	22.8	C	--	--	29.0	C	--
Route 152 at Route 1 Southbound Jughandle								
<i>Weekday Evening:</i>								
Route 152 EB TH	0.38	9.2	A	4/6	0.26	2.3	A	2/3
Route 152 WB TH	0.21	6.8	A	2/2	0.14	0.5	A	1/1
Route 1 Southbound Jughandle SB LT	0.60	22.8	C	5/6	0.05	40.8	D	0/1
Route 1 Southbound Jughandle SB RT	0.46	5.1	A	11/2	0.15	41.5	D	0/3
Overall	--	12.0	B	--	--	8.7	A	--
<i>Saturday MIDDAY:</i>								
Route 152 EB TH	0.37	6.1	A	3/7	0.25	2.7	A	2/3
Route 152 WB TH	0.21	7.2	A	3/4	0.15	10.4	B	4/5
Route 1 Southbound Jughandle SB LT	0.44	28.9	C	3/4	0.06	31.0	C	1/1
Route 1 Southbound Jughandle SB RT	0.67	16.1	B	2/5	0.16	31.7	C	0/3
Overall	--	11.4	B	--	--	10.8	B	--

^aVolume-to-capacity ratio.

^bControl (signal) delay per vehicle in seconds.

^cLevel-of-Service.

^dQueue length in vehicles.

EB = eastbound; WB = westbound; NB = northbound; SB = southbound; LT = left-turning movements; TH = through movements; RT = right-turning movements; UT = u-turning movements.



Table 5
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE
AND VEHICLE QUEUE SUMMARY

Unsignalized Intersection/ Peak Hour/Movement	2015 Baseline				2019 Existing			
	Demand ^a	Delay ^b	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th
Route 1 at Madison Street								
<i>Weekday Evening:</i>								
Madison Street EB LT/TH/RT	61	>50.0	F	3				
Madison Street WB LT/TH/RT	31	>50.0	F	6				
Route 1 NB UT/LT	61	24.4	C	1				
Route 1 NB TH/RT	1,076	0.0	A	0				
Route 1 SB LT	5	12.3	B	0				
Route 1 SB TH/RT	2,111	0.0	A	0				(See Table 4)
<i>Saturday MIDDAY:</i>								
Madison Street EB LT/TH/RT	44	>50.0	F	3				
Madison Street WB LT/TH/RT	16	>50.0	F	4				
Route 1 NB UT/LT	90	12.7	B	1				
Route 1 NB TH/RT	1,724	0.0	A	0				
Route 1 SB LT	4	15.9	C	0				
Route 1 SB RT	1,174	0.0	A	0				

^aDemand in vehicles per hour.

^bAverage control delay per vehicle (in seconds).

^cLevel-of-Service.

^dQueue length in vehicles.

EB = eastbound; WB = westbound; NB = northbound; SB = southbound; LT = left-turning movements; TH = through movements; RT = right-turning movements; UT = u-turning movements.



Table 6
RAMP JUNCTION LEVEL-OF-SERVICE

Unsignalized Intersection/ Peak Hour/Movement	2015 Baseline			2019 Existing		
	Density ^a	Speed ^b	LOS ^c	Density	Speed	LOS
<i>Route 1 Northbound at the I-495 Northbound Off-Ramp</i>				(See Table 4)		
Weekday Evening	11.4	51.1	B			
Saturday MIDDAY	16.9	50.9	B			
<i>Route 1 Northbound at the I-495 Northbound On-Ramp</i>						
Weekday Evening	9.3	49.1	A	12.3	49.0	B
Saturday MIDDAY	11.9	49.2	B	11.0	48.9	B
<i>Route 1 Northbound at the I-495 Southbound Off-Ramp</i>						
Weekday Evening	10.9	51.1	B	13.3	51.1	B
Saturday MIDDAY	14.1	51.1	B	12.5	51.1	B
<i>Route 1 Northbound at the I-495 Southbound On-Ramp</i>						
Weekday Evening	10.7	49.0	B	10.1	49.1	B
Saturday MIDDAY	11.6	49.0	B	10.7	49.1	B
<i>Route 1 Southbound at the I-495 Northbound On-Ramp</i>						
Weekday Evening	19.1	48.9	B	20.6	48.6	C
Saturday MIDDAY	10.8	49.1	B	11.3	48.9	B
<i>Route 1 Southbound at the I-495 Northbound Off-Ramp</i>						
Weekday Evening	21.5	50.7	C	18.5	50.9	B
Saturday MIDDAY	12.7	51.1	B	11.5	51.1	B
<i>Route 1 Southbound at the I-495 Southbound On-Ramp</i>						
Weekday Evening	20.7	48.7	D	16.7	48.7	B
Saturday MIDDAY	12.3	48.8	B	10.6	49.1	B
<i>Route 1 Southbound at the I-495 Southbound Off-Ramp</i>						
Weekday Evening	21.2	50.7	C	(See Table 4)		
Saturday MIDDAY	11.6	51.1	B			

^aPassenger cars per mile per lane.

^bSpeed in ramp influence area in miles per hour.

^cLevel-of-Service.

Unsignalized Intersections

As can be seen in Table 5, critical movements at the Route 1/Madison Street intersection (all movements from the Madison Street approaches) were shown to operate at or over capacity (LOS “E” or “F”, respectively) during both analysis periods under 2015 Baseline conditions. With the installation of traffic control signal and minor roadway widening as a part of the mitigation commitments for the mixed-use development that is to be located off Madison Street west of Route 1, this intersection currently operates at an overall LOS B or better during both analysis periods under 2019 Existing conditions.

Ramp Junctions

As can be seen in Table 6, the ramp junctions within the study area were shown to operate at LOS C or better under during both peak periods.

Traffic Operations Comparison – Baseline vs. 2019

In general, operating conditions at the monitored intersections were found to be similar to the conditions that were documented as a part of the 2015 Baseline Study, indicating that the opening of the Project and the associated increase in traffic volumes did not result in a significant change in motorist delays or vehicle queueing over the conditions that existed prior to the opening of the Project.

TRANSPORTATION DEMAND MANAGEMENT PROGRAM

In conjunction with the initial planning of the Project, a comprehensive Transportation Demand Management (TDM) program was developed with the goal of reducing single-occupant vehicle (SOV) travel to the Project site by employees and patrons through encouraging the use of alternative modes of transportation to SOV's (i.e., carpools/vanpools, public transportation and pedestrian/bicycle trips). In addition, specific measures were targeted to reduce off-site employee trips during the workday such as direct deposit of pay checks and on-site amenities such as food services and an ATM machine. Table 7 summarizes the elements of the TDM program and the current status of implementation.

Table 7
2019 PLAINRIDGE PARK CASINO TDM PROGRAM

TDM Measure	Current Status	Follow-Up Required
Designate a full time on-site Transportation Coordinator	Complete	None
Join or form a Transportation Management Association (TMA)	Complete	None
Maintain a link to the MassRIDES website via the Plainridge Park Casino website	Complete	None
Maintain a link on the Plainridge Park Casino website for information on Southeastern Massachusetts bike routes	Complete	None
Provide promotional materials on-site for distribution regarding Bay State Commute (NuRide) and MassRIDES programs (e.g. website, employment package)	Complete	None
Expand the role of the on-site transportation coordinator to oversee increased employees, patronage and the related monitoring program	In-Progress	On-going
Maintain and/or expand the Guaranteed Ride Home Program	In-Progress	On-going
Offer non-essential employees work schedules to reduce peak period traffic volumes	Complete	None
Offer direct deposit to all employees	Complete	None
Provide on-site amenities such as food, ATM machine, and check cashing services to reduce off-site vehicle trips throughout the day	Complete	None
Designate a percentage of parking spaces for car/vanpool parking near the building entrance as a convenience to promote ridesharing	In-Progress	Reviewing areas of parking to designate as ridesharing spaces
Provide preferred parking for fuel-efficient vehicles to promote the use of clean fuel vehicles	Complete	None
Provide electric vehicle (EV) charging stations to charge and promote the use of clean fuel vehicles	Complete	None
Accommodate and promote the use of car-sharing services (e.g., Zip Car or Enterprise Carshare)	Complete	None
Implement vehicle idle reduction policies	Complete	None
Provide bicycle storage and changing rooms for employees who elect to bike to work	Complete	None
Provide opportunity for employees to participate in transit subsidy or reimbursement programs, such as the Charlie Card Purchase program	N/A	To be reviewed when GATRA expands route to include Plainridge Park Casino
Provide on-site bus and passenger accommodations within the entry court of the Casino, with sidewalk connections to the customer and employee entrances. These accommodations will include, but not be limited to, dedicated waiting areas for transit riders with adequate seating; kiosks and/or terminals with up to date transit information; and bus berthing areas with covered and easy access to the waiting area and casino entrances	Complete	None - Added seating and monitors with MBTA schedule in the North Casino entrance
Provide a bus circulation lane within the entry court to allow for efficient bus operations to maintain service schedules	Complete	None
Work with and provide necessary funding to the Greater Attleboro Taunton Regional Transit Authority (GATRA) to plan, develop, and implement a new route in North Attleboro and Plainville between Triboro Plaza and Plainridge Park Casino/Plainville Commons shopping center via Route 152. The new route will be designed to provide seamless transfers to the existing GATRA Bus Routes # 10 and #14 serving Attleboro, North Attleboro and Plainville	In-progress	GATRA to expand routes in 2019 to include Plainridge Park Casino



EMPLOYEE AND PATRON TRAVEL MODE SURVEY

An updated survey of employee and patron travel modes was completed in order to ascertain the effectiveness of the TDM program and to refine the initial program to achieve the desired goal of reducing overall volume of traffic generated by the Project. The results of the updated employee and patron travel mode survey are summarized in Table 8.

**Table 8
2019 PLAINRIDGE PARK CASINO
EMPLOYEE AND PATRON TRAVEL MODE SURVEY**

Question	Response	
	Patron	Employee
<i>How did you arrive at Plainridge Today?</i>		
Alone in car	92	88
Car/vanpool	9	0
Bus	0	0
Taxi	0	0
Uber/Lyft	1	0
Motorcycle	0	2
Bicycle	0	0
Walked	0	1
Other/Did not respond	0	3
TOTAL:	102	94
<i>Are you aware of public transportation and car/vanpool options that are available?</i>		
Yes	24	32
No	75	61
Did not respond	3	1
TOTAL:	102	94
<i>Would you use public transportation or a shuttle from a secure designated pick-up area or bus terminal?</i>		
Yes	17	22
No	81	72
Did not respond	4	0
TOTAL:	102	94
<i>Would you walk or bicycle to Plainridge if sidewalks and bicycle lanes were available?</i>		
Yes	4	13
No	93	81
Did not respond	5	0
TOTAL:	102	94
<i>Are you aware of and do you participate in the corporate TDM program?</i>		
Aware and participate	2	12
Aware but do not participate	7	14
Not aware but would participate	28	23
Not aware and would not participate	61	43
Did not respond	4	2
TOTAL:	102	94
<i>Which TDM program features do you use?</i>		
I do not participate	87	55
Guaranteed ride home	1	0
On-site Charlie Card sales	0	0
Direct deposit	1	32
MassRIDES carpool/vanpool matching	0	0
Bay State Commute (NuRide) program	0	0
Flexible Work Schedule	2	1
Transit pass subsidy	1	0
Other/Did not respond	10	6
TOTAL:	102	94



As can be seen in Table 8, the current survey indicates that approximately 90 percent of patrons and 94 percent of employees arrive to the Project site alone in a private automobile, with approximately 74 percent of patrons and 65 percent of employees indicating that they were not aware of public transportation or car/vanpool opportunities. The majority of patrons and employees indicated that they would not use or participate in a shuttle program from an off-site parking facility. Similarly, the majority of patrons and employees indicated that they would not walk or bicycle to the Project site if sidewalks and bicycle lanes were available.

Focusing on employees, 24 percent indicated that they were not aware of the corporate TDM program but would participate. This indicates a distinct opportunity to increase employee participation in the TDM program.

SUMMARY

VAI has completed the 2019 Traffic Monitoring Program for the Plainridge Park Casino located at 301 Washington Street (Route 1) in Plainville, Massachusetts, in accordance with the requirements of the MassDOT Section 61 Finding that was issued for the Project. As required therein, the 2019 Traffic Monitoring Program has documented and compared: i) traffic volumes; ii) trip patterns; iii) traffic operations; and iv) safety; along Route 1 and at defined intersections to the conditions that were documented as a part of the 2015 Baseline Study. In addition, a summary of the elements of the TDM program that has been implemented for employees and patrons has been provided, along with the results of an employee and patron survey of travel modes.

Based on a review of the results of the 2019 Traffic Monitoring Program, we have noted the following with respect to the Project:

1. The *measured* traffic volumes associated with the Project were found to be approximately four (4) percent lower on an average weekday, 52 percent higher during the weekday morning peak-hour, 28 percent higher during the Friday evening peak-hour and four (4) percent higher during the Saturday afternoon peak-hour when compared to the traffic volume *projections* for the Project. As documented herein, sufficient capacity is afforded at the Project site driveway intersection with Route 1 and at the monitored intersections to accommodate the variation in traffic volumes associated with the Project;
2. The 2019 observed peak-hour traffic volumes within the study area were found to be similar to the conditions that were documented in the 2015 Baseline Study;
3. A review of motor vehicle crash data indicates that the study intersections exhibited similar crash patterns before and after the opening of the Project and, with the exception of the Route 1/Route 152 intersection, were found to have motor vehicle crash rates that were below both the MassDOT statewide and District averages for a signalized or unsignalized intersection, as appropriate, for the MassDOT Highway Division District in which the intersections are located (District 5);
4. The Route 1/Route 152 intersection was found to have experienced a decrease in the number of reported crashes after the opening of the Project (17 crashes in 2015 vs. 10 crashes in 2017); however, the calculated motor vehicle crash rate continues to be above the MassDOT average crash rate (statewide and District 5) for a signalized intersection. The majority of the crashes occurring at the intersection were reported as rear-end type collisions that resulted in property damage only. A Road Safety Audit (RSA) was conducted for this intersection in 2014 as a part of the Project and



a number of the recommendations from the RSA have been implemented. It is likely that these improvements have contributed to the reduction in the number of motor vehicle crashes occurring at the intersection;

5. Eighteen motor vehicle crashes were reported to have occurred at the Route 1/Plainridge Park Casino driveway intersection over the 5-year review period, the majority of which occurred on a weekday, involved rear-end type collisions that were attributed to driver error, and resulted in property damage only. The calculated motor vehicle crash rate at the intersection was found to be below the MassDOT average crash rates for a signalized intersection;
6. Operating conditions at the majority of the monitored intersections were found to be similar to the conditions that were documented as a part of the 2015 Baseline Study, indicating that the opening of the Project and the associated increase in traffic volumes did not result in a significant increase in motorist delays or vehicle queuing over the conditions that existed prior to the opening of the Project with consideration of the noted traffic volume differentials during the peak hours;
7. The intersection of Route 1 at the Plainridge Park Casino driveway was shown to operate at an overall LOS B or better during both the weekday evening and Saturday afternoon peak hours, with all movements reported to be operating at LOS C or better where a LOS of “D” or better is considered “acceptable” operating conditions;
8. Approximately 92 percent of patrons and employees arrive to the Project site alone in a private automobile, with approximately 70 percent indicating that they were not aware of public transportation or car/vanpool opportunities. The majority of patrons and employees indicated that they would not use or participate in a shuttle program from an off-site parking facility and would not walk or bicycle to the Project site if sidewalks and bicycle lanes were available; and
9. Twenty-four (24) percent of employees indicated that they were not aware of the corporate Transportation Demand Management (TDM) program but would participate. This indicates a distinct opportunity to increase employee participation in the TDM program.

In consideration of these findings, we have concluded that the measured impact of the Project on traffic volumes, trip patterns, motor vehicle crash trends, and traffic operations (levels of service, motorist delays and vehicle queuing) has been relatively minor, with operating conditions at the monitored intersections found to be similar to the conditions that were documented as a part of the 2015 Baseline Study. Further, opportunities exist to increase employee participation in the TDM program and the use of public transportation services and car/vanpool participation by both patrons and employees.

cc: BG, File

APPENDIX

MANUAL TURNING MOVEMENT COUNT DATA
PROJECT SITE AUTOMATIC TRAFFIC RECORDER COUNT DATA
SEASONAL ADJUSTMENT DATA
2015 BASELINE TRAFFIC-VOLUME NETWORKS
MASSDOT CRASH RATE WORKSHEETS
CAPACITY ANALYSIS WORKSHEETS
EMPLOYEE AND PATRON TRAVEL MODE SURVEY

MANUAL TURNING MOVEMENT COUNTS

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street : Madison Street
 City/State : Wrentham, MA
 Weather : Cloudy

File Name : 69640001
 Site Code : 69640001
 Start Date : 6/6/2019
 Page No : 1

Start Time	Groups Printed: Cars - Trucks														Int. Total	
	Route 1 From North				Madison St From East				Route 1 From South				Madison St From West			
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru		Right
04:00 PM	1	464	1	0	2	0	4	25	263	2	2	2	2	0	24	790
04:15 PM	2	530	8	0	7	0	2	21	310	2	1	2	1	0	36	921
04:30 PM	1	541	2	0	5	0	1	20	346	0	0	0	0	0	26	942
04:45 PM	1	540	3	0	2	0	1	20	363	1	0	0	0	0	24	955
Total	5	2075	14	0	16	0	8	86	1282	5	3	4	3	0	110	3608
05:00 PM	2	597	0	0	10	0	3	17	340	5	2	0	2	1	24	1001
05:15 PM	2	582	1	1	4	1	1	18	341	4	1	1	2	0	30	988
05:30 PM	0	558	5	0	1	0	2	27	289	2	2	1	2	0	21	908
05:45 PM	1	519	5	1	0	0	1	19	290	2	2	0	2	0	35	875
Total	5	2256	11	2	15	1	7	81	1260	13	8	2	8	1	110	3772
06:00 PM	2	516	2	1	3	0	2	14	277	4	1	0	1	0	20	842
06:15 PM	4	388	3	0	0	1	1	19	218	2	2	1	2	0	26	665
06:30 PM	1	345	5	0	3	0	1	32	193	6	0	2	0	0	14	602
06:45 PM	0	312	0	0	1	0	0	13	208	4	4	2	5	1	11	557
Total	7	1561	10	1	7	1	4	78	896	16	8	5	8	1	71	2666
Grand Total	17	5892	35	3	38	2	19	245	3438	34	19	11	19	2	291	10046
Apprch %	0.3	99.1	0.6	0.1	64.4	3.4	32.2	6.6	92.2	0.9	6.1	0.3	6.1	0.6	93.3	
Total %	0.2	58.7	0.3	0	0.4	0	0.2	2.4	34.2	0.3	0.2	0.1	0.2	0	2.9	
Cars	17	5836	35	3	38	2	19	245	3383	31	19	11	19	2	290	9931
% Cars	100	99	100	100	100	100	100	100	98.4	91.2	100	100	100	100	99.7	98.9
Trucks	0	56	0	0	0	0	0	0	55	3	0	0	0	0	1	115
% Trucks	0	1	0	0	0	0	0	0	1.6	8.8	0	0	0	0	0.3	1.1

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street : Madison Street
 City/State : Wrentham, MA
 Weather : Cloudy

File Name : 69640001
 Site Code : 69640001
 Start Date : 6/6/2019
 Page No : 2

Start Time	Route 1 From North				Madison St From East				Route 1 From South				Madison St From West								
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	1	541	2	0	544	5	0	1	0	6	20	346	0	0	366	0	0	26	0	26	942
04:45 PM	1	540	3	0	544	2	0	1	0	3	20	363	1	0	384	0	0	24	0	24	955
05:00 PM	2	597	0	0	599	10	0	3	0	13	17	340	5	0	362	2	1	24	1	24	1001
05:15 PM	2	582	1	1	586	4	1	1	1	6	18	341	4	1	364	2	0	30	0	30	988
Total Volume	6	2260	6	1	2273	21	1	6	1	28	75	1390	10	1	1476	4	1	104	1	104	3886
% App. Total	0.3	99.4	0.3	0	949	75	3.6	21.4	0	538	5.1	94.2	0.7	0.1	961	3.7	0.9	95.4	0.250	.867	.971
PHF	.750	.946	.500	.250	.949	.525	.250	.500	.250	.538	.938	.957	.500	.250	.961	.500	.250	.867	.250	.852	.971
Cars	6	2241	6	1	2254	21	1	6	1	28	75	1371	8	1	1455	4	1	104	1	104	3846
% Cars	100	99.2	100	100	99.2	100	100	100	100	100	100	98.6	80.0	100	98.6	100	100	100	100	100	99.0
Trucks	0	19	0	0	19	0	0	0	0	0	0	19	2	0	21	0	0	0	0	0	40
% Trucks	0	0.8	0	0	0.8	0	0	0	0	0	0	1.4	20.0	0	1.4	0	0	0	0	0	1.0

Accurate Counts

978-664-2565

File Name : 69640001
 Site Code : 69640001
 Start Date : 6/6/2019
 Page No : 1

N/S Street : Route 1
 E/W Street: Madison Street
 City/State : Wrentham, MA
 Weather : Cloudy

Start Time	Groups Printed- Cars												Int. Total		
	Route 1 From North			Madison St From East			Route 1 From South			Madison St From West					
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left		Thru	Right
04:00 PM	1	452	1	0	2	0	4	0	25	254	1	2	0	24	768
04:15 PM	2	523	8	0	7	0	2	21	303	2	2	1	0	35	906
04:30 PM	1	533	2	0	5	0	1	20	339	0	0	0	0	26	927
04:45 PM	1	535	3	0	2	0	1	20	356	0	0	0	0	24	942
Total	5	2043	14	0	16	0	8	86	1252	3	4	3	0	109	3543
05:00 PM	2	593	0	0	10	0	3	17	337	4	0	2	1	24	993
05:15 PM	2	580	1	1	4	1	1	18	339	4	1	2	0	30	984
05:30 PM	0	556	5	0	1	0	2	27	285	2	1	2	0	21	902
05:45 PM	1	514	5	1	0	0	1	19	287	2	0	2	0	35	867
Total	5	2243	11	2	15	1	7	81	1248	12	2	8	1	110	3746
06:00 PM	2	513	2	1	3	0	2	14	275	4	0	1	0	20	837
06:15 PM	4	384	3	0	0	1	1	19	213	2	1	2	0	26	656
06:30 PM	1	342	5	0	3	0	1	32	191	6	2	0	0	14	597
06:45 PM	0	311	0	0	1	0	0	13	204	4	2	5	1	11	552
Total	7	1550	10	1	7	1	4	78	883	16	5	8	1	71	2642
Grand Total	17	5836	35	3	38	2	19	245	3383	31	11	19	2	290	9931
Approch %	0.3	99.1	0.6	0.1	64.4	3.4	32.2	6.7	92.2	0.8	0.3	6.1	0.6	93.2	
Total %	0.2	58.8	0.4	0	0.4	0	0.2	2.5	34.1	0.3	0.1	0.2	0	2.9	

Accurate Counts

978-664-2565

File Name : 69640001
 Site Code : 69640001
 Start Date : 6/6/2019
 Page No : 1

N/S Street : Route 1
 E/W Street : Madison Street
 City/State : Wrentham, MA
 Weather : Cloudy

Start Time	Groups Printed- Trucks												Int. Total				
	Route 1 From North				Madison St From East				Route 1 From South					Madison St From West			
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		Left	Thru	Right	U-TR
04:00 PM	0	12	0	0	0	0	0	0	0	9	1	0	0	0	0	0	22
04:15 PM	0	7	0	0	0	0	0	0	0	7	0	0	0	0	1	0	15
04:30 PM	0	8	0	0	0	0	0	0	0	7	0	0	0	0	0	0	15
04:45 PM	0	5	0	0	0	0	0	0	0	7	1	0	0	0	0	0	13
Total	0	32	0	0	0	0	0	0	0	30	2	0	0	0	1	0	65
05:00 PM	0	4	0	0	0	0	0	0	0	3	1	0	0	0	0	0	8
05:15 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
05:30 PM	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	0	6
05:45 PM	0	5	0	0	0	0	0	0	0	3	0	0	0	0	0	0	8
Total	0	13	0	0	0	0	0	0	0	12	1	0	0	0	0	0	26
06:00 PM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
06:15 PM	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0	9
06:30 PM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5
06:45 PM	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	5
Total	0	11	0	0	0	0	0	0	0	13	0	0	0	0	0	0	24
Grand Total	0	56	0	0	0	0	0	0	0	55	3	0	0	0	1	0	115
Approch %	0	100	0	0	0	0	0	0	0	94.8	5.2	0	0	0	100	0	
Total %	0	48.7	0	0	0	0	0	0	0	47.8	2.6	0	0	0	0.9	0	

Accurate Counts

978-664-2565

File Name : 69640001
 Site Code : 69640001
 Start Date : 6/6/2019
 Page No : 1

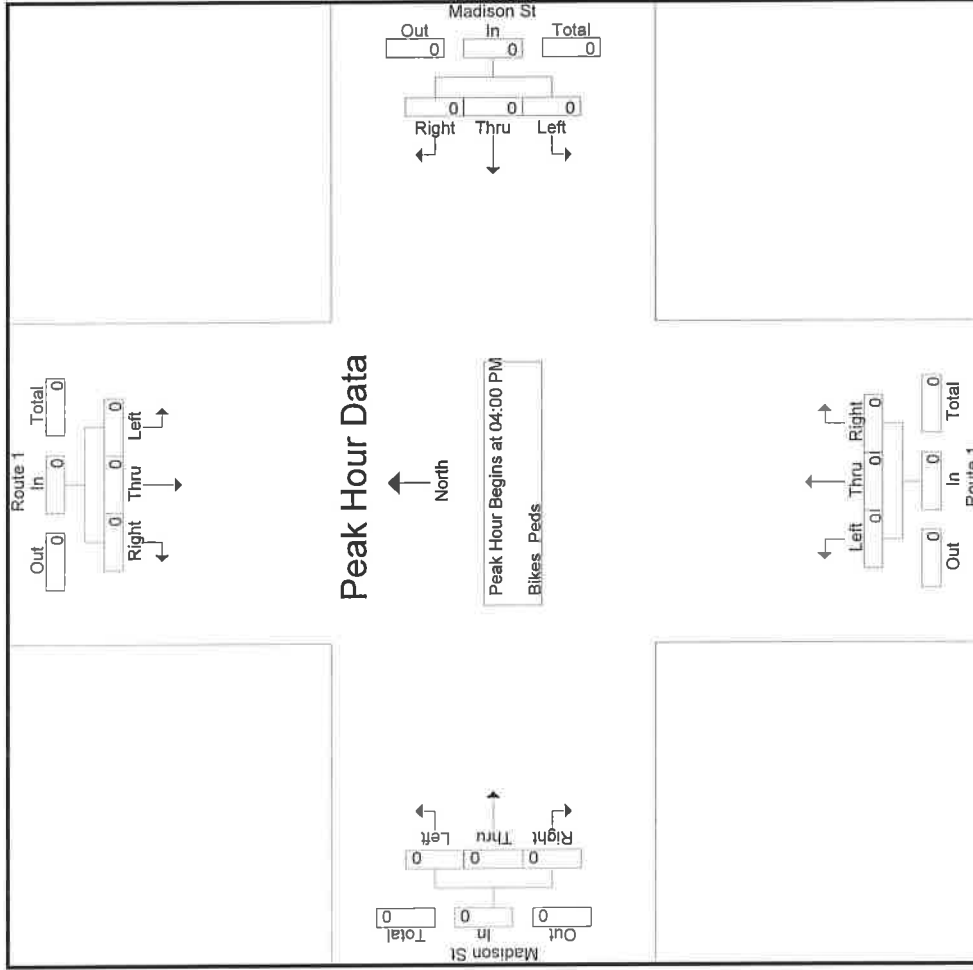
N/S Street : Route 1
 E/W Street: Madison Street
 City/State : Wrentham, MA
 Weather : Cloudy

Start Time	Groups Printed- Bikes Peds																			
	Route 1 From North				Madison St From East				Route 1 From South				Madison St From West							
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total	
04:00 PM	0	0	0	0	0	0	0	0	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	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	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	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	0
05:30 PM	0	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	0
Total	0	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	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	0
06:30 PM	0	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	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Accurate Counts
978-664-2565

N/S Street : Route 1
E/W Street: Madison Street
City/State : Wrentham, MA
Weather : Cloudy

File Name : 69640001
Site Code : 69640001
Start Date : 6/6/2019
Page No : 3



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	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
+30 mins.	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
Total Volume	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
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

File Name : 696400S1
 Site Code : 69640001
 Start Date : 6/8/2019
 Page No : 1

N/S Street : Route 1
 E/W Street : Madison Street
 City/State : Wrentham, MA
 Weather : Clear

Start Time	Groups Printed- Cars - Trucks												Int. Total		
	Route 1 From North			Madison St From East			Route 1 From South			Madison St From West					
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left		Thru	Right
02:00 PM	0	260	5	0	6	0	0	28	239	1	3	1	0	27	570
02:15 PM	0	235	1	0	0	0	0	21	282	3	4	0	0	16	562
02:30 PM	0	253	1	0	1	0	0	24	278	1	0	1	0	11	570
02:45 PM	1	293	2	0	2	0	3	17	270	4	2	1	0	21	616
Total	1	1041	9	0	9	0	3	90	1069	9	9	3	0	75	2318
03:00 PM	1	343	2	0	3	0	1	26	246	2	2	1	0	22	649
03:15 PM	0	319	5	0	1	0	1	23	258	1	3	1	1	26	639
03:30 PM	1	265	2	0	2	0	2	17	292	3	2	1	0	16	603
03:45 PM	1	307	0	0	1	0	1	22	263	5	2	1	0	15	618
Total	3	1234	9	0	7	0	5	88	1059	11	9	4	1	79	2509
04:00 PM	1	258	2	0	2	0	2	14	255	2	5	0	0	28	569
04:15 PM	0	256	3	0	2	0	0	15	226	0	0	0	0	8	510
04:30 PM	0	238	4	0	2	1	1	15	250	2	1	0	0	17	531
04:45 PM	0	219	1	0	4	0	0	18	278	2	2	3	0	22	549
Total	1	971	10	0	10	1	3	62	1009	6	8	3	0	75	2159
Grand Total	5	3246	28	0	26	1	11	240	3137	26	26	10	1	229	6986
Approch %	0.2	99	0.9	0	68.4	2.6	28.9	7	91.5	0.8	0.8	4.2	0.4	95.4	
Total %	0.1	46.5	0.4	0	0.4	0	0.2	3.4	44.9	0.4	0.4	0.1	0	3.3	
Cars	5	3234	28	0	26	1	11	240	3115	23	26	10	1	229	6949
% Cars	100	99.6	100	0	100	100	100	100	99.3	88.5	100	100	100	100	99.5
Trucks	0	12	0	0	0	0	0	0	22	3	0	0	0	0	37
% Trucks	0	0.4	0	0	0	0	0	0	0.7	11.5	0	0	0	0	0.5

Accurate Counts

978-664-2565

File Name : 696400S1
 Site Code : 69640001
 Start Date : 6/8/2019
 Page No : 2

N/S Street : Route 1
 E/W Street: Madison Street
 City/State : Wrentham, MA
 Weather : Clear

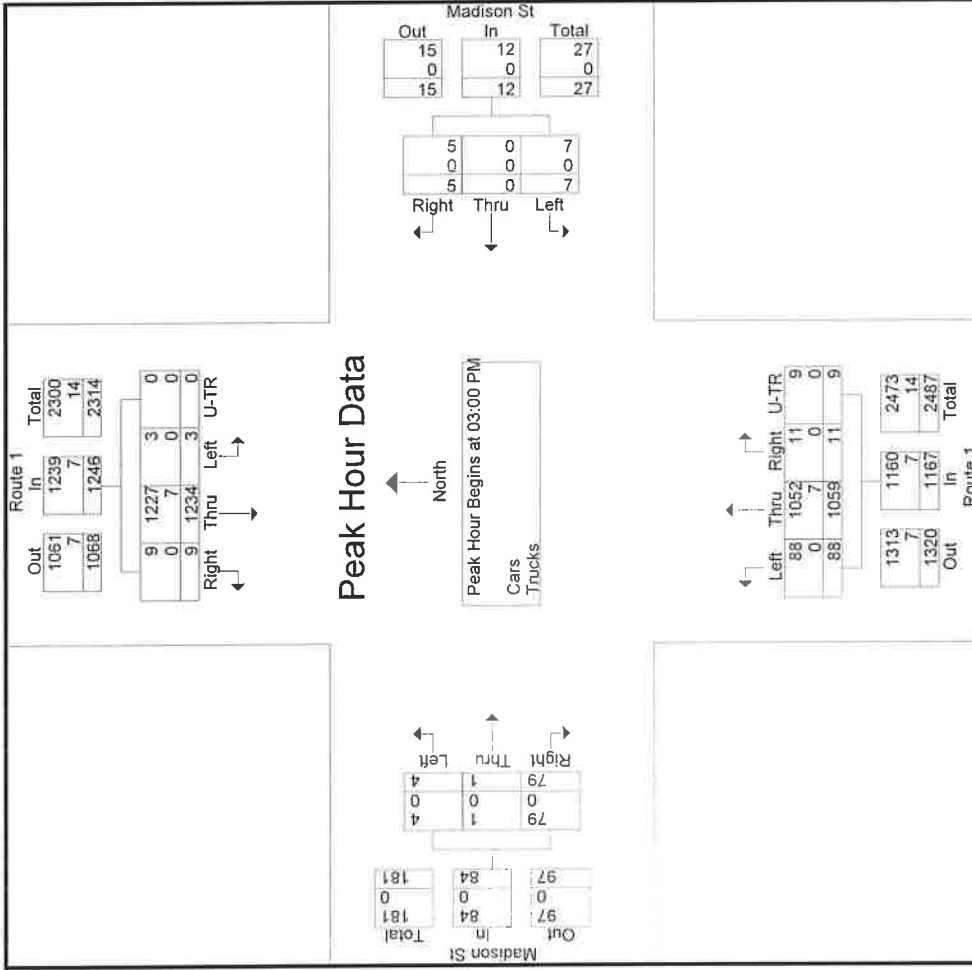
Start Time	Route 1 From North				Madison St From East				Route 1 From South				Madison St From West						
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:00 PM																			
03:00 PM	1	343	2	0	346	3	0	1	4	26	246	2	2	276	1	0	22	23	649
03:15 PM	0	319	5	0	324	1	0	1	2	23	258	1	3	285	1	1	26	28	639
03:30 PM	1	265	2	0	268	2	0	2	4	17	292	3	2	314	1	0	16	17	603
03:45 PM	1	307	0	0	308	1	0	1	2	22	263	5	2	292	1	0	15	16	618
Total Volume	3	1234	9	0	1246	7	0	5	12	88	1059	11	9	1167	4	1	79	84	2509
% App. Total	0.2	99	0.7	0		58.3	0	41.7		7.5	90.7	0.9	0.8		4.8	1.2	94		
PHF	.750	.899	.450	.000	.900	.583	.000	.625	.750	.846	.907	.550	.750	.929	1.00	.250	.760	.750	.966
Cars	3	1227	9	0	1239	7	0	5	12	88	1052	11	9	1160	4	1	79	84	2495
% Cars	100	99.4	100	0	99.4	100	0	100	100	100	99.3	100	100	99.4	100	100	100	100	99.4
Trucks	0	7	0	0	7	0	0	0	0	0	7	0	0	7	0	0	0	0	14
% Trucks	0	0.6	0	0	0.6	0	0	0	0	0	0.7	0	0	0.6	0	0	0	0	0.6

Accurate Counts

978-664-2565

File Name : 696400S1
 Site Code : 69640001
 Start Date : 6/8/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Madison Street
 City/State : Wrentham, MA
 Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	03:00 PM	02:45 PM	02:15 PM	02:45 PM	02:15 PM	02:45 PM	02:15 PM	02:45 PM	02:15 PM	02:45 PM
+0 mins.	1	343	2	0	3	5	21	310	1	22
+15 mins.	0	319	5	0	1	4	24	303	1	23
+30 mins.	1	265	2	0	1	2	17	293	1	28
+45 mins.	1	307	0	0	2	4	26	276	1	17
Total Volume	3	1234	9	0	7	15	88	1182	4	90
% App. Total	0.2	99	0.7	0	46.7	7.4	91	94.4	1.1	94.4
PHF	.750	.899	.450	.000	.583	.750	.846	.954	.625	.817
				.000	.900	.667	.000	.953	.250	.804

Accurate Counts

978-664-2565

File Name : 696400S1
 Site Code : 69640001
 Start Date : 6/8/2019
 Page No : 1

N/S Street : Route 1
 E/W Street: Madison Street
 City/State : Wrentham, MA
 Weather : Clear

Start Time	Groups Printed- Cars												Int. Total		
	Route 1 From North			Madison St From East			Route 1 From South			Madison St From West					
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left		Thru	Right
02:00 PM	0	259	5	0	6	0	0	28	237	1	3	1	0	27	567
02:15 PM	0	235	1	0	0	0	0	21	279	2	4	0	0	16	558
02:30 PM	0	252	1	0	1	0	0	24	275	0	0	1	0	11	565
02:45 PM	1	293	2	0	2	0	3	17	267	3	2	1	0	21	612
Total	1	1039	9	0	9	0	3	90	1058	6	9	3	0	75	2302
03:00 PM	1	340	2	0	3	0	1	26	243	2	2	1	0	22	643
03:15 PM	0	319	5	0	1	0	1	23	257	1	3	1	1	26	638
03:30 PM	1	265	2	0	2	0	2	17	291	3	2	1	0	16	602
03:45 PM	1	303	0	0	1	0	1	22	261	5	2	1	0	15	612
Total	3	1227	9	0	7	0	5	88	1052	11	9	4	1	79	2495
04:00 PM	1	256	2	0	2	0	2	14	255	2	5	0	0	28	567
04:15 PM	0	256	3	0	2	0	0	15	223	0	0	0	0	8	507
04:30 PM	0	237	4	0	2	1	1	15	250	2	1	0	0	17	530
04:45 PM	0	219	1	0	4	0	0	18	277	2	2	3	0	22	548
Total	1	968	10	0	10	1	3	62	1005	6	8	3	0	75	2152
Grand Total	5	3234	28	0	26	1	11	240	3115	23	26	10	1	229	6949
Approch %	0.2	99	0.9	0	68.4	2.6	28.9	7.1	91.5	0.7	0.8	4.2	0.4	95.4	
Total %	0.1	46.5	0.4	0	0.4	0	0.2	3.5	44.8	0.3	0.4	0.1	0	3.3	

Accurate Counts
978-664-2565

File Name : 696400S1
Site Code : 69640001
Start Date : 6/8/2019
Page No : 1

N/S Street : Route 1
E/W Street: Madison Street
City/State : Wrentham, MA
Weather : Clear

Groups Printed- Trucks

Start Time	Route 1 From North			Madison St From East			Route 1 From South			Madison St From West			Int. Total		
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left		Thru	Right
02:00 PM	0	1	0	0	0	0	0	0	2	0	0	0	0	0	3
02:15 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	4
02:30 PM	0	1	0	0	0	0	0	0	3	0	0	0	0	0	5
02:45 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	4
Total	0	2	0	0	0	0	0	0	11	3	0	0	0	0	16
03:00 PM	0	3	0	0	0	0	0	0	3	0	0	0	0	0	6
03:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
03:45 PM	0	4	0	0	0	0	0	0	2	0	0	0	0	0	6
Total	0	7	0	0	0	0	0	0	7	0	0	0	0	0	14
04:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Total	0	3	0	0	0	0	0	0	4	0	0	0	0	0	7
Grand Total	0	12	0	0	0	0	0	0	22	3	0	0	0	0	37
Approch %	0	100	0	0	0	0	0	0	88	12	0	0	0	0	
Total %	0	32.4	0	0	0	0	0	0	59.5	8.1	0	0	0	0	

Accurate Counts

978-664-2565

File Name : 696400S1
 Site Code : 69640001
 Start Date : 6/8/2019
 Page No : 1

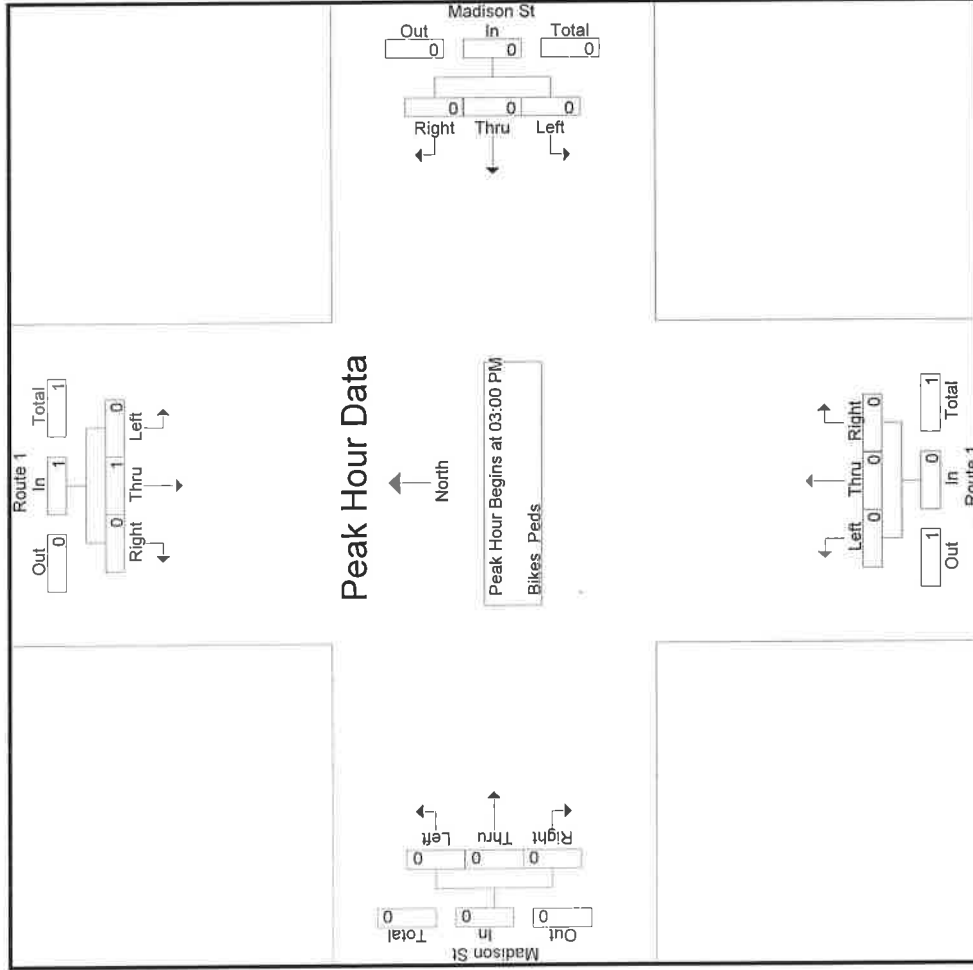
N/S Street : Route 1
 E/W Street: Madison Street
 City/State : Wrentham, MA
 Weather : Clear

Start Time	Groups Printed- Bikes Peds															
	Route 1 From North			Madison St From East			Route 1 From South			Madison St From West						
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	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
02:30 PM	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
Total	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	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2
04:00 PM	0	0	0	0	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	0	0	0	0
04:30 PM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Approch %	0	100	0	0	0	0	0	0	0	0	0	0	0	50	50	50
Total %	0	100	0	0	0	0	0	0	0	0	0	0	0	50	50	50

Accurate Counts
978-664-2565

File Name : 696400S1
Site Code : 69640001
Start Date : 6/8/2019
Page No : 3

N/S Street : Route 1
E/W Street : Madison Street
City/State : Wrentham, MA
Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640002
 Site Code : 69640002
 Start Date : 6/6/2019
 Page No : 1

Start Time	Groups Printed- Cars - Trucks												Int. Total
	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	314	182	0	0	71	0	194	91	0	0	96	948
04:15 PM	0	357	177	0	0	96	0	185	102	0	0	108	1025
04:30 PM	0	346	190	0	0	91	0	225	99	0	0	101	1052
04:45 PM	0	367	155	0	0	85	0	243	99	0	0	96	1045
Total	0	1384	704	0	0	343	0	847	391	0	0	401	4070
05:00 PM	0	364	184	0	0	78	0	198	93	0	0	97	1014
05:15 PM	0	405	202	0	0	102	0	222	87	0	0	112	1130
05:30 PM	0	382	156	0	0	92	0	199	92	0	0	101	1022
05:45 PM	0	360	142	0	0	84	0	184	77	0	0	92	939
Total	0	1511	684	0	0	356	0	803	349	0	0	402	4105
06:00 PM	0	358	156	0	0	84	0	153	57	0	0	93	901
06:15 PM	0	308	117	0	0	60	0	152	81	0	0	69	787
06:30 PM	0	273	104	0	0	56	0	142	77	0	0	81	733
06:45 PM	0	232	142	0	0	56	0	136	80	0	0	86	732
Total	0	1171	519	0	0	256	0	583	295	0	0	329	3153
Grand Total	0	4066	1907	0	0	955	0	2233	1035	0	0	1132	11328
Approach %	0	68.1	31.9	0	0	100	0	68.3	31.7	0	0	100	99.2
Total %	0	35.9	16.8	0	0	8.4	0	19.7	9.1	0	0	10	94
Cars	0	4051	1883	0	0	931	0	2220	1029	0	0	1120	11234
% Cars	0	99.6	98.7	0	0	97.5	0	99.4	99.4	0	0	98.9	99.2
Trucks	0	15	24	0	0	24	0	13	6	0	0	12	94
% Trucks	0	0.4	1.3	0	0	2.5	0	0.6	0.6	0	0	1.1	0.8

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640002
 Site Code : 69640002
 Start Date : 6/6/2019
 Page No : 2

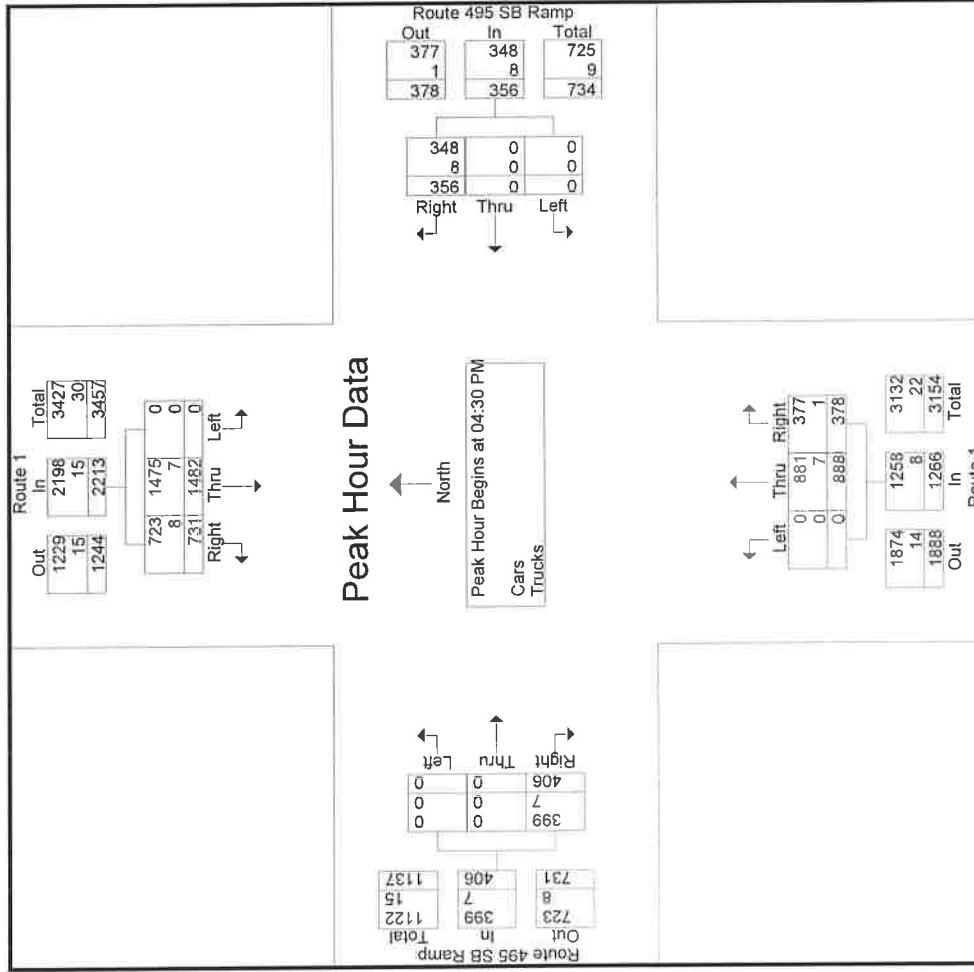
Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	0	346	190	0	0	91	0	225	99	0	0	101	324	1052
04:45 PM	0	367	155	0	0	85	0	243	99	0	0	96	342	1045
05:00 PM	0	364	184	0	0	78	0	198	93	0	0	97	291	1014
05:15 PM	0	405	202	0	0	102	0	222	87	0	0	112	309	1130
Total Volume	0	1482	731	0	0	356	0	888	378	0	0	406	1266	4241
% App. Total	0	67	33	0	0	100	0	70.1	29.9	0	0	100	.000	.938
PHF	.000	.915	.905	.000	.000	.873	.000	.914	.955	.000	.000	.906	.925	.938
Cars	0	1475	723	0	0	348	0	881	377	0	0	399	1258	4203
% Cars	0	99.5	98.9	0	0	97.8	0	99.2	99.7	0	0	98.3	99.4	99.1
Trucks	0	7	8	0	0	8	0	7	1	0	0	7	8	38
% Trucks	0	0.5	1.1	0	0	2.2	0	0.8	0.3	0	0	1.7	0.6	0.9

Accurate Counts

978-664-2565

File Name : 69640002
 Site Code : 69640002
 Start Date : 6/6/2019
 Page No : 3

N/S Street : Route 1
 EW Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM		05:15 PM		04:30 PM		04:30 PM						
+0 mins.	0	367	155	522	0	102	0	225	0	0	0	0	101
+15 mins.	0	364	184	548	0	92	0	243	99	324	0	0	96
+30 mins.	0	405	202	607	0	84	0	198	93	342	0	0	97
+45 mins.	0	382	156	538	0	84	0	222	87	309	0	0	112
Total Volume	0	1518	697	2215	0	362	0	888	378	1266	0	0	406
% App. Total	0	68.5	31.5	0	0	100	0	70.1	29.9	0	0	0	100
PHF	.000	.937	.863	.912	.000	.887	.000	.914	.955	.925	.000	.000	.906

Accurate Counts
978-664-2565

File Name : 69640002
Site Code : 69640002
Start Date : 6/6/2019
Page No : 5

N/S Street : Route 1
E/W Street: Route 495 SB Ramp
City/State : Plainville, MA
Weather : Cloudy

Groups Printed- Cars

Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	311	174	0	0	67	0	193	88	0	0	95	928
04:15 PM	0	355	176	0	0	92	0	182	102	0	0	108	1015
04:30 PM	0	344	186	0	0	88	0	224	98	0	0	98	1038
04:45 PM	0	364	153	0	0	81	0	243	99	0	0	95	1035
Total	0	1374	689	0	0	328	0	842	387	0	0	396	4016
05:00 PM	0	364	183	0	0	77	0	196	93	0	0	97	1010
05:15 PM	0	403	201	0	0	102	0	218	87	0	0	109	1120
05:30 PM	0	380	156	0	0	91	0	198	91	0	0	99	1015
05:45 PM	0	359	141	0	0	83	0	183	77	0	0	92	935
Total	0	1506	681	0	0	353	0	795	348	0	0	397	4080
06:00 PM	0	358	156	0	0	83	0	153	57	0	0	93	900
06:15 PM	0	308	114	0	0	58	0	152	81	0	0	67	780
06:30 PM	0	273	102	0	0	55	0	142	77	0	0	81	730
06:45 PM	0	232	141	0	0	54	0	136	79	0	0	86	728
Total	0	1171	513	0	0	250	0	583	294	0	0	327	3138
Grand Total	0	4051	1883	0	0	931	0	2220	1029	0	0	1120	11234
Approch %	0	68.3	31.7	0	0	100	0	68.3	31.7	0	0	100	
Total %	0	36.1	16.8	0	0	8.3	0	19.8	9.2	0	0	10	

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640002
 Site Code : 69640002
 Start Date : 6/6/2019
 Page No : 9

Groups Printed- Trucks

Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	3	8	0	0	4	0	1	3	0	0	1	20
04:15 PM	0	2	1	0	0	4	0	3	0	0	0	0	10
04:30 PM	0	2	4	0	0	3	0	1	1	0	0	3	14
04:45 PM	0	3	2	0	0	4	0	0	0	0	0	1	10
Total	0	10	15	0	0	15	0	5	4	0	0	5	54
05:00 PM	0	0	1	0	0	1	0	2	0	0	0	0	4
05:15 PM	0	2	1	0	0	0	0	4	0	0	0	3	10
05:30 PM	0	2	0	0	0	1	0	1	1	0	0	2	7
05:45 PM	0	1	1	0	0	1	0	1	0	0	0	0	4
Total	0	5	3	0	0	3	0	8	1	0	0	5	25
06:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
06:15 PM	0	0	3	0	0	2	0	0	0	0	0	2	7
06:30 PM	0	0	2	0	0	1	0	0	0	0	0	0	3
06:45 PM	0	0	1	0	0	2	0	0	1	0	0	0	4
Total	0	0	6	0	0	6	0	0	1	0	0	2	15
Grand Total	0	15	24	0	0	24	0	13	6	0	0	12	94
Approch %	0	38.5	61.5	0	0	100	0	68.4	31.6	0	0	100	
Total %	0	16	25.5	0	0	25.5	0	13.8	6.4	0	0	12.8	

Accurate Counts

978-664-2565

File Name : 69640002
 Site Code : 69640002
 Start Date : 6/6/2019
 Page No : 13

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Cloudy

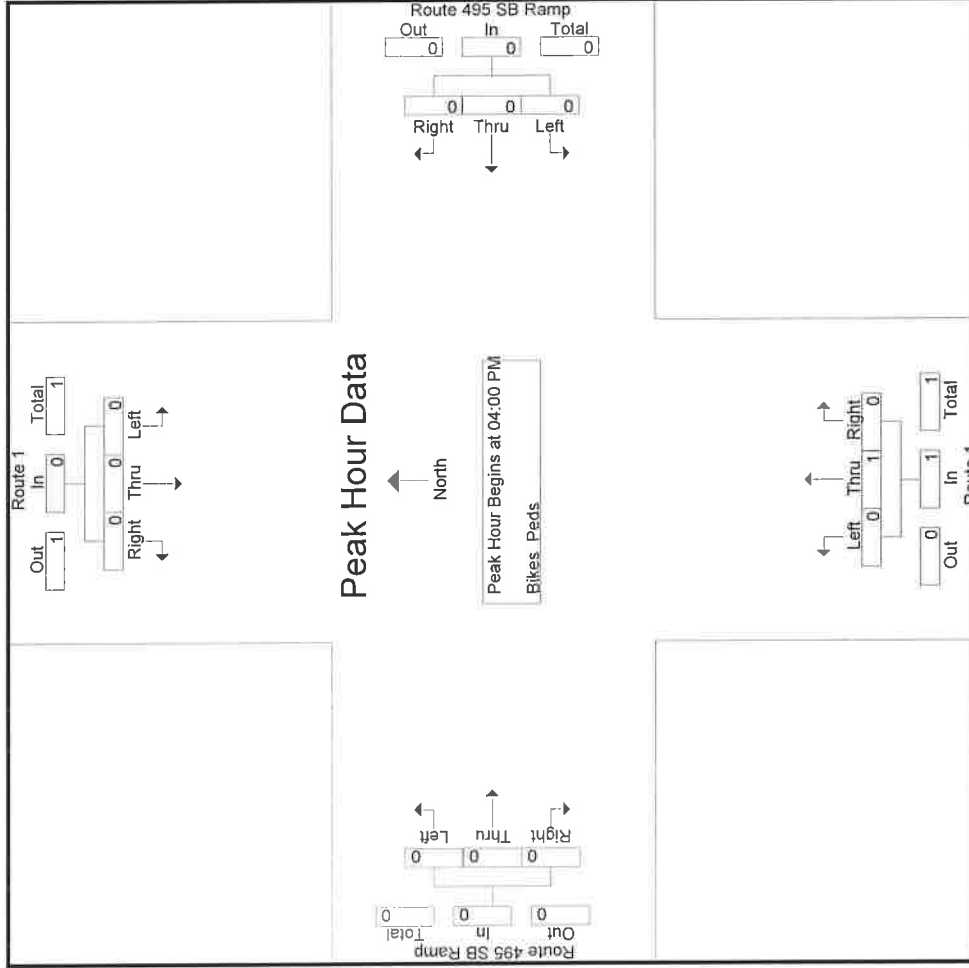
Groups Printed- Bikes- Peds

Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
04:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
04:15 PM	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
04:45 PM	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	0	0	0	0	1
05:00 PM	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
05:30 PM	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
Total	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	0	0
06:15 PM	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
06:45 PM	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
Grand Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Approch %	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	100	0	0	0	0	0	0	100	0

Accurate Counts
978-664-2565

File Name : 69640002
Site Code : 69640002
Start Date : 6/6/2019
Page No : 15

N/S Street : Route 1
E/W Street : Route 495 SB Ramp
City/State : Plainville, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

Accurate Counts

978-664-2565

File Name : 696400S2
 Site Code : 69640002
 Start Date : 6/8/2019
 Page No : 1

N/S Street : Route 1
 EW Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Clear

Start Time	Groups Printed- Cars - Trucks												
	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
02:00 PM	0	225	87	0	0	48	0	179	94	0	0	86	719
02:15 PM	0	222	93	0	0	57	0	214	100	0	0	71	757
02:30 PM	0	225	101	0	0	79	0	212	87	0	0	76	780
02:45 PM	0	273	88	0	0	62	0	237	111	0	0	87	858
Total	0	945	369	0	0	246	0	842	392	0	0	320	3114
03:00 PM	0	272	141	0	0	53	0	211	109	0	0	81	867
03:15 PM	0	258	133	0	0	67	0	198	119	0	0	85	860
03:30 PM	0	247	96	0	0	64	0	222	107	0	0	79	815
03:45 PM	0	246	101	0	0	57	0	212	97	0	0	87	800
Total	0	1023	471	0	0	241	0	843	432	0	0	332	3342
04:00 PM	0	223	102	0	0	62	0	191	77	0	0	64	719
04:15 PM	0	202	74	0	0	57	0	190	105	0	0	58	686
04:30 PM	0	221	80	0	0	74	0	160	72	0	0	66	673
04:45 PM	0	191	91	0	0	61	0	175	94	0	0	81	693
Total	0	837	347	0	0	254	0	716	348	0	0	269	2771
Grand Total:	0	2805	1187	0	0	741	0	2401	1172	0	0	921	9227
Approach %	0	70.3	29.7	0	0	100	0	67.2	32.8	0	0	100	
Total %	0	30.4	12.9	0	0	8	0	26	12.7	0	0	10	
Cars	0	2800	1181	0	0	730	0	2389	1169	0	0	917	9186
% Cars	0	99.8	99.5	0	0	98.5	0	99.5	99.7	0	0	99.6	99.6
Trucks	0	5	6	0	0	11	0	12	3	0	0	4	41
% Trucks	0	0.2	0.5	0	0	1.5	0	0.5	0.3	0	0	0.4	0.4

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Clear

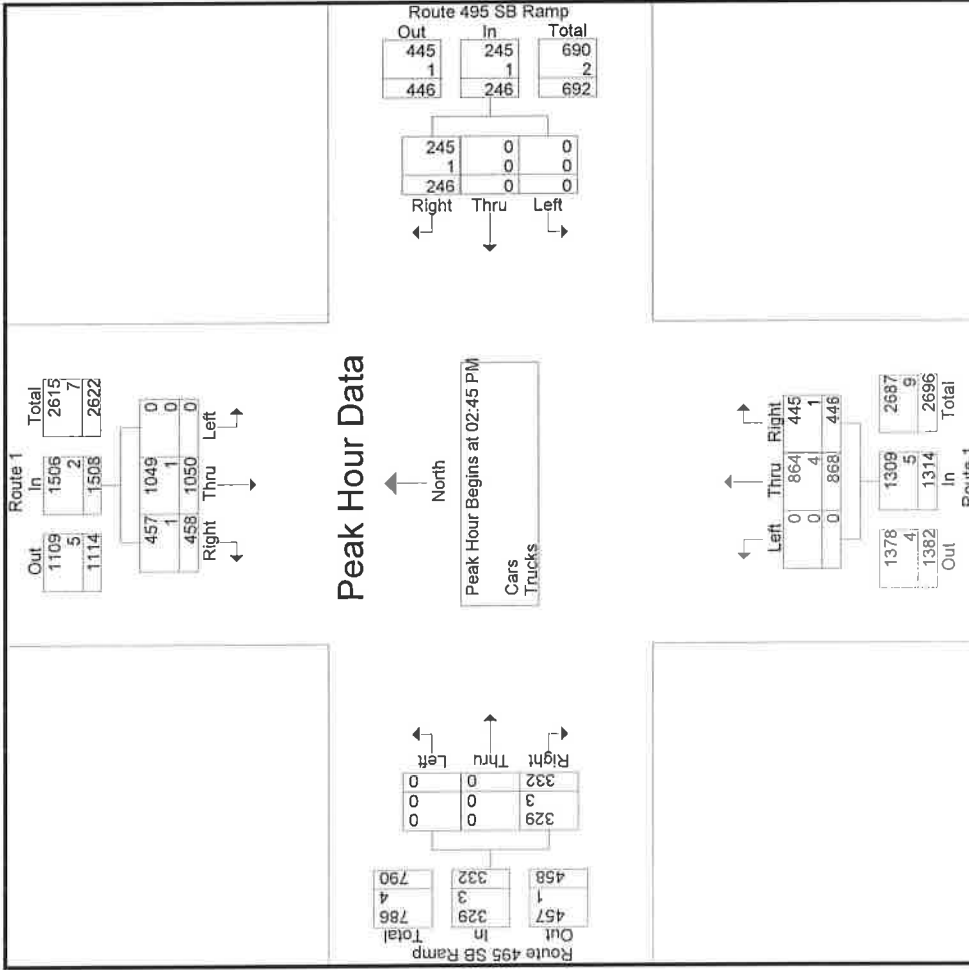
File Name : 696400S2
 Site Code : 69640002
 Start Date : 6/8/2019
 Page No : 2

Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 02:45 PM														
02:45 PM	0	273	88	0	0	62	0	237	111	0	0	87	348	858
03:00 PM	0	272	141	0	0	53	0	211	109	0	0	81	320	867
03:15 PM	0	258	133	0	0	67	0	198	119	0	0	85	317	860
03:30 PM	0	247	96	0	0	64	0	222	107	0	0	79	329	815
Total Volume	0	1050	458	0	0	246	0	868	446	0	0	332	1314	3400
% App. Total:	0	69.6	30.4	0	0	100	0	66.1	33.9	0	0	100		
PHF	.000	.962	.812	.000	.000	.918	.000	.916	.937	.000	.000	.954	.944	.980
Cars	0	1049	457	0	0	245	0	864	445	0	0	329	1309	3389
% Cars	0	99.9	99.8	0	0	99.6	0	99.5	99.8	0	0	99.1	99.6	99.7
Trucks	0	1	1	0	0	1	0	4	1	0	0	3	5	11
% Trucks	0	0.1	0.2	0	0	0.4	0	0.5	0.2	0	0	0.9	0.4	0.3

Accurate Counts
978-664-2565

File Name : 696400S2
Site Code : 69640002
Start Date : 6/8/2019
Page No : 3

N/S Street : Route 1
E/W Street : Route 495 SB Ramp
City/State : Plainville, MA
Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:30 PM			02:45 PM			02:45 PM					
+0 mins	0	273	88	361	0	0	79	79	0	237	111	348	0	0	87
+15 mins	0	272	141	413	0	0	62	62	0	211	109	320	0	0	81
+30 mins	0	258	133	391	0	0	53	53	0	198	119	317	0	0	85
+45 mins	0	247	96	343	0	0	67	67	0	222	107	329	0	0	79
Total Volume	0	1050	458	1508	0	0	261	261	0	868	446	1314	0	0	332
% App. Total	0	69.6	30.4	100	0	0	100	100	0	66.1	33.9	94.4	0	0	100
PHF	.000	.962	.812	.913	.000	.000	.826	.826	.000	.916	.937	.944	.000	.000	.954

Accurate Counts

978-664-2565

File Name : 696400S2
 Site Code : 69640002
 Start Date : 6/8/2019
 Page No : 5

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Clear

Groups Printed- Cars

Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:00 PM	0	225	87	0	0	46	0	178	94	0	0	86	716
02:15 PM	0	222	93	0	0	56	0	214	100	0	0	71	756
02:30 PM	0	225	101	0	0	78	0	210	87	0	0	75	776
02:45 PM	0	273	88	0	0	61	0	237	111	0	0	87	857
Total	0	945	369	0	0	241	0	839	392	0	0	319	3105
03:00 PM	0	271	141	0	0	53	0	209	109	0	0	79	862
03:15 PM	0	258	133	0	0	67	0	198	119	0	0	84	859
03:30 PM	0	247	95	0	0	64	0	220	106	0	0	79	811
03:45 PM	0	244	98	0	0	55	0	212	97	0	0	87	793
Total	0	1020	467	0	0	239	0	839	431	0	0	329	3325
04:00 PM	0	222	101	0	0	61	0	191	76	0	0	64	715
04:15 PM	0	202	74	0	0	55	0	187	105	0	0	58	681
04:30 PM	0	221	79	0	0	74	0	159	72	0	0	66	671
04:45 PM	0	190	91	0	0	60	0	174	93	0	0	81	689
Total	0	835	345	0	0	250	0	711	346	0	0	269	2756
Grand Total	0	2800	1181	0	0	730	0	2389	1169	0	0	917	9186
Approch %	0	70.3	29.7	0	0	100	0	67.1	32.9	0	0	100	
Total %	0	30.5	12.9	0	0	7.9	0	26	12.7	0	0	10	

Accurate Counts
978-664-2565

File Name : 696400S2
Site Code : 69640002
Start Date : 6/8/2019
Page No : 9

N/S Street : Route 1
EW Street: Route 495 SB Ramp
City/State : Plainville, MA
Weather : Clear

Groups Printed- Trucks

Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:00 PM	0	0	0	0	0	2	0	1	0	0	0	0	3
02:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
02:30 PM	0	0	0	0	0	1	0	2	0	0	0	1	4
02:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
Total	0	0	0	0	0	5	0	3	0	0	0	1	9
03:00 PM	0	1	0	0	0	0	0	2	0	0	0	2	5
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
03:30 PM	0	0	1	0	0	0	0	2	1	0	0	0	4
03:45 PM	0	2	3	0	0	2	0	0	0	0	0	0	7
Total	0	3	4	0	0	2	0	4	1	0	0	3	17
04:00 PM	0	1	1	0	0	1	0	0	1	0	0	0	4
04:15 PM	0	0	0	0	0	2	0	3	0	0	0	0	5
04:30 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
04:45 PM	0	1	0	0	0	1	0	1	1	0	0	0	4
Total	0	2	2	0	0	4	0	5	2	0	0	0	15
Grand Total	0	5	6	0	0	11	0	12	3	0	0	4	41
Approch %	0	45.5	54.5	0	0	100	0	80	20	0	0	100	
Total %	0	12.2	14.6	0	0	26.8	0	29.3	7.3	0	0	9.8	

Accurate Counts

978-664-2565

File Name : 696400S2
 Site Code : 69640002
 Start Date : 6/8/2019
 Page No : 13

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Clear

Groups Printed- Bikes Peds

Start Time	Route 1 From North						Route 495 SB Ramp From East						Route 1 From South						Route 495 SB Ramp From West						Exclu. Total	Inclu. Total	Int. Total
	Left		Right		Peds		Left		Right		Peds		Left		Right		Peds		Left		Right		Peds				
	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0	Thru	0			
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Apprch %	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	66.7
Total %	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	66.7

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S2
 Site Code : 69640002
 Start Date : 6/8/2019
 Page No : 14

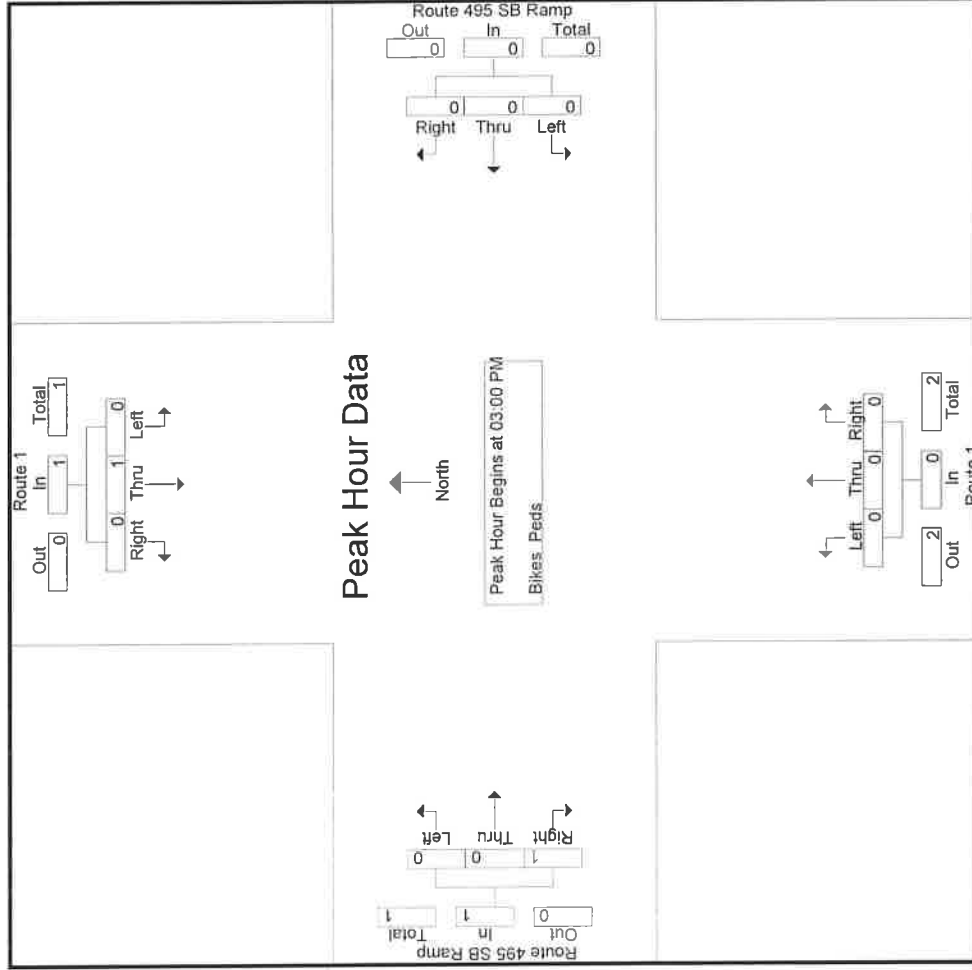
Start Time	Route 1 From North			Route 495 SB Ramp From East			Route 1 From South			Route 495 SB Ramp From West			Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		App. Total	
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1															
Peak Hour for Entire Intersection Begins at 03:00 PM															
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	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
03:45 PM	0	1	0	0	0	0	0	0	0	0	0	1	1	1	2
Total Volume	0	1	0	0	0	0	0	0	0	0	0	1	1	1	2
% App. Total	0	100	0	0	0	0	0	0	0	0	0	100	.250	.250	.250
PHF	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250	.250

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Route 495 SB Ramp
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S2
 Site Code : 69640002
 Start Date : 6/8/2019
 Page No : 15



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

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

Accurate Counts
978-664-2565

File Name : 69640003
Site Code : 69640003
Start Date : 6/6/2019
Page No : 1

N/S Street : Route 1
EW Street : Route 495 NB Ramp
City/State : Plainville, MA
Weather : Cloudy

Groups Printed- Cars - Trucks

Start Time	Route 1 From North			Rte 495 NB Ramp From East			Route 1 From South			Rte 495 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	366	128	0	0	86	0	214	62	0	0	123	979
04:15 PM	0	431	143	0	0	125	0	209	72	0	0	111	1091
04:30 PM	0	407	160	0	0	120	0	244	73	0	0	117	1121
04:45 PM	0	415	162	0	0	141	0	247	75	0	0	115	1155
Total :	0	1619	593	0	0	472	0	914	282	0	0	466	4346
05:00 PM	0	439	183	0	0	142	0	217	67	0	0	106	1154
05:15 PM	0	460	159	0	0	115	0	245	71	0	0	145	1195
05:30 PM	0	423	164	0	0	107	0	220	75	0	0	115	1104
05:45 PM	0	398	150	0	0	107	0	203	61	0	0	110	1029
Total	0	1720	656	0	0	471	0	885	274	0	0	476	4482
06:00 PM	0	394	144	0	0	92	0	203	42	0	0	121	996
06:15 PM	0	318	101	0	0	77	0	167	47	0	0	106	816
06:30 PM	0	302	69	0	0	83	0	147	55	0	0	104	760
06:45 PM	0	247	64	0	0	81	0	148	48	0	0	85	673
Total	0	1261	378	0	0	333	0	665	192	0	0	416	3245
Grand Total	0	4600	1627	0	0	1276	0	2464	748	0	0	1358	12073
Approch %	0	73.9	26.1	0	0	100	0	76.7	23.3	0	0	100	
Total %	0	38.1	13.5	0	0	10.6	0	20.4	6.2	0	0	11.2	
Cars	0	4572	1598	0	0	1247	0	2435	740	0	0	1345	11937
% Cars	0	99.4	98.2	0	0	97.7	0	98.8	98.9	0	0	99	98.9
Trucks	0	28	29	0	0	29	0	29	8	0	0	13	136
% Trucks	0	0.6	1.8	0	0	2.3	0	1.2	1.1	0	0	1	1.1

Accurate Counts

978-664-2565

File Name : 69640003
 Site Code : 69640003
 Start Date : 6/6/2019
 Page No : 2

N/S Street : Route 1
 E/W Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Cloudy

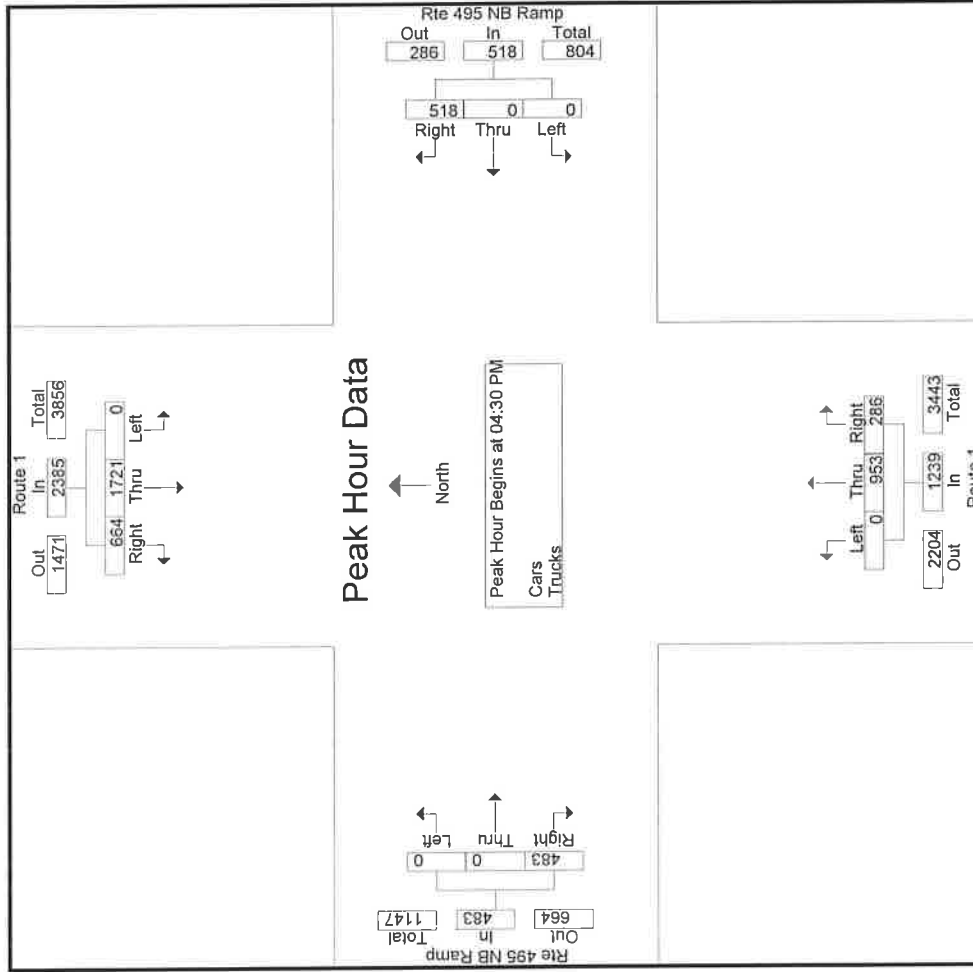
Start Time	Route 1 From North			Rte 495 NB Ramp From East			Route 1 From South			Rte 495 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	0	407	160	0	0	120	0	244	73	0	0	117	317
04:45 PM	0	415	162	0	0	141	0	247	75	0	0	115	322
05:00 PM	0	439	183	0	0	142	0	217	67	0	0	106	284
05:15 PM	0	460	159	0	0	115	0	245	71	0	0	145	316
Total Volume	0	1721	664	0	0	518	0	953	286	0	0	483	1239
% App. Total	0	72.2	27.8	0	0	100	0	76.9	23.1	0	0	100	96.2
PHF	.000	.935	.907	.000	.000	.912	.000	.965	.953	.000	.000	.833	.968

Accurate Counts

978-664-2565

File Name : 69640003
 Site Code : 69640003
 Start Date : 6/6/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM			04:15 PM			04:30 PM			05:15 PM					
+0 mins.	0	415	162	577	0	0	125	125	0	244	73	317	0	0	145
+15 mins.	0	439	183	622	0	0	120	120	0	247	75	322	0	0	115
+30 mins.	0	460	159	619	0	0	141	141	0	217	67	284	0	0	110
+45 mins.	0	423	164	587	0	0	142	142	0	245	71	316	0	0	121
Total Volume	0	1737	668	2405	0	0	528	528	0	953	286	1239	0	0	491
% App. Total	0	72.2	27.8	.967	.000	.930	.930	.930	.000	.965	.953	.962	.000	.000	.847
PHF	.000	.944	.913	.967	.000	.930	.930	.930	.000	.965	.953	.962	.000	.000	.847

Accurate Counts

978-664-2565

File Name : 69640003
 Site Code : 69640003
 Start Date : 6/6/2019
 Page No : 5

N/S Street : Route 1
 E/W Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Cloudy

Groups Printed- Cars

Start Time	Route 1 From North			Rte 495 NB Ramp From East			Route 1 From South			Rte 495 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	359	123	0	0	81	0	209	62	0	0	119	953
04:15 PM	0	428	138	0	0	122	0	205	69	0	0	110	1072
04:30 PM	0	402	157	0	0	117	0	240	73	0	0	116	1105
04:45 PM	0	411	161	0	0	137	0	243	75	0	0	114	1141
Total	0	1600	579	0	0	457	0	897	279	0	0	459	4271
05:00 PM	0	439	179	0	0	141	0	214	67	0	0	105	1145
05:15 PM	0	458	159	0	0	114	0	244	68	0	0	144	1187
05:30 PM	0	423	162	0	0	104	0	219	74	0	0	113	1095
05:45 PM	0	397	146	0	0	105	0	202	60	0	0	109	1019
Total	0	1717	646	0	0	464	0	879	269	0	0	471	4446
06:00 PM	0	394	141	0	0	91	0	202	42	0	0	120	990
06:15 PM	0	314	101	0	0	75	0	164	47	0	0	106	807
06:30 PM	0	301	67	0	0	81	0	147	55	0	0	104	755
06:45 PM	0	246	64	0	0	79	0	146	48	0	0	85	668
Total	0	1255	373	0	0	326	0	659	192	0	0	415	3220
Grand Total	0	4572	1598	0	0	1247	0	2435	740	0	0	1345	11937
Approch %	0	74.1	25.9	0	0	100	0	76.7	23.3	0	0	100	
Total %	0	38.3	13.4	0	0	10.4	0	20.4	6.2	0	0	11.3	

Accurate Counts
978-664-2565

File Name : 69640003
Site Code : 69640003
Start Date : 6/6/2019
Page No : 9

N/S Street : Route 1
EW Street : Route 495 NB Ramp
City/State : Plainville, MA
Weather : Cloudy

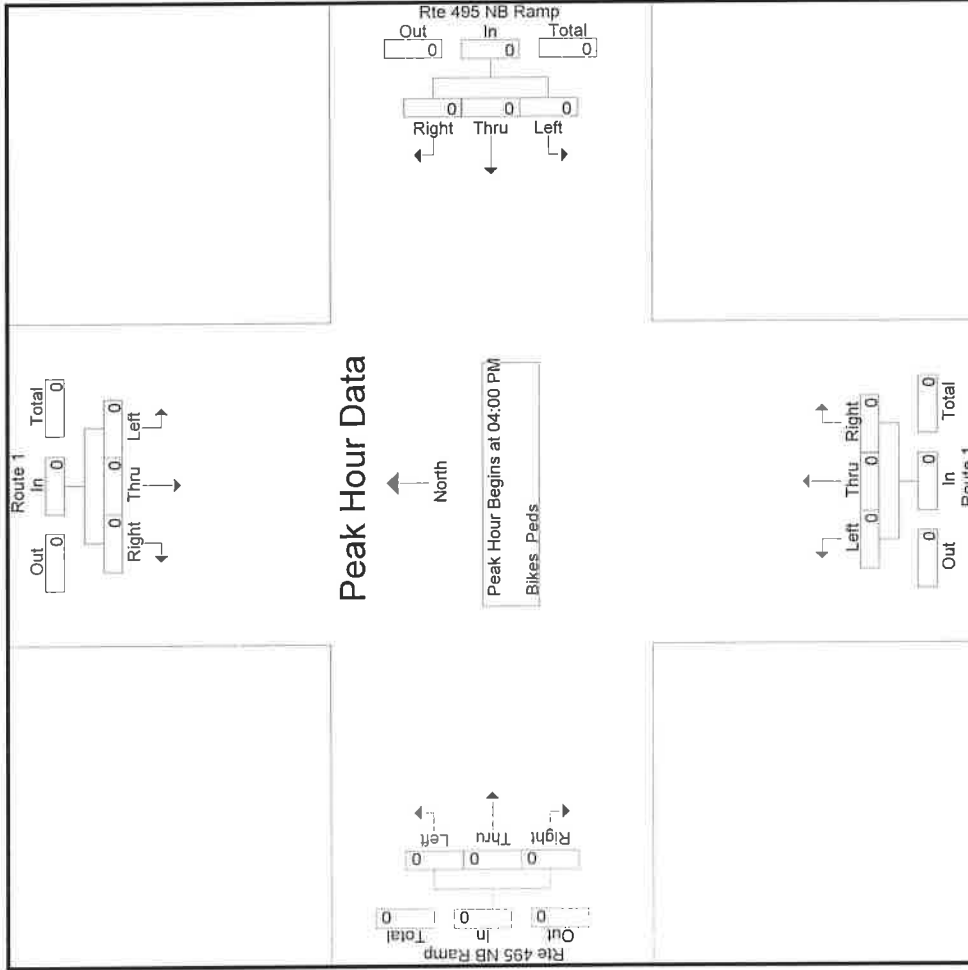
Groups Printed- Trucks

Start Time	Route 1 From North			Rte 495 NB Ramp From East			Route 1 From South			Rte 495 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	7	5	0	0	5	0	5	0	0	0	4	26
04:15 PM	0	3	5	0	0	3	0	4	0	0	0	1	19
04:30 PM	0	5	3	0	0	3	0	4	0	0	0	1	16
04:45 PM	0	4	1	0	0	4	0	4	0	0	0	1	14
Total	0	19	14	0	0	15	0	17	0	0	0	7	75
05:00 PM	0	0	4	0	0	1	0	3	0	0	0	1	9
05:15 PM	0	2	0	0	0	1	0	1	3	0	0	1	8
05:30 PM	0	0	2	0	0	3	0	1	1	0	0	2	9
05:45 PM	0	1	4	0	0	2	0	1	1	0	0	1	10
Total	0	3	10	0	0	7	0	6	5	0	0	5	36
06:00 PM	0	0	3	0	0	1	0	1	0	0	0	1	6
06:15 PM	0	4	0	0	0	2	0	3	0	0	0	0	9
06:30 PM	0	1	2	0	0	2	0	0	0	0	0	0	5
06:45 PM	0	1	0	0	0	2	0	2	0	0	0	0	5
Total	0	6	5	0	0	7	0	6	0	0	0	1	25
Grand Total	0	28	29	0	0	29	0	29	8	0	0	13	136
Approach %	0	49.1	50.9	0	0	100	0	78.4	21.6	0	0	100	
Total %	0	20.6	21.3	0	0	21.3	0	21.3	5.9	0	0	9.6	

Accurate Counts
978-664-2565

File Name : 69640003
Site Code : 69640003
Start Date : 6/6/2019
Page No : 15

N/S Street : Route 1
EW Street : Route 495 NB Ramp
City/State : Plainville, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM			04:00 PM		
+0 mins.	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
+30 mins.	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
Total Volume	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
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S3
 Site Code : 69640003
 Start Date : 6/8/2019
 Page No : 1

Start Time	Groups Printed- Cars - Trucks												
	Route 1 From North			Route 495 NB Ramp From East			Route 1 From South			Route 495 NB Ramp From West			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
02:00 PM	0	248	54	0	0	116	0	159	75	0	0	97	749
02:15 PM	0	194	59	0	0	116	0	193	65	0	0	84	711
02:30 PM	0	206	53	0	0	93	0	207	85	0	0	103	747
02:45 PM	0	264	59	0	0	88	0	210	92	0	0	96	809
Total	0	912	225	0	0	413	0	769	317	0	0	380	3016
03:00 PM	0	320	56	0	0	78	0	198	82	0	0	111	845
03:15 PM	0	283	60	0	0	104	0	177	78	0	0	85	787
03:30 PM	0	221	67	0	0	98	0	220	82	0	0	112	800
03:45 PM	0	258	64	0	0	94	0	199	68	0	0	97	780
Total	0	1082	247	0	0	374	0	794	310	0	0	405	3212
04:00 PM	0	242	50	0	0	94	0	180	73	0	0	77	716
04:15 PM	0	211	57	0	0	67	0	180	77	0	0	79	671
04:30 PM	0	215	51	0	0	94	0	170	53	0	0	101	684
04:45 PM	0	186	55	0	0	114	0	184	63	0	0	89	691
Total	0	854	213	0	0	369	0	714	266	0	0	346	2762
Grand Total	0	2848	685	0	0	1156	0	2277	893	0	0	1131	8990
Approch %	0	80.6	19.4	0	0	100	0	71.8	28.2	0	0	100	
Total %	0	31.7	7.6	0	0	12.9	0	25.3	9.9	0	0	12.6	
Cars	0	2839	682	0	0	1145	0	2263	884	0	0	1128	8941
% Cars	0	99.7	99.6	0	0	99	0	99.4	99	0	0	99.7	99.5
Trucks	0	9	3	0	0	11	0	14	9	0	0	3	49
% Trucks	0	0.3	0.4	0	0	1	0	0.6	1	0	0	0.3	0.5

Accurate Counts

978-664-2565

File Name : 696400S3
 Site Code : 69640003
 Start Date : 6/8/2019
 Page No : 2

N/S Street : Route 1
 E/W Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Clear

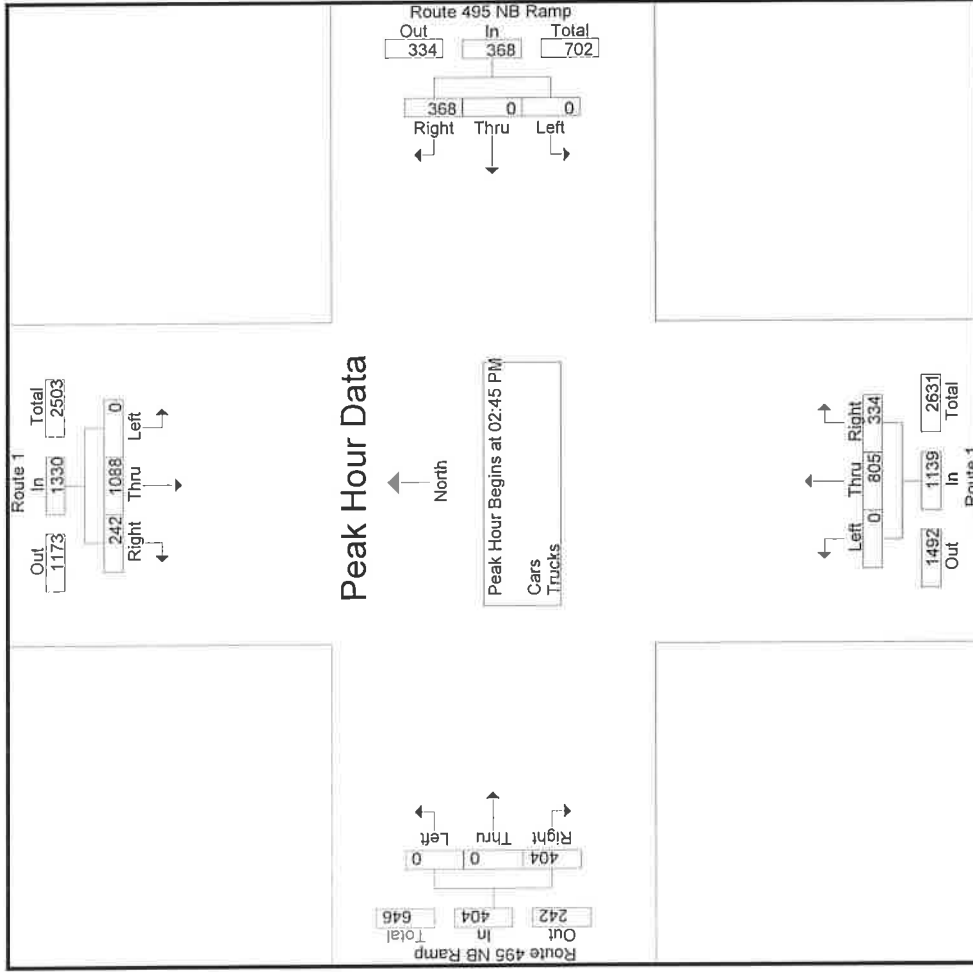
Start Time	Route 1 From North			Route 495 NB Ramp From East			Route 1 From South			Route 495 NB Ramp From West			Int. Total			
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total				
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1																
Peak Hour for Entire Intersection Begins at 02:45 PM																
02:45 PM	0	264	59	323	0	0	88	88	0	210	92	302	0	0	96	809
03:00 PM	0	320	56	376	0	0	78	78	0	198	82	280	0	0	111	845
03:15 PM	0	283	60	343	0	0	104	104	0	177	78	255	0	0	85	787
03:30 PM	0	221	67	288	0	0	98	98	0	220	82	302	0	0	112	800
Total Volume	0	1088	242	1330	0	0	368	368	0	805	334	1139	0	0	404	3241
% App. Total	0	81.8	18.2		0	0	100		0	70.7	29.3		0	0	100	
PHF	.000	.850	.903	.884	.000	.000	.885	.885	.000	.915	.908	.943	.000	.000	.902	.959

Accurate Counts

978-664-2565

File Name : 696400S3
 Site Code : 69640003
 Start Date : 6/8/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:45 PM		02:00 PM		02:45 PM		03:00 PM			
+0 mins	0	264	59	323	0	116	116	0	111	111
+15 mins	0	320	56	376	0	116	116	0	82	85
+30 mins	0	283	60	343	0	93	93	0	78	112
+45 mins	0	221	67	288	0	88	88	0	220	97
Total Volume	0	1088	242	1330	0	413	413	0	805	405
% App. Total	0	81.8	18.2	88.4	0	100	100	0	70.7	100
PHF	.000	.850	.903	.884	.000	.890	.890	.000	.915	.904

Accurate Counts

978-664-2565

File Name : 696400S3
 Site Code : 69640003
 Start Date : 6/8/2019
 Page No : 5

N/S Street : Route 1
 E/W Street : Route 495 NB Ramp
 City/State : Plainville, MA
 Weather : Clear

Groups Printed- Cars

Start Time	Route 1 From North			Route 495 NB Ramp From East			Route 1 From South			Route 495 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:00 PM	0	247	54	0	0	114	0	159	74	0	0	97	745
02:15 PM	0	194	59	0	0	115	0	190	64	0	0	84	706
02:30 PM	0	206	52	0	0	90	0	206	84	0	0	103	741
02:45 PM	0	264	59	0	0	85	0	209	92	0	0	96	805
Total	0	911	224	0	0	404	0	764	314	0	0	380	2997
03:00 PM	0	319	54	0	0	77	0	196	82	0	0	111	839
03:15 PM	0	283	60	0	0	103	0	177	78	0	0	85	786
03:30 PM	0	221	67	0	0	98	0	219	81	0	0	111	797
03:45 PM	0	254	64	0	0	94	0	197	68	0	0	96	773
Total	0	1077	245	0	0	372	0	789	309	0	0	403	3195
04:00 PM	0	240	50	0	0	94	0	180	72	0	0	77	713
04:15 PM	0	211	57	0	0	67	0	177	75	0	0	79	666
04:30 PM	0	214	51	0	0	94	0	170	52	0	0	101	682
04:45 PM	0	186	55	0	0	114	0	183	62	0	0	88	688
Total	0	851	213	0	0	369	0	710	261	0	0	345	2749
Grand Total	0	2839	682	0	0	1145	0	2263	884	0	0	1128	8941
Approch %	0	80.6	19.4	0	0	100	0	71.9	28.1	0	0	100	
Total %	0	31.8	7.6	0	0	12.8	0	25.3	9.9	0	0	12.6	

Accurate Counts
978-664-2565

File Name : 696400S3
Site Code : 69640003
Start Date : 6/8/2019
Page No : 9

N/S Street : Route 1
E/W Street : Route 495 NB Ramp
City/State : Plainville, MA
Weather : Clear

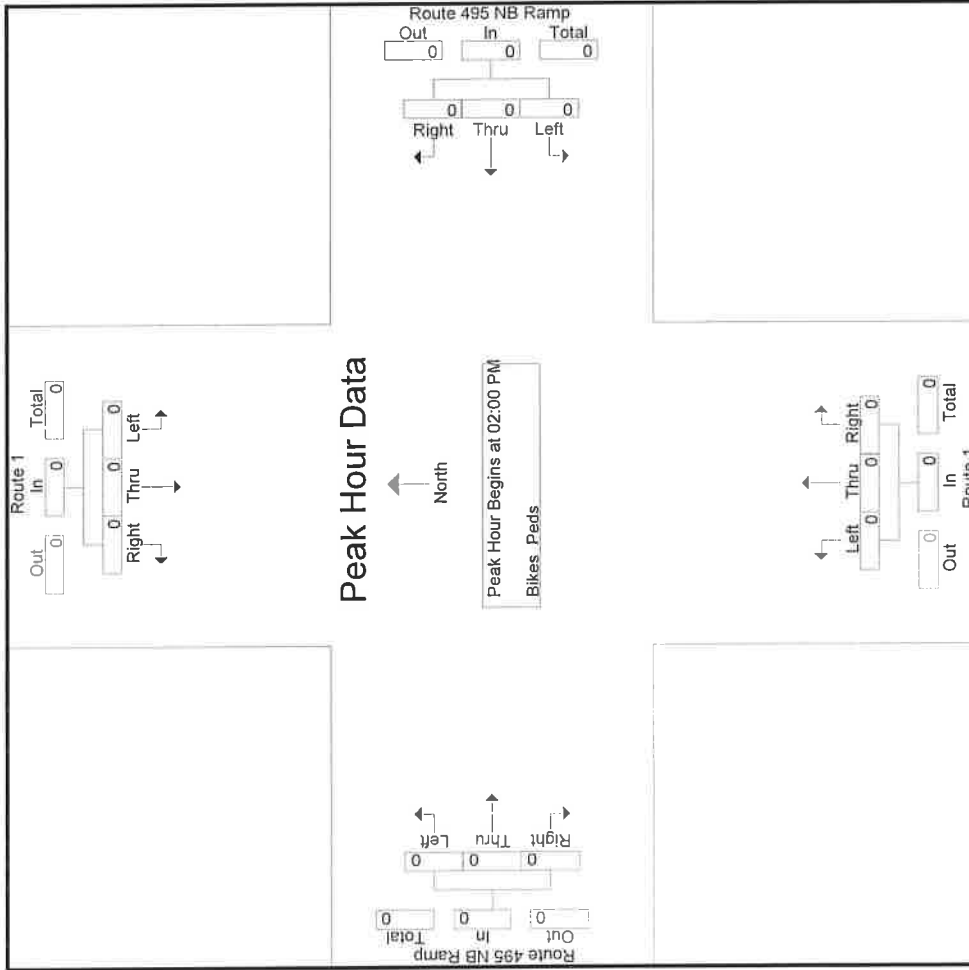
Groups Printed- Trucks

Start Time	Route 1 From North			Route 495 NB Ramp From East			Route 1 From South			Route 495 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
02:00 PM	0	1	0	0	0	2	0	0	1	0	0	0	4
02:15 PM	0	0	0	0	0	1	0	3	1	0	0	0	5
02:30 PM	0	0	1	0	0	3	0	1	1	0	0	0	6
02:45 PM	0	0	0	0	0	3	0	1	0	0	0	0	4
Total	0	1	1	0	0	9	0	5	3	0	0	0	19
03:00 PM	0	1	2	0	0	1	0	2	0	0	0	0	6
03:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0	1	1	0	0	1	3
03:45 PM	0	4	0	0	0	0	0	2	0	0	0	1	7
Total	0	5	2	0	0	2	0	5	1	0	0	2	17
04:00 PM	0	2	0	0	0	0	0	0	1	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	3	2	0	0	0	5
04:30 PM	0	1	0	0	0	0	0	0	1	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	1	1	0	0	1	3
Total	0	3	0	0	0	0	0	4	5	0	0	1	13
Grand Total	0	9	3	0	0	11	0	14	9	0	0	3	49
Approch %	0	75	25	0	0	100	0	60.9	39.1	0	0	100	
Total %	0	18.4	6.1	0	0	22.4	0	28.6	18.4	0	0	6.1	

Accurate Counts
978-664-2565

File Name : 696400S3
Site Code : 69640003
Start Date : 6/8/2019
Page No : 15

N/S Street : Route 1
EW Street : Route 495 NB Ramp
City/State : Plainville, MA
Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
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
+15 mins.	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
+45 mins.	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
% App. Total	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

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street: Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640004
 Site Code : 69640004
 Start Date : 6/6/2019
 Page No : 1

Start Time	Groups Printed- Cars - Trucks										Int. Total
	Route 1 From North			Plainridge Park Casino From East			Route 1 From South			Right	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
04:00 PM	34	373	41	17	233	22					720
04:15 PM	36	429	49	16	245	15					790
04:30 PM	33	407	46	13	286	19					804
04:45 PM	37	421	49	18	261	10					796
Total	140	1630	185	64	1025	66					3110
05:00 PM	37	438	45	19	277	17					833
05:15 PM	42	463	50	17	257	13					842
05:30 PM	43	449	44	15	251	16					818
05:45 PM	40	408	49	14	209	15					735
Total	162	1758	188	65	994	61					3228
06:00 PM	55	396	32	15	172	15					685
06:15 PM	37	341	52	16	183	16					645
06:30 PM	44	316	39	22	193	14					628
06:45 PM	62	245	43	14	160	23					547
Total	198	1298	166	67	708	68					2505
Grand Total	500	4686	539	196	2727	195					8843
Approch %	9.6	90.4	73.3	26.7	93.3	6.7					
Total %	5.7	53	6.1	2.2	30.8	2.2					
Cars	500	4659	539	195	2708	194					8795
% Cars	100	99.4	100	99.5	99.3	99.5					99.5
Trucks	0	27	0	1	19	1					48
% Trucks	0	0.6	0	0.5	0.7	0.5					0.5

Accurate Counts
978-664-2565

File Name : 69640004
Site Code : 69640004
Start Date : 6/6/2019
Page No : 2

N/S Street : Route 1
E/W Street : Plainridge Park Casino
City/State : Plainville, MA
Weather : Cloudy

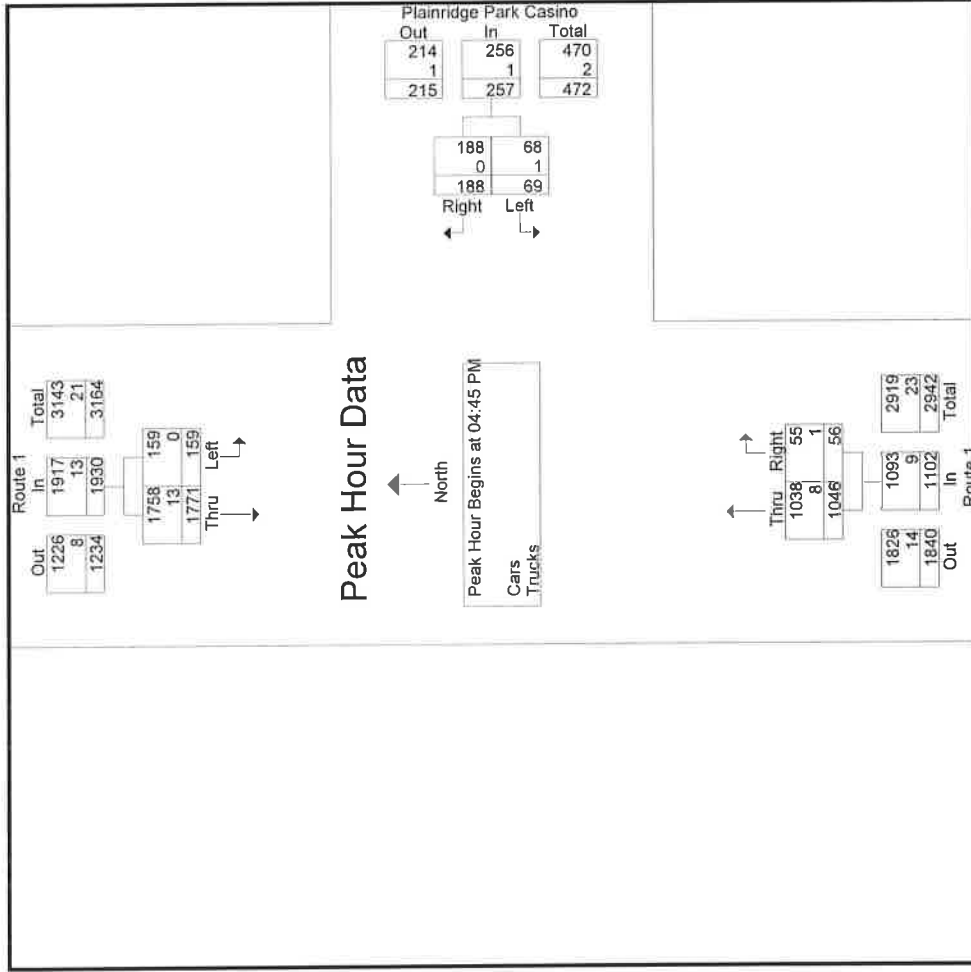
Start Time	Route 1 From North			Plainridge Park Casino From East			Route 1 From South			
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	37	421	458	18	49	67	261	10	271	796
05:00 PM	37	438	475	19	45	64	277	17	294	833
05:15 PM	42	463	505	17	50	67	257	13	270	842
05:30 PM	43	449	492	15	44	59	251	16	267	818
Total Volume	159	1771	1930	69	188	257	1046	56	1102	3289
% App. Total	8.2	91.8		26.8	73.2		94.9	5.1		
PHF	.924	.956	.955	.908	.940	.959	.944	.824	.937	.977
Cars	159	1758	1917	68	188	256	1038	55	1093	3266
% Cars	100	99.3	99.3	98.6	100	99.6	99.2	98.2	99.2	99.3
Trucks	0	13	13	1	0	1	8	1	9	23
% Trucks	0	0.7	0.7	1.4	0	0.4	0.8	1.8	0.8	0.7

Accurate Counts

978-664-2565

File Name : 69640004
 Site Code : 69640004
 Start Date : 6/6/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM	04:30 PM	04:30 PM	04:30 PM
+0 mins.	37	421	458	305
+15 mins.	37	438	475	271
+30 mins.	42	463	505	294
+45 mins.	43	449	492	270
Total Volume	159	1771	1930	1140
% App. Total	8.2	91.8	26.1	5.2
PHF	.924	.956	.955	.776

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street : Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640004
 Site Code : 69640004
 Start Date : 6/6/2019
 Page No : 5

Start Time	Groups Printed- Cars										Int. Total
	Route 1 From North		Plainridge Park Casino				Route 1 From South		Right	Int. Total	
	Left	Thru	From East	From Left	From Right	Thru	From South				
04:00 PM	34	369	17	41	22	229	15	22	712		
04:15 PM	36	427	16	49	15	242	19	15	785		
04:30 PM	33	402	13	46	19	284	10	19	797		
04:45 PM	37	417	18	49	10	261	66	10	792		
Total	140	1615	64	185	66	1016	60	66	3086		
05:00 PM	37	438	19	45	16	275	13	16	830		
05:15 PM	42	458	16	50	13	252	16	13	831		
05:30 PM	43	445	15	44	16	250	15	16	813		
05:45 PM	40	407	14	49	15	208	60	15	733		
Total	162	1748	64	188	60	985	60	60	3207		
06:00 PM	55	396	15	32	15	172	16	15	685		
06:15 PM	37	339	16	52	16	183	14	16	643		
06:30 PM	44	316	22	39	14	193	23	14	628		
06:45 PM	62	245	14	43	23	159	68	23	546		
Total	198	1296	67	166	68	707	68	68	2502		
Grand Total	500	4659	195	539	194	2708	6.7	194	8795		
Approch %	9.7	90.3	26.6	73.4	6.7	93.3	6.1	6.7			
Total %	5.7	53	2.2	6.1	2.2	30.8	2.2	2.2			

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640004
 Site Code : 69640004
 Start Date : 6/6/2019
 Page No : 9

Start Time	Route 1						Plainridge Park Casino						Route 1	
	From North			From South			From East			From South			Thru	Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
04:00 PM	0	4	0	0	0	0	0	0	0	0	4	0	0	8
04:15 PM	0	2	0	0	0	0	0	0	0	0	3	0	0	5
04:30 PM	0	5	0	0	0	0	0	0	0	0	2	0	0	7
04:45 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	4
Total	0	15	0	0	0	0	0	0	0	0	9	0	0	24
05:00 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	3
05:15 PM	0	5	0	1	0	0	0	0	0	0	5	0	0	11
05:30 PM	0	4	0	0	0	0	0	0	0	0	1	0	0	5
05:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	2
Total	0	10	0	1	0	0	0	0	0	0	9	1	0	21
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
06:30 PM	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	1	0	0	1
Total	0	2	0	0	0	0	0	0	0	0	1	0	0	3
Grand Total	0	27	0	1	0	0	0	0	0	0	19	1	1	48
Apprch %	0	100	0	100	0	0	0	0	0	0	95	5	5	48
Total %	0	56.2	0	2.1	0	0	0	0	0	0	39.6	2.1	2.1	48

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street : Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Cloudy

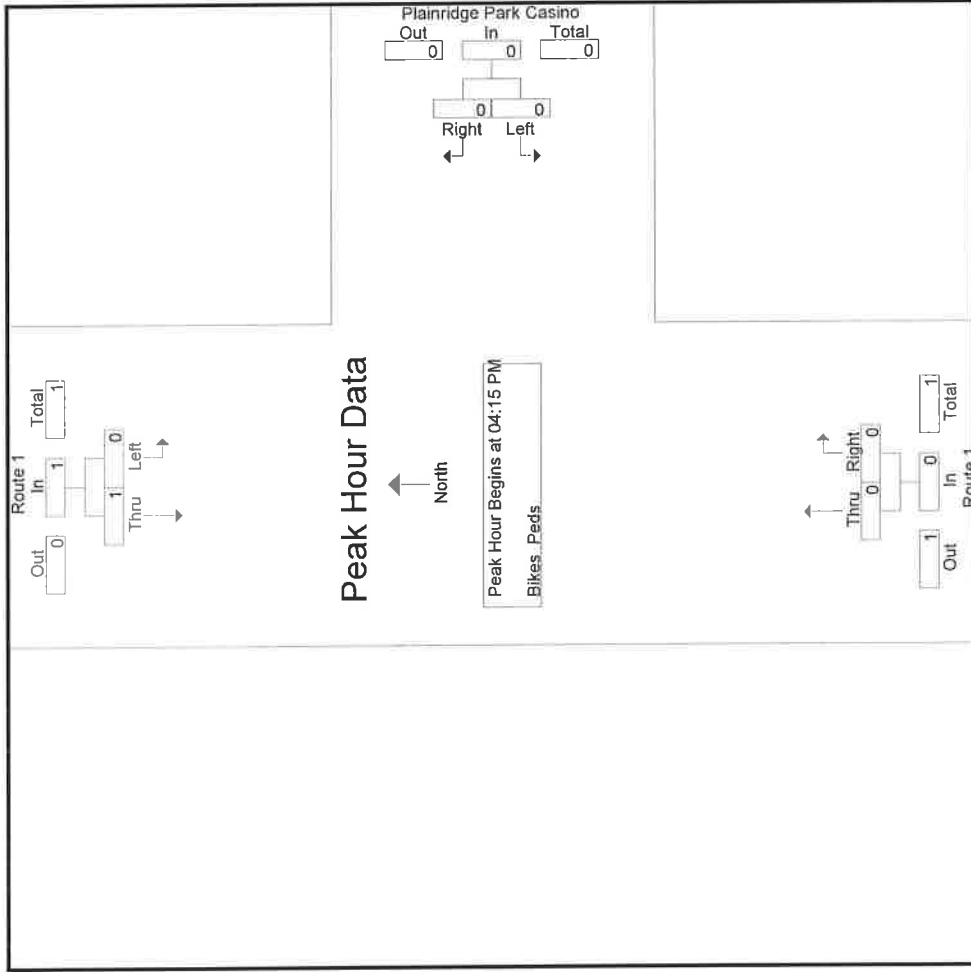
File Name : 69640004
 Site Code : 69640004
 Start Date : 6/6/2019
 Page No : 13

Start Time	Groups Printed- Bikes Peds											
	Route 1 From North			Plainridge Park Casino From East			Route 1 From South					
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	0	0	0	0	0	0	1	1
05:15 PM	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
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	1	1
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	1	0	0	0	0	0	0	0	0	1	1
Approch %	0	100		0	0		0	0				
Total %	0	100		0	0		0	0		0	100	

Accurate Counts
978-664-2565

File Name : 69640004
Site Code : 69640004
Start Date : 6/6/2019
Page No : 15

N/S Street : Route 1
EW Street: Plainridge Park Casino
City/State : Plainville, MA
Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street: Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S4
 Site Code : 69640004
 Start Date : 6/8/2019
 Page No : 1

Start Time	Route 1						Plainridge Park Casino						Route 1		Int. Total
	From North			Thru			From East			From South			Thru	Right	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Thru	Right				
02:00 PM	72	232	56	16	219	18	219	219	219	18	613				613
02:15 PM	62	230	44	13	273	22	273	273	273	22	644				644
02:30 PM	58	256	47	21	250	24	250	250	250	24	656				656
02:45 PM	70	272	54	12	313	29	313	313	313	29	750				750
Total	262	990	201	62	1055	93	1055	1055	1055	93	2663				2663
03:00 PM	76	284	52	10	246	18	246	246	246	18	686				686
03:15 PM	56	288	58	19	265	23	265	265	265	23	709				709
03:30 PM	71	250	69	16	247	20	247	247	247	20	673				673
03:45 PM	72	254	66	17	252	21	252	252	252	21	682				682
Total	275	1076	245	62	1010	82	1010	1010	1010	82	2750				2750
04:00 PM	56	236	59	16	213	25	213	213	213	25	605				605
04:15 PM	47	209	76	24	199	19	199	199	199	19	574				574
04:30 PM	59	232	55	23	193	40	193	193	193	40	602				602
04:45 PM	66	216	52	16	214	20	214	214	214	20	584				584
Total	228	893	242	79	819	104	819	819	819	104	2365				2365
Grand Total	765	2959	688	203	2884	279	2884	2884	2884	279	7778				7778
Approach %	20.5	79.5	77.2	22.8	91.2	8.8	91.2	91.2	91.2	8.8					
Total %	9.8	38	8.8	2.6	37.1	3.6	37.1	37.1	37.1	3.6					
Cars	765	2951	688	203	2869	279	2869	2869	2869	279	7755				7755
% Cars	100	99.7	100	100	99.5	100	99.5	99.5	99.5	100	99.7				99.7
Trucks	0	8	0	0	15	0	15	15	15	0	23				23
% Trucks	0	0.3	0	0	0.5	0	0.5	0.5	0.5	0	0.3				0.3

Accurate Counts
978-664-2565

File Name : 696400S4
Site Code : 69640004
Start Date : 6/8/2019
Page No : 2

N/S Street : Route 1
E/W Street : Plainridge Park Casino
City/State : Plainville, MA
Weather : Clear

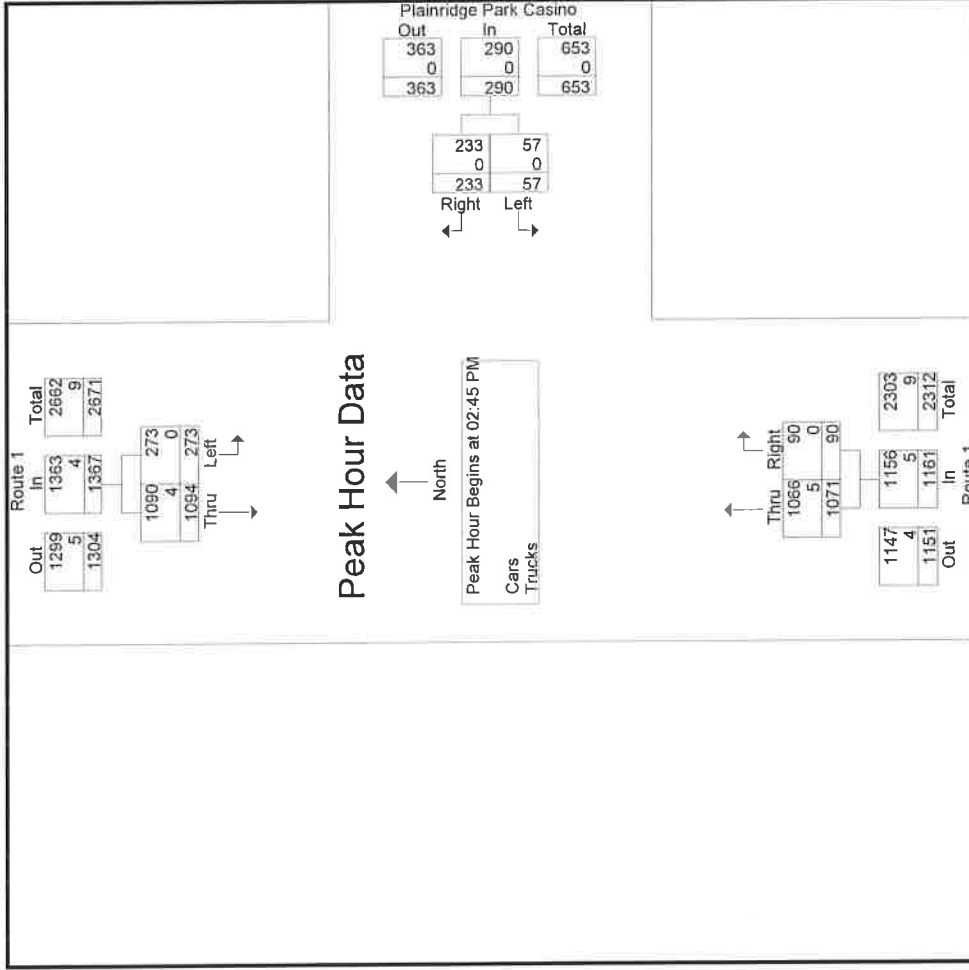
Start Time	Route 1 From North			Plainridge Park Casino From East			Route 1 From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	70	272	342	12	54	66	313	29	342	750
03:00 PM	76	284	360	10	52	62	246	18	264	686
03:15 PM	56	288	344	19	58	77	265	23	288	709
03:30 PM	71	250	321	16	69	85	247	20	267	673
Total Volume	273	1094	1367	57	233	290	1071	90	1161	2818
% App. Total	20	80		19.7	80.3		92.2	7.8		
PHF	.898	.950	.949	.750	.844	.853	.855	.776	.849	.939
Cars	273	1090	1363	57	233	290	1066	90	1156	2809
% Cars	100	99.6	99.7	100	100	100	99.5	100	99.6	99.7
Trucks	0	4	4	0	0	0	5	0	5	9
% Trucks	0	0.4	0.3	0	0	0	0.5	0	0.4	0.3

Accurate Counts

978-664-2565

File Name : 696400S4
 Site Code : 69640004
 Start Date : 6/8/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:45 PM	03:30 PM	02:15 PM
+0 mins.	70	16	85
+15 mins.	272	17	83
+30 mins.	284	16	75
+45 mins.	288	24	100
Total Volume	273	73	343
% App. Total	20	21.3	92.1
PHF	.898	.760	.858
			.802
			.859

Accurate Counts
978-664-2565

N/S Street : Route 1
E/W Street: Plainridge Park Casino
City/State : Plainville, MA
Weather : Clear

File Name : 696400S4
Site Code : 69640004
Start Date : 6/8/2019
Page No : 5

Start Time	Groups Printed- Cars										Int. Total
	Route 1 From North		Plainridge Park Casino				Route 1 From South		Right	Int. Total	
	Left	Thru	From East	Left	Right	Thru	From South				
02:00 PM	72	232	16	56	18	218	18	612			
02:15 PM	62	230	13	44	22	272	22	643			
02:30 PM	58	255	21	47	24	249	24	654			
02:45 PM	70	272	12	54	29	312	29	749			
Total	262	989	62	201	93	1051	93	2658			
03:00 PM	76	281	10	52	18	245	18	682			
03:15 PM	56	287	19	58	23	263	23	706			
03:30 PM	71	250	16	69	20	246	20	672			
03:45 PM	72	252	17	66	21	252	21	680			
Total	275	1070	62	245	82	1006	82	2740			
04:00 PM	56	235	16	59	25	211	25	602			
04:15 PM	47	209	24	76	19	197	19	572			
04:30 PM	59	232	23	55	40	192	40	601			
04:45 PM	66	216	16	52	20	212	20	582			
Total	228	892	79	242	104	812	104	2357			
Grand Total	765	2951	203	688	279	2869	279	7755			
Apprch %	20.6	79.4	22.8	77.2	8.9	91.1	8.9				
Total %	9.9	38.1	2.6	8.9	3.6	37	3.6				

Accurate Counts
978-664-2565

N/S Street : Route 1
 EW Street: Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Clear

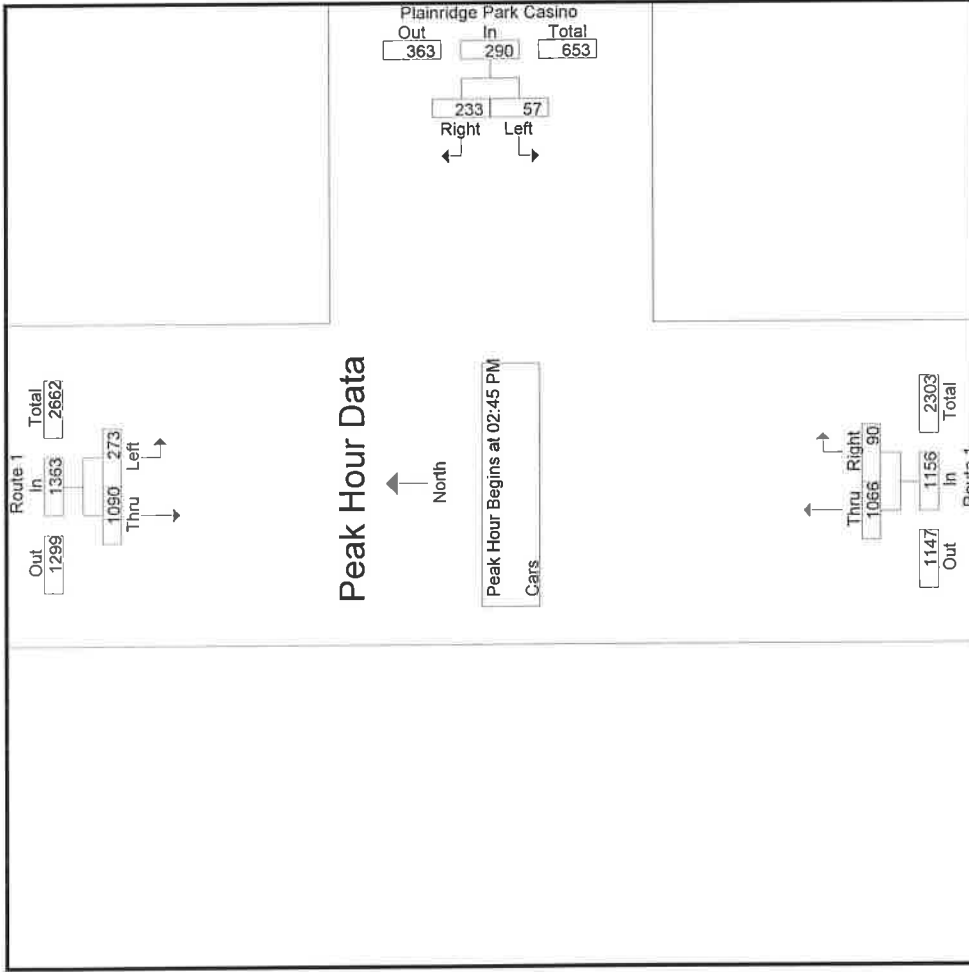
File Name : 696400S4
 Site Code : 69640004
 Start Date : 6/8/2019
 Page No : 6

Start Time	Route 1 From North			Plainridge Park Casino From East			Route 1 From South			
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	70	272	342	12	54	66	312	29	341	749
03:00 PM	76	281	357	10	52	62	245	18	263	682
03:15 PM	56	287	343	19	58	77	263	23	286	706
03:30 PM	71	250	321	16	69	85	246	20	266	672
Total Volume	273	1090	1363	57	233	290	1066	90	1156	2809
% App. Total	20	80		19.7	80.3		92.2	7.8		
PHF	.898	.949	.954	.750	.844	.853	.854	.776	.848	.938

Accurate Counts
978-664-2565

File Name : 696400S4
Site Code : 69640004
Start Date : 6/8/2019
Page No : 7

N/S Street : Route 1
E/W Street: Plainridge Park Casino
City/State : Plainville, MA
Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM	03:30 PM	02:15 PM	
+0 mins.	70	272	85	294
+15 mins.	76	281	83	273
+30 mins.	56	287	75	341
+45 mins.	71	250	100	263
Total Volume	273	1090	343	1171
% App. Total	20	80	92.1	7.9
PHF	.898	.949	.858	.802
			.864	

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street: Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S4
 Site Code : 69640004
 Start Date : 6/8/2019
 Page No : 9

Start Time	Route 1 From North			Plainridge Park Casino			Route 1 From South			Int. Total
	Left	Thru	Right	From East	From South	Right	From South	Thru	Right	
02:00 PM	0	0	0	0	1	0	1	0	0	1
02:15 PM	0	0	0	0	0	0	1	0	0	1
02:30 PM	0	1	0	0	0	0	1	0	0	2
02:45 PM	0	0	0	0	0	0	1	0	0	1
Total	0	1	0	0	1	0	4	0	0	5
03:00 PM	0	3	0	0	0	0	1	0	0	4
03:15 PM	0	1	0	0	0	0	2	0	0	3
03:30 PM	0	0	0	0	0	0	1	0	0	1
03:45 PM	0	2	0	0	0	0	0	0	0	2
Total	0	6	0	0	0	0	4	0	0	10
04:00 PM	0	1	0	0	0	0	2	0	0	3
04:15 PM	0	0	0	0	0	0	2	0	0	2
04:30 PM	0	0	0	0	0	0	1	0	0	1
04:45 PM	0	0	0	0	0	0	2	0	0	2
Total	0	1	0	0	0	0	7	0	0	8
Grand Total	0	8	0	0	0	0	15	0	0	23
Approch %	0	100	0	0	0	0	100	0	0	
Total %	0	34.8	0	0	0	0	65.2	0	0	

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Plainridge Park Casino
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S4
 Site Code : 69640004
 Start Date : 6/8/2019
 Page No : 13

Start Time	Groups Printed- Bikes Peds											
	Route 1 From North			Plainridge Park Casino From East			Route 1 From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
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	1	0	0	0	1	1
03:45 PM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	0	1	0	0	0	2	2
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	1	0	0	0	0	1	1	0	0	3	3
Approch %	0	100		0	0	0	50	50				
Total %	0	33.3		0	0	0	33.3	33.3			100	

Accurate Counts
978-664-2565

N/S Street : Route 1
E/W Street: Plainridge Park Casino
City/State : Plainville, MA
Weather : Clear

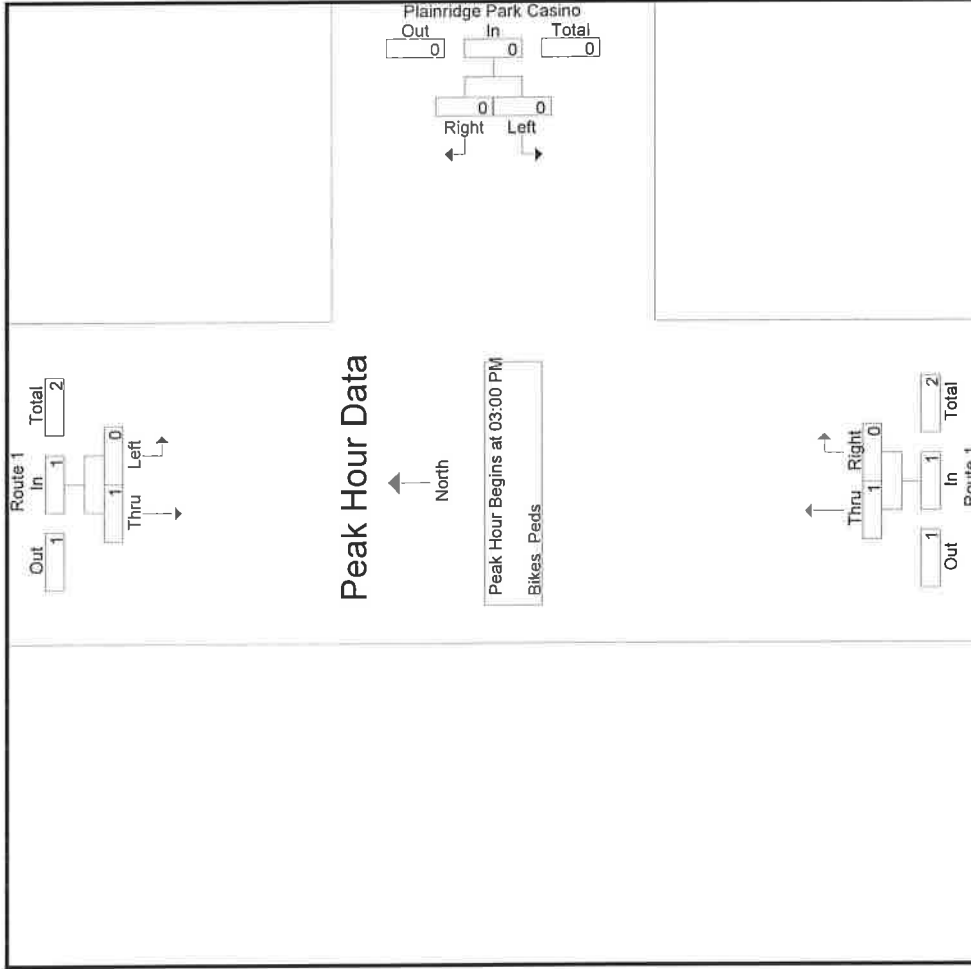
File Name : 696400S4
Site Code : 69640004
Start Date : 6/8/2019
Page No : 14

Start Time	Route 1 From North			Plainridge Park Casino From East			Route 1 From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 02:00 PM to 04:45 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
03:15 PM	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	1	0	1	1
03:45 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100	.250	0	0	.000	100	0	.250	.500
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500

Accurate Counts
978-664-2565

N/S Street : Route 1
E/W Street : Plainridge Park Casino
City/State : Plainville, MA
Weather : Clear

File Name : 696400S4
Site Code : 69640004
Start Date : 6/8/2019
Page No : 15



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

Accurate Counts
978-664-2565

File Name : 69640005
Site Code : 69640005
Start Date : 6/6/2019
Page No : 1

N/S Street : Route 1
E/W Street : Taunton Street Ramp
City/State : Plainville, MA
Weather : Cloudy

Groups Printed- Cars - Trucks

Start Time	Route 1 From North			Route 1 From South			Taunton St Ramp From West			Int. Total
	Thru	Right	Thru	Left	Right	Thru	Left	Right		
04:00 PM	325	72	0	0	0	0	0	0	397	
04:15 PM	382	61	0	0	0	0	0	0	443	
04:30 PM	336	73	0	0	0	0	0	0	409	
04:45 PM	372	77	0	0	0	0	0	0	449	
Total	1415	283	0	0	0	0	0	0	1698	
05:00 PM	401	60	0	0	0	0	0	0	461	
05:15 PM	410	64	0	0	0	0	0	0	474	
05:30 PM	406	65	0	0	0	0	0	0	471	
05:45 PM	341	74	0	0	0	0	0	0	415	
Total	1558	263	0	0	0	0	0	0	1821	
06:00 PM	359	61	0	0	0	0	0	0	420	
06:15 PM	312	52	0	0	0	0	0	0	364	
06:30 PM	281	53	0	0	0	0	0	0	334	
06:45 PM	206	51	0	0	0	0	0	0	257	
Total	1158	217	0	0	0	0	0	0	1375	
Grand Total	4131	763	0	0	0	0	0	0	4894	
Approch %	84.4	15.6	0	0	0	0	0	0		
Total %	84.4	15.6	0	0	0	0	0	0		
Cars	4106	760	0	0	0	0	0	0	4866	
% Cars	99.4	99.6	0	0	0	0	0	0	99.4	
Trucks	25	3	0	0	0	0	0	0	28	
% Trucks	0.6	0.4	0	0	0	0	0	0	0.6	

Accurate Counts

978-664-2565

File Name : 69640005
 Site Code : 69640005
 Start Date : 6/6/2019
 Page No : 2

N/S Street : Route 1
 EW Street : Taunton Street Ramp
 City/State : Plainville, MA
 Weather : Cloudy

Start Time	Route 1 From North			Route 1 From South			Taunton St Ramp From West			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:45 PM	372	77	449	0	0	0	0	0	0	449
05:00 PM	401	60	461	0	0	0	0	0	0	461
05:15 PM	410	64	474	0	0	0	0	0	0	474
05:30 PM	406	65	471	0	0	0	0	0	0	471
Total Volume	1589	266	1855	0	0	0	0	0	0	1855
% App. Total	85.7	14.3	.978	.000	.000	.000	.000	.000	.000	.978
PHF	.969	.864	.978	.000	.000	.000	.000	.000	.000	.978
Cars	1575	266	1841	0	0	0	0	0	0	1841
% Cars	99.1	100	99.2	0	0	0	0	0	0	99.2
Trucks	14	0	14	0	0	0	0	0	0	14
% Trucks	0.9	0	0.8	0	0	0	0	0	0	0.8

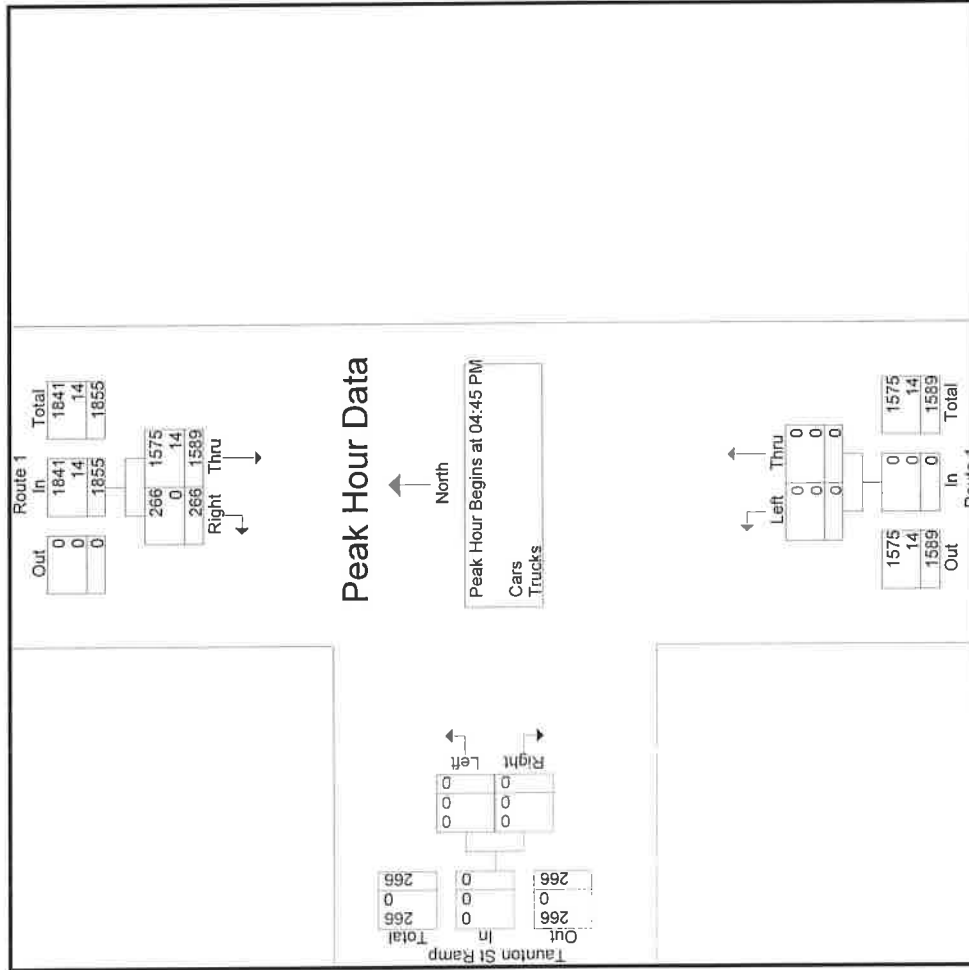
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

Accurate Counts

978-664-2565

File Name : 69640005
 Site Code : 69640005
 Start Date : 6/6/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Taunton Street Ramp
 City/State : Plainville, MA
 Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM	04:00 PM	04:00 PM	04:00 PM
+0 mins.	372	77	449	0
+15 mins.	401	60	461	0
+30 mins.	410	64	474	0
+45 mins.	406	65	471	0
Total Volume	1589	266	1855	0
% App. Total	85.7	14.3		
PHF	.969	.864	.978	.000
			.000	.000
			.000	.000

Accurate Counts
978-664-2565

N/S Street : Route 1
E/W Street: Taunton Street Ramp
City/State : Plainville, MA
Weather : Clear

File Name : 696400S5
Site Code : 69640005
Start Date : 6/8/2019
Page No : 2

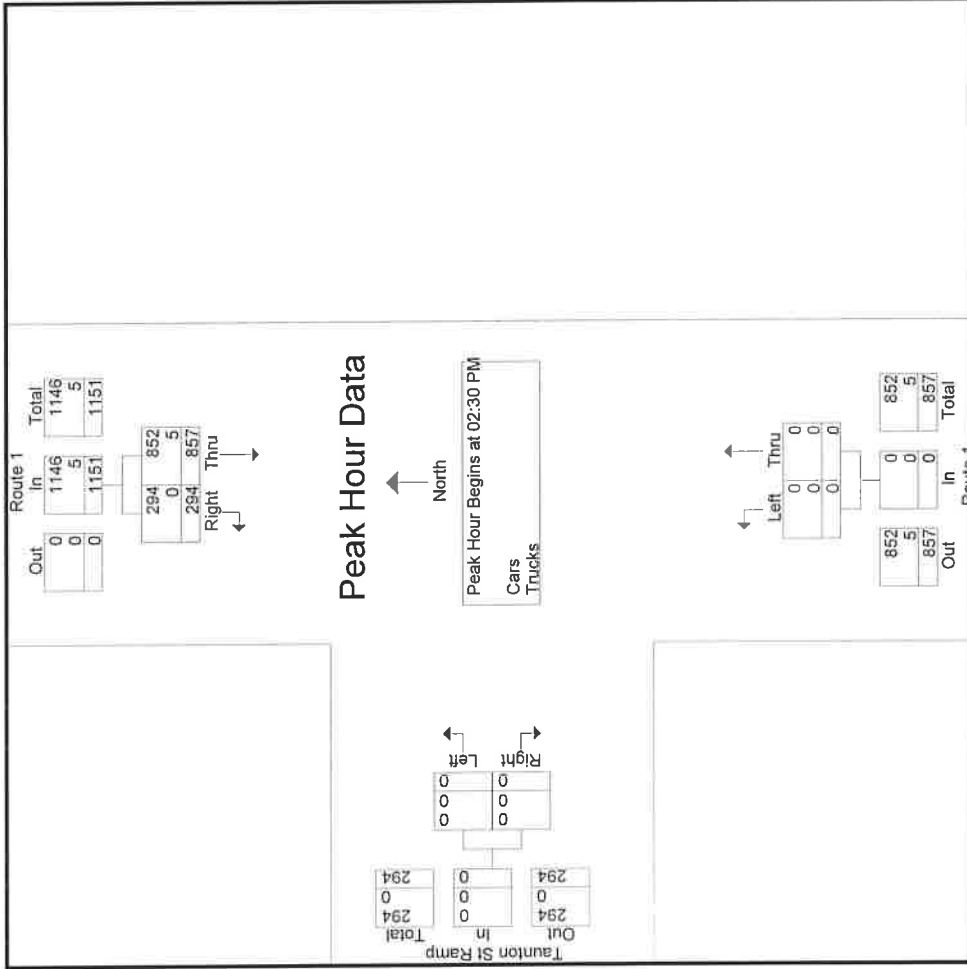
Start Time	Route 1 From North			Route 1 From South			Taunton St Ramp From West			
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:30 PM										
02:30 PM	202	77	279	0	0	0	0	0	0	279
02:45 PM	206	75	281	0	0	0	0	0	0	281
03:00 PM	221	75	296	0	0	0	0	0	0	296
03:15 PM	228	67	295	0	0	0	0	0	0	295
Total Volume	857	294	1151	0	0	0	0	0	0	1151
% App. Total	74.5	25.5	.972	.000	.000	.000	.000	.000	.000	.972
PHF	.940	.955	.972	.000	.000	.000	.000	.000	.000	.972
Cars	852	294	1146	0	0	0	0	0	0	1146
% Cars	99.4	100	99.6	0	0	0	0	0	0	99.6
Trucks	5	0	5	0	0	0	0	0	0	5
% Trucks	0.6	0	0.4	0	0	0	0	0	0	0.4

Accurate Counts

978-664-2565

File Name : 696400S5
 Site Code : 69640005
 Start Date : 6/8/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Taunton Street Ramp
 City/State : Plainville, MA
 Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:30 PM	02:00 PM	02:00 PM	02:00 PM
+0 mins.	202	279	0	0
+15 mins.	206	281	0	0
+30 mins.	221	296	0	0
+45 mins.	228	295	0	0
Total Volume	857	1151	0	0
% App. Total	74.5	25.5	0	0
PHF	.940	.955	.000	.000
			.000	.000

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Taunton Street Ramp
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S5
 Site Code : 69640005
 Start Date : 6/8/2019
 Page No : 9

Groups Printed- Trucks

Start Time	Route 1 From North		Route 1 From South		Taunton St Ramp From West		Int. Total
	Thru	Right	Left	Thru	Left	Right	
02:00 PM	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0
02:30 PM	1	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	1
03:00 PM	3	0	0	0	0	0	3
03:15 PM	1	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0
03:45 PM	2	0	0	0	0	0	2
Total	6	0	0	0	0	0	6
04:00 PM	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1
Grand Total	7	1	0	0	0	0	8
Approch %	87.5	12.5	0	0	0	0	
Total %	87.5	12.5	0	0	0	0	

Accurate Counts

978-664-2565

N/S Street : Route 152
 E/W Street : Jughandle
 City/State : Plainville, MA
 Weather : Cloudy

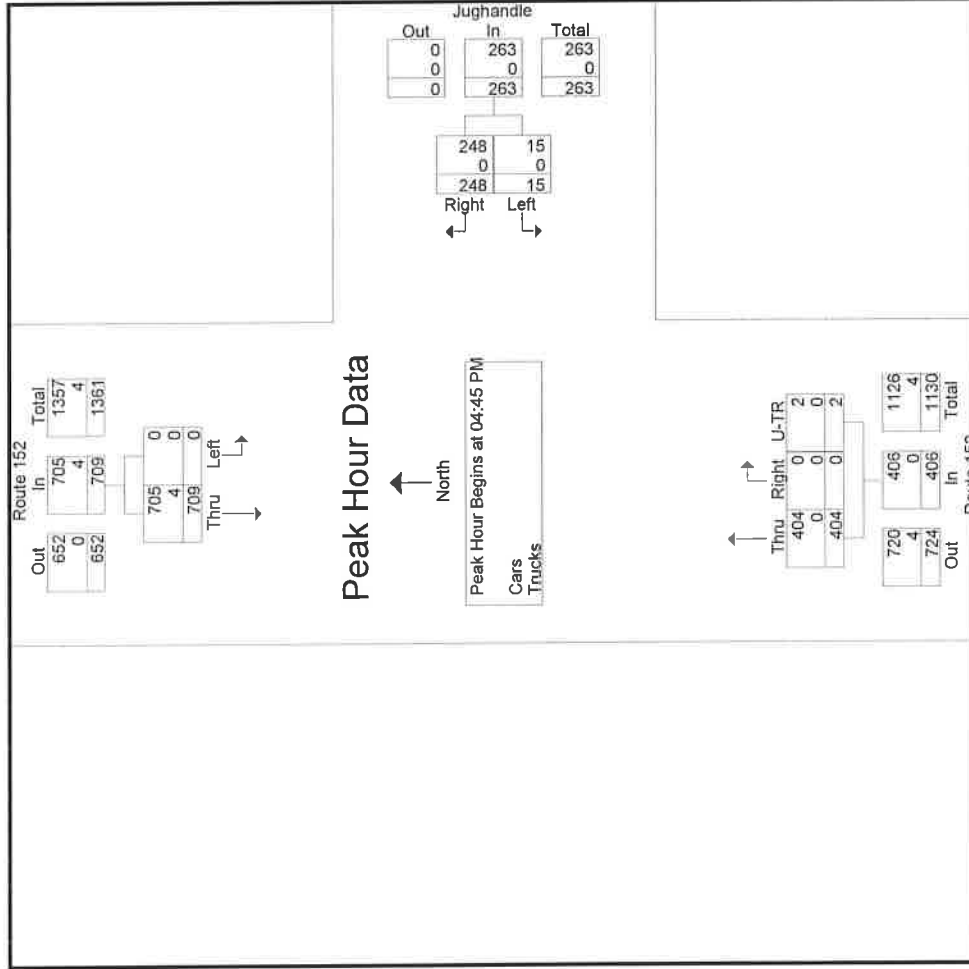
File Name : 69640006
 Site Code : 69640006
 Start Date : 6/6/2019
 Page No : 1

Start Time	Route 152 From North				Jughandle From East				Route 152 From South				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
04:00 PM	0	182	64	0	6	99	0	0	0	99	0	0	351
04:15 PM	0	173	56	1	6	97	0	0	1	97	0	0	333
04:30 PM	0	186	67	0	6	96	0	0	0	96	0	0	355
04:45 PM	0	168	73	0	3	88	0	0	0	88	0	0	332
Total	0	709	260	1	21	380	0	0	1	380	0	0	1371
05:00 PM	0	172	59	0	3	94	0	0	0	94	0	0	328
05:15 PM	0	181	55	2	7	117	0	0	2	117	0	0	362
05:30 PM	0	188	61	0	2	105	0	0	0	105	0	0	356
05:45 PM	0	147	71	0	7	86	0	0	0	86	0	0	311
Total	0	688	246	2	19	402	0	0	2	402	0	0	1357
06:00 PM	0	133	54	0	4	92	0	0	0	92	0	0	283
06:15 PM	0	149	53	0	0	76	0	0	0	76	0	0	278
06:30 PM	0	142	47	0	5	89	0	0	0	89	0	0	283
06:45 PM	0	118	47	2	5	55	0	0	2	55	0	0	227
Total	0	542	201	2	14	312	0	0	2	312	0	0	1071
Grand Total	0	1939	707	5	54	1094	0	0	5	1094	0	0	3799
Approch %	0	100	92.9	0.5	7.1	99.5	0	0	0.5	99.5	0	0	
Total %	0	51	18.6	0.1	1.4	28.8	0	0	0.1	28.8	0	0	
Cars	0	1932	705	5	54	1093	0	0	5	1093	0	0	3789
% Cars	0	99.6	99.7	100	100	99.9	0	0	100	99.9	0	0	99.7
Trucks	0	7	2	0	0	1	0	0	0	1	0	0	10
% Trucks	0	0.4	0.3	0	0	0.1	0	0	0	0.1	0	0	0.3

Accurate Counts
978-664-2565

File Name : 69640006
Site Code : 69640006
Start Date : 6/6/2019
Page No : 3

N/S Street : Route 152
E/W Street : Jughandle
City/State : Plainville, MA
Weather : Cloudy



Peak Hour Data

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM	04:00 PM	04:45 PM	04:45 PM
+0 mins.	182	182	64	88
+15 mins.	173	173	56	94
+30 mins.	186	186	67	117
+45 mins.	168	168	73	105
Total Volume	709	709	260	404
% App. Total	100	100	92.5	99.5
PHF	.953	.953	.890	.863
				.250
				.853

Accurate Counts

978-664-2565

N/S Street : Route 152
 EW Street : Jughandle
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640006
 Site Code : 69640006
 Start Date : 6/6/2019
 Page No : 1

Start Time	Groups Printed- Cars										Int. Total	
	Route 152 From North		Jughandle From East		Route 152 From South		U-TR		Right			
	Left	Thru	Left	Right	Thru	Right	Thru	Right	U-TR	Right	U-TR	
04:00 PM	0	180	6	64	99	0	99	0	0	0	0	349
04:15 PM	0	173	6	56	97	0	97	0	1	0	1	333
04:30 PM	0	186	6	66	95	0	95	0	0	0	0	353
04:45 PM	0	167	3	73	88	0	88	0	0	0	0	331
Total	0	706	21	259	379	0	379	0	1	0	1	1366
05:00 PM	0	171	3	59	94	0	94	0	0	0	0	327
05:15 PM	0	180	7	55	117	0	117	0	2	0	2	361
05:30 PM	0	187	2	61	105	0	105	0	0	0	0	355
05:45 PM	0	147	7	71	86	0	86	0	0	0	0	311
Total	0	685	19	246	402	0	402	0	2	0	2	1354
06:00 PM	0	133	4	54	92	0	92	0	0	0	0	283
06:15 PM	0	149	0	52	76	0	76	0	0	0	0	277
06:30 PM	0	142	5	47	89	0	89	0	0	0	0	283
06:45 PM	0	117	5	47	55	0	55	0	2	0	2	226
Total	0	541	14	200	312	0	312	0	2	0	2	1069
Grand Total	0	1932	54	705	1093	0	1093	0	5	0	5	3789
Approch %	0	100	7.1	92.9	99.5	0	99.5	0	0.5	0	0.5	
Total %	0	51	1.4	18.6	28.8	0	28.8	0	0.1	0	0.1	

Accurate Counts

978-664-2565

N/S Street : Route 152
 E/W Street : Jughandle
 City/State : Plainville, MA
 Weather : Cloudy

File Name : 69640006
 Site Code : 69640006
 Start Date : 6/6/2019
 Page No : 1

Start Time	Route 152 From North				Jughandle From East				Route 152 From South				U-TR	Int. Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total		
04:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	1	0	0	1	1	0	1	0	1	0	2
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	3	1	4	0	0	1	1	0	1	0	1	0	5
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	1	0	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	0
Total	0	3	0	3	0	0	0	0	0	0	0	0	0	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	1
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	2	0	0	1	1	0	0	0	0	0	2
Grand Total	0	7	2	9	0	0	2	2	1	1	0	2	0	10
Approch %	0	100	100	100	0	0	100	100	100	100	0	100	0	100
Total %	0	70	20	90	0	0	20	20	10	10	0	20	0	100

Accurate Counts

978-664-2565

N/S Street : Route 152
 EW Street : Jughandle
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S6
 Site Code : 69640006
 Start Date : 6/8/2019
 Page No : 1

Start Time	Route 152 From North			Jughandle From East			Route 152 From South			U-TR	Int. Total
	Left	Thru	Right	Left	Right	Thru	Right	Thru			
02:00 PM	0	179	49	8	49	114	0	114	0	350	
02:15 PM	0	187	61	5	61	97	0	97	3	353	
02:30 PM	0	178	68	8	68	117	0	117	0	371	
02:45 PM	0	169	67	7	67	109	0	109	1	353	
Total	0	713	245	28	245	437	0	437	4	1427	
03:00 PM	0	178	69	8	69	120	0	120	2	377	
03:15 PM	0	184	64	1	64	102	0	102	3	354	
03:30 PM	0	160	72	8	72	114	0	114	1	355	
03:45 PM	0	173	59	3	59	95	0	95	1	331	
Total	0	695	264	20	264	431	0	431	7	1417	
04:00 PM	0	185	50	6	50	86	0	86	0	327	
04:15 PM	0	156	47	7	47	72	0	72	0	282	
04:30 PM	0	144	56	5	56	98	0	98	1	304	
04:45 PM	0	158	42	3	42	101	0	101	3	307	
Total	0	643	195	21	195	357	0	357	4	1220	
Grand Total	0	2051	704	69	704	1225	0	1225	15	4064	
Approch %	0	100	91.1	8.9	91.1	98.8	0	98.8	1.2		
Total %	0	50.5	17.3	1.7	17.3	30.1	0	30.1	0.4		
Cars	0	2047	703	69	703	1223	0	1223	15	4057	
% Cars	0	99.8	99.9	100	99.9	99.8	0	99.8	100	99.8	
Trucks	0	4	1	0	1	2	0	2	0	7	
% Trucks	0	0.2	0.1	0	0.1	0.2	0	0.2	0	0.2	

Accurate Counts

978-664-2565

N/S Street : Route 152
 E/W Street : Jughandle
 City/State : Plainville, MA
 Weather : Clear

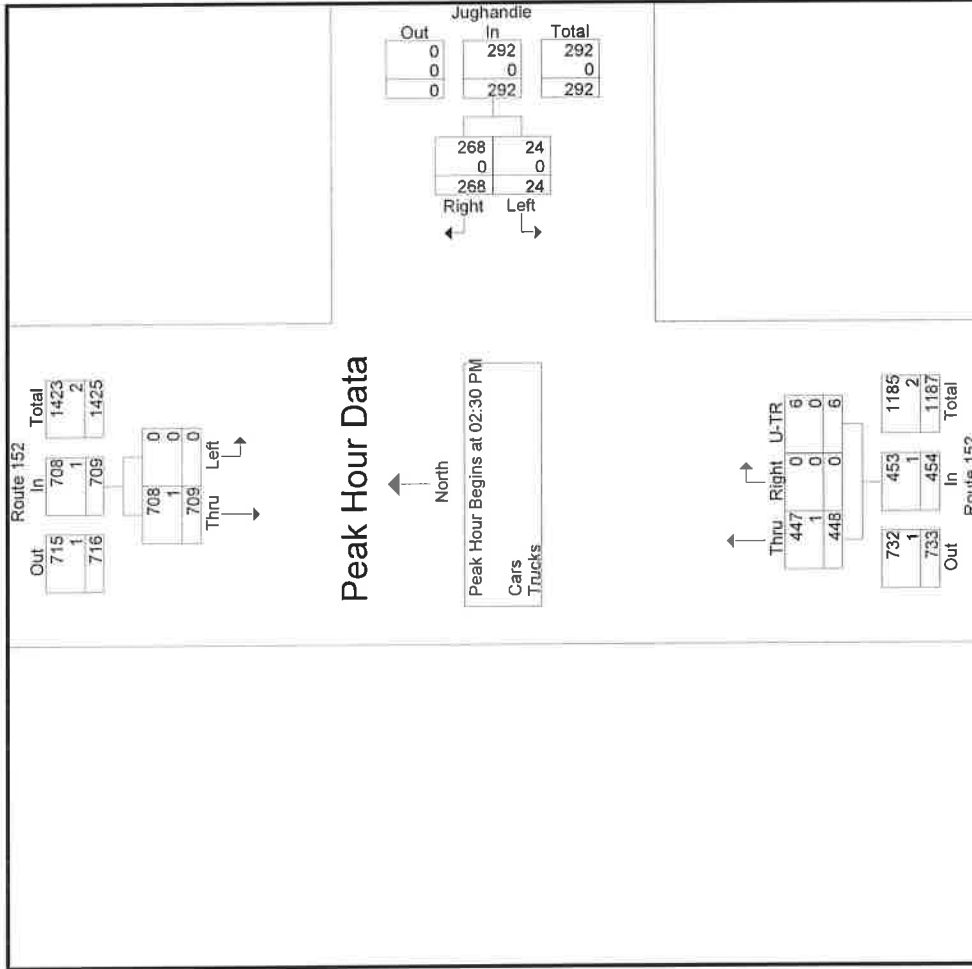
File Name : 696400S6
 Site Code : 69640006
 Start Date : 6/8/2019
 Page No : 2

Start Time	Route 152 From North			Jughandle From East			Route 152 From South			Int. Total	
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	U-TR		App. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 02:30 PM											
02:30 PM	0	178	178	8	68	76	117	0	0	117	371
02:45 PM	0	169	169	7	67	74	109	0	1	110	353
03:00 PM	0	178	178	8	69	77	120	0	2	122	377
03:15 PM	0	184	184	1	64	65	102	0	3	105	354
Total Volume	0	709	709	24	268	292	448	0	6	454	1455
% App. Total	0	100	100	8.2	91.8	98.7	98.7	0	1.3	98.7	98.7
PHF	.000	.963	.963	.750	.971	.948	.933	.000	.500	.930	.965
Cars	0	708	708	24	268	292	447	0	6	453	1453
% Cars	0	99.9	99.9	100	100	100	99.8	0	100	99.8	99.9
Trucks	0	1	1	0	0	0	1	0	0	1	2
% Trucks	0	0.1	0.1	0	0	0	0.2	0	0	0.2	0.1

Accurate Counts
978-664-2565

N/S Street : Route 152
E/W Street : Jughandle
City/State : Plainville, MA
Weather : Clear

File Name : 696400S6
Site Code : 69640006
Start Date : 6/8/2019
Page No : 3



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM	02:45 PM	02:30 PM	
+0 mins.	179	7	117	0
+15 mins.	187	8	109	1
+30 mins.	178	1	120	2
+45 mins.	169	8	102	3
Total Volume	713	24	448	6
% App. Total	100	8.1	98.7	1.3
PHF	.953	.750	.933	.500
				.930

Accurate Counts

978-664-2565

N/S Street : Route 152
 E/W Street : Jughandle
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S6
 Site Code : 69640006
 Start Date : 6/8/2019
 Page No : 1

Start Time	Route 152 From North				Jughandle From East				Route 152 From South				U-TR	Int. Total
	Left	Thru	Right	Thru	Left	Right	Thru	Right	Left	Right	Thru	Right		
02:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	0	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	1	0	0	0	1	0	0	1
Total	0	1	0	1	0	0	2	0	0	0	3	0	0	3
03:00 PM	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
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	1	0	1	0	0	0	0	0	0	1	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	1	0	0	1
04:00 PM	0	1	1	1	0	1	0	0	0	0	2	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	1	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	2	0	1	0	0	0	0	3	0	0	3
Grand Total	0	4	1	4	0	1	2	0	0	0	7	0	0	7
Approch %	0	100	100	100	0	100	100	0	0	0	100	0	0	0
Total %	0	57.1	14.3	57.1	0	14.3	28.6	0	0	0	28.6	0	0	0

Accurate Counts

978-664-2565

File Name : 696400S6
 Site Code : 69640006
 Start Date : 6/8/2019
 Page No : 1

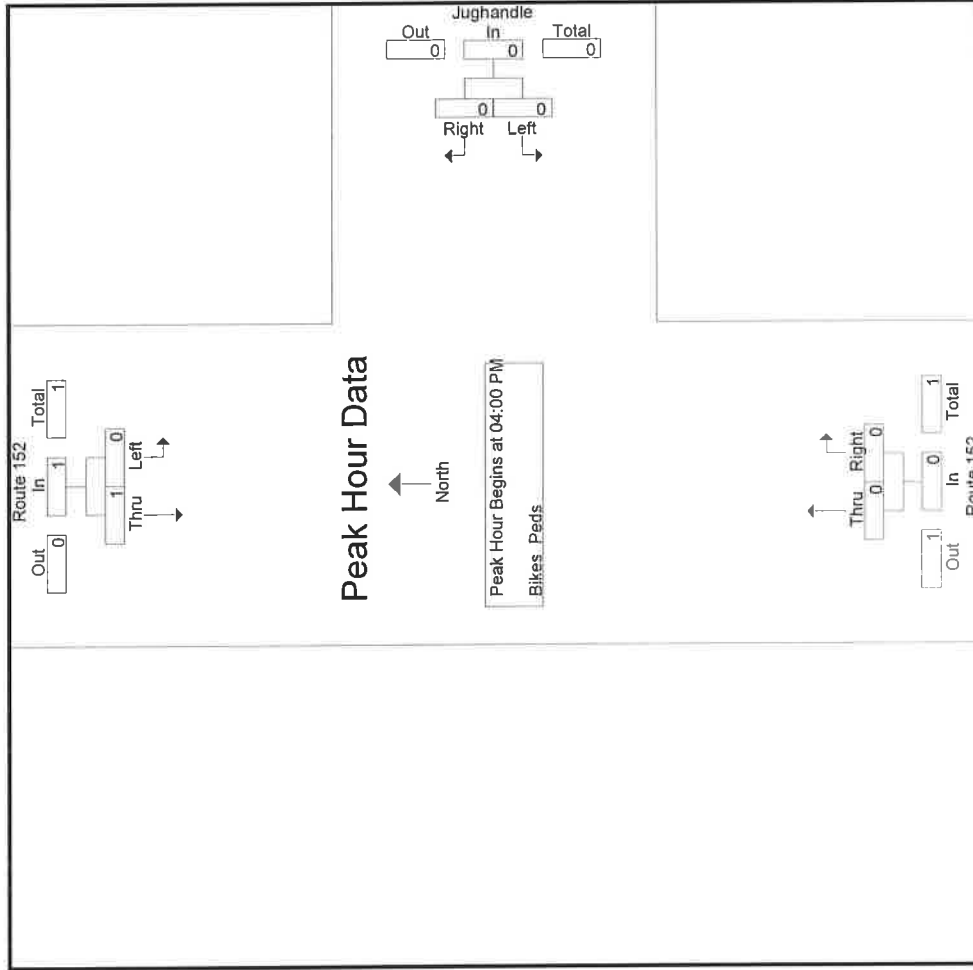
N/S Street : Route 152
 E/W Street : Jughandle
 City/State : Plainville, MA
 Weather : Clear

Start Time	Groups Printed- Bikes Peds											
	Route 152 From North			Jughandle From East			Route 152 From South					
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
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	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	1	0	0	0	0	0	0	0	0	1	1
Grand Total	0	1	0	0	0	0	0	0	0	0	1	1
Approch %	0	100		0	0		0	0				
Total %	0	100		0	0		0	0		0	100	

Accurate Counts
978-664-2565

File Name : 696400S6
Site Code : 69640006
Start Date : 6/8/2019
Page No : 3

N/S Street : Route 152
E/W Street : Jughandle
City/State : Plainville, MA
Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

Accurate Counts

978-664-2565

File Name : 69640007
 Site Code : 69640007
 Start Date : 6/6/2019
 Page No : 1

N/S Street : Route 1
 EW Street: Route 152
 City/State : Plainville, MA
 Weather : Cloudy

Start Time	Groups Printed- Cars - Trucks																				
	Route 1 From North				Route 152 From East				Route 1 From South				Route 152 From West								
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Int. Total
04:00 PM	81	213	2	1	17	74	105		24	108	13	0	54	84	57		54	84	57		833
04:15 PM	119	285	0	1	27	63	86		25	106	6	0	49	93	41		49	93	41		901
04:30 PM	88	247	0	1	14	74	109		33	121	8	0	49	80	54		49	80	54		878
04:45 PM	112	262	0	1	18	59	88		29	135	4	0	57	60	56		57	60	56		881
Total	400	1007	2	4	76	270	388		111	470	31	0	209	317	208		209	317	208		3493
05:00 PM	102	264	1	2	20	69	99		23	122	15	0	49	62	62		49	62	62		890
05:15 PM	113	326	0	3	20	75	74		45	113	4	1	54	85	53		54	85	53		966
05:30 PM	88	272	1	1	18	78	81		29	102	12	0	57	61	69		57	61	69		869
05:45 PM	94	296	0	0	24	51	72		35	97	12	0	32	50	55		32	50	55		818
Total	397	1158	2	6	82	273	326		132	434	43	1	192	258	239		192	258	239		3543
06:00 PM	95	266	0	1	22	64	76		29	82	9	0	36	54	59		36	54	59		793
06:15 PM	94	227	0	0	15	38	37		29	96	5	2	38	54	44		38	54	44		679
06:30 PM	82	190	1	1	10	74	66		33	85	6	0	53	61	46		53	61	46		708
06:45 PM	89	140	2	1	10	30	46		22	89	6	0	25	60	30		25	60	30		550
Total	360	823	3	3	57	206	225		113	352	26	2	152	229	179		152	229	179		2730
Grand Total	1157	2988	7	13	215	749	939		356	1256	100	3	553	804	626		553	804	626		9766
Approch %	27.8	71.7	0.2	0.3	11.3	39.4	49.3		20.8	73.2	5.8	0.2	27.9	40.5	31.6		27.9	40.5	31.6		
Total %	11.8	30.6	0.1	0.1	2.2	7.7	9.6		3.6	12.9	1	0	5.7	8.2	6.4		5.7	8.2	6.4		
Cars	1150	2969	7	13	215	748	934		356	1248	100	3	550	802	626		550	802	626		9721
% Cars	99.4	99.4	100	100	100	99.9	99.5		100	99.4	100	100	99.5	99.8	100		99.5	99.8	100		99.5
Trucks	7	19	0	0	0	1	5		0	8	0	0	3	2	0		3	2	0		45
% Trucks	0.6	0.6	0	0	0	0.1	0.5		0	0.6	0	0	0.5	0.2	0		0.5	0.2	0		0.5

Accurate Counts

978-664-2565

File Name : 69640007
 Site Code : 69640007
 Start Date : 6/6/2019
 Page No : 2

N/S Street : Route 1
 E/W Street : Route 152
 City/State : Plainville, MA
 Weather : Cloudy

Start Time	Route 1 From North				Route 152 From East				Route 1 From South				Route 152 From West						
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:30 PM																			
04:30 PM	88	247	0	1	336	14	74	109	197	33	121	8	0	162	49	80	54	183	878
04:45 PM	112	262	0	1	375	18	59	88	165	29	135	4	0	168	57	60	56	173	881
05:00 PM	102	264	1	2	369	20	69	99	188	23	122	15	0	160	49	62	62	173	890
05:15 PM	113	326	0	3	442	20	75	74	169	45	113	4	1	163	54	85	53	192	966
Total Volume	415	1099	1	7	1522	72	277	370	719	130	491	31	1	653	209	287	225	721	3615
% App. Total	27.3	72.2	0.1	0.5		10	38.5	51.5		19.9	75.2	4.7	0.2		29	39.8	31.2		
PHF	.918	.843	.250	.583	.861	.900	.923	.849	.912	.722	.909	.517	.250	.972	.917	.844	.907	.939	.936
Cars	410	1090	1	7	1508	72	276	367	715	130	488	31	1	650	207	286	225	718	3591
% Cars	98.8	99.2	100	100	99.1	100	99.6	99.2	99.4	100	99.4	100	100	99.5	99.0	99.7	100	99.6	99.3
Trucks	5	9	0	0	14	0	1	3	4	0	3	0	0	3	2	1	0	3	24
% Trucks	1.2	0.8	0	0	0.9	0	0.4	0.8	0.6	0	0.6	0	0	0.5	1.0	0.3	0	0.4	0.7

Accurate Counts

978-664-2565

File Name : 69640007
 Site Code : 69640007
 Start Date : 6/6/2019
 Page No : 1

N/S Street : Route 1
 E/W Street: Route 152
 City/State : Plainville, MA
 Weather : Cloudy

Start Time	Groups Printed- Cars														
	Route 1 From North			Route 152 From East			Route 1 From South			Route 152 From West					
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left	Thru	Right	Int. Total
04:00 PM	80	210	2	1	17	74	104	24	107	13	0	53	83	57	825
04:15 PM	119	283	0	1	27	63	85	25	105	6	0	49	93	41	897
04:30 PM	85	244	0	1	14	73	108	33	121	8	0	49	80	54	870
04:45 PM	111	261	0	1	18	59	88	29	135	4	0	57	60	56	879
Total	395	998	2	4	76	269	385	111	468	31	0	208	316	208	3471
05:00 PM	101	264	1	2	20	69	97	23	121	15	0	49	61	62	885
05:15 PM	113	321	0	3	20	75	74	45	111	4	1	52	85	53	957
05:30 PM	88	269	1	1	18	78	81	29	101	12	0	57	61	69	865
05:45 PM	94	295	0	0	24	51	72	35	96	12	0	32	50	55	816
Total	396	1149	2	6	82	273	324	132	429	43	1	190	257	239	3523
06:00 PM	95	266	0	1	22	64	76	29	82	9	0	36	54	59	793
06:15 PM	94	226	0	0	15	38	37	29	96	5	2	38	54	44	678
06:30 PM	82	190	1	1	10	74	66	33	84	6	0	53	61	46	707
06:45 PM	88	140	2	1	10	30	46	22	89	6	0	25	60	30	549
Total	359	822	3	3	57	206	225	113	351	26	2	152	229	179	2727
Grand Total	1150	2969	7	13	215	748	934	356	1248	100	3	550	802	626	9721
Approch %	27.8	71.7	0.2	0.3	11.3	39.4	49.2	20.9	73.1	5.9	0.2	27.8	40.5	31.6	
Total %	11.8	30.5	0.1	0.1	2.2	7.7	9.6	3.7	12.8	1	0	5.7	8.3	6.4	

Accurate Counts

978-664-2565

File Name : 69640007
 Site Code : 69640007
 Start Date : 6/6/2019
 Page No : 1

N/S Street : Route 1
 E/W Street : Route 152
 City/State : Plainville, MA
 Weather : Cloudy

Groups Printed- Trucks															
Start Time	Route 1 From North			Route 152 From East			Route 1 From South			Route 152 From West			Int. Total		
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left		Thru	Right
04:00 PM	1	3	0	0	0	0	1	0	1	0	0	1	1	0	8
04:15 PM	0	2	0	0	0	0	1	0	1	0	0	0	0	0	4
04:30 PM	3	3	0	0	0	1	1	0	0	0	0	0	0	0	8
04:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	5	9	0	0	0	1	3	0	2	0	0	1	1	0	22
05:00 PM	1	0	0	0	0	0	2	0	1	0	0	0	1	0	5
05:15 PM	0	5	0	0	0	0	0	0	2	0	0	2	0	0	9
05:30 PM	0	3	0	0	0	0	0	0	1	0	0	0	0	0	4
05:45 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
Total	1	9	0	0	0	0	2	0	5	0	0	2	1	0	20
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
06:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	0	0	0	0	0	1	0	0	0	0	0	3
Grand Total:	7	19	0	0	0	1	5	0	8	0	0	3	2	0	45
Approch %	26.9	73.1	0	0	0	16.7	83.3	0	100	0	0	60	40	0	
Total %	15.6	42.2	0	0	0	2.2	11.1	0	17.8	0	0	6.7	4.4	0	

Accurate Counts

978-664-2565

File Name : 69640007
 Site Code : 69640007
 Start Date : 6/6/2019
 Page No : 1

N/S Street : Route 1
 E/W Street : Route 152
 City/State : Plainville, MA
 Weather : Cloudy

Groups Printed- Bikes Peds

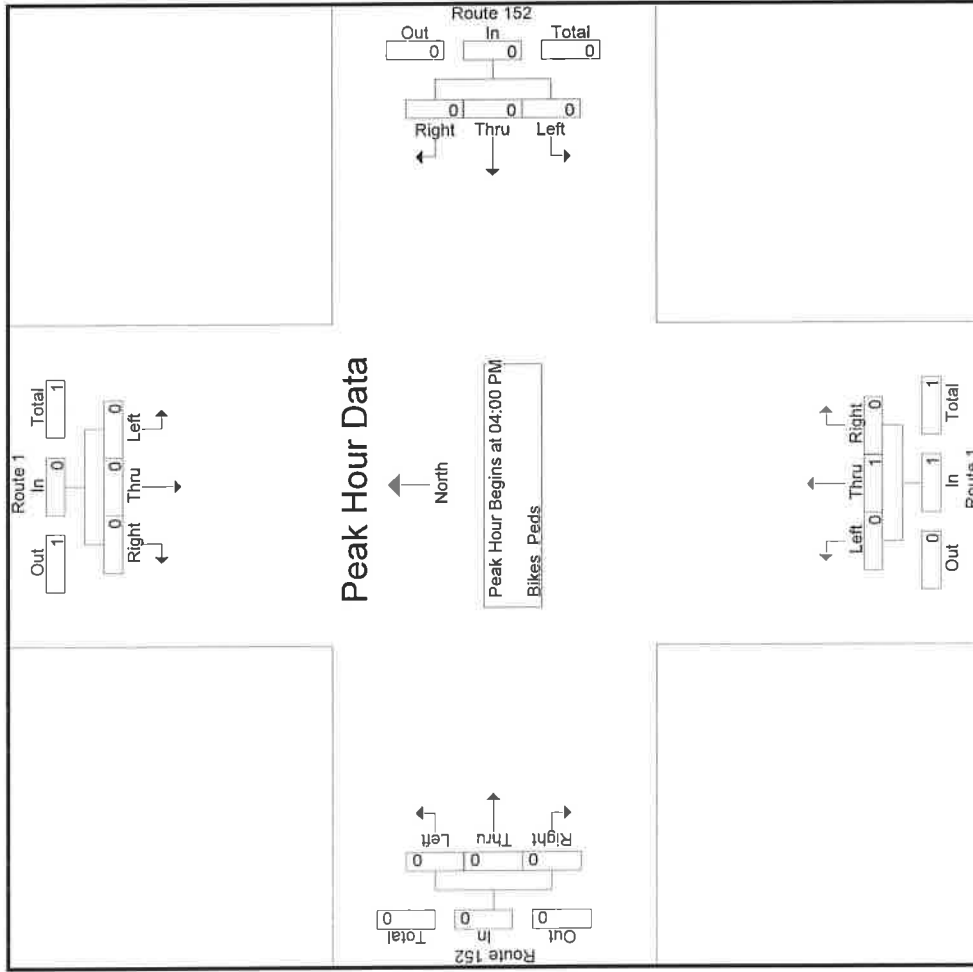
Start Time	Route 1 From North			Route 152 From East			Route 1 From South			Route 152 From West			Inclu. Total	Exclu. Total	Peds	Int. Total	
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	Left					Thru
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	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	1	0	0	0	1	1	1	2
05:00 PM	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
05:30 PM	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
Total	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	2	0	0	2
06:15 PM	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
06:45 PM	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	2	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	1	0	0	0	3	1	1	4
Approch %	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	100	0	0	0	75	0	25	0

Accurate Counts

978-664-2565

File Name : 69640007
 Site Code : 69640007
 Start Date : 6/6/2019
 Page No : 3

N/S Street : Route 1
 E/W Street : Route 152
 City/State : Plainville, MA
 Weather : Cloudy



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

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

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street : Route 152
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S7
 Site Code : 69640007
 Start Date : 6/8/2019
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Route 1 From North			Route 152 From East			Route 1 From South			Route 152 From West			Int. Total		
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	Left		Thru	Right
02:00 PM	60	125	0	1	14	84	63	18	32	110	18	51	79	42	679
02:15 PM	70	121	0	5	21	67	51	27	27	133	27	83	83	42	730
02:30 PM	70	122	1	2	26	83	83	8	40	131	8	68	81	30	745
02:45 PM	78	128	0	4	16	79	111	11	26	148	11	62	66	32	761
Total	278	496	1	12	77	313	308	64	125	522	64	264	309	146	2915
03:00 PM	68	145	0	1	11	82	75	24	36	138	24	57	94	42	774
03:15 PM	89	138	1	2	13	74	88	11	25	122	11	66	76	41	746
03:30 PM	65	119	0	3	17	94	87	2	36	127	2	53	76	39	719
03:45 PM	85	126	2	3	16	58	82	12	33	104	12	63	62	45	691
Total	307	528	3	9	57	308	332	49	130	491	49	239	308	167	2930
04:00 PM	59	125	0	2	11	51	62	9	33	98	9	71	73	47	641
04:15 PM	75	115	0	2	27	44	67	13	28	86	13	60	69	40	626
04:30 PM	60	126	0	2	8	62	63	4	41	114	4	49	64	36	630
04:45 PM	70	108	1	5	8	64	73	9	44	110	9	56	61	41	650
Total	264	474	1	11	54	221	265	35	146	408	35	236	267	164	2547
Grand Total	849	1498	5	32	188	842	905	148	401	1421	148	739	884	477	8392
Approch %	35.6	62.8	0.2	1.3	9.7	43.5	46.8	7.5	20.3	72	7.5	35.2	42.1	22.7	
Total %	10.1	17.9	0.1	0.4	2.2	10	10.8	1.8	4.8	16.9	1.8	8.8	10.5	5.7	
Cars	848	1492	5	31	188	841	902	148	400	1412	148	735	884	477	8366
% Cars	99.9	99.6	100	96.9	100	99.9	99.7	100	99.8	99.4	100	99.5	100	100	99.7
Trucks	1	6	0	1	0	1	3	0	1	9	0	4	0	0	26
% Trucks	0.1	0.4	0	3.1	0	0.1	0.3	0	0.2	0.6	0	0.5	0	0	0.3

Accurate Counts

978-664-2565

N/S Street : Route 1
 EW Street: Route 152
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S7
 Site Code : 69640007
 Start Date : 6/8/2019
 Page No : 2

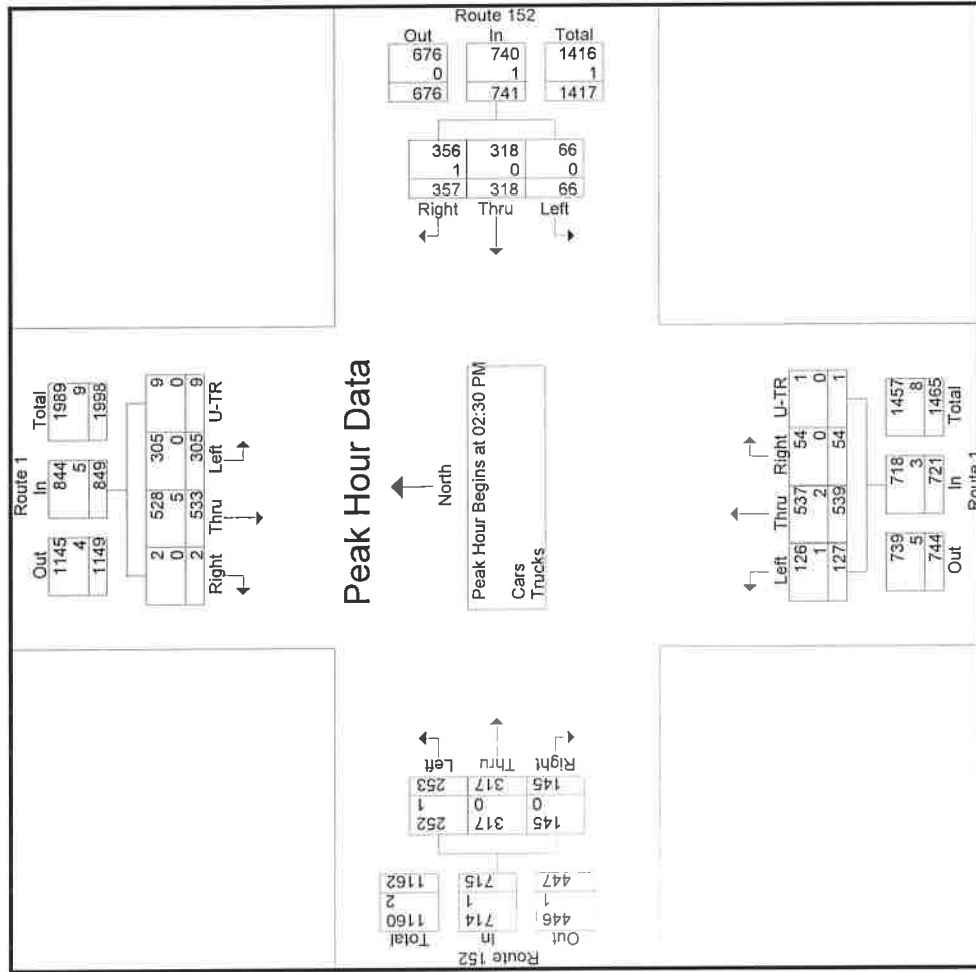
Start Time	Route 1 From North				Route 152 From East				Route 1 From South				Route 152 From West								
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	70	122	1	2	195	26	83	83	192	40	131	8	0	179	68	81	30	179			745
02:45 PM	78	128	0	4	210	16	79	111	206	26	148	11	0	185	62	66	32	160			761
03:00 PM	68	145	0	1	214	11	82	75	168	36	138	24	1	199	57	94	42	193			774
03:15 PM	89	138	1	2	230	13	74	88	175	25	122	11	0	158	66	76	41	183			746
Total Volume	305	533	2	9	849	66	318	357	741	127	539	54	1	721	253	317	145	715			3026
% App. Total	35.9	62.8	0.2	1.1		8.9	42.9	48.2		17.6	74.8	7.5	0.1		35.4	44.3	20.3				
PHF	.857	.919	.500	.563	.923	.635	.958	.804	.899	.794	.910	.563	.250	.906	.930	.843	.863	.926			.977
Cars	305	528	2	9	844	66	318	356	740	126	537	54	1	718	252	317	145	714			3016
% Cars	100	99.1	100	100	99.4	100	100	99.7	99.9	99.2	99.6	100	100	99.6	99.6	100	100	99.9			99.7
Trucks	0	5	0	0	5	0	0	1	1	1	2	0	0	3	1	0	0	1			10
% Trucks	0	0.9	0	0	0.6	0	0	0.3	0.1	0.8	0.4	0	0	0.4	0.4	0	0	0.1			0.3

Accurate Counts

978-664-2565

File Name : 696400S7
 Site Code : 69640007
 Start Date : 6/8/2019
 Page No : 3

N/S Street : Route 1
 EW Street : Route 152
 City/State : Plainville, MA
 Weather : Clear



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	02:30 PM		02:45 PM		02:15 PM		02:15 PM								
+0 mins.	70	122	1	2	195	16	79	111	206	27	133	0	187	83	208
+15 mins.	78	128	0	4	210	11	82	75	168	40	131	8	179	68	179
+30 mins.	68	145	0	1	214	13	74	88	175	26	148	11	185	62	160
+45 mins.	89	138	1	2	230	17	94	87	198	36	138	24	199	57	193
Total Volume	305	533	2	9	849	57	329	361	747	129	550	70	750	270	740
% App. Total	35.9	62.8	0.2	1.1	100.0	7.6	44	48.3	100.0	17.2	73.3	9.3	100.0	36.5	100.0
PHF	.857	.919	.500	.563	.923	.838	.875	.813	.907	.806	.929	.648	.942	.813	.869

Accurate Counts

978-664-2565

File Name : 696400S7
 Site Code : 69640007
 Start Date : 6/8/2019
 Page No : 1

N/S Street : Route 1
 E/W Street: Route 152
 City/State : Plainville, MA
 Weather : Clear

Start Time	Groups Printed- Cars														
	Route 1 From North			Route 152 From East			Route 1 From South			Route 152 From West					
	Left	Thru	Right	U-TR	Left	Thru	Right	Left	Thru	Right	U-TR	Left	Thru	Right	Int. Total
02:00 PM	60	125	0	1	14	84	63	32	109	18	0	51	79	42	678
02:15 PM	70	121	0	5	21	66	51	27	132	27	0	83	83	42	728
02:30 PM	70	121	1	2	26	83	83	40	130	8	0	67	81	30	742
02:45 PM	78	128	0	4	16	79	111	26	147	11	0	62	66	32	760
Total	278	495	1	12	77	312	308	125	518	64	0	263	309	146	2908
03:00 PM	68	142	0	1	11	82	74	35	138	24	1	57	94	42	769
03:15 PM	89	137	1	2	13	74	88	25	122	11	0	66	76	41	745
03:30 PM	65	119	0	3	17	94	87	36	125	2	1	53	76	39	717
03:45 PM	84	125	2	3	16	58	82	33	104	12	0	62	62	45	688
Total	306	523	3	9	57	308	331	129	489	49	2	238	308	167	2919
04:00 PM	59	125	0	2	11	51	62	33	97	9	0	71	73	47	640
04:15 PM	75	115	0	2	27	44	67	28	85	13	0	59	69	40	624
04:30 PM	60	126	0	2	8	62	63	41	113	4	1	48	64	36	628
04:45 PM	70	108	1	4	8	64	71	44	110	9	0	56	61	41	647
Total	264	474	1	10	54	221	263	146	405	35	1	234	267	164	2539
Grand Total	848	1492	5	31	188	841	902	400	1412	148	3	735	884	477	8366
Approch %	35.7	62.8	0.2	1.3	9.7	43.6	46.7	20.4	71.9	7.5	0.2	35.1	42.2	22.8	
Total %	10.1	17.8	0.1	0.4	2.2	10.1	10.8	4.8	16.9	1.8	0	8.8	10.6	5.7	

Accurate Counts

978-664-2565

N/S Street : Route 1
 E/W Street: Route 152
 City/State : Plainville, MA
 Weather : Clear

File Name : 696400S7
 Site Code : 69640007
 Start Date : 6/8/2019
 Page No : 1

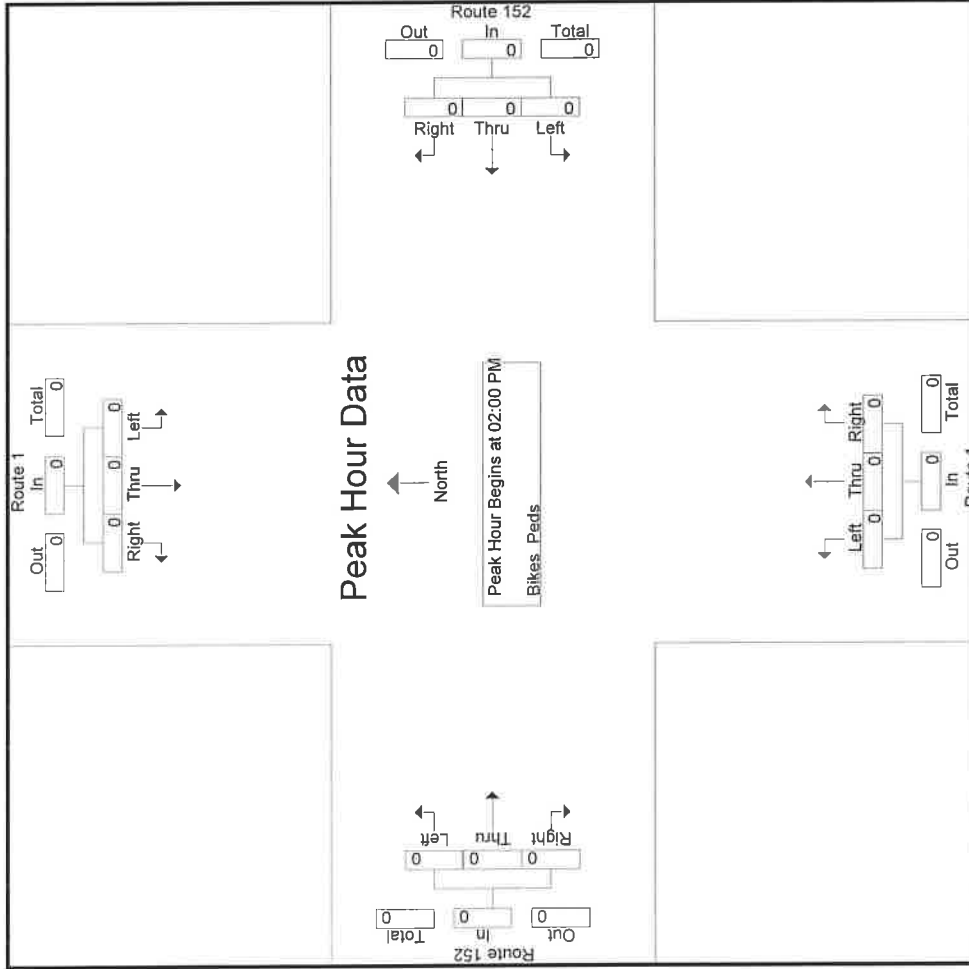
Groups Printed- Trucks

Start Time	Route 1 From North			Route 152 From East			Route 1 From South			Route 152 From West			Int. Total					
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		Left	Thru	Right	U-TR	
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
02:30 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	1	0	0	0	0	4	0	0	1	0	0	0	7
03:00 PM	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
03:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
03:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
Total	1	5	0	0	0	0	1	0	0	1	2	0	0	1	0	0	0	11
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
04:45 PM	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3
Total	0	0	0	1	0	0	2	0	0	0	3	0	0	2	0	0	0	8
Grand Total	1	6	0	1	0	1	3	0	0	1	9	0	0	4	0	0	0	26
Approch %	12.5	75	0	12.5	0	25	75	0	0	10	90	0	0	100	0	0	0	
Total %	3.8	23.1	0	3.8	0	3.8	11.5	0	0	3.8	34.6	0	0	15.4	0	0	0	

Accurate Counts
978-664-2565

N/S Street : Route 1
E/W Street: Route 152
City/State : Plainville, MA
Weather : Clear

File Name : 696400S7
Site Code : 69640007
Start Date : 6/8/2019
Page No : 3



Peak Hour Analysis From 02:00 PM to 04:45 PM - Peak 1 of 1
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
+15 mins.	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
+45 mins.	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
% App. Total	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

PROJECT SITE DRIVEWAY COUNTS

Accurate Counts
978-664-2565

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

69640001

Start Time	6/3/2019 Mon	Out		Hour Totals		In		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		17	49			4	76				
12:15		21	48			4	85				
12:30		10	54			5	83				
12:45		15	43	63	194	5	103	18	347	81	541
01:00		14	47			2	91				
01:15		13	62			3	65				
01:30		7	56			3	90				
01:45		13	69	47	234	4	88	12	334	59	568
02:00		5	66			1	66				
02:15		8	70			0	62				
02:30		6	72			6	62				
02:45		8	66	27	274	2	84	9	274	36	548
03:00		7	65			7	90				
03:15		7	70			2	66				
03:30		3	80			4	72				
03:45		7	61	24	276	6	58	19	286	43	562
04:00		2	50			1	48				
04:15		6	54			5	50				
04:30		7	75			1	59				
04:45		7	66	22	245	3	36	10	193	32	438
05:00		4	69			5	34				
05:15		3	67			6	26				
05:30		7	79			10	29				
05:45		0	67	14	282	14	38	35	127	49	409
06:00		8	58			8	45				
06:15		11	55			12	36				
06:30		12	52			16	43				
06:45		7	54	38	219	22	34	58	158	96	377
07:00		8	78			20	39				
07:15		8	73			19	31				
07:30		18	56			16	34				
07:45		17	96	51	303	23	28	78	132	129	435
08:00		9	79			20	32				
08:15		16	53			33	27				
08:30		17	35			19	28				
08:45		8	29	50	196	35	29	107	116	157	312
09:00		16	32			34	23				
09:15		22	26			36	13				
09:30		17	29			44	23				
09:45		16	26	71	113	48	28	162	87	233	200
10:00		20	36			52	12				
10:15		17	22			54	14				
10:30		29	19			68	13				
10:45		26	29	92	106	62	22	236	61	328	167
11:00		26	45			72	13				
11:15		47	26			72	15				
11:30		34	24			79	7				
11:45		50	22	157	117	83	20	306	55	463	172
Total		656	2559			1050	2170			1706	4729
Percent		20.4%	79.6%			32.6%	67.4%			26.5%	73.5%

Accurate Counts
978-664-2565

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

69640001

Start Time	6/4/2019 Tue	Out		Hour Totals		In		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		17	47			3	58				
12:15		21	54			6	76				
12:30		12	47			0	68				
12:45		12	50	62	198	2	57	11	259	73	457
01:00		8	58			4	65				
01:15		10	50			2	56				
01:30		14	53			0	52				
01:45		14	72	46	233	4	75	10	248	56	481
02:00		13	66			4	54				
02:15		8	67			0	54				
02:30		7	48			1	56				
02:45		6	54	34	235	2	58	7	222	41	457
03:00		1	52			1	52				
03:15		4	60			1	56				
03:30		2	74			4	52				
03:45		5	67	12	253	7	45	13	205	25	458
04:00		3	60			1	44				
04:15		5	55			3	53				
04:30		6	62			2	56				
04:45		5	50	19	227	5	56	11	209	30	436
05:00		4	44			4	37				
05:15		4	54			3	52				
05:30		4	56			2	28				
05:45		4	54	16	208	13	31	22	148	38	356
06:00		10	47			13	42				
06:15		8	53			7	43				
06:30		5	47			13	38				
06:45		3	48	26	195	18	30	51	153	77	348
07:00		9	51			12	45				
07:15		5	54			16	40				
07:30		11	44			18	36				
07:45		12	44	37	193	26	34	72	155	109	348
08:00		10	36			26	34				
08:15		25	34			24	34				
08:30		9	41			28	28				
08:45		11	43	55	154	40	22	118	118	173	272
09:00		20	42			40	21				
09:15		8	39			30	17				
09:30		18	31			43	26				
09:45		22	34	68	146	58	29	171	93	239	239
10:00		22	32			59	29				
10:15		34	30			60	18				
10:30		33	29			50	13				
10:45		24	36	113	127	63	16	232	76	345	203
11:00		22	37			64	14				
11:15		36	27			56	14				
11:30		27	31			70	12				
11:45		39	24	124	119	57	16	247	56	371	175
Total		612	2288			965	1942			1577	4230
Percent		21.1%	78.9%			33.2%	66.8%			27.2%	72.8%

Accurate Counts
978-664-2565

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

69640001

Start Time	6/5/2019 Wed	Out		Hour Totals		In		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		23	29			9	57				
12:15		10	24			2	47				
12:30		22	39			2	56				
12:45		18	36	73	128	3	62	16	222	89	350
01:00		13	34			1	54				
01:15		21	34			1	49				
01:30		6	44			3	54				
01:45		15	55	55	167	2	47	7	204	62	371
02:00		8	52			2	56				
02:15		4	59			1	42				
02:30		11	52			4	47				
02:45		4	48	27	211	4	51	11	196	38	407
03:00		11	56			1	66				
03:15		6	46			1	42				
03:30		3	50			2	40				
03:45		6	48	26	200	4	50	8	198	34	398
04:00		4	58			1	33				
04:15		6	60			3	41				
04:30		2	46			2	38				
04:45		3	44	15	208	2	35	8	147	23	355
05:00		1	53			0	40				
05:15		1	54			5	36				
05:30		2	56			6	36				
05:45		4	28	8	191	13	52	24	164	32	355
06:00		14	42			11	28				
06:15		9	42			11	38				
06:30		6	43			10	37				
06:45		4	39	33	166	27	46	59	149	92	315
07:00		8	37			16	37				
07:15		10	48			12	35				
07:30		12	30			18	23				
07:45		5	37	35	152	17	27	63	122	98	274
08:00		14	45			20	19				
08:15		15	46			17	16				
08:30		10	42			25	20				
08:45		14	27	53	160	34	24	96	79	149	239
09:00		12	29			28	22				
09:15		14	32			18	21				
09:30		10	38			38	12				
09:45		12	26	48	125	42	14	126	69	174	194
10:00		13	28			34	12				
10:15		15	29			34	8				
10:30		14	43			45	11				
10:45		30	27	72	127	48	21	161	52	233	179
11:00		19	25			45	9				
11:15		24	16			48	8				
11:30		26	32			47	7				
11:45		36	17	105	90	60	9	200	33	305	123
Total		550	1925			779	1635			1329	3560
Percent		22.2%	77.8%			32.3%	67.7%			27.2%	72.8%

Accurate Counts
978-664-2565

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

69640001

Start Time	6/6/2019 Thu	Out		Hour Totals		In		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		21	44			6	82				
12:15		16	45			2	86				
12:30		9	53			3	96				
12:45		9	63	55	205	2	96	13	360	68	565
01:00		17	48			1	70				
01:15		7	44			5	86				
01:30		9	54			4	91				
01:45		8	58	41	204	6	82	16	329	57	533
02:00		3	56			1	74				
02:15		6	66			1	72				
02:30		3	91			2	60				
02:45		3	67	15	280	2	76	6	282	21	562
03:00		5	56			2	70				
03:15		7	78			2	61				
03:30		7	79			4	80				
03:45		5	60	24	273	3	75	11	286	35	559
04:00		5	54			0	56				
04:15		2	72			6	65				
04:30		4	62			2	46				
04:45		4	74	15	262	3	53	11	220	26	482
05:00		2	67			3	56				
05:15		3	74			3	60				
05:30		3	68			6	64				
05:45		6	60	14	269	18	52	30	232	44	501
06:00		10	47			10	74				
06:15		5	79			15	44				
06:30		7	68			16	64				
06:45		10	57	32	251	28	78	69	260	101	511
07:00		10	64			45	68				
07:15		12	67			102	61				
07:30		14	90			80	38				
07:45		8	122	44	343	37	45	264	212	308	555
08:00		9	100			26	40				
08:15		19	76			26	28				
08:30		20	60			24	34				
08:45		14	35	62	271	36	38	112	140	174	411
09:00		22	51			32	34				
09:15		76	72			32	34				
09:30		106	50			52	34				
09:45		42	57	246	230	48	24	164	126	410	356
10:00		26	54			42	25				
10:15		23	44			52	23				
10:30		27	58			58	18				
10:45		22	45	98	201	60	18	212	84	310	285
11:00		30	58			66	16				
11:15		32	34			66	17				
11:30		30	29			94	12				
11:45		46	35	138	156	106	19	332	64	470	220
Total		784	2945			1240	2595			2024	5540
Percent		21.0%	79.0%			32.3%	67.7%			26.8%	73.2%

Accurate Counts
978-664-2565

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

69640001

Start Time	6/7/2019 Fri	Out		Hour Totals		In		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		32	58			4	95				
12:15		30	62			2	92				
12:30		34	51			6	91				
12:45		20	65	116	236	6	93	18	371	134	607
01:00		16	56			6	64				
01:15		17	66			3	88				
01:30		14	67			3	112				
01:45		15	68	62	257	7	86	19	350	81	607
02:00		14	86			5	115				
02:15		11	88			3	80				
02:30		7	58			5	78				
02:45		3	70	35	302	0	82	13	355	48	657
03:00		5	82			1	80				
03:15		9	80			2	82				
03:30		3	80			6	94				
03:45		6	74	23	316	5	93	14	349	37	665
04:00		1	62			4	82				
04:15		6	86			6	76				
04:30		7	81			0	76				
04:45		3	66	17	295	1	91	11	325	28	620
05:00		1	82			5	82				
05:15		2	72			3	93				
05:30		2	80			8	81				
05:45		4	86	9	320	19	97	35	353	44	673
06:00		6	88			8	68				
06:15		10	92			13	106				
06:30		10	89			18	72				
06:45		6	80	32	349	27	90	66	336	98	685
07:00		10	84			17	79				
07:15		10	92			26	87				
07:30		17	83			24	88				
07:45		12	104	49	363	23	77	90	331	139	694
08:00		21	114			32	79				
08:15		28	106			30	82				
08:30		26	74			38	86				
08:45		11	64	86	358	42	69	142	316	228	674
09:00		20	76			32	52				
09:15		18	71			44	50				
09:30		16	71			50	51				
09:45		22	65	76	283	54	51	180	204	256	487
10:00		19	84			61	43				
10:15		26	104			69	31				
10:30		46	91			85	36				
10:45		39	78	130	357	98	30	313	140	443	497
11:00		31	79			76	31				
11:15		66	77			87	29				
11:30		48	62			104	36				
11:45		46	68	191	286	98	19	365	115	556	401
Total		826	3722			1266	3545			2092	7267
Percent		18.2%	81.8%			26.3%	73.7%			22.4%	77.6%

Accurate Counts
978-664-2565

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

69640001

Start Time	6/8/2019 Sat	Out		Hour Totals		In		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		86	45			9	82				
12:15		59	50			8	76				
12:30		47	34			13	75				
12:45		33	46	225	175	5	72	35	305	260	480
01:00		33	53			1	82				
01:15		21	60			5	76				
01:30		37	48			5	75				
01:45		27	66	118	227	4	84	15	317	133	544
02:00		34	74			3	84				
02:15		24	60			2	91				
02:30		16	62			6	82				
02:45		15	67	89	263	0	106	11	363	100	626
03:00		10	71			4	88				
03:15		16	73			4	96				
03:30		10	92			6	88				
03:45		10	82	46	318	2	98	16	370	62	688
04:00		9	75			3	75				
04:15		10	100			1	69				
04:30		6	82			5	100				
04:45		6	64	31	321	4	91	13	335	44	656
05:00		1	94			3	88				
05:15		4	62			7	87				
05:30		4	72			8	88				
05:45		10	85	19	313	12	92	30	355	49	668
06:00		12	81			8	76				
06:15		10	58			15	77				
06:30		8	42			18	58				
06:45		7	118	37	299	20	65	61	276	98	575
07:00		13	90			18	70				
07:15		5	86			15	52				
07:30		20	101			11	78				
07:45		9	72	47	349	20	51	64	251	111	600
08:00		9	60			20	55				
08:15		17	76			25	62				
08:30		13	81			28	58				
08:45		12	66	51	283	32	48	105	223	156	506
09:00		23	71			36	57				
09:15		17	70			45	48				
09:30		28	64			53	44				
09:45		24	72	92	277	64	43	198	192	290	469
10:00		26	85			71	40				
10:15		40	67			68	40				
10:30		36	59			88	33				
10:45		53	72	155	283	74	34	301	147	456	430
11:00		45	64			96	24				
11:15		48	69			90	17				
11:30		52	68			74	23				
11:45		61	53	206	254	98	26	358	90	564	344
Total		1116	3362			1207	3224			2323	6586
Percent		24.9%	75.1%			27.2%	72.8%			26.1%	73.9%

Accurate Counts
978-664-2565

69640001

Location : Plainridge Park Casino
Location : East of Route 1
City/State: Plainville, MA

Start Time	6/3/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In
12:00 AM	63	18	73	16	55	13	116	18	225	35	218	49	116	23		
01:00	47	12	55	7	41	16	62	19	118	15	124	18	70	14		
02:00	27	9	27	11	15	6	35	13	89	11	67	8	42	9		
03:00	24	19	26	8	24	11	23	14	46	16	40	8	28	13		
04:00	22	10	15	8	15	11	17	11	31	13	29	7	21	10		
05:00	14	35	8	24	14	30	9	35	19	30	29	36	16	30		
06:00	38	58	33	59	32	69	32	66	37	61	29	67	32	62		
07:00	51	78	35	63	44	264	49	90	47	64	45	75	44	101		
08:00	50	107	53	96	62	112	86	142	51	105	49	103	58	112		
09:00	71	162	48	126	246	164	76	180	92	198	83	148	98	164		
10:00	92	236	72	161	98	212	130	313	155	301	92	174	107	233		
11:00	157	306	105	200	138	332	191	365	206	358	137	238	151	292		
12:00 PM	194	347	128	222	205	360	236	371	175	305	163	301	186	309		
01:00	234	334	167	204	204	329	257	350	227	317	160	316	212	300		
02:00	274	274	211	196	280	282	302	355	263	363	227	328	256	289		
03:00	276	286	200	198	273	286	316	349	318	370	291	282	275	282		
04:00	245	193	208	147	262	220	295	325	321	335	211	211	268	234		
05:00	282	127	191	164	269	232	320	353	313	355	256	146	263	218		
06:00	219	158	166	149	251	260	349	336	299	276	260	159	248	213		
07:00	303	132	152	122	343	212	363	331	349	251	217	147	274	193		
08:00	196	116	160	79	271	140	358	316	283	223	177	96	228	155		
09:00	113	87	125	69	230	126	283	204	277	192	137	75	187	121		
10:00	106	61	127	52	201	84	357	140	283	147	111	65	187	89		
11:00	117	55	90	33	156	64	286	115	254	90	109	35	162	64		
Lane	3215	3220	2475	2414	3729	3835	4548	4811	4478	4431	3365	3092	3529	3530		
Day	6435	5807	4889	7564	8909	9359	8909	6457	7059							
AM Peak	11:00	11:00	11:00	09:00	11:00	11:00	11:00	11:00	00:00	11:00	00:00	11:00	11:00	11:00		
Vol.	157	306	105	246	246	332	191	365	225	358	218	238	151	292		
PM Peak	19:00	12:00	14:00	19:00	19:00	12:00	19:00	12:00	19:00	15:00	16:00	14:00	15:00	12:00		
Vol.	303	347	211	222	343	360	363	371	349	370	315	328	275	309		

Comb. Total 6435 5807 4889 7564 8909 9359 8909 6457 7059

ADT ADT 7,060 AADT 7,060

SEASONAL ADJUSTMENT FACTOR

Massachusetts Highway Department

6248: Monthly Hourly Volume for June 2017

Location ID: **6248** Seasonal Factor Group: **U1-Boston**
 County: **NORFOLK** Daily Factor Group:
 Functional Class: **1** Axle Factor Group: **U1-Boston**
 Location: **INTERSTATE 95, North of I-495 in Foxborough** Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL	
1	1189	739	659	700	1719	5231	6083	7676	8350	6543	5481	5718	5930	6364	7585	8459	8625	8660	7730	5677	4473	3273	2817	2246	121927	
2	1274	851	645	711	1698	5009	6860	8709	7087	6985	5805	5884	6518	7136	8062	9279	8037	7822	7266	5671	4357	3570	3547	2608	125391	
3	1700	1285	1012	778	1006	1909	2996	4312	5108	5702	6412	7218	7328	7470	7755	7898	7925	8017	6978	5682	4724	4399	4374	3872	115860	
4	2700	1461	1069	777	634	990	1721	2593	3439	4767	6062	6971	7640	7243	7314	7482	7339	6982	6583	5153	4103	3013	2405	1646	100087	
5	1054	680	523	612	1645	4570	5622	8347	7971	6181	5357	5521	5466	5817	7274	7815	8150	8615	6325	5593	3532	2732	2091	1492	112985	
6																										
7	1058	736	552	641	1735	5300	7563	8880	8052	6486	5525	5529	5691	6066	7498	8486	8619	8714	7751	5722	4178	3521	2638	2164	123105	
8	1258	845	632	723	1793	5425	7220	9061	8228	6506	5776	5594	5771	6330	7321	8332	8862	8653	7766	5558	4378	3675	2631	1960	124298	
9	1304	847	614	705	1696	5054	7269	8506	7586	6361	5481	6586	6671	6983	8446	8009	8405	8424	7776	6514	4612	3966	3909	3636	129360	
10	2661	1433	938	790	956	1856	2949	4433	5502	6087	6644	6911	7234	7407	7529	7550	7804	7210	6833	5543	4656	4826	5046	3728	116526	
11	2283	1306	1051	755	672	979	1560	2589	3709	4797	6022	6788	7346	7061	6846	6688	7242	6810	6894	5717	4921	3953	2978	2728	101695	
12	1384	918	576	711	1740	5072	7306	8515	8153	6337	5607	5558	5852	5843	7181	8043	8402	8908	7040	5107	3932	3123	2293	1752	119353	
13	1369	838	691	737	1738	5260	7028	9107	8791	6479	5368	5393	5577	6120	6980	8008	8612	8218	7735	5399	3735	3237	2430	1860	120710	
14	1264	775	601	660	1736	5171	7318	8757	8279	6433	5655	5541	5836	6121	6992	8153	8457	9007	7531	5663	4296	3595	2680	2010	122531	
15	1184	793	651	697	1791	5224	7043	8986	8431	6612	5724	5770	5930	6350	7440	8071	8393	8848	7647	5845	4418	3751	2834	2055	124488	
16	1280	929	672	683	1517	3134	5958	7777	7252	6258	6270	6377	6931	7820	7332	7013	7339	7013	5918	4463	3924	3508	3260	2660	118853	
17	2040	1114	933	798	934	1697	2732	4134	4972	5631	6729	7165	7905	8025	8422	8426	7913	7561	6915	5731	4791	4913	5106	3915	118502	
18	2357	1411	1180	890	704	955	1642	2477	3315	4716	6279	7656	7804	7496	7512	7524	7222	7079	6820	6145	5336	4185	2929	2152	105786	
19	1279	824	616	689	1750	5188	7519	8774	8264	6342	5603	5595	5841	6097	7089	8198	8414	8585	7383	5115	3878	2908	2425	1789	120165	
20	1024	726	565	577	1743	4758	6516	8234	8320	6338	5632	5856	5830	5779	6077	6783	8036	8456	7450	5558	4084	3380	2646	1857	116365	
21	1089	742	577	694	1833	5527	7537	8625	8333	6616	5759	5922	6082	6175	7336	8332	8735	9021	8001	5765	4379	3531	3115	2266	125992	
22	1396	920	670	674	1776	5097	7221	8687	8305	6594	6062	5949	6098	6277	7266	8374	8710	8997	7680	5948	4485	3783	2896	2223	126088	
23	1344	909	683	762	1773	5036	6986	7971	7409	6334	6348	6891	7101	7570	8372	8731	8746	8591	7287	5682	4430	3687	3368	2925	128936	
24	1857	1184	1005	780	992	1972	2892	4015	4720	5343	6068	6915	7340	7528	7779	7903	7926	7538	6504	5488	4771	4411	4672	4387	113990	
25	3051	1587	1083	726	693	1008	1629	2563	3804	5010	6456	7349	7354	6990	7059	7207	6968	6970	7294	5879	5034	4337	3319	2941	106311	
26	2365	1343	679	729	1782	5264	7363	8579	8237	6481	5966	5823	5918	6056	6899	7556	8592	8990	7319	5323	4002	3402	2419	2034	123121	
27	1110	697	565	662	1838	5371	7373	8705	8393	6577	5564	5595	5934	6105	7142	8334	8603	7610	7200	5314	4164	3359	2688	1834	120637	
28	1379	835	621	668	1761	5206	7059	8865	8043	6773	6212	6009	6050	6439	7290	8115	8580	8536	7619	5855	4539	3562	3006	2531	125553	
29	1379	822	654	716	1839	5425	7386	8847	8475	6856	6089	6079	6368	6559	7533	8741	9271	9373	7847	5944	4756	3724	3020	2291	129994	
30	1416	885	666	805	1801	5041	6776	7808	7573	6436	6402	6486	6987	7414	8070	7089	7178	7315	6772	5913	4522	3892	3218	2593	123058	

Monthly Average = 119367.8

Yearly Average = 109256

Adjustment Factor = 0.915

2015 BASELINE TRAFFIC-VOLUME NETWORKS

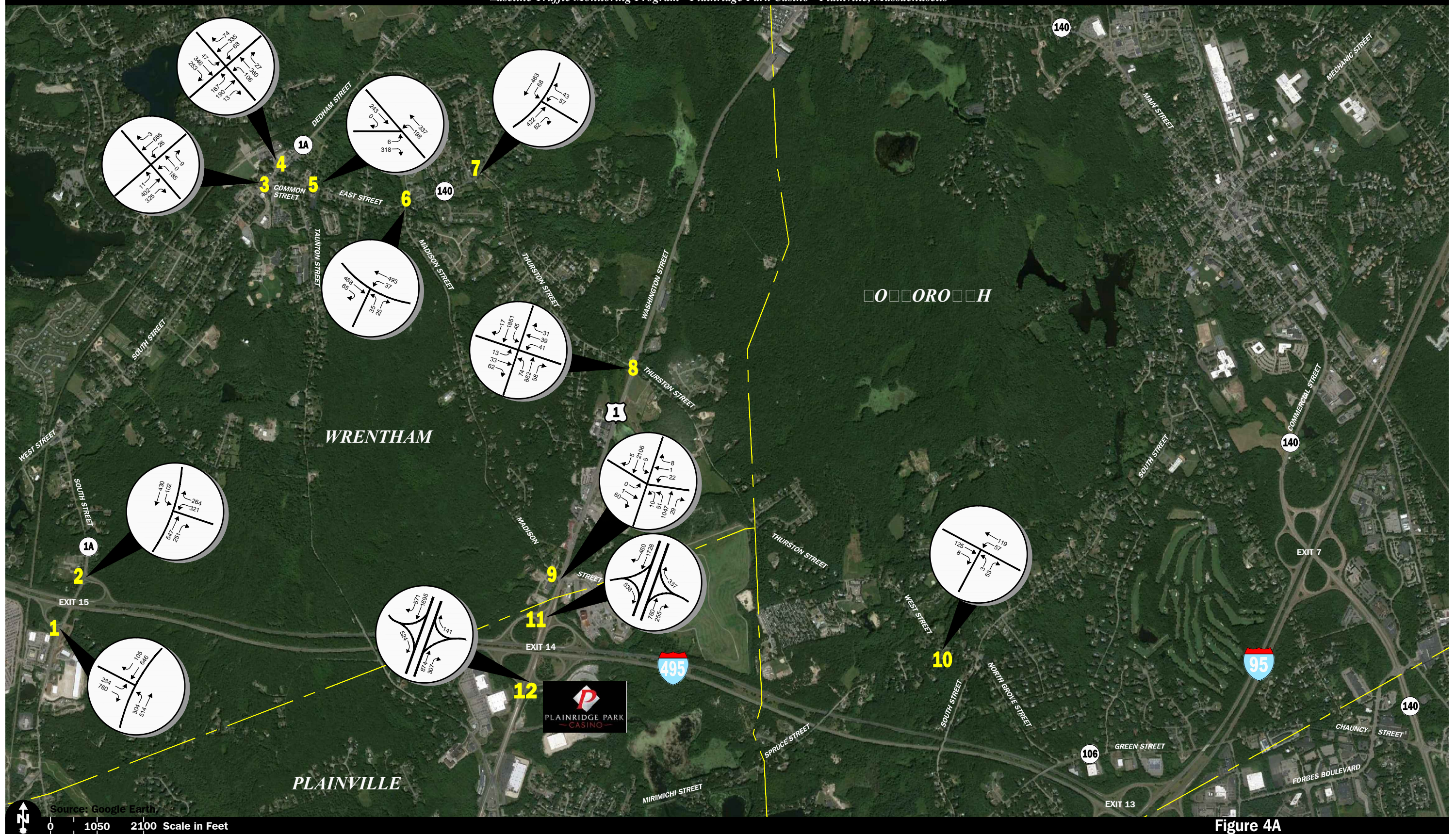


Figure 4A
 2015 Baseline
 Friday Evening
 Peak Hour Traffic Volumes
 Average-Month Conditions

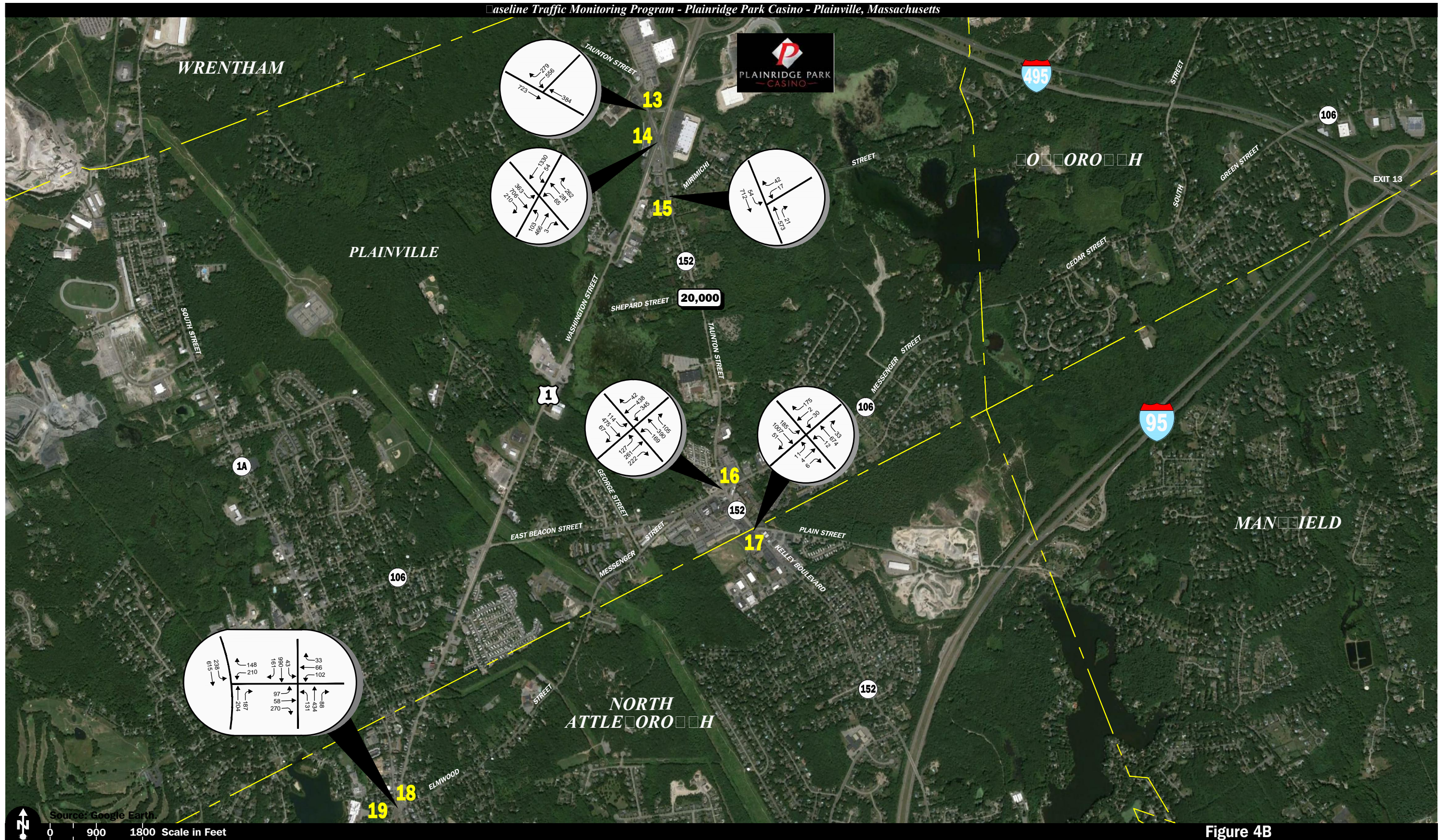


Figure 4B
 2015 Baseline
 Friday Evening
 Peak Hour Traffic Volumes
 Average-Month Conditions

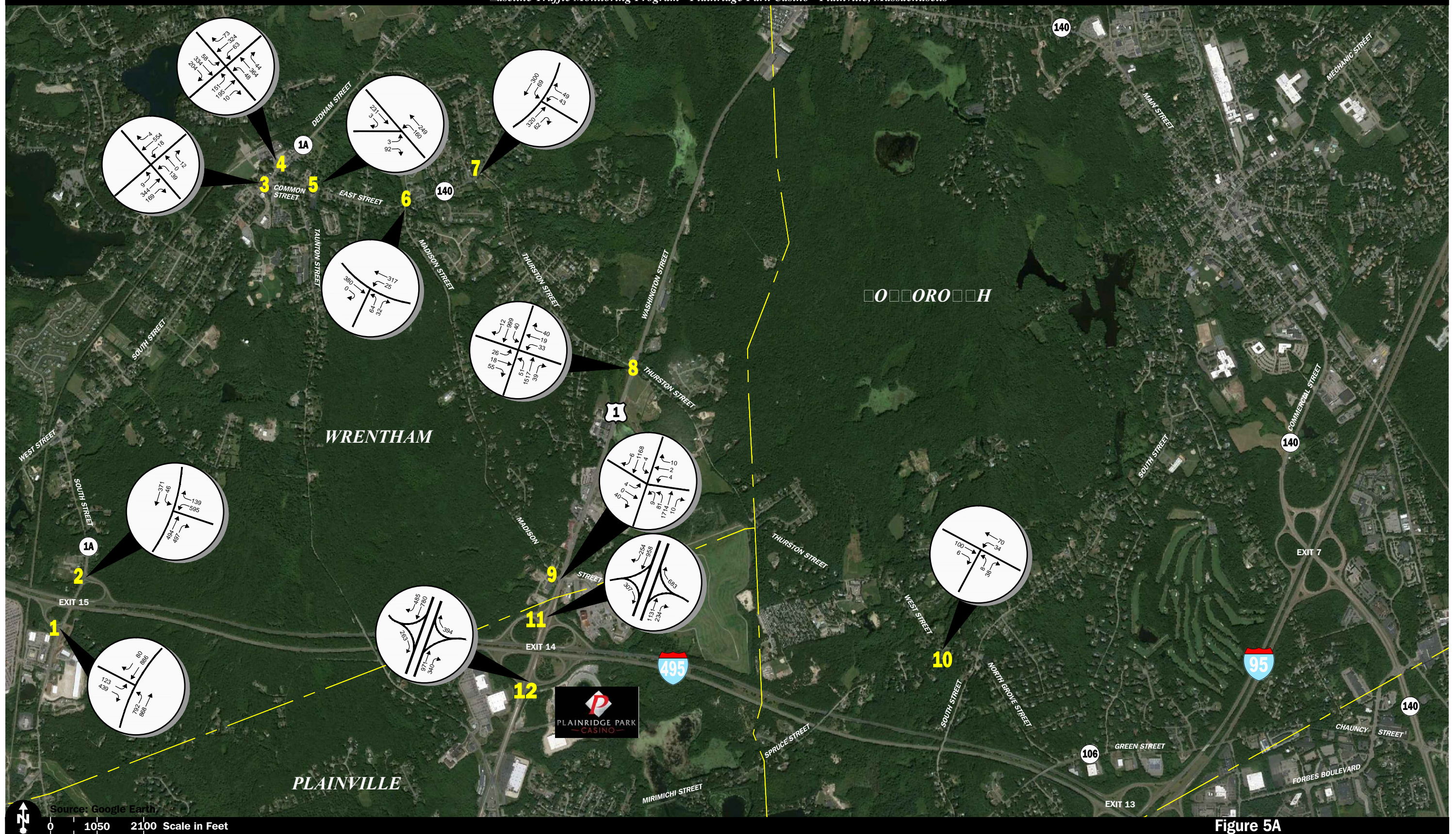


Figure 5A
 2015 Baseline
 Saturday Afternoon
 Peak Hour Traffic Volumes
 Average-Month Conditions

R:\6064\6064m12.dwg, 5/8/2015, 3:21:31 PM

MASSDOT CRASH RATE WORKSHEETS AND HIGH CRASH LOCATION MAPPING

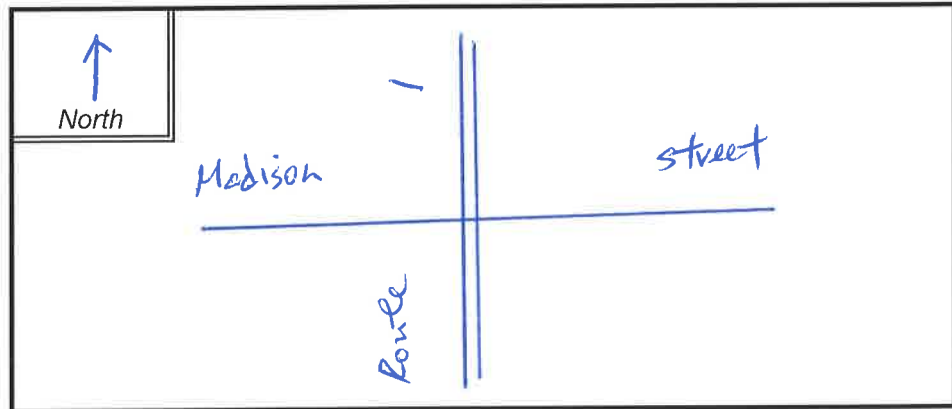
INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wrentham COUNT DATE : Jun-19
 DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Route 1
 MINOR STREET(S) : Madison Street

**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 (PM) :	1,351	2,079	100	25		3,555

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

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

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

Comments : Below MassDOT District 5 crash rate

Project Title & Date: 2019 MassDOT Traffic Monitoring Program

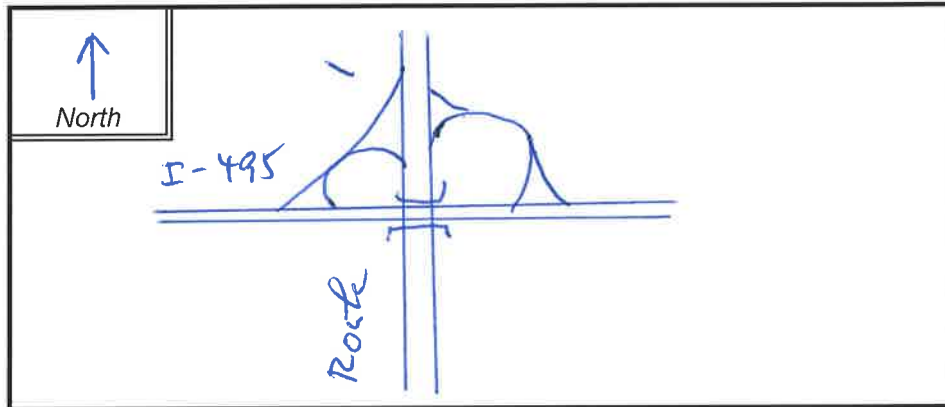
INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Plainville COUNT DATE : Jun-19
 DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Route 1
 MINOR STREET(S) : I-495 NB Ramps

**INTERSECTION
 DIAGRAM**
 (Label Approaches)



PEAK HOUR VOLUMES

	1	2	3	4	5	
APPROACH :						Total Peak Hourly Approach Volume
DIRECTION :	NB	SB	EB	WB		
PEAK HOURLY VOLUMES (PM) :	1,346	2,183	351	371		4,251

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

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

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

Comments : Below MassDOT District 5 crash rate
 Project Title & Date : 2019 MassDOT Traffic Monitoring Program

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Plainville COUNT DATE : Jun-19

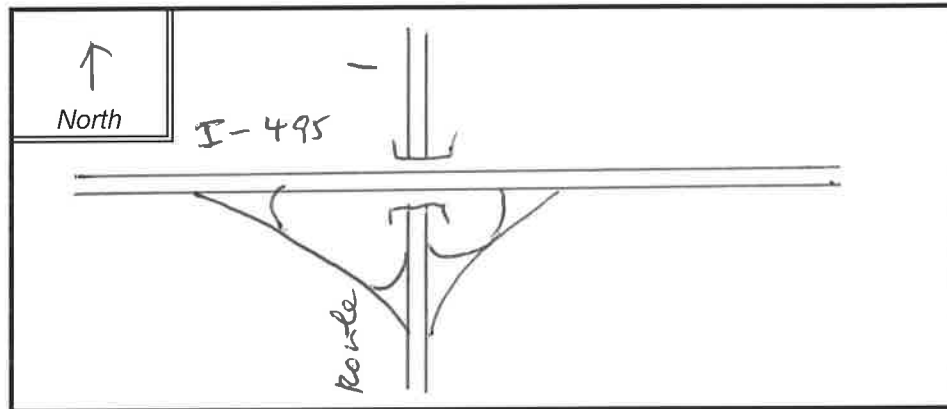
DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Route 1

MINOR STREET(S) : I-495 SB Ramps

**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 (PM) :	1,134	1,883	474	442		3,933

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

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

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

Comments : Below MassDOT District 5 crash rate
 Project Title & Date : 2018 MassDOT Traffic Monitoring Program

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Plainville COUNT DATE : Jun-19

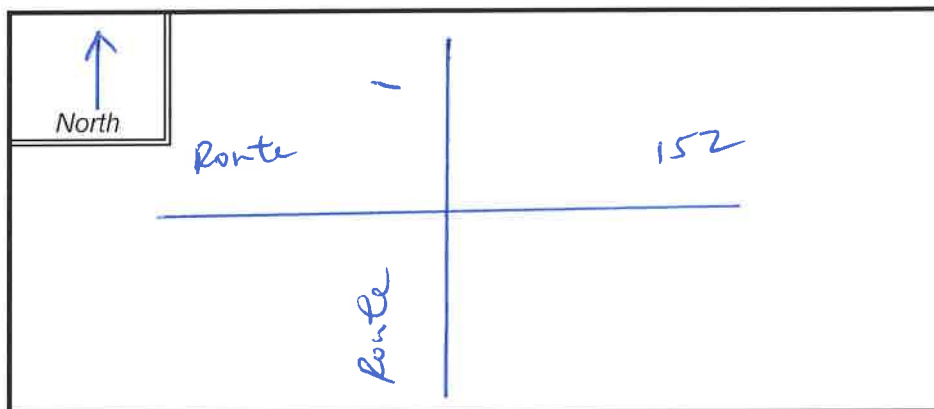
DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Route 1

MINOR STREET(S) : Route 152

**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 (PM) :	625	1,392	665	658		3,340

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

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

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

Comments : Above MassDOT District 5 crash rate

Project Title & Date : 2019 MassDOT Traffic Monitoring Program

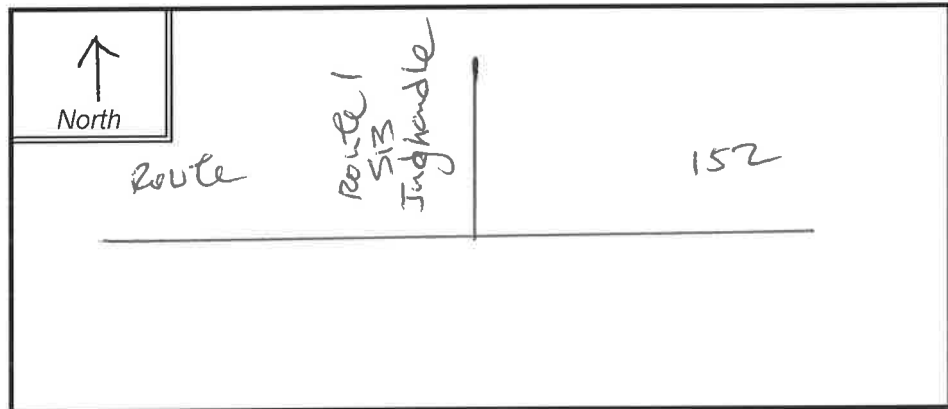
INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Plainville COUNT DATE : Jun-19
 DISTRICT : 5 UNSIGNALIZED : SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Route 152
 MINOR STREET(S) : Route 1 JugHandle

**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 (PM) :		243	649	372		1,264

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

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

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

Comments : Below MassDOT District 5 crash rate

Project Title & Date : 2019 MassDOT Traffic Monitoring Program

Top Crash Locations

Accessible Version

washington street, plainville, ma X Q

Show search results for washington st...

W

State

Forest



Legend

Crash Clusters

Top 200 Intersection Cluster 2014-2016



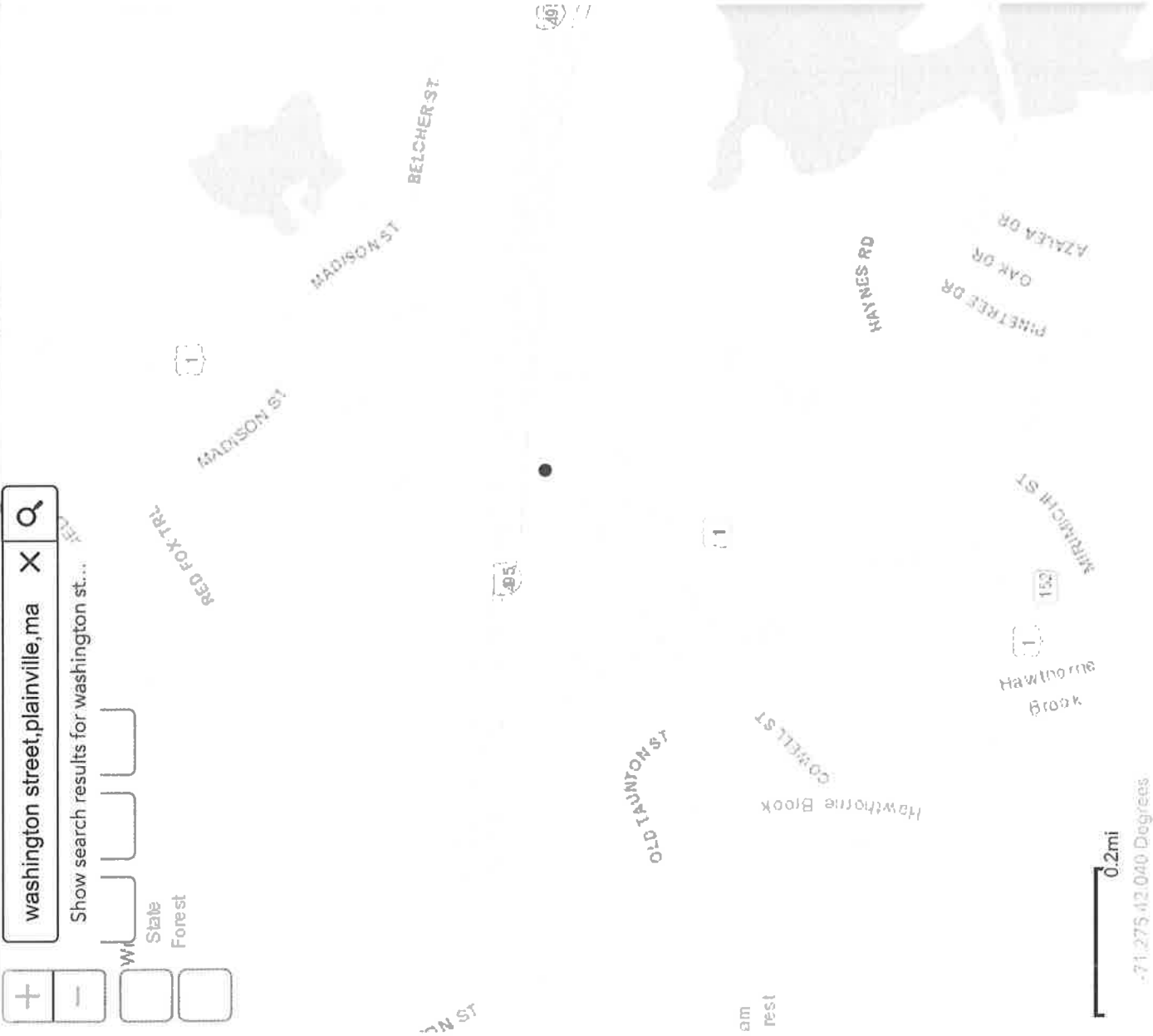
HSIP Cluster 2014-2016



2007-2016 HSIP Bicycle Cluster



2007-2016 HSIP Pedestrian Cluster



0.2mi

-71.275 -72.040 Degrees

CAPACITY ANALYSIS WORKSHEETS

2019 Weekday Evening Peak Hour - Average-Month Conditions

9: Route 1 & Madison Street

09/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	4	1	95	19	1	5	1	69	1272	9	1	5
Future Volume (vph)	4	1	95	19	1	5	1	69	1272	9	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	11	12	16	12	12	12	12	12	12	10
Storage Length (ft)	0		150	0		0		425		0		150
Storage Lanes	0		1	0		0		1		0		1
Taper Length (ft)	25			25				25				25
Satd. Flow (prot)	0	1702	1561	0	2020	0	0	1805	3566	0	0	1685
Flt Permitted		0.814			0.774			0.950				0.950
Satd. Flow (perm)	0	1443	1561	0	1623	0	0	1805	3566	0	0	1685
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			42		9				1			
Link Speed (mph)		30			30				30			
Link Distance (ft)		717			424				774			
Travel Time (s)		16.3			9.6				17.6			
Peak Hour Factor	0.85	0.85	0.85	0.54	0.54	0.54	0.96	0.96	0.96	0.96	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	1%	20%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	112	0	46	0	0	73	1334	0	0	6
Turn Type	Perm	NA	pm+ov	Perm	NA		Prot	Prot	NA		Prot	Prot
Protected Phases		4	5!		8		5!	5	2		1	1
Permitted Phases	4		4	8								
Detector Phase	4	4	5	8	8		5	5	2		1	1
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	22.0	22.0	11.5	23.0	23.0		11.5	11.5	22.5		11.0	11.0
Total Split (s)	22.0	22.0	25.0	22.0	22.0		25.0	25.0	55.0		13.0	13.0
Total Split (%)	24.4%	24.4%	27.8%	24.4%	24.4%		27.8%	27.8%	61.1%		14.4%	14.4%
Yellow Time (s)	4.0	4.0	4.5	4.0	4.0		4.5	4.5	5.5		4.5	4.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	1.0		2.5	2.5
Lost Time Adjust (s)		-3.0	-3.5		-3.0			-3.5	-2.5			-3.0
Total Lost Time (s)		4.0	4.0		4.0			4.0	4.0			4.0
Lead/Lag			Lead				Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?			Yes				Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None		None	None	C-Max		None	None
Act Effct Green (s)		10.4	21.9		10.6			12.5	75.4			9.0
Actuated g/C Ratio		0.12	0.24		0.12			0.14	0.84			0.10
v/c Ratio		0.04	0.27		0.23			0.29	0.45			0.04
Control Delay		34.4	16.5		32.7			47.5	4.5			36.8
Queue Delay		0.0	0.0		0.0			0.0	0.0			0.0
Total Delay		34.4	16.5		32.7			47.5	4.5			36.8
LOS		C	B		C			D	A			D
Approach Delay		17.4			32.7				6.7			
Approach LOS		B			C				A			
Queue Length 50th (ft)		3	29		19			44	63			3
Queue Length 95th (ft)		13	58		28			78	368			15
Internal Link Dist (ft)		637			344				694			
Turn Bay Length (ft)			150					425				150

2019 Weekday Evening Peak Hour - Average-Month Conditions
 9: Route 1 & Madison Street

09/16/2019

Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	2068	5
Future Volume (vph)	2068	5
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	10
Storage Length (ft)		425
Storage Lanes		1
Taper Length (ft)		
Satd. Flow (prot)	3574	1507
Flt Permitted		
Satd. Flow (perm)	3574	1507
Right Turn on Red		Yes
Satd. Flow (RTOR)		224
Link Speed (mph)	30	
Link Distance (ft)	566	
Travel Time (s)	12.9	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	1%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2177	5
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	22.5	22.5
Total Split (s)	43.0	43.0
Total Split (%)	47.8%	47.8%
Yellow Time (s)	5.5	5.5
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	-2.5	-2.5
Total Lost Time (s)	4.0	4.0
Lead/Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes
Recall Mode	C-Max	C-Max
Act Effct Green (s)	60.1	60.1
Actuated g/C Ratio	0.67	0.67
v/c Ratio	0.91	0.00
Control Delay	23.5	0.0
Queue Delay	8.9	0.0
Total Delay	32.4	0.0
LOS	C	A
Approach Delay	32.4	
Approach LOS	C	
Queue Length 50th (ft)	589	0
Queue Length 95th (ft)	#895	0
Internal Link Dist (ft)	486	
Turn Bay Length (ft)		425

2019 Weekday Evening Peak Hour - Average-Month Conditions
 9: Route 1 & Madison Street

09/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Base Capacity (vph)		288	555		331			421	2987			172
Starvation Cap Reductn		0	0		0			0	0			0
Spillback Cap Reductn		0	0		0			0	0			0
Storage Cap Reductn		0	0		0			0	0			0
Reduced v/c Ratio		0.02	0.20		0.14			0.17	0.45			0.03

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 22.3
 Intersection Capacity Utilization 77.4%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 ! Phase conflict between lane groups.

Splits and Phases: 9: Route 1 & Madison Street

Ø1 13 s	Ø2 (R) 55 s		Ø4 22 s
Ø5 25 s	Ø6 (R) 43 s		Ø8 22 s

2019 Weekday Evening Peak Hour - Average-Month Conditions

9: Route 1 & Madison Street

09/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations		↕	↗		↕			↖	↕↖			↘
Traffic Volume (vph)	4	1	95	19	1	5	1	69	1272	9	1	5
Future Volume (vph)	4	1	95	19	1	5	1	69	1272	9	1	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	11	12	16	12	12	12	12	12	12	10
Total Lost time (s)		4.0	4.0		4.0			4.0	4.0			4.0
Lane Util. Factor		1.00	1.00		1.00			1.00	0.95			1.00
Fr _t		1.00	0.85		0.97			1.00	1.00			1.00
Fl _t Protected		0.96	1.00		0.96			0.95	1.00			0.95
Satd. Flow (prot)		1702	1561		2020			1805	3566			1685
Fl _t Permitted		0.81	1.00		0.77			0.95	1.00			0.95
Satd. Flow (perm)		1443	1561		1622			1805	3566			1685
Peak-hour factor, PHF	0.85	0.85	0.85	0.54	0.54	0.54	0.96	0.96	0.96	0.96	0.95	0.95
Adj. Flow (vph)	5	1	112	35	2	9	1	72	1325	9	1	5
RTOR Reduction (vph)	0	0	32	0	8	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	6	80	0	38	0	0	73	1334	0	0	6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	1%	20%	0%	0%
Turn Type	Perm	NA	pm+ov	Perm	NA		Prot	Prot	NA		Prot	Prot
Protected Phases		4	5!		8		5!	5	2		1	1
Permitted Phases	4		4	8								
Actuated Green, G (s)		5.2	14.2		5.2			9.0	62.9			1.4
Effective Green, g (s)		8.2	21.2		8.2			12.5	65.4			4.4
Actuated g/C Ratio		0.09	0.24		0.09			0.14	0.73			0.05
Clearance Time (s)		7.0	7.5		7.0			7.5	6.5			7.0
Vehicle Extension (s)		3.0	3.0		3.0			3.0	3.0			3.0
Lane Grp Cap (vph)		131	367		147			250	2591			82
v/s Ratio Prot			0.03					c0.04	c0.37			0.00
v/s Ratio Perm		0.00	0.02		c0.02							
v/c Ratio		0.05	0.22		0.26			0.29	0.51			0.07
Uniform Delay, d1		37.3	27.7		38.1			34.8	5.4			40.9
Progression Factor		1.00	1.00		1.00			1.32	0.91			1.00
Incremental Delay, d2		0.1	0.3		0.9			0.6	0.7			0.4
Delay (s)		37.5	28.0		39.0			46.3	5.5			41.2
Level of Service		D	C		D			D	A			D
Approach Delay (s)		28.5			39.0				7.7			
Approach LOS		C			D				A			

Intersection Summary		
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.83	
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	77.4%	ICU Level of Service
Analysis Period (min)	15	

! Phase conflict between lane groups.
c Critical Lane Group





















2019 Weekday Evening Peak Hour - Average-Month Conditions
 9: Route 1 & Madison Street

09/16/2019

Movement	↓	↙
	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	2068	5
Future Volume (vph)	2068	5
Ideal Flow (vphpl)	1900	1900
Lane Width	12	10
Total Lost time (s)	4.0	4.0
Lane Util. Factor	0.95	1.00
Fr _t	1.00	0.85
Fl _t Protected	1.00	1.00
Satd. Flow (prot)	3574	1507
Fl _t Permitted	1.00	1.00
Satd. Flow (perm)	3574	1507
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	2177	5
RTOR Reduction (vph)	0	2
Lane Group Flow (vph)	2177	3
Heavy Vehicles (%)	1%	0%
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	54.8	54.8
Effective Green, g (s)	57.3	57.3
Actuated g/C Ratio	0.64	0.64
Clearance Time (s)	6.5	6.5
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	2275	959
v/s Ratio Prot	c0.61	
v/s Ratio Perm		0.00
v/c Ratio	0.96	0.00
Uniform Delay, d ₁	15.2	6.0
Progression Factor	1.00	1.00
Incremental Delay, d ₂	11.2	0.0
Delay (s)	26.4	6.0
Level of Service	C	A
Approach Delay (s)	26.4	
Approach LOS	C	
Intersection Summary		

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 9: Route 1 & Madison Street

09/16/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	32	6	0	5	89	969	10	3	1129	8
Future Volume (vph)	4	1	32	6	0	5	89	969	10	3	1129	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	11	12	16	12	12	12	12	10	12	10
Storage Length (ft)	0		150	0		0	425		0	150		425
Storage Lanes	0		1	0		0	1		0	1		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)		733			424			764			516	
Travel Time (s)		16.7			9.6			17.4			11.7	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.93	0.93	0.93	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	43	0	15	0	96	1053	0	3	1254	9
Turn Type	Perm	NA	pm+ov	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4	5		8		5	2		1	6	
Permitted Phases	4		4	8								6
Detector Phase	4	4	5	8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	23.0	23.0	11.5	23.0	23.0		11.5	22.5		11.0	22.5	22.5
Total Split (s)	23.0	23.0	17.0	23.0	23.0		17.0	66.0		11.0	60.0	60.0
Total Split (%)	23.0%	23.0%	17.0%	23.0%	23.0%		17.0%	66.0%		11.0%	60.0%	60.0%
Yellow Time (s)	4.0	4.0	4.5	4.0	4.0		4.5	5.5		4.5	5.5	5.5
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	1.0		2.5	1.0	1.0
Lost Time Adjust (s)		-4.0	-3.5		-3.0		-3.5	-2.5		-3.0	-2.5	-2.5
Total Lost Time (s)		3.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag			Lead				Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?			Yes				Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max		None	C-Max	C-Max
v/c Ratio		0.05	0.13		0.06		0.38	0.33		0.02	0.46	0.01
Control Delay		41.2	8.5		0.5		48.5	1.9		41.7	7.7	0.0
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.4	0.0
Total Delay		41.2	8.5		0.5		48.5	1.9		41.7	8.1	0.0
Queue Length 50th (ft)		4	0		0		59	0		2	113	0
Queue Length 95th (ft)		14	17		0		113	105		11	302	0
Internal Link Dist (ft)		653			344			684			436	
Turn Bay Length (ft)			150				425			150		425
Base Capacity (vph)		266	350		411		267	3220		147	2718	1175
Starvation Cap Reductn		0	0		0		0	0		0	851	0
Spillback Cap Reductn		0	0		0		0	0		0	0	0
Storage Cap Reductn		0	0		0		0	0		0	0	0
Reduced v/c Ratio		0.02	0.12		0.04		0.36	0.33		0.02	0.67	0.01

Intersection Summary

Area Type: Other

Cycle Length: 100







Actuated Cycle Length: 100

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 9: Route 1 & Madison Street

09/16/2019

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Route 1 & Madison Street

 Ø1	 Ø2 (R)	 Ø4
11 s	66 s	23 s
 Ø5	 Ø6 (R)	 Ø8
17 s	60 s	23 s

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 9: Route 1 & Madison Street

09/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	1	32	6	0	5	89	969	10	3	1129	8
Future Volume (vph)	4	1	32	6	0	5	89	969	10	3	1129	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	10	11	12	16	12	12	12	12	10	12	10
Total Lost time (s)		3.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frt		1.00	0.85		0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected		0.96	1.00		0.97		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1702	1561		1965		1805	3569		1685	3574	1507
Flt Permitted		0.75	1.00		0.83		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1332	1561		1675		1805	3569		1685	3574	1507
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.93	0.93	0.93	0.90	0.90	0.90
Adj. Flow (vph)	5	1	43	8	0	7	96	1042	11	3	1254	9
RTOR Reduction (vph)	0	0	35	0	14	0	0	0	0	0	0	3
Lane Group Flow (vph)	0	6	8	0	1	0	96	1053	0	3	1254	6
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Perm	NA	pm+ov	Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4	5		8		5	2		1	6	
Permitted Phases	4		4	8								6
Actuated Green, G (s)		2.7	12.0		2.7		9.3	75.5		1.3	67.0	67.0
Effective Green, g (s)		6.7	19.0		5.7		12.8	78.0		4.3	69.5	69.5
Actuated g/C Ratio		0.07	0.19		0.06		0.13	0.78		0.04	0.70	0.70
Clearance Time (s)		7.0	7.5		7.0		7.5	6.5		7.0	6.5	6.5
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		89	296		95		231	2783		72	2483	1047
v/s Ratio Prot			0.00				c0.05	0.29		0.00	c0.35	
v/s Ratio Perm		c0.00	0.00		0.00							0.00
v/c Ratio		0.07	0.03		0.01		0.42	0.38		0.04	0.51	0.01
Uniform Delay, d1		43.7	33.0		44.5		40.2	3.4		45.9	7.2	4.7
Progression Factor		1.00	1.00		1.00		1.16	0.68		1.00	1.00	1.00
Incremental Delay, d2		0.3	0.0		0.0		1.2	0.4		0.2	0.7	0.0
Delay (s)		44.0	33.0		44.5		47.8	2.7		46.1	7.9	4.7
Level of Service		D	C		D		D	A		D	A	A
Approach Delay (s)		34.4			44.5			6.5			8.0	
Approach LOS		C			D			A			A	

Intersection Summary

HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

2019 Weekday Evening Peak Hour - Average-Month Conditions
 33: Route 1 & I-495 NB Off Ramp

09/16/2019

	↙	↖	↑	↗	↘	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø6
Lane Configurations		??	??			??	
Traffic Volume (vph)	0	351	1000	0	0	1512	
Future Volume (vph)	0	351	1000	0	0	1512	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	0	2787	3539	0	0	3539	
Flt Permitted							
Satd. Flow (perm)	0	2787	3539	0	0	3539	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		182					
Link Speed (mph)	30		30			30	
Link Distance (ft)	484		529			774	
Travel Time (s)	11.0		12.0			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	382	1087	0	0	1643	
Turn Type		Prot	NA			NA	
Protected Phases		3	2			3 6	6
Permitted Phases							
Detector Phase		3	2			3 6	
Switch Phase							
Minimum Initial (s)		4.0	4.0				4.0
Minimum Split (s)		9.0	22.5				20.0
Total Split (s)		31.0	59.0				59.0
Total Split (%)		34.4%	65.6%				66%
Yellow Time (s)		3.5	5.5				3.5
All-Red Time (s)		1.5	1.0				0.5
Lost Time Adjust (s)		-1.0	-2.5				
Total Lost Time (s)		4.0	4.0				
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode		None	C-Max				C-Max
Act Effct Green (s)		26.1	55.9			90.0	
Actuated g/C Ratio		0.29	0.62			1.00	
v/c Ratio		0.41	0.49			0.46	
Control Delay		14.2	10.5			0.2	
Queue Delay		0.0	0.4			0.0	
Total Delay		14.2	10.8			0.2	
LOS		B	B			A	
Approach Delay	14.2		10.8			0.2	
Approach LOS	B		B			A	
Queue Length 50th (ft)		48	166			0	
Queue Length 95th (ft)		90	214			m0	
Internal Link Dist (ft)	404		449			694	
Turn Bay Length (ft)							
Base Capacity (vph)		963	2198			3536	
Starvation Cap Reductn		0	536			0	
Spillback Cap Reductn		0	0			0	
Storage Cap Reductn		0	0			0	
Reduced v/c Ratio		0.40	0.65			0.46	

2019 Weekday Evening Peak Hour - Average-Month Conditions
 33: Route 1 & I-495 NB Off_Ramp

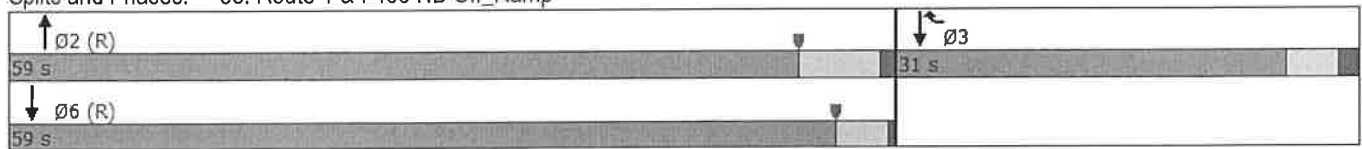
09/16/2019

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 69 (77%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 5.6
 Intersection Capacity Utilization 46.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 33: Route 1 & I-495 NB Off_Ramp



2019 Weekday Evening Peak Hour - Average-Month Conditions
 33: Route 1 & I-495 NB Off Ramp

09/16/2019

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗↗	↑↑			↑↑
Traffic Volume (vph)	0	351	1000	0	0	1512
Future Volume (vph)	0	351	1000	0	0	1512
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			5.0
Lane Util. Factor		0.88	0.95			0.95
Frt		0.85	1.00			1.00
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		2787	3539			3539
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		2787	3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	382	1087	0	0	1643
RTOR Reduction (vph)	0	129	0	0	0	0
Lane Group Flow (vph)	0	253	1087	0	0	1643
Turn Type		Prot	NA			NA
Protected Phases		3	2			3 6
Permitted Phases						
Actuated Green, G (s)		25.1	53.4			90.0
Effective Green, g (s)		26.1	55.9			86.0
Actuated g/C Ratio		0.29	0.62			0.96
Clearance Time (s)		5.0	6.5			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		808	2198			3381
v/s Ratio Prot		0.09	0.31			c0.46
v/s Ratio Perm						
v/c Ratio		0.31	0.49			0.49
Uniform Delay, d1		24.9	9.3			0.2
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		0.2	0.8			0.1
Delay (s)		25.2	10.1			0.2
Level of Service		C	B			A
Approach Delay (s)	25.2		10.1			0.2
Approach LOS	C		B			A
Intersection Summary						
HCM 2000 Control Delay			6.7		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.52			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	9.0
Intersection Capacity Utilization			46.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 33: Route 1 & I-495 NB Orff-Ramp

09/16/2019

	↙	↖	↑	↗	↘	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø6
Lane Configurations		↗↗	↑↑			↑↑	
Traffic Volume (vph)	0	253	815	0	0	795	
Future Volume (vph)	0	253	815	0	0	795	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Right Turn on Red		Yes		Yes			
Link Speed (mph)	30		30			30	
Link Distance (ft)	353		664			764	
Travel Time (s)	8.0		15.1			17.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	275	886	0	0	864	
Turn Type		Prot	NA			NA	
Protected Phases		3	2			3 6	6
Permitted Phases							
Detector Phase		3	2			3 6	
Switch Phase							
Minimum Initial (s)		4.0	4.0				4.0
Minimum Split (s)		9.0	22.5				20.0
Total Split (s)		40.0	60.0				60.0
Total Split (%)		40.0%	60.0%				60%
Yellow Time (s)		3.5	5.5				3.5
All-Red Time (s)		1.5	1.0				0.5
Lost Time Adjust (s)		-1.0	-1.5				
Total Lost Time (s)		4.0	5.0				
Lead/Lag							
Lead-Lag Optimize?							
Recall Mode		None	C-Max				C-Max
v/c Ratio		0.44	0.33			0.24	
Control Delay		9.8	5.0			0.1	
Queue Delay		0.0	0.0			0.0	
Total Delay		9.8	5.0			0.1	
Queue Length 50th (ft)		14	74			0	
Queue Length 95th (ft)		48	151			0	
Internal Link Dist (ft)	273		584			684	
Turn Bay Length (ft)							
Base Capacity (vph)		1149	2664			3539	
Starvation Cap Reductn		0	0			0	
Spillback Cap Reductn		0	0			0	
Storage Cap Reductn		0	0			0	
Reduced v/c Ratio		0.24	0.33			0.24	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 96 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
33: Route 1 & I-495 NB Orff-Ramp

09/16/2019

Splits and Phases: 33: Route 1 & I-495 NB Orff-Ramp

↑ Ø2 (R) 60 s	↓ Ø3 40 s
↓ Ø6 (R) 60 s	

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 33: Route 1 & I-495 NB Orff-Ramp














09/16/2019

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗↗	↖↖			↖↖
Traffic Volume (vph)	0	253	815	0	0	795
Future Volume (vph)	0	253	815	0	0	795
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	5.0			5.0
Lane Util. Factor		0.88	0.95			0.95
Fr _t		0.85	1.00			1.00
Fl _t Protected		1.00	1.00			1.00
Satd. Flow (prot)		2787	3539			3539
Fl _t Permitted		1.00	1.00			1.00
Satd. Flow (perm)		2787	3539			3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	275	886	0	0	864
RTOR Reduction (vph)	0	193	0	0	0	0
Lane Group Flow (vph)	0	82	886	0	0	864
Turn Type		Prot	NA			NA
Protected Phases		3	2			3 6
Permitted Phases						
Actuated Green, G (s)		14.7	73.8			100.0
Effective Green, g (s)		15.7	75.3			96.0
Actuated g/C Ratio		0.16	0.75			0.96
Clearance Time (s)		5.0	6.5			
Vehicle Extension (s)		3.0	3.0			
Lane Grp Cap (vph)		437	2664			3397
v/s Ratio Prot		0.03	c0.25			c0.24
v/s Ratio Perm						
v/c Ratio		0.19	0.33			0.25
Uniform Delay, d ₁		36.6	4.1			0.1
Progression Factor		1.00	1.00			1.00
Incremental Delay, d ₂		0.2	0.3			0.0
Delay (s)		36.8	4.4			0.1
Level of Service		D	A			A
Approach Delay (s)	36.8		4.4			0.1
Approach LOS	D		A			A

Intersection Summary				
HCM 2000 Control Delay		7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio		0.33		
Actuated Cycle Length (s)		100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization		38.9%	ICU Level of Service	A
Analysis Period (min)		15		
c Critical Lane Group				







2019 Weekday Evening Peak Hour - Average-Month Conditions
 12: Route 1 & I-495 SB Off-Ramp

08/08/2019

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		 		 	 	
Traffic Volume (vph)	0	442	0	0	1275	608
Future Volume (vph)	0	442	0	0	1275	608
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			400
Storage Lanes	0	2	0			1
Taper Length (ft)	25		25			
Satd. Flow (prot)	0	2814	0	3539	3574	1599
Flt Permitted						
Satd. Flow (perm)	0	2814	0	3539	3574	1599
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		112				633
Link Speed (mph)	30			30	30	
Link Distance (ft)	773			1072	830	
Travel Time (s)	17.6			24.4	18.9	
Peak Hour Factor	0.83	0.83	0.92	0.92	0.96	0.96
Heavy Vehicles (%)	0%	1%	0%	2%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	533	0	0	1328	633
Turn Type		Prot			NA	Free
Protected Phases		4		2	6	
Permitted Phases		4				Free
Detector Phase		4		2	6	
Switch Phase						
Minimum Initial (s)		4.0		4.0	4.0	
Minimum Split (s)		22.0		22.0	22.0	
Total Split (s)		26.0		54.0	54.0	
Total Split (%)		32.5%		67.5%	67.5%	
Yellow Time (s)		4.0		4.0	4.0	
All-Red Time (s)		2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	
Total Lost Time (s)		4.0		4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		None		C-Max	C-Max	
Act Effct Green (s)		18.9			53.1	80.0
Actuated g/C Ratio		0.24			0.66	1.00
v/c Ratio		0.71			0.56	0.40
Control Delay		27.2			8.8	0.7
Queue Delay		0.0			0.0	0.0
Total Delay		27.2			8.8	0.7
LOS		C			A	A
Approach Delay	27.2				6.2	
Approach LOS	C				A	
Queue Length 50th (ft)		108			166	0
Queue Length 95th (ft)		141			242	0
Internal Link Dist (ft)	693			992	750	
Turn Bay Length (ft)						400
Base Capacity (vph)		855			2372	1599

2019 Weekday Evening Peak Hour - Average-Month Conditions
 12: Route 1 & I-495 SB Off-Ramp

08/08/2019

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Starvation Cap Reductn		0			0	0
Spillback Cap Reductn		0			0	0
Storage Cap Reductn		0			0	0
Reduced v/c Ratio		0.62			0.56	0.40

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 10.7
 Intersection Capacity Utilization 57.4%
 Analysis Period (min) 15







Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 12: Route 1 & I-495 SB Off-Ramp

↑ Ø2 (R) 54 s	↘ Ø4 26 s
↓ Ø6 (R) 54 s	

2019 Weekday Evening Peak Hour - Average-Month Conditions
 12: Route 1 & I-495 SB Off-Ramp

08/08/2019











						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑↑		↑↑	↑↑	↑
Traffic Volume (vph)	0	442	0	0	1275	608
Future Volume (vph)	0	442	0	0	1275	608
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	2.0
Lane Util. Factor		0.88			0.95	1.00
Frt		0.85			1.00	0.85
Flt Protected		1.00			1.00	1.00
Satd. Flow (prot)		2814			3574	1599
Flt Permitted		1.00			1.00	1.00
Satd. Flow (perm)		2814			3574	1599
Peak-hour factor, PHF	0.83	0.83	0.92	0.92	0.96	0.96
Adj. Flow (vph)	0	533	0	0	1328	633
RTOR Reduction (vph)	0	86	0	0	0	0
Lane Group Flow (vph)	0	447	0	0	1328	633
Heavy Vehicles (%)	0%	1%	0%	2%	1%	1%
Turn Type		Prot			NA	Free
Protected Phases		4		2	6	
Permitted Phases		4				Free
Actuated Green, G (s)		16.9			51.1	80.0
Effective Green, g (s)		18.9			53.1	80.0
Actuated g/C Ratio		0.24			0.66	1.00
Clearance Time (s)		6.0			6.0	
Vehicle Extension (s)		3.0			3.0	
Lane Grp Cap (vph)		664			2372	1599
v/s Ratio Prot		c0.16			c0.37	
v/s Ratio Perm						0.40
v/c Ratio		0.67			0.56	0.40
Uniform Delay, d1		27.8			7.2	0.0
Progression Factor		1.00			1.00	1.00
Incremental Delay, d2		2.7			1.0	0.7
Delay (s)		30.5			8.2	0.7
Level of Service		C			A	A
Approach Delay (s)	30.5			0.0	5.8	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 12: Route 1 & I-495 SB Off-Ramp

08/08/2019

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	370	0	0	887	306
Future Volume (vph)	0	370	0	0	887	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			500
Storage Lanes	0	2	0			1
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			30	30	
Link Distance (ft)	540			1061	1010	
Travel Time (s)	12.3			24.1	23.0	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	411	0	0	944	326
Turn Type		Prot			NA	Free
Protected Phases		4		2	6	
Permitted Phases		4				Free
Detector Phase		4		2	6	
Switch Phase						
Minimum Initial (s)		4.0		4.0	4.0	
Minimum Split (s)		24.0		22.0	22.0	
Total Split (s)		26.0		44.0	44.0	
Total Split (%)		37.1%		62.9%	62.9%	
Yellow Time (s)		4.0		4.0	4.0	
All-Red Time (s)		2.0		2.0	2.0	
Lost Time Adjust (s)		-2.0		-2.0	-2.0	
Total Lost Time (s)		4.0		4.0	4.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode		None		C-Max	C-Max	
v/c Ratio		0.60			0.37	0.20
Control Delay		15.4			5.0	0.3
Queue Delay		0.0			0.0	0.0
Total Delay		15.4			5.0	0.3
Queue Length 50th (ft)		42			68	0
Queue Length 95th (ft)		78			123	0
Internal Link Dist (ft)	460			981	930	
Turn Bay Length (ft)						500
Base Capacity (vph)		1042			2528	1615
Starvation Cap Reductn		0			0	0
Spillback Cap Reductn		0			0	0
Storage Cap Reductn		0			0	0
Reduced v/c Ratio		0.39			0.37	0.20

Intersection Summary

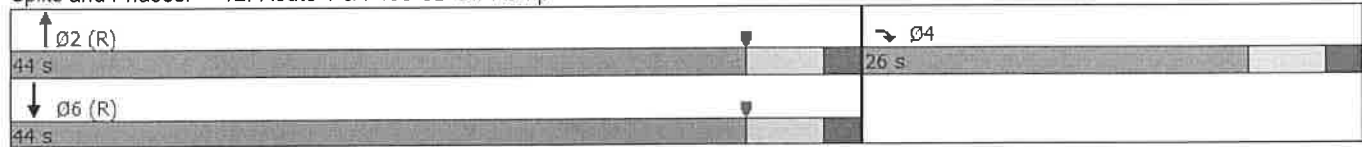
Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
12: Route 1 & I-495 SB Off-Ramp

08/08/2019







Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 12: Route 1 & I-495 SB Off-Ramp















2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 12: Route 1 & I-495 SB Off-Ramp

08/08/2019

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗↗		↑↑	↑↑	↘
Traffic Volume (vph)	0	370	0	0	887	306
Future Volume (vph)	0	370	0	0	887	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	2.0
Lane Util. Factor		0.88			0.95	1.00
Frt		0.85			1.00	0.85
Flt Protected		1.00			1.00	1.00
Satd. Flow (prot)		2842			3574	1615
Flt Permitted		1.00			1.00	1.00
Satd. Flow (perm)		2842			3574	1615
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.94	0.94
Adj. Flow (vph)	0	411	0	0	944	326
RTOR Reduction (vph)	0	178	0	0	0	0
Lane Group Flow (vph)	0	233	0	0	944	326
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%
Turn Type		Prot			NA	Free
Protected Phases		4		2	6	
Permitted Phases		4				Free
Actuated Green, G (s)		10.5			47.5	70.0
Effective Green, g (s)		12.5			49.5	70.0
Actuated g/C Ratio		0.18			0.71	1.00
Clearance Time (s)		6.0			6.0	
Vehicle Extension (s)		3.0			3.0	
Lane Grp Cap (vph)		507			2527	1615
v/s Ratio Prot		c0.08			c0.26	
v/s Ratio Perm						0.20
v/c Ratio		0.46			0.37	0.20
Uniform Delay, d1		25.7			4.1	0.0
Progression Factor		1.00			1.00	1.00
Incremental Delay, d2		0.7			0.4	0.3
Delay (s)		26.4			4.5	0.3
Level of Service		C			A	A
Approach Delay (s)	26.4			0.0	3.4	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			9.0		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.39			
Actuated Cycle Length (s)			70.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			44.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

2019 Weekday Evening Peak Hour - Average-Month Conditions
 20: Route 1 & Plainridge Park Casino Drive

08/08/2019

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	172	962	51	145	1572
Future Volume (vph)	63	172	962	51	145	1572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		275	700	
Storage Lanes	1	2		1	1	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1787	2842	3574	1583	1805	3574
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1787	2842	3574	1583	1805	3574
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		68		54		
Link Speed (mph)	30		30			30
Link Distance (ft)	848		836			1072
Travel Time (s)	19.3		19.0			24.4
Peak Hour Factor	0.96	0.96	0.94	0.94	0.96	0.96
Heavy Vehicles (%)	1%	0%	1%	2%	0%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	179	1023	54	151	1638
Turn Type	Prot	pm+ov	NA	Free	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		Free		
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	22.0	10.0	22.0		10.0	22.0
Total Split (s)	22.0	21.0	37.0		21.0	58.0
Total Split (%)	27.5%	26.3%	46.3%		26.3%	72.5%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max
Act Effct Green (s)	10.3	25.9	46.1	80.0	13.9	64.8
Actuated g/C Ratio	0.13	0.32	0.58	1.00	0.17	0.81
v/c Ratio	0.29	0.19	0.50	0.03	0.48	0.57
Control Delay	33.9	10.1	13.0	0.0	35.3	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	10.1	13.0	0.0	35.3	3.0
LOS	C	B	B	A	D	A
Approach Delay	16.5		12.4			5.7
Approach LOS	B		B			A
Queue Length 50th (ft)	30	21	158	0	71	88
Queue Length 95th (ft)	64	36	261	0	m115	117
Internal Link Dist (ft)	768		756			992
Turn Bay Length (ft)		200		275	700	
Base Capacity (vph)	402	1084	2057	1583	389	2893

2019 Weekday Evening Peak Hour - Average-Month Conditions
 20: Route 1 & Plainridge Park Casino Drive

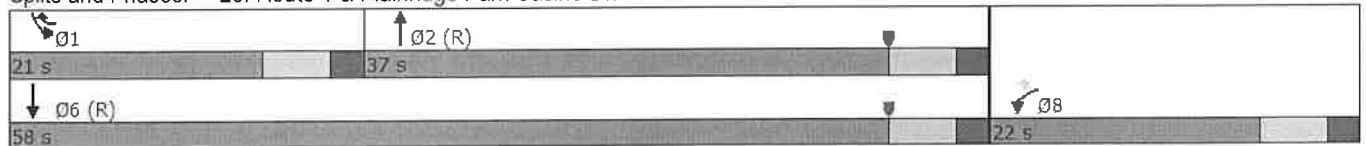
08/08/2019

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.17	0.50	0.03	0.39	0.57

Intersection Summary
















Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 8.9
 Intersection Capacity Utilization 53.6%
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: Route 1 & Plainridge Park Casino Drive



2019 Weekday Evening Peak Hour - Average-Month Conditions
 20: Route 1 & Plainridge Park Casino Drive

08/08/2019

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		 	 			 
Traffic Volume (vph)	63	172	962	51	145	1572
Future Volume (vph)	63	172	962	51	145	1572
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.88	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1787	2842	3574	1583	1805	3574
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1787	2842	3574	1583	1805	3574
Peak-hour factor, PHF	0.96	0.96	0.94	0.94	0.96	0.96
Adj. Flow (vph)	66	179	1023	54	151	1638
RTOR Reduction (vph)	0	48	0	0	0	0
Lane Group Flow (vph)	66	131	1023	54	151	1638
Heavy Vehicles (%)	1%	0%	1%	2%	0%	1%
Turn Type	Prot	pm+ov	NA	Free	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		Free		
Actuated Green, G (s)	7.2	19.1	42.9	80.0	11.9	60.8
Effective Green, g (s)	9.2	23.1	44.9	80.0	13.9	62.8
Actuated g/C Ratio	0.11	0.29	0.56	1.00	0.17	0.78
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	205	962	2005	1583	313	2805
v/s Ratio Prot	c0.04	0.02	0.29		0.08	c0.46
v/s Ratio Perm		0.02		0.03		
v/c Ratio	0.32	0.14	0.51	0.03	0.48	0.58
Uniform Delay, d1	32.5	21.1	10.8	0.0	29.8	3.4
Progression Factor	1.00	1.00	1.00	1.00	1.07	0.59
Incremental Delay, d2	0.9	0.1	0.9	0.0	1.0	0.7
Delay (s)	33.4	21.1	11.7	0.0	32.8	2.8
Level of Service	C	C	B	A	C	A
Approach Delay (s)	24.4		11.1			5.3
Approach LOS	C		B			A

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 20: Route 1 & Plainridge Park Casino Drive

08/08/2019

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖↖	↑↑	↗	↘	↑↑
Traffic Volume (vph)	52	213	980	82	250	1001
Future Volume (vph)	52	213	980	82	250	1001
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	200		275	700	
Storage Lanes	1	2		1	1	
Taper Length (ft)	25				25	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		30			30
Link Distance (ft)	714		636			1072
Travel Time (s)	16.2		14.5			24.4
Peak Hour Factor	0.85	0.85	0.85	0.85	0.95	0.95
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	251	1153	96	263	1054
Turn Type	Prot	pm+ov	NA	Free	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		Free		
Detector Phase	8	1	2		1	6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	22.0	10.0	22.0		10.0	22.0
Total Split (s)	21.0	20.0	29.0		20.0	49.0
Total Split (%)	30.0%	28.6%	41.4%		28.6%	70.0%
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0		-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max
v/c Ratio	0.24	0.24	0.62	0.06	0.61	0.35
Control Delay	28.5	12.4	17.6	0.1	30.4	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	12.4	17.6	0.1	30.4	2.3
Queue Length 50th (ft)	24	32	204	0	101	52
Queue Length 95th (ft)	50	42	#329	0	159	77
Internal Link Dist (ft)	634		556			992
Turn Bay Length (ft)		200		275	700	
Base Capacity (vph)	438	1102	1851	1615	459	3023
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.23	0.62	0.06	0.57	0.35

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 20: Route 1 & Plainridge Park Casino Drive

08/08/2019

Natural Cycle: 65

Control Type: Actuated-Coordinated

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

Splits and Phases: 20: Route 1 & Plainridge Park Casino Drive

↙ Ø1 20 s	↑ Ø2 (R) 29 s	
↓ Ø6 (R) 49 s		↘ Ø8 21 s

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 20: Route 1 & Plainridge Park Casino Drive

08/08/2019

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	213	980	82	250	1001
Future Volume (vph)	52	213	980	82	250	1001
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	2.0	4.0	4.0
Lane Util. Factor	1.00	0.88	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1805	2842	3574	1615	1805	3610
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1805	2842	3574	1615	1805	3610
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.95	0.95
Adj. Flow (vph)	61	251	1153	96	263	1054
RTOR Reduction (vph)	0	15	0	0	0	0
Lane Group Flow (vph)	61	236	1153	96	263	1054
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%
Turn Type	Prot	pm+ov	NA	Free	Prot	NA
Protected Phases	8	1	2		1	6
Permitted Phases		8		Free		
Actuated Green, G (s)	5.4	20.2	31.8	70.0	14.8	52.6
Effective Green, g (s)	7.4	24.2	33.8	70.0	16.8	54.6
Actuated g/C Ratio	0.11	0.35	0.48	1.00	0.24	0.78
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	190	1144	1725	1615	433	2815
v/s Ratio Prot	c0.03	0.05	c0.32		c0.15	0.29
v/s Ratio Perm		0.03		0.06		
v/c Ratio	0.32	0.21	0.67	0.06	0.61	0.37
Uniform Delay, d1	29.0	16.1	13.8	0.0	23.7	2.4
Progression Factor	1.00	1.00	1.00	1.00	1.05	0.75
Incremental Delay, d2	1.0	0.1	2.1	0.1	2.3	0.4
Delay (s)	30.0	16.2	15.9	0.1	27.2	2.2
Level of Service	C	B	B	A	C	A
Approach Delay (s)	18.9		14.7			7.2
Approach LOS	B		B			A

Intersection Summary

HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

2019 Weekday Evening Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	191	263	211	66	253	339	1	119	477	28	6	380
Future Volume (vph)	191	263	211	66	253	339	1	119	477	28	6	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	14	12	11	12	11	12	10	12	12
Storage Length (ft)	300		180	245		245		245		210		250
Storage Lanes	2		1	1		2		1		1		1
Taper Length (ft)	25			25				25				25
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			
Link Distance (ft)		571			329				2907			
Travel Time (s)		13.0			7.5				66.1			
Peak Hour Factor	0.94	0.94	0.94	0.91	0.91	0.91	0.97	0.97	0.97	0.97	0.86	0.86
Heavy Vehicles (%)	1%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	203	280	224	73	278	373	0	124	492	29	0	449
Turn Type	Prot	NA	custom	Prot	NA	Perm	Prot	Prot	NA	Free	Prot	Prot
Protected Phases	7	4	4	3	8		5	5	2		1	1
Permitted Phases			4			8				Free		
Detector Phase	7	4	4	3	8	8	5	5	2		1	1
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	10.0	18.0	18.0	10.0	16.0	16.0	10.0	10.0	20.0		10.0	10.0
Total Split (s)	13.0	19.0	19.0	13.0	19.0	19.0	16.0	16.0	27.0		41.0	41.0
Total Split (%)	13.0%	19.0%	19.0%	13.0%	19.0%	19.0%	16.0%	16.0%	27.0%		41.0%	41.0%
Maximum Green (s)	7.0	13.0	13.0	7.0	13.0	13.0	10.0	10.0	21.0		35.0	35.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0		-2.0	-2.0			-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	C-Max		None	None
v/c Ratio	0.65	0.47	0.41	0.43	0.54	0.53		0.59	0.47	0.02		0.80
Control Delay	66.0	47.2	7.6	51.2	44.0	7.1		54.2	32.3	0.0		42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		31.4
Total Delay	66.0	47.2	7.6	51.2	44.0	7.1		54.2	32.3	0.0		73.6
Queue Length 50th (ft)	72	80	0	45	86	0		76	138	0		257
Queue Length 95th (ft)	110	146	40	90	129	44		#138	202	0		328
Internal Link Dist (ft)		491			249				2827			
Turn Bay Length (ft)	300		180	245		245		245		210		250
Base Capacity (vph)	312	610	545	176	541	725		209	1048	1507		661
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		227
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	0.46	0.41	0.41	0.51	0.51		0.59	0.47	0.02		1.03

Intersection Summary

Area Type: Other

2019 Weekday Evening Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

	↓	↙
Lane Group	SBT	SBR
Lane Configurations	↑↑	
Traffic Volume (vph)	1006	0
Future Volume (vph)	1006	0
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Right Turn on Red		Yes
Link Speed (mph)	30	
Link Distance (ft)	282	
Travel Time (s)	6.4	
Peak Hour Factor	0.86	0.86
Heavy Vehicles (%)	1%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1170	0
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Detector Phase	6	
Switch Phase		
Minimum Initial (s)	4.0	
Minimum Split (s)	20.0	
Total Split (s)	52.0	
Total Split (%)	52.0%	
Maximum Green (s)	46.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	-2.0	
Total Lost Time (s)	4.0	
Lead/Lag	Lead	
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	C-Max	
v/c Ratio	0.67	
Control Delay	22.1	
Queue Delay	49.7	
Total Delay	71.7	
Queue Length 50th (ft)	292	
Queue Length 95th (ft)	342	
Internal Link Dist (ft)	202	
Turn Bay Length (ft)		
Base Capacity (vph)	1744	
Starvation Cap Reductn	739	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	1.16	

Intersection Summary

2019 Weekday Evening Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 14: Route 1 & Route 152/Route 152

↙ Ø1 41 s	↑ Ø2 (R) 27 s	→ Ø4 19 s	↘ Ø3 13 s
↓ Ø6 (R) 52 s	↖ Ø5 16 s	↗ Ø7 13 s	← Ø8 19 s

2019 Weekday Evening Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	191	263	211	66	253	339	1	119	477	28	6	380
Future Volume (vph)	191	263	211	66	253	339	1	119	477	28	6	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	14	12	11	12	11	12	10	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	2.0		4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	0.88		1.00	0.95	1.00		1.00
Flt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3467	3610	1507	1925	3610	2720		1745	3574	1507		1787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (perm)	3467	3610	1507	1925	3610	2720		1745	3574	1507		1787
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.97	0.97	0.97	0.97	0.86	0.86
Adj. Flow (vph)	203	280	224	73	278	373	1	123	492	29	7	442
RTOR Reduction (vph)	0	0	187	0	0	316	0	0	0	0	0	0
Lane Group Flow (vph)	203	280	37	73	278	57	0	124	492	29	0	449
Heavy Vehicles (%)	1%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%	1%
Turn Type	Prot	NA	custom	Prot	NA	Perm	Prot	Prot	NA	Free	Prot	Prot
Protected Phases	7	4	4	3	8		5	5	2		1	1
Permitted Phases			4			8				Free		
Actuated Green, G (s)	7.0	14.6	14.6	5.8	13.4	13.4		10.0	26.1	100.0		29.5
Effective Green, g (s)	9.0	16.6	16.6	7.8	15.4	15.4		12.0	28.1	100.0		31.5
Actuated g/C Ratio	0.09	0.17	0.17	0.08	0.15	0.15		0.12	0.28	1.00		0.32
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0
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)	312	599	250	150	555	418		209	1004	1507		562
v/s Ratio Prot	c0.06	c0.08	0.02	0.04	c0.08			c0.07	0.14			c0.25
v/s Ratio Perm						0.02				0.02		
v/c Ratio	0.65	0.47	0.15	0.49	0.50	0.14		0.59	0.49	0.02		0.80
Uniform Delay, d1	44.0	37.7	35.7	44.2	38.8	36.6		41.7	30.0	0.0		31.4
Progression Factor	1.27	1.15	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2	4.7	0.6	0.3	2.5	0.7	0.2		4.5	1.7	0.0		7.8
Delay (s)	60.4	43.9	35.9	46.7	39.5	36.7		46.2	31.7	0.0		39.2
Level of Service	E	D	D	D	D	D		D	C	A		D
Approach Delay (s)		46.1			38.8				33.0			
Approach LOS		D			D				C			

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

2019 Weekday Evening Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

Movement	↓	↙
	SBT	SBR
Lane Configurations	↑↑	
Traffic Volume (vph)	1006	0
Future Volume (vph)	1006	0
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Flt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3574	
Flt Permitted	1.00	
Satd. Flow (perm)	3574	
Peak-hour factor, PHF	0.86	0.86
Adj. Flow (vph)	1170	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	1170	0
Heavy Vehicles (%)	1%	0%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	45.6	
Effective Green, g (s)	47.6	
Actuated g/C Ratio	0.48	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1701	
v/s Ratio Prot	c0.33	
v/s Ratio Perm		
v/c Ratio	0.69	
Uniform Delay, d1	20.4	
Progression Factor	1.00	
Incremental Delay, d2	2.3	
Delay (s)	22.7	
Level of Service	C	
Approach Delay (s)	27.3	
Approach LOS	C	
Intersection Summary		

2019 Saturday Afternoon Peak Hour - Average-Month Conditions

14: Route 1 & Route 152/Route 152

08/08/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	231	290	152	60	294	327	1	115	496	49	8	279
Future Volume (vph)	231	290	152	60	294	327	1	115	496	49	8	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	10	14	12	11	12	11	12	10	12	12
Storage Length (ft)	300		180	245		245		245		210		250
Storage Lanes	2		1	1		2		1		1		1
Taper Length (ft)	25			25				25				25
Right Turn on Red			Yes			Yes				Yes		
Link Speed (mph)		30			30				30			
Link Distance (ft)		571			329				2907			
Travel Time (s)		13.0			7.5				66.1			
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.91	0.91	0.91	0.91	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	248	312	163	67	327	363	0	127	545	54	0	312
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	Free	Prot	Prot
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases			4			8				Free		
Detector Phase	7	4	4	3	8	8	5	5	2		1	1
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	10.0	18.0	18.0	10.0	16.0	16.0	10.0	10.0	20.0		10.0	10.0
Total Split (s)	15.0	22.0	22.0	12.0	19.0	19.0	17.0	17.0	23.0		23.0	23.0
Total Split (%)	18.8%	27.5%	27.5%	15.0%	23.8%	23.8%	21.3%	21.3%	28.8%		28.8%	28.8%
Maximum Green (s)	9.0	16.0	16.0	6.0	13.0	13.0	11.0	11.0	17.0		17.0	17.0
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0			-2.0	-2.0		-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	C-Max		None	None
v/c Ratio	0.53	0.40	0.33	0.29	0.52	0.46			0.48	0.57	0.04	0.77
Control Delay	34.0	26.6	5.9	35.9	32.9	5.5			37.2	29.1	0.0	42.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	3.4
Total Delay	34.0	26.6	5.9	35.9	32.9	5.5			37.2	29.1	0.0	46.2
Queue Length 50th (ft)	60	74	0	30	77	0			58	128	0	144
Queue Length 95th (ft)	96	107	50	70	117	37			110	181	0	#255
Internal Link Dist (ft)		491			249				2827			
Turn Bay Length (ft)	300		180	245		245		245		210		250
Base Capacity (vph)	481	875	520	234	676	810		283	955	1507		428
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0		54
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	0.36	0.31	0.29	0.48	0.45		0.45	0.57	0.04		0.83

Intersection Summary

Area Type: Other

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

	↓	↙
Lane Group	SBT	SBR
Lane Configurations	↑↑	
Traffic Volume (vph)	497	0
Future Volume (vph)	497	0
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	12	12
Storage Length (ft)		0
Storage Lanes		0
Taper Length (ft)		
Right Turn on Red		Yes
Link Speed (mph)	30	
Link Distance (ft)	282	
Travel Time (s)	6.4	
Peak Hour Factor	0.92	0.92
Heavy Vehicles (%)	1%	0%
Shared Lane Traffic (%)		
Lane Group Flow (vph)	540	0
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Detector Phase	6	
Switch Phase		
Minimum Initial (s)	4.0	
Minimum Split (s)	20.0	
Total Split (s)	29.0	
Total Split (%)	36.3%	
Maximum Green (s)	23.0	
Yellow Time (s)	4.0	
All-Red Time (s)	2.0	
Lost Time Adjust (s)	-2.0	
Total Lost Time (s)	4.0	
Lead/Lag	Lead	
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	
Recall Mode	C-Max	
v/c Ratio	0.41	
Control Delay	21.7	
Queue Delay	0.4	
Total Delay	22.0	
Queue Length 50th (ft)	113	
Queue Length 95th (ft)	160	
Internal Link Dist (ft)	202	
Turn Bay Length (ft)		
Base Capacity (vph)	1322	
Starvation Cap Reductn	329	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.54	

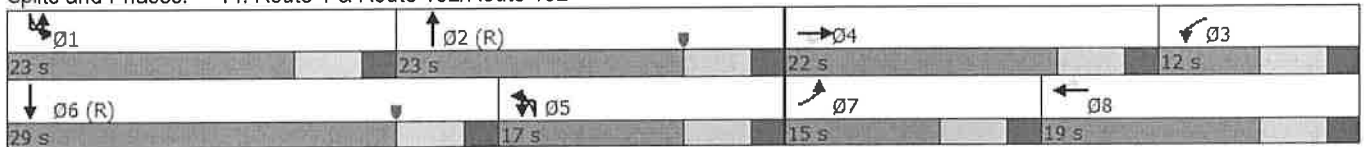
Intersection Summary

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 14: Route 1 & Route 152/Route 152



2019 Saturday Afternoon Peak Hour - Average-Month Conditions

14: Route 1 & Route 152/Route 152

08/08/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	231	290	152	60	294	327	1	115	496	49	8	279
Future Volume (vph)	231	290	152	60	294	327	1	115	496	49	8	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	10	14	12	11	12	11	12	10	12	12
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	2.0		4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	0.88		1.00	0.95	1.00		1.00
Fr _t	1.00	1.00	0.85	1.00	1.00	0.85		1.00	1.00	0.85		1.00
Fl _t Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	3502	3610	1507	1925	3610	2748		1745	3610	1507		1805
Fl _t Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.95	1.00	1.00		0.95
Satd. Flow (perm)	3502	3610	1507	1925	3610	2748		1745	3610	1507		1805
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.91	0.91	0.91	0.91	0.92	0.92
Adj. Flow (vph)	248	312	163	67	327	363	1	126	545	54	9	303
RTOR Reduction (vph)	0	0	127	0	0	294	0	0	0	0	0	0
Lane Group Flow (vph)	248	312	36	67	327	69	0	127	545	54	0	312
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	Prot	NA	Free	Prot	Prot
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases			4			8				Free		
Actuated Green, G (s)	8.8	15.5	15.5	6.5	13.2	13.2		8.8	18.0	80.0		16.0
Effective Green, g (s)	10.8	17.5	17.5	8.5	15.2	15.2		10.8	20.0	80.0		18.0
Actuated g/C Ratio	0.14	0.22	0.22	0.11	0.19	0.19		0.14	0.25	1.00		0.22
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0			6.0
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)	472	789	329	204	685	522		235	902	1507		406
v/s Ratio Prot	c0.07	c0.09		0.03	c0.09			0.07	c0.15			c0.17
v/s Ratio Perm			0.02			0.03				0.04		
v/c Ratio	0.53	0.40	0.11	0.33	0.48	0.13		0.54	0.60	0.04		0.77
Uniform Delay, d1	32.2	26.7	25.0	33.1	28.9	26.9		32.3	26.5	0.0		29.0
Progression Factor	0.92	0.91	1.88	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2	1.0	0.3	0.1	0.9	0.5	0.1		2.5	3.0	0.0		8.5
Delay (s)	30.7	24.7	47.1	34.1	29.4	27.0		34.8	29.5	0.0		37.5
Level of Service	C	C	D	C	C	C		C	C	A		D
Approach Delay (s)		31.8			28.7				28.2			
Approach LOS		C			C				C			

Intersection Summary			
HCM 2000 Control Delay	29.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 14: Route 1 & Route 152/Route 152

08/08/2019

	↓	↙
Movement	SBT	SBR
Lane Configurations	↑↑	
Traffic Volume (vph)	497	0
Future Volume (vph)	497	0
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.0	
Lane Util. Factor	0.95	
Flt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3574	
Flt Permitted	1.00	
Satd. Flow (perm)	3574	
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	540	0
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	540	0
Heavy Vehicles (%)	1%	0%
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	25.2	
Effective Green, g (s)	27.2	
Actuated g/C Ratio	0.34	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1215	
v/s Ratio Prot	0.15	
v/s Ratio Perm		
v/c Ratio	0.44	
Uniform Delay, d1	20.5	
Progression Factor	1.00	
Incremental Delay, d2	1.2	
Delay (s)	21.7	
Level of Service	C	
Approach Delay (s)	27.5	
Approach LOS	C	
Intersection Summary		

2019 Weekday Evening Peak Hour - Average-Month Conditions
 13: Route 152 & Rte 1 SB Off-Ramp

08/08/2019

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑		↗↘	↗
Traffic Volume (vph)	0	649	372	0	16	227
Future Volume (vph)	0	649	372	0	16	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red				Yes		Yes
Link Speed (mph)		30	30		30	
Link Distance (ft)		1170	571		628	
Travel Time (s)		26.6	13.0		14.3	
Peak Hour Factor	0.85	0.85	0.87	0.87	0.94	0.94
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	764	428	0	17	241
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		22.0	22.0		22.0	22.0
Total Split (s)		70.0	70.0		30.0	30.0
Total Split (%)		70.0%	70.0%		30.0%	30.0%
Maximum Green (s)		64.0	64.0		24.0	24.0
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0
Total Lost Time (s)		4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		C-Max	C-Max		None	None
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
v/c Ratio		0.26	0.14		0.05	0.64
Control Delay		2.5	0.6		38.8	13.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.5	0.6		38.8	13.5
Queue Length 50th (ft)		35	1		5	0
Queue Length 95th (ft)		76	11		14	67
Internal Link Dist (ft)		1090	491		548	
Turn Bay Length (ft)						
Base Capacity (vph)		2932	2961		910	598
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.26	0.14		0.02	0.40

Intersection Summary

Area Type: Other
 Cycle Length: 100

2019 Weekday Evening Peak Hour - Average-Month Conditions

13: Route 152 & Rte 1 SB Off-Ramp

08/08/2019

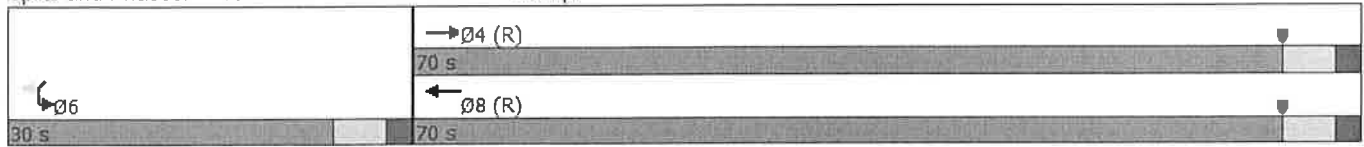
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow

Natural Cycle: 45







Control Type: Actuated-Coordinated

Splits and Phases: 13: Route 152 & Rte 1 SB Off-Ramp



2019 Weekday Evening Peak Hour - Average-Month Conditions
 13: Route 152 & Rte 1 SB Off-Ramp

08/08/2019







						
Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑		↔↔	↗
Traffic Volume (vph)	0	649	372	0	16	227
Future Volume (vph)	0	649	372	0	16	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3574	3610		3502	1615
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3574	3610		3502	1615
Peak-hour factor, PHF	0.85	0.85	0.87	0.87	0.94	0.94
Adj. Flow (vph)	0	764	428	0	17	241
RTOR Reduction (vph)	0	0	0	0	0	217
Lane Group Flow (vph)	0	764	428	0	17	24
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		80.0	80.0		8.0	8.0
Effective Green, g (s)		82.0	82.0		10.0	10.0
Actuated g/C Ratio		0.82	0.82		0.10	0.10
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2930	2960		350	161
v/s Ratio Prot		c0.21	0.12		0.00	
v/s Ratio Perm						c0.01
v/c Ratio		0.26	0.14		0.05	0.15
Uniform Delay, d1		2.1	1.8		40.7	41.1
Progression Factor		1.00	0.23		1.00	1.00
Incremental Delay, d2		0.2	0.1		0.1	0.4
Delay (s)		2.3	0.5		40.8	41.5
Level of Service		A	A		D	D
Approach Delay (s)		2.3	0.5		41.5	
Approach LOS		A	A		D	

Intersection Summary

HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 13: Route 152 & Rte 1 SB Off-Ramp

08/08/2019

						
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	649	410	0	24	245
Future Volume (vph)	0	649	410	0	24	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Right Turn on Red				Yes		Yes
Link Speed (mph)		30	30		30	
Link Distance (ft)		1170	571		628	
Travel Time (s)		26.6	13.0		14.3	
Peak Hour Factor	0.93	0.93	0.95	0.95	0.96	0.96
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	698	432	0	25	255
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Detector Phase		4	8		6	6
Switch Phase						
Minimum Initial (s)		4.0	4.0		4.0	4.0
Minimum Split (s)		22.0	22.0		22.0	22.0
Total Split (s)		40.0	40.0		40.0	40.0
Total Split (%)		50.0%	50.0%		50.0%	50.0%
Maximum Green (s)		34.0	34.0		34.0	34.0
Yellow Time (s)		4.0	4.0		4.0	4.0
All-Red Time (s)		2.0	2.0		2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0		-2.0	-2.0
Total Lost Time (s)		4.0	4.0		4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Recall Mode		C-Max	C-Max		None	None
Walk Time (s)		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0
v/c Ratio		0.25	0.15		0.06	0.60
Control Delay		3.0	11.8		29.3	10.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		3.0	11.8		29.3	10.8
Queue Length 50th (ft)		31	91		6	0
Queue Length 95th (ft)		75	125		15	59
Internal Link Dist (ft)		1090	491		548	
Turn Bay Length (ft)						
Base Capacity (vph)		2804	2804		1575	867
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.25	0.15		0.02	0.29

Intersection Summary

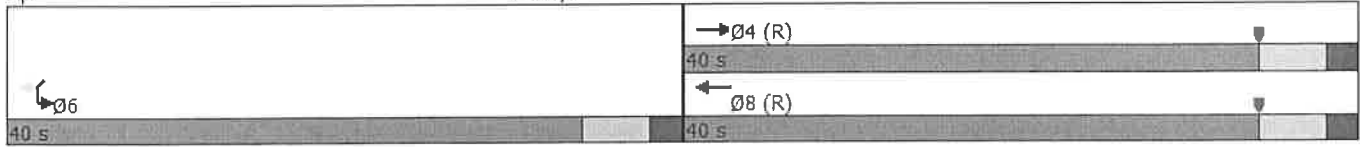
Area Type: Other
 Cycle Length: 80

2019 Saturday Afternoon Peak Hour - Average-Month Conditions
13: Route 152 & Rte 1 SB Off-Ramp

08/08/2019

Actuated Cycle Length: 80
Offset: 47 (59%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 13: Route 152 & Rte 1 SB Off-Ramp



2019 Saturday Afternoon Peak Hour - Average-Month Conditions
 13: Route 152 & Rte 1 SB Off-Ramp

08/08/2019

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑↑	↑↑		↔↔	↔
Traffic Volume (vph)	0	649	410	0	24	245
Future Volume (vph)	0	649	410	0	24	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.95	0.95		0.97	1.00
Fr _t		1.00	1.00		1.00	0.85
Fl _t Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3610	3610		3502	1615
Fl _t Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3610	3610		3502	1615
Peak-hour factor, PHF	0.93	0.93	0.95	0.95	0.96	0.96
Adj. Flow (vph)	0	698	432	0	25	255
RTOR Reduction (vph)	0	0	0	0	0	223
Lane Group Flow (vph)	0	698	432	0	25	32
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Turn Type		NA	NA		Prot	Perm
Protected Phases		4	8		6	
Permitted Phases						6
Actuated Green, G (s)		60.1	60.1		7.9	7.9
Effective Green, g (s)		62.1	62.1		9.9	9.9
Actuated g/C Ratio		0.78	0.78		0.12	0.12
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2802	2802		433	199
v/s Ratio Prot		c0.19	0.12		0.01	
v/s Ratio Perm						c0.02
v/c Ratio		0.25	0.15		0.06	0.16
Uniform Delay, d ₁		2.5	2.3		30.9	31.3
Progression Factor		1.00	4.51		1.00	1.00
Incremental Delay, d ₂		0.2	0.1		0.1	0.4
Delay (s)		2.7	10.4		31.0	31.7
Level of Service		A	B		C	C
Approach Delay (s)		2.7	10.4		31.6	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Weekday Evening Peak
 Freeway/Dir of Travel: Route 1 NB
 Junction: I-495 NB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1346	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	346	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	351	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1346	346	351	vph
Peak-hour factor, PHF	0.93	0.93	0.87	
Peak 15-min volume, v15	362	93	101	v
Trucks and buses	2	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.990	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1462	376	407	pcph

Estimation of V12 Diverge Areas

$$L = \text{(Equation 13-12 or 13-13)}$$

$$EQ$$

$$P = 1.000 \text{ Using Equation } 0$$

$$FD$$

$$v_{12} = v_R + (v_F - v_R) P = 1462 \text{ pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	1462	4500	No
$v_{FO} = v_{FO} - v_R$	1086	4500	No
v_R	376	2000	No
$v_3 \text{ or } v_{av34}$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_{av34} > 2700 \text{ pc/h?}$		No	
Is $v_3 \text{ or } v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1462$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1462	4400	No

Level of Service Determination (if not F)

$$\text{Density, } D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 12.3 \text{ pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$D = 0.462$	
Space mean speed in ramp influence area,	$S_R = 49.0$	mph
Space mean speed in outer lanes,	$S_0 = \text{N/A}$	mph
Space mean speed for all vehicles,	$S = 49.0$	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Saturday Afternoon Peak
 Freeway/Dir of Travel: Route 1 NB
 Junction: I-495 NB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1224	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	409	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	253	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1224	409	253	vph
Peak-hour factor, PHF	0.94	0.94	0.92	
Peak 15-min volume, v15	326	109	69	v
Trucks and buses	1	1	1	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	0.995	0.995	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1309	437	276	pcph

Estimation of V12 Diverge Areas

$$L = \text{(Equation 13-12 or 13-13)}$$

$$EQ$$

$$P = 1.000 \text{ Using Equation } 0$$

$$FD$$

$$v_{12} = v_R + (v_F - v_R) P = 1309 \text{ pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	1309	4500	No
$v_{FO} = v_{FO} - v_R$	872	4500	No
v_R	437	2000	No
$v_3 \text{ or } v_3$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_3 > 2700 \text{ pc/h?}$		No	
Is $v_3 \text{ or } v_3 > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1309$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1309	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 11.0 \text{ pc/mi/ln}$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$D = 0.467$	
Space mean speed in ramp influence area,	$S_R = 48.9$	mph
Space mean speed in outer lanes,	$S_0 = \text{N/A}$	mph
Space mean speed for all vehicles,	$S = 48.9$	mph

Phone:
E-mail:

Fax:

Merge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Weekday Evening Peak
 Freeway/Dir of Travel: Route 1 NB
 Junction: I-495 SB Off-Ramp to Rte 1 NB
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Merge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	872	vph	

On Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-flow speed on ramp	35.0	mph	
Volume on ramp	474	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent Ramp	262	vph	
Position of adjacent Ramp	Upstream		
Type of adjacent Ramp	Off		
Distance to adjacent Ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	872	474	262	vph
Peak-hour factor, PHF	0.96	0.91	0.96	
Peak 15-min volume, v15	227	130	68	v
Trucks and buses	1	1	3	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	%
Length	mi	mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	0.995	0.985	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	913	523	277	pcph

Estimation of V12 Merge Areas

L = (Equation 13-6 or 13-7)
 EQ
 P = 1.000 Using Equation 0
 FM
 $v_{12} = v_F (P_{FM}) = 913 \text{ pc/h}$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	1436	4500	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 913		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	1436	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 13.3 \text{ pc/mi/ln}$
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M = 0.302	
Space mean speed in ramp influence area,	S _R = 51.1	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone:
E-mail:

Fax:

Merge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Saturday Afternoon Peak
 Freeway/Dir of Travel: Route 1 NB
 Junction: I-495 SB Off-Ramp to Rte 1 NB
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Merge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	887	vph	

On Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-flow speed on ramp	35.0	mph	
Volume on ramp	337	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent Ramp	306	vph	
Position of adjacent Ramp	Upstream		
Type of adjacent Ramp	Off		
Distance to adjacent Ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	887	337	306	vph
Peak-hour factor, PHF	0.94	0.89	0.94	
Peak 15-min volume, v15	236	95	81	v
Trucks and buses	0	1	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade		%	%	%
Length		mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	1.000	0.995	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	944	381	326	pcph

Estimation of V12 Merge Areas

$$L = \text{(Equation 13-6 or 13-7)}$$

$$EQ$$

$$P = 1.000 \text{ Using Equation } 0$$

$$FM$$

$$v_{12} = v_{F, FM} (P) = 944 \text{ pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	1325	4500	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 944		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	1325	4600	No

Level of Service Determination (if not F)

$$\text{Density, } D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 12.5 \text{ pc/mi/ln}$$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M = 0.301	
Space mean speed in ramp influence area,	S _R = 51.1	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Weekday Evening Peak
 Freeway/Dir of Travel: Route 1 NB
 Junction: I-495 SB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1134	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	262	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	474	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	1134		262		474	vph
Peak-hour factor, PHF	0.96		0.96		0.91	
Peak 15-min volume, v15	295		68		130	v
Trucks and buses	2		1		5	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	

Heavy vehicle adjustment, fHV	0.990	0.995	0.976	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1193	274	534	pcph

Estimation of V12 Diverge Areas

L = (Equation 13-12 or 13-13)
 EQ
 P = 1.000 Using Equation 0
 FD
 $v_{12} = v_R + (v_F - v_R) P = 1193 \text{ pc/h}$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	1193	4500	No
$v_{FO} = v_F - v_R$	919	4500	No
v_R	274	2000	No
$v_3 \text{ or } v_{av34}$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_{av34} > 2700 \text{ pc/h?}$		No	
Is $v_3 \text{ or } v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1193$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1193	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 10.0+ \text{ pc/mi/ln}$
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D = 0.453	
Space mean speed in ramp influence area,	S _R = 49.1	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 49.1	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Saturday Afternoon Peak
 Freeway/Dir of Travel: Route 1 NB
 Junction: I-495 SB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1193	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	306	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	337	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1193	306	337	vph
Peak-hour factor, PHF	0.94	0.94	0.89	
Peak 15-min volume, v15	317	81	95	v
Trucks and buses	1	1	1	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	0.995	0.995	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1275	327	381	pcph

Estimation of V12 Diverge Areas

$$L = \text{(Equation 13-12 or 13-13)}$$

$$EQ$$

$$P = 1.000 \text{ Using Equation } 0$$

$$FD$$

$$v_{12} = v_R + (v_F - v_R) P_{FD} = 1275 \text{ pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	1275	4500	No
$v_{FO} = v_{FO} - v_{FR}$	948	4500	No
v_R	327	2000	No
$v_3 \text{ or } v_{av34}$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_{av34} > 2700 \text{ pc/h?}$		No	
Is $v_3 \text{ or } v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1275$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1275	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 10.7 \text{ pc/mi/ln}$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$D = 0.457$	
Space mean speed in ramp influence area,	$S_R = 49.1$	mph
Space mean speed in outer lanes,	$S_0 = \text{N/A}$	mph
Space mean speed for all vehicles,	$S = 49.1$	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Weekday Evening Peak
 Freeway/Dir of Travel: Route 1 SB
 Junction: I-495 NB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	2183	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	671	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	371	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2183	671	371	vph
Peak-hour factor, PHF	0.91	0.91	0.91	
Peak 15-min volume, v15	600	184	102	v
Trucks and buses	2	3	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.990	0.985	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2423	748	408	pcph

Estimation of V12 Diverge Areas

$$L = \text{(Equation 13-12 or 13-13)}$$

$$EQ$$

$$P = 1.000 \text{ Using Equation } 0$$

$$FD$$

$$v_{12} = v_R + (v_F - v_R) P = 2423 \text{ pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	2423	4500	No
$v_{FO} = v_F - v_R$	1675	4500	No
v_R	748	2000	No
$v_3 \text{ or } v_{av34}$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_{av34} > 2700 \text{ pc/h?}$		No	
Is $v_3 \text{ or } v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 2423$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2423	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 20.6 \text{ pc/mi/ln}$

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	$D = 0.495$	
Space mean speed in ramp influence area,	$S_R = 48.6$	mph
Space mean speed in outer lanes,	$S_0 = \text{N/A}$	mph
Space mean speed for all vehicles,	$S = 48.6$	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Saturday Afternoon Peak
 Freeway/Dir of Travel: Route 1 SB
 Junction: I-495 NB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1215	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	420	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	307	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1215	420	307	vph
Peak-hour factor, PHF	0.91	0.91	0.95	
Peak 15-min volume, v15	334	115	81	v
Trucks and buses	1	1	1	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	0.995	0.995	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1342	464	325	pcph

Estimation of V12 Diverge Areas

$$L = \text{(Equation 13-12 or 13-13)}$$

$$EQ$$

$$P = 1.000 \text{ Using Equation } 0$$

$$FD$$

$$v_{12} = v_R + (v_F - v_R) P = 1342 \text{ pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	1342	4500	No
$v_{FO} = v_F - v_R$	878	4500	No
v_R	464	2000	No
$v_3 \text{ or } v_{av34}$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_{av34} > 2700 \text{ pc/h?}$		No	
Is $v_3 \text{ or } v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1342$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1342	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 11.3 \text{ pc/mi/ln}$

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$D = 0.470$	
Space mean speed in ramp influence area,	$S_R = 48.9$	mph
Space mean speed in outer lanes,	$S_0 = \text{N/A}$	mph
Space mean speed for all vehicles,	$S = 48.9$	mph

Phone:
E-mail:

Fax:

Merge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Weekday Evening Peak
 Freeway/Dir of Travel: Route 1 SB
 Junction: I-495 NB Off-Ramp to Route 1 S
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1512	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	371	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	671	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1512	371	671	vph
Peak-hour factor, PHF	0.91	0.91	0.91	
Peak 15-min volume, v15	415	102	184	v
Trucks and buses	3	0	1	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade		%	%	%
Length		mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.985	1.000	0.995	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1686	408	741	pcph

Estimation of V12 Merge Areas

L = (Equation 13-6 or 13-7)
 EQ
 P = 1.000 Using Equation 0
 FM
 $v_{12} = v_{F \text{ FM}} (P) = 1686 \text{ pc/h}$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	2094	4500	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 1686		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	2094	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 18.5 \text{ pc/mi/ln}$
 Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M = 0.318	
Space mean speed in ramp influence area,	S _R = 50.9	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 50.9	mph

Phone:
E-mail:

Fax:

Merge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Saturday Afternoon Peak
 Freeway/Dir of Travel: Route 1 SB
 Junction: I-495 NB Off-Ramp to Route 1 S
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Merge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	795	vph	

On Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-flow speed on ramp	35.0	mph	
Volume on ramp	301	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent Ramp	420	vph	
Position of adjacent Ramp	Upstream		
Type of adjacent Ramp	Off		
Distance to adjacent Ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	795	301	420	vph
Peak-hour factor, PHF	0.91	0.95	0.91	
Peak 15-min volume, v15	218	79	115	v
Trucks and buses	1	0	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade		%	%	%
Length		mi	mi	mi
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	1.000	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	878	317	466	pcph

Estimation of V12 Merge Areas

L = (Equation 13-6 or 13-7)
EQ
P = 1.000 Using Equation 0
FM
 $v_{12} = v_F (P_{FM}) = 878 \text{ pc/h}$

Capacity Checks

	Actual	Maximum	LOS F?
v _{FO}	1195	4500	No
v ₃ or v _{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v ₃ or v _{av34} > 2700 pc/h?		No	
Is v ₃ or v _{av34} > 1.5 v ₁₂ / 2		No	
If yes, v _{12A} = 878		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v _{R12}	1195	4600	No

Level of Service Determination (if not F)

Density, $D = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A = 11.5 \text{ pc/mi/ln}$
Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M = 0.299	
Space mean speed in ramp influence area,	S _R = 51.1	mph
Space mean speed in outer lanes,	S ₀ = N/A	mph
Space mean speed for all vehicles,	S = 51.1	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Weekday Evening Peak
 Freeway/Dir of Travel: Route 1 SB
 Junction: I-495 SB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1883	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	608	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	442	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	Off		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1883	608	442	vph
Peak-hour factor, PHF	0.96	0.96	0.83	
Peak 15-min volume, v15	490	158	133	v
Trucks and buses	1	2	1	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	0.990	0.995	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1971	640	535	pcph

Estimation of V12 Diverge Areas

$$L = \text{(Equation 13-12 or 13-13)}$$

$$EQ$$

$$P = 1.000 \quad \text{Using Equation } 0$$

$$FD$$

$$v_{12} = v_R + (v_F - v_R) P = 1971 \quad \text{pc/h}$$

Capacity Checks

	Actual	Maximum	LOS F?
$v_{12} = v_{12}$	1971	4500	No
$v_{FO} = v_F - v_R$	1331	4500	No
v_R	640	2000	No
$v_3 \text{ or } v_{av34}$	0 pc/h	(Equation 13-14 or 13-17)	
Is $v_3 \text{ or } v_{av34} > 2700$ pc/h?		No	
Is $v_3 \text{ or } v_{av34} > 1.5 v_{12} / 2$		No	
If yes, $v_{12A} = 1971$		(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1971	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 16.7$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	$D = 0.486$	
Space mean speed in ramp influence area,	$S_R = 48.7$	mph
Space mean speed in outer lanes,	$S_0 = N/A$	mph
Space mean speed for all vehicles,	$S = 48.7$	mph

Phone:
E-mail:

Fax:

Diverge Analysis

Analyst: BG
 Agency/Co.: VAI
 Date performed: 8/8/2019
 Analysis time period: Saturday Afternoon Peak
 Freeway/Dir of Travel: Route 1 SB
 Junction: I-495 SB On-Ramp
 Jurisdiction: MassDOT
 Analysis Year: 2019
 Description: Plainridge Park Casino - 2019 Traffic Monitoring

Freeway Data

Type of analysis	Diverge		
Number of lanes in freeway	2		
Free-flow speed on freeway	55.0	mph	
Volume on freeway	1102	vph	

Off Ramp Data

Side of freeway	Right		
Number of lanes in ramp	1		
Free-Flow speed on ramp	35.0	mph	
Volume on ramp	221	vph	
Length of first accel/decel lane	500	ft	
Length of second accel/decel lane		ft	

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes		
Volume on adjacent ramp	370	vph	
Position of adjacent ramp	Downstream		
Type of adjacent ramp	On		
Distance to adjacent ramp	500	ft	

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1102	221	370	vph
Peak-hour factor, PHF	0.88	0.88	0.90	
Peak 15-min volume, v15	313	63	103	v
Trucks and buses	1	1	1	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.995	0.995	0.995	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1259	252	413	pcph

Estimation of V12 Diverge Areas

L = (Equation 13-12 or 13-13)

EQ
P = 1.000 Using Equation 0

FD
v = v + (v - v) P = 1259 pc/h
12 R F R FD

Capacity Checks

	Actual	Maximum	LOS F?
v = v	1259	4500	No
Fi F			
v = v - v	1007	4500	No
FO F R			
v	252	2000	No
R			
v or v	0 pc/h	(Equation 13-14 or 13-17)	
3 av34			
Is v or v > 2700 pc/h?		No	
3 av34			
Is v or v > 1.5 v /2		No	
3 av34 12			
If yes, v = 1259		(Equation 13-15, 13-16, 13-18, or 13-19)	
12A			

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v	1259	4400	No
12			

Level of Service Determination (if not F)

Density, D = 4.252 + 0.0086 v - 0.009 L = 10.6 pc/mi/ln
R 12 D

Level of service for ramp-freeway junction areas of influence B

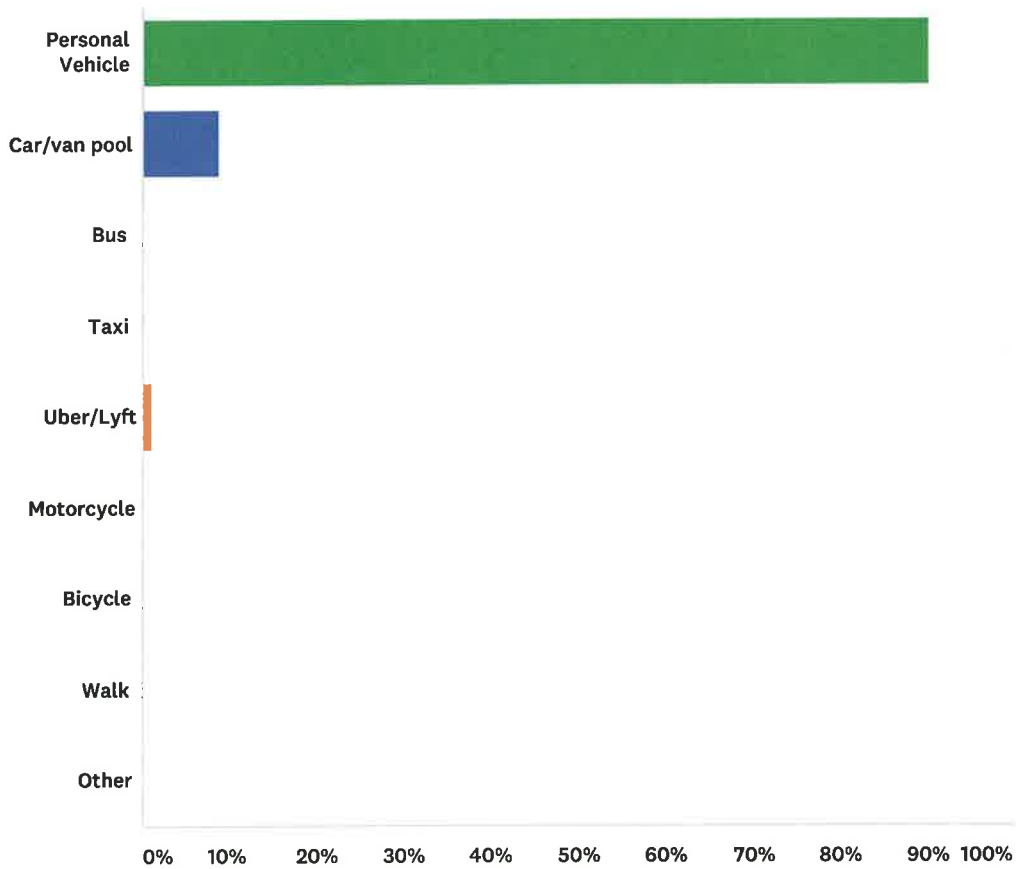
Speed Estimation

Intermediate speed variable,	D = 0.451	
	S	
Space mean speed in ramp influence area,	S = 49.1	mph
	R	
Space mean speed in outer lanes,	S = N/A	mph
	0	
Space mean speed for all vehicles,	S = 49.1	mph

EMPLOYEE AND PATRON TRAVEL MODE SURVEY

Q1 What transportation do you utilize when you visit Plainridge Park Casino?

Answered: 102 Skipped: 0



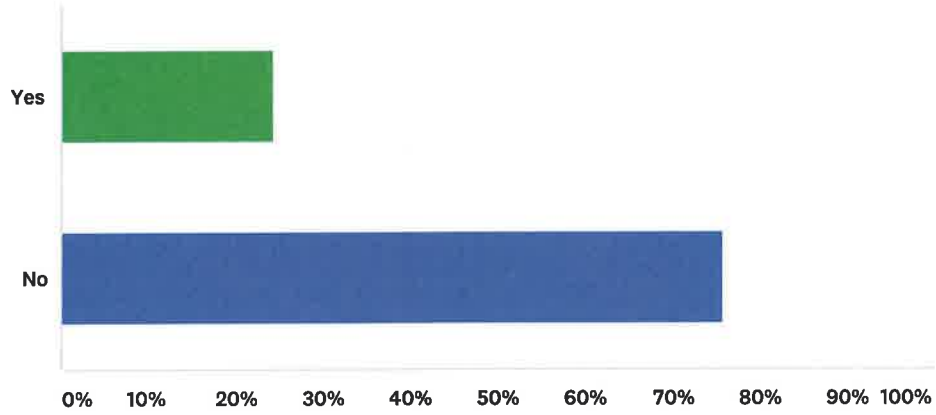
ANSWER CHOICES

RESPONSES

Personal Vehicle	90.20%	92
Car/van pool	8.82%	9
Bus	0.00%	0
Taxi	0.00%	0
Uber/Lyft	0.98%	1
Motorcycle	0.00%	0
Bicycle	0.00%	0
Walk	0.00%	0
Other	0.00%	0
TOTAL		102

Q2 Are you aware of public transportation and car/vanpool options that are available?

Answered: 99 Skipped: 3



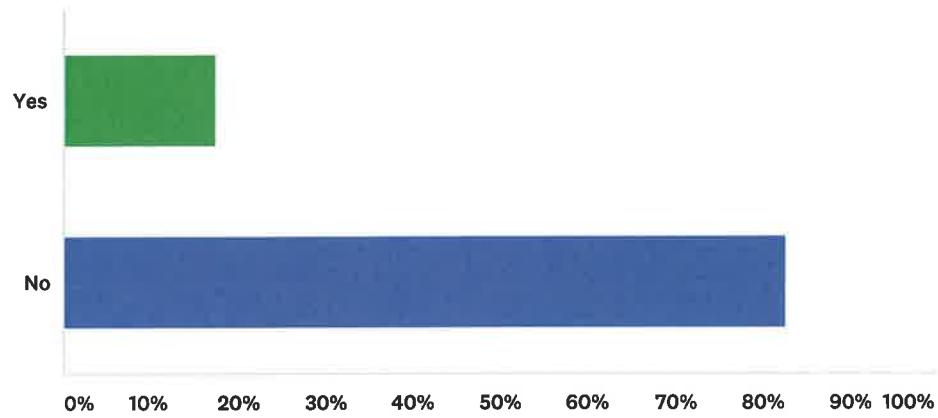
ANSWER CHOICES

RESPONSES

Yes	24.24%	24
No	75.76%	75
TOTAL		99

Q3 Would you use public transportation or a shuttle from a secure designated pick-up area or bus terminal?

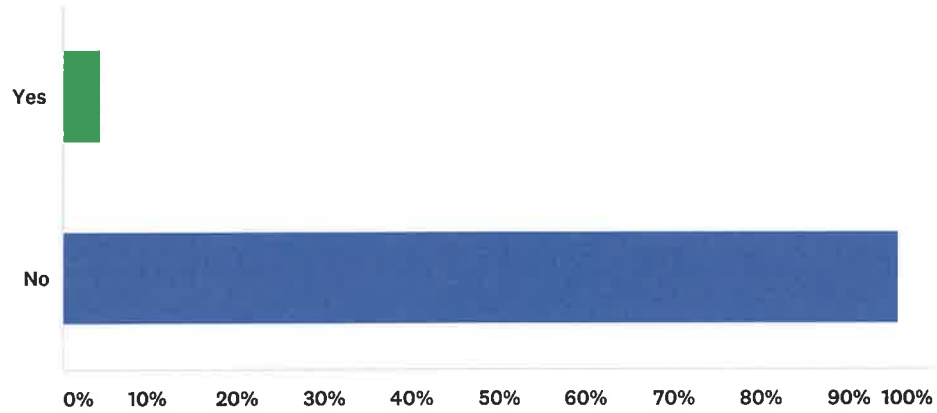
Answered: 98 Skipped: 4



ANSWER CHOICES	RESPONSES	
Yes	17.35%	17
No	82.65%	81
TOTAL		98

Q4 Would you walk or bicycle to Plainridge if sidewalks and bicycle lanes were available?

Answered: 97 Skipped: 5



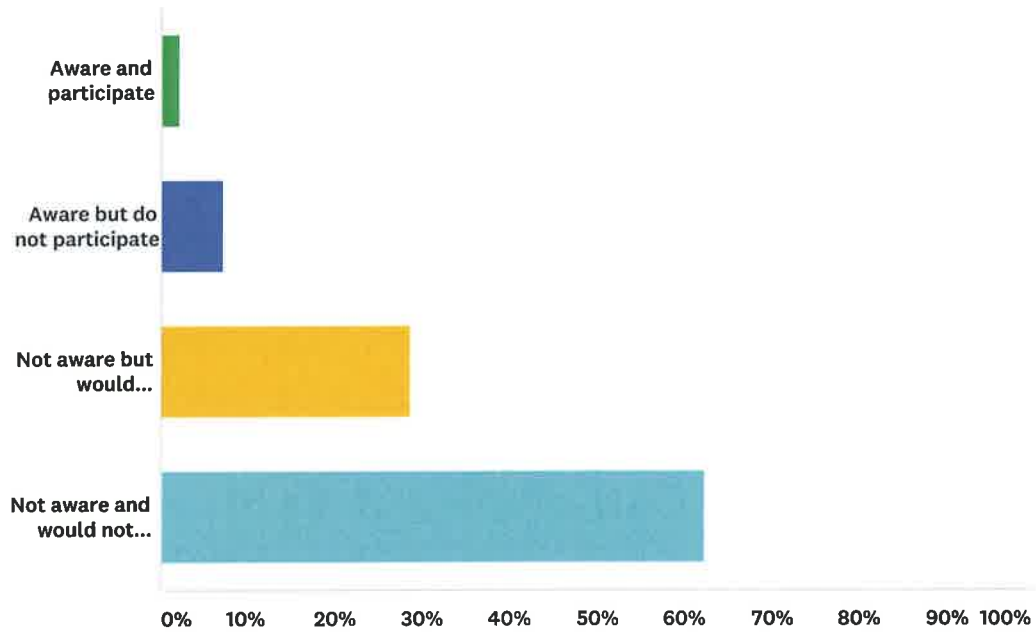
ANSWER CHOICES

RESPONSES

Yes	4.12%	4
No	95.88%	93
TOTAL		97

Q5 Are you aware of and do you participate in the corporate TDM program?

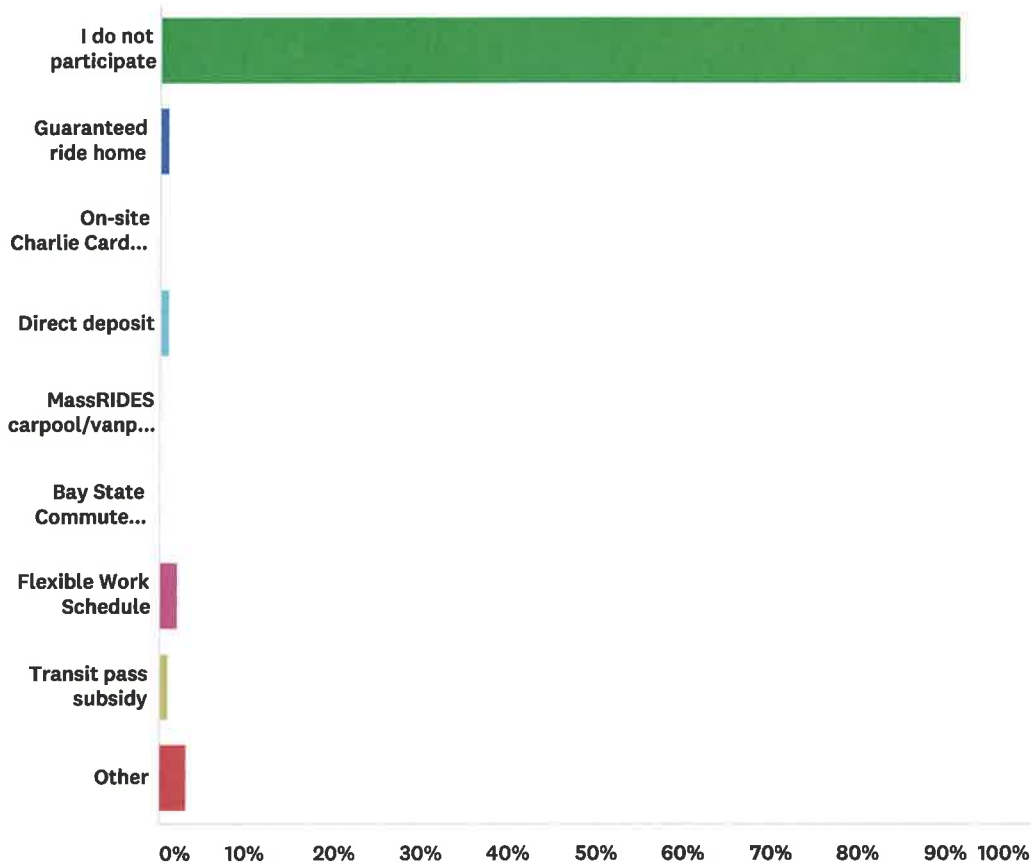
Answered: 98 Skipped: 4



ANSWER CHOICES	RESPONSES	
Aware and participate	2.04%	2
Aware but do not participate	7.14%	7
Not aware but would participate	28.57%	28
Not aware and would not participate	62.24%	61
TOTAL		98

Q6 Which TDM program features do you use?

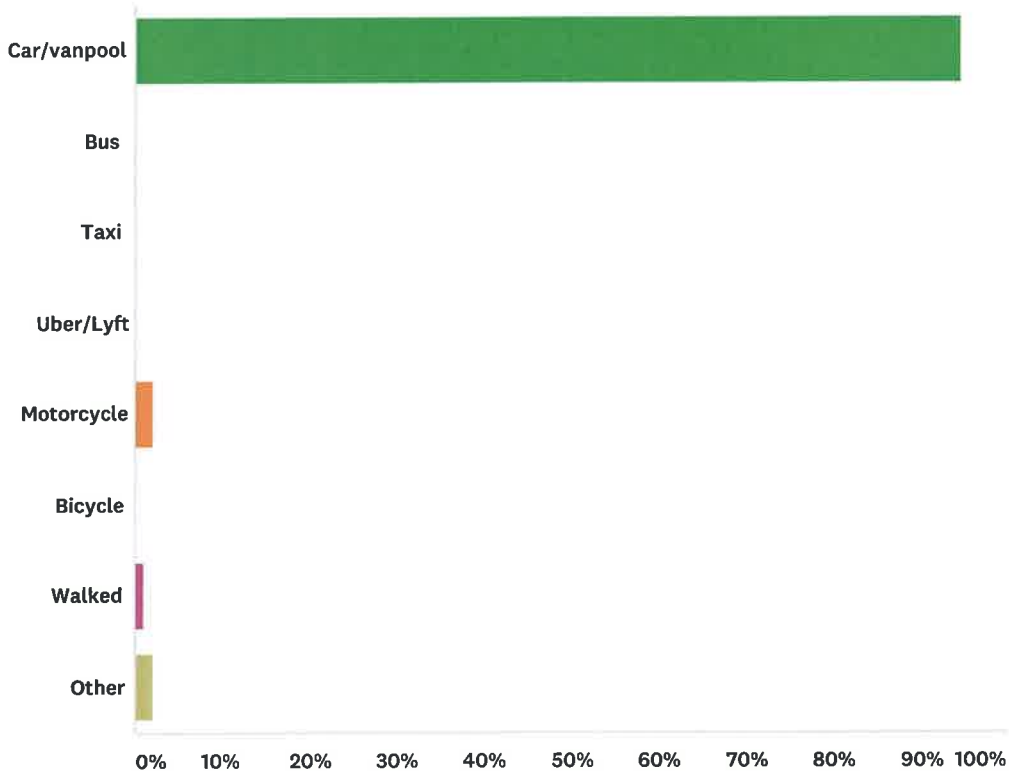
Answered: 95 Skipped: 7



ANSWER CHOICES	RESPONSES	
I do not participate	91.58%	87
Guaranteed ride home	1.05%	1
On-site Charlie Card sales	0.00%	0
Direct deposit	1.05%	1
MassRIDES carpool/vanpool matching	0.00%	0
Bay State Commute (NuRide) program	0.00%	0
Flexible Work Schedule	2.11%	2
Transit pass subsidy	1.05%	1
Other	3.16%	3
TOTAL		95

Q1 How do you commute to work at Plainridge Park Casino?

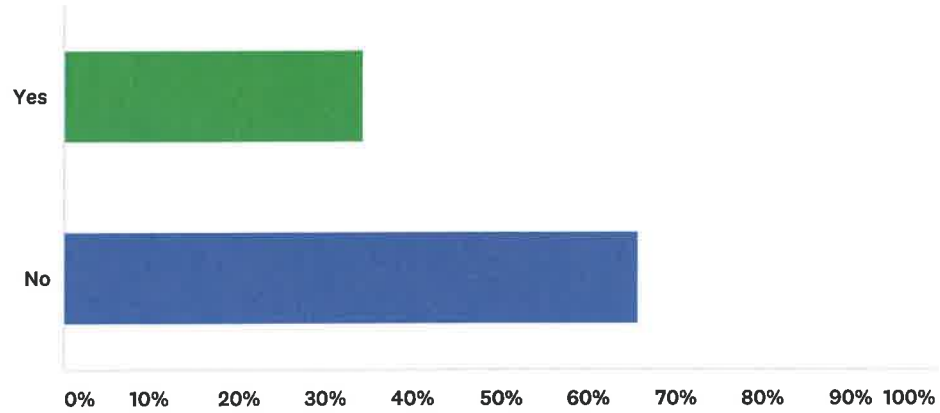
Answered: 93 Skipped: 1



ANSWER CHOICES	RESPONSES	
Car/vanpool	94.62%	88
Bus	0.00%	0
Taxi	0.00%	0
Uber/Lyft	0.00%	0
Motorcycle	2.15%	2
Bicycle	0.00%	0
Walked	1.08%	1
Other	2.15%	2
TOTAL		93

Q2 Are you aware of public transportation and car/vanpool options that are available?

Answered: 93 Skipped: 1



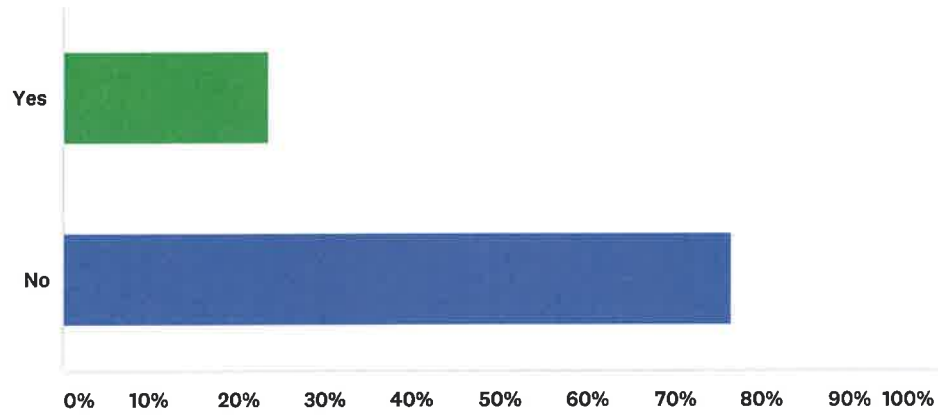
ANSWER CHOICES

RESPONSES

Yes	34.41%	32
No	65.59%	61
TOTAL		93

Q3 Would you use public transportation or a shuttle from a secure designated pick-up area or bus terminal?

Answered: 94 Skipped: 0



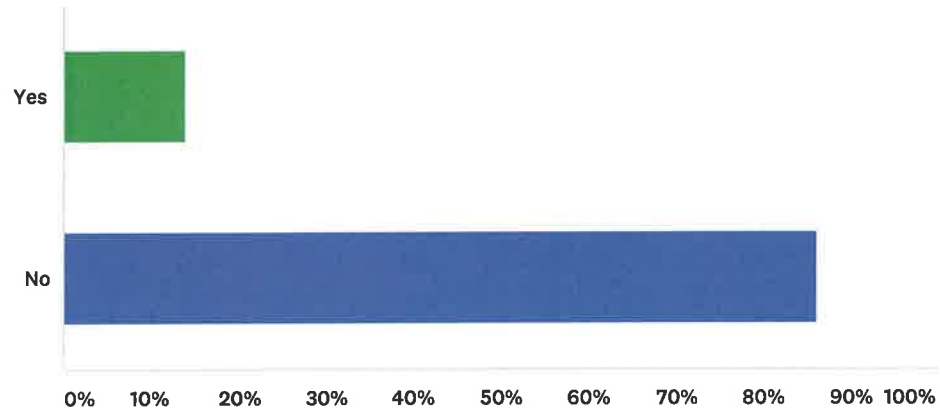
ANSWER CHOICES

RESPONSES

Yes	23.40%	22
No	76.60%	72
TOTAL		94

Q4 Would you walk or bicycle to Plainridge if sidewalks and bicycle lanes were available?

Answered: 94 Skipped: 0



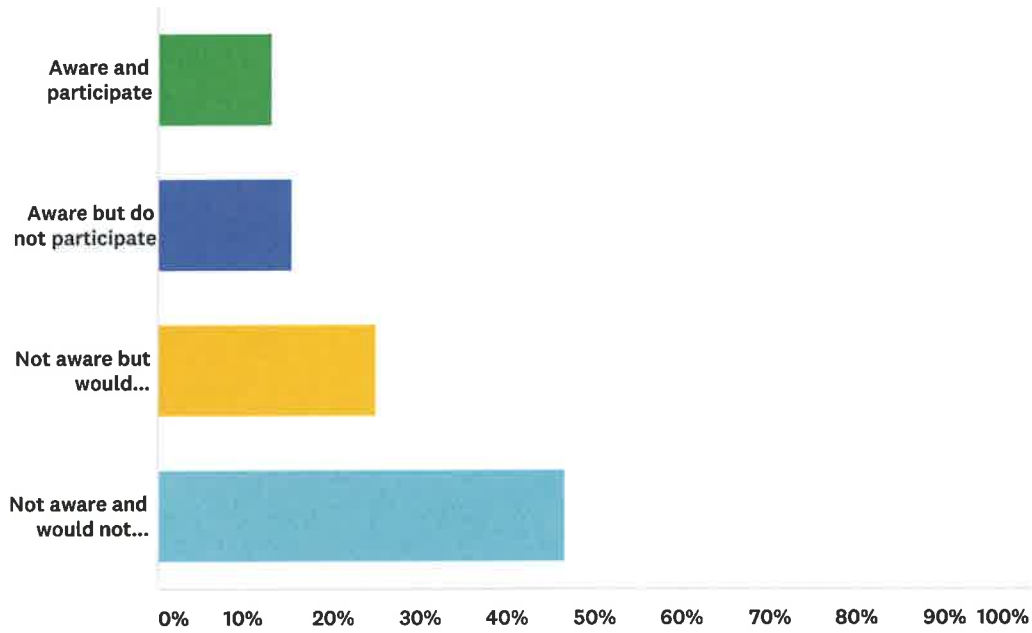
ANSWER CHOICES

RESPONSES

Yes	13.83%	13
No	86.17%	81
TOTAL		94

Q5 Are you aware of and do you participate in the corporate TDM program?

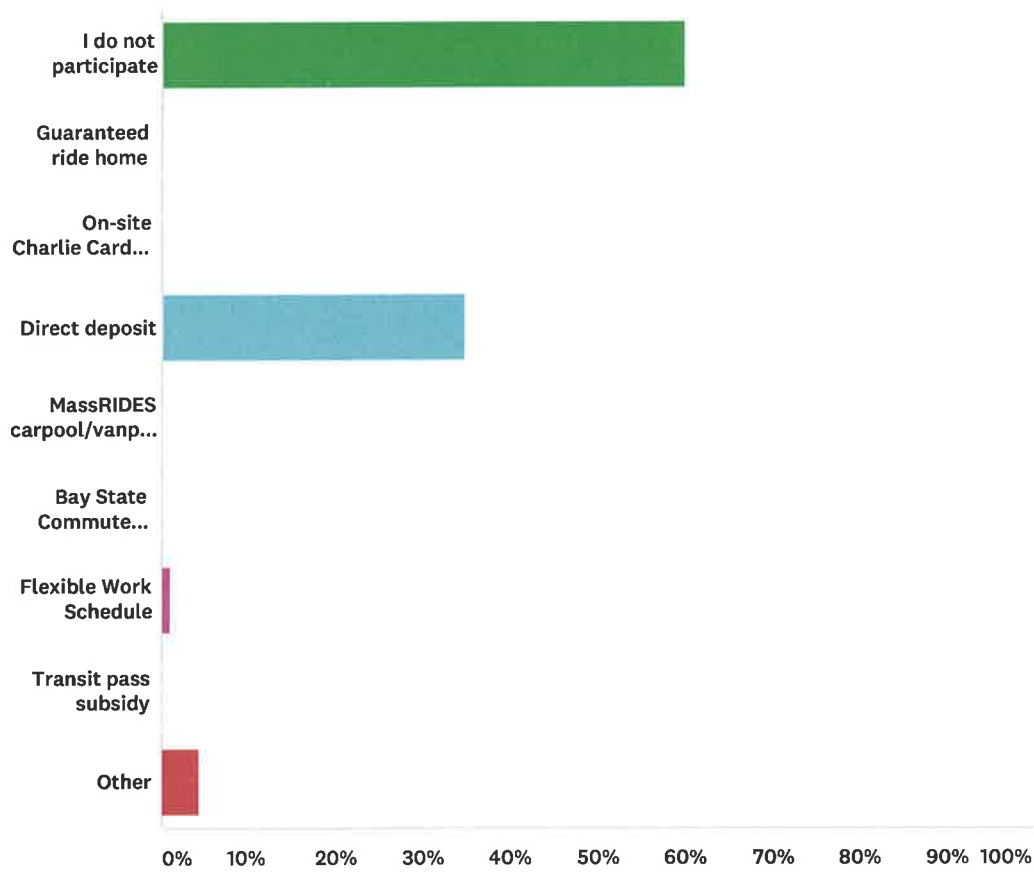
Answered: 92 Skipped: 2



ANSWER CHOICES	RESPONSES	
Aware and participate	13.04%	12
Aware but do not participate	15.22%	14
Not aware but would participate	25.00%	23
Not aware and would not participate	46.74%	43
TOTAL		92

Q6 Which TDM program features do you use?

Answered: 92 Skipped: 2



ANSWER CHOICES	RESPONSES	
I do not participate	59.78%	55
Guaranteed ride home	0.00%	0
On-site Charlie Card sales	0.00%	0
Direct deposit	34.78%	32
MassRIDES carpool/vanpool matching	0.00%	0
Bay State Commute (NuRide) program	0.00%	0
Flexible Work Schedule	1.09%	1
Transit pass subsidy	0.00%	0
Other	4.35%	4
TOTAL		92