

MEMORANDUM

TO: Mr. Michael Duffy
New England Development
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Boston, MA 02116

FROM: Mr. Jeffrey S. Dirk, P.E., PTOE, FITE 
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DATE: June 13, 2019

RE: 7991

SUBJECT: Transportation Impact Assessment Update
Waterfront West Mixed-Use Development
Newburyport, Massachusetts

Vanasse & Associates, Inc. (VAI) has prepared an update to the November 2016 *Transportation Impact Assessment* (TIA) that was submitted in support of the Waterfront West mixed-use development to be located off Merrimac Street and accessed by way of Tournament Wharf, McKay's Wharf and Brown's Wharf along the southern bank of the Merrimack River in Newburyport, Massachusetts (hereafter referred to as the "Project"). Specifically, this update: i) presents new (July 2018) traffic volume and vehicle travel speed data for Merrimac Street and the study area intersections that were evaluated in the November 2016 TIA; ii) reviews the Massachusetts Department of Transportation (MassDOT) high crash location database in order to identify any changes in motor vehicle crash trends within the study area; iii) provides trip-generation calculations and parking data for the current development program that is proposed for the Project; and iv) comparatively assesses the impact of the current development program to the development program that was assessed in the November 2016 TIA. In addition, a summary of the elements of the transportation improvement program that has been developed for the Project in consultation with the City and their independent review consultant is also provided.

Since the publication of the November 2016 TIA, the Institute of Transportation Engineers (ITE) has published its most recent comprehensive re-write of *Trip Generation*.¹ The latest edition includes a number of new land uses and consolidated the multi-family land uses (apartments, condominiums and townhouses) into a single Land Use Code (LUC), *Multifamily Housing*, differentiated by the number of floors that are proposed in each building (classified as low-rise, mid-rise and high-rise). Recent data collected for multi-family residential communities did not indicate a statistical difference in the trip rates between apartments, condominiums and townhouses, and also found that the number of trips generated per unit has declined. As a result, applying the updated ITE data for multi-family developments to the current residential development program for the Project (215 multi-family units, or a 15 unit increase over the prior development program), resulted in a decrease in trips over the residential development program that was assessed in the November 2016 TIA.

Based on this updated assessment, we have concluded the following with respect to the Project:

¹*Trip Generation*, 10th Edition; Institute of Transportation Engineers; Washington, DC; 2017.



1. Traffic volume conditions within the study area have not changed significantly between 2016 and 2018. Accordingly, the conditions that were assessed in the November 2016 TIA would not be materially different with respect to the relative impact of the Project, particularly given the reduction in Project generated traffic that is associated with the current development program;
2. A review of the MassDOT statewide High Crash Location List did not indicate any listed locations within the study area that was assessed in the November 2016 TIA, consistent with the findings that were presented in the November 2016 TIA; and
3. The current development program will generate up to 36 percent fewer vehicle trips on a daily basis and up to 49 percent fewer vehicle trips during the weekday and Saturday peak hours over the development program that was assessed in the November 2016 TIA and, as such, ***the current development program will be less impactful on the transportation infrastructure than the development program that was assessed in the November 2016 TIA;*** and
4. Sufficient parking will be provided to support the existing marina operation and the proposed uses that are to be located within the Project site.

Accordingly, the elements of the transportation improvement program that have been developed for the Project in consultation with the City and their independent review consultant continue to be sufficient to off-set the expected impact of the Project and to address needed transportation infrastructure improvements that were identified independent of the Project.

The following summarizes the data and analyses that form the basis of this updated assessment of the Project.

PROJECT DESCRIPTION

The Project will entail the redevelopment of the west end waterfront area located along the south bank of the Merrimack River and east of the Route 1 drawbridge in Newburyport, Massachusetts. As currently proposed, the redevelopment will entail the removal or rehabilitation of the existing structures that occupy the Project site to include up to 215 residential condominium/townhouse units, 80 hotel rooms and approximately 10,000 square feet (sf) of retail and restaurant uses. The existing marina, boat slips and moorings that are accessed through the Project site will be retained. In comparison to the development program that was assessed in the November 2016 TIA, the current development program represents an increase of 15 residential units, a reduction of 20 hotel rooms and a reduction of 10,000 sf in a retail/restaurant space.

Access to the Project site is and will continue to be provided by way of Tournament Wharf, McKay's Wharf and Brown's Wharf, all which intersect the north side of Merrimac Street east of Newburyport Turnpike. On-site parking will be provided for up to 392 vehicles with additional public parking located within a short walking distance of the Project site.



UPDATE OF EXISTING CONDITIONS

Traffic Volumes

In order to evaluate changes in traffic volumes and travel patterns within the study area that was assessed as a part of the November 2016 TIA, new traffic counts were conducted along Merrimac Street and at the study intersections in July 2018 as requested by the City. The data collection effort consisted of a 72-hour (Thursday through Saturday, inclusive) automatic traffic recorder (ATR) count on Merrimac Street in the vicinity of the Project site and manual turning movement counts (TMCs) at the study area intersections during the weekday morning (7:00 to 9:00 AM), weekday evening (4:00 to 6:00 PM) and Saturday midday (11:00 AM to 2:00 PM) peak periods. Table 1 summarizes the July 2018 traffic count data and compares the data to that which formed the basis of the November 2016 TIA and was collected in June, August and September 2016.



Table 1
TRAFFIC VOLUME COMPARISON

Automatic Traffic Recorder Counts:									
Merrimac Street:			Weekday ^a	Saturday ^b	Vehicles per day. Vehicles.				
2016			17,265	17,710					
2018			16,177	14,791					
Difference			-1,088	-2,919					
Manual Turning Movement Counts:									
Location:	Vehicles Per Hour								
	2016			2018			Difference		
	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
Merrimac St./ Rte. 1 Off-Ramp/ Winter St.	1,139	1,598	1,516	1,225	1,397	1,398	+86 (7.6%)	-201 (12.6%)	-118 (7.8%)
Merrimac St./ Rte. 1 on-Ramp/ Summer St.	1,340	1,807	1,678	1,284	1,582	1,516	-56 (4.2%)	-225 (12.5%)	-162 (9.7%)
Merrimac St./ Tournament Wharf/ Market St.	1,229	1,522	1,445	1,187	1,358	1,316	-42 (3.4%)	-164 (10.8%)	-129 (8.9%)
Merrimac St./ McKay's Wharf	1,085	1,379	1,302	1,118	1,256	1,197	+33 (3.0%)	-123 (8.9%)	-105 (8.1%)
Merrimac St/ Titcomb St.	1,075	1,410	1,279	1,121	1,254	1,187	+46 (4.3%)	-156 (11.1%)	-92 (7.2%)
Merrimac St/ Brown's Wharf	1,059	1,374	1,263	1,079	1,201	1,136	+20 (1.9%)	-173 (12.6%)	-127 (10.1%)
Merrimac St./ Green St.	1,202	1,487	1,441	1,169	1,323	1,306	-33 (2.7%)	-164 (11.0%)	-135 (9.4%)
Merrimac St./ Visitor Center Dwy	1,168	1,395	1,421	1,146	1,245	1,333	-22 (1.9%)	-150 (10.8%)	-88 (6.2%)
Merrimac St./ State St./Water St.	1,109	1,285	1,191	1,001	1,091	1,070	-108 (9.7%)	-194 (15.1%)	-121 (10.2%)
State St./Library St.	489	420	437	788	834	838	+299 (61.1%)	+414 (98.6%)	+401 (91.8%)
Summer St./ Rte. 1 Off-Ramp/ Pleasant St./	203	289	312	184	240	285	-19 (9.4%)	-49 (17.0%)	-27 (8.7%)



As can be seen in Table 1, average weekday and Saturday traffic volumes along Merrimac Street were shown to have decreased by between 1,000 and 3,000 vehicles between 2016 and 2018. Excluding the State Street/Library Street intersection, traffic volume variations at the study area intersections between 2016 and 2018 were shown to range from an increase of 7.6 percent to a decrease of 17.0 percent, which is well within the range of normal daily traffic volume variations.² Traffic volumes at the State Street/Library Street intersection were shown to have increased by between 299 and 414 vehicles between 2016 and 2018, with the increased traffic volume originating from Water Street east of State Street. The Project is expected to add less than 10 vehicles to this intersection during the peak hours, or less than one (1) additional vehicle every 6-minutes, an increase that would not materially impact motorist delays or vehicle queuing over existing conditions.

Based on this comparative analysis, it is reasonable to conclude that *traffic volume conditions within the study area have not changed significantly between 2016 and 2018. Accordingly, the conditions that were assessed in the November 2016 TIA would not be materially different with respect to the relative impact of the Project, particularly given the reduction in Project generated traffic that is associated with the current development program (discussion follows).*

Motor Vehicle Crash Data

A review of the MassDOT statewide High Crash Location List did not indicate any listed locations within the study area that was assessed in the November 2016 TIA, including the Route 1/Merrimac Street interchange, the Merrimac Street corridor, Water Street, Green Street, Winter Street, Summer Street, State Street or High Street (Route 1A). *These findings are consistent with those that were presented in the November 2016 TIA.*

Spot Speed Measurements

New vehicle travel speed measurements were performed in July 2018 on Merrimac Street in the vicinity of the Project in conjunction with the ATR counts. Table 2 summarizes the new vehicle travel speed measurements and compares the data to the measurements that were performed in 2016.

Table 2
VEHICLE TRAVEL SPEED MEASUREMENTS

	Merrimac Street	
	Eastbound 2016/2018	Westbound 2016/2018
Mean Travel Speed (mph)	17/14	19/16
85 th Percentile Speed (mph)	23/20	24/21
Posted Speed Limit (mph)	30	30

mph = miles per hour.

²It is typical for traffic volumes to vary by 10 percent on a daily basis over the course of a week.



As can be seen in Table 2, the mean vehicle travel speed along Merrimac Street in the vicinity of the Project site was found to be approximately 15 miles per hour (mph), which is slightly below the mean travel speed that was observed in 2016 (approximately 18 mph). The average measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be approximately 21 mph which, again, is slightly below the average measured 85th vehicle travel speed that was observed in 2016 (24 mph) and continues to be below the posted speed limit (30 mph).

PROJECT-GENERATED TRAFFIC

In order to determine the traffic characteristics of the Project, trip-generation methodologies established by the ITE³ were used. The ITE provides trip-generation information for various types of land uses developed as a result of scientific studies that have been conducted over the past 50 plus years, the most recent update of which was published in September 2017. Based on the land uses that are proposed as a part of the Project and a review of the ITE trip-generation database, ITE Land Use Codes (LUCs) 221, *Multifamily Housing (Mid-Rise)*; 310, *Hotel*; and 820, *Shopping Center*; were used to establish the base traffic characteristics of the Project.

Consistent with the trip-generation methodology that was presented in the November 2016 TIA and that was subsequently reviewed and approved by the City's independent review consultant, appropriate adjustments were applied to the base trip-generation calculations in order to account for internal trips (trips that are made between uses within a mixed-use development) and pass-by trips (applied to the retail/restaurant uses only and consists of vehicles already traveling along Merrimac Street for other purposes that will patronize the Project in conjunction with their trip and then continue on to their original destination). Adjustments to account for the use of public transportation and pedestrian/bicycle trips were not applied to the base trip-generation calculations in order to provide conservative (high) trip projections from which to assess the potential impact of the Project on the transportation infrastructure.

Table 3 summarizes the trip-generation calculations for the current development program using the above methodology.

As described previously, the ITE published its most recent comprehensive re-write of *Trip Generation* in September 2017.⁴ The latest edition includes a number of new land uses and consolidated the multi-family land uses (apartments, condominiums and townhouses) into a single LUC, *Multifamily Housing*, differentiated by the number of floors that are proposed in each building (classified as low-rise, mid-rise and high-rise). Recent data collected for multi-family residential communities did not indicate a statistical difference in the trip rates between apartments, condominiums and townhouses, and, as such, consolidation of the data into a single land use type resulted in a better correlation between the number of residential units and the trips generated per unit. Additionally, these studies have indicated that the number of trips generated per unit in multi-family communities has been declining over the past several years, a trend that is indicative of the increased use of car-sharing and ride-sharing services, and a reduction in automobile ownership. As a result, the updated ITE data reflects a lower trip rate per unit for multi-family developments which, when applied to the current residential development program for the Project (215 multi-family units, or a 15 unit increase over the prior development program), results in a decrease in trips over the residential development program that was assessed in the November 2016 TIA.

³Ibid 1.

⁴Ibid 1.



Table 3
WATERFRONT WEST REDEVELOPMENT PROJECT
TRIP GENERATION SUMMARY

Time Period/Direction	Residential Component			Hotel Component			Retail/Restaurant Component					
	(A) Residential Housing (215 Units) ^a	(B) Internal/Dual Purpose Trips	(C = A -B) Total Primary Trips	(D) Hotel (80 Rooms) ^b	(E) Internal/Dual Purpose Trips	(F = D-E) Total Primary Trips	(G) Retail/ Restaurant (10,000 sf) ^c	(H) Internal/ Dual Purpose Trips	(I = G –H) Net Trips	(J) Pass-By Trips ^d	(K = I - J) Total Primary Trips	(L = C+F+K) Total Primary Project Trips
<i>Average Weekday Daily</i>												
Entering	585	63	522	238	63	175	628	126	502	151	351	1,048
Exiting	<u>585</u>	<u>63</u>	<u>522</u>	<u>238</u>	<u>63</u>	<u>175</u>	<u>628</u>	<u>126</u>	<u>502</u>	<u>151</u>	<u>351</u>	<u>1,048</u>
Total	1,170	126	1,044	476	126	350	1,256	252	1,004	302	702	2,096
<i>Weekday Morning Peak Hour</i>												
Entering	19	0	19	21	0	21	5	0	5	0	5	45
Exiting	<u>53</u>	<u>0</u>	<u>53</u>	<u>14</u>	<u>0</u>	<u>14</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>71</u>
Total	72	0	72	35	0	35	9	0	9	0	9	116
<i>Weekday Evening Peak Hour</i>												
Entering	56	5	51	17	6	11	47	9	38	14	24	86
Exiting	<u>36</u>	<u>5</u>	<u>31</u>	<u>17</u>	<u>6</u>	<u>11</u>	<u>52</u>	<u>9</u>	<u>43</u>	<u>14</u>	<u>29</u>	<u>71</u>
Total	92	12	82	34	12	22	99	18	81	28	53	157
<i>Saturday</i>												
Entering	536	107	429	238	85	153	1,069	169	900	234	666	1,248
Exiting	<u>536</u>	<u>107</u>	<u>429</u>	<u>238</u>	<u>85</u>	<u>153</u>	<u>1,069</u>	<u>169</u>	<u>900</u>	<u>234</u>	<u>666</u>	<u>1,248</u>
Total	1,072	214	858	476	170	306	2,138	338	1,800	468	1,332	2,496
<i>Saturday Midday Peak Hour</i>												
Entering	48	6	42	34	7	27	52	9	43	11	32	101
Exiting	<u>49</u>	<u>6</u>	<u>43</u>	<u>26</u>	<u>7</u>	<u>19</u>	<u>48</u>	<u>9</u>	<u>39</u>	<u>11</u>	<u>28</u>	<u>90</u>
Total	97	12	85	60	14	46	100	18	82	22	60	191

^aBased on ITE LUC 221, *Multifamily Housing (Mid-Rise)*.

^bBased on ITE LUC 310, *Hotel*.

^cBased on ITE LUC 820, *Shopping Center*.

^dA Pass-by trip rate was applied to the traffic volumes associated with the retail use as follows: average weekday daily - 30 percent; weekday morning peak-hour – 0 percent; weekday evening peak-hour - 34 percent; Saturday and Saturday midday peak-hour – 26 percent.



Project-Generated Traffic Summary and Comparison

As can be seen in Table 3, without adjustment to account for the use of public transportation or pedestrian/bicycle trips, the Project is expected to generate approximately 2,096 primary (new) vehicle trips on an average weekday and 2,496 primary vehicle trips on a Saturday (both two-way, 24-hour volumes), with 116 primary vehicle trips (45 vehicles entering and 71 exiting) expected during the weekday morning peak-hour, 157 primary vehicle trips (86 vehicles entering and 71 exiting) expected during the weekday evening peak-hour and 191 primary vehicle trips (101 vehicles entering and 90 exiting) expected during the Saturday midday peak-hour.

Table 4 provides a comparative analysis of the trip projections for the current development program to the development program that was assessed in the November 2016 TIA inclusive of both primary trips and pass-by trips (Table 4 provides a comparison of the total volume of traffic entering and exiting the Project site).

Table 4
WATERFRONT WEST REDEVELOPMENT PROJECT
TRAFFIC VOLUME COMPARISON

Time Period/Direction	Vehicle Trips		
	(A) Current Development Program	(B) Prior Development Program ^a	(A-B) Difference
<i>Average Weekday Daily:</i>	2,398	3,696	-1,298
<i>Weekday Morning Peak Hour:</i>	116	159	-43
<i>Weekday Evening Peak Hour:</i>	185	330	-145
<i>Saturday:</i>	2,964	4,648	-1,684
<i>Saturday Midday Peak Hour:</i>	213	421	-208

^aAs presented in the November 2016 TIS prepared by VAI.

As can be seen in Table 4, the current development program will generate 1,298 fewer total vehicle trips on an average weekday (a 35 percent reduction) and 1,684 fewer total vehicle trips on a Saturday (a 36 percent reduction), with 43 fewer total vehicle trips during the weekday morning peak-hour (a 27 percent reduction), 145 fewer total vehicle trips during the weekday evening peak-hour (a 44 percent reduction) and 208 fewer total vehicle trips during the Saturday midday peak-hour (a 49 percent reduction). Based on the comparative analysis, ***it is clear that the current development program will be less impactful on the transportation infrastructure than the development program that was assessed in the November 2016 TIA.***



PARKING

In conjunction with the Project, the existing parking that supports the marina will be maintained and will provide a parking ratio of 0.5 spaces per slip, which is consistent with the parking supply that is necessary to support the seasonal parking demands that have been observed by the marina operator. In total, 392 parking spaces will be provided to support the new uses that are proposed within the Project and will be allocated as shown in Table 5:

Table 5
PARKING ALLOCATION

Land Use	No. of Spaces	Parking Ratio
Residential	282	1.30 spaces per unit ⁵ (cumulative total)
Hotel	42	1.0 spaces per room/key; Shared, managed & off-site provisions will be made to accommodate hotel use
Retail/Restaurant	0	Shared parking
Marina	68	Shared Parking
TOTAL:	392	

The residential parking ratio is represented as a composite on a per unit basis, with market conditions driving the mix of units (i.e., studio, one, two and three-bedroom units) that will be constructed. The program is consistent with the parking supply that is provided for multifamily residential communities located in the Newburyport area (including the waterfront in Portsmouth, New Hampshire) and is within the range of values documented by the ITE for a multifamily community in a suburban setting with access to public transportation resources.⁶ The market study of residential parking in the Newburyport area is attached.

Parking demands for a hotel use vary based on the amenities that are offered and the modes of transportation that are available. In addition, information provided by the hotel operator to guests prior to their arrival can also influence travel mode and parking demands. An adequate number of parking spaces will be provided by the hotel operator through a managed system of shared and dedicated on-site parking. Off-site provisions will be maintained by the hotel operator to accommodate additional parking. Guests will pay a separate fee for on-site parking and will be issued a parking pass that will be required to be displayed within the vehicle. Employees will be required to park at an off-site location and will be encouraged to use alternative modes of transportation to single-occupant vehicles (SOVs).

Parking for the restaurant and retail space that is to be located within the Project will be accommodated by available public parking that is located proximate to the Project site along Merrimac Street and intersecting roadways and in the Visitor's Center parking lot. It is expected that a significant portion of the patronage of the shops and restaurants that are to be located within the Project site will be derived from persons that are visiting other uses in the area or within the Project site. Similar to the hotel, employees will be required to park at an off-site location and will be encouraged to use alternative modes of transportation to SOVs.

⁵The residential parking ratio is represented as a composite on a per unit basis to account for market conditions. The total shown is a cumulative total derived from the follow: 1.0 spaces per studio unit, 1.25 spaces per one-bedroom unit; 1.50 spaces per two-bedroom unit, and 2.0 spaces per three-bedroom unit.

⁶*Parking Generation Manual*, 5th Edition; Institute of Transportation Engineers; Washington, D.C.; 2019. For a multifamily residential community, the average parking demand was reported to be 1.31 spaces per dwelling unit and the 85th percentile peak parking demand was identified to be 1.47 spaces per dwelling unit.



SUMMARY

VAI has prepared an update to the November 2016 TIA that was submitted in support of the Waterfront West mixed-use development to be located off Merrimac Street and accessed by way of Tournament Wharf, McKay's Wharf and Brown's Wharf along the southern bank of the Merrimack River in Newburyport, Massachusetts. Specifically, this update: i) presented new (July 2018) traffic volume and vehicle travel speed data for Merrimac Street and the study area intersections that were evaluated in the November 2016 TIA; ii) reviewed the MassDOT high crash location database in order to identify any changes in motor vehicle crash trends within the study area; iii) provided trip-generation calculations for the current development program that is proposed for the Project; and iv) comparatively assessed the impact of the current development program to the development program that was assessed in the November 2016 TIA.

As noted herein, current data for multi-family residential communities published by the ITE have found that the number of trips generated per unit has declined. As a result, applying the updated ITE data for multi-family developments to the current residential development program for the Project (215 multi-family units, or a 15 unit increase over the prior development program), resulted in a decrease in trips over the residential development program that was assessed in the November 2016 TIA.

Based on this updated assessment, we have concluded the following with respect to the Project:

1. Traffic volume conditions within the study area have not changed significantly between 2016 and 2018. Accordingly, the conditions that were assessed in the November 2016 TIA would not be materially different with respect to the relative impact of the Project, particularly given the reduction in Project generated traffic that is associated with the current development program;
2. A review of the MassDOT statewide High Crash Location List did not indicate any listed locations within the study area that was assessed in the November 2016 TIA, consistent with the findings that were presented in the November 2016 TIA;
3. The current development program will generate up to 36 percent fewer vehicle trips on a daily basis and up to 49 percent fewer vehicle trips during the weekday and Saturday peak hours over the development program that was assessed in the November 2016 TIA and, as such, ***the current development program will be less impactful on the transportation infrastructure than the development program that was assessed in the November 2016 TIA;*** and
4. Sufficient parking will be provided to support the existing marina operation and the proposed uses that are to be located within the Project site.

Accordingly, the elements of the transportation improvement program that have been developed for the Project in consultation with the City and their independent review consultant continue to be sufficient to off-set the expected impact of the Project and to address needed transportation infrastructure improvements that were identified independent of the Project. These improvements are as follows and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals. To the extent that the Project is constructed in phases, the identified improvement measures may also be phased in a manner that will be consistent with the build-out of the Project:



Transportation Demand Management

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

- Information regarding public transportation services, maps, schedules and fare information will be posted in a central location within each building and/or otherwise made available to hotel guests, residents and employees;
- A “welcome packet” will be provided to new residents and employees detailing available public transportation services, bicycle and walking alternatives, and commuter options available through MassRIDES’ and their Bay State Commute program which rewards individuals that choose to walk, bicycle, carpool, vanpool or that use public transportation to travel to and from work;
- Residents and employees will be made aware of the Emergency Ride Home (ERH) program available through MassRIDES, which reimburses employees of a participating MassRIDES employer partner worksite that is registered for ERH and that carpool, take transit, bicycle, walk or vanpool to work;
- Pedestrian accommodations will be incorporated within the Project site consisting of sidewalks linking buildings and parking to on-site amenities and sidewalks along Merrimac Street. As requested by the City’s independent review consultant, the sidewalk along the Project site frontage on Merrimac Street will be reconstructed to match the historic brick treatment used along the sidewalk adjacent to the site;
- A connection to the Clipper City Rail Trail will be incorporated into the Project and include an extension of the Harborwalk along the Project site frontage on the Merrimack River;
- A mail drop will be provided in a central location within each building; and
- Bicycle parking will be provided, including both exterior bicycle racks and interior bicycle parking.

Off-Site

Merrimac Street at Summer Street, Winter Street and the Route 1 Ramps - Operating conditions for left-turn movements exiting from Route 1 southbound to Merrimac Street and for left-turn and through movements from Summer Street at its intersection with Merrimac Street and the Route 1 northbound on-ramp were found to be constrained under existing conditions and independent of the Project. As a result of these existing conditions, MassDOT is in the process of developing preliminary design plans for the installation of traffic control signals at both intersections; however, a construction date and funding source have not yet been identified. In order to advance these improvements, the Project proponent will prepare design plans, up to and including the MassDOT 100 Percent Design/Project Specifications & Estimate (PS&E) submission, and will assist the City in preparing the necessary grant applications to obtain funding for the construction of the improvements. With the installation of traffic control signals at the Route 1 ramp intersections with Merrimac Street, Summer Street and Winter Street, operating conditions were shown to improve to acceptable conditions.

In conjunction with the City’s review of the November 2016 TIA, the City’s intendent review consultant acknowledged the benefit to overall traffic operations and safety that would result from installation of traffic control signals at the ramp intersections; however, it was recommended that Merrimac Street be widened



approaching the Route 1 ramps in order to provide an additional travel lane in both directions to reduce vehicle queuing along Merrimac Street. This widening would: i) eliminate on-street parking between Summer Street and Titcomb Street; ii) require the acquisition of land owned or controlled by the Project proponent; and iii) impact the initial layout of the Project and proposed building setbacks. As requested by the City's consultant, the Project proponent will work with the City to establish appropriate building setbacks that will allow for the Project to proceed while maintaining the City's ability to widen Merrimac Street to provide a four (4) lane cross-section approaching the Route 1 ramps.

Merrimac Street at Green Street and Waterfront Park - Left-turn movements exiting Green Street onto Merrimac Street and all movements from the driveway to Waterfront Park were found to be operating at or over capacity during weekday evening and Saturday midday peak hours under existing conditions and independent of the Project. A traffic control signal has been installed at this intersection that is currently operating in flashing mode (flashing "yellow" for Merrimac Street and flashing "red" for Green Street and Waterfront Park). As a part of the Downtown Circulation Study, the City's independent review consultant developed alternative improvement measures for this intersection consisting of: i) realigning Green Street to the east to align with the Visitors Center driveway and replacing the pedestrian traffic signal with a fully operational (controlling vehicles and pedestrians) traffic signal system; or ii) reconfiguring the intersection as a modern roundabout; both alternatives would entail re-establishing two-way traffic along Green Street. With these improvements, overall operating conditions at the Merrimac Street/Green Street intersection were shown to improve to acceptable conditions.

The City is in the process of advancing changes to circulation patterns for streets within the downtown area, including along the Green Street corridor. These changes will likely include improvements at the Merrimac Street/Green Street intersection to accommodate the resulting change in traffic patterns and to facilitate pedestrian access. The Project proponent remains committed supporting the reactivation of the traffic control signal at the intersection and implementation of pedestrian access improvements. The details of any financial contribution will be defined in the Development Agreement with the City.

cc: File



ATTACHMENTS

AUTOMATIC TRAFFIC RECORDER COUNTS

MANUAL TURNING MOVEMENT COUNTS

VEHICLE TRAVEL SPEED

MASSDOT HIGH CRASH LOCATION MAPPING

TRIP-GENERATION CALCULATIONS

INTERNAL TRIP CALCULATIONS

AUTOMATIC TRAFFIC RECORDER COUNTS

Accurate Counts
978-664-2565

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Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281VOL1

Start Time	8/2/2018 Thu	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	160			21	94				
12:15		4	167			10	97				
12:30		6	163			1	88				
12:45		2	153	20	643	7	114	39	393	59	1036
01:00		2	139			2	91				
01:15		6	123			3	107				
01:30		2	133			4	108				
01:45		1	156	11	551	2	103	11	409	22	960
02:00		0	137			2	118				
02:15		1	136			1	127				
02:30		3	131			1	144				
02:45		1	138	5	542	0	151	4	540	9	1082
03:00		1	131			4	109				
03:15		1	136			1	130				
03:30		1	146			4	138				
03:45		3	165	6	578	1	128	10	505	16	1083
04:00		2	157			3	137				
04:15		3	154			1	129				
04:30		5	173			4	125				
04:45		6	186	16	670	7	111	15	502	31	1172
05:00		7	167			11	134				
05:15		15	176			21	120				
05:30		24	199			19	88				
05:45		20	179	66	721	30	92	81	434	147	1155
06:00		31	161			27	119				
06:15		37	157			27	101				
06:30		45	140			53	85				
06:45		67	153	180	611	58	122	165	427	345	1038
07:00		92	124			50	130				
07:15		90	94			78	131				
07:30		116	92			83	147				
07:45		139	111	437	421	83	115	294	523	731	944
08:00		166	96			95	120				
08:15		167	80			97	105				
08:30		159	74			94	152				
08:45		211	62	703	312	104	156	390	533	1093	845
09:00		197	50			92	106				
09:15		159	56			82	129				
09:30		147	50			90	156				
09:45		175	46	678	202	86	98	350	489	1028	691
10:00		165	57			93	108				
10:15		145	41			87	98				
10:30		181	24			80	69				
10:45		155	29	646	151	108	42	368	317	1014	468
11:00		139	31			109	43				
11:15		145	15			91	32				
11:30		145	19			128	25				
11:45		146	18	575	83	104	18	432	118	1007	201
Total		3343	5485			2159	5190			5502	10675
Percent		37.9%	62.1%			29.4%	70.6%			34.0%	66.0%

Accurate Counts
978-664-2565

Page 2

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281VOL1

Start Time	8/3/2018 Fri	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		7	153			18	115				
12:15		8	141			18	101				
12:30		9	159			12	124				
12:45		3	153	27	606	7	105	55	445	82	1051
01:00		11	147			13	117				
01:15		1	140			5	137				
01:30		4	158			7	100				
01:45		3	161	19	606	2	114	27	468	46	1074
02:00		2	152			1	113				
02:15		1	119			3	145				
02:30		1	137			3	124				
02:45		3	150	7	558	3	127	10	509	17	1067
03:00		1	125			4	157				
03:15		0	158			1	131				
03:30		5	167			3	115				
03:45		4	143	10	593	3	133	11	536	21	1129
04:00		2	132			2	135				
04:15		3	155			3	102				
04:30		3	121			8	136				
04:45		11	150	19	558	9	135	22	508	41	1066
05:00		10	141			16	133				
05:15		10	148			15	119				
05:30		27	156			16	100				
05:45		29	162	76	607	19	117	66	469	142	1076
06:00		27	147			30	99				
06:15		44	157			32	95				
06:30		56	145			48	117				
06:45		68	156	195	605	71	77	181	388	376	993
07:00		78	123			56	89				
07:15		81	145			51	73				
07:30		119	121			74	89				
07:45		158	138	436	527	87	96	268	347	704	874
08:00		138	94			72	168				
08:15		137	89			92	140				
08:30		169	78			101	116				
08:45		211	79	655	340	86	98	351	522	1006	862
09:00		169	70			132	144				
09:15		143	72			110	118				
09:30		148	72			77	114				
09:45		184	55	644	269	95	84	414	460	1058	729
10:00		173	58			93	110				
10:15		158	52			97	79				
10:30		156	30			103	55				
10:45		164	29	651	169	93	43	386	287	1037	456
11:00		145	26			116	61				
11:15		146	27			115	63				
11:30		151	26			99	29				
11:45		158	17	600	96	80	28	410	181	1010	277
Total		3339	5534			2201	5120			5540	10654
Percent		37.6%	62.4%			30.1%	69.9%			34.2%	65.8%

Accurate Counts

978-664-2565

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281VOL1

Start Time	8/4/2018 Sat	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		18	162			29	106				
12:15		12	139			15	130				
12:30		10	147			23	102				
12:45		15	147	55	595	21	104	88	442	143	1037
01:00		12	148			11	108				
01:15		3	155			12	109				
01:30		4	131			8	114				
01:45		7	118	26	552	10	89	41	420	67	972
02:00		1	115			14	111				
02:15		4	144			6	94				
02:30		1	118			2	100				
02:45		2	155	8	532	4	86	26	391	34	923
03:00		3	164			2	97				
03:15		8	132			5	105				
03:30		2	143			6	90				
03:45		3	157	16	596	2	117	15	409	31	1005
04:00		2	136			4	118				
04:15		1	159			3	97				
04:30		5	150			5	99				
04:45		9	145	17	590	4	95	16	409	33	999
05:00		10	143			8	109				
05:15		14	127			6	80				
05:30		10	146			11	99				
05:45		27	148	61	564	14	98	39	386	100	950
06:00		30	144			19	81				
06:15		28	136			28	95				
06:30		46	141			17	91				
06:45		66	166	170	587	44	91	108	358	278	945
07:00		52	129			43	111				
07:15		78	95			35	103				
07:30		89	97			43	91				
07:45		116	91	335	412	77	78	198	383	533	795
08:00		92	63			71	85				
08:15		119	78			84	55				
08:30		108	82			75	52				
08:45		145	67	464	290	77	52	307	244	771	534
09:00		141	57			117	37				
09:15		122	50			95	47				
09:30		150	45			94	75				
09:45		162	67	575	219	90	79	396	238	971	457
10:00		170	56			93	133				
10:15		161	42			90	107				
10:30		144	58			86	126				
10:45		141	65	616	221	98	103	367	469	983	690
11:00		157	58			122	90				
11:15		157	41			135	71				
11:30		155	33			109	59				
11:45		139	31	608	163	144	39	510	259	1118	422
Total		2951	5321			2111	4408			5062	9729
Percent		35.7%	64.3%			32.4%	67.6%			34.2%	65.8%
Grand Total		9633	16340			6471	14718			16104	31058
Percent		37.1%	62.9%			30.5%	69.5%			34.1%	65.9%

ADT

ADT 15,721

AADT 15,721

978-664-2565

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

[illegible]

MANUAL TURNING MOVEMENT COUNTS

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
aather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	14	10	0	0	0	0	2
07:15 AM	20	13	0	0	0	0	3
07:30 AM	27	14	0	0	0	0	4
07:45 AM	28	17	0	0	0	0	4
Total	89	54	0	0	0	0	14
08:00 AM	36	19	0	0	0	0	5
08:15 AM	34	23	0	0	0	0	5
08:30 AM	20	20	1	0	0	0	4
08:45 AM	32	23	0	0	0	0	5
Total	122	85	1	0	0	0	20
Grand Total	211	139	1	0	0	0	34
Apprch %	60.3	39.7	100	0	0	0	
Total %	60.1	39.6	0.3	0	0	0	
Cars	202	129	0	0	0	0	30
% Cars	95.7	92.8	0	0	0	0	94
Trucks	9	10	1	0	0	0	4
% Trucks	4.3	7.2	100	0	0	0	5

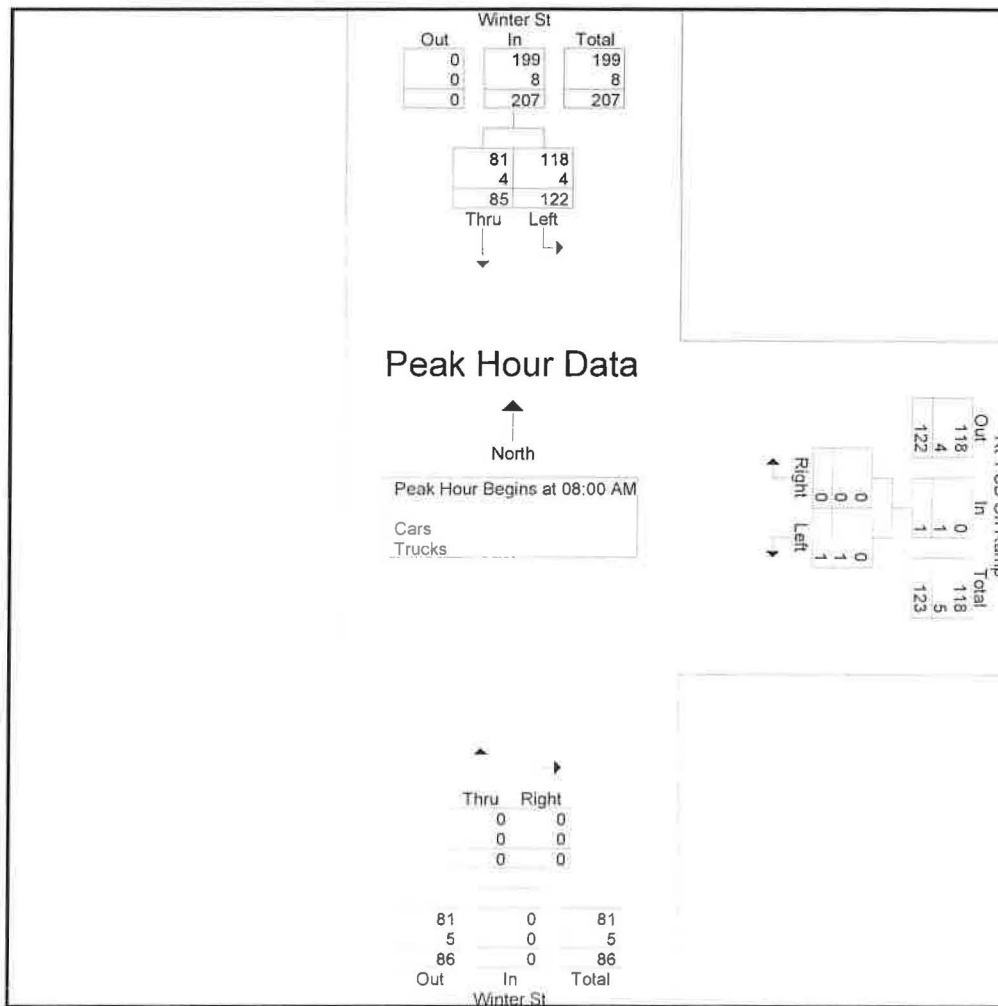
Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	36	19	55	0	0	0	0	0	0	5
08:15 AM	34	23	57	0	0	0	0	0	0	5
08:30 AM	20	20	40	1	0	1	0	0	0	4
08:45 AM	32	23	55	0	0	0	0	0	0	5
Total Volume	122	85	207	1	0	1	0	0	0	20
% App. Total	58.9	41.1		100	0		0	0		
PHF	.847	.924	.908	.250	.000	.250	.000	.000	.000	.91
Cars	118	81	199	0	0	0	0	0	0	19
% Cars	96.7	95.3	96.1	0	0	0	0	0	0	95
Trucks	4	4	8	1	0	1	0	0	0	
% Trucks	3.3	4.7	3.9	100	0	100	0	0	0	4



Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	13	10	0	0	0	0	13
07:15 AM	19	11	0	0	0	0	19
07:30 AM	24	12	0	0	0	0	24
07:45 AM	28	15	0	0	0	0	28
Total	84	48	0	0	0	0	132
08:00 AM	35	18	0	0	0	0	35
08:15 AM	34	22	0	0	0	0	34
08:30 AM	19	18	0	0	0	0	19
08:45 AM	30	23	0	0	0	0	30
Total	118	81	0	0	0	0	199
Grand Total	202	129	0	0	0	0	331
Apprch %	61	39	0	0	0	0	
Total %	61	39	0	0	0	0	

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	1	0	0	0	0	0	
07:15 AM	1	2	0	0	0	0	
07:30 AM	3	2	0	0	0	0	
07:45 AM	0	2	0	0	0	0	
Total	5	6	0	0	0	0	
08:00 AM	1	1	0	0	0	0	
08:15 AM	0	1	0	0	0	0	
08:30 AM	1	2	1	0	0	0	
08:45 AM	2	0	0	0	0	0	
Total	4	4	1	0	0	0	
Grand Total	9	10	1	0	0	0	
Apprch %	47.4	52.6	100	0	0	0	
Total %	45	50	5	0	0	0	

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds

Start Time	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			Exclu. Total	Inclu. Total	Int. Tot
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	0	1	0	0	0	0	0	0	0	0	1	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	
Total	0	1	0	0	0	0	0	0	0	0	1	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	0	1	0	0	0	0	0	0	0	0	1	
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	
Total	0	1	0	0	0	0	0	0	0	0	1	
Grand Total	0	2	0	0	0	0	0	0	0	0	2	
Apprch %	0	100		0	0		0	0				
Total %	0	100		0	0		0	0		0	100	

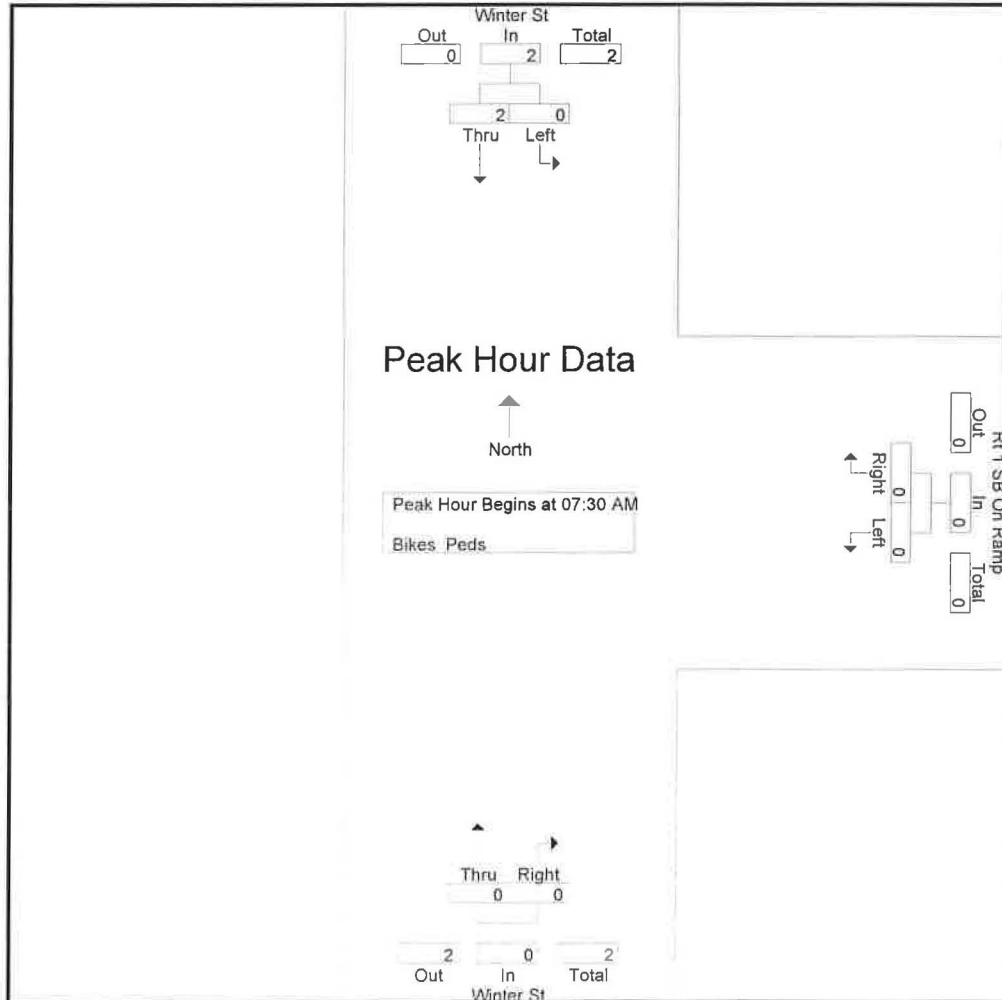
Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	1	1	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	
08:00 AM	0	0	0	0	0	0	0	0	0	
08:15 AM	0	1	1	0	0	0	0	0	0	
Total Volume	0	2	2	0	0	0	0	0	0	
% App. Total	0	100		0	0		0	0		
PHF	.000	.500	.500	.000	.000	.000	.000	.000	.000	.500



Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	42	29	0	0	0	0	0
04:15 PM	24	24	0	0	0	0	0
04:30 PM	29	22	0	0	0	0	0
04:45 PM	21	24	0	0	0	0	0
Total	116	99	0	0	0	0	0
05:00 PM	24	20	0	0	0	0	0
05:15 PM	24	23	0	0	0	0	0
05:30 PM	27	28	0	0	0	0	0
05:45 PM	18	15	0	0	0	0	0
Total	93	86	0	0	0	0	0
Grand Total	209	185	0	0	0	0	0
Apprch %	53	47	0	0	0	0	0
Total %	53	47	0	0	0	0	0
Cars	208	183	0	0	0	0	0
% Cars	99.5	98.9	0	0	0	0	0
Trucks	1	2	0	0	0	0	0
% Trucks	0.5	1.1	0	0	0	0	0

978-664-2565

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

Winter St

Out	In	Total
0	215	215
0	0	0
0	215	215

1st St

Thru	Right	Left
99	0	116
0	0	0
99	0	116

Peak Hour Begins at 04:00 PM

Cars

Trucks

North

Thru Right

0	0
0	0
0	0

Out In Total

99	0	99
0	0	0
99	0	99

Out In Total

Winter St

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	42	29	0	0	0	0	7
04:15 PM	24	24	0	0	0	0	4
04:30 PM	29	22	0	0	0	0	5
04:45 PM	21	24	0	0	0	0	4
Total	116	99	0	0	0	0	20
05:00 PM	24	19	0	0	0	0	4
05:15 PM	24	22	0	0	0	0	4
05:30 PM	26	28	0	0	0	0	5
05:45 PM	18	15	0	0	0	0	3
Total	92	84	0	0	0	0	17
Grand Total	208	183	0	0	0	0	37
Apprch %	53.2	46.8	0	0	0	0	
Total %	53.2	46.8	0	0	0	0	

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	
Total	0	0	0	0	0	0	
05:00 PM	0	1	0	0	0	0	
05:15 PM	0	1	0	0	0	0	
05:30 PM	1	0	0	0	0	0	
05:45 PM	0	0	0	0	0	0	
Total	1	2	0	0	0	0	
Grand Total	1	2	0	0	0	0	
Apprch %	33.3	66.7	0	0	0	0	
Total %	33.3	66.7	0	0	0	0	

978-664-2565

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

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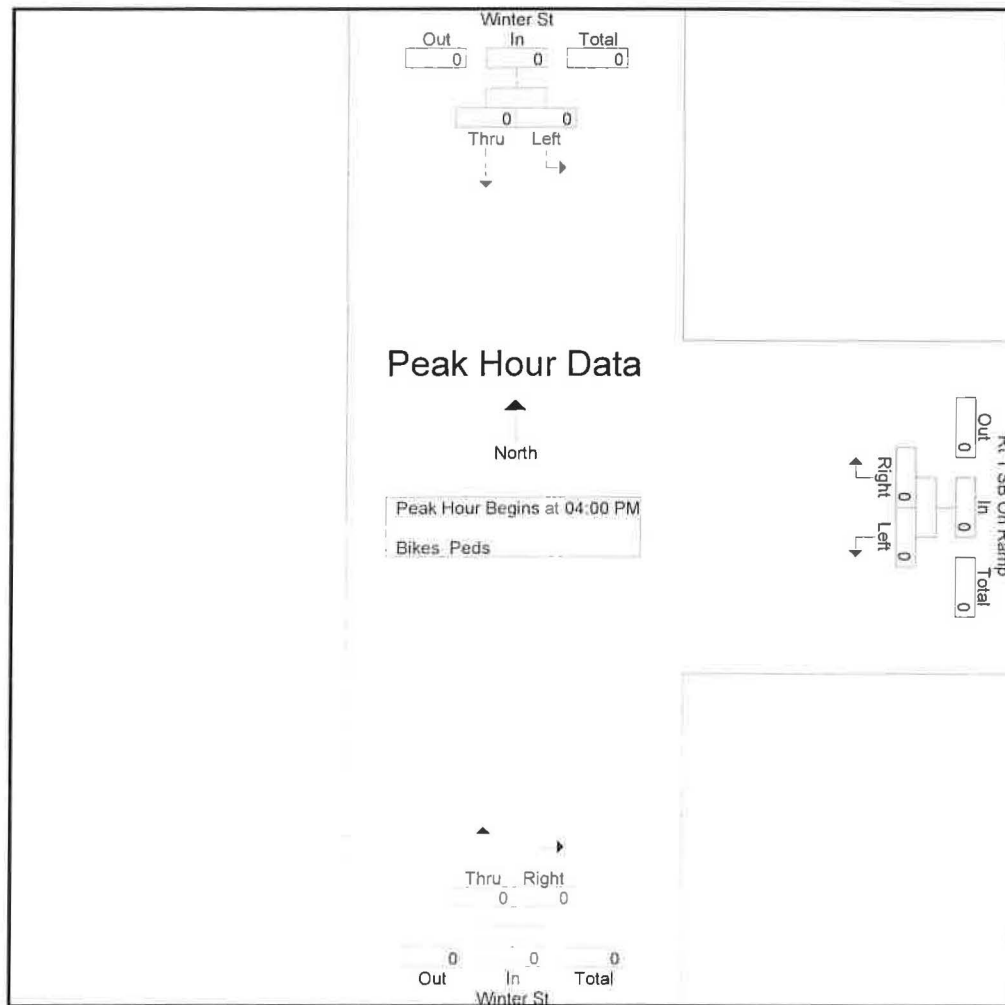
Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.00



Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/28/20
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	24	23	0	0	0	0	
11:15 AM	25	29	0	0	0	0	
11:30 AM	25	26	0	0	0	0	
11:45 AM	26	25	0	0	0	0	
Total	100	103	0	0	0	0	20
12:00 PM	33	26	0	0	0	0	
12:15 PM	29	25	0	0	0	0	
12:30 PM	30	33	1	0	0	0	
12:45 PM	28	29	0	0	0	0	
Total	120	113	1	0	0	0	20
01:00 PM	31	28	0	0	0	0	
01:15 PM	28	29	0	0	0	0	
01:30 PM	30	46	0	0	0	0	
01:45 PM	26	37	0	0	0	0	
Total	115	140	0	0	0	0	20
Grand Total	335	356	1	0	0	0	60
Apprch %	48.5	51.5	100	0	0	0	
Total %	48.4	51.4	0.1	0	0	0	
Cars	332	350	0	0	0	0	60
% Cars	99.1	98.3	0	0	0	0	98
Trucks	3	6	1	0	0	0	
% Trucks	0.9	1.7	100	0	0	0	1

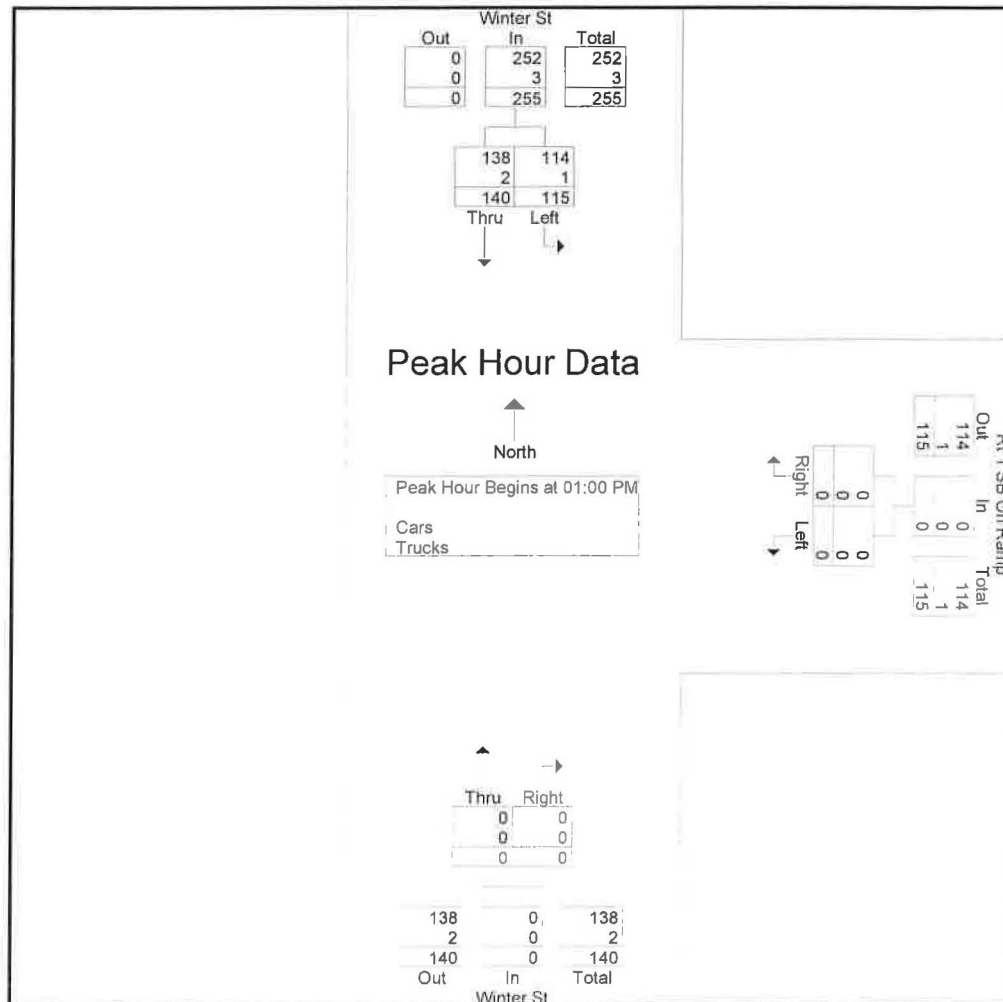
Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/28/21
Page No : 2

	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:00 PM										
01:00 PM	31	28	59	0	0	0	0	0	0	5
01:15 PM	28	29	57	0	0	0	0	0	0	5
01:30 PM	30	46	76	0	0	0	0	0	0	7
01:45 PM	26	37	63	0	0	0	0	0	0	6
Total Volume	115	140	255	0	0	0	0	0	0	25
% App. Total	45.1	54.9		0	0		0	0		
PHF	.927	.761	.839	.000	.000	.000	.000	.000	.000	.83
Cars	114	138	252	0	0	0	0	0	0	25
% Cars	99.1	98.6	98.8	0	0	0	0	0	0	98
Trucks	1	2	3	0	0	0	0	0	0	
% Trucks	0.9	1.4	1.2	0	0	0	0	0	0	1



Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 4

Groups Printed- Cars

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	24	23	0	0	0	0	47
11:15 AM	24	26	0	0	0	0	50
11:30 AM	25	26	0	0	0	0	51
11:45 AM	26	25	0	0	0	0	51
Total	99	100	0	0	0	0	199
12:00 PM	33	26	0	0	0	0	59
12:15 PM	29	24	0	0	0	0	53
12:30 PM	29	33	0	0	0	0	62
12:45 PM	28	29	0	0	0	0	57
Total	119	112	0	0	0	0	221
01:00 PM	31	28	0	0	0	0	59
01:15 PM	27	29	0	0	0	0	56
01:30 PM	30	44	0	0	0	0	74
01:45 PM	26	37	0	0	0	0	63
Total	114	138	0	0	0	0	252
Grand Total	332	350	0	0	0	0	682
Apprch %	48.7	51.3	0	0	0	0	
Total %	48.7	51.3	0	0	0	0	

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2011
Page No : 7

Groups Printed- Trucks

Start Time	Winter St From North		Rt 1 SB On Ramp From East		Winter St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	0	0	0	0	0	0	
11:15 AM	1	3	0	0	0	0	
11:30 AM	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	
Total	1	3	0	0	0	0	
12:00 PM	0	0	0	0	0	0	
12:15 PM	0	1	0	0	0	0	
12:30 PM	1	0	1	0	0	0	
12:45 PM	0	0	0	0	0	0	
Total	1	1	1	0	0	0	
01:00 PM	0	0	0	0	0	0	
01:15 PM	1	0	0	0	0	0	
01:30 PM	0	2	0	0	0	0	
01:45 PM	0	0	0	0	0	0	
Total	1	2	0	0	0	0	
Grand Total	3	6	1	0	0	0	
Apprch %	33.3	66.7	100	0	0	0	
Total %	30	60	10	0	0	0	

Accurate Counts

978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2016
Page No : 10

Groups Printed- Bikes Peds

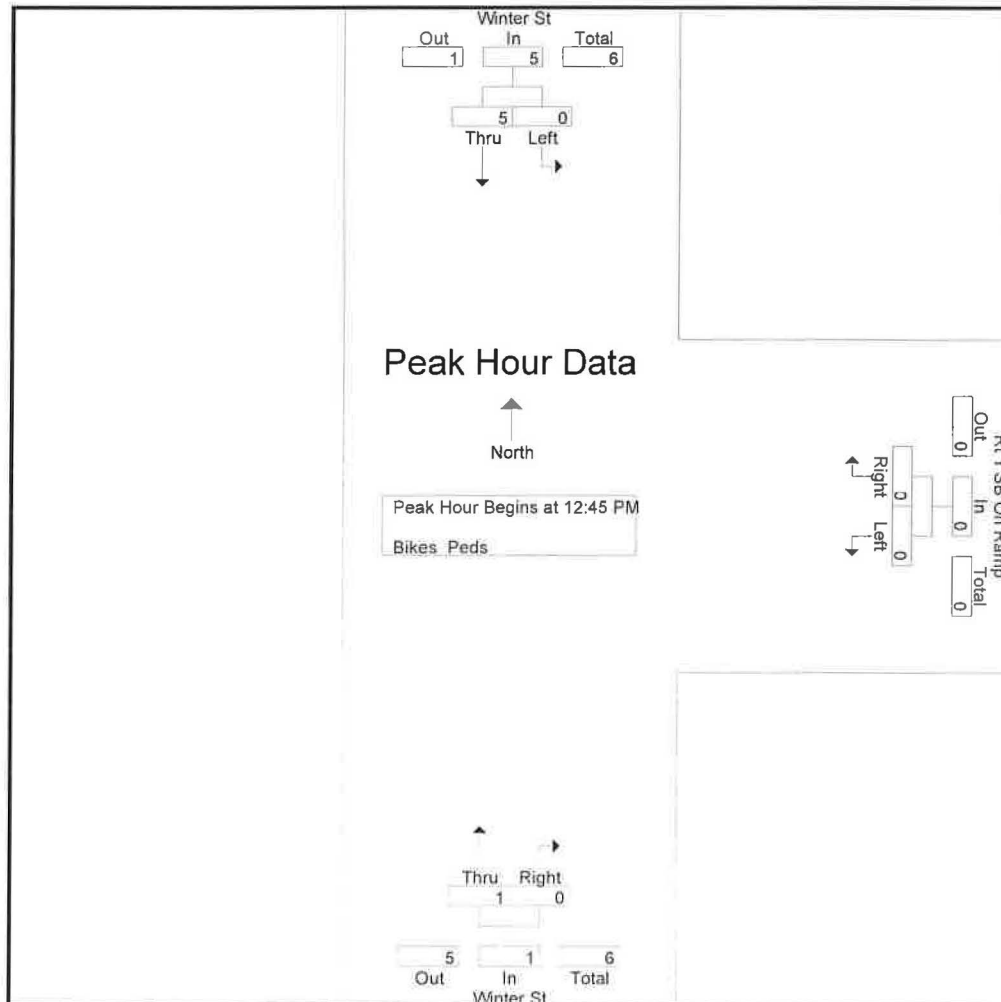
Start Time	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
11:00 AM	0	1	0	0	0	0	0	0	0	0	1	
11:15 AM	0	1	0	0	0	0	0	0	0	0	1	
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	
Total	0	2	0	0	0	0	0	0	0	0	2	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	0	1	0	0	0	0	0	0	0	0	1	
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	0	3	0	0	0	0	0	0	0	0	3	
Total	0	4	0	0	0	0	0	0	0	0	4	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	1	0	0	0	1	
01:30 PM	0	2	0	0	0	0	0	0	0	0	2	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	
Total	0	2	0	0	0	0	1	0	0	0	3	
Grand Total	0	8	0	0	0	0	1	0	0	0	9	
Apprch %	0	100		0	0		100	0				
Total %	0	88.9		0	0		11.1	0		0	100	

Accurate Counts
978-664-2565

S Street : Winter Street
W Street : Route 1 SB On Ramp
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/28/21
Page No : 11

	Winter St From North			Rt 1 SB On Ramp From East			Winter St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:45 PM										
12:45 PM	0	3	3	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	1	0	1	
01:30 PM	0	2	2	0	0	0	0	0	0	
Total Volume	0	5	5	0	0	0	1	0	1	
% App. Total	0	100		0	0		100	0		
PHF	.000	.417	.417	.000	.000	.000	.250	.000	.250	.500



Accurate Counts
978-664-2565

S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

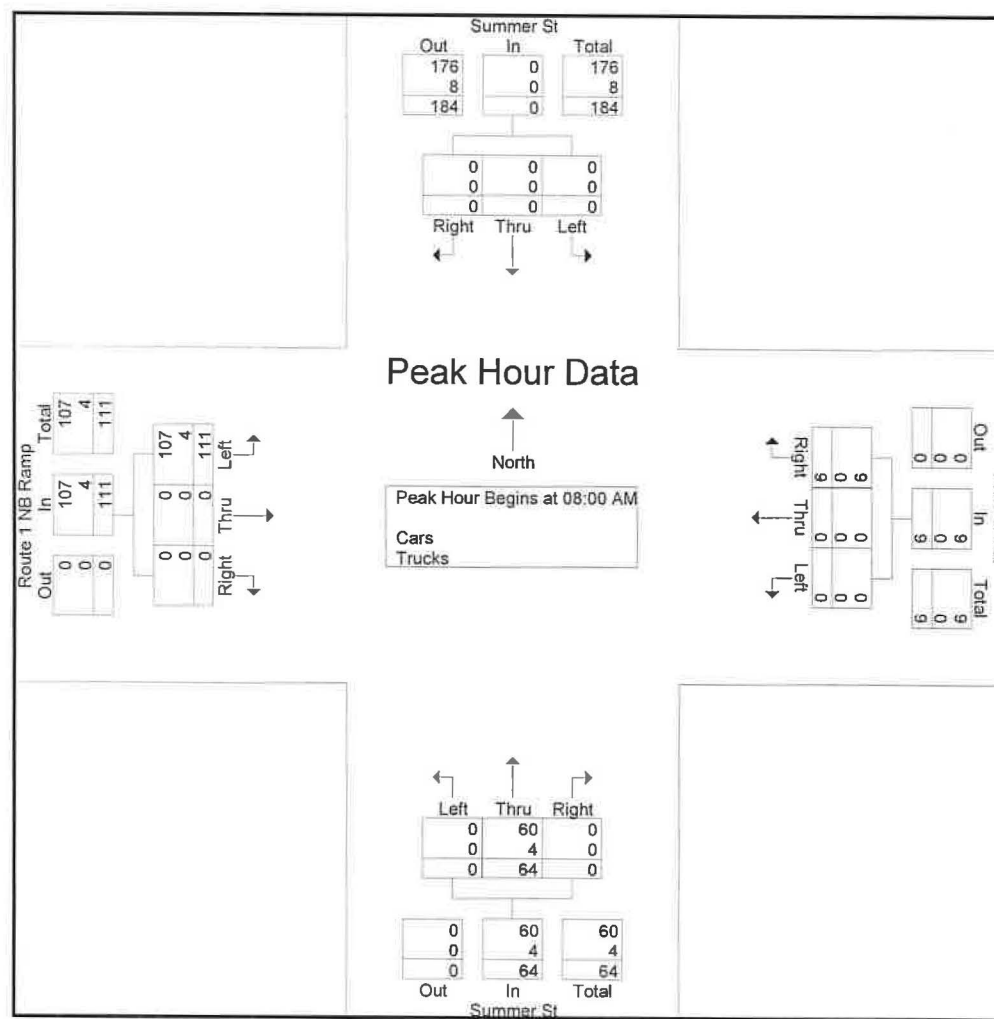
Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	0	0	0	15	0	12	0	0	27
07:15 AM	0	0	0	0	0	2	0	8	0	18	0	0	28
07:30 AM	0	0	0	0	0	1	0	16	0	19	0	0	36
07:45 AM	0	0	0	0	0	1	0	17	0	19	0	0	37
Total	0	0	0	0	0	4	0	56	0	68	0	0	128
08:00 AM	0	0	0	0	0	1	0	15	0	26	0	0	42
08:15 AM	0	0	0	0	0	2	0	15	0	30	0	0	47
08:30 AM	0	0	0	0	0	4	0	13	0	24	0	0	41
08:45 AM	0	0	0	0	0	2	0	21	0	31	0	0	54
Total	0	0	0	0	0	9	0	64	0	111	0	0	184
Grand Total	0	0	0	0	0	13	0	120	0	179	0	0	312
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	4.2	0	38.5	0	57.4	0	0	
Cars	0	0	0	0	0	13	0	114	0	169	0	0	296
% Cars	0	0	0	0	0	100	0	95	0	94.4	0	0	94.9
Trucks	0	0	0	0	0	0	0	6	0	10	0	0	16
% Trucks	0	0	0	0	0	0	0	5	0	5.6	0	0	5.1

Accurate Counts
978-664-2565

/S Street : Summer Street
 /W Street: Pleasant St / Route 1NB Ramp
 City/State : Newburyport, MA
 Weather : Cloudy

File Name : 7281001
 Site Code : 7281001
 Start Date : 7/26/201
 Page No : 2

	Summer St				Pleasant St				Summer St				Route 1 NB Ramp				
	From North				From East				From South				From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	1	1	0	15	0	15	26	0	0	26	42
08:15 AM	0	0	0	0	0	0	2	2	0	15	0	15	30	0	0	30	47
08:30 AM	0	0	0	0	0	0	4	4	0	13	0	13	24	0	0	24	41
08:45 AM	0	0	0	0	0	0	2	2	0	21	0	21	31	0	0	31	54
Total Volume	0	0	0	0	0	0	9	9	0	64	0	64	111	0	0	111	184
% App. Total	0	0	0		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.563	.563	.000	.762	.000	.762	.895	.000	.000	.895	.852
Cars	0	0	0	0	0	0	9	9	0	60	0	60	107	0	0	107	176
% Cars	0	0	0	0	0	0	100	100	0	93.8	0	93.8	96.4	0	0	96.4	95.7
Trucks	0	0	0	0	0	0	0	0	0	4	0	4	4	0	0	4	8
% Trucks	0	0	0	0	0	0	0	0	0	6.3	0	6.3	3.6	0	0	3.6	4.3



Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	0	1	1	0	15	0	15	26	0	0	26
+15 mins.	0	0	0	0	0	0	2	2	0	15	0	15	30	0	0	30
+30 mins.	0	0	0	0	0	0	4	4	0	13	0	13	24	0	0	24
+45 mins.	0	0	0	0	0	0	2	2	0	21	0	21	31	0	0	31
Total Volume	0	0	0	0	0	0	9	9	0	64	0	64	111	0	0	111
of All Total	0	0	0	0	0	0	100	100	0	100	0	100	100	0	0	100

Accurate Counts
978-664-2565

S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
City/State : Newburyport, MA
Weather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	0	0	0	15	0	10	0	0	25
07:15 AM	0	0	0	0	0	2	0	8	0	15	0	0	25
07:30 AM	0	0	0	0	0	1	0	14	0	18	0	0	33
07:45 AM	0	0	0	0	0	1	0	17	0	19	0	0	37
Total	0	0	0	0	0	4	0	54	0	62	0	0	120
08:00 AM	0	0	0	0	0	1	0	13	0	25	0	0	39
08:15 AM	0	0	0	0	0	2	0	14	0	28	0	0	44
08:30 AM	0	0	0	0	0	4	0	13	0	24	0	0	41
08:45 AM	0	0	0	0	0	2	0	20	0	30	0	0	52
Total	0	0	0	0	0	9	0	60	0	107	0	0	176
Grand Total	0	0	0	0	0	13	0	114	0	169	0	0	296
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	4.4	0	38.5	0	57.1	0	0	

Accurate Counts
978-664-2565

S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	3	0	0	3
07:30 AM	0	0	0	0	0	0	0	2	0	1	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	2	0	6	0	0	8
08:00 AM	0	0	0	0	0	0	0	2	0	1	0	0	3
08:15 AM	0	0	0	0	0	0	0	1	0	2	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
Total	0	0	0	0	0	0	0	4	0	4	0	0	8
Grand Total	0	0	0	0	0	0	0	6	0	10	0	0	16
Apprch %	0	0	0	0	0	0	0	100	0	100	0	0	
Total %	0	0	0	0	0	0	0	37.5	0	62.5	0	0	

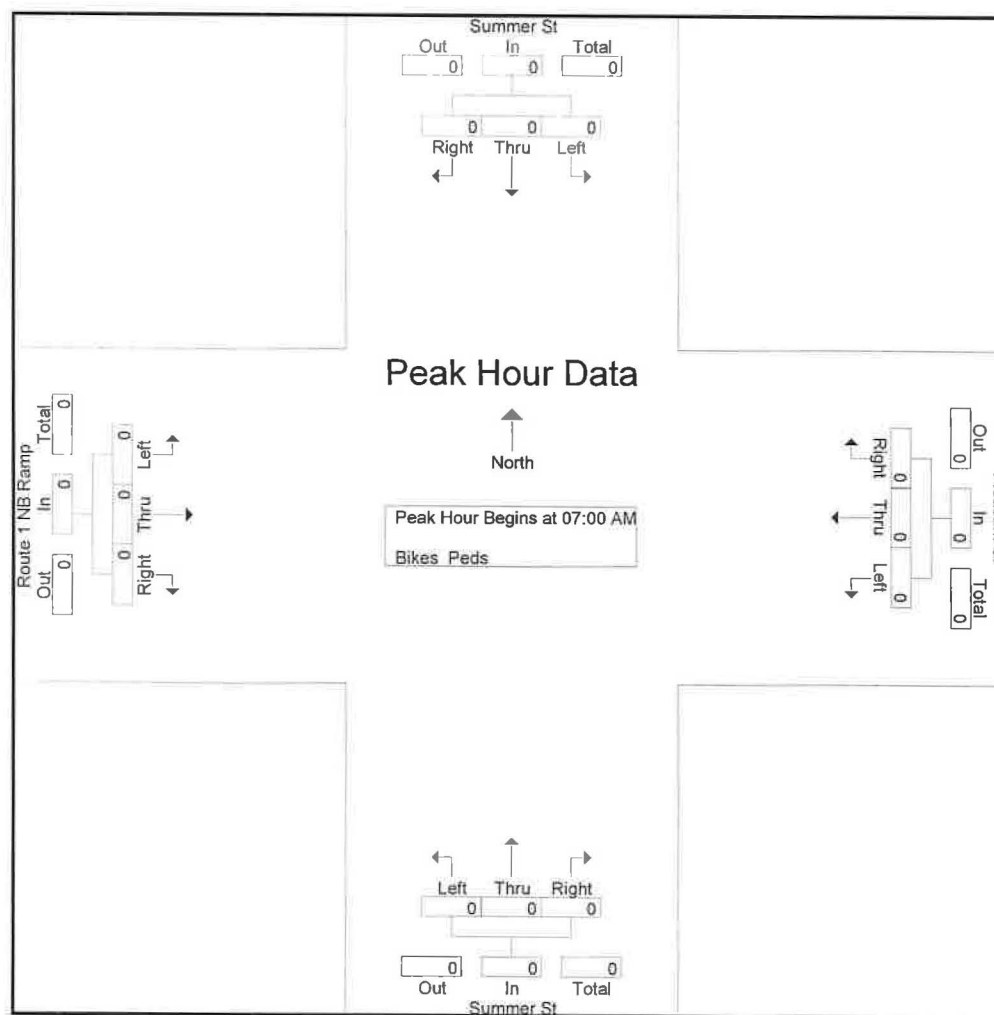
File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 13

978-664-2565

I/S Street : Summer Street
 W Street: Pleasant St / Route 1NB Ramp
 City/State : Newburyport, MA
 Weather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 14

[illegible]



Peak Hour for Each Approach Begins at:

[illegible]

Accurate Counts
978-664-2565

S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
City/State : Newburyport, MA
Weather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	0	2	0	39	0	24	0	0	65
04:15 PM	0	0	0	0	0	4	0	33	0	22	0	0	59
04:30 PM	0	0	0	0	0	2	0	33	0	18	0	0	53
04:45 PM	0	0	0	0	0	1	0	35	0	21	0	0	57
Total	0	0	0	0	0	9	0	140	0	85	0	0	234
05:00 PM	0	0	0	0	0	3	0	31	0	21	0	0	55
05:15 PM	0	0	0	0	0	1	0	32	0	26	0	0	59
05:30 PM	0	0	0	0	0	2	0	35	0	26	0	0	63
05:45 PM	0	0	0	0	0	2	0	35	0	26	0	0	63
Total	0	0	0	0	0	8	0	133	0	99	0	0	240
Grand Total	0	0	0	0	0	17	0	273	0	184	0	0	474
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	3.6	0	57.6	0	38.8	0	0	
Cars	0	0	0	0	0	17	0	272	0	183	0	0	472
% Cars	0	0	0	0	0	100	0	99.6	0	99.5	0	0	99.6
Trucks	0	0	0	0	0	0	0	1	0	1	0	0	2
% Trucks	0	0	0	0	0	0	0	0.4	0	0.5	0	0	0.4

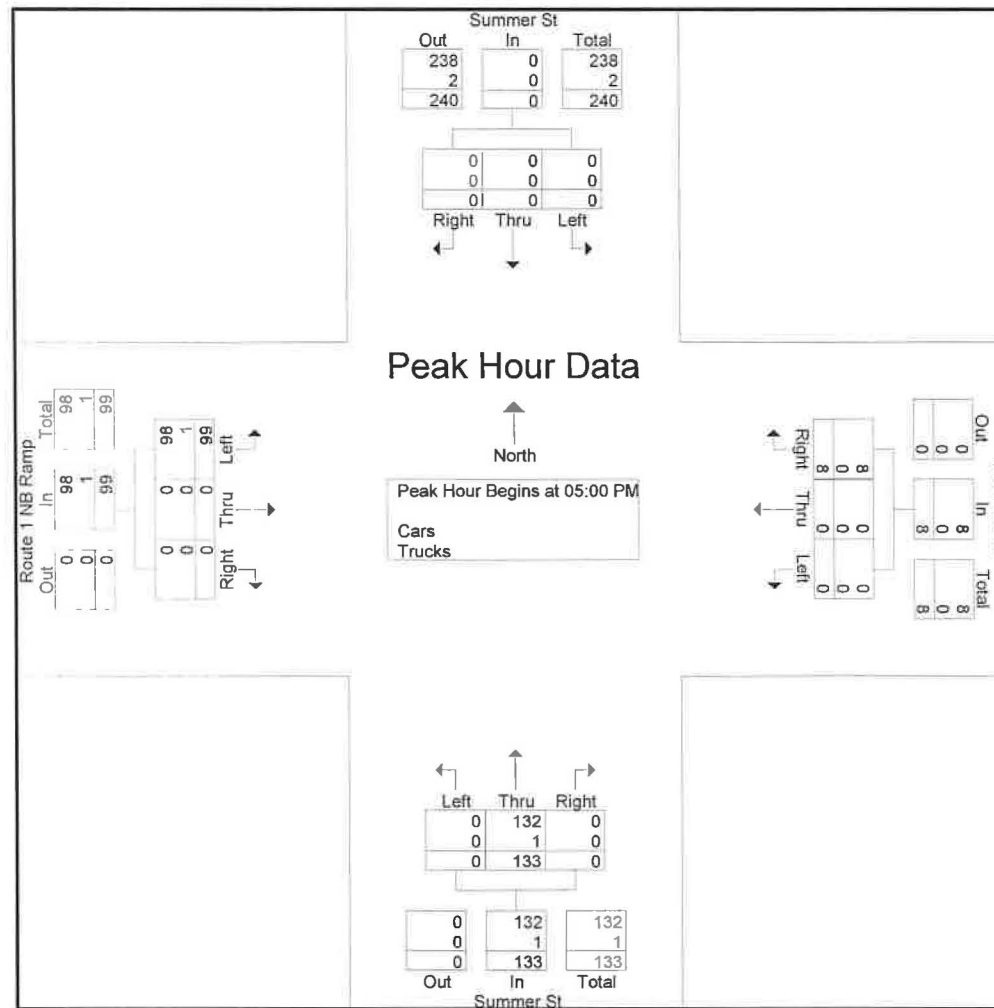
/S Street : Summer Street
 /W Street: Pleasant St / Route 1NB Ramp
 City/State : Newburyport, MA
 Weather : Cloudy

File Name : 7281001
 Site Code : 7281001
 Start Date : 7/26/201
 Page No : 2

Start Time	Summer St From North				Pleasant St From East				Summer St From South				Route 1 NB Ramp From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	3	3	0	31	0	31	21	0	0	21	55
05:15 PM	0	0	0	0	0	0	1	1	0	32	0	32	26	0	0	26	59
05:30 PM	0	0	0	0	0	0	2	2	0	35	0	35	26	0	0	26	63
05:45 PM	0	0	0	0	0	0	2	2	0	35	0	35	26	0	0	26	63
Total Volume	0	0	0	0	0	0	8	8	0	133	0	133	99	0	0	99	240
% App. Total	0	0	0		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.667	.667	.000	.950	.000	.950	.952	.000	.000	.952	.952
Cars	0	0	0	0	0	0	8	8	0	132	0	132	98	0	0	98	238
% Cars	0	0	0	0	0	0	100	100	0	99.2	0	99.2	99.0	0	0	99.0	99.2
Trucks	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
% Trucks	0	0	0	0	0	0	0	0	0	0.8	0	0.8	1.0	0	0	1.0	0.8

IS Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	4	4	0	39	0	39	21	0	0	21
+15 mins.	0	0	0	0	0	0	2	2	0	33	0	33	26	0	0	26
+30 mins.	0	0	0	0	0	0	1	1	0	33	0	33	26	0	0	26
+45 mins.	0	0	0	0	0	0	3	3	0	35	0	35	26	0	0	26
Total Volume	0	0	0	0	0	0	10	10	0	140	0	140	99	0	0	99
% App. Total	0	0	0	0	0	0	100	100	0	100	0	100	100	0	0	100

S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	0	2	0	39	0	24	0	0	65
04:15 PM	0	0	0	0	0	4	0	33	0	22	0	0	59
04:30 PM	0	0	0	0	0	2	0	33	0	18	0	0	53
04:45 PM	0	0	0	0	0	1	0	35	0	21	0	0	57
Total	0	0	0	0	0	9	0	140	0	85	0	0	234
05:00 PM	0	0	0	0	0	3	0	31	0	21	0	0	55
05:15 PM	0	0	0	0	0	1	0	32	0	26	0	0	59
05:30 PM	0	0	0	0	0	2	0	35	0	25	0	0	62
05:45 PM	0	0	0	0	0	2	0	34	0	26	0	0	62
Total	0	0	0	0	0	8	0	132	0	98	0	0	238
Grand Total	0	0	0	0	0	17	0	272	0	183	0	0	472
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	3.6	0	57.6	0	38.8	0	0	

/S Street : Summer Street
/W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	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
04:30 PM	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
Total	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
05:15 PM	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	1	0	0	1
05:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	0	0	2
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	2
Apprch %	0	0	0	0	0	0	0	100	0	100	0	0	
Total %	0	0	0	0	0	0	0	50	0	50	0	0	

Accurate Counts
978-664-2565

/S Street : Summer Street
/W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 13

Start Time	Groups Printed- Bikes Peds																			
	Summer St From North				Pleasant St From East				Summer St From South				Route 1 NB Ramp From West				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds				
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	2	0	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2
05:00 PM	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	2	3	5
Grand Total	0	0	0	0	0	0	0	4	0	3	0	0	0	0	0	0	0	4	3	7
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0					
Total %	0	0	0		0	0	0		0	100	0		0	0	0			57.1	42.9	

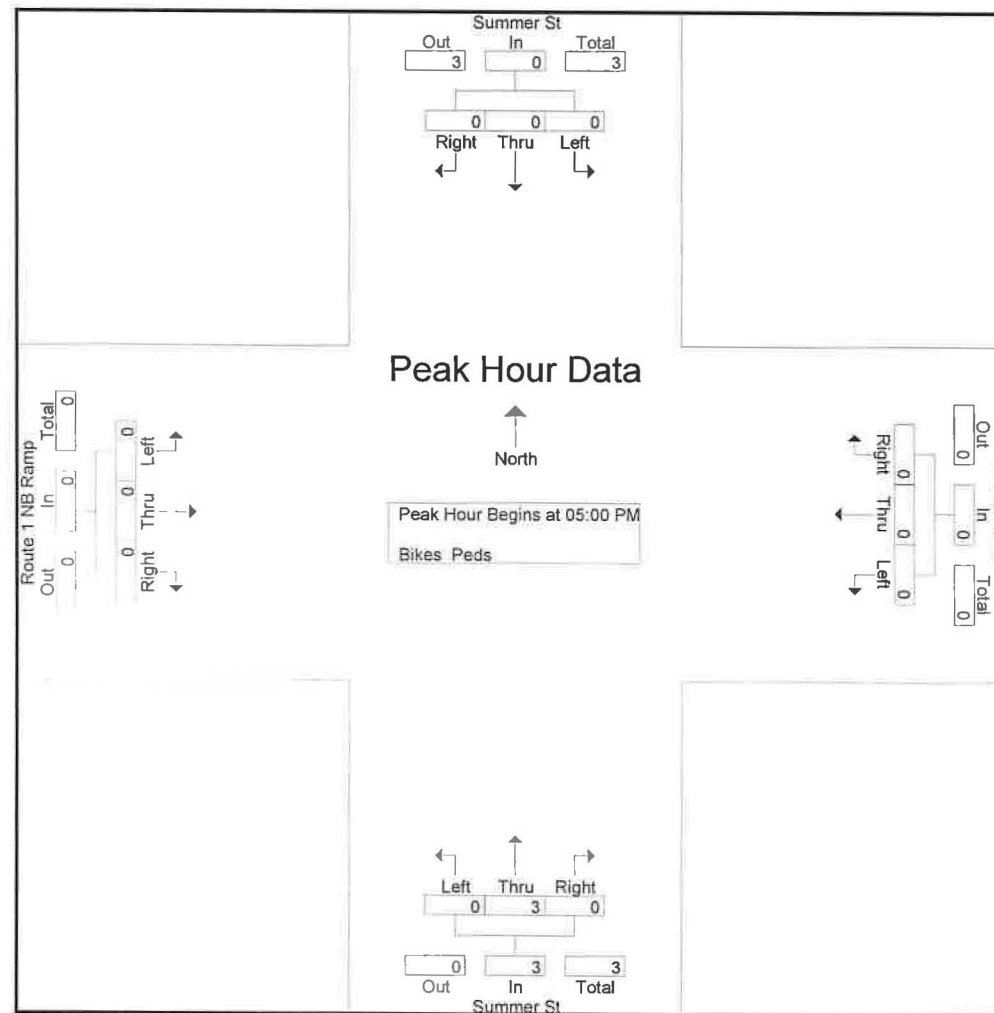
/S Street : Summer Street
 /W Street: Pleasant St / Route 1NB Ramp
 City/State : Newburyport, MA
 Weather : Cloudy

File Name : 7281001
 Site Code : 7281001
 Start Date : 7/26/201
 Page No : 14

	Summer St				Pleasant St				Summer St				Route 1 NB Ramp				Int. Total
	From North				From East				From South				From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
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	2	0	2	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.375

IS Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 7281001
Site Code : 7281001
Start Date : 7/26/201
Page No : 15



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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0

Accurate Counts
978-664-2565

S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 72810S1
Site Code : 7281001
Start Date : 7/28/2011
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	1	0	32	0	28	0	0	61
11:15 AM	0	0	0	0	0	2	0	31	0	29	0	0	62
11:30 AM	0	0	0	0	0	3	0	29	0	30	0	0	62
11:45 AM	0	0	0	0	0	4	0	30	0	24	0	0	58
Total	0	0	0	0	0	10	0	122	0	111	0	0	243
12:00 PM	0	0	0	0	0	3	0	38	0	28	0	0	69
12:15 PM	0	0	0	0	0	1	0	28	0	27	0	0	56
12:30 PM	0	0	0	0	0	2	0	38	0	37	0	0	77
12:45 PM	0	0	0	0	0	3	0	30	0	35	0	0	68
Total	0	0	0	0	0	9	0	134	0	127	0	0	270
01:00 PM	0	0	0	0	0	5	0	32	0	36	0	0	73
01:15 PM	0	0	0	0	0	2	0	42	0	23	0	0	67
01:30 PM	0	0	0	0	0	2	0	39	0	31	0	0	72
01:45 PM	0	0	0	0	0	4	0	36	0	25	0	0	65
Total	0	0	0	0	0	13	0	149	0	115	0	0	277
Grand Total	0	0	0	0	0	32	0	405	0	353	0	0	790
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	4.1	0	51.3	0	44.7	0	0	
Cars	0	0	0	0	0	32	0	402	0	347	0	0	781
% Cars	0	0	0	0	0	100	0	99.3	0	98.3	0	0	98.9
Trucks	0	0	0	0	0	0	0	3	0	6	0	0	9
% Trucks	0	0	0	0	0	0	0	0.7	0	1.7	0	0	1.1

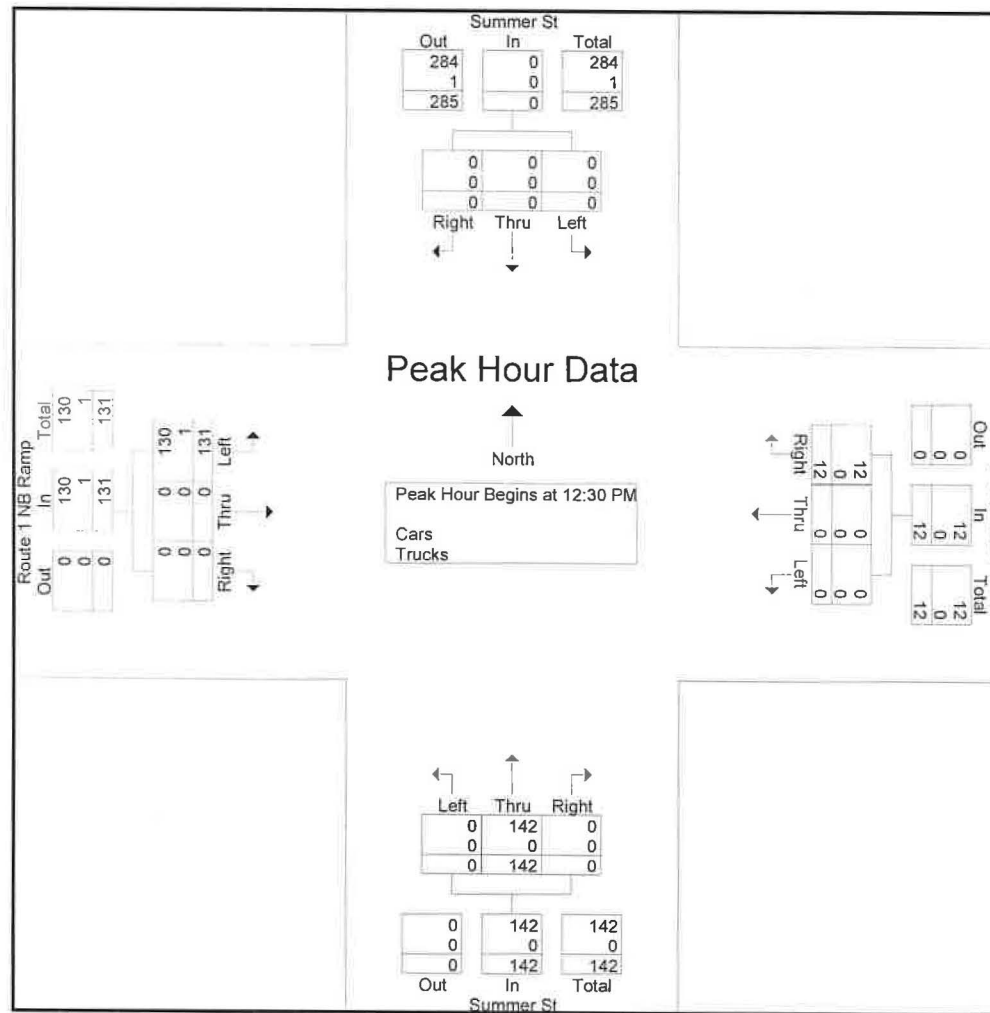
/S Street : Summer Street
 /W Street: Pleasant St / Route 1NB Ramp
 ity/State : Newburyport, MA
 eather : Cloudy

File Name : 72810S1
 Site Code : 7281001
 Start Date : 7/28/2011
 Page No : 2

	Summer St From North				Pleasant St From East				Summer St From South				Route 1 NB Ramp From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:30 PM																	
12:30 PM	0	0	0	0	0	0	2	2	0	38	0	38	37	0	0	37	77
12:45 PM	0	0	0	0	0	0	3	3	0	30	0	30	35	0	0	35	68
01:00 PM	0	0	0	0	0	0	5	5	0	32	0	32	36	0	0	36	73
01:15 PM	0	0	0	0	0	0	2	2	0	42	0	42	23	0	0	23	67
Total Volume	0	0	0	0	0	0	12	12	0	142	0	142	131	0	0	131	285
% App. Total	0	0	0		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.600	.600	.000	.845	.000	.845	.885	.000	.000	.885	.925
Cars	0	0	0	0	0	0	12	12	0	142	0	142	130	0	0	130	284
% Cars	0	0	0	0	0	0	100	100	0	100	0	100	99.2	0	0	99.2	99.6
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0.8	0	0	0.8	0.4

/S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 72810S1
Site Code : 7281001
Start Date : 7/28/2011
Page No : 3



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:00 AM				01:00 PM				01:00 PM				12:15 PM			
+0 mins.	0	0	0	0	0	0	5	5	0	32	0	32	27	0	0	27
+15 mins.	0	0	0	0	0	0	2	2	0	42	0	42	37	0	0	37
+30 mins.	0	0	0	0	0	0	2	2	0	39	0	39	35	0	0	35
+45 mins.	0	0	0	0	0	0	4	4	0	36	0	36	36	0	0	36
Total Volume	0	0	0	0	0	0	13	13	0	149	0	149	135	0	0	135
% App. Total	0	0	0	0	0	0	100	100	0	100	0	100	100	0	0	100
PHF	.000	.000	.000	.000	.000	.000	.650	.650	.000	.887	.000	.887	.912	.000	.000	.912

/S Street : Summer Street
/W Street: Pleasant St / Route 1NB Ramp
ity/State : Newburyport, MA
eather : Cloudy

File Name : 72810S1
Site Code : 7281001
Start Date : 7/28/2011
Page No : 5

Groups Printed- Cars

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	1	0	30	0	28	0	0	59
11:15 AM	0	0	0	0	0	2	0	31	0	27	0	0	60
11:30 AM	0	0	0	0	0	3	0	29	0	30	0	0	62
11:45 AM	0	0	0	0	0	4	0	30	0	21	0	0	55
Total	0	0	0	0	0	10	0	120	0	106	0	0	236
12:00 PM	0	0	0	0	0	3	0	37	0	28	0	0	68
12:15 PM	0	0	0	0	0	1	0	28	0	27	0	0	56
12:30 PM	0	0	0	0	0	2	0	38	0	37	0	0	77
12:45 PM	0	0	0	0	0	3	0	30	0	35	0	0	68
Total	0	0	0	0	0	9	0	133	0	127	0	0	269
01:00 PM	0	0	0	0	0	5	0	32	0	35	0	0	72
01:15 PM	0	0	0	0	0	2	0	42	0	23	0	0	67
01:30 PM	0	0	0	0	0	2	0	39	0	31	0	0	72
01:45 PM	0	0	0	0	0	4	0	36	0	25	0	0	65
Total	0	0	0	0	0	13	0	149	0	114	0	0	276
Grand Total	0	0	0	0	0	32	0	402	0	347	0	0	781
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	4.1	0	51.5	0	44.4	0	0	

Accurate Counts
978-664-2565

/S Street : Summer Street
 /W Street: Pleasant St / Route 1NB Ramp
 ity/State : Newburyport, MA
 eather : Cloudy

File Name : 72810S1
 Site Code : 7281001
 Start Date : 7/28/2011
 Page No : 9

Groups Printed- Trucks

Start Time	Summer St From North			Pleasant St From East			Summer St From South			Route 1 NB Ramp From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	3
Total	0	0	0	0	0	0	0	2	0	5	0	0	7
12:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	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	1
01:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	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	1
Grand Total	0	0	0	0	0	0	0	3	0	6	0	0	9
Apprch %	0	0	0	0	0	0	0	100	0	100	0	0	
Total %	0	0	0	0	0	0	0	33.3	0	66.7	0	0	

I/S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810S1
Site Code : 7281001
Start Date : 7/28/2011
Page No : 13

Groups Printed- Bikes Peds

Start Time	Summer St From North				Pleasant St From East				Summer St From South				Route 1 NB Ramp From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	2	3
Total	0	1	0	0	1	0	0	1	0	0	1	0	0	0	0	0	1	3	4
01:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
01:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	3	1	4
Grand Total	0	1	0	0	2	0	0	4	0	1	2	0	0	0	0	0	4	6	10
Apprch %	0	100	0		100	0	0		0	33.3	66.7		0	0	0				
Total %	0	16.7	0		33.3	0	0		0	16.7	33.3		0	0	0		40	60	

Accurate Counts
978-664-2565

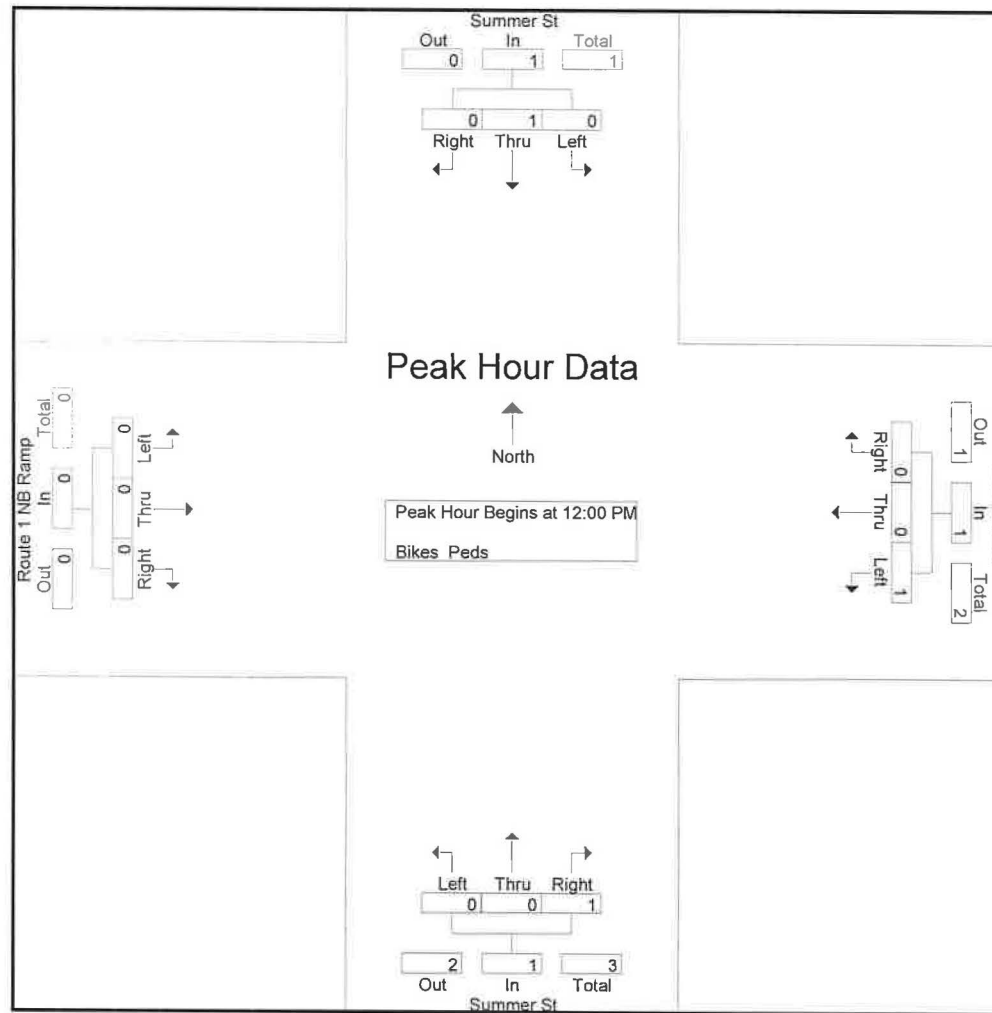
W Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810S1
Site Code : 7281001
Start Date : 7/28/2011
Page No : 14

Start Time	Summer St From North				Pleasant St From East				Summer St From South				Route 1 NB Ramp From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
Total Volume	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
% App. Total	0	100	0		100	0	0		0	0	100		0	0	0		
PHF	.000	.250	.000	.250	.250	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.375

I/S Street : Summer Street
W Street: Pleasant St / Route 1NB Ramp
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810S1
Site Code : 7281001
Start Date : 7/28/2011
Page No : 15



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:30 AM				12:00 PM				11:00 AM				11:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
+45 mins.	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	1	0	0	1	0	1	1	2	0	0	0	0
% App. Total	0	100	0		100	0	0		0	50	50		0	0	0	
PHF	.000	.250	.000	.250	.250	.000	.000	.250	.000	.250	.250	.500	.000	.000	.000	.000

S Street : Rte 1 SB Off / Winter St
W Street : Merrimac Street
y/State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	23	4	13	1	40	0	0	0	0	0	47	18	146
07:15 AM	20	6	9	10	56	0	0	0	0	0	64	17	182
07:30 AM	38	10	17	10	60	0	0	0	0	0	73	20	228
07:45 AM	43	12	16	10	74	0	0	0	0	0	107	25	287
Total	124	32	55	31	230	0	0	0	0	0	291	80	843
08:00 AM	37	12	13	8	65	0	0	0	0	0	119	35	289
08:15 AM	37	9	24	19	66	0	0	0	0	0	100	26	281
08:30 AM	46	11	14	12	67	0	0	0	0	0	107	19	276
08:45 AM	51	12	10	15	99	0	0	0	0	0	155	26	368
Total	171	44	61	54	297	0	0	0	0	0	481	106	1214
Grand Total	295	76	116	85	527	0	0	0	0	0	772	186	2057
Apprch %	60.6	15.6	23.8	13.9	86.1	0	0	0	0	0	80.6	19.4	
Total %	14.3	3.7	5.6	4.1	25.6	0	0	0	0	0	37.5	9	
Cars	290	68	112	74	509	0	0	0	0	0	766	186	2005
% Cars	98.3	89.5	96.6	87.1	96.6	0	0	0	0	0	99.2	100	97.5
Trucks	5	8	4	11	18	0	0	0	0	0	6	0	52
% Trucks	1.7	10.5	3.4	12.9	3.4	0	0	0	0	0	0.8	0	2.5

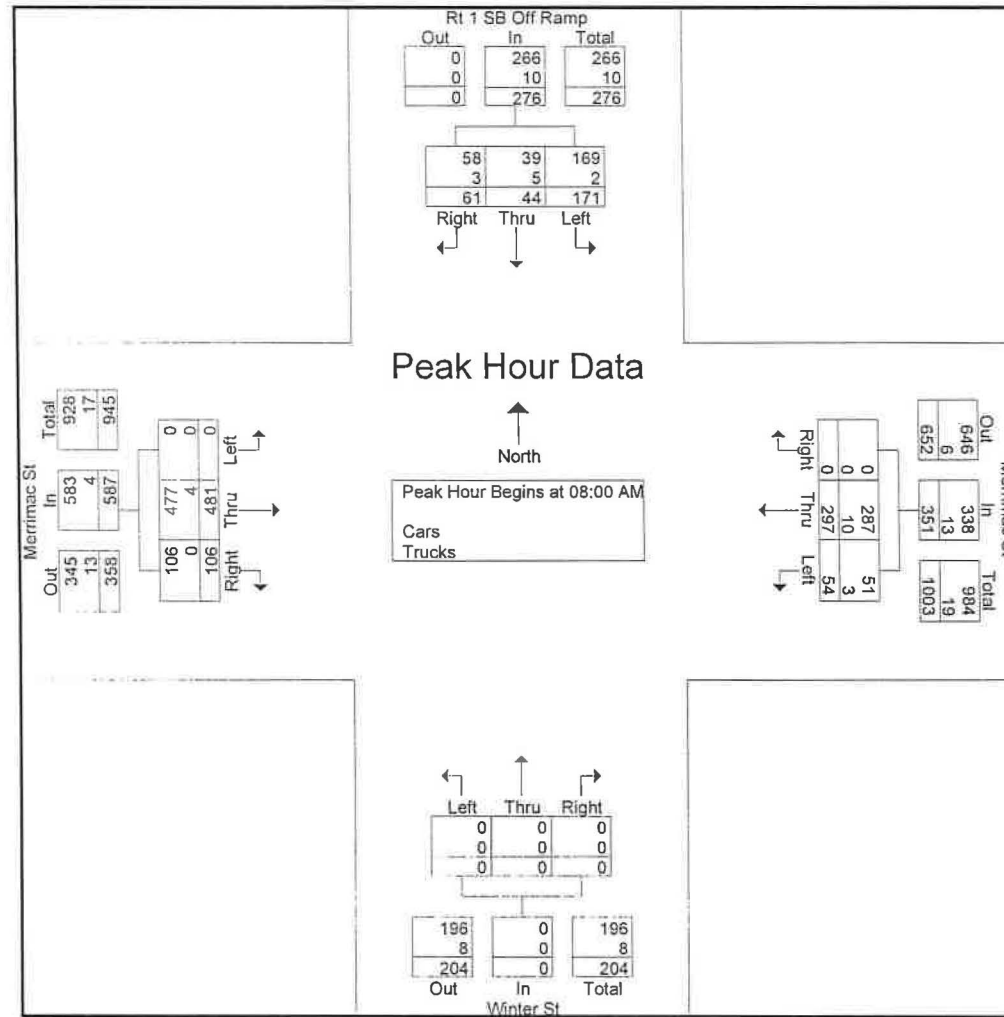
Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 2

Start Time	Rt 1 SB Off Ramp				Merrimac St				Winter St				Merrimac St				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	37	12	13	62	8	65	0	73	0	0	0	0	0	119	35	154	289
08:15 AM	37	9	24	70	19	66	0	85	0	0	0	0	0	100	26	126	281
08:30 AM	46	11	14	71	12	67	0	79	0	0	0	0	0	107	19	126	276
08:45 AM	51	12	10	73	15	99	0	114	0	0	0	0	0	155	26	181	368
Total Volume	171	44	61	276	54	297	0	351	0	0	0	0	0	481	106	587	1214
% App. Total	62	15.9	22.1		15.4	84.6	0		0	0	0		0	81.9	18.1		
PHF	.838	.917	.635	.945	.711	.750	.000	.770	.000	.000	.000	.000	.000	.776	.757	.811	.825
Cars	169	39	58	266	51	287	0	338	0	0	0	0	0	477	106	583	1187
% Cars	98.8	88.6	95.1	96.4	94.4	96.6	0	96.3	0	0	0	0	0	99.2	100	99.3	97.8
Trucks	2	5	3	10	3	10	0	13	0	0	0	0	0	4	0	4	27
% Trucks	1.2	11.4	4.9	3.6	5.6	3.4	0	3.7	0	0	0	0	0	0.8	0	0.7	2.2

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:00 AM				08:00 AM			
+0 mins.	37	12	13	62	8	65	0	73	0	0	0	0	0	119	35	154
+15 mins.	37	9	24	70	19	66	0	85	0	0	0	0	0	100	26	126
+30 mins.	46	11	14	71	12	67	0	79	0	0	0	0	0	107	19	126
+45 mins.	51	12	10	73	15	99	0	114	0	0	0	0	0	155	26	181
Total Volume	171	44	61	276	54	297	0	351	0	0	0	0	0	481	106	587
% App. Total	62	15.9	22.1		15.4	94.6	0		0	0	0	0	0	81.0	18.1	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/State : Newburyport, MA
ather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	21	4	13	1	35	0	0	0	0	0	47	18	139
07:15 AM	20	4	9	7	54	0	0	0	0	0	64	17	175
07:30 AM	38	10	16	6	60	0	0	0	0	0	73	20	223
07:45 AM	42	11	16	9	73	0	0	0	0	0	105	25	281
Total	121	29	54	23	222	0	0	0	0	0	289	80	818
08:00 AM	37	10	12	8	62	0	0	0	0	0	118	35	282
08:15 AM	36	8	23	19	63	0	0	0	0	0	99	26	274
08:30 AM	45	9	14	11	66	0	0	0	0	0	107	19	271
08:45 AM	51	12	9	13	96	0	0	0	0	0	153	26	360
Total	169	39	58	51	287	0	0	0	0	0	477	106	1187
Grand Total	290	68	112	74	509	0	0	0	0	0	766	186	2005
Apprch %	61.7	14.5	23.8	12.7	87.3	0	0	0	0	0	80.5	19.5	
Total %	14.5	3.4	5.6	3.7	25.4	0	0	0	0	0	38.2	9.3	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/State : Newburyport, MA
ather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	2	0	0	0	5	0	0	0	0	0	0	0	7
07:15 AM	0	2	0	3	2	0	0	0	0	0	0	0	7
07:30 AM	0	0	1	4	0	0	0	0	0	0	0	0	5
07:45 AM	1	1	0	1	1	0	0	0	0	0	2	0	6
Total	3	3	1	8	8	0	0	0	0	0	2	0	25
08:00 AM	0	2	1	0	3	0	0	0	0	0	1	0	7
08:15 AM	1	1	1	0	3	0	0	0	0	0	1	0	7
08:30 AM	1	2	0	1	1	0	0	0	0	0	0	0	5
08:45 AM	0	0	1	2	3	0	0	0	0	0	2	0	8
Total	2	5	3	3	10	0	0	0	0	0	4	0	27
Grand Total	5	8	4	11	18	0	0	0	0	0	6	0	52
Apprch %	29.4	47.1	23.5	37.9	62.1	0	0	0	0	0	100	0	
Total %	9.6	15.4	7.7	21.2	34.6	0	0	0	0	0	11.5	0	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/State : Newburyport, MA
ather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Start Time	Rt 1 SB Off Ramp From North				Merrimac St From East				Winter St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds							
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:45 AM	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	1	
08:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	
08:30 AM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	4	0	
08:45 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3	0	
Total	0	1	0	4	0	0	0	0	0	0	0	3	0	1	0	1	8	2	
Grand Total	0	2	0	4	0	0	0	0	0	0	0	3	0	1	0	1	8	3	
Apprch %	0	100	0		0	0	0		0	0	0		0	100	0				
Total %	0	66.7	0		0	0	0		0	0	0		0	33.3	0		72.7	27.3	

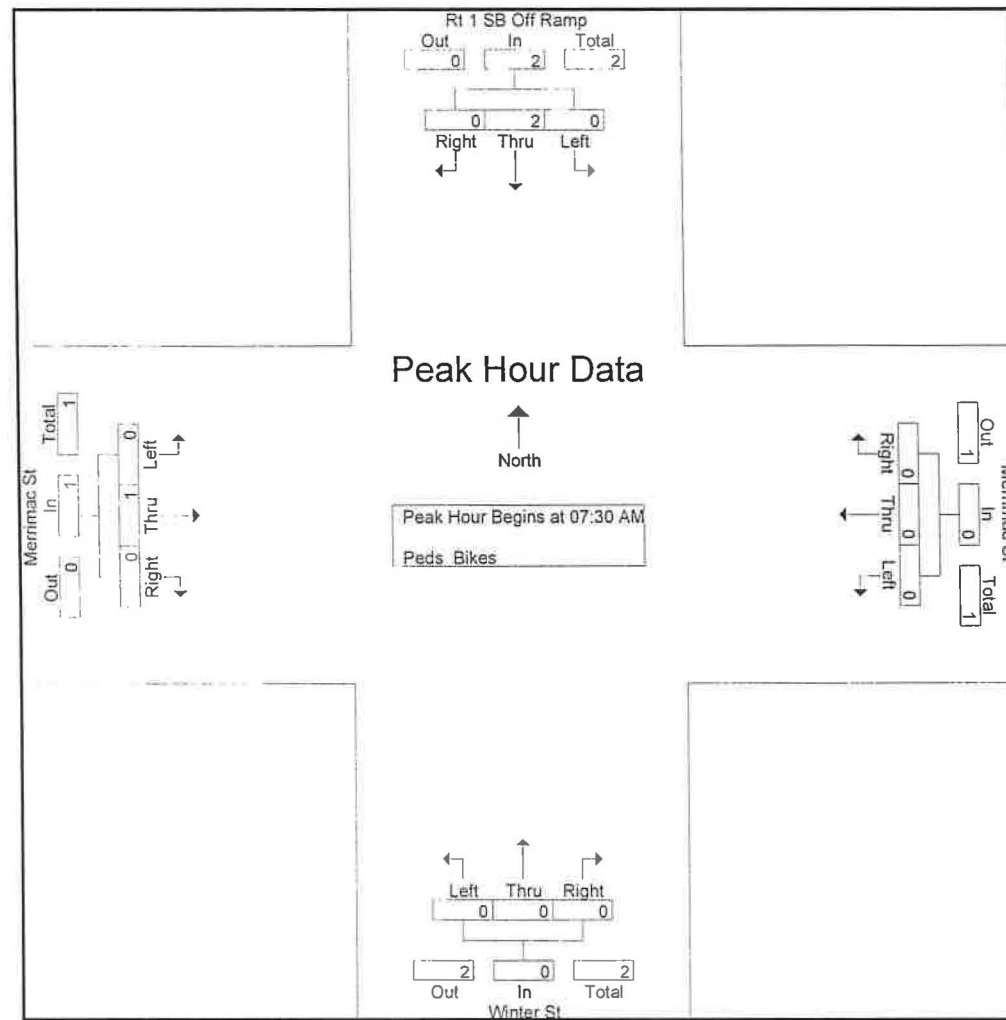
Street : Rte 1 SB Off / Winter St
 Street : Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 14

Rt 1 SB Off Ramp					Merrimac St				Winter St				Merrimac St				Int. Total
From North					From East				From South				From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
% App. Total	0	100	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.750

Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	100	0	100	0	0	0	0	0	0	0	0	100	0	100	100

Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

Weather : Cloudy

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	47	13	31	32	109	0	0	0	0	0	113	25	370
04:15 PM	37	5	19	15	93	0	0	0	0	0	115	26	310
04:30 PM	46	14	28	21	86	0	0	0	0	0	97	18	310
04:45 PM	48	2	21	23	92	0	0	0	0	0	102	18	306
Total	178	34	99	91	380	0	0	0	0	0	427	87	1296
05:00 PM	46	6	18	25	102	0	0	0	0	0	142	12	351
05:15 PM	36	13	33	18	87	0	0	0	0	0	144	14	345
05:30 PM	38	9	28	22	87	0	0	0	0	0	114	24	322
05:45 PM	56	6	30	18	97	0	0	0	0	0	122	11	340
Total	176	34	109	83	373	0	0	0	0	0	522	61	1358
Grand Total	354	68	208	174	753	0	0	0	0	0	949	148	2654
Apprch %	56.2	10.8	33	18.8	81.2	0	0	0	0	0	86.5	13.5	
Total %	13.3	2.6	7.8	6.6	28.4	0	0	0	0	0	35.8	5.6	
Cars	354	68	208	173	742	0	0	0	0	0	947	148	2640
% Cars	100	100	100	99.4	98.5	0	0	0	0	0	99.8	100	99.5
Trucks	0	0	0	1	11	0	0	0	0	0	2	0	14
% Trucks	0	0	0	0.6	1.5	0	0	0	0	0	0.2	0	0.5

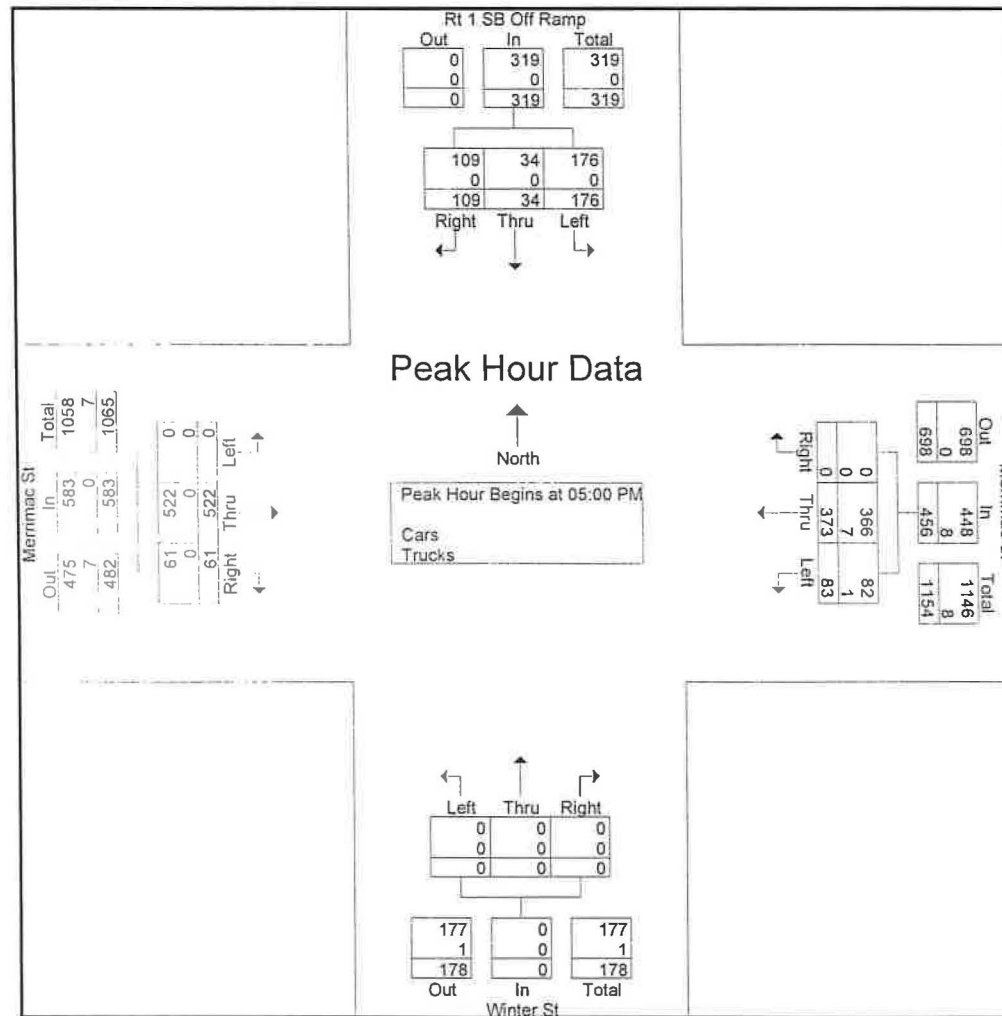
Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 2

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Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	46	6	18	70	32	109	0	141	0	0	0	0	0	142	12	154
+15 mins.	36	13	33	82	15	93	0	108	0	0	0	0	0	144	14	158
+30 mins.	38	9	28	75	21	86	0	107	0	0	0	0	0	114	24	138
+45 mins.	56	6	30	92	23	92	0	115	0	0	0	0	0	122	11	133
Total Volume	176	34	109	319	91	380	0	471	0	0	0	0	0	522	61	583
% App. Total	55.2	10.7	34.2		19.2	80.7	0		0	0	0	0	0	89.5	10.5	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	47	13	31	32	108	0	0	0	0	0	113	25	369
04:15 PM	37	5	19	15	91	0	0	0	0	0	114	26	307
04:30 PM	46	14	28	21	85	0	0	0	0	0	96	18	308
04:45 PM	48	2	21	23	92	0	0	0	0	0	102	18	306
Total	178	34	99	91	376	0	0	0	0	0	425	87	1290
05:00 PM	46	6	18	25	100	0	0	0	0	0	142	12	349
05:15 PM	36	13	33	18	86	0	0	0	0	0	144	14	344
05:30 PM	38	9	28	21	84	0	0	0	0	0	114	24	318
05:45 PM	56	6	30	18	96	0	0	0	0	0	122	11	339
Total	176	34	109	82	366	0	0	0	0	0	522	61	1350
Grand Total	354	68	208	173	742	0	0	0	0	0	947	148	2640
Apprch %	56.2	10.8	33	18.9	81.1	0	0	0	0	0	86.5	13.5	
Total %	13.4	2.6	7.9	6.6	28.1	0	0	0	0	0	35.9	5.6	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	3
04:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	0	0	0	0	0	2	0	6
05:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	1	3	0	0	0	0	0	0	0	4
05:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	1	7	0	0	0	0	0	0	0	8
Grand Total	0	0	0	1	11	0	0	0	0	0	2	0	14
Apprch %	0	0	0	8.3	91.7	0	0	0	0	0	100	0	
Total %	0	0	0	7.1	78.6	0	0	0	0	0	14.3	0	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Groups Printed- Peds Bikes																				
Start Time	Rt 1 SB Off Ramp From North				Merrimac St From East				Winter St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds				
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	
Total	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	5	0	5	
05:00 PM	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	2	3	
05:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	3	1	4	
05:30 PM	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	
Total	1	1	0	4	0	1	0	0	0	0	0	2	0	1	0	2	8	4	12	
Grand Total	1	1	0	5	0	1	0	0	0	0	0	6	0	1	0	2	13	4	17	
Apprch %	50	50	0		0	100	0		0	0	0		0	100	0					
Total %	25	25	0		0	25	0		0	0	0		0	25	0		76.5	23.5		

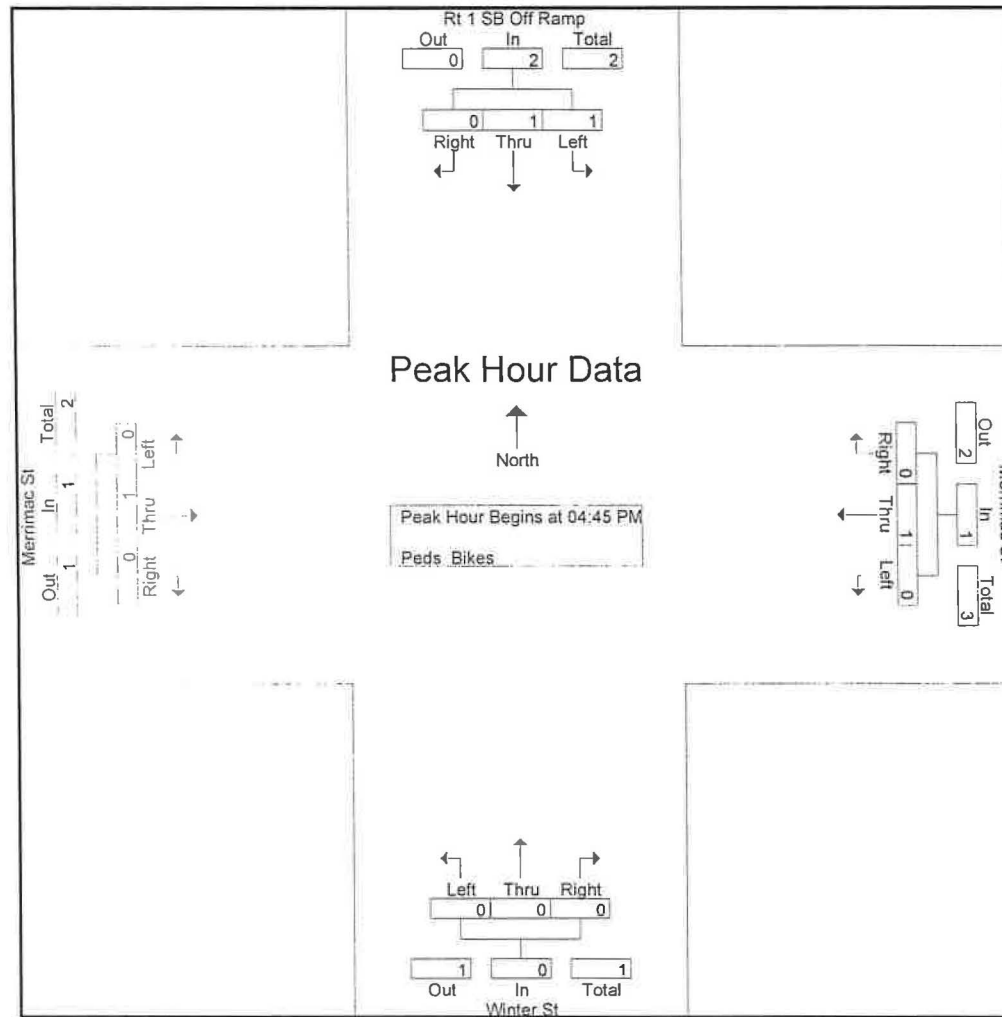
Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 14

Start Time	Rt 1 SB Off Ramp				Merrimac St				Winter St				Merrimac St				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	1	0	2	0	1	0	1	0	0	0	0	0	1	0	1	4
% App. Total	50	50	0		0	100	0		0	0	0		0	100	0		
PHF	.250	.250	.000	.500	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

Street : Rte 1 SB Off / Winter St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 15



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

Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	1	1	0	2	0	1	0	1	0	0	0	0	0	1	0	1
% App. Total	50	50	0	100	0	100	0	100	0	0	0	0	0	100	0	100

Accurate Counts
978-664-2565

S Street : Rte 1 SB Off / Winter St
V Street : Merrimac Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	40	18	35	17	80	0	0	0	0	0	136	14	340
11:15 AM	42	14	34	20	73	0	0	0	0	0	140	19	342
11:30 AM	39	15	29	17	72	0	0	0	0	0	146	22	340
11:45 AM	40	7	37	14	66	0	0	0	0	0	129	23	316
Total	161	54	135	68	291	0	0	0	0	0	551	78	1338
12:00 PM	38	22	33	16	89	0	0	0	0	0	122	28	348
12:15 PM	51	21	29	16	75	0	0	0	0	0	123	18	333
12:30 PM	32	16	29	11	82	0	0	0	0	0	104	35	309
12:45 PM	40	13	26	18	65	0	0	0	0	0	95	37	294
Total	161	72	117	61	311	0	0	0	0	0	444	118	1284
01:00 PM	41	18	37	18	65	0	0	0	0	0	107	21	307
01:15 PM	31	15	26	25	70	0	0	0	0	0	110	19	296
01:30 PM	39	23	35	26	74	0	0	0	0	0	76	24	297
01:45 PM	34	17	19	29	59	0	0	0	0	0	112	18	288
Total	145	73	117	98	268	0	0	0	0	0	405	82	1188
Grand Total	467	199	369	227	870	0	0	0	0	0	1400	278	3810
Apprch %	45.1	19.2	35.7	20.7	79.3	0	0	0	0	0	83.4	16.6	
Total %	12.3	5.2	9.7	6	22.8	0	0	0	0	0	36.7	7.3	
Cars	463	197	369	223	861	0	0	0	0	0	1395	268	3776
% Cars	99.1	99	100	98.2	99	0	0	0	0	0	99.6	96.4	99.1
Trucks	4	2	0	4	9	0	0	0	0	0	5	10	34
% Trucks	0.9	1	0	1.8	1	0	0	0	0	0	0.4	3.6	0.9

Accurate Counts
978-664-2565

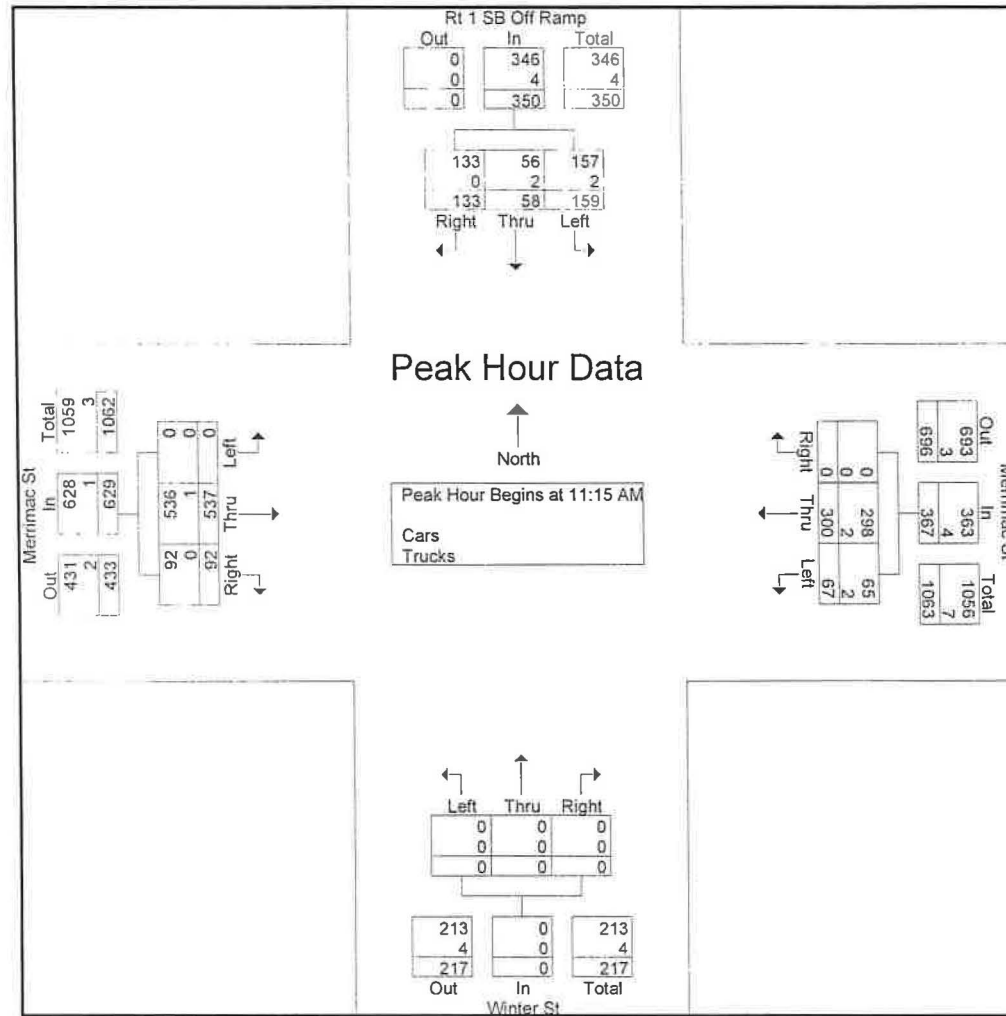
Street : Rte 1 SB Off / Winter St
V Street : Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 2

Rt 1 SB Off Ramp From North					Merrimac St From East				Winter St From South				Merrimac St From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15 AM																	
11:15 AM	42	14	34	90	20	73	0	93	0	0	0	0	0	140	19	159	342
11:30 AM	39	15	29	83	17	72	0	89	0	0	0	0	0	146	22	168	340
11:45 AM	40	7	37	84	14	66	0	80	0	0	0	0	0	129	23	152	316
12:00 PM	38	22	33	93	16	89	0	105	0	0	0	0	0	122	28	150	348
Total Volume	159	58	133	350	67	300	0	367	0	0	0	0	0	537	92	629	1346
% App. Total	45.4	16.6	38		18.3	81.7	0		0	0	0		0	85.4	14.6		
PHF	.946	.659	.899	.941	.838	.843	.000	.874	.000	.000	.000	.000	.000	.920	.821	.936	.967
Cars	157	56	133	346	65	298	0	363	0	0	0	0	0	536	92	628	1337
% Cars	98.7	96.6	100	98.9	97.0	99.3	0	98.9	0	0	0	0	0	99.8	100	99.8	99.3
Trucks	2	2	0	4	2	2	0	4	0	0	0	0	0	1	0	1	9
% Trucks	1.3	3.4	0	1.1	3.0	0.7	0	1.1	0	0	0	0	0	0.2	0	0.2	0.7

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/State : Newburyport, MA
ather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 3



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:30 AM				12:00 PM				11:00 AM				11:00 AM			
+0 mins.	39	15	29	83	16	89	0	105	0	0	0	0	0	136	14	150
+15 mins.	40	7	37	84	16	75	0	91	0	0	0	0	0	140	19	159
+30 mins.	38	22	33	93	11	82	0	93	0	0	0	0	0	146	22	168
+45 mins.	51	21	29	101	18	65	0	83	0	0	0	0	0	129	23	152
Total Volume	168	65	128	361	61	311	0	372	0	0	0	0	0	551	78	629
% App. Total	46.5	18	35.5		16.4	83.6	0		0	0	0	0	0	87.6	12.4	
PHF	.824	.739	.865	.894	.847	.874	.000	.886	.000	.000	.000	.000	.000	.943	.848	.936

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
 / Street : Merrimac Street
 / State : Newburyport, MA
 ather : Cloudy

File Name : 728100S
 Site Code : 7281000
 Start Date : 7/28/2011
 Page No : 5

Groups Printed- Cars

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	39	18	35	17	80	0	0	0	0	0	135	14	338
11:15 AM	41	12	34	18	72	0	0	0	0	0	140	19	336
11:30 AM	39	15	29	17	72	0	0	0	0	0	146	22	340
11:45 AM	39	7	37	14	65	0	0	0	0	0	129	23	314
Total	158	52	135	66	289	0	0	0	0	0	550	78	1328
12:00 PM	38	22	33	16	89	0	0	0	0	0	121	28	347
12:15 PM	51	21	29	16	74	0	0	0	0	0	122	18	331
12:30 PM	32	16	29	11	79	0	0	0	0	0	103	35	305
12:45 PM	40	13	26	17	65	0	0	0	0	0	94	28	283
Total	161	72	117	60	307	0	0	0	0	0	440	109	1266
01:00 PM	41	18	37	18	64	0	0	0	0	0	107	21	306
01:15 PM	31	15	26	24	69	0	0	0	0	0	110	19	294
01:30 PM	38	23	35	26	73	0	0	0	0	0	76	23	294
01:45 PM	34	17	19	29	59	0	0	0	0	0	112	18	288
Total	144	73	117	97	265	0	0	0	0	0	405	81	1182
Grand Total	463	197	369	223	861	0	0	0	0	0	1395	268	3776
Apprch %	45	19.1	35.9	20.6	79.4	0	0	0	0	0	83.9	16.1	
Total %	12.3	5.2	9.8	5.9	22.8	0	0	0	0	0	36.9	7.1	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 9

Groups Printed- Trucks

Start Time	Rt 1 SB Off Ramp From North			Merrimac St From East			Winter St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	1	0	0	0	0	0	0	0	0	0	1	0	2
11:15 AM	1	2	0	2	1	0	0	0	0	0	0	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	2
Total	3	2	0	2	2	0	0	0	0	0	1	0	10
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
12:30 PM	0	0	0	0	3	0	0	0	0	0	1	0	4
12:45 PM	0	0	0	1	0	0	0	0	0	0	1	9	11
Total	0	0	0	1	4	0	0	0	0	0	4	9	18
01:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
01:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
01:30 PM	1	0	0	0	1	0	0	0	0	0	0	1	3
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	3	0	0	0	0	0	0	1	6
Grand Total	4	2	0	4	9	0	0	0	0	0	5	10	34
Apprch %	66.7	33.3	0	30.8	69.2	0	0	0	0	0	33.3	66.7	
Total %	11.8	5.9	0	11.8	26.5	0	0	0	0	0	14.7	29.4	

Accurate Counts
978-664-2565

Street : Rte 1 SB Off / Winter St
 ' Street : Merrimac Street
 /State : Newburyport, MA
 ather : Cloudy

File Name : 728100S
 Site Code : 7281000
 Start Date : 7/28/201
 Page No : 13

Groups Printed- Peds Bikes																				
Start Time	Rt 1 SB Off Ramp From North				Merrimac St From East				Winter St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds				
11:00 AM	0	1	0	1	0	0	0	0	0	0	0	3	0	0	0	0	4	1	5	
11:15 AM	0	0	0	0	1	0	0	0	0	0	0	3	0	1	0	0	3	2	5	
11:30 AM	0	0	0	4	0	1	0	0	0	0	0	6	0	2	0	6	16	3	19	
11:45 AM	0	1	0	0	0	2	0	0	0	0	0	13	0	3	0	0	13	6	19	
Total	0	2	0	5	1	3	0	0	0	0	0	25	0	6	0	6	36	12	48	
12:00 PM	0	0	0	8	0	0	0	0	0	0	0	4	0	1	0	0	12	1	13	
12:15 PM	0	2	1	2	0	1	0	0	0	0	0	10	0	0	0	2	14	4	18	
12:30 PM	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	7	0	7	
12:45 PM	1	2	0	5	0	0	0	0	0	0	0	14	0	0	0	0	19	3	22	
Total	1	4	1	18	0	1	0	0	0	0	0	32	0	1	0	2	52	8	60	
01:00 PM	0	0	0	8	0	0	0	0	0	0	0	4	0	0	3	1	13	3	16	
01:15 PM	0	0	0	0	1	1	0	0	0	0	0	15	0	2	0	0	15	4	19	
01:30 PM	0	1	0	5	0	1	0	0	0	0	0	4	0	0	0	1	10	2	12	
01:45 PM	1	0	0	3	0	0	0	0	0	0	0	3	0	4	0	0	6	5	11	
Total	1	1	0	16	1	2	0	0	0	0	0	26	0	6	3	2	44	14	58	
Grand Total	2	7	1	39	2	6	0	0	0	0	0	83	0	13	3	10	132	34	166	
Apprch %	20	70	10		25	75	0		0	0	0		0	81.2	18.8					
Total %	5.9	20.6	2.9		5.9	17.6	0		0	0	0		0	38.2	8.8		79.5	20.5		

Accurate Counts
978-664-2565

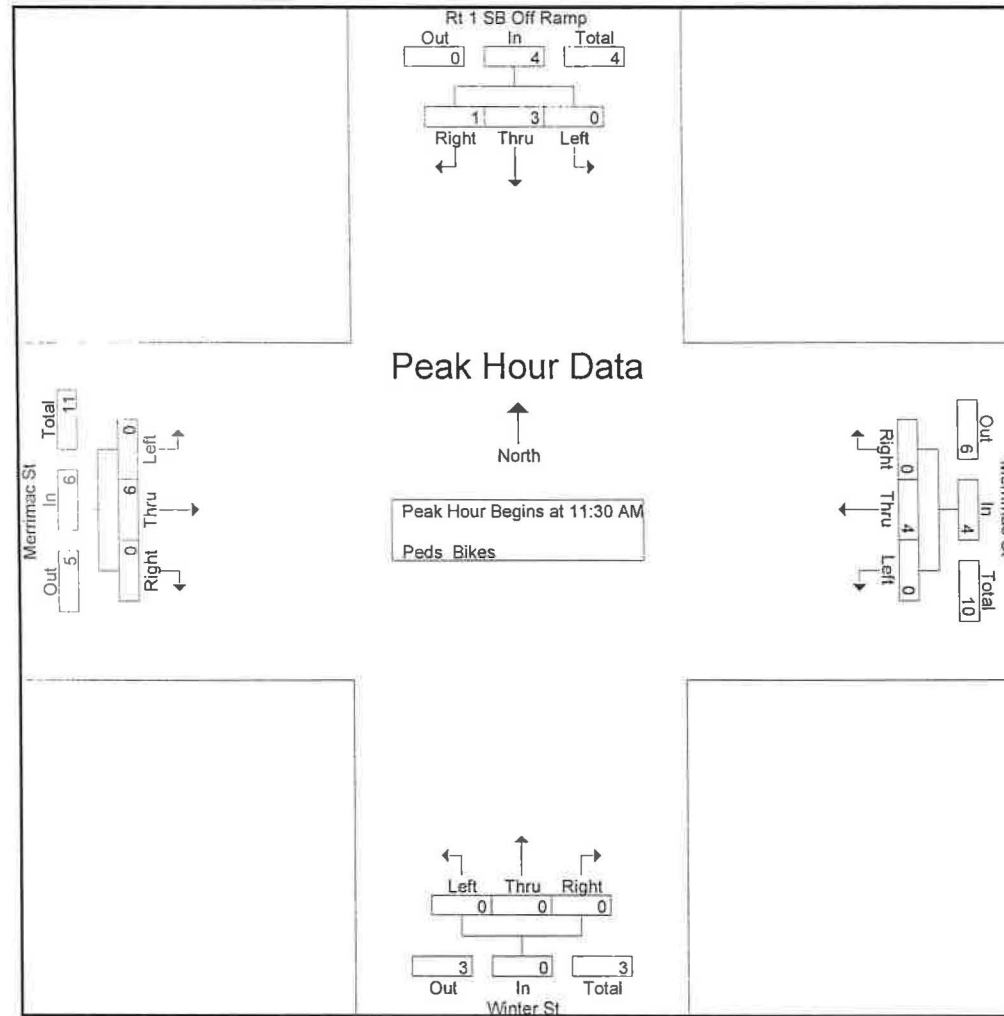
Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 14

Rt 1 SB Off Ramp From North					Merrimac St From East				Winter St From South				Merrimac St From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:30 AM																	
11:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
11:45 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	3	0	3	6
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
12:15 PM	0	2	1	3	0	1	0	1	0	0	0	0	0	0	0	0	4
Total Volume	0	3	1	4	0	4	0	4	0	0	0	0	0	6	0	6	14
% App. Total	0	75	25		0	100	0		0	0	0		0	100	0		
PHF	.000	.375	.250	.333	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.583

Street : Rte 1 SB Off / Winter St
/ Street : Merrimac Street
/ State : Newburyport, MA
ather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 15



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:00 PM				11:00 AM				11:00 AM				01:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
+15 mins.	0	2	1	3	1	0	0	1	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	1	2	0	3	0	2	0	2	0	0	0	0	0	4	0	4
Total Volume	1	4	1	6	1	3	0	4	0	0	0	0	0	6	3	9
% App. Total	16.7	66.7	16.7		25	75	0		0	0	0		0	66.7	33.3	
PHF	250	.500	.250	.500	.250	.375	.000	.500	.000	.000	.000	.000	.000	.375	.250	.563

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	40	25	4	10	11	11	57	0	158
07:15 AM	0	0	0	0	53	18	8	5	13	8	76	0	181
07:30 AM	0	0	0	0	60	23	8	11	20	12	104	0	238
07:45 AM	0	0	0	0	68	22	10	12	16	10	137	0	275
Total	0	0	0	0	221	88	30	38	60	41	374	0	852
08:00 AM	0	0	0	0	64	27	13	6	19	13	140	0	282
08:15 AM	0	0	0	0	78	46	6	9	27	11	119	0	296
08:30 AM	0	0	0	0	65	31	12	7	24	14	142	0	295
08:45 AM	0	0	0	0	95	34	14	11	29	15	197	0	395
Total	0	0	0	0	302	138	45	33	99	53	598	0	1268
Grand Total	0	0	0	0	523	226	75	71	159	94	972	0	2120
Apprch %	0	0	0	0	69.8	30.2	24.6	23.3	52.1	8.8	91.2	0	
Total %	0	0	0	0	24.7	10.7	3.5	3.3	7.5	4.4	45.8	0	
Cars	0	0	0	0	506	220	72	68	147	94	961	0	2068
% Cars	0	0	0	0	96.7	97.3	96	95.8	92.5	100	98.9	0	97.5
Trucks	0	0	0	0	17	6	3	3	12	0	11	0	52
% Trucks	0	0	0	0	3.3	2.7	4	4.2	7.5	0	1.1	0	2.5

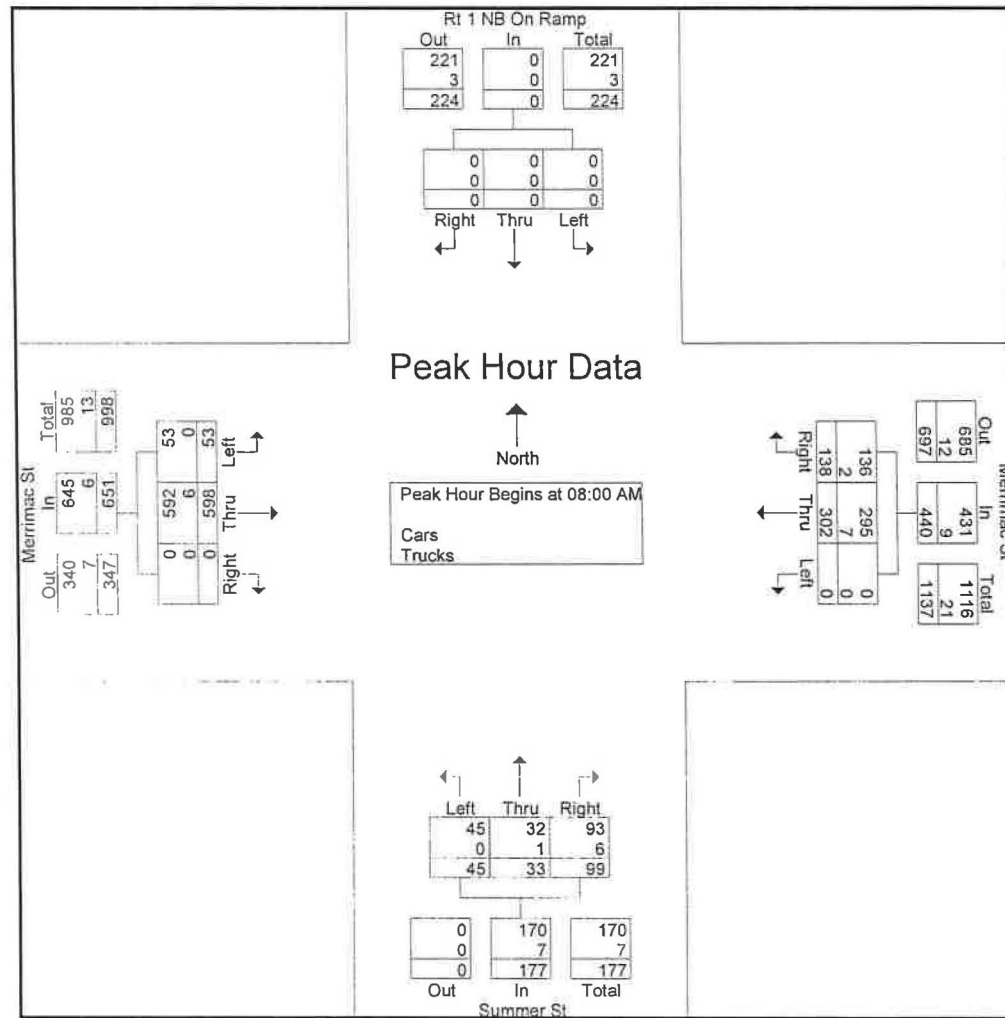
Street : Rte 1 NB On / Summer St
/ Street : Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 2

Start Time	Rt 1 NB On Ramp From North				Merrimac St From East				Summer St From South				Merimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	64	27	91	13	6	19	38	13	140	0	153	282
08:15 AM	0	0	0	0	0	78	46	124	6	9	27	42	11	119	0	130	296
08:30 AM	0	0	0	0	0	65	31	96	12	7	24	43	14	142	0	156	295
08:45 AM	0	0	0	0	0	95	34	129	14	11	29	54	15	197	0	212	395
Total Volume	0	0	0	0	0	302	138	440	45	33	99	177	53	598	0	651	1268
% App. Total	0	0	0		0	68.6	31.4		25.4	18.6	55.9		8.1	91.9	0		
PHF	.000	.000	.000	.000	.000	.795	.750	.853	.804	.750	.853	.819	.883	.759	.000	.768	.803
Cars	0	0	0	0	0	295	136	431	45	32	93	170	53	592	0	645	1246
% Cars	0	0	0	0	0	97.7	98.6	98.0	100	97.0	93.9	96.0	100	99.0	0	99.1	98.3
Trucks	0	0	0	0	0	7	2	9	0	1	6	7	0	6	0	6	22
% Trucks	0	0	0	0	0	2.3	1.4	2.0	0	3.0	6.1	4.0	0	1.0	0	0.9	1.7

Street : Rte 1 NB On / Summer St
V Street : Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	64	27	91	13	6	19	38	13	140	0	153
+15 mins.	0	0	0	0	0	78	46	124	6	9	27	42	11	119	0	130
+30 mins.	0	0	0	0	0	65	31	96	12	7	24	43	14	142	0	156
+45 mins.	0	0	0	0	0	95	34	129	14	11	29	54	15	197	0	212
Total Volume	0	0	0	0	0	302	138	440	45	33	99	177	53	598	0	651
Av. App. Total	0	0	0	0	0	30.2	13.8	44.0	4.5	3.3	9.9	17.7	5.3	59.8	0	65.1

Accurate Counts
978-664-2565

S Street : Rte 1 NB On / Summer St
V Street : Merrimac Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	36	25	3	10	10	11	55	0	150
07:15 AM	0	0	0	0	51	17	7	5	10	8	76	0	174
07:30 AM	0	0	0	0	57	21	7	9	19	12	104	0	229
07:45 AM	0	0	0	0	67	21	10	12	15	10	134	0	269
Total	0	0	0	0	211	84	27	36	54	41	369	0	822
08:00 AM	0	0	0	0	62	26	13	5	18	13	139	0	276
08:15 AM	0	0	0	0	77	46	6	9	25	11	117	0	291
08:30 AM	0	0	0	0	64	31	12	7	23	14	141	0	292
08:45 AM	0	0	0	0	92	33	14	11	27	15	195	0	387
Total	0	0	0	0	295	136	45	32	93	53	592	0	1246
Grand Total	0	0	0	0	506	220	72	68	147	94	961	0	2068
Apprch %	0	0	0	0	69.7	30.3	25.1	23.7	51.2	8.9	91.1	0	
Total %	0	0	0	0	24.5	10.6	3.5	3.3	7.1	4.5	46.5	0	

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	4	0	1	0	1	0	2	0	8
07:15 AM	0	0	0	0	2	1	1	0	3	0	0	0	7
07:30 AM	0	0	0	0	3	2	1	2	1	0	0	0	9
07:45 AM	0	0	0	0	1	1	0	0	1	0	3	0	6
Total :	0	0	0	0	10	4	3	2	6	0	5	0	30
08:00 AM	0	0	0	0	2	1	0	1	1	0	1	0	6
08:15 AM	0	0	0	0	1	0	0	0	2	0	2	0	5
08:30 AM	0	0	0	0	1	0	0	0	1	0	1	0	3
08:45 AM	0	0	0	0	3	1	0	0	2	0	2	0	8
Total	0	0	0	0	7	2	0	1	6	0	6	0	22
Grand Total	0	0	0	0	17	6	3	3	12	0	11	0	52
Apprch %	0	0	0	0	73.9	26.1	16.7	16.7	66.7	0	100	0	
Total %	0	0	0	0	32.7	11.5	5.8	5.8	23.1	0	21.2	0	

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
 ' Street : Merrimac Street
 /State : Newburyport, MA
 ather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 13

Start Time	Rt 1 NB On Ramp From North				Merrimac St From East				Summer St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds				
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2	2
08:30 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	3	0	1	0	0	0	0	0	0	0	0	1	0	0	3	2	5
Grand Total	0	0	0	4	0	1	0	0	0	0	0	0	2	0	1	0	0	6	2	8
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0					
Total %	0	0	0		0	50	0		0	0	0		0	50	0			75	25	

Accurate Counts
978-664-2565

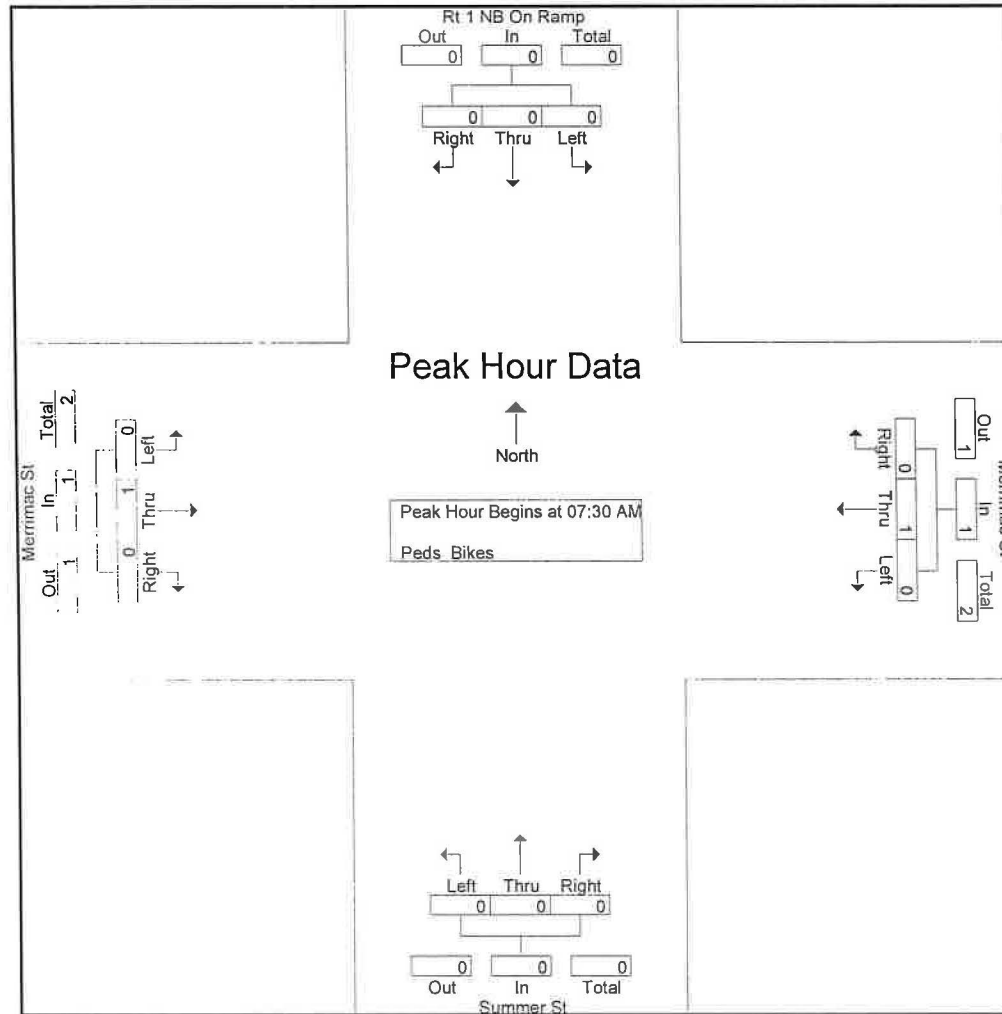
Street : Rte 1 NB On / Summer St
 Street : Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 14

Rt 1 NB On Ramp					Merrimac St				Summer St				Merrimac St				Int. Total
From North					From East				From South				From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.250

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 15



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

Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:00 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	121	66	18	22	20	21	139	0	407
04:15 PM	0	0	0	0	96	48	11	25	22	31	124	0	357
04:30 PM	0	0	0	0	95	61	9	16	22	24	127	0	354
04:45 PM	0	0	0	0	102	49	9	21	23	12	128	0	344
Total	0	0	0	0	414	224	47	84	87	88	518	0	1462
05:00 PM	0	0	0	0	122	56	7	27	25	41	156	0	434
05:15 PM	0	0	0	0	88	46	10	25	27	28	142	0	366
05:30 PM	0	0	0	0	100	42	10	19	29	26	129	0	355
05:45 PM	0	0	0	0	89	50	17	27	16	28	151	0	378
Total	0	0	0	0	399	194	44	98	97	123	578	0	1533
Grand Total	0	0	0	0	813	418	91	182	184	211	1096	0	2995
Apprch %	0	0	0	0	66	34	19.9	39.8	40.3	16.1	83.9	0	
Total %	0	0	0	0	27.1	14	3	6.1	6.1	7	36.6	0	
Cars	0	0	0	0	811	418	91	178	174	210	1095	0	2977
% Cars	0	0	0	0	99.8	100	100	97.8	94.6	99.5	99.9	0	99.4
Trucks	0	0	0	0	2	0	0	4	10	1	1	0	18
% Trucks	0	0	0	0	0.2	0	0	2.2	5.4	0.5	0.1	0	0.6

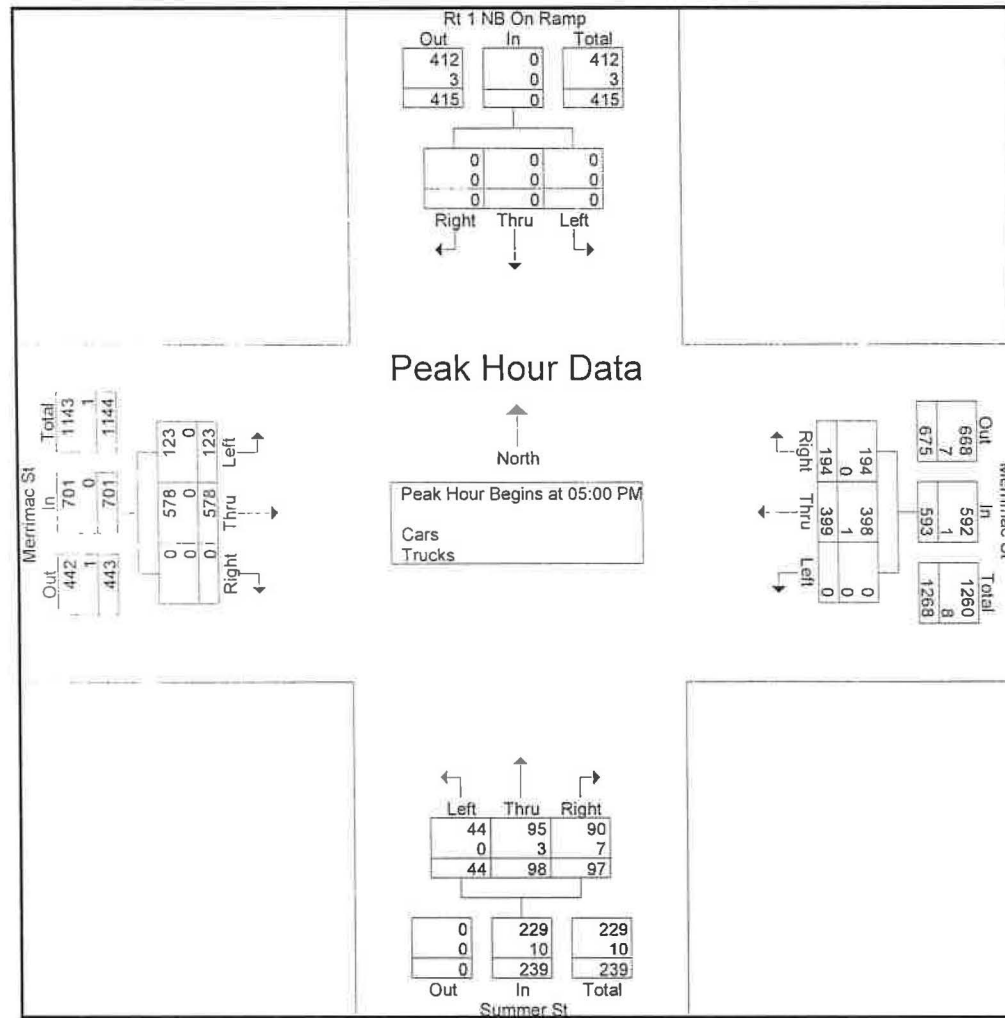
Street : Rte 1 NB On / Summer St
 Street : Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 2

Start Time	Rt 1 NB On Ramp				Merrimac St				Summer St				Merrimac St				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
k Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
k Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	122	56	178	7	27	25	59	41	156	0	197	434
05:15 PM	0	0	0	0	0	88	46	134	10	25	27	62	28	142	0	170	366
05:30 PM	0	0	0	0	0	100	42	142	10	19	29	58	26	129	0	155	355
05:45 PM	0	0	0	0	0	89	50	139	17	27	16	60	28	151	0	179	378
Total Volume	0	0	0	0	0	399	194	593	44	98	97	239	123	578	0	701	1533
% App. Total	0	0	0		0	67.3	32.7		18.4	41	40.6		17.5	82.5	0		
PHF	.000	.000	.000	.000	.000	.818	.866	.833	.647	.907	.836	.964	.750	.926	.000	.890	.883
Cars	0	0	0	0	0	398	194	592	44	95	90	229	123	578	0	701	1522
% Cars	0	0	0	0	0	99.7	100	99.8	100	96.9	92.8	95.8	100	100	0	100	99.3
Trucks	0	0	0	0	0	1	0	1	0	3	7	10	0	0	0	0	11
% Trucks	0	0	0	0	0	0.3	0	0.2	0	3.1	7.2	4.2	0	0	0	0	0.7

Street : Rte 1 NB On / Summer St
W Street : Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	121	66	187	7	27	25	59	41	156	0	197
+15 mins.	0	0	0	0	0	96	48	144	10	25	27	62	28	142	0	170
+30 mins.	0	0	0	0	0	95	61	156	10	19	29	58	26	129	0	155
+45 mins.	0	0	0	0	0	102	49	151	17	27	16	60	28	151	0	179
Total Volume	0	0	0	0	0	414	224	638	44	98	97	239	123	578	0	701
% App Total	0	0	0	0	0	64.0	35.1	100.0	10.4	14.4	10.6	35.4	17.5	27.5	0	100.0

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	121	66	18	22	19	21	139	0	406
04:15 PM	0	0	0	0	95	48	11	24	21	31	123	0	353
04:30 PM	0	0	0	0	95	61	9	16	21	23	127	0	352
04:45 PM	0	0	0	0	102	49	9	21	23	12	128	0	344
Total	0	0	0	0	413	224	47	83	84	87	517	0	1455
05:00 PM	0	0	0	0	122	56	7	26	23	41	156	0	431
05:15 PM	0	0	0	0	88	46	10	25	26	28	142	0	365
05:30 PM	0	0	0	0	99	42	10	18	26	26	129	0	350
05:45 PM	0	0	0	0	89	50	17	26	15	28	151	0	376
Total	0	0	0	0	398	194	44	95	90	123	578	0	1522
Grand Total	0	0	0	0	811	418	91	178	174	210	1095	0	2977
Apprch %	0	0	0	0	66	34	20.5	40.2	39.3	16.1	83.9	0	
Total %	0	0	0	0	27.2	14	3.1	6	5.8	7.1	36.8	0	

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
04:15 PM	0	0	0	0	1	0	0	1	1	0	1	0	4
04:30 PM	0	0	0	0	0	0	0	0	1	1	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	3	1	1	0	7
05:00 PM	0	0	0	0	0	0	0	1	2	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
05:30 PM	0	0	0	0	1	0	0	1	3	0	0	0	5
05:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
Total	0	0	0	0	1	0	0	3	7	0	0	0	11
Grand Total	0	0	0	0	2	0	0	4	10	1	1	0	18
Apprch %	0	0	0	0	100	0	0	28.6	71.4	50	50	0	
Total %	0	0	0	0	11.1	0	0	22.2	55.6	5.6	5.6	0	

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Groups Printed- Peds Bikes

Start Time	Rt 1 NB On Ramp From North				Merrimac St From East				Summer St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	1	0	0	0	1	0	2	0	1	0	0	0	0	3	2	5
Total	0	0	0	1	0	0	0	1	0	2	0	4	0	0	0	0	6	2	8
05:00 PM	0	0	0	4	0	0	0	0	0	1	0	2	0	1	0	0	6	2	8
05:15 PM	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	3	1	4
05:30 PM	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0	0	5	0	5
05:45 PM	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	0	4	0	4
Total	0	0	0	7	0	1	0	5	0	1	0	6	0	1	0	0	18	3	21
Grand Total	0	0	0	8	0	1	0	6	0	3	0	10	0	1	0	0	24	5	29
Apprch %	0	0	0		0	100	0		0	100	0		0	100	0				
Total %	0	0	0		0	20	0		0	60	0		0	20	0		82.8	17.2	

Accurate Counts
978-664-2565

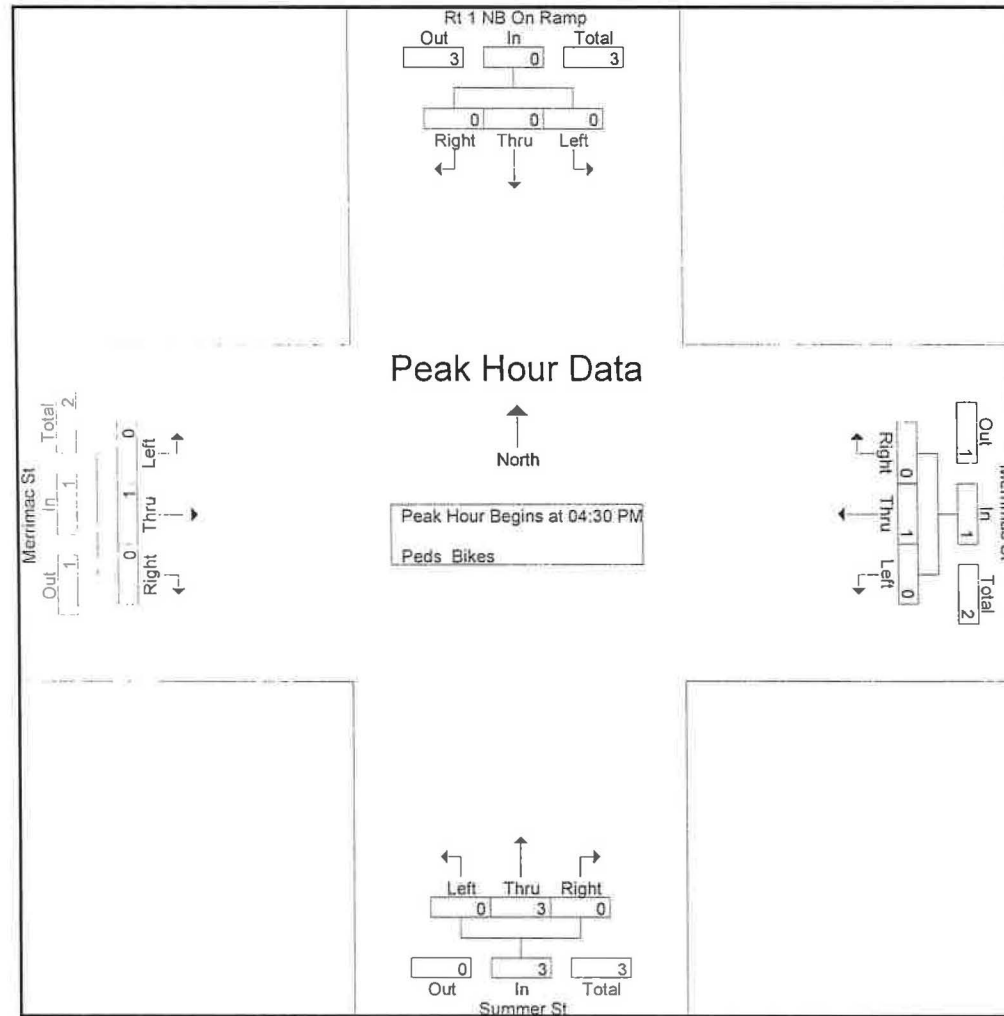
Street : Rte 1 NB On / Summer St
 V Street : Merrimac Street
 y/State : Newburyport, MA
 ather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 14

Start Time	Rt 1 NB On Ramp From North				Merrimac St From East				Summer St From South				Merrimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	3	0	3	0	1	0	1	5
% App. Total	0	0	0		0	100	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.375	.000	.375	.000	.250	.000	.250	.625

Street : Rte 1 NB On / Summer St
V Street : Merrimac Street
W/State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 15



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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
Total Volume	0	0	0	0	0	1	0	1	0	3	0	3	0	1	0	1

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	80	47	18	16	27	29	147	0	364
11:15 AM	0	0	0	0	84	52	14	17	34	29	153	0	383
11:30 AM	0	0	0	0	72	40	9	17	39	26	158	0	361
11:45 AM	0	0	0	0	76	42	8	25	25	22	147	0	345
Total	0	0	0	0	312	181	49	75	125	106	605	0	1453
12:00 PM	0	0	0	0	90	51	10	35	24	29	129	0	368
12:15 PM	0	0	0	0	83	56	2	19	28	32	140	0	360
12:30 PM	0	0	0	0	77	63	11	31	47	30	109	0	368
12:45 PM	0	0	0	0	79	53	10	25	34	33	92	0	326
Total	0	0	0	0	329	223	33	110	133	124	470	0	1422
01:00 PM	0	0	0	0	76	42	7	27	36	27	132	0	347
01:15 PM	0	0	0	0	87	51	12	32	18	24	117	0	341
01:30 PM	0	0	0	0	86	63	11	28	35	28	84	0	335
01:45 PM	0	0	0	0	80	50	9	31	28	36	112	0	346
Total	0	0	0	0	329	206	39	118	117	115	445	0	1369
Grand Total	0	0	0	0	970	610	121	303	375	345	1520	0	4244
Apprch %	0	0	0	0	61.4	38.6	15.1	37.9	46.9	18.5	81.5	0	
Total %	0	0	0	0	22.9	14.4	2.9	7.1	8.8	8.1	35.8	0	
Cars	0	0	0	0	964	607	116	301	358	342	1514	0	4202
% Cars	0	0	0	0	99.4	99.5	95.9	99.3	95.5	99.1	99.6	0	99
Trucks	0	0	0	0	6	3	5	2	17	3	6	0	42
% Trucks	0	0	0	0	0.6	0.5	4.1	0.7	4.5	0.9	0.4	0	1

Accurate Counts
978-664-2565

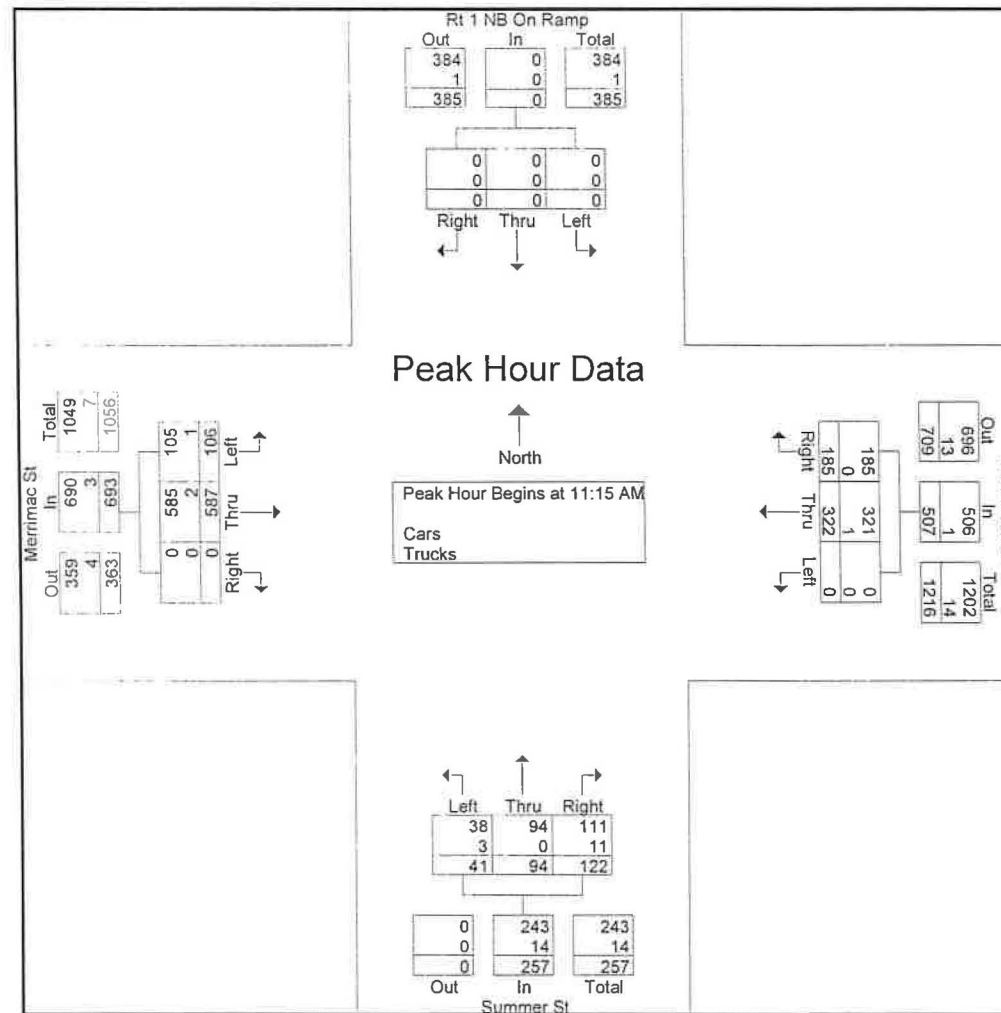
Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/201
Page No : 2

Rt 1 NB On Ramp From North					Merrimac St From East				Summer St From South				Merrimac St From West				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15 AM																	
11:15 AM	0	0	0	0	0	84	52	136	14	17	34	65	29	153	0	182	383
11:30 AM	0	0	0	0	0	72	40	112	9	17	39	65	26	158	0	184	361
11:45 AM	0	0	0	0	0	76	42	118	8	25	25	58	22	147	0	169	345
12:00 PM	0	0	0	0	0	90	51	141	10	35	24	69	29	129	0	158	368
Total Volume	0	0	0	0	0	322	185	507	41	94	122	257	106	587	0	693	1457
% App. Total	0	0	0		0	63.5	36.5		16	36.6	47.5		15.3	84.7	0		
PHF	.000	.000	.000	.000	.000	.894	.889	.899	.732	.671	.782	.931	.914	.929	.000	.942	.951
Cars	0	0	0	0	0	321	185	506	38	94	111	243	105	585	0	690	1439
% Cars	0	0	0	0	0	99.7	100	99.8	92.7	100	91.0	94.6	99.1	99.7	0	99.6	98.8
Trucks	0	0	0	0	0	1	0	1	3	0	11	14	1	2	0	3	18
% Trucks	0	0	0	0	0	0.3	0	0.2	7.3	0	9.0	5.4	0.9	0.3	0	0.4	1.2

Street : Rte 1 NB On / Summer St
 Street : Merrimac Street
 State : Newburyport, MA
 ther : Cloudy

File Name : 728100S
 Site Code : 7281000:
 Start Date : 7/28/201:
 Page No : 3



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:00 AM				12:00 PM				12:30 PM				11:00 AM			
+0 mins.	0	0	0	0	0	90	51	141	11	31	47	89	29	147	0	176
+15 mins.	0	0	0	0	0	83	56	139	10	25	34	69	29	153	0	182
+30 mins.	0	0	0	0	0	77	63	140	7	27	36	70	26	158	0	184
+45 mins.	0	0	0	0	0	79	53	132	12	32	18	62	22	147	0	169
Total Volume	0	0	0	0	0	329	223	552	40	115	135	290	106	605	0	711
% App. Total	0	0	0	0	0	59.6	40.4		13.8	39.7	46.6		14.9	85.1	0	
PHF	.000	.000	.000	.000	.000	.914	.885	.979	.833	.898	.718	.815	.914	.957	.000	.966

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 5

Groups Printed- Cars

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	80	46	18	15	27	28	146	0	360
11:15 AM	0	0	0	0	83	52	12	17	27	29	152	0	372
11:30 AM	0	0	0	0	72	40	9	17	37	26	158	0	359
11:45 AM	0	0	0	0	76	42	7	25	23	22	146	0	341
Total	0	0	0	0	311	180	46	74	114	105	602	0	1432
12:00 PM	0	0	0	0	90	51	10	35	24	28	129	0	367
12:15 PM	0	0	0	0	82	55	2	19	28	31	140	0	357
12:30 PM	0	0	0	0	75	62	10	31	44	30	108	0	360
12:45 PM	0	0	0	0	79	53	10	24	33	33	91	0	323
Total	0	0	0	0	326	221	32	109	129	122	468	0	1407
01:00 PM	0	0	0	0	76	42	6	27	36	27	132	0	346
01:15 PM	0	0	0	0	86	51	12	32	17	24	117	0	339
01:30 PM	0	0	0	0	85	63	11	28	34	28	83	0	332
01:45 PM	0	0	0	0	80	50	9	31	28	36	112	0	346
Total	0	0	0	0	327	206	38	118	115	115	444	0	1363
Grand Total	0	0	0	0	964	607	116	301	358	342	1514	0	4202
Apprch %	0	0	0	0	61.4	38.6	15	38.8	46.2	18.4	81.6	0	
Total %	0	0	0	0	22.9	14.4	2.8	7.2	8.5	8.1	36	0	

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
 Street : Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 728100S
 Site Code : 7281000:
 Start Date : 7/28/2011
 Page No : 9

Groups Printed- Trucks

Start Time	Rt 1 NB On Ramp From North			Merrimac St From East			Summer St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	1	0	1	0	1	1	0	4
11:15 AM	0	0	0	0	1	0	2	0	7	0	1	0	11
11:30 AM	0	0	0	0	0	0	0	0	2	0	0	0	2
11:45 AM	0	0	0	0	0	0	1	0	2	0	1	0	4
Total	0	0	0	0	1	1	3	1	11	1	3	0	21
12:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
12:15 PM	0	0	0	0	1	1	0	0	0	1	0	0	3
12:30 PM	0	0	0	0	2	1	1	0	3	0	1	0	8
12:45 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
Total	0	0	0	0	3	2	1	1	4	2	2	0	15
01:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
01:15 PM	0	0	0	0	1	0	0	0	1	0	0	0	2
01:30 PM	0	0	0	0	1	0	0	0	1	0	1	0	3
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	1	0	2	0	1	0	6
Grand Total	0	0	0	0	6	3	5	2	17	3	6	0	42
Apprch %	0	0	0	0	66.7	33.3	20.8	8.3	70.8	33.3	66.7	0	
Total %	0	0	0	0	14.3	7.1	11.9	4.8	40.5	7.1	14.3	0	

Accurate Counts
978-664-2565

Street : Rte 1 NB On / Summer St
Street : Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 13

Groups Printed- Peds Bikes																				
Start Time	Rt 1 NB On Ramp From North				Merrimac St From East				Summer St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds				
11:00 AM	0	0	0	0	0	1	0	3	0	1	0	3	0	0	0	0	6	2	8	
11:15 AM	0	0	0	2	0	1	0	2	0	0	0	4	0	1	0	0	8	2	10	
11:30 AM	0	0	0	5	0	1	0	11	0	0	0	4	0	3	0	0	20	4	24	
11:45 AM	0	0	0	0	0	1	1	0	0	0	0	15	0	4	0	0	15	6	21	
Total	0	0	0	7	0	4	1	16	0	1	0	26	0	8	0	0	49	14	63	
12:00 PM	1	0	0	6	0	1	1	0	0	0	0	8	0	1	0	0	14	4	18	
12:15 PM	0	0	0	0	0	1	0	0	0	0	0	9	0	0	0	0	9	1	10	
12:30 PM	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	7	0	7	
12:45 PM	0	0	0	1	0	0	1	0	0	0	0	13	0	2	0	0	14	3	17	
Total	1	0	0	9	0	2	2	0	0	0	0	35	0	3	0	0	44	8	52	
01:00 PM	0	0	0	8	0	1	0	1	0	0	0	2	0	1	0	0	11	2	13	
01:15 PM	0	0	0	1	0	1	0	0	0	0	0	16	0	1	0	0	17	2	19	
01:30 PM	0	0	0	2	0	1	0	3	0	0	0	3	0	0	0	0	8	1	9	
01:45 PM	0	0	0	4	0	0	0	0	0	0	0	4	0	5	0	0	8	5	13	
Total	0	0	0	15	0	3	0	4	0	0	0	25	0	7	0	0	44	10	54	
Grand Total	1	0	0	31	0	9	3	20	0	1	0	86	0	18	0	0	137	32	169	
Apprch %	100	0	0		0	75	25		0	100	0		0	100	0					
Total %	3.1	0	0		0	28.1	9.4		0	3.1	0		0	56.2	0		81.1	18.9		

Accurate Counts
978-664-2565

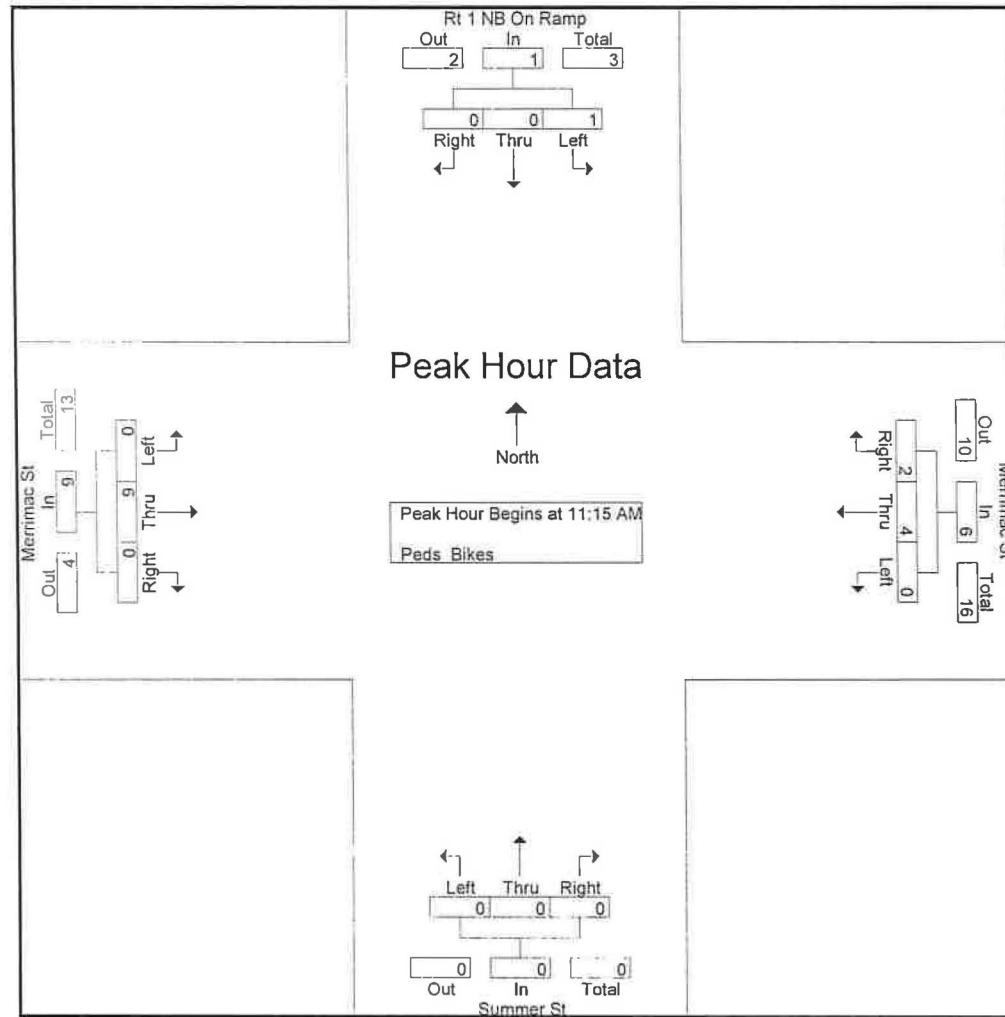
S Street : Rte 1 NB On / Summer St
V Street : Merrimac Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/201:
Page No : 14

Start Time	Rt 1 NB On Ramp From North				Merrimac St From East				Summer St From South				Merrimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15 AM																	
11:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
11:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
11:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	4	0	4	6
12:00 PM	1	0	0	1	0	1	1	2	0	0	0	0	0	1	0	1	4
Total Volume	1	0	0	1	0	4	2	6	0	0	0	0	0	9	0	9	16
% App. Total	100	0	0		0	66.7	33.3		0	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	1.00	.500	.750	.000	.000	.000	.000	.000	.563	.000	.563	.667

Street : Rte 1 NB On / Summer St
V Street : Merrimac Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/201:
Page No : 15



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:15 AM				11:15 AM				11:00 AM				11:15 AM			
+0 mins	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1
+15 mins	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3
+30 mins	0	0	0	0	0	1	1	2	0	0	0	0	0	4	0	4
+45 mins	1	0	0	1	0	1	1	2	0	0	0	0	0	1	0	1
Total Volume	1	0	0	1	0	4	2	6	0	1	0	1	0	9	0	9
% App. Total	100	0	0		0	66.7	33.3		0	100	0		0	100	0	
PHF	250	.000	.000	.250	.000	1.000	.500	.750	.000	.250	.000	.250	.000	.563	.000	.563

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	2	0	53	1	1	0	3	0	68	2	130
07:15 AM	1	0	0	0	67	0	1	0	3	3	80	1	156
07:30 AM	1	0	0	0	85	1	2	0	3	0	109	6	207
07:45 AM	0	0	1	1	81	2	9	0	4	2	148	5	253
Total	2	0	3	1	286	4	13	0	13	5	405	14	746
08:00 AM	0	0	0	2	86	0	3	0	5	3	158	8	265
08:15 AM	0	0	4	3	111	1	6	1	7	2	126	7	268
08:30 AM	0	0	3	1	83	1	4	0	3	1	155	0	251
08:45 AM	0	0	4	2	121	0	1	2	6	6	206	16	364
Total	0	0	11	8	401	2	14	3	21	12	645	31	1148
Grand Total	2	0	14	9	687	6	27	3	34	17	1050	45	1894
Apprch %	12.5	0	87.5	1.3	97.9	0.9	42.2	4.7	53.1	1.5	94.4	4	
Total %	0.1	0	0.7	0.5	36.3	0.3	1.4	0.2	1.8	0.9	55.4	2.4	
Cars	2	0	14	9	672	6	27	3	34	17	1038	45	1867
% Cars	100	0	100	100	97.8	100	100	100	100	100	98.9	100	98.6
Trucks	0	0	0	0	15	0	0	0	0	0	12	0	27
% Trucks	0	0	0	0	2.2	0	0	0	0	0	1.1	0	1.4

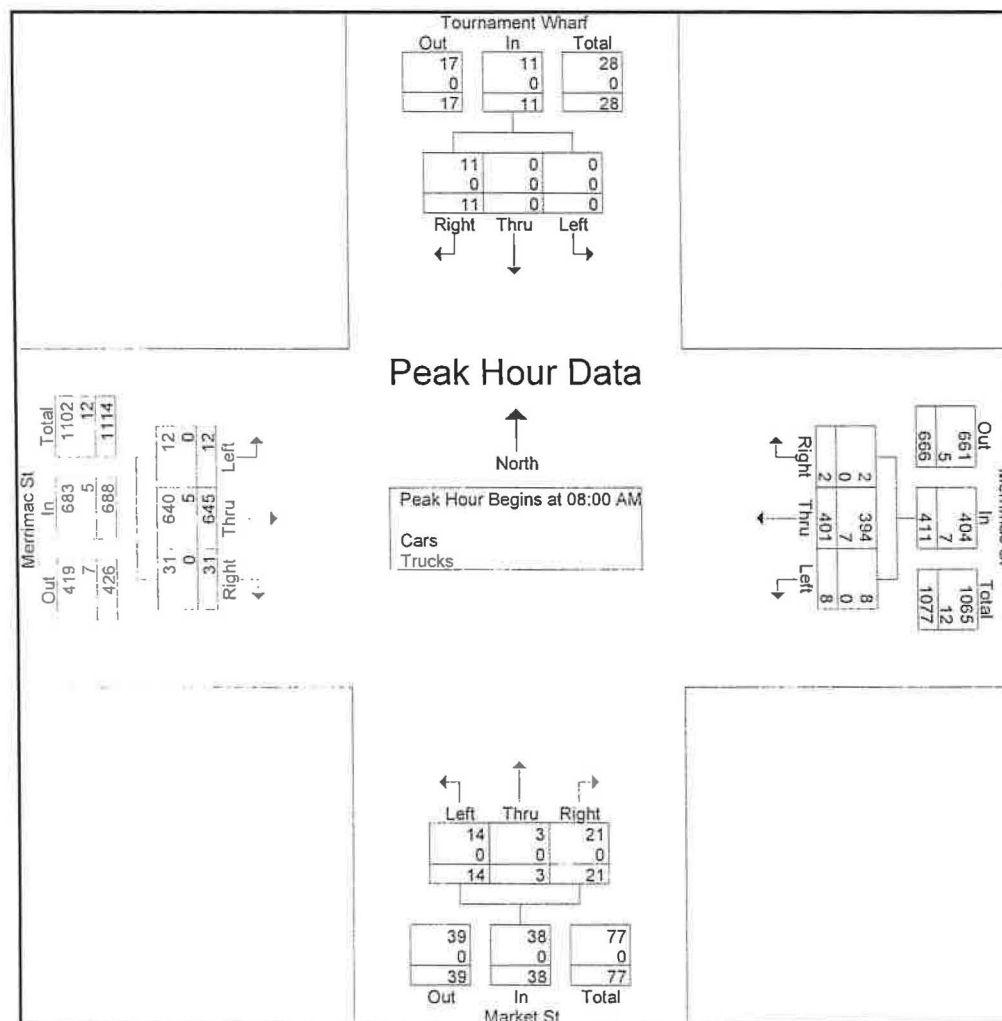
Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 2

Start Time	Tournament Wharf				Merrimac St				Market St				Merrimac St				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	2	86	0	88	3	0	5	8	3	158	8	169	265
08:15 AM	0	0	4	4	3	111	1	115	6	1	7	14	2	126	7	135	268
08:30 AM	0	0	3	3	1	83	1	85	4	0	3	7	1	155	0	156	251
08:45 AM	0	0	4	4	2	121	0	123	1	2	6	9	6	206	16	228	364
Total Volume	0	0	11	11	8	401	2	411	14	3	21	38	12	645	31	688	1148
% App. Total	0	0	100		1.9	97.6	0.5		36.8	7.9	55.3		1.7	93.8	4.5		
PHF	.000	.000	.688	.688	.667	.829	.500	.835	.583	.375	.750	.679	.500	.783	.484	.754	.788
Cars	0	0	11	11	8	394	2	404	14	3	21	38	12	640	31	683	1136
% Cars	0	0	100	100	100	98.3	100	98.3	100	100	100	100	100	99.2	100	99.3	99.0
Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5	12
% Trucks	0	0	0	0	0	1.7	0	1.7	0	0	0	0	0	0.8	0	0.7	1.0

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	08:00 AM				08:00 AM				07:45 AM				08:00 AM			
+0 mins.	0	0	0	0	2	86	0	88	9	0	4	13	3	158	8	169
+15 mins.	0	0	4	4	3	111	1	115	3	0	5	8	2	126	7	135
+30 mins.	0	0	3	3	1	83	1	85	6	1	7	14	1	155	0	156
+45 mins.	0	0	4	4	2	121	0	123	4	0	3	7	6	206	16	228
Total Volume	0	0	11	11	8	401	2	411	22	1	19	42	12	645	31	688
% App. Total	0	0	100	100	1.0	97.6	0.5	100	3.2	0.4	4.5	100	1.7	97.8	4.5	100

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	2	0	52	1	1	0	3	0	66	2	127
07:15 AM	1	0	0	0	66	0	1	0	3	3	77	1	152
07:30 AM	1	0	0	0	81	1	2	0	3	0	109	6	203
07:45 AM	0	0	1	1	79	2	9	0	4	2	146	5	249
Total	2	0	3	1	278	4	13	0	13	5	398	14	731
08:00 AM	0	0	0	2	84	0	3	0	5	3	157	8	262
08:15 AM	0	0	4	3	110	1	6	1	7	2	124	7	265
08:30 AM	0	0	3	1	82	1	4	0	3	1	155	0	250
08:45 AM	0	0	4	2	118	0	1	2	6	6	204	16	359
Total	0	0	11	8	394	2	14	3	21	12	640	31	1136
Grand Total	2	0	14	9	672	6	27	3	34	17	1038	45	1867
Apprch %	12.5	0	87.5	1.3	97.8	0.9	42.2	4.7	53.1	1.5	94.4	4.1	
Total %	0.1	0	0.7	0.5	36	0.3	1.4	0.2	1.8	0.9	55.6	2.4	

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
07:15 AM	0	0	0	0	1	0	0	0	0	0	3	0	4
07:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	2	0	0	0	0	0	2	0	4
Total	0	0	0	0	8	0	0	0	0	0	7	0	15
08:00 AM	0	0	0	0	2	0	0	0	0	0	1	0	3
08:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
08:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	3	0	0	0	0	0	2	0	5
Total	0	0	0	0	7	0	0	0	0	0	5	0	12
Grand Total	0	0	0	0	15	0	0	0	0	0	12	0	27
Apprch %	0	0	0	0	100	0	0	0	0	0	100	0	
Total %	0	0	0	0	55.6	0	0	0	0	0	44.4	0	

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Groups Printed- Bikes Peds

Start Time	Tournament Wharf From North				Merrimac St From East				Market St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Total	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	1	4	2	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:30 AM	0	0	0	3	0	0	0	1	0	0	0	0	0	0	1	0	4	1	5
08:45 AM	0	0	0	3	0	0	0	0	0	0	0	2	0	1	0	0	5	1	6
Total	0	0	0	6	0	0	0	1	0	0	0	2	0	1	2	0	9	3	12
Grand Total	0	0	0	9	0	2	0	1	0	0	0	2	0	1	2	1	13	5	18
Apprch %	0	0	0		0	100	0		0	0	0		0	33.3	66.7				
Total %	0	0	0		0	40	0		0	0	0		0	20	40		72.2	27.8	

Accurate Counts
978-664-2565

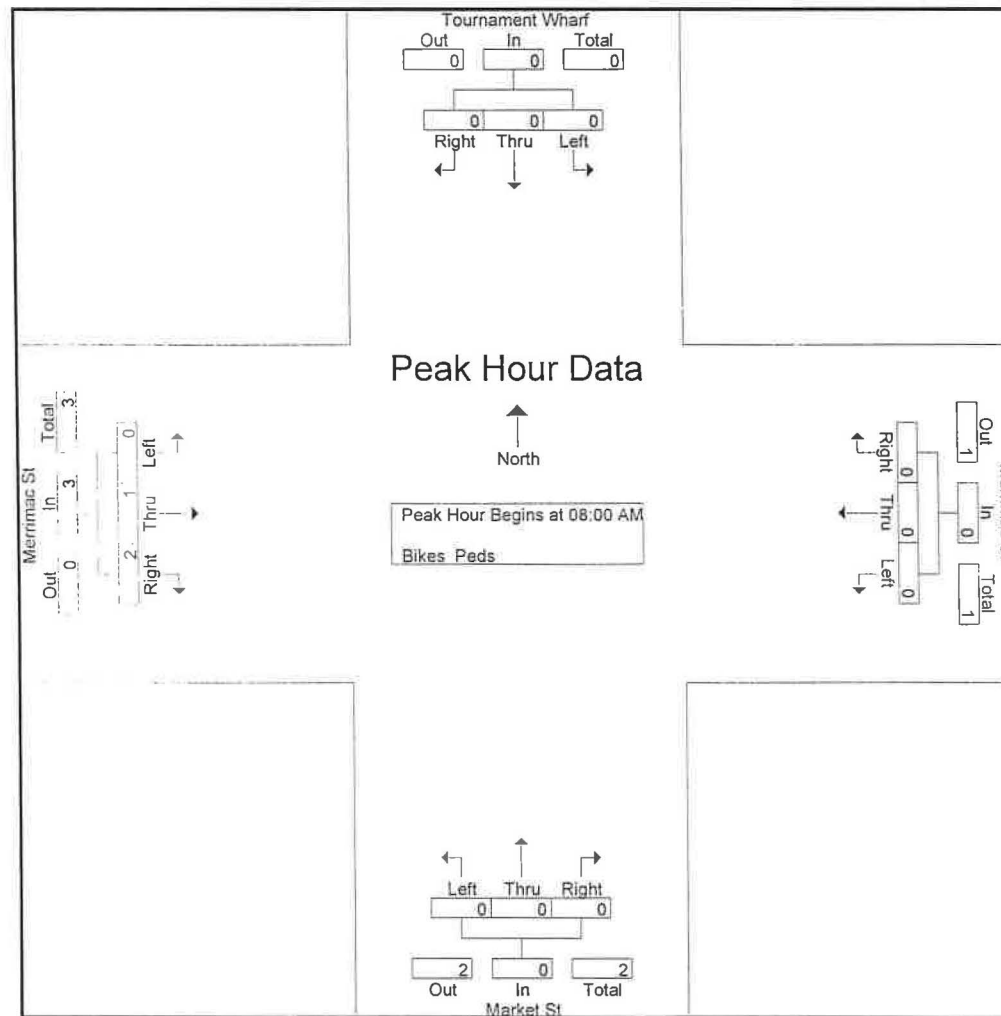
Street : Tournament Wharf/ Market St
 Street: Merrimac Street
 State : Newburyport, MA
 ther : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 14

Start Time	Tournament Wharf				Merrimac St				Market St				Merrimac St				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
k Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
k Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3
% App. Total	0	0	0		0	0	0		0	0	0		0	33.3	66.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.500	.750	.750

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 15



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

Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	2	3
% App Total	0	0	0	0	0	100	0	0	0	0	0	0	0	33.3	66.7	

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	6	0	7	1	171	6	5	0	7	9	145	8	365
04:15 PM	3	0	4	1	137	1	7	0	11	8	143	2	317
04:30 PM	2	0	8	0	142	3	5	0	3	5	131	2	301
04:45 PM	0	0	2	1	130	4	14	2	8	8	145	5	319
Total	11	0	21	3	580	14	31	2	29	30	564	17	1302
05:00 PM	1	0	3	2	178	0	5	2	1	8	161	5	366
05:15 PM	2	0	6	1	126	0	5	0	5	13	162	4	324
05:30 PM	0	0	6	4	126	3	6	0	4	13	140	4	306
05:45 PM	1	2	2	1	128	1	5	1	10	11	155	4	321
Total	4	2	17	8	558	4	21	3	20	45	618	17	1317
Grand Total	15	2	38	11	1138	18	52	5	49	75	1182	34	2619
Apprch %	27.3	3.6	69.1	0.9	97.5	1.5	49.1	4.7	46.2	5.8	91.6	2.6	
Total %	0.6	0.1	1.5	0.4	43.5	0.7	2	0.2	1.9	2.9	45.1	1.3	
Cars	15	2	38	11	1137	18	52	5	48	75	1181	34	2616
% Cars	100	100	100	100	99.9	100	100	100	98	100	99.9	100	99.9
Trucks	0	0	0	0	1	0	0	0	1	0	1	0	3
% Trucks	0	0	0	0	0.1	0	0	0	2	0	0.1	0	0.1

Accurate Counts
978-664-2565

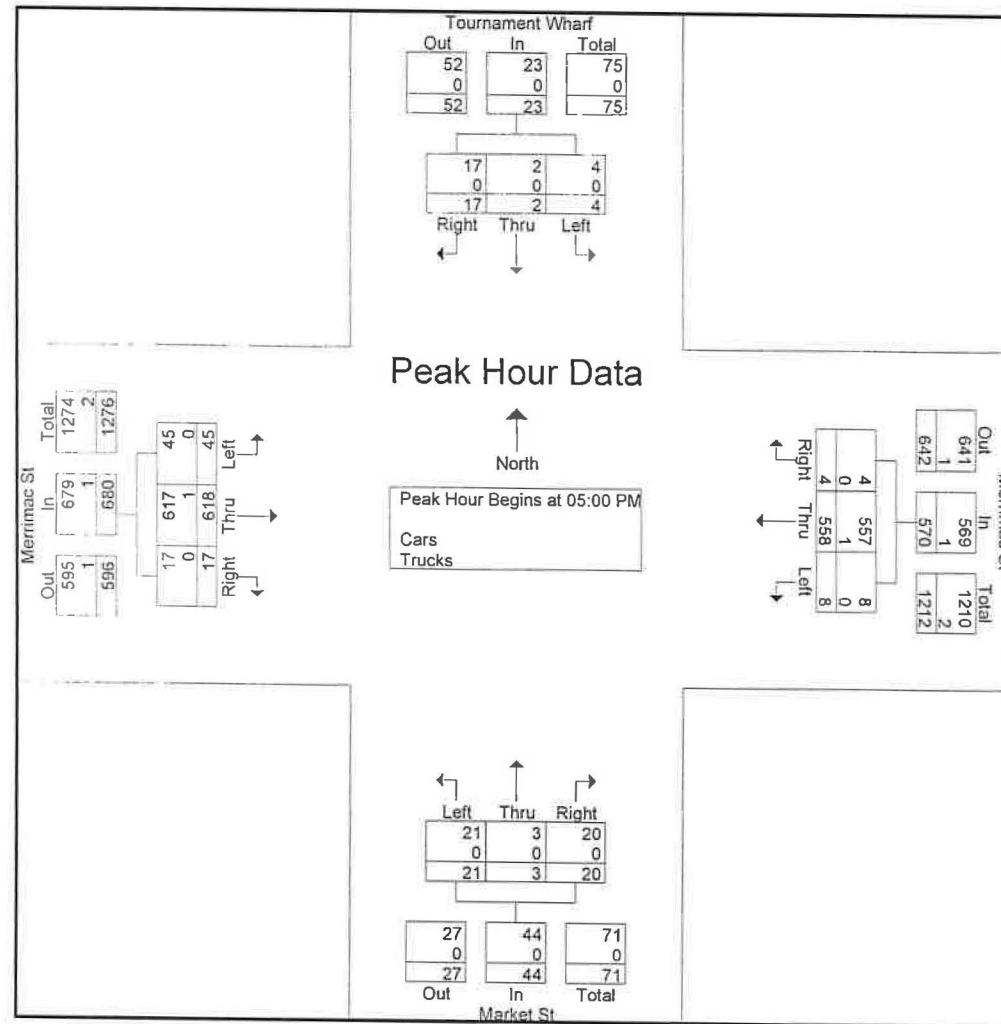
Street : Tournament Wharf/ Market St
 Street: Merrimac Street
 State : Newburyport, MA
 ther : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 2

Start Time	Tournament Wharf From North				Merrimac St From East				Market St From South				Merrimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	3	4	2	178	0	180	5	2	1	8	8	161	5	174	366
05:15 PM	2	0	6	8	1	126	0	127	5	0	5	10	13	162	4	179	324
05:30 PM	0	0	6	6	4	126	3	133	6	0	4	10	13	140	4	157	306
05:45 PM	1	2	2	5	1	128	1	130	5	1	10	16	11	155	4	170	321
Total Volume	4	2	17	23	8	558	4	570	21	3	20	44	45	618	17	680	1317
% App. Total	17.4	8.7	73.9		1.4	97.9	0.7		47.7	6.8	45.5		6.6	90.9	2.5		
PHF	.500	.250	.708	.719	.500	.784	.333	.792	.875	.375	.500	.688	.865	.954	.850	.950	.900
Cars	4	2	17	23	8	557	4	569	21	3	20	44	45	617	17	679	1315
% Cars	100	100	100	100	100	99.8	100	99.8	100	100	100	100	100	99.8	100	99.9	99.8
Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% Trucks	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0	0.2	0	0.1	0.2

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				05:00 PM			
+0 mins.	6	0	7	13	1	137	1	139	5	0	7	12	8	161	5	174
+15 mins.	3	0	4	7	0	142	3	145	7	0	11	18	13	162	4	179
+30 mins.	2	0	8	10	1	130	4	135	5	0	3	8	13	140	4	157
+45 mins.	0	0	2	2	2	178	0	180	14	2	8	24	11	155	4	170
Total Volume	11	0	21	32	4	587	8	599	31	2	29	62	45	618	17	680
% App Total	2.4	0	5.5	32	0.7	68	1.3	599	50	2.2	4.8	62	6.6	68.8	2.5	680

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	6	0	7	1	171	6	5	0	7	9	145	8	365
04:15 PM	3	0	4	1	137	1	7	0	10	8	143	2	316
04:30 PM	2	0	8	0	142	3	5	0	3	5	131	2	301
04:45 PM	0	0	2	1	130	4	14	2	8	8	145	5	319
Total	11	0	21	3	580	14	31	2	28	30	564	17	1301
05:00 PM	1	0	3	2	178	0	5	2	1	8	161	5	366
05:15 PM	2	0	6	1	126	0	5	0	5	13	162	4	324
05:30 PM	0	0	6	4	125	3	6	0	4	13	139	4	304
05:45 PM	1	2	2	1	128	1	5	1	10	11	155	4	321
Total	4	2	17	8	557	4	21	3	20	45	617	17	1315
Grand Total	15	2	38	11	1137	18	52	5	48	75	1181	34	2616
Apprch %	27.3	3.6	69.1	0.9	97.5	1.5	49.5	4.8	45.7	5.8	91.6	2.6	
Total %	0.6	0.1	1.5	0.4	43.5	0.7	2	0.2	1.8	2.9	45.1	1.3	

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
04:30 PM	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
Total	0	0	0	0	0	0	0	0	1	0	0	0	1
05:00 PM	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
05:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	1	0	2
Grand Total	0	0	0	0	1	0	0	0	1	0	1	0	3
Apprch %	0	0	0	0	100	0	0	0	100	0	100	0	
Total %	0	0	0	0	33.3	0	0	0	33.3	0	33.3	0	

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Groups Printed- Bikes Peds																			
Start Time	Tournament Wharf From North				Merrimac St From East				Market St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	2
04:15 PM	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	2	1	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	2	4
Total	0	0	0	1	0	0	1	0	0	0	0	5	0	3	0	0	6	4	10
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	2
05:15 PM	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	2	1	3
05:30 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
05:45 PM	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	4	0	4
Total	0	0	0	8	0	1	0	1	1	0	0	0	0	1	0	0	9	3	12
Grand Total	0	0	0	9	0	1	1	1	1	0	0	5	0	4	0	0	15	7	22
Apprch %	0	0	0		0	50	50		100	0	0		0	100	0				
Total %	0	0	0		0	14.3	14.3		14.3	0	0		0	57.1	0		68.2	31.8	

Accurate Counts
978-664-2565

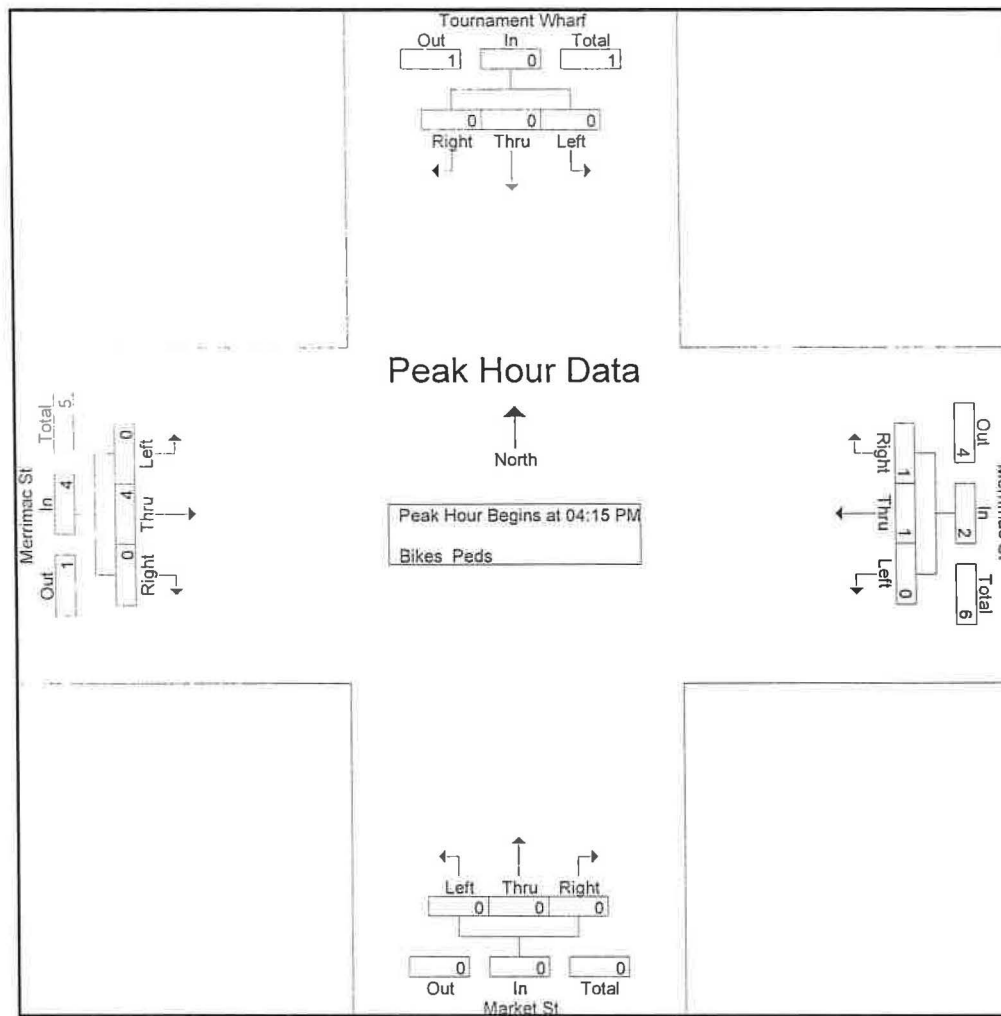
Street : Tournament Wharf/ Market St
 Street: Merrimac Street
 State : Newburyport, MA
 ther : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 14

Tournament Wharf From North					Merrimac St From East				Market St From South				Merrimac St From West				Int. Total	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Hour for Entire Intersection Begins at 04:15 PM																		
04:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2	
Total Volume	0	0	0	0	0	1	1	2	0	0	0	0	0	4	0	4	6	
% App. Total	0	0	0		0	50	50		0	0	0		0	100	0			
PHF	.000	.000	.000	.000	.000	.250	.250	.500	.000	.000	.000	.000	.000	.500	.000	.500	.750	

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 15



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

Peak Hour for Each Approach Begins at:

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

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	3	0	12	2	104	2	4	1	8	10	155	7	308
11:15 AM	1	0	4	2	124	3	5	1	5	8	173	2	328
11:30 AM	0	1	3	2	104	1	8	2	7	15	174	3	320
11:45 AM	0	0	5	3	108	1	5	2	2	16	156	4	302
Total	4	1	24	9	440	7	22	6	22	49	658	16	1258
12:00 PM	0	0	6	0	133	3	9	1	7	14	129	7	309
12:15 PM	2	1	4	1	118	5	3	1	8	17	145	6	311
12:30 PM	1	1	12	3	140	2	4	2	7	14	119	12	317
12:45 PM	2	3	12	1	112	4	6	0	7	19	110	6	282
Total	5	5	34	5	503	14	22	4	29	64	503	31	1219
01:00 PM	0	1	8	1	108	1	2	2	7	18	149	7	304
01:15 PM	3	0	7	1	116	3	4	2	7	11	119	5	278
01:30 PM	3	1	13	2	125	5	4	0	9	14	101	5	282
01:45 PM	3	2	7	3	137	3	3	0	3	15	119	8	303
Total	9	4	35	7	486	12	13	4	26	58	488	25	1167
Grand Total	18	10	93	21	1429	33	57	14	77	171	1649	72	3644
Apprch %	14.9	8.3	76.9	1.4	96.4	2.2	38.5	9.5	52	9	87.2	3.8	
Total %	0.5	0.3	2.6	0.6	39.2	0.9	1.6	0.4	2.1	4.7	45.3	2	
Cars	16	10	93	21	1425	33	57	14	77	169	1645	72	3632
% Cars	88.9	100	100	100	99.7	100	100	100	100	98.8	99.8	100	99.7
Trucks	2	0	0	0	4	0	0	0	0	2	4	0	12
% Trucks	11.1	0	0	0	0.3	0	0	0	0	1.2	0.2	0	0.3

Accurate Counts
978-664-2565

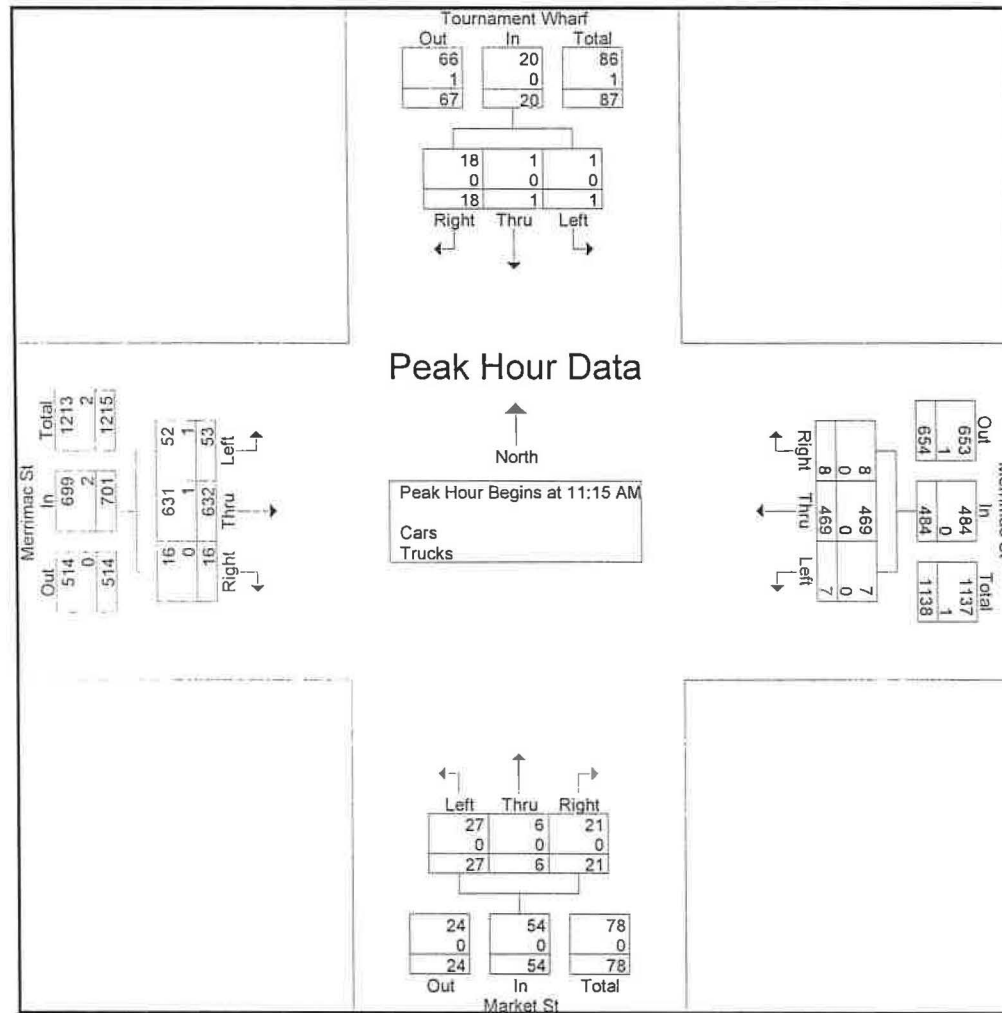
Street : Tournament Wharf/ Market St
 Street: Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 728100S
 Site Code : 7281000:
 Start Date : 7/28/2011
 Page No : 2

Start Time	Tournament Wharf From North				Merrimac St From East				Market St From South				Merrimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15 AM																	
11:15 AM	1	0	4	5	2	124	3	129	5	1	5	11	8	173	2	183	328
11:30 AM	0	1	3	4	2	104	1	107	8	2	7	17	15	174	3	192	320
11:45 AM	0	0	5	5	3	108	1	112	5	2	2	9	16	156	4	176	302
12:00 PM	0	0	6	6	0	133	3	136	9	1	7	17	14	129	7	150	309
Total Volume	1	1	18	20	7	469	8	484	27	6	21	54	53	632	16	701	1259
% App. Total	5	5	90		1.4	96.9	1.7		50	11.1	38.9		7.6	90.2	2.3		
PHF	.250	.250	.750	.833	.583	.882	.667	.890	.750	.750	.750	.794	.828	.908	.571	.913	.960
Cars	1	1	18	20	7	469	8	484	27	6	21	54	52	631	16	699	1257
% Cars	100	100	100	100	100	100	100	100	100	100	100	100	98.1	99.8	100	99.7	99.8
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1.9	0.2	0	0.3	0.2

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/2011
Page No : 3



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:45 PM				12:00 PM				11:30 AM				11:00 AM			
+0 mins.	2	3	12	17	0	133	3	136	8	2	7	17	10	155	7	172
+15 mins.	0	1	8	9	1	118	5	124	5	2	2	9	8	173	2	183
+30 mins.	3	0	7	10	3	140	2	145	9	1	7	17	15	174	3	192
+45 mins.	3	1	13	17	1	112	4	117	3	1	8	12	16	156	4	176
Total Volume	8	5	40	53	5	503	14	522	25	6	24	55	49	658	16	723
% App. Total	15.1	9.4	75.5		1	96.4	2.7		45.5	10.9	43.6		6.8	91	2.2	
PHF	.667	.417	.769	.779	.417	.898	.700	.900	.694	.750	.750	.809	.766	.945	.571	.941

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/2017
Page No : 5

Groups Printed- Cars

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	3	0	12	2	104	2	4	1	8	10	153	7	306
11:15 AM	1	0	4	2	124	3	5	1	5	8	173	2	328
11:30 AM	0	1	3	2	104	1	8	2	7	15	174	3	320
11:45 AM	0	0	5	3	108	1	5	2	2	15	155	4	300
Total	4	1	24	9	440	7	22	6	22	48	655	16	1254
12:00 PM	0	0	6	0	133	3	9	1	7	14	129	7	309
12:15 PM	1	1	4	1	116	5	3	1	8	17	145	6	308
12:30 PM	1	1	12	3	138	2	4	2	7	14	119	12	315
12:45 PM	2	3	12	1	112	4	6	0	7	19	110	6	282
Total	4	5	34	5	499	14	22	4	29	64	503	31	1214
01:00 PM	0	1	8	1	108	1	2	2	7	18	149	7	304
01:15 PM	3	0	7	1	116	3	4	2	7	10	119	5	277
01:30 PM	2	1	13	2	125	5	4	0	9	14	100	5	280
01:45 PM	3	2	7	3	137	3	3	0	3	15	119	8	303
Total	8	4	35	7	486	12	13	4	26	57	487	25	1164
Grand Total	16	10	93	21	1425	33	57	14	77	169	1645	72	3632
Apprch %	13.4	8.4	78.2	1.4	96.3	2.2	38.5	9.5	52	9	87.2	3.8	
Total %	0.4	0.3	2.6	0.6	39.2	0.9	1.6	0.4	2.1	4.7	45.3	2	

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/201:
Page No : 9

Groups Printed- Trucks

Start Time	Tournament Wharf From North			Merrimac St From East			Market St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	1	1	0	2
Total	0	0	0	0	0	0	0	0	0	1	3	0	4
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	1	0	0	0	2	0	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	4	0	0	0	0	0	0	0	5
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
01:30 PM	1	0	0	0	0	0	0	0	0	0	1	0	2
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	0	1	1	0	3
Grand Total	2	0	0	0	4	0	0	0	0	2	4	0	12
Apprch %	100	0	0	0	100	0	0	0	0	33.3	66.7	0	
Total %	16.7	0	0	0	33.3	0	0	0	0	16.7	33.3	0	

Accurate Counts
978-664-2565

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/201
Page No : 13

Groups Printed- Bikes Peds

Start Time	Tournament Wharf From North				Merrimac St From East				Market St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
11:00 AM	0	0	0	1	0	1	0	0	0	0	0	8	0	9	0	0	9	10	19
11:15 AM	0	0	0	1	0	2	0	0	0	0	0	3	0	0	0	0	4	2	6
11:30 AM	0	0	0	8	0	0	0	0	0	0	0	1	1	2	0	0	9	3	12
11:45 AM	0	0	0	6	0	4	0	0	0	0	0	18	0	9	0	0	24	13	37
Total	0	0	0	16	0	7	0	0	0	0	0	30	1	20	0	0	46	28	74
12:00 PM	2	0	0	6	0	0	0	0	0	0	0	4	0	3	0	1	11	5	16
12:15 PM	0	0	0	2	0	1	0	2	0	0	0	4	0	0	0	0	8	1	9
12:30 PM	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	5	0	5
12:45 PM	0	0	0	4	0	5	0	5	0	0	0	14	0	6	0	0	23	11	34
Total	2	0	0	13	0	6	0	7	0	0	0	26	0	9	0	1	47	17	64
01:00 PM	0	0	0	8	0	0	0	5	0	0	0	2	0	1	1	0	15	2	17
01:15 PM	0	0	0	2	0	0	0	0	0	0	0	19	0	2	0	1	22	2	24
01:30 PM	0	0	0	5	0	0	1	0	0	0	0	2	0	2	0	0	7	3	10
01:45 PM	0	0	0	6	0	0	0	0	0	0	0	4	1	1	1	0	10	3	13
Total	0	0	0	21	0	0	1	5	0	0	0	27	1	6	2	1	54	10	64
Grand Total	2	0	0	50	0	13	1	12	0	0	0	83	2	35	2	2	147	55	202
Apprch %	100	0	0		0	92.9	7.1		0	0	0		5.1	89.7	5.1				
Total %	3.6	0	0		0	23.6	1.8		0	0	0		3.6	63.6	3.6		72.8	27.2	

Accurate Counts
978-664-2565

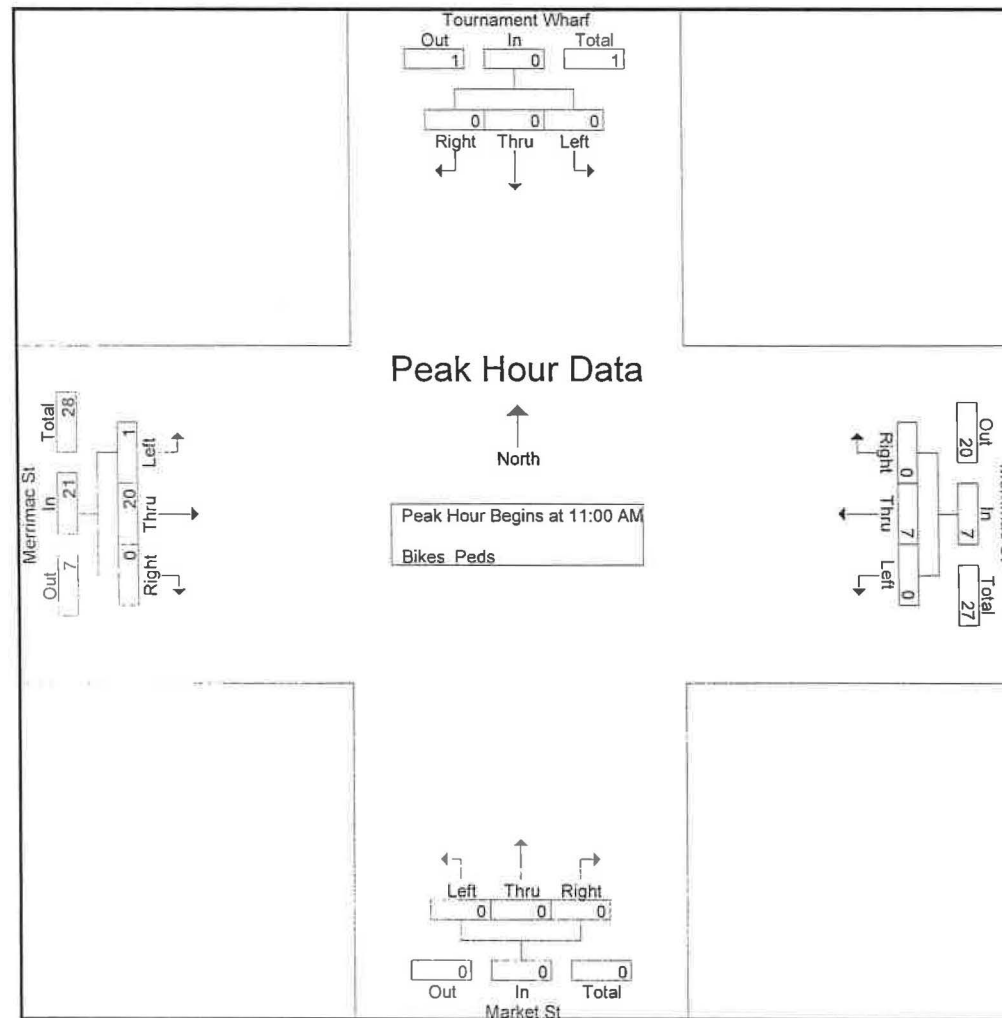
Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000:
Start Date : 7/28/2011
Page No : 14

Start Time	Tournament Wharf From North				Merrimac St From East				Market St From South				Merrimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:00 AM																	
11:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	9	0	9	10
11:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
11:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	9	0	9	13
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	1	20	0	21	28
% App. Total	0	0	0		0	100	0		0	0	0		4.8	95.2	0		
PHF	.000	.000	.000	.000	.000	.438	.000	.438	.000	.000	.000	.000	.250	.556	.000	.583	.538

Street : Tournament Wharf/ Market St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 15



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	11:15 AM				11:00 AM				11:00 AM				11:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	9	0	9
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
+45 mins.	2	0	0	2	0	4	0	4	0	0	0	0	0	9	0	9
Total Volume	2	0	0	2	0	7	0	7	0	0	0	0	1	20	0	21
% App. Total	100	0	0		0	100	0		0	0	0		4.8	95.2	0	
PHF	250	.000	.000	.250	.000	.438	.000	.438	.000	.000	.000	.000	.250	.556	.000	.583

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

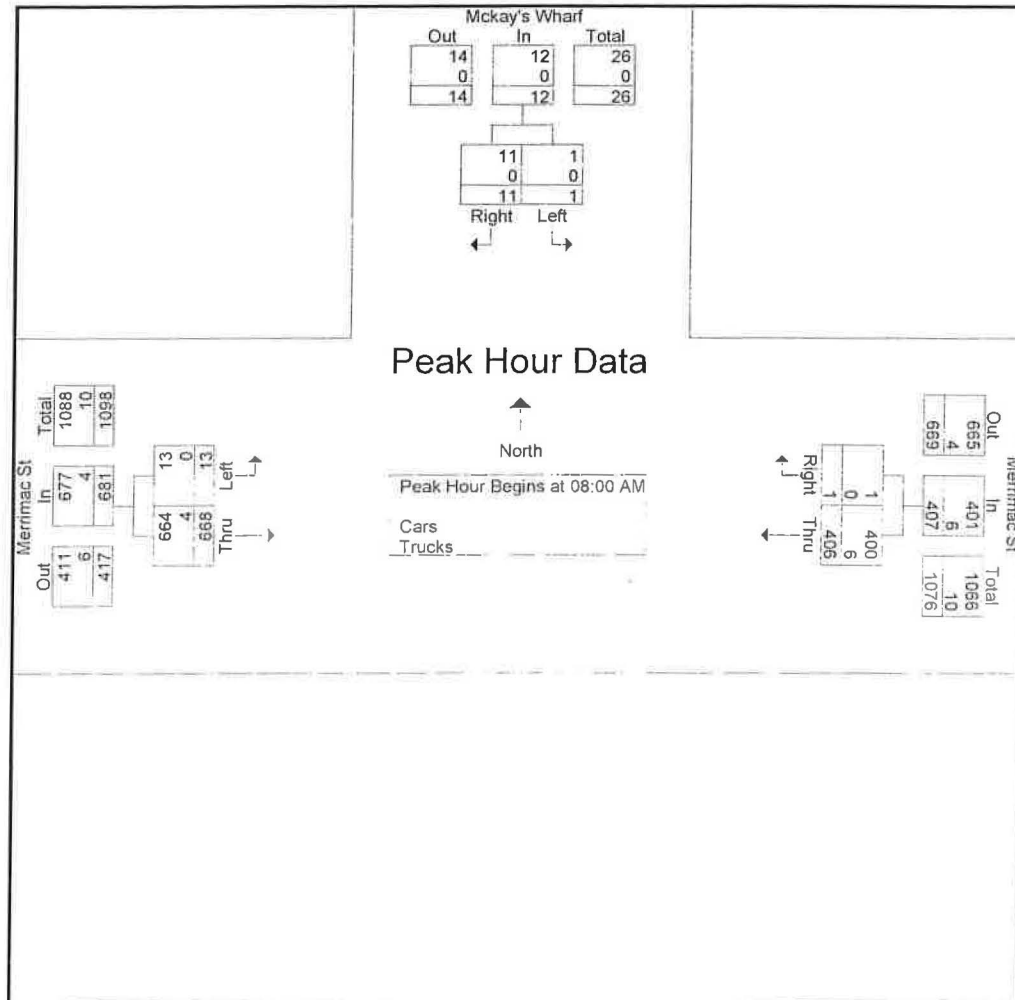
Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	3	56	0	2	66	12
07:15 AM	0	3	63	0	0	87	15
07:30 AM	0	2	74	0	1	121	19
07:45 AM	0	3	81	0	3	144	21
Total	0	11	274	0	6	418	70
08:00 AM	0	3	87	0	1	163	21
08:15 AM	0	4	111	0	3	137	21
08:30 AM	0	2	89	0	2	162	21
08:45 AM	1	2	119	1	7	206	31
Total	1	11	406	1	13	668	110
Grand Total	1	22	680	1	19	1086	180
Apprch %	4.3	95.7	99.9	0.1	1.7	98.3	
Total %	0.1	1.2	37.6	0.1	1.1	60	
Cars	1	22	667	1	19	1075	178
% Cars	100	100	98.1	100	100	99	98
Trucks	0	0	13	0	0	11	1
% Trucks	0	0	1.9	0	0	1	1

Accurate Counts 978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	3	3	87	0	87	1	163	164	25
08:15 AM	0	4	4	111	0	111	3	137	140	25
08:30 AM	0	2	2	89	0	89	2	162	164	25
08:45 AM	1	2	3	119	1	120	7	206	213	33
Total Volume	1	11	12	406	1	407	13	668	681	110
% App. Total	8.3	91.7		99.8	0.2		1.9	98.1		
PHF	.250	.688	.750	.853	.250	.848	.464	.811	.799	.81
Cars	1	11	12	400	1	401	13	664	677	109
% Cars	100	100	100	98.5	100	98.5	100	99.4	99.4	99
Trucks	0	0	0	6	0	6	0	4	4	1
% Trucks	0	0	0	1.5	0	1.5	0	0.6	0.6	0



Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	3	56	0	2	63	12
07:15 AM	0	3	62	0	0	85	14
07:30 AM	0	2	69	0	1	121	15
07:45 AM	0	3	80	0	3	142	22
Total	0	11	267	0	6	411	64
08:00 AM	0	3	85	0	1	162	22
08:15 AM	0	4	110	0	3	135	22
08:30 AM	0	2	88	0	2	162	22
08:45 AM	1	2	117	1	7	205	32
Total	1	11	400	1	13	664	100
Grand Total	1	22	667	1	19	1075	176
Apprch %	4.3	95.7	99.9	0.1	1.7	98.3	
Total %	0.1	1.2	37.4	0.1	1.1	60.2	

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	0	0	0	3	
07:15 AM	0	0	1	0	0	2	
07:30 AM	0	0	5	0	0	0	
07:45 AM	0	0	1	0	0	2	
Total	0	0	7	0	0	7	
08:00 AM	0	0	2	0	0	1	
08:15 AM	0	0	1	0	0	2	
08:30 AM	0	0	1	0	0	0	
08:45 AM	0	0	2	0	0	1	
Total	0	0	6	0	0	4	
Grand Total	0	0	13	0	0	11	
Apprch %	0	0	100	0	0	100	
Total %	0	0	54.2	0	0	45.8	

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

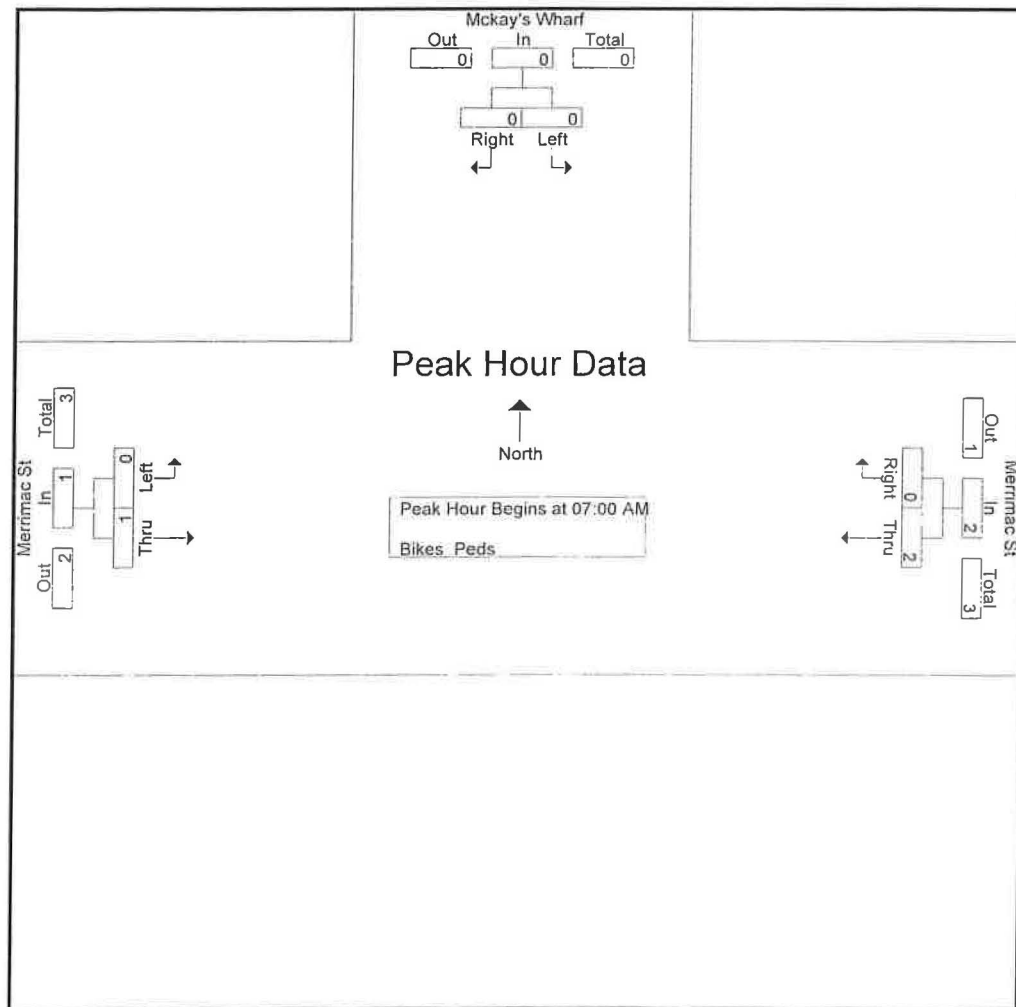
Groups Printed- Bikes Peds													
Start Time	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot	
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds				
07:00 AM	0	0	0	2	0	0	0	0	0	0	2		
07:15 AM	0	0	0	0	0	0	0	0	0	0	0		
07:30 AM	0	0	1	0	0	0	0	0	0	1	0		
07:45 AM	0	0	3	0	0	0	0	1	0	3	1		
Total	0	0	4	2	0	0	0	1	0	4	3		
08:00 AM	0	0	1	0	0	0	0	0	0	1	0		
08:15 AM	0	0	1	0	0	0	0	0	0	1	0		
08:30 AM	0	0	5	0	0	0	0	0	0	5	0		
08:45 AM	0	0	5	0	0	0	0	2	0	5	2		
Total	0	0	12	0	0	0	0	2	0	12	2	1	
Grand Total	0	0	16	2	0	0	0	3	0	16	5	2	
Apprch %	0	0		100	0		0	100					
Total %	0	0		40	0		0	60		76.2	23.8		

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	2	0	2	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	1	1	
Total Volume	0	0	0	2	0	2	0	1	1	
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250	.37



Accurate Counts
978-664-2565

S Street : Mckay's Wharf
N Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

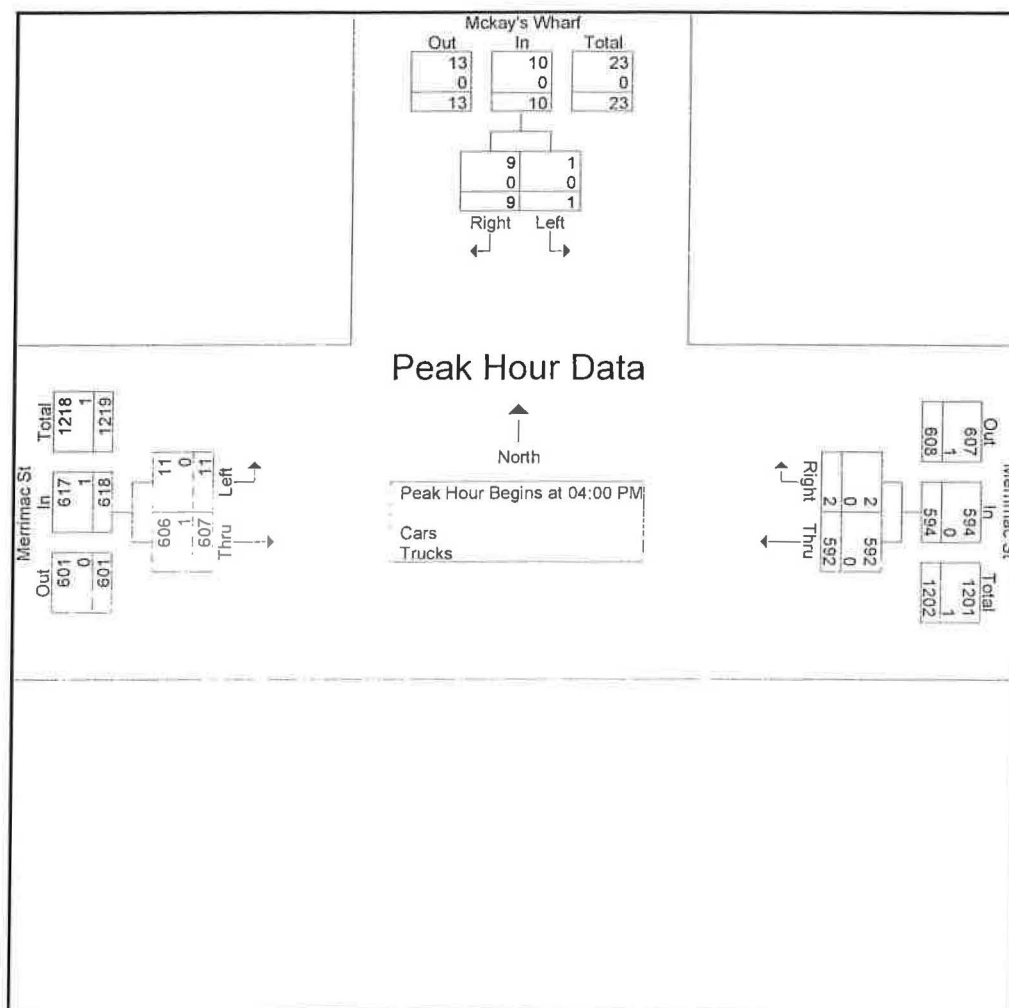
Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	4	173	1	4	155	30
04:15 PM	0	1	135	0	5	155	29
04:30 PM	1	3	148	1	1	140	29
04:45 PM	0	1	136	0	1	157	29
Total	1	9	592	2	11	607	128
05:00 PM	1	2	175	0	3	153	30
05:15 PM	0	3	121	0	2	171	29
05:30 PM	0	4	124	0	2	144	27
05:45 PM	0	2	129	0	4	154	28
Total	1	11	549	0	11	622	119
Grand Total	2	20	1141	2	22	1229	247
Apprch %	9.1	90.9	99.8	0.2	1.8	98.2	
Total %	0.1	0.8	47.2	0.1	0.9	50.9	
Cars	2	20	1140	2	22	1227	247
% Cars	100	100	99.9	100	100	99.8	99
Trucks	0	0	1	0	0	2	
% Trucks	0	0	0.1	0	0	0.2	0

Accurate Counts
978-664-2565

S Street : McKay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	McKay's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	4	4	173	1	174	4	155	159	33
04:15 PM	0	1	1	135	0	135	5	155	160	29
04:30 PM	1	3	4	148	1	149	1	140	141	29
04:45 PM	0	1	1	136	0	136	1	157	158	29
Total Volume	1	9	10	592	2	594	11	607	618	122
% App. Total	10	90		99.7	0.3		1.8	98.2		
PHF	.250	.563	.625	.855	.500	.853	.550	.967	.966	.90
Cars	1	9	10	592	2	594	11	606	617	122
% Cars	100	100	100	100	100	100	100	99.8	99.8	99
Trucks	0	0	0	0	0	0	0	1	1	
% Trucks	0	0	0	0	0	0	0	0.2	0.2	0



Accurate Counts

978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	4	173	1	4	155	30
04:15 PM	0	1	135	0	5	154	29
04:30 PM	1	3	148	1	1	140	29
04:45 PM	0	1	136	0	1	157	29
Total	1	9	592	2	11	606	120
05:00 PM	1	2	175	0	3	153	30
05:15 PM	0	3	121	0	2	171	29
05:30 PM	0	4	123	0	2	143	29
05:45 PM	0	2	129	0	4	154	28
Total	1	11	548	0	11	621	119
Grand Total	2	20	1140	2	22	1227	240
Approch %	9.1	90.9	99.8	0.2	1.8	98.2	
Total %	0.1	0.8	47.2	0.1	0.9	50.8	

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	1	
04:30 PM	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	
Total	0	0	0	0	0	1	
05:00 PM	0	0	0	0	0	0	
05:15 PM	0	0	0	0	0	0	
05:30 PM	0	0	1	0	0	1	
05:45 PM	0	0	0	0	0	0	
Total	0	0	1	0	0	1	
Grand Total	0	0	1	0	0	2	
Apprch %	0	0	100	0	0	100	
Total %	0	0	33.3	0	0	66.7	

Accurate Counts
978-664-2565

S Street : McKay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds

Start Time	McKay's Wharf From North			Merrimac St From East			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
04:00 PM	0	0	2	0	0	0	0	0	0	2	0	
04:15 PM	0	0	2	1	0	0	0	0	0	2	1	
04:30 PM	0	0	3	0	0	0	0	1	0	3	1	
04:45 PM	0	0	3	0	0	0	0	2	0	3	2	
Total	0	0	10	1	0	0	0	3	0	10	4	1
05:00 PM	0	0	1	1	0	0	0	1	0	1	2	
05:15 PM	0	0	3	0	0	0	0	0	0	3	0	
05:30 PM	0	0	7	0	0	0	0	0	0	7	0	
05:45 PM	0	0	14	0	0	0	0	2	0	14	2	1
Total	0	0	25	1	0	0	0	3	0	25	4	2
Grand Total	0	0	35	2	0	0	0	6	0	35	8	4
Apprch %	0	0		100	0		0	100				
Total %	0	0		25	0		0	75		81.4	18.6	

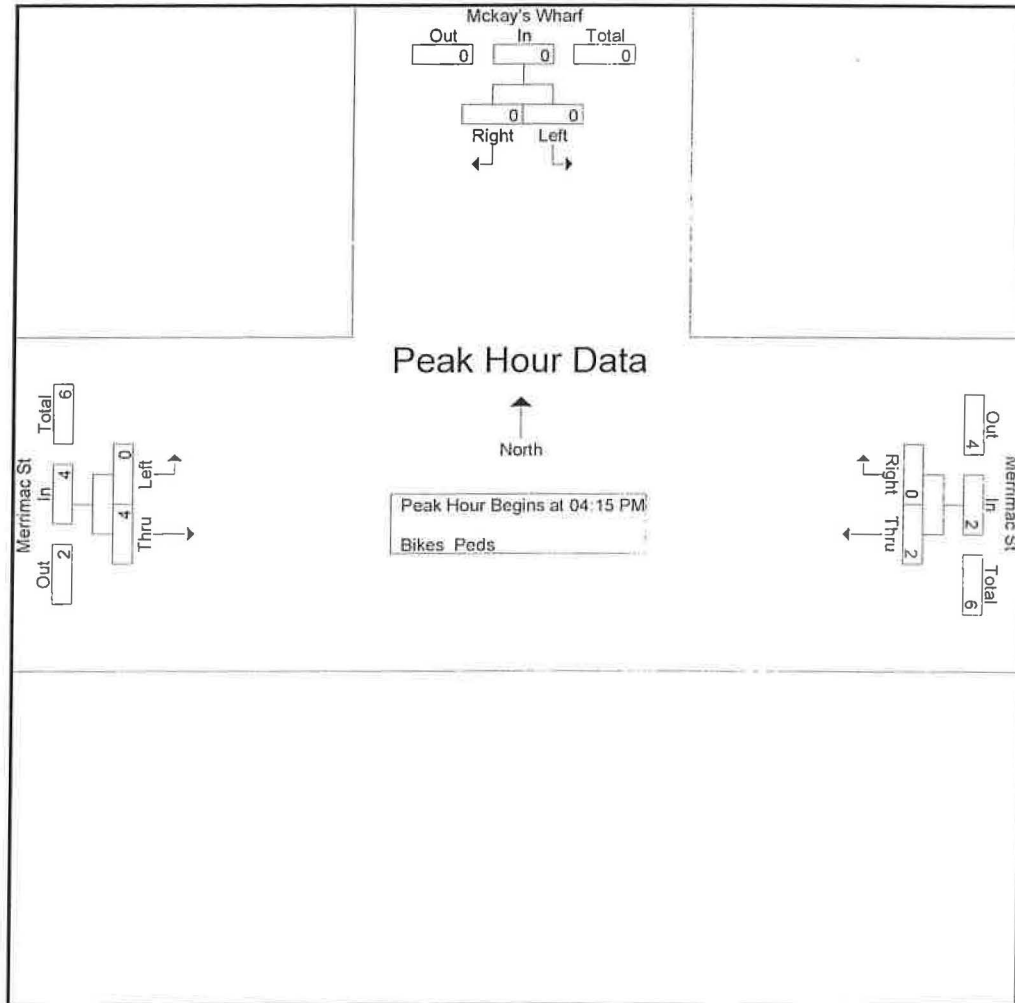
Accurate Counts

978-664-2565

S Street : Mckay's Wharf
 W Street: Merrimac Street
 City/State : Newburyport, MA
 Weather : Cloudy

File Name : 72810
 Site Code : 72810
 Start Date : 7/26/2
 Page No : 11

	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	0	0	1	0	1	0	0	0	
04:30 PM	0	0	0	0	0	0	0	1	1	
04:45 PM	0	0	0	0	0	0	0	2	2	
05:00 PM	0	0	0	1	0	1	0	1	1	
Total Volume	0	0	0	2	0	2	0	4	4	
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.500	.500	.75



Accurate Counts

978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	1	113	0	4	166	28
11:15 AM	0	1	128	1	5	176	31
11:30 AM	0	3	109	0	4	177	28
11:45 AM	0	3	104	1	4	153	28
Total	0	8	454	2	17	672	115
12:00 PM	0	3	132	2	2	133	27
12:15 PM	0	5	126	0	3	151	28
12:30 PM	0	2	139	2	1	130	27
12:45 PM	1	3	116	1	4	122	24
Total	1	13	513	5	10	536	107
01:00 PM	0	1	112	0	2	143	25
01:15 PM	1	3	127	0	1	122	25
01:30 PM	0	4	130	1	4	120	25
01:45 PM	0	7	123	1	4	129	26
Total	1	15	492	2	11	514	108
Grand Total	2	36	1459	9	38	1722	326
Apprch %	5.3	94.7	99.4	0.6	2.2	97.8	
Total %	0.1	1.1	44.7	0.3	1.2	52.7	
Cars	2	36	1454	9	38	1718	325
% Cars	100	100	99.7	100	100	99.8	99
Trucks	0	0	5	0	0	4	
% Trucks	0	0	0.3	0	0	0.2	0

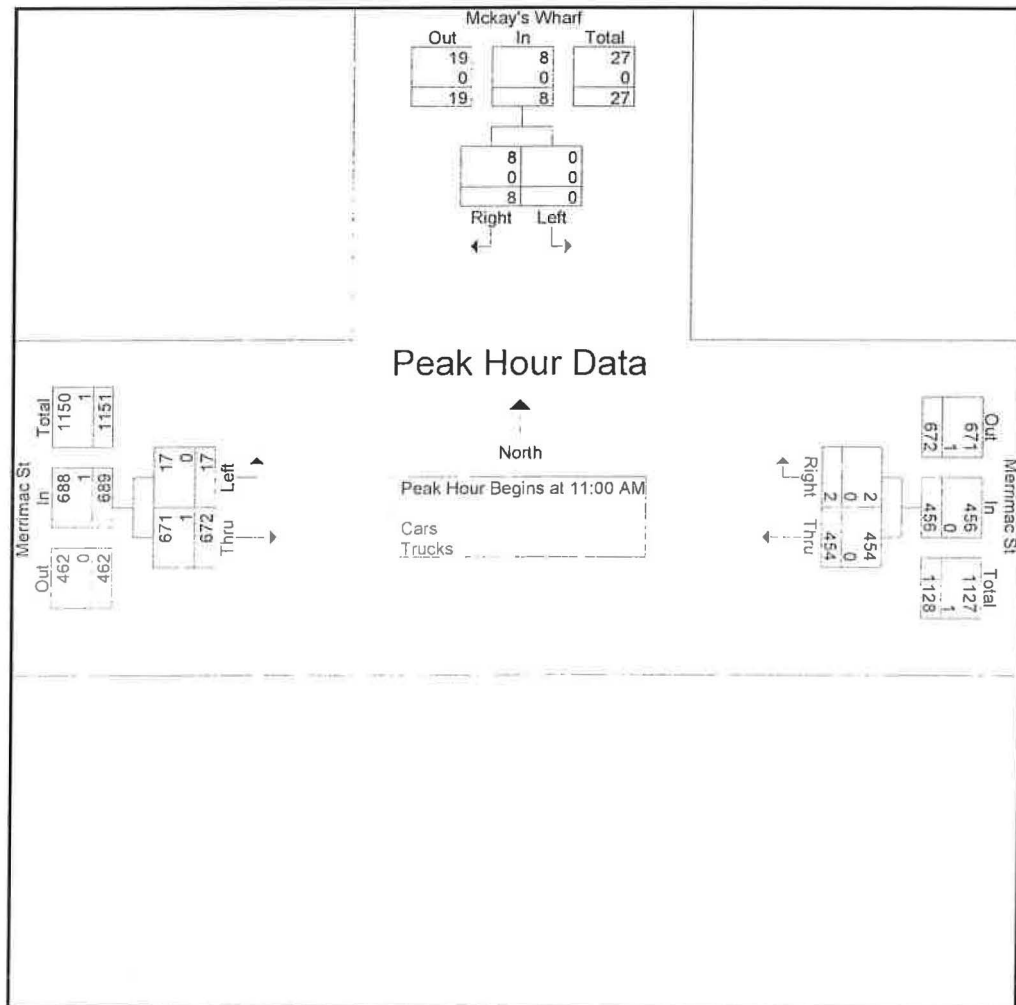
Accurate Counts

978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/20
Page No : 2

	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	0	1	1	113	0	113	4	166	170	28
11:15 AM	0	1	1	128	1	129	5	176	181	31
11:30 AM	0	3	3	109	0	109	4	177	181	29
11:45 AM	0	3	3	104	1	105	4	153	157	26
Total Volume	0	8	8	454	2	456	17	672	689	115
% App. Total	0	100		99.6	0.4		2.5	97.5		
PHF	.000	.667	.667	.887	.500	.884	.850	.949	.952	.92
Cars	0	8	8	454	2	456	17	671	688	115
% Cars	0	100	100	100	100	100	100	99.9	99.9	99
Trucks	0	0	0	0	0	0	0	1	1	
% Trucks	0	0	0	0	0	0	0	0.1	0.1	0



Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/20
Page No : 4

Groups Printed- Cars							
Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	1	113	0	4	166	28
11:15 AM	0	1	128	1	5	176	31
11:30 AM	0	3	109	0	4	177	28
11:45 AM	0	3	104	1	4	152	26
Total	0	8	454	2	17	671	113
12:00 PM	0	3	131	2	2	133	27
12:15 PM	0	5	124	0	3	150	28
12:30 PM	0	2	137	2	1	130	27
12:45 PM	1	3	116	1	4	122	24
Total	1	13	508	5	10	535	107
01:00 PM	0	1	112	0	2	143	25
01:15 PM	1	3	127	0	1	122	25
01:30 PM	0	4	130	1	4	118	25
01:45 PM	0	7	123	1	4	129	26
Total	1	15	492	2	11	512	103
Grand Total	2	36	1454	9	38	1718	321
Apprch %	5.3	94.7	99.4	0.6	2.2	97.8	
Total %	0.1	1.1	44.6	0.3	1.2	52.7	

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 7

Groups Printed- Trucks							
Start Time	Mckay's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	1	
Total	0	0	0	0	0	1	
12:00 PM	0	0	1	0	0	0	
12:15 PM	0	0	2	0	0	1	
12:30 PM	0	0	2	0	0	0	
12:45 PM	0	0	0	0	0	0	
Total	0	0	5	0	0	1	
01:00 PM	0	0	0	0	0	0	
01:15 PM	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	2	
01:45 PM	0	0	0	0	0	0	
Total	0	0	0	0	0	2	
Grand Total	0	0	5	0	0	4	
Apprch %	0	0	100	0	0	100	
Total %	0	0	55.6	0	0	44.4	

Accurate Counts
978-664-2565

S Street : Mckay's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 10

Groups Printed- Bikes Peds												
Start Time	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
11:00 AM	0	0	5	1	0	0	0	5	0	5	6	1
11:15 AM	0	0	6	2	0	0	0	0	0	6	2	
11:30 AM	0	0	14	1	0	0	0	2	0	14	3	1
11:45 AM	0	0	15	3	0	0	0	9	0	15	12	2
Total	0	0	40	7	0	0	0	16	0	40	23	6
12:00 PM	0	0	16	1	0	0	0	4	0	16	5	2
12:15 PM	0	0	12	1	0	0	0	0	0	12	1	1
12:30 PM	0	1	10	0	0	0	0	0	0	10	1	1
12:45 PM	0	0	23	5	0	0	0	5	0	23	10	3
Total	0	1	61	7	0	0	0	9	0	61	17	7
01:00 PM	0	0	18	0	0	0	0	0	0	18	0	1
01:15 PM	0	0	21	1	0	0	0	3	0	21	4	2
01:30 PM	0	0	16	0	0	0	0	0	0	16	0	1
01:45 PM	0	0	12	0	0	0	0	1	0	12	1	1
Total	0	0	67	1	0	0	0	4	0	67	5	7
Grand Total	0	1	168	15	0	0	0	29	0	168	45	21
Apprch %	0	100		100	0		0	100				
Total %	0	2.2		33.3	0		0	64.4		78.9	21.1	

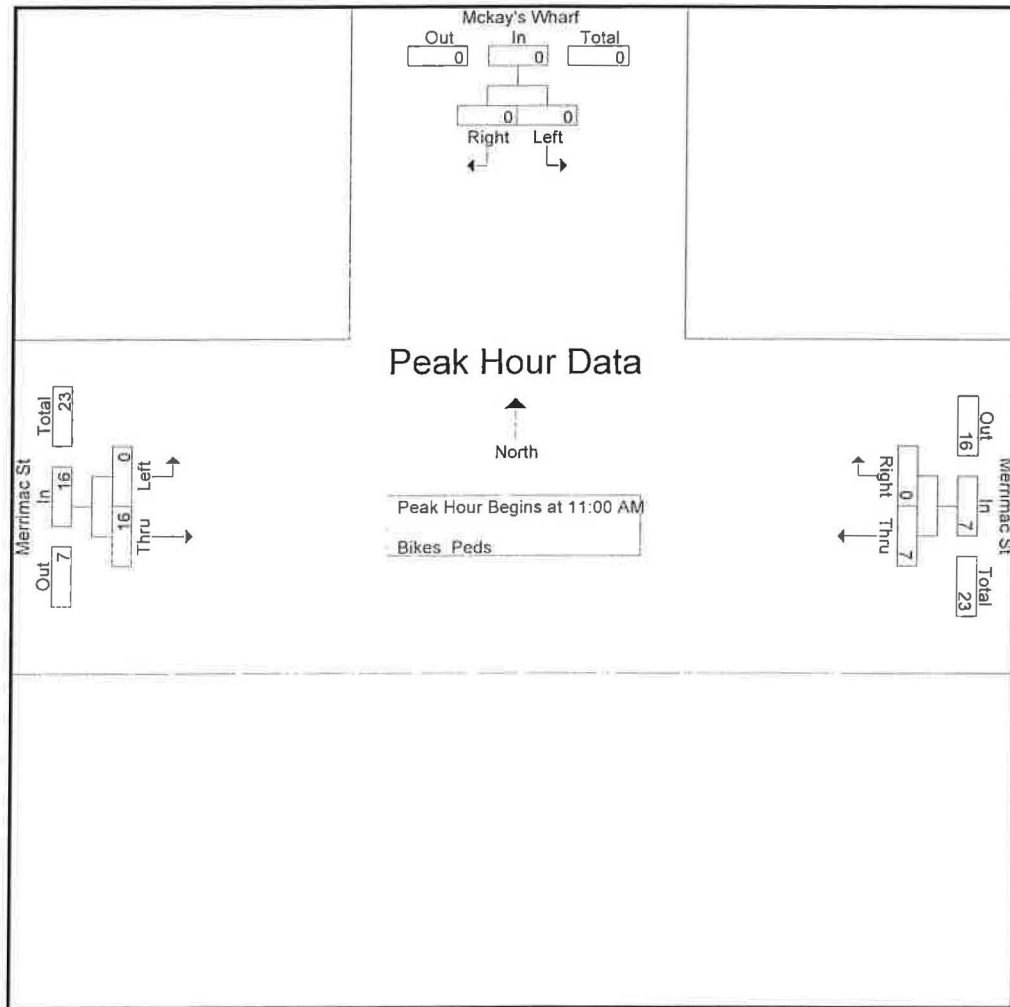
Accurate Counts

978-664-2565

S Street : McKay's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 11

	Mckay's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	0	0	0	1	0	1	0	5	5	
11:15 AM	0	0	0	2	0	2	0	0	0	
11:30 AM	0	0	0	1	0	1	0	2	2	
11:45 AM	0	0	0	3	0	3	0	9	9	1
Total Volume	0	0	0	7	0	7	0	16	16	2
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.583	.000	.583	.000	.444	.444	.47



Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	55	3	2	63	6	12
07:15 AM	0	61	0	2	79	8	15
07:30 AM	3	73	2	1	108	16	20
07:45 AM	1	73	5	1	133	7	22
Total	4	262	10	6	383	37	70
08:00 AM	9	82	2	2	150	10	23
08:15 AM	2	109	4	2	130	10	28
08:30 AM	2	86	2	5	163	4	26
08:45 AM	3	110	7	2	191	17	33
Total	16	387	15	11	634	41	110
Grand Total	20	649	25	17	1017	78	180
Apprch %	3	97	59.5	40.5	92.9	7.1	
Total %	1.1	35.9	1.4	0.9	56.3	4.3	
Cars	20	641	23	17	1009	76	177
% Cars	100	98.8	92	100	99.2	97.4	98
Trucks	0	8	2	0	8	2	2
% Trucks	0	1.2	8	0	0.8	2.6	1

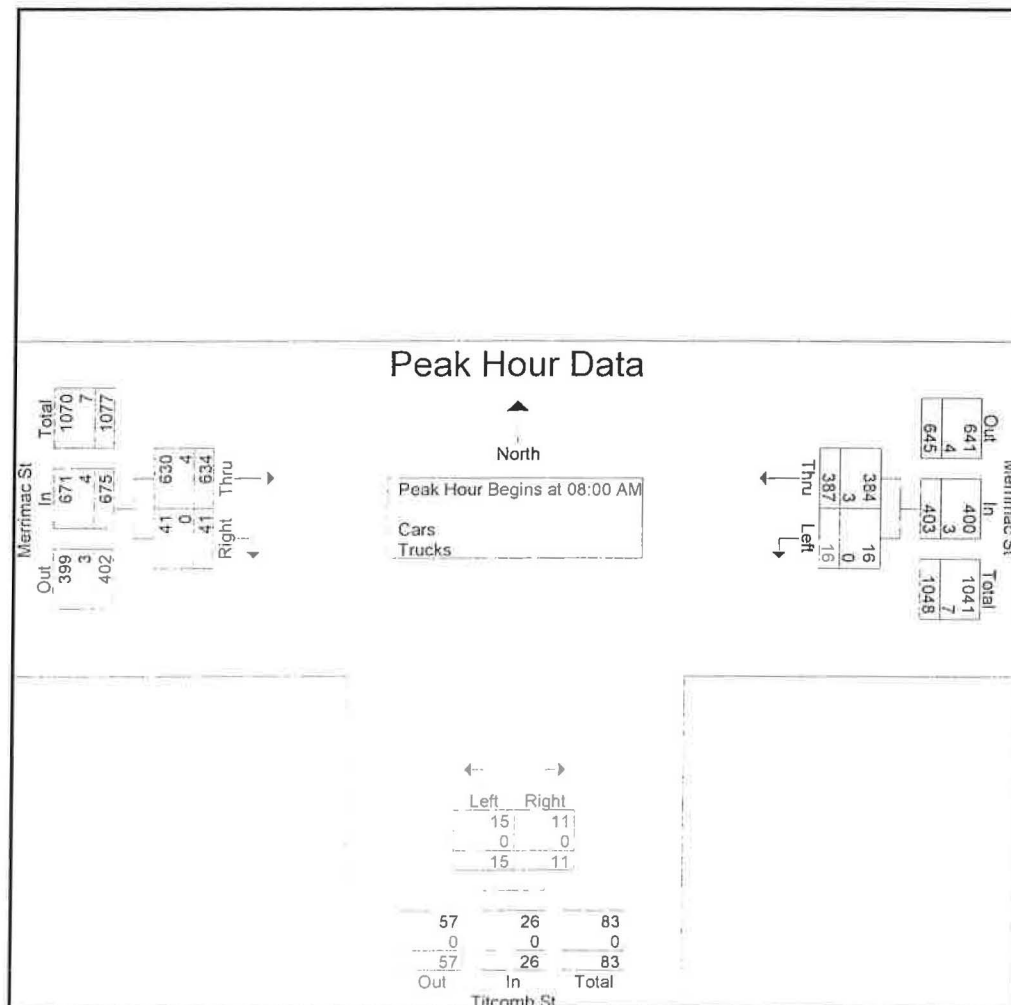
Accurate Counts

978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Merrimac St From East			Titcomb St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	9	82	91	2	2	4	150	10	160	25
08:15 AM	2	109	111	4	2	6	130	10	140	25
08:30 AM	2	86	88	2	5	7	163	4	167	26
08:45 AM	3	110	113	7	2	9	191	17	208	33
Total Volume	16	387	403	15	11	26	634	41	675	110
% App. Total	4	96		57.7	42.3		93.9	6.1		
PHF	.444	.880	.892	.536	.550	.722	.830	.603	.811	.83
Cars	16	384	400	15	11	26	630	41	671	109
% Cars	100	99.2	99.3	100	100	100	99.4	100	99.4	99
Trucks	0	3	3	0	0	0	4	0	4	
% Trucks	0	0.8	0.7	0	0	0	0.6	0	0.6	0



Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	55	3	2	61	5	12
07:15 AM	0	60	0	2	79	7	14
07:30 AM	3	70	0	1	108	16	19
07:45 AM	1	72	5	1	131	7	21
Total	4	257	8	6	379	35	68
08:00 AM	9	82	2	2	149	10	23
08:15 AM	2	109	4	2	128	10	24
08:30 AM	2	85	2	5	163	4	26
08:45 AM	3	108	7	2	190	17	33
Total	16	384	15	11	630	41	109
Grand Total	20	641	23	17	1009	76	178
Apprch %	3	97	57.5	42.5	93	7	
Total %	1.1	35.9	1.3	1	56.5	4.3	

Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	0	0	0	2	1	
07:15 AM	0	1	0	0	0	1	
07:30 AM	0	3	2	0	0	0	
07:45 AM	0	1	0	0	2	0	
Total	0	5	2	0	4	2	
08:00 AM	0	0	0	0	1	0	
08:15 AM	0	0	0	0	2	0	
08:30 AM	0	1	0	0	0	0	
08:45 AM	0	2	0	0	1	0	
Total	0	3	0	0	4	0	
Grand Total	0	8	2	0	8	2	
Apprch %	0	100	100	0	80	20	
Total %	0	40	10	0	40	10	

Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street : Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds												
Start Time	Merrimac St From East			Titcomb St From South			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	2	0	0	0	0	0	0	0	0	2	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	1	1	0	
07:45 AM	0	0	0	0	0	0	0	1	0	0	1	
Total	0	2	0	0	0	0	0	1	1	1	3	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM	0	0	0	0	0	2	0	0	2	4	0	
08:45 AM	0	0	0	0	0	0	3	0	5	5	3	
Total	0	0	0	0	0	2	3	0	7	9	3	1
Grand Total	0	2	0	0	0	2	3	1	8	10	6	1
Apprch %	0	100		0	0		75	25				
Total %	0	33.3		0	0		50	16.7		62.5	37.5	

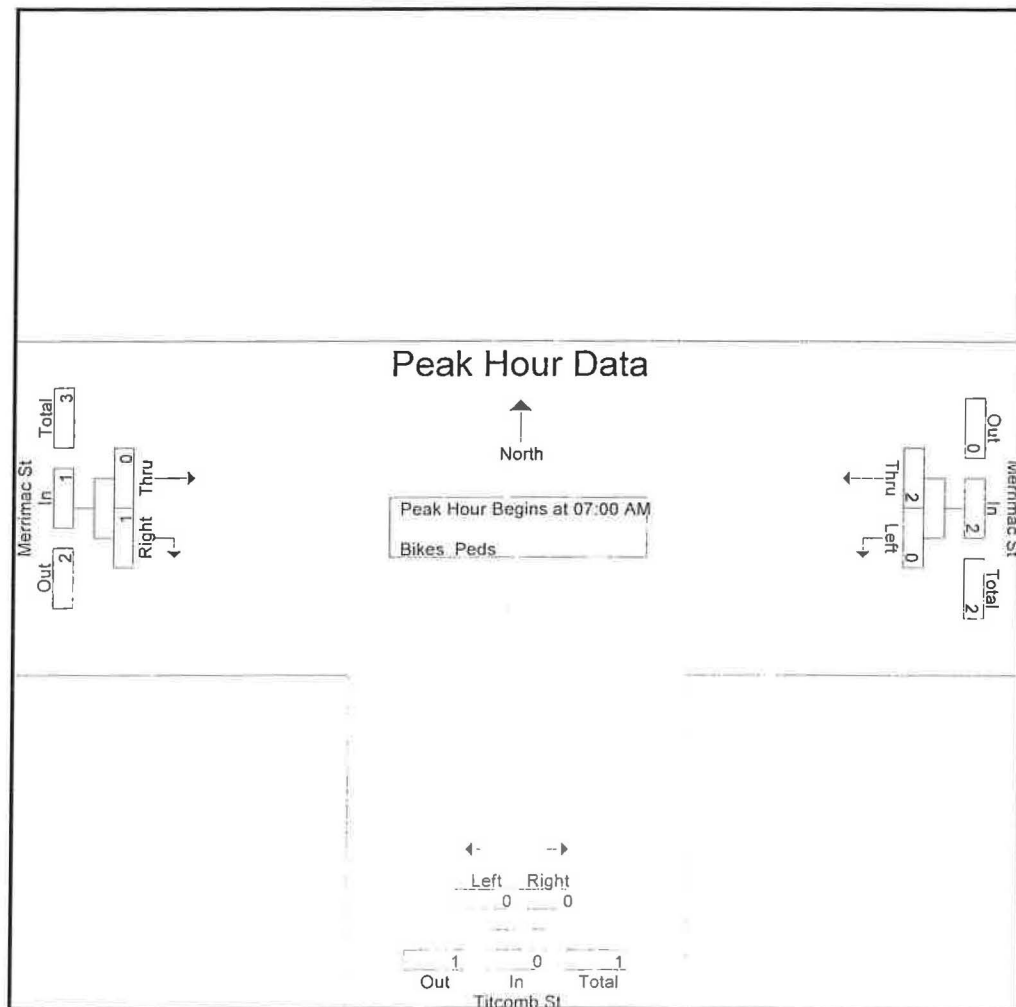
Accurate Counts

978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Merrimac St From East			Titcomb St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	1	1	
Total Volume	0	2	2	0	0	0	0	1	1	
% App. Total	0	100		0	0		0	100		
PHF	.000	.250	.250	.000	.000	.000	.000	.250	.250	.37



Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

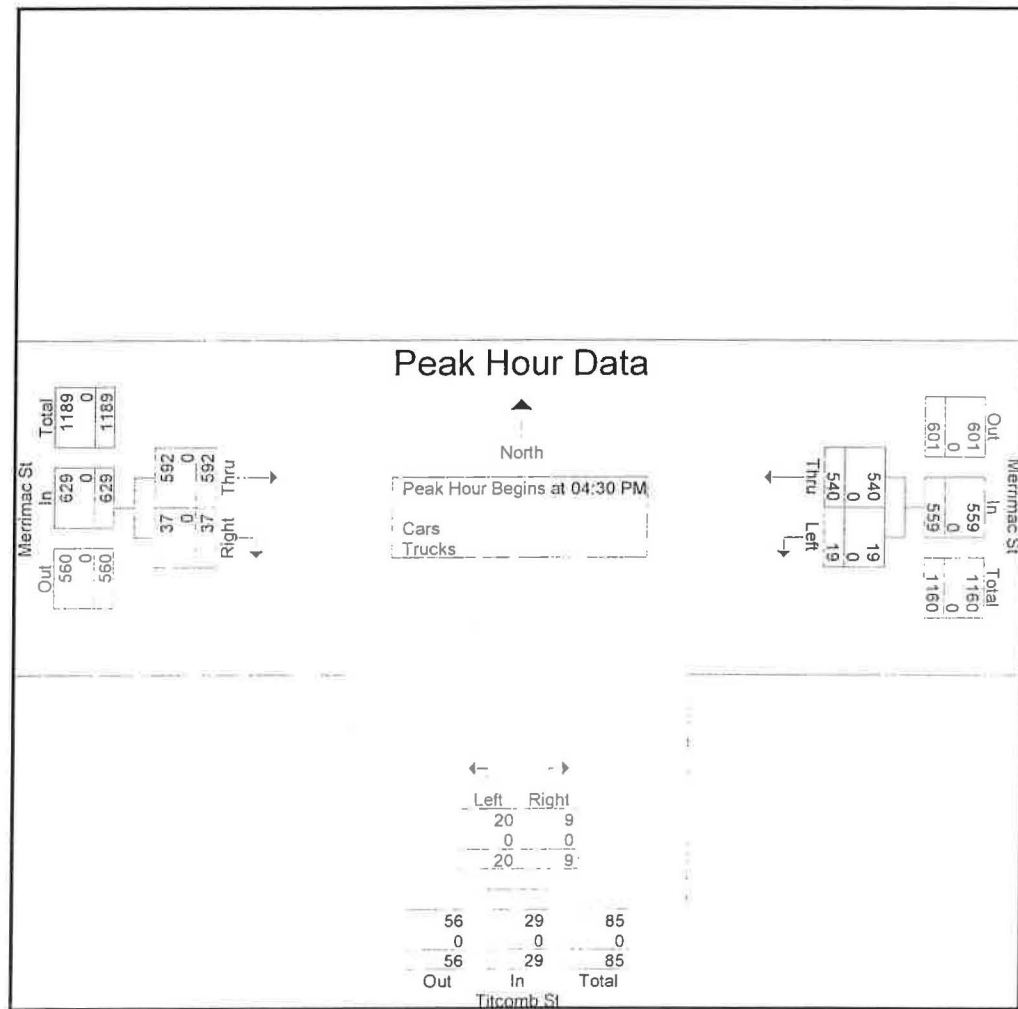
Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	4	159	9	2	147	14	30
04:15 PM	2	123	7	5	138	16	29
04:30 PM	5	134	3	3	138	6	28
04:45 PM	7	129	5	3	144	10	29
Total	18	545	24	13	567	46	120
05:00 PM	3	162	8	1	153	11	30
05:15 PM	4	115	4	2	157	10	29
05:30 PM	4	119	4	1	146	8	28
05:45 PM	2	126	3	1	155	4	29
Total	13	522	19	5	611	33	120
Grand Total	31	1067	43	18	1178	79	240
Apprch %	2.8	97.2	70.5	29.5	93.7	6.3	
Total %	1.3	44.2	1.8	0.7	48.8	3.3	
Cars	31	1066	43	18	1176	79	240
% Cars	100	99.9	100	100	99.8	100	99
Trucks	0	1	0	0	2	0	
% Trucks	0	0.1	0	0	0.2	0	0

Accurate Counts 978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Merrimac St From East			Titcomb St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	5	134	139	3	3	6	138	6	144	28
04:45 PM	7	129	136	5	3	8	144	10	154	28
05:00 PM	3	162	165	8	1	9	153	11	164	33
05:15 PM	4	115	119	4	2	6	157	10	167	28
Total Volume	19	540	559	20	9	29	592	37	629	121
% App. Total	3.4	96.6		69	31		94.1	5.9		
PHF	.679	.833	.847	.625	.750	.806	.943	.841	.942	.90
Cars	19	540	559	20	9	29	592	37	629	121
% Cars	100	100	100	100	100	100	100	100	100	100
Trucks	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0



Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	4	159	9	2	146	14	30
04:15 PM	2	123	7	5	138	16	29
04:30 PM	5	134	3	3	138	6	28
04:45 PM	7	129	5	3	144	10	29
Total	18	545	24	13	566	46	120
05:00 PM	3	162	8	1	153	11	30
05:15 PM	4	115	4	2	157	10	29
05:30 PM	4	118	4	1	145	8	28
05:45 PM	2	126	3	1	155	4	29
Total	13	521	19	5	610	33	120
Grand Total	31	1066	43	18	1176	79	240
Apprch %	2.8	97.2	70.5	29.5	93.7	6.3	
Total %	1.3	44.2	1.8	0.7	48.7	3.3	

Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	0	0	0	1	0	
04:15 PM	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	
Total	0	0	0	0	1	0	
05:00 PM	0	0	0	0	0	0	
05:15 PM	0	0	0	0	0	0	
05:30 PM	0	1	0	0	1	0	
05:45 PM	0	0	0	0	0	0	
Total	0	1	0	0	1	0	
Grand Total	0	1	0	0	2	0	
Apprch %	0	100	0	0	100	0	
Total %	0	33.3	0	0	66.7	0	

Accurate Counts

978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds

Start Time	Merrimac St From East			Titcomb St From South			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot.
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	1	0	0	2	3	0	
04:15 PM	0	1	0	0	0	1	0	0	0	1	1	
04:30 PM	0	0	0	0	1	0	0	0	0	0	1	
04:45 PM	0	0	0	0	0	1	2	0	0	1	2	
Total	0	1	0	0	1	3	2	0	2	5	4	
05:00 PM	0	1	0	0	0	0	1	0	1	1	2	
05:15 PM	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	
05:45 PM	0	0	0	0	0	0	0	0	1	1	0	
Total	0	1	0	0	0	0	1	0	2	2	2	
Grand Total	0	2	0	0	1	3	3	0	4	7	6	1
Apprch %	0	100		0	100		100	0				
Total %	0	33.3		0	16.7		50	0		53.8	46.2	

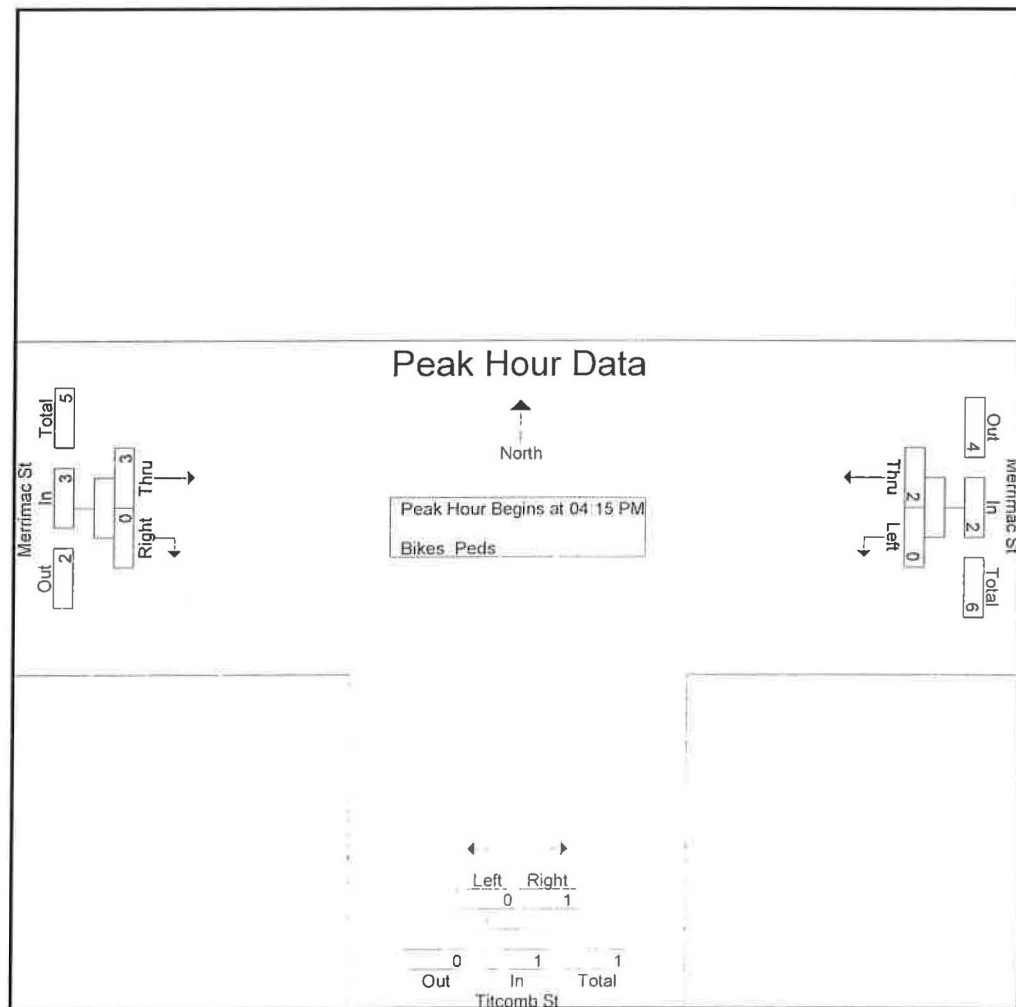
Accurate Counts

978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Merrimac St From East			Titcomb St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	0	1	1	0	0	0	0	0	0	
04:30 PM	0	0	0	0	1	1	0	0	0	
04:45 PM	0	0	0	0	0	0	2	0	2	
05:00 PM	0	1	1	0	0	0	1	0	1	
Total Volume	0	2	2	0	1	1	3	0	3	
% App. Total	0	100		0	100		100	0		
PHF	.000	.500	.500	.000	.250	.250	.375	.000	.375	.75



Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2011
Page No : 1

Groups Printed- Cars - Trucks

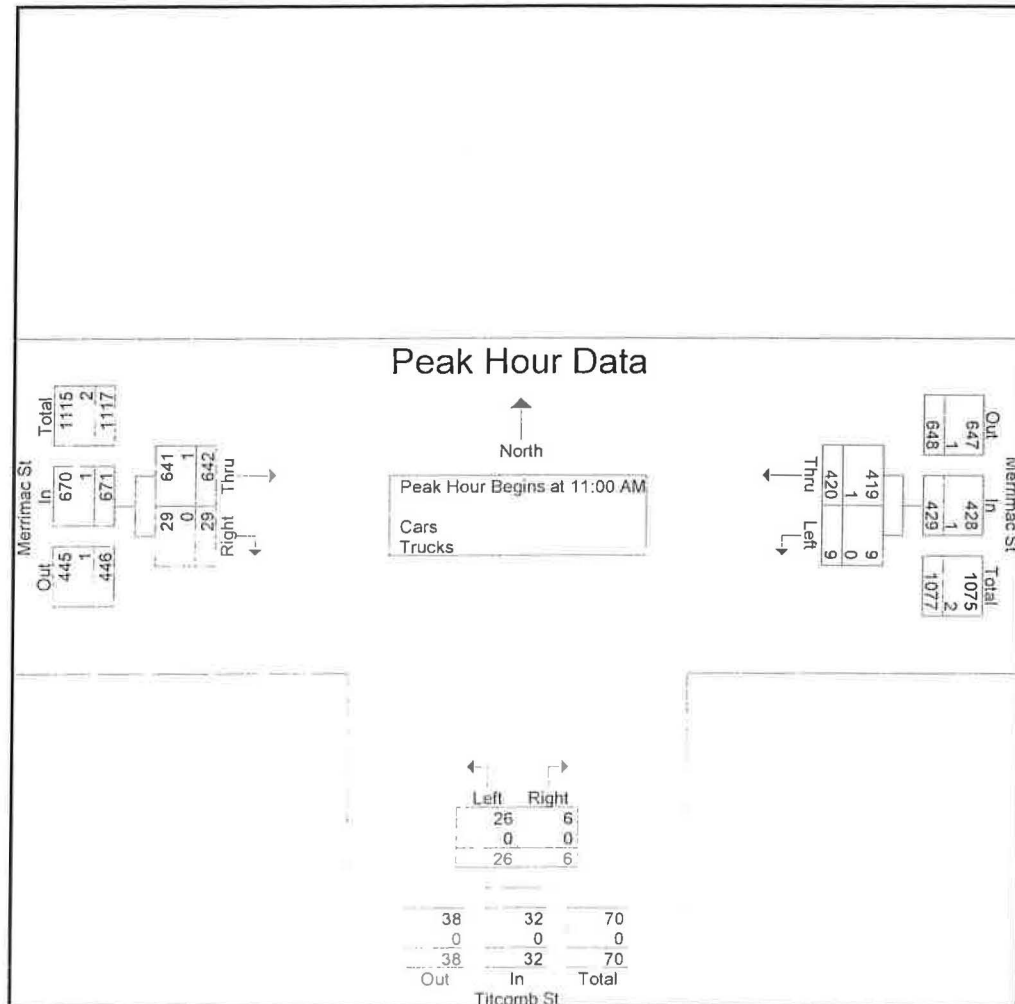
Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	3	100	8	2	160	5	27
11:15 AM	1	116	8	1	166	6	29
11:30 AM	1	104	5	1	169	11	29
11:45 AM	4	100	5	2	147	7	28
Total	9	420	26	6	642	29	111
12:00 PM	7	118	7	1	124	8	28
12:15 PM	6	122	3	2	144	10	28
12:30 PM	2	125	3	2	125	10	28
12:45 PM	7	109	4	3	119	3	24
Total	22	474	17	8	512	31	108
01:00 PM	6	104	4	4	136	12	28
01:15 PM	8	122	6	4	120	4	28
01:30 PM	9	120	10	1	120	6	28
01:45 PM	7	113	6	2	121	10	29
Total	30	459	26	11	497	32	109
Grand Total	61	1353	69	25	1651	92	329
Apprch %	4.3	95.7	73.4	26.6	94.7	5.3	
Total %	1.9	41.6	2.1	0.8	50.8	2.8	
Cars	61	1347	69	25	1647	92	329
% Cars	100	99.6	100	100	99.8	100	99
Trucks	0	6	0	0	4	0	
% Trucks	0	0.4	0	0	0.2	0	0

Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 2

	Merrimac St From East			Titcomb St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	3	100	103	8	2	10	160	5	165	27
11:15 AM	1	116	117	8	1	9	166	6	172	29
11:30 AM	1	104	105	5	1	6	169	11	180	29
11:45 AM	4	100	104	5	2	7	147	7	154	26
Total Volume	9	420	429	26	6	32	642	29	671	113
% App. Total	2.1	97.9		81.2	18.8		95.7	4.3		
PHF	.563	.905	.917	.813	.750	.800	.950	.659	.932	.95
Cars	9	419	428	26	6	32	641	29	670	113
% Cars	100	99.8	99.8	100	100	100	99.8	100	99.9	99
Trucks	0	1	1	0	0	0	1	0	1	
% Trucks	0	0.2	0.2	0	0	0	0.2	0	0.1	0



Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/20
Page No : 4

Groups Printed- Cars

Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	3	100	8	2	160	5	27
11:15 AM	1	116	8	1	166	6	29
11:30 AM	1	103	5	1	169	11	29
11:45 AM	4	100	5	2	146	7	28
Total	9	419	26	6	641	29	115
12:00 PM	7	118	7	1	124	8	28
12:15 PM	6	119	3	2	143	10	28
12:30 PM	2	124	3	2	125	10	28
12:45 PM	7	109	4	3	119	3	24
Total	22	470	17	8	511	31	108
01:00 PM	6	104	4	4	136	12	28
01:15 PM	8	121	6	4	120	4	28
01:30 PM	9	120	10	1	118	6	28
01:45 PM	7	113	6	2	121	10	28
Total	30	458	26	11	495	32	108
Grand Total	61	1347	69	25	1647	92	324
Apprch %	4.3	95.7	73.4	26.6	94.7	5.3	
Total %	1.9	41.6	2.1	0.8	50.8	2.8	

Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2011
Page No : 7

Groups Printed- Trucks								
Start Time	Merrimac St From East		Titcomb St From South		Merrimac St From West		Int. Tol	
	Left	Thru	Left	Right	Thru	Right		
11:00 AM	0	0	0	0	0	0		
11:15 AM	0	0	0	0	0	0		
11:30 AM	0	1	0	0	0	0		
11:45 AM	0	0	0	0	1	0		
Total	0	1	0	0	1	0		
12:00 PM	0	0	0	0	0	0		
12:15 PM	0	3	0	0	1	0		
12:30 PM	0	1	0	0	0	0		
12:45 PM	0	0	0	0	0	0		
Total	0	4	0	0	1	0		
01:00 PM	0	0	0	0	0	0		
01:15 PM	0	1	0	0	0	0		
01:30 PM	0	0	0	0	2	0		
01:45 PM	0	0	0	0	0	0		
Total	0	1	0	0	2	0		
Grand Total	0	6	0	0	4	0		
Apprch %	0	100	0	0	100	0		
Total %	0	60	0	0	40	0		

Accurate Counts
978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 10

Groups Printed- Bikes Peds												
Start Time	Merrimac St From East			Titcomb St From South			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
11:00 AM	0	1	0	0	0	2	0	0	1	3	1	
11:15 AM	0	2	0	0	1	0	1	0	0	0	4	
11:30 AM	0	1	0	0	0	0	1	0	4	4	2	
11:45 AM	0	6	0	0	0	1	8	1	4	5	15	2
Total	0	10	0	0	1	3	10	1	9	12	22	3
12:00 PM	0	0	0	0	0	4	2	2	4	8	4	1
12:15 PM	0	1	0	0	0	0	0	0	1	1	1	
12:30 PM	0	0	1	0	0	2	0	0	2	5	0	
12:45 PM	0	5	0	0	0	14	5	0	9	23	10	3
Total	0	6	1	0	0	20	7	2	16	37	15	5
01:00 PM	0	0	0	0	0	6	0	0	5	11	0	1
01:15 PM	0	1	0	0	0	1	1	0	3	4	2	
01:30 PM	0	0	0	0	0	1	0	0	1	2	0	
01:45 PM	0	5	0	0	0	4	2	0	2	6	7	1
Total	0	6	0	0	0	12	3	0	11	23	9	3
Grand Total	0	22	1	0	1	35	20	3	36	72	46	11
Apprch %	0	100		0	100		87	13				
Total %	0	47.8		0	2.2		43.5	6.5		61	39	

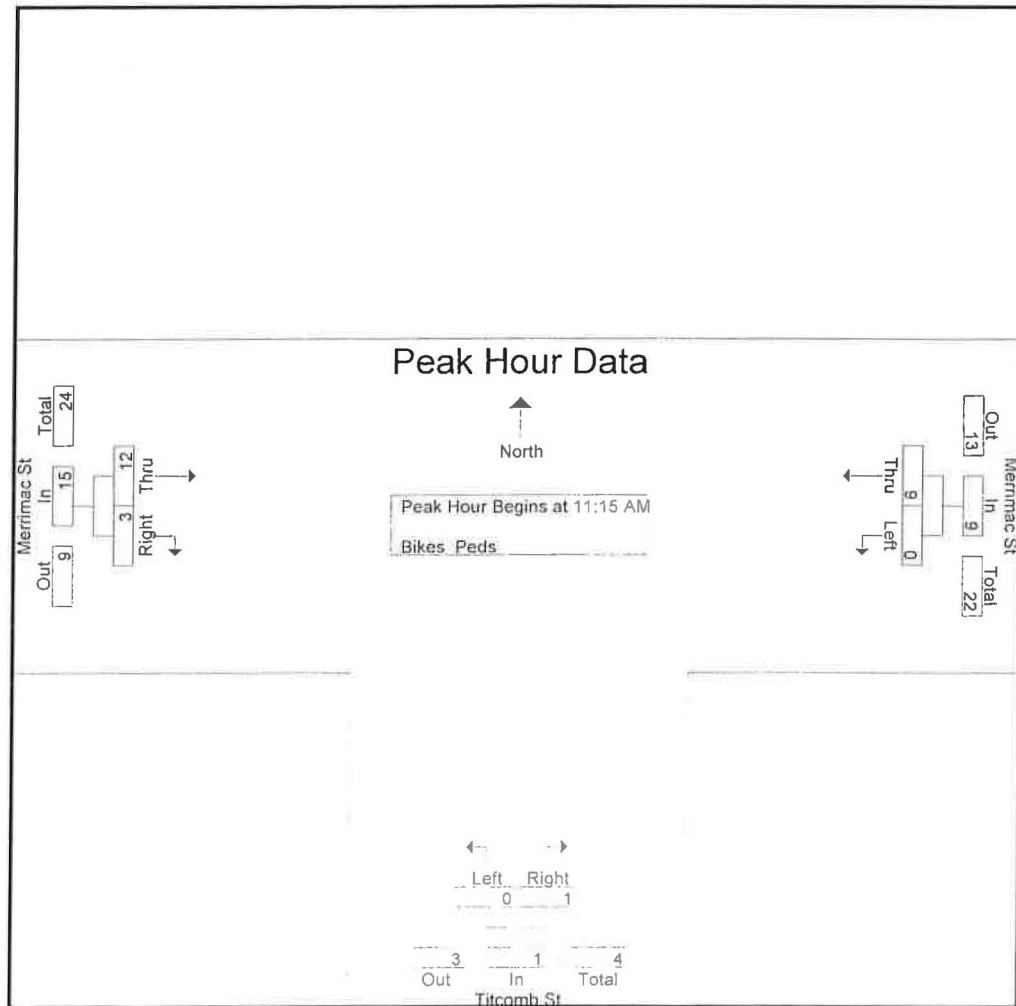
Accurate Counts

978-664-2565

S Street : Titcomb Street
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810I
Site Code : 72810I
Start Date : 7/28/2I
Page No : 11

	Merrimac St From East			Titcomb St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:15 AM										
11:15 AM	0	2	2	0	1	1	1	0	1	
11:30 AM	0	1	1	0	0	0	1	0	1	
11:45 AM	0	6	6	0	0	0	8	1	9	1
12:00 PM	0	0	0	0	0	0	2	2	4	
Total Volume	0	9	9	0	1	1	12	3	15	2
% App. Total	0	100		0	100		80	20		
PHF	.000	.375	.375	.000	.250	.250	.375	.375	.417	.41



Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	56	0	4	60	12
07:15 AM	1	0	62	2	3	76	14
07:30 AM	0	2	80	2	1	110	19
07:45 AM	1	0	78	1	2	132	22
Total	2	2	276	5	10	378	69
08:00 AM	0	2	94	3	5	146	25
08:15 AM	1	3	104	4	4	121	29
08:30 AM	0	4	92	4	8	155	26
08:45 AM	1	2	116	1	12	165	29
Total	2	11	406	12	29	587	104
Grand Total	4	13	682	17	39	965	173
Apprch %	23.5	76.5	97.6	2.4	3.9	96.1	
Total %	0.2	0.8	39.7	1	2.3	56.1	
Cars	2	13	670	17	38	953	169
% Cars	50	100	98.2	100	97.4	98.8	98
Trucks	2	0	12	0	1	12	3
% Trucks	50	0	1.8	0	2.6	1.2	1

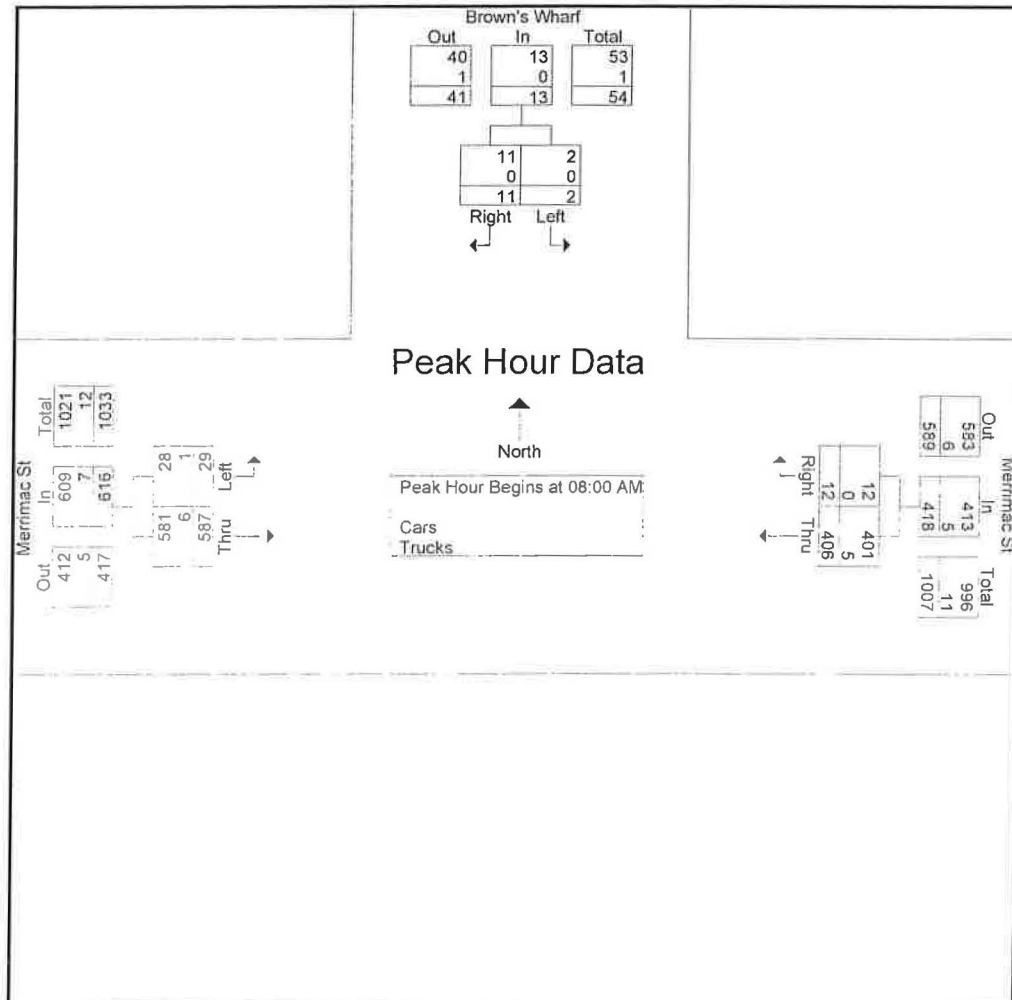
Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Brown's Wharf			Merrimac St			Merrimac St			
	From North			From East			From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	2	2	94	3	97	5	146	151	25
08:15 AM	1	3	4	104	4	108	4	121	125	23
08:30 AM	0	4	4	92	4	96	8	155	163	26
08:45 AM	1	2	3	116	1	117	12	165	177	29
Total Volume	2	11	13	406	12	418	29	587	616	104
% App. Total	15.4	84.6		97.1	2.9		4.7	95.3		
PHF	.500	.688	.813	.875	.750	.893	.604	.889	.870	.88
Cars	2	11	13	401	12	413	28	581	609	103
% Cars	100	100	100	98.8	100	98.8	96.6	99.0	98.9	98
Trucks	0	0	0	5	0	5	1	6	7	1
% Trucks	0	0	0	1.2	0	1.2	3.4	1.0	1.1	1



Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	55	0	4	58	11
07:15 AM	0	0	61	2	3	75	14
07:30 AM	0	2	76	2	1	109	18
07:45 AM	0	0	77	1	2	130	21
Total	0	2	269	5	10	372	68
08:00 AM	0	2	94	3	4	146	24
08:15 AM	1	3	104	4	4	119	26
08:30 AM	0	4	90	4	8	153	29
08:45 AM	1	2	113	1	12	163	29
Total	2	11	401	12	28	581	100
Grand Total	2	13	670	17	38	953	160
Apprch %	13.3	86.7	97.5	2.5	3.8	96.2	
Total %	0.1	0.8	39.6	1	2.2	56.3	

Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
07:00 AM	0	0	1	0	0	2	
07:15 AM	1	0	1	0	0	1	
07:30 AM	0	0	4	0	0	1	
07:45 AM	1	0	1	0	0	2	
Total	2	0	7	0	0	6	
08:00 AM	0	0	0	0	1	0	
08:15 AM	0	0	0	0	0	2	
08:30 AM	0	0	2	0	0	2	
08:45 AM	0	0	3	0	0	2	
Total	0	0	5	0	1	6	
Grand Total	2	0	12	0	1	12	
Apprch %	100	0	100	0	7.7	92.3	
Total %	7.4	0	44.4	0	3.7	44.4	

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds

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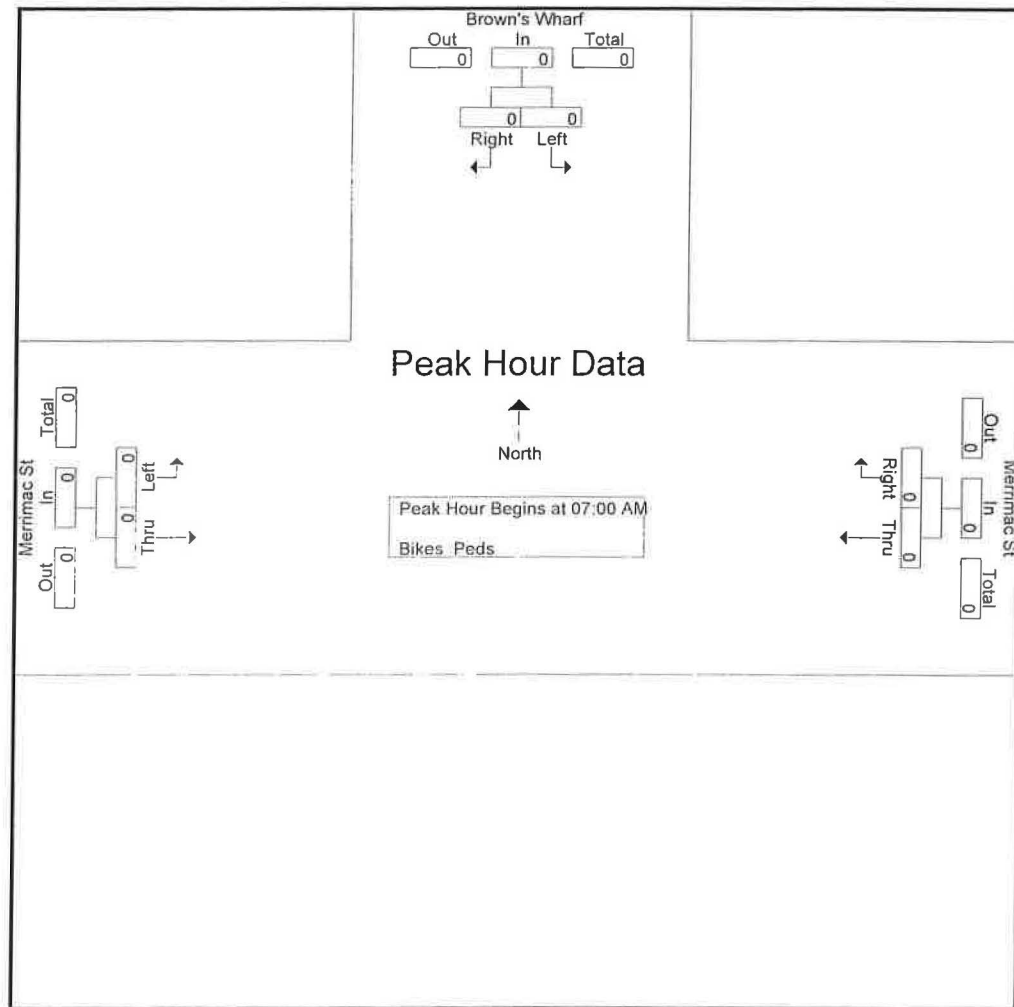
Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Brown's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.00



Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

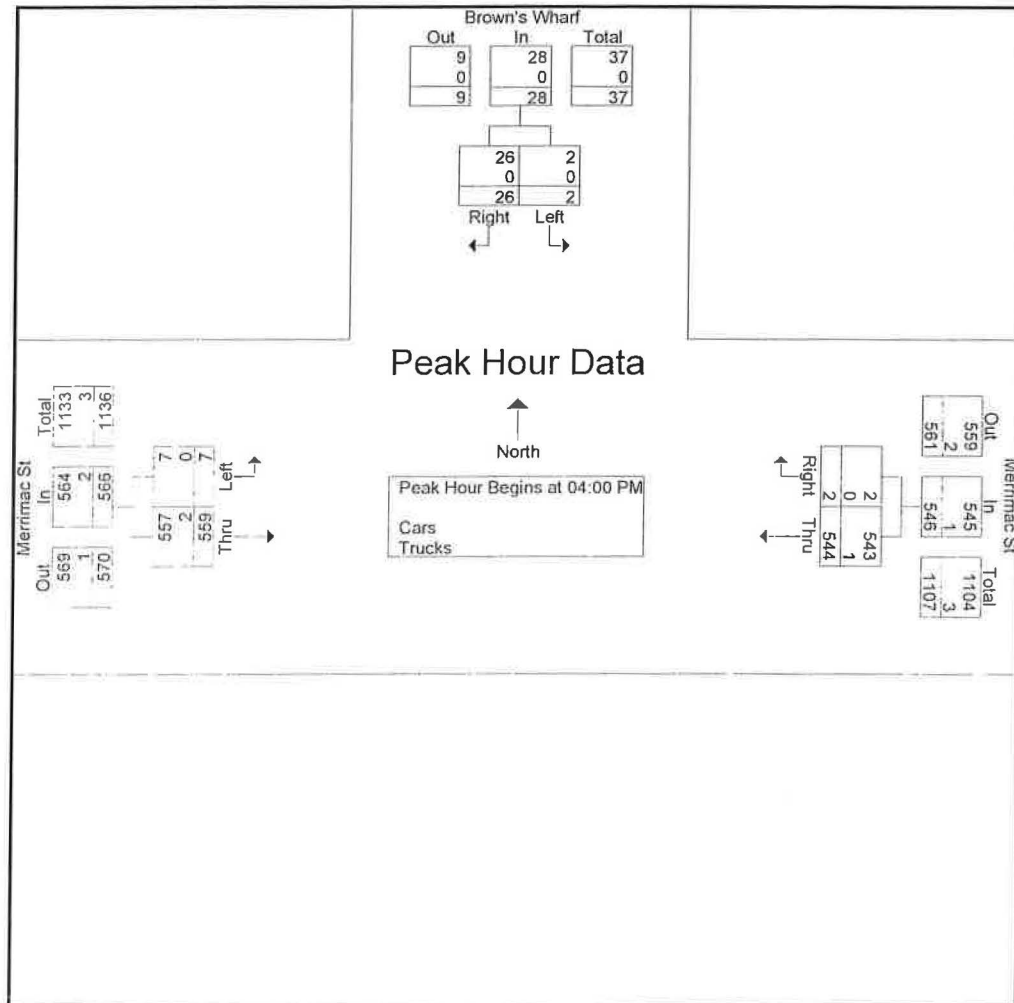
Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	6	160	1	2	156	37
04:15 PM	1	2	127	0	0	130	26
04:30 PM	1	8	131	0	1	138	27
04:45 PM	0	10	126	1	4	135	27
Total	2	26	544	2	7	559	117
05:00 PM	0	15	152	0	0	143	37
05:15 PM	2	7	111	1	1	143	26
05:30 PM	0	4	129	0	0	144	27
05:45 PM	1	2	120	0	4	146	27
Total	3	28	512	1	5	576	117
Grand Total	5	54	1056	3	12	1135	227
Apprch %	8.5	91.5	99.7	0.3	1	99	
Total %	0.2	2.4	46.6	0.1	0.5	50.1	
Cars	5	54	1053	3	12	1132	226
% Cars	100	100	99.7	100	100	99.7	99
Trucks	0	0	3	0	0	3	
% Trucks	0	0	0.3	0	0	0.3	0

Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Brown's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	6	6	160	1	161	2	156	158	32
04:15 PM	1	2	3	127	0	127	0	130	130	26
04:30 PM	1	8	9	131	0	131	1	138	139	27
04:45 PM	0	10	10	126	1	127	4	135	139	27
Total Volume	2	26	28	544	2	546	7	559	566	114
% App. Total	7.1	92.9		99.6	0.4		1.2	98.8		
PHF	.500	.650	.700	.850	.500	.848	.438	.896	.896	.87
Cars	2	26	28	543	2	545	7	557	564	113
% Cars	100	100	100	99.8	100	99.8	100	99.6	99.6	99
Trucks	0	0	0	1	0	1	0	2	2	
% Trucks	0	0	0	0.2	0	0.2	0	0.4	0.4	0



Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	6	160	1	2	155	318
04:15 PM	1	2	126	0	0	130	229
04:30 PM	1	8	131	0	1	137	249
04:45 PM	0	10	126	1	4	135	266
Total	2	26	543	2	7	557	1118
05:00 PM	0	15	152	0	0	143	305
05:15 PM	2	7	110	1	1	143	264
05:30 PM	0	4	128	0	0	143	275
05:45 PM	1	2	120	0	4	146	273
Total	3	28	510	1	5	575	1117
Grand Total	5	54	1053	3	12	1132	2235
Apprch %	8.5	91.5	99.7	0.3	1	99	
Total %	0.2	2.4	46.6	0.1	0.5	50.1	

Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
04:00 PM	0	0	0	0	0	1	
04:15 PM	0	0	1	0	0	0	
04:30 PM	0	0	0	0	0	1	
04:45 PM	0	0	0	0	0	0	
Total	0	0	1	0	0	2	
05:00 PM	0	0	0	0	0	0	
05:15 PM	0	0	1	0	0	0	
05:30 PM	0	0	1	0	0	1	
05:45 PM	0	0	0	0	0	0	
Total	0	0	2	0	0	1	
Grand Total	0	0	3	0	0	3	
Apprch %	0	0	100	0	0	100	
Total %	0	0	50	0	0	50	

978-664-2565

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

[illegible]

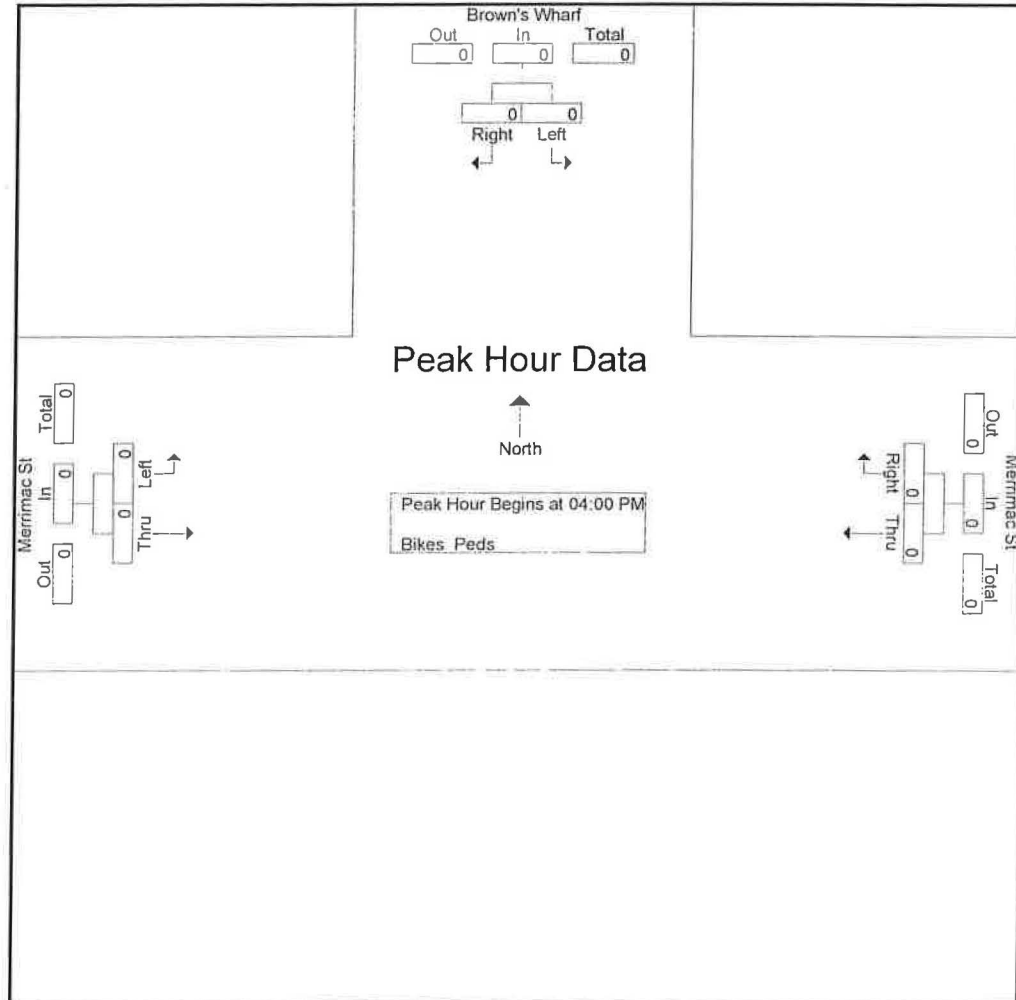
Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Brown's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.00



Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 1

Groups Printed- Cars - Trucks

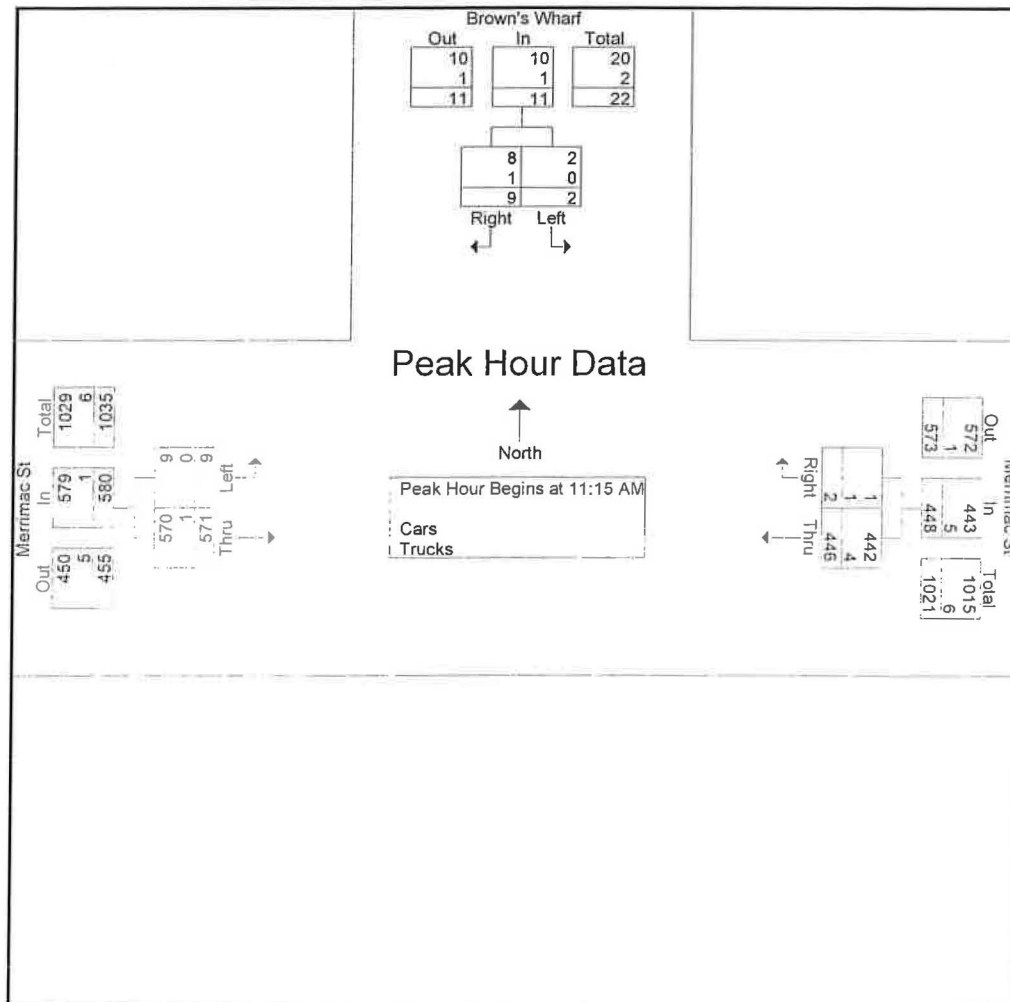
Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	3	93	0	1	149	24
11:15 AM	0	4	115	0	1	170	28
11:30 AM	0	1	102	0	5	148	25
11:45 AM	1	3	104	0	2	131	24
Total	1	11	414	0	9	598	101
12:00 PM	1	1	125	2	1	122	25
12:15 PM	1	2	124	2	1	130	28
12:30 PM	0	2	124	0	1	119	24
12:45 PM	0	3	98	2	0	110	27
Total	2	8	471	6	3	481	95
01:00 PM	1	3	109	1	1	140	25
01:15 PM	1	6	126	1	2	112	24
01:30 PM	1	7	122	1	3	110	24
01:45 PM	0	6	116	0	1	116	25
Total	3	22	473	3	7	478	98
Grand Total	6	41	1358	9	19	1557	299
Apprch %	12.8	87.2	99.3	0.7	1.2	98.8	
Total %	0.2	1.4	45.4	0.3	0.6	52.1	
Cars	6	39	1345	7	18	1549	296
% Cars	100	95.1	99	77.8	94.7	99.5	99
Trucks	0	2	13	2	1	8	3
% Trucks	0	4.9	1	22.2	5.3	0.5	0

Accurate Counts
978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2010
Page No : 2

	Brown's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:15 AM										
11:15 AM	0	4	4	115	0	115	1	170	171	286
11:30 AM	0	1	1	102	0	102	5	148	153	255
11:45 AM	1	3	4	104	0	104	2	131	133	247
12:00 PM	1	1	2	125	2	127	1	122	123	250
Total Volume	2	9	11	446	2	448	9	571	580	1029
% App. Total	18.2	81.8		99.6	0.4		1.6	98.4		
PHF	.500	.563	.688	.892	.250	.882	.450	.840	.848	.85
Cars	2	8	10	442	1	443	9	570	579	1023
% Cars	100	88.9	90.9	99.1	50.0	98.9	100	99.8	99.8	99
Trucks	0	1	1	4	1	5	0	1	1	
% Trucks	0	11.1	9.1	0.9	50.0	1.1	0	0.2	0.2	0



Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 4

Groups Printed- Cars

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tol
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	3	93	0	1	147	24
11:15 AM	0	4	114	0	1	170	28
11:30 AM	0	1	100	0	5	148	25
11:45 AM	1	2	104	0	2	130	25
Total	1	10	411	0	9	595	105
12:00 PM	1	1	124	1	1	122	25
12:15 PM	1	2	121	2	1	129	25
12:30 PM	0	2	123	0	0	119	24
12:45 PM	0	3	98	2	0	109	25
Total	2	8	466	5	2	479	99
01:00 PM	1	3	109	1	1	139	25
01:15 PM	1	6	122	0	2	111	24
01:30 PM	1	6	121	1	3	109	24
01:45 PM	0	6	116	0	1	116	25
Total	3	21	468	2	7	475	99
Grand Total	6	39	1345	7	18	1549	299
Apprch %	13.3	86.7	99.5	0.5	1.1	98.9	
Total %	0.2	1.3	45.4	0.2	0.6	52.3	

Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/20
Page No : 7

Groups Printed- Trucks

Start Time	Brown's Wharf From North		Merrimac St From East		Merrimac St From West		Int. Tot
	Left	Right	Thru	Right	Left	Thru	
11:00 AM	0	0	0	0	0	2	
11:15 AM	0	0	1	0	0	0	
11:30 AM	0	0	2	0	0	0	
11:45 AM	0	1	0	0	0	1	
Total	0	1	3	0	0	3	
12:00 PM	0	0	1	1	0	0	
12:15 PM	0	0	3	0	0	1	
12:30 PM	0	0	1	0	1	0	
12:45 PM	0	0	0	0	0	1	
Total	0	0	5	1	1	2	
01:00 PM	0	0	0	0	0	1	
01:15 PM	0	0	4	1	0	1	
01:30 PM	0	1	1	0	0	1	
01:45 PM	0	0	0	0	0	0	
Total	0	1	5	1	0	3	
Grand Total	0	2	13	2	1	8	
Apprch %	0	100	86.7	13.3	11.1	88.9	
Total %	0	7.7	50	7.7	3.8	30.8	

978-664-2565

File Name : 728101
Site Code : 728101
Start Date : 7/28/2010
Page No : 10

Start Time	Brown's Wharf From North			Merrimac St From East			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot.
	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds			
11:00 AM	0	0	10	0	0	0	0	0	0	10	0	10
11:15 AM	0	0	16	0	0	0	0	0	0	16	0	16
11:30 AM	0	0	16	0	0	0	0	0	0	16	0	16
11:45 AM	0	0	22	0	0	4	0	0	0	26	0	26
Total	0	0	64	0	0	4	0	0	0	68	0	68
12:00 PM	0	0	18	0	0	0	0	0	0	18	0	18
12:15 PM	0	0	21	0	0	0	0	0	2	23	0	23
12:30 PM	0	0	20	0	0	3	0	0	0	23	0	23
12:45 PM	0	0	29	0	0	0	0	0	0	29	0	29
Total	0	0	88	0	0	3	0	0	2	93	0	93
01:00 PM	0	0	16	0	0	0	0	0	0	16	0	16
01:15 PM	0	0	24	0	0	4	0	0	0	28	0	28
01:30 PM	0	0	19	0	0	0	0	0	0	19	0	19
01:45 PM	0	0	14	0	0	4	0	0	0	18	0	18
Total	0	0	73	0	0	8	0	0	0	81	0	81
Grand Total	0	0	225	0	0	15	0	0	2	242	0	242
Apprch %	0	0		0	0		0	0				
Total %										100	0	

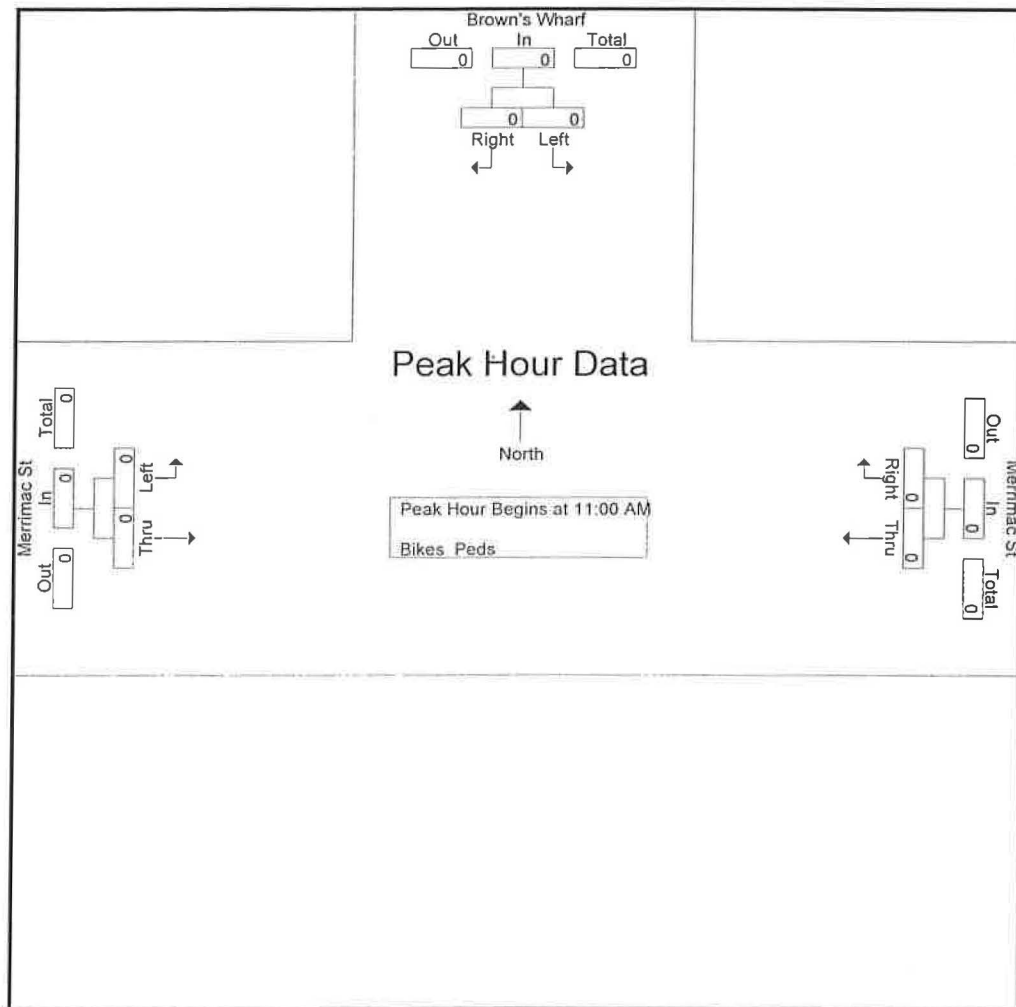
Accurate Counts

978-664-2565

S Street : Brown's Wharf
W Street: Merrimac Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 11

	Brown's Wharf From North			Merrimac St From East			Merrimac St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	0	0	0	0	0	0	0	0	0	
11:15 AM	0	0	0	0	0	0	0	0	0	
11:30 AM	0	0	0	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.00



Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	1	0	1	0	43	2	12	0	13	5	55	0	132
07:15 AM	4	0	1	0	49	3	14	2	20	0	77	0	170
07:30 AM	2	0	2	0	69	6	11	3	25	9	101	0	228
07:45 AM	1	0	1	0	66	3	12	5	13	9	124	0	234
Total	8	0	5	0	227	14	49	10	71	23	357	0	764
08:00 AM	9	0	9	0	76	7	12	3	12	19	127	0	274
08:15 AM	14	0	11	0	72	4	25	8	32	13	109	0	288
08:30 AM	7	0	7	0	72	4	17	12	24	6	149	0	298
08:45 AM	9	0	6	0	84	4	27	3	36	19	147	0	335
Total	39	0	33	0	304	19	81	26	104	57	532	0	1195
Grand Total	47	0	38	0	531	33	130	36	175	80	889	0	1959
Apprch %	55.3	0	44.7	0	94.1	5.9	38.1	10.6	51.3	8.3	91.7	0	
Total %	2.4	0	1.9	0	27.1	1.7	6.6	1.8	8.9	4.1	45.4	0	
Cars	47	0	36	0	525	32	126	35	173	78	877	0	1929
% Cars	100	0	94.7	0	98.9	97	96.9	97.2	98.9	97.5	98.7	0	98.5
Trucks	0	0	2	0	6	1	4	1	2	2	12	0	30
% Trucks	0	0	5.3	0	1.1	3	3.1	2.8	1.1	2.5	1.3	0	1.5

Accurate Counts

978-664-2565

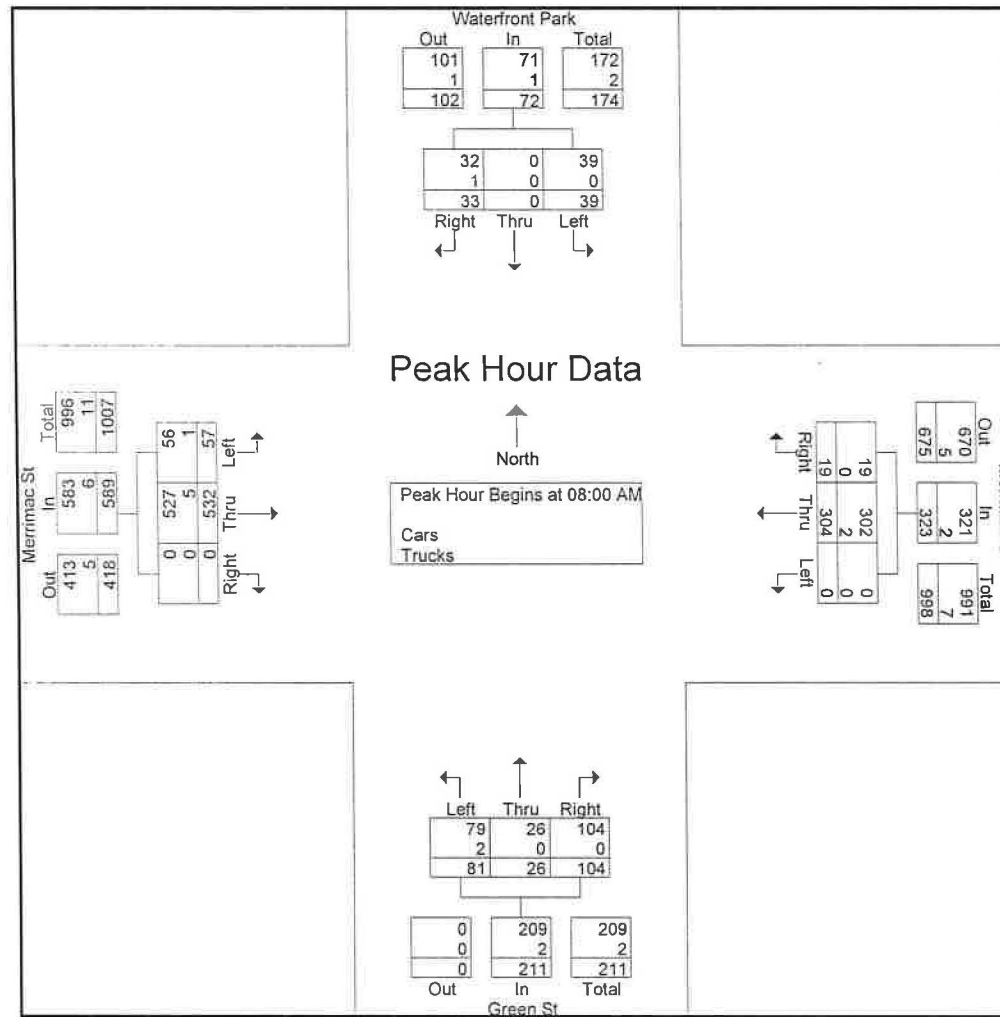
Street : Waterfront Park / Green St
 Street: Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 2

Start Time	Waterfront Park				Merrimac St				Green St				Merrimac St				Int. Total
	From North				From East				From South				From West				
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	9	0	9	18	0	76	7	83	12	3	12	27	19	127	0	146	274
08:15 AM	14	0	11	25	0	72	4	76	25	8	32	65	13	109	0	122	288
08:30 AM	7	0	7	14	0	72	4	76	17	12	24	53	6	149	0	155	298
08:45 AM	9	0	6	15	0	84	4	88	27	3	36	66	19	147	0	166	335
Total Volume	39	0	33	72	0	304	19	323	81	26	104	211	57	532	0	589	1195
% App. Total	54.2	0	45.8		0	94.1	5.9		38.4	12.3	49.3		9.7	90.3	0		
PHF	.696	.000	.750	.720	.000	.905	.679	.918	.750	.542	.722	.799	.750	.893	.000	.887	.892
Cars	39	0	32	71	0	302	19	321	79	26	104	209	56	527	0	583	1184
% Cars	100	0	97.0	98.6	0	99.3	100	99.4	97.5	100	100	99.1	98.2	99.1	0	99.0	99.1
Trucks	0	0	1	1	0	2	0	2	2	0	0	2	1	5	0	6	11
% Trucks	0	0	3.0	1.4	0	0.7	0	0.6	2.5	0	0	0.9	1.8	0.9	0	1.0	0.9

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 3



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

Peak Hour for Each Approach Begins at:

08:00 AM					08:00 AM					08:00 AM					08:00 AM				
+0 mins.	9	0	9	18	0	76	7	83	12	3	12	27	19	127	0	146			
+15 mins.	14	0	11	25	0	72	4	76	25	8	32	65	13	109	0	122			
+30 mins.	7	0	7	14	0	72	4	76	17	12	24	53	6	149	0	155			
+45 mins.	9	0	6	15	0	84	4	88	27	3	36	66	19	147	0	166			
Total Volume	39	0	33	72	0	304	19	323	81	26	104	211	57	532	0	589			
% App. Total	5.2	0	4.5	10	0	34.4	5.0	39.4	28.4	12.2	40.2	100	9.7	90.2	0	100			

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	1	0	1	0	42	2	12	0	13	5	53	0	129
07:15 AM	4	0	1	0	49	2	13	1	20	0	75	0	165
07:30 AM	2	0	1	0	66	6	11	3	23	9	100	0	221
07:45 AM	1	0	1	0	66	3	11	5	13	8	122	0	230
Total	8	0	4	0	223	13	47	9	69	22	350	0	745
08:00 AM	9	0	9	0	76	7	12	3	12	19	127	0	274
08:15 AM	14	0	11	0	72	4	25	8	32	13	107	0	286
08:30 AM	7	0	6	0	71	4	17	12	24	6	147	0	294
08:45 AM	9	0	6	0	83	4	25	3	36	18	146	0	330
Total	39	0	32	0	302	19	79	26	104	56	527	0	1184
Grand Total	47	0	36	0	525	32	126	35	173	78	877	0	1929
Apprch %	56.6	0	43.4	0	94.3	5.7	37.7	10.5	51.8	8.2	91.8	0	
Total %	2.4	0	1.9	0	27.2	1.7	6.5	1.8	9	4	45.5	0	

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
 Street: Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 7281000
 Site Code : 7281000
 Start Date : 7/26/201
 Page No : 9

Groups Printed- Trucks

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
07:15 AM	0	0	0	0	0	1	1	1	0	0	2	0	5
07:30 AM	0	0	1	0	3	0	0	0	2	0	1	0	7
07:45 AM	0	0	0	0	0	0	1	0	0	1	2	0	4
Total	0	0	1	0	4	1	2	1	2	1	7	0	19
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
08:30 AM	0	0	1	0	1	0	0	0	0	0	2	0	4
08:45 AM	0	0	0	0	1	0	2	0	0	1	1	0	5
Total	0	0	1	0	2	0	2	0	0	1	5	0	11
Grand Total	0	0	2	0	6	1	4	1	2	2	12	0	30
Apprch %	0	0	100	0	85.7	14.3	57.1	14.3	28.6	14.3	85.7	0	
Total %	0	0	6.7	0	20	3.3	13.3	3.3	6.7	6.7	40	0	

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Groups Printed- Bikes Peds

Start Time	Waterfront Park From North				Merrimac St From East				Green St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	2	2	4
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	4	0	0	0	2	0	0	0	1	0	0	0	0	7	0	7
Total	0	0	0	4	0	2	0	3	0	0	0	2	0	0	0	0	9	2	11
08:00 AM	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	5	0	5
08:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
08:30 AM	0	0	0	3	0	0	0	7	0	0	0	1	0	0	0	0	11	0	11
08:45 AM	0	0	0	1	0	0	1	5	0	0	0	2	0	0	1	0	8	2	10
Total	0	0	0	5	0	0	1	18	0	0	0	3	0	0	1	0	26	2	28
Grand Total	0	0	0	9	0	2	1	21	0	0	0	5	0	0	1	0	35	4	39
Apprch %	0	0	0		0	66.7	33.3		0	0	0		0	0	100				
Total %	0	0	0		0	50	25		0	0	0		0	0	25		89.7	10.3	

978-664-2565

ther : Cloudy

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[illegible]

[illegible]

Street : Waterfront Park / Green St
/ Street: Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	10	0	15	0	109	6	37	0	33	5	151	0	366
04:15 PM	9	0	19	0	79	6	29	4	37	9	122	0	314
04:30 PM	6	0	10	0	88	5	33	3	43	3	136	0	327
04:45 PM	4	0	10	0	88	4	29	0	35	15	120	0	305
Total	29	0	54	0	364	21	128	7	148	32	529	0	1312
05:00 PM	6	0	16	0	101	5	35	1	45	24	119	0	352
05:15 PM	3	0	9	0	84	6	19	6	27	21	124	0	299
05:30 PM	6	0	9	0	79	3	41	12	37	14	130	0	331
05:45 PM	5	0	21	0	75	4	24	4	35	11	136	0	315
Total	20	0	55	0	339	18	119	23	144	70	509	0	1297
Grand Total	49	0	109	0	703	39	247	30	292	102	1038	0	2609
Apprch %	31	0	69	0	94.7	5.3	43.4	5.3	51.3	8.9	91.1	0	
Total %	1.9	0	4.2	0	26.9	1.5	9.5	1.1	11.2	3.9	39.8	0	
Cars	49	0	109	0	701	39	246	30	292	102	1035	0	2603
% Cars	100	0	100	0	99.7	100	99.6	100	100	100	99.7	0	99.8
Trucks	0	0	0	0	2	0	1	0	0	0	3	0	6
% Trucks	0	0	0	0	0.3	0	0.4	0	0	0	0.3	0	0.2

Accurate Counts
978-664-2565

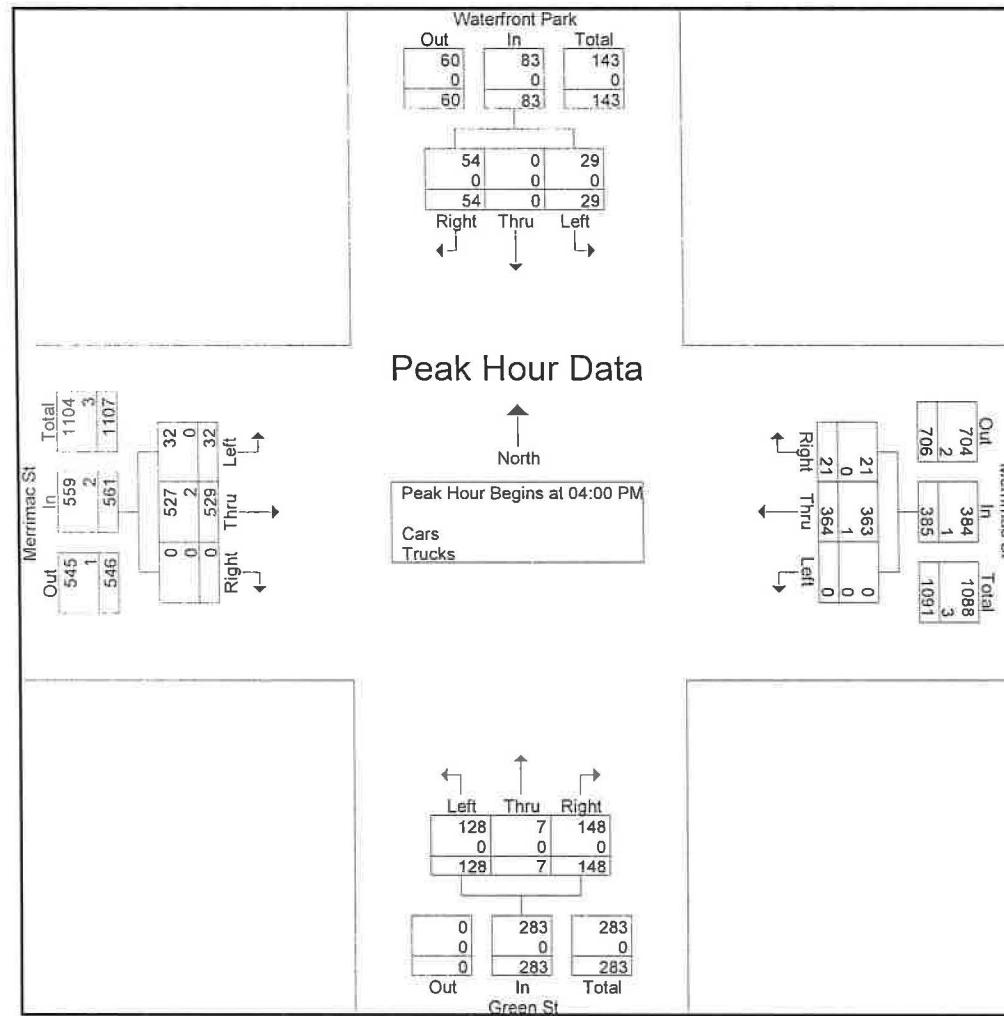
Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 2

Start Time	Waterfront Park				Merrimac St				Green St				Merrimac St				Int. Total
	From North				From East				From South				From West				
Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	10	0	15	25	0	109	6	115	37	0	33	70	5	151	0	156	366
04:15 PM	9	0	19	28	0	79	6	85	29	4	37	70	9	122	0	131	314
04:30 PM	6	0	10	16	0	88	5	93	33	3	43	79	3	136	0	139	327
04:45 PM	4	0	10	14	0	88	4	92	29	0	35	64	15	120	0	135	305
Total Volume	29	0	54	83	0	364	21	385	128	7	148	283	32	529	0	561	1312
% App. Total	34.9	0	65.1		0	94.5	5.5		45.2	2.5	52.3		5.7	94.3	0		
PHF	.725	.000	.711	.741	.000	.835	.875	.837	.865	.438	.860	.896	.533	.876	.000	.899	.896
Cars	29	0	54	83	0	363	21	384	128	7	148	283	32	527	0	559	1309
% Cars	100	0	100	100	0	99.7	100	99.7	100	100	100	100	100	99.6	0	99.6	99.8
Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
% Trucks	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0	0.4	0	0.4	0.2

Street : Waterfront Park / Green St
/ Street: Merrimac Street
/ State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:15 PM				05:00 PM			
+0 mins.	10	0	15	25	0	109	6	115	29	4	37	70	24	119	0	143
+15 mins.	9	0	19	28	0	79	6	85	33	3	43	79	21	124	0	145
+30 mins.	6	0	10	16	0	88	5	93	29	0	35	64	14	130	0	144
+45 mins.	4	0	10	14	0	88	4	92	35	1	45	81	11	136	0	147
Total Volume	29	0	54	83	0	364	21	385	126	8	160	294	70	509	0	579
% App. Total	24.0	0.0	65.1		0.0	64.5	5.5		42.0	2.7	51.4		12.1	87.0	0.0	

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 5

Groups Printed- Cars

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	10	0	15	0	109	6	37	0	33	5	150	0	365
04:15 PM	9	0	19	0	78	6	29	4	37	9	122	0	313
04:30 PM	6	0	10	0	88	5	33	3	43	3	135	0	326
04:45 PM	4	0	10	0	88	4	29	0	35	15	120	0	305
Total	29	0	54	0	363	21	128	7	148	32	527	0	1309
05:00 PM	6	0	16	0	101	5	35	1	45	24	119	0	352
05:15 PM	3	0	9	0	83	6	19	6	27	21	124	0	298
05:30 PM	6	0	9	0	79	3	40	12	37	14	129	0	329
05:45 PM	5	0	21	0	75	4	24	4	35	11	136	0	315
Total	20	0	55	0	338	18	118	23	144	70	508	0	1294
Grand Total	49	0	109	0	701	39	246	30	292	102	1035	0	2603
Apprch %	31	0	69	0	94.7	5.3	43.3	5.3	51.4	9	91	0	
Total %	1.9	0	4.2	0	26.9	1.5	9.5	1.2	11.2	3.9	39.8	0	

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 9

Groups Printed- Trucks

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	0	2	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	1	0	3
Grand Total	0	0	0	0	2	0	1	0	0	0	3	0	6
Apprch %	0	0	0	0	100	0	100	0	0	0	100	0	
Total %	0	0	0	0	33.3	0	16.7	0	0	0	50	0	

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
Page No : 13

Groups Printed- Bikes Peds

Start Time	Waterfront Park From North				Merrimac St From East				Green St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	0	0	0	2	0	0	0	3	0	0	0	2	0	0	0	0	7	0	7
04:15 PM	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0	0	3	1	4
04:30 PM	0	0	0	3	0	0	0	3	0	0	0	1	0	0	0	0	7	0	7
04:45 PM	0	0	0	5	0	0	0	3	0	0	0	0	0	0	0	3	11	0	11
Total	0	0	0	10	0	1	0	11	0	0	0	4	0	0	0	3	28	1	29
05:00 PM	0	0	0	1	0	0	0	7	0	0	0	1	0	1	0	0	9	1	10
05:15 PM	0	0	0	1	0	0	0	20	0	0	0	0	0	0	0	0	21	0	21
05:30 PM	0	0	0	2	0	0	0	9	0	0	0	0	0	0	0	0	11	0	11
05:45 PM	0	0	0	8	0	0	0	14	0	0	0	0	0	2	0	0	22	2	24
Total	0	0	0	12	0	0	0	50	0	0	0	1	0	3	0	0	63	3	66
Grand Total	0	0	0	22	0	1	0	61	0	0	0	5	0	3	0	3	91	4	95
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	25	0		0	0	0		0	75	0		95.8	4.2	

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
V Street: Merrimac Street
y/State : Newburyport, MA
ather : Cloudy

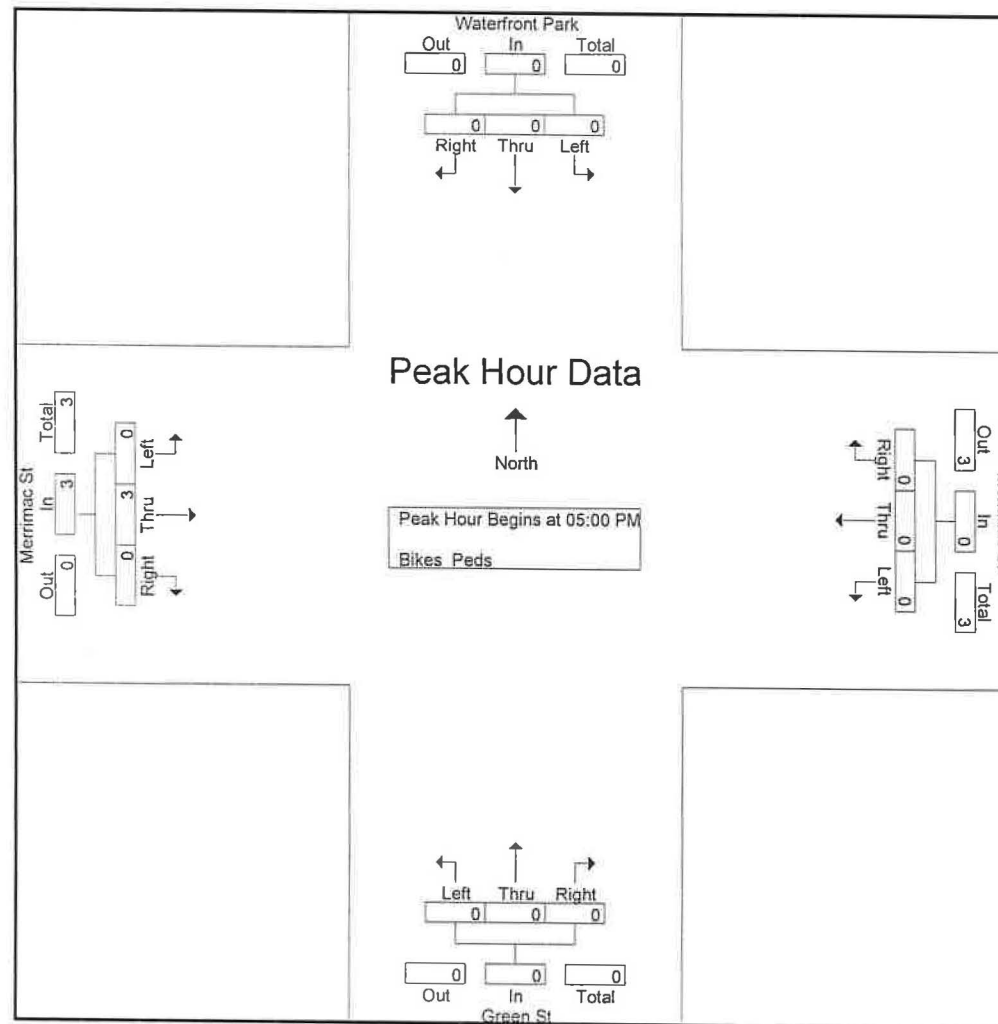
File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
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Start Time	Waterfront Park				Merrimac St				Green St				Merrimac St				Int. Total
	Left	Thru	Right	App. Total	From East				From South				From West				
					Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
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	2	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.375

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
/ Street: Merrimac Street
/State : Newburyport, MA
ather : Cloudy

File Name : 7281000
Site Code : 7281000
Start Date : 7/26/201
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

ak Hour for Each Approach Begins at:

04:00 PM				04:00 PM				04:00 PM				05:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3
% App. Total	0	0	0	0	0	100	0	100	0	0	0	0	0	100	0	100

Street : Waterfront Park / Green St
 Street: Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 728100S
 Site Code : 7281000
 Start Date : 7/28/2011
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	5	0	9	0	68	3	16	4	34	15	134	0	288
11:15 AM	6	0	10	0	81	7	24	6	33	12	158	0	337
11:30 AM	5	0	9	0	71	3	22	2	28	15	133	0	288
11:45 AM	5	0	13	0	71	8	20	4	40	17	115	0	293
Total	21	0	41	0	291	21	82	16	135	59	540	0	1206
12:00 PM	11	0	11	0	87	8	29	9	28	26	97	0	306
12:15 PM	14	0	18	0	82	10	26	6	30	23	108	0	317
12:30 PM	15	0	24	0	81	4	19	7	25	29	90	0	294
12:45 PM	17	0	11	0	71	8	18	6	32	25	85	0	273
Total	57	0	64	0	321	30	92	28	115	103	380	0	1190
01:00 PM	22	0	16	0	83	16	11	5	41	21	120	0	335
01:15 PM	20	0	12	0	90	9	25	13	35	19	94	0	317
01:30 PM	13	0	19	0	80	9	24	8	50	15	96	0	314
01:45 PM	13	0	18	0	77	6	21	6	30	22	94	0	287
Total	68	0	65	0	330	40	81	32	156	77	404	0	1253
Grand Total	146	0	170	0	942	91	255	76	406	239	1324	0	3649
Apprch %	46.2	0	53.8	0	91.2	8.8	34.6	10.3	55.1	15.3	84.7	0	
Total %	4	0	4.7	0	25.8	2.5	7	2.1	11.1	6.5	36.3	0	
Cars	143	0	170	0	934	90	248	76	399	239	1316	0	3615
% Cars	97.9	0	100	0	99.2	98.9	97.3	100	98.3	100	99.4	0	99.1
Trucks	3	0	0	0	8	1	7	0	7	0	8	0	34
% Trucks	2.1	0	0	0	0.8	1.1	2.7	0	1.7	0	0.6	0	0.9

Accurate Counts
978-664-2565

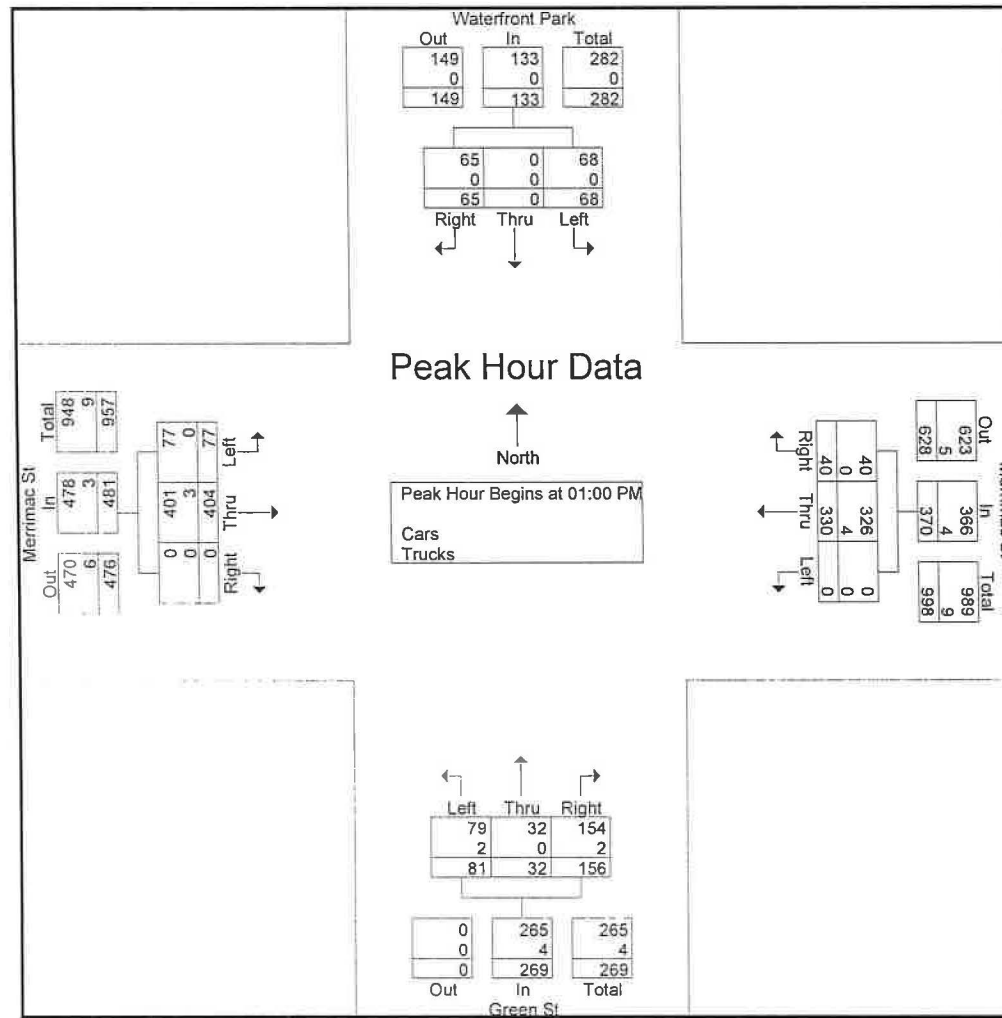
Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 2

	Waterfront Park From North				Merrimac St From East				Green St From South				Merrimac St From West				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 01:00 PM																	
01:00 PM	22	0	16	38	0	83	16	99	11	5	41	57	21	120	0	141	335
01:15 PM	20	0	12	32	0	90	9	99	25	13	35	73	19	94	0	113	317
01:30 PM	13	0	19	32	0	80	9	89	24	8	50	82	15	96	0	111	314
01:45 PM	13	0	18	31	0	77	6	83	21	6	30	57	22	94	0	116	287
Total Volume	68	0	65	133	0	330	40	370	81	32	156	269	77	404	0	481	1253
% App. Total	51.1	0	48.9		0	89.2	10.8		30.1	11.9	58		16	84	0		
PHF	.773	.000	.855	.875	.000	.917	.625	.934	.810	.615	.780	.820	.875	.842	.000	.853	.935
Cars	68	0	65	133	0	326	40	366	79	32	154	265	77	401	0	478	1242
% Cars	100	0	100	100	0	98.8	100	98.9	97.5	100	98.7	98.5	100	99.3	0	99.4	99.1
Trucks	0	0	0	0	0	4	0	4	2	0	2	4	0	3	0	3	11
% Trucks	0	0	0	0	0	1.2	0	1.1	2.5	0	1.3	1.5	0	0.7	0	0.6	0.9

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/201
Page No : 3



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15 PM				01:00 PM				01:00 PM				11:00 AM			
+0 mins.	14	0	18	32	0	83	16	99	11	5	41	57	15	134	0	149
+15 mins.	15	0	24	39	0	90	9	99	25	13	35	73	12	158	0	170
+30 mins.	17	0	11	28	0	80	9	89	24	8	50	82	15	133	0	148
+45 mins.	22	0	16	38	0	77	6	83	21	6	30	57	17	115	0	132
Total Volume	68	0	69	137	0	330	40	370	81	32	156	269	59	540	0	599
% App. Total	49.6	0	50.4		0	89.2	10.8		30.1	11.9	58		9.8	90.2	0	
PHF	.773	.000	.719	.878	.000	.917	.625	.934	.810	.615	.780	.820	.868	.854	.000	.881

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 5

Groups Printed- Cars

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	5	0	9	0	68	3	16	4	34	15	132	0	286
11:15 AM	5	0	10	0	80	6	24	6	33	12	158	0	334
11:30 AM	5	0	9	0	70	3	21	2	28	15	133	0	286
11:45 AM	5	0	13	0	71	8	20	4	40	17	114	0	292
Total	20	0	41	0	289	20	81	16	135	59	537	0	1198
12:00 PM	11	0	11	0	86	8	28	9	24	26	97	0	300
12:15 PM	13	0	18	0	81	10	24	6	29	23	107	0	311
12:30 PM	14	0	24	0	81	4	18	7	25	29	90	0	292
12:45 PM	17	0	11	0	71	8	18	6	32	25	84	0	272
Total	55	0	64	0	319	30	88	28	110	103	378	0	1175
01:00 PM	22	0	16	0	83	16	11	5	41	21	119	0	334
01:15 PM	20	0	12	0	87	9	23	13	33	19	93	0	309
01:30 PM	13	0	19	0	79	9	24	8	50	15	95	0	312
01:45 PM	13	0	18	0	77	6	21	6	30	22	94	0	287
Total	68	0	65	0	326	40	79	32	154	77	401	0	1242
Grand Total	143	0	170	0	934	90	248	76	399	239	1316	0	3615
Apprch %	45.7	0	54.3	0	91.2	8.8	34.3	10.5	55.2	15.4	84.6	0	
Total %	4	0	4.7	0	25.8	2.5	6.9	2.1	11	6.6	36.4	0	

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
Weather : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 9

Groups Printed- Trucks

Start Time	Waterfront Park From North			Merrimac St From East			Green St From South			Merrimac St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
11:15 AM	1	0	0	0	1	1	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	1	0	0	0	2	1	1	0	0	0	3	0	8
12:00 PM	0	0	0	0	1	0	1	0	4	0	0	0	6
12:15 PM	1	0	0	0	1	0	2	0	1	0	1	0	6
12:30 PM	1	0	0	0	0	0	1	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	2	0	0	0	2	0	4	0	5	0	2	0	15
01:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:15 PM	0	0	0	0	3	0	2	0	2	0	1	0	8
01:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	0	2	0	2	0	3	0	11
Grand Total	3	0	0	0	8	1	7	0	7	0	8	0	34
Apprch %	100	0	0	0	88.9	11.1	50	0	50	0	100	0	
Total %	8.8	0	0	0	23.5	2.9	20.6	0	20.6	0	23.5	0	

Accurate Counts
978-664-2565

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 13

Groups Printed- Bikes Peds

Start Time	Waterfront Park From North				Merrimac St From East				Green St From South				Merrimac St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
11:00 AM	0	0	0	10	0	1	1	15	0	0	1	6	0	0	0	0	31	3	34
11:15 AM	1	0	0	3	0	2	0	8	0	0	0	7	0	1	0	0	18	4	22
11:30 AM	0	0	0	22	0	3	1	16	0	0	0	2	0	1	0	0	40	5	45
11:45 AM	0	0	0	15	0	2	0	32	0	1	1	5	0	7	0	0	52	11	63
Total	1	0	0	50	0	8	2	71	0	1	2	20	0	9	0	0	141	23	164
12:00 PM	2	0	0	9	0	0	2	31	0	0	1	5	0	3	0	0	45	8	53
12:15 PM	1	0	0	12	0	1	0	40	0	0	0	1	0	0	0	1	54	2	56
12:30 PM	0	0	0	11	0	0	0	32	0	0	1	3	0	0	0	3	49	1	50
12:45 PM	0	1	0	25	0	4	0	42	0	0	0	20	0	5	0	5	92	10	102
Total	3	1	0	57	0	5	2	145	0	0	2	29	0	8	0	9	240	21	261
01:00 PM	0	0	0	11	0	0	0	41	0	0	0	8	0	0	0	0	60	0	60
01:15 PM	0	0	0	16	0	1	0	36	0	6	0	9	0	3	1	1	62	11	73
01:30 PM	0	0	0	9	0	0	0	38	0	0	0	6	0	0	0	0	53	0	53
01:45 PM	1	0	0	7	0	6	0	45	0	0	1	6	0	2	1	3	61	11	72
Total	1	0	0	43	0	7	0	160	0	6	1	29	0	5	2	4	236	22	258
Grand Total	5	1	0	150	0	20	4	376	0	7	5	78	0	22	2	13	617	66	683
Apprch %	83.3	16.7	0		0	83.3	16.7		0	58.3	41.7		0	91.7	8.3				
Total %	7.6	1.5	0		0	30.3	6.1		0	10.6	7.6		0	33.3	3		90.3	9.7	

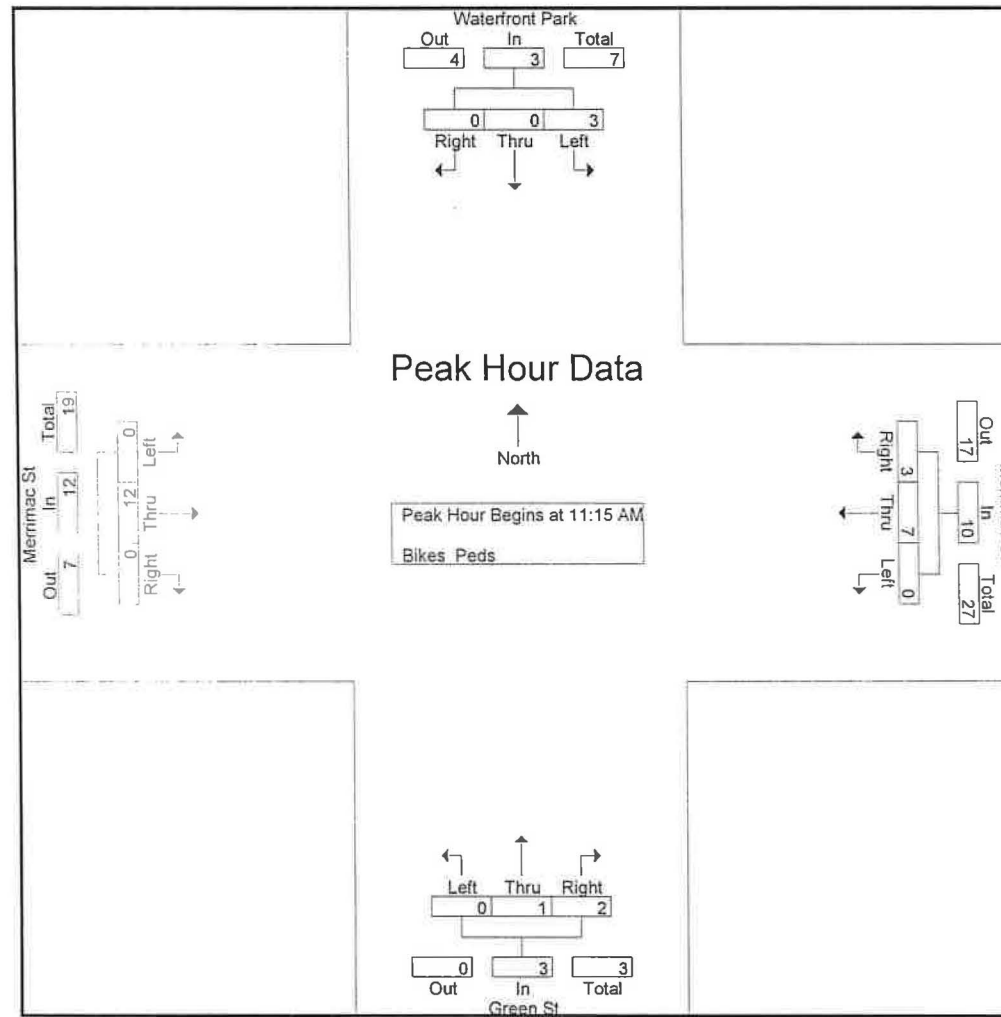
Street : Waterfront Park / Green St
 Street: Merrimac Street
 State : Newburyport, MA
 Weather : Cloudy

File Name : 728100S
 Site Code : 7281000
 Start Date : 7/28/2011
 Page No : 14

Start Time	Waterfront Park From North				Merrimac St From East				Green St From South				Merrimac St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:15 AM																	
11:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
11:30 AM	0	0	0	0	0	3	1	4	0	0	0	0	0	1	0	1	5
11:45 AM	0	0	0	0	0	2	0	2	0	1	1	2	0	7	0	7	11
12:00 PM	2	0	0	2	0	0	2	2	0	0	1	1	0	3	0	3	8
Total Volume	3	0	0	3	0	7	3	10	0	1	2	3	0	12	0	12	28
% App. Total	100	0	0		0	70	30		0	33.3	66.7		0	100	0		
PHF	.375	.000	.000	.375	.000	.583	.375	.625	.000	.250	.500	.375	.000	.429	.000	.429	.636

Street : Waterfront Park / Green St
Street: Merrimac Street
State : Newburyport, MA
ther : Cloudy

File Name : 728100S
Site Code : 7281000
Start Date : 7/28/2011
Page No : 15



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:00 PM				11:00 AM				12:30 PM				11:15 AM			
+0 mins.	2	0	0	2	0	1	1	2	0	0	1	1	0	1	0	1
+15 mins.	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	3	1	4	0	0	0	0	0	7	0	7
+45 mins.	0	1	0	1	0	2	0	2	0	6	0	6	0	3	0	3
Total Volume	3	1	0	4	0	8	2	10	0	6	1	7	0	12	0	12
% App. Total	75	25	0		0	80	20		0	85.7	14.3		0	100	0	
PHF	.375	.250	.000	.500	.000	.667	.500	.625	.000	.250	.250	.292	.000	.429	.000	.429

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

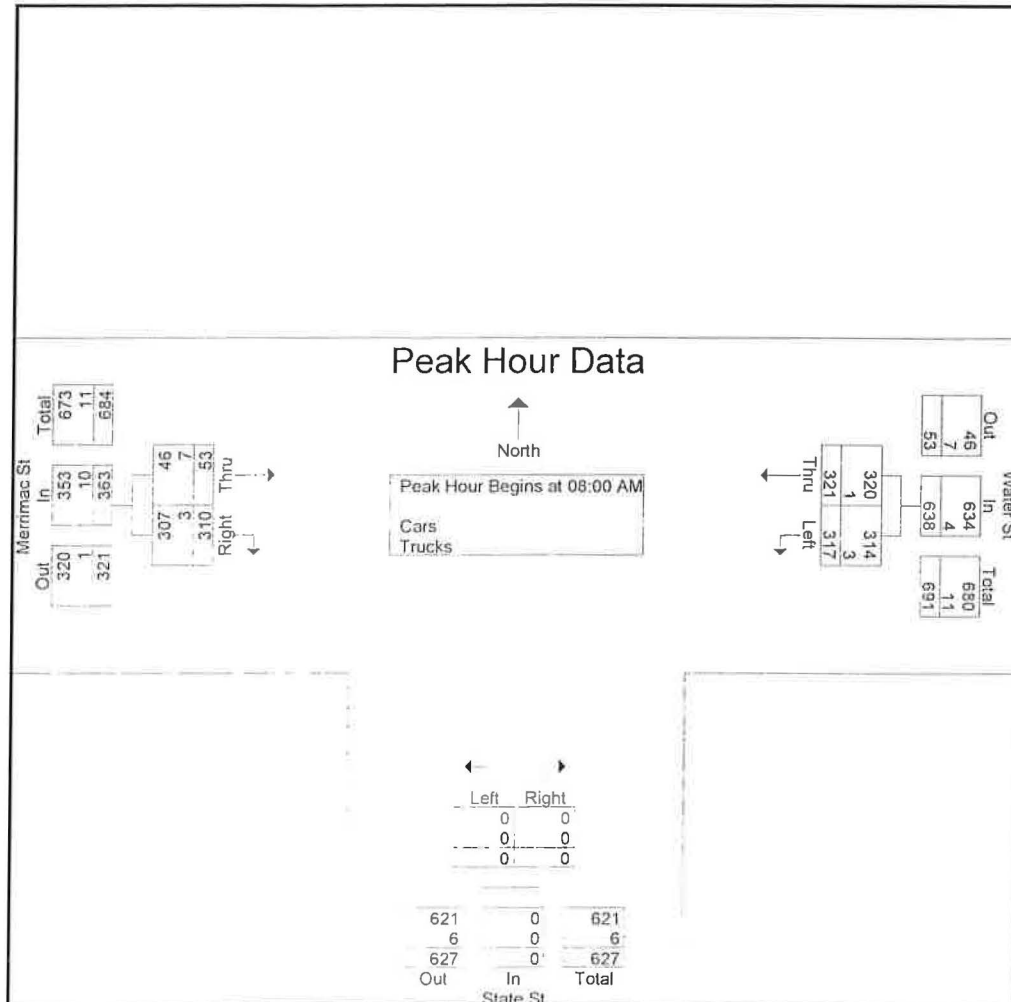
Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	33	35	0	0	15	45	12
07:15 AM	44	50	0	0	16	50	16
07:30 AM	56	59	0	0	12	64	15
07:45 AM	69	60	0	0	17	61	20
Total	202	204	0	0	60	220	63
08:00 AM	64	77	0	0	12	80	23
08:15 AM	76	77	0	0	9	75	23
08:30 AM	87	73	0	0	16	74	23
08:45 AM	90	94	0	0	16	81	23
Total	317	321	0	0	53	310	100
Grand Total	519	525	0	0	113	530	163
Apprch %	49.7	50.3	0	0	17.6	82.4	
Total %	30.8	31.1	0	0	6.7	31.4	
Cars	510	524	0	0	104	523	160
% Cars	98.3	99.8	0	0	92	98.7	98
Trucks	9	1	0	0	9	7	3
% Trucks	1.7	0.2	0	0	8	1.3	1

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Water St From East			State St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	64	77	141	0	0	0	12	80	92	23
08:15 AM	76	77	153	0	0	0	9	75	84	23
08:30 AM	87	73	160	0	0	0	16	74	90	25
08:45 AM	90	94	184	0	0	0	16	81	97	28
Total Volume	317	321	638	0	0	0	53	310	363	100
% App. Total	49.7	50.3		0	0		14.6	85.4		
PHF	.881	.854	.867	.000	.000	.000	.828	.957	.936	.89
Cars	314	320	634	0	0	0	46	307	353	98
% Cars	99.1	99.7	99.4	0	0	0	86.8	99.0	97.2	98
Trucks	3	1	4	0	0	0	7	3	10	1
% Trucks	0.9	0.3	0.6	0	0	0	13.2	1.0	2.8	1



Accurate Counts

978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	31	35	0	0	15	44	17
07:15 AM	42	50	0	0	16	49	19
07:30 AM	56	59	0	0	11	63	18
07:45 AM	67	60	0	0	16	60	20
Total	196	204	0	0	58	216	67
08:00 AM	64	77	0	0	10	78	22
08:15 AM	75	77	0	0	7	75	22
08:30 AM	85	73	0	0	14	73	24
08:45 AM	90	93	0	0	15	81	27
Total	314	320	0	0	46	307	98
Grand Total	510	524	0	0	104	523	166
Apprch %	49.3	50.7	0	0	16.6	83.4	
Total %	30.7	31.5	0	0	6.3	31.5	

Accurate Counts

978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
y/State : Newburyport, MA
ather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	2	0	0	0	0	1	
07:15 AM	2	0	0	0	0	1	
07:30 AM	0	0	0	0	1	1	
07:45 AM	2	0	0	0	1	1	
Total	6	0	0	0	2	4	
08:00 AM	0	0	0	0	2	2	
08:15 AM	1	0	0	0	2	0	
08:30 AM	2	0	0	0	2	1	
08:45 AM	0	1	0	0	1	0	
Total	3	1	0	0	7	3	
Grand Total	9	1	0	0	9	7	
Apprch %	90	10	0	0	56.2	43.8	
Total %	34.6	3.8	0	0	34.6	26.9	

978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds

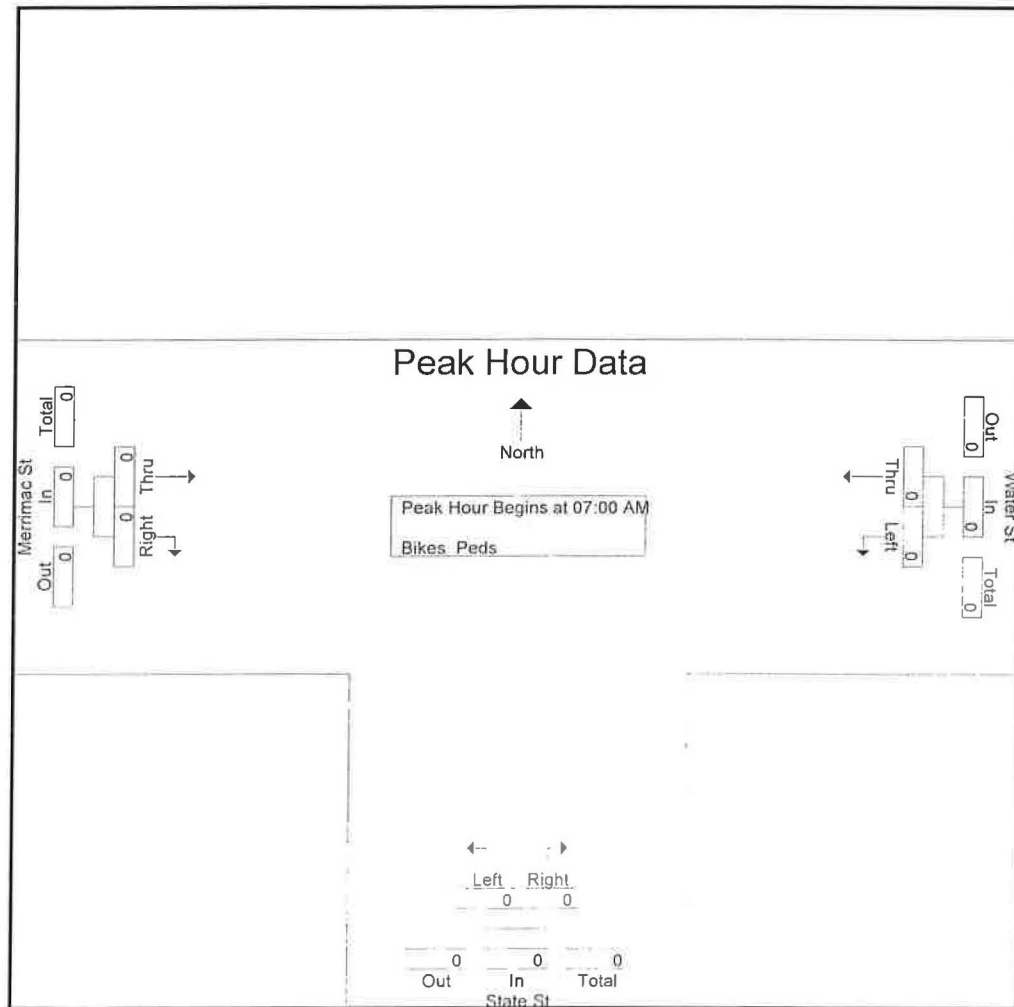
[illegible]

Accurate Counts 978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Water St From East			State St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.00



Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

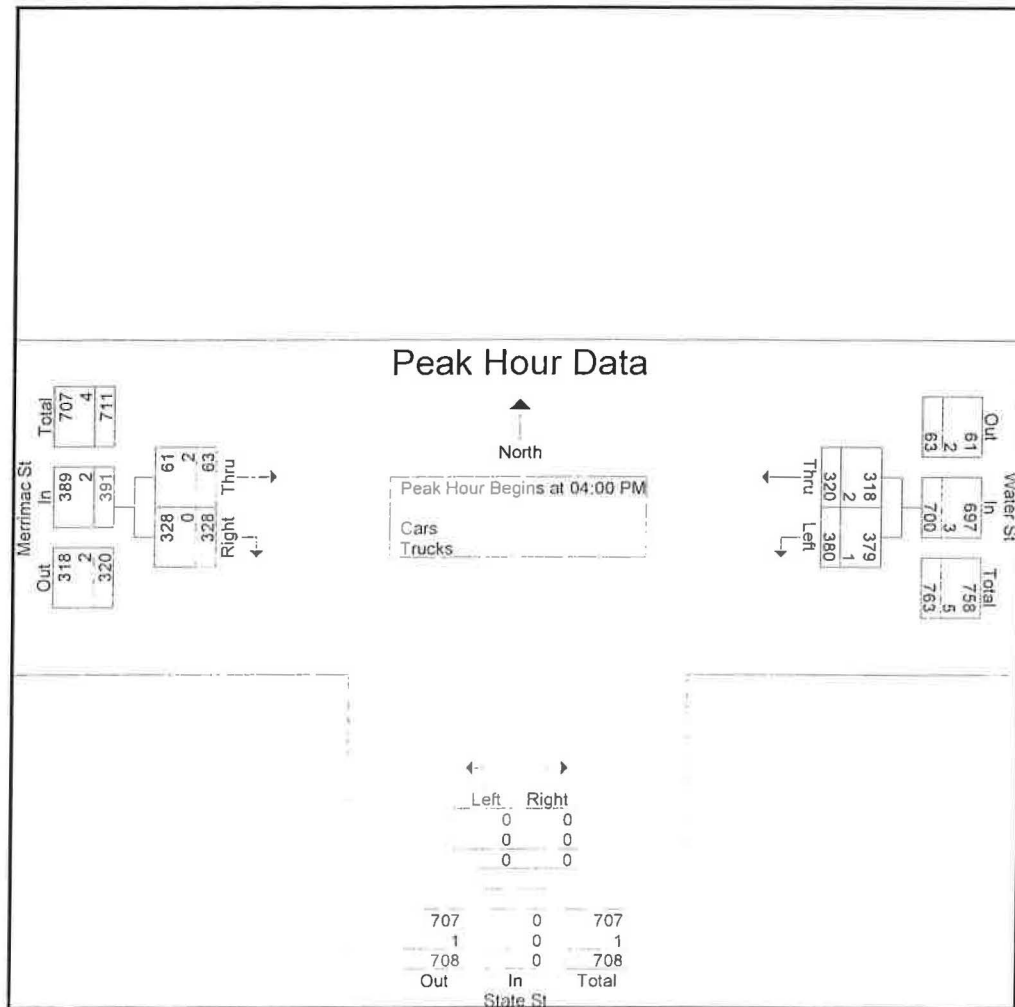
Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	97	81	0	0	20	88	206
04:15 PM	98	81	0	0	14	82	265
04:30 PM	94	75	0	0	19	81	260
04:45 PM	91	83	0	0	10	77	251
Total	380	320	0	0	63	328	1094
05:00 PM	91	78	0	0	19	86	255
05:15 PM	102	59	0	0	17	86	264
05:30 PM	91	72	0	0	22	69	232
05:45 PM	93	67	0	0	18	76	236
Total	377	276	0	0	76	317	1090
Grand Total	757	596	0	0	139	645	2184
Apprch %	55.9	44.1	0	0	17.7	82.3	
Total %	35.4	27.9	0	0	6.5	30.2	
Cars	756	593	0	0	134	644	2194
% Cars	99.9	99.5	0	0	96.4	99.8	99
Trucks	1	3	0	0	5	1	6
% Trucks	0.1	0.5	0	0	3.6	0.2	0

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	Water St From East			State St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	97	81	178	0	0	0	20	88	108	28
04:15 PM	98	81	179	0	0	0	14	82	96	27
04:30 PM	94	75	169	0	0	0	19	81	100	26
04:45 PM	91	83	174	0	0	0	10	77	87	26
Total Volume	380	320	700	0	0	0	63	328	391	109
% App. Total	54.3	45.7		0	0		16.1	83.9		
PHF	.969	.964	.978	.000	.000	.000	.788	.932	.905	.95
Cars	379	318	697	0	0	0	61	328	389	108
% Cars	99.7	99.4	99.6	0	0	0	96.8	100	99.5	99
Trucks	1	2	3	0	0	0	2	0	2	
% Trucks	0.3	0.6	0.4	0	0	0	3.2	0	0.5	0



Accurate Counts

978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	96	81	0	0	19	88	26
04:15 PM	98	80	0	0	14	82	26
04:30 PM	94	75	0	0	18	81	26
04:45 PM	91	82	0	0	10	77	26
Total	379	318	0	0	61	328	106
05:00 PM	91	78	0	0	17	85	26
05:15 PM	102	59	0	0	17	86	26
05:30 PM	91	71	0	0	21	69	26
05:45 PM	93	67	0	0	18	76	26
Total	377	275	0	0	73	316	106
Grand Total	756	593	0	0	134	644	212
Apprch %	56	44	0	0	17.2	82.8	
Total %	35.5	27.9	0	0	6.3	30.3	

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	1	0	0	0	1	0	
04:15 PM	0	1	0	0	0	0	
04:30 PM	0	0	0	0	1	0	
04:45 PM	0	1	0	0	0	0	
Total	1	2	0	0	2	0	
05:00 PM	0	0	0	0	2	1	
05:15 PM	0	0	0	0	0	0	
05:30 PM	0	1	0	0	1	0	
05:45 PM	0	0	0	0	0	0	
Total	0	1	0	0	3	1	
Grand Total	1	3	0	0	5	1	
Apprch %	25	75	0	0	83.3	16.7	
Total %	10	30	0	0	50	10	

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

Groups Printed- Bikes Peds

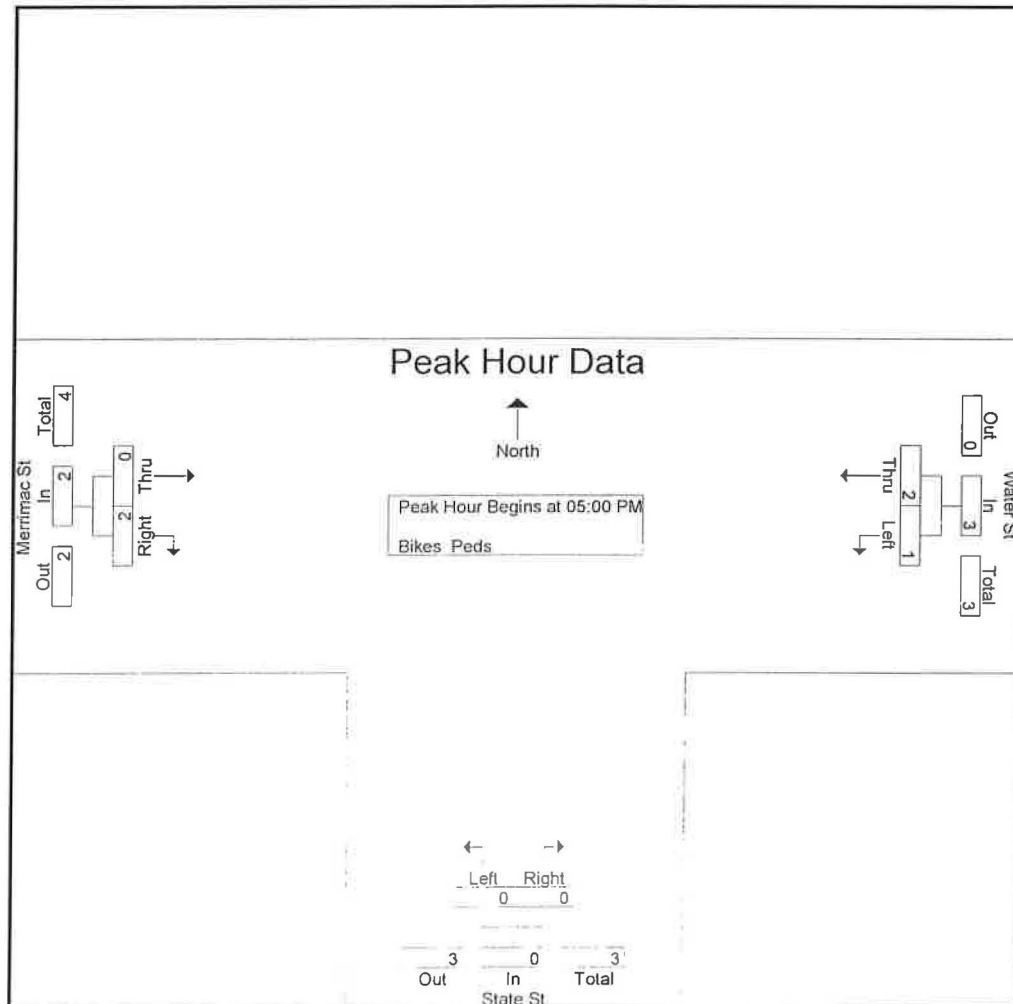
Start Time	Water St From East			State St From South			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Tot
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	0	2	0	0	16	0	0	19	37	0	3
04:15 PM	0	0	0	0	0	5	0	1	4	9	1	1
04:30 PM	0	0	3	0	0	12	0	0	2	17	0	1
04:45 PM	0	1	9	0	0	12	0	0	5	26	1	2
Total	0	1	14	0	0	45	0	1	30	89	2	9
05:00 PM	0	1	1	0	0	12	0	1	0	13	2	1
05:15 PM	0	0	8	0	0	8	0	1	1	17	1	1
05:30 PM	0	0	3	0	0	10	0	0	3	16	0	1
05:45 PM	1	1	2	0	0	6	0	0	0	8	2	1
Total	1	2	14	0	0	36	0	2	4	54	5	5
Grand Total	1	3	28	0	0	81	0	3	34	143	7	15
Apprch %	25	75		0	0		0	100				
Total %	14.3	42.9		0	0		0	42.9		95.3	4.7	

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

	Water St From East			State St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	1	1	0	0	0	0	1	1	
05:15 PM	0	0	0	0	0	0	0	1	1	
05:30 PM	0	0	0	0	0	0	0	0	0	
05:45 PM	1	1	2	0	0	0	0	0	0	
Total Volume	1	2	3	0	0	0	0	2	2	
% App. Total	33.3	66.7		0	0		0	100		
PHF	.250	.500	.375	.000	.000	.000	.000	.500	.500	.62



Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2016
Page No : 1

Groups Printed- Cars - Trucks

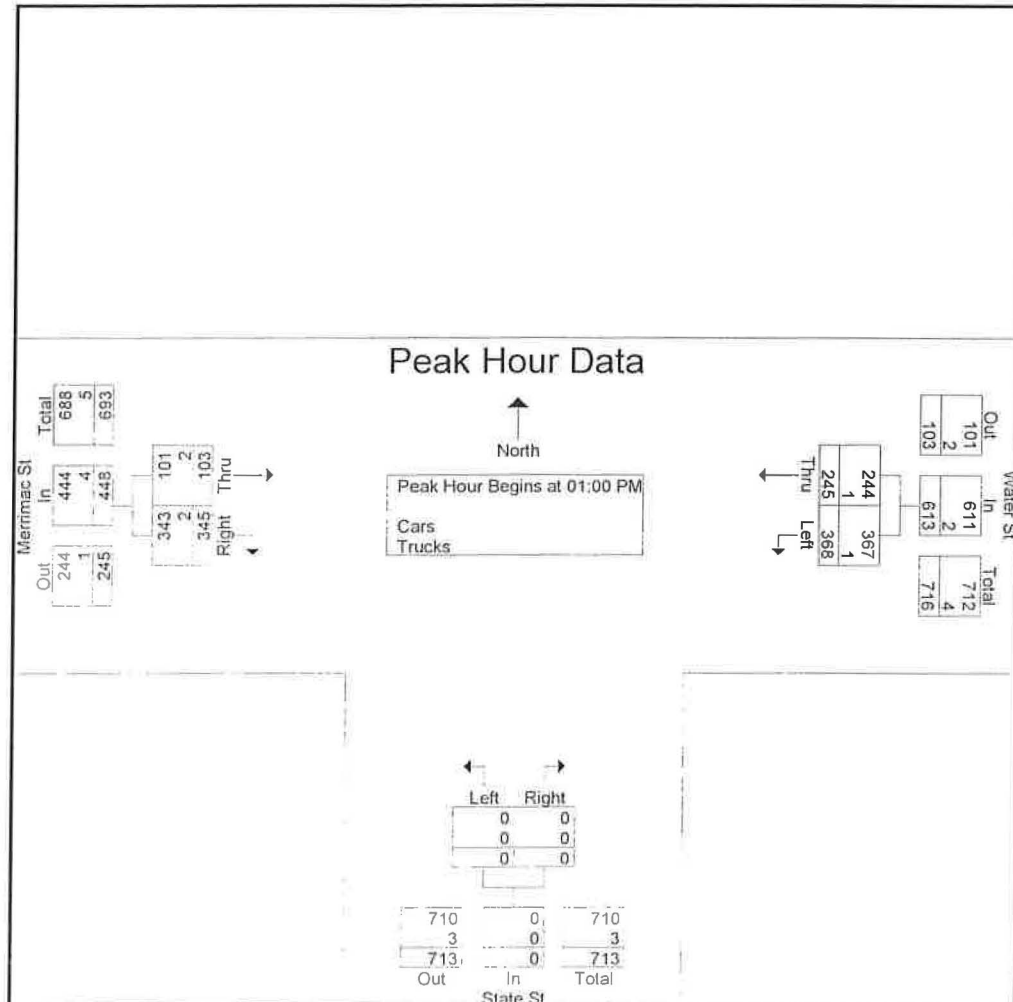
Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	104	68	0	0	24	59	291
11:15 AM	102	58	0	0	17	82	241
11:30 AM	101	50	0	0	27	69	247
11:45 AM	102	55	0	0	13	75	235
Total	409	231	0	0	81	285	1005
12:00 PM	91	60	0	0	15	88	244
12:15 PM	89	54	0	0	23	89	251
12:30 PM	67	49	0	0	14	73	203
12:45 PM	78	55	0	0	14	81	218
Total	325	218	0	0	66	331	974
01:00 PM	100	72	0	0	26	76	274
01:15 PM	87	53	0	0	28	87	252
01:30 PM	84	56	0	0	19	82	241
01:45 PM	97	64	0	0	30	100	291
Total	368	245	0	0	103	345	1058
Grand Total	1102	694	0	0	250	961	3053
Apprch %	61.4	38.6	0	0	20.6	79.4	
Total %	36.6	23.1	0	0	8.3	32	
Cars	1094	687	0	0	243	954	2991
% Cars	99.3	99	0	0	97.2	99.3	
Trucks	8	7	0	0	7	7	14
% Trucks	0.7	1	0	0	2.8	0.7	

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/2011
Page No : 2

	Water St From East			State St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 01:00 PM										
01:00 PM	100	72	172	0	0	0	26	76	102	27
01:15 PM	87	53	140	0	0	0	28	87	115	25
01:30 PM	84	56	140	0	0	0	19	82	101	24
01:45 PM	97	64	161	0	0	0	30	100	130	29
Total Volume	368	245	613	0	0	0	103	345	448	106
% App. Total	60	40		0	0		23	77		
PHF	.920	.851	.891	.000	.000	.000	.858	.863	.862	.91
Cars	367	244	611	0	0	0	101	343	444	105
% Cars	99.7	99.6	99.7	0	0	0	98.1	99.4	99.1	99
Trucks	1	1	2	0	0	0	2	2	4	
% Trucks	0.3	0.4	0.3	0	0	0	1.9	0.6	0.9	0



Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 4

Groups Printed- Cars

Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	102	68	0	0	24	58	24
11:15 AM	101	58	0	0	16	80	24
11:30 AM	101	50	0	0	26	69	24
11:45 AM	102	54	0	0	12	75	24
Total	406	230	0	0	78	282	96
12:00 PM	91	56	0	0	15	88	24
12:15 PM	87	53	0	0	23	88	24
12:30 PM	66	49	0	0	12	72	18
12:45 PM	77	55	0	0	14	81	24
Total	321	213	0	0	64	329	96
01:00 PM	100	72	0	0	25	76	27
01:15 PM	87	53	0	0	28	86	24
01:30 PM	83	56	0	0	18	81	24
01:45 PM	97	63	0	0	30	100	24
Total	367	244	0	0	101	343	100
Grand Total	1094	687	0	0	243	954	296
Apprch %	61.4	38.6	0	0	20.3	79.7	
Total %	36.7	23.1	0	0	8.2	32	

Accurate Counts

978-664-2565

S Street : State Street
 W Street : Water St / Merrimac St
 City/State : Newburyport, MA
 Weather : Cloudy

File Name : 728101
 Site Code : 728101
 Start Date : 7/28/2011
 Page No : 7

Groups Printed- Trucks

Start Time	Water St From East		State St From South		Merrimac St From West		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	2	0	0	0	0	1	
11:15 AM	1	0	0	0	1	2	
11:30 AM	0	0	0	0	1	0	
11:45 AM	0	1	0	0	1	0	
Total	3	1	0	0	3	3	
12:00 PM	0	4	0	0	0	0	
12:15 PM	2	1	0	0	0	1	
12:30 PM	1	0	0	0	2	1	
12:45 PM	1	0	0	0	0	0	
Total	4	5	0	0	2	2	
01:00 PM	0	0	0	0	1	0	
01:15 PM	0	0	0	0	0	1	
01:30 PM	1	0	0	0	1	1	
01:45 PM	0	1	0	0	0	0	
Total	1	1	0	0	2	2	
Grand Total	8	7	0	0	7	7	
Apprch %	53.3	46.7	0	0	50	50	
Total %	27.6	24.1	0	0	24.1	24.1	

Accurate Counts
978-664-2565

S Street : State Street
W Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 10

Groups Printed- Bikes Peds

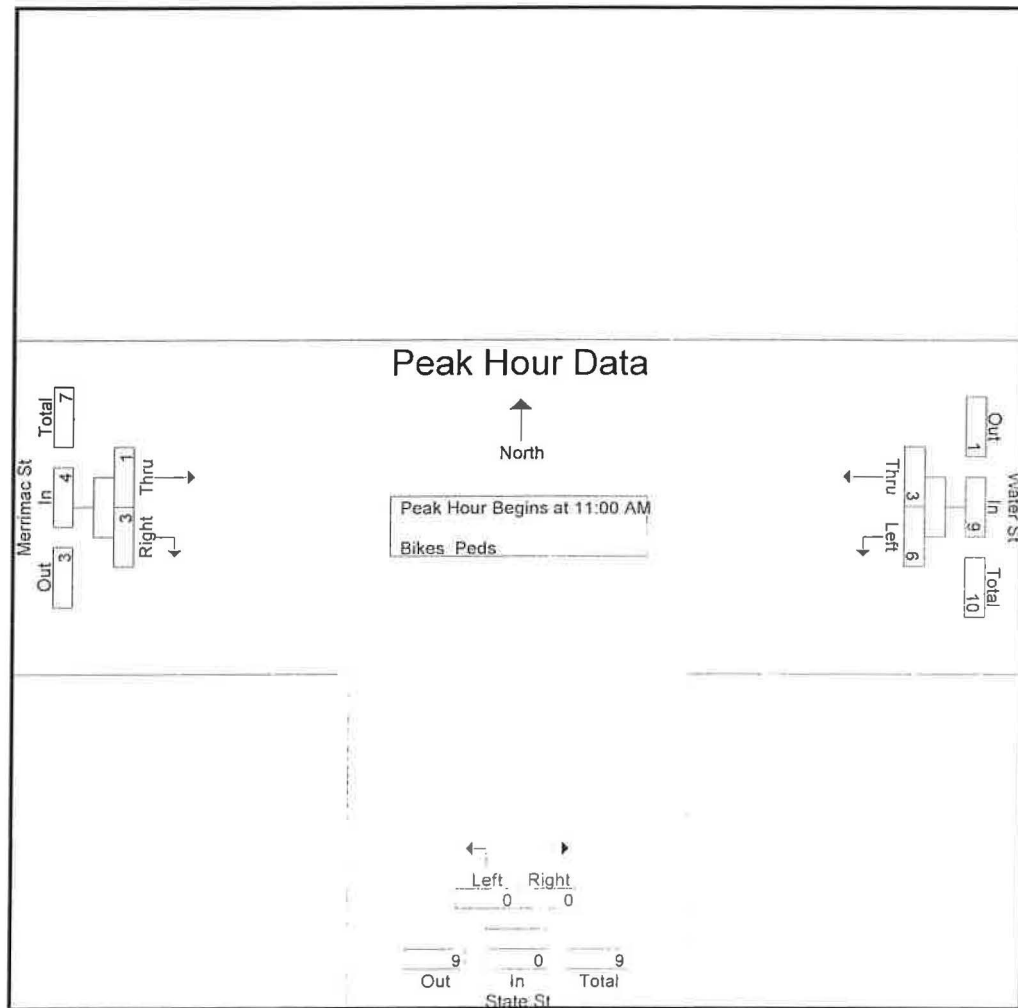
Start Time	Water St From East			State St From South			Merrimac St From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
11:00 AM	3	1	3	0	0	11	0	1	9	23	5	2
11:15 AM	0	0	12	0	0	10	1	0	12	34	1	3
11:30 AM	0	2	6	0	0	17	0	1	20	43	3	4
11:45 AM	3	0	11	0	0	3	0	1	24	38	4	4
Total	6	3	32	0	0	41	1	3	65	138	13	15
12:00 PM	0	1	9	0	0	3	0	0	15	27	1	2
12:15 PM	0	0	5	0	0	14	0	3	8	27	3	3
12:30 PM	2	0	11	0	0	18	0	1	13	42	3	4
12:45 PM	1	0	5	0	0	16	0	0	7	28	1	2
Total	3	1	30	0	0	51	0	4	43	124	8	13
01:00 PM	0	0	0	0	0	10	0	1	6	16	1	1
01:15 PM	0	0	15	0	0	23	0	0	14	52	0	5
01:30 PM	0	0	4	0	0	40	1	0	12	56	1	5
01:45 PM	1	0	4	0	0	16	0	1	11	31	2	3
Total	1	0	23	0	0	89	1	2	43	155	4	15
Grand Total	10	4	85	0	0	181	2	9	151	417	25	44
Apprch %	71.4	28.6		0	0		18.2	81.8				
Total %	40	16		0	0		8	36		94.3	5.7	

Accurate Counts
978-664-2565

S Street : State Street
N Street : Water St / Merrimac St
City/State : Newburyport, MA
Weather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 11

	Water St From East			State St From South			Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	3	1	4	0	0	0	0	1	1	
11:15 AM	0	0	0	0	0	0	1	0	1	
11:30 AM	0	2	2	0	0	0	0	1	1	
11:45 AM	3	0	3	0	0	0	0	1	1	
Total Volume	6	3	9	0	0	0	1	3	4	1
% App. Total	66.7	33.3		0	0		25	75		
PHF	.500	.375	.563	.000	.000	.000	.250	.750	1.00	.65



Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	78	18	0	0	0	96
07:15 AM	0	94	25	0	0	0	119
07:30 AM	0	120	35	0	0	0	155
07:45 AM	0	130	36	0	0	0	166
Total	0	422	114	0	0	0	536
08:00 AM	0	144	43	0	0	0	187
08:15 AM	0	151	41	0	0	0	192
08:30 AM	0	161	40	0	0	0	201
08:45 AM	0	171	37	0	0	0	208
Total	0	627	161	0	0	0	788
Grand Total	0	1049	275	0	0	0	1324
Apprch %	0	100	100	0	0	0	
Total %	0	79.2	20.8	0	0	0	
Cars	0	1033	270	0	0	0	1303
% Cars	0	98.5	98.2	0	0	0	98
Trucks	0	16	5	0	0	0	21
% Trucks	0	1.5	1.8	0	0	0	1

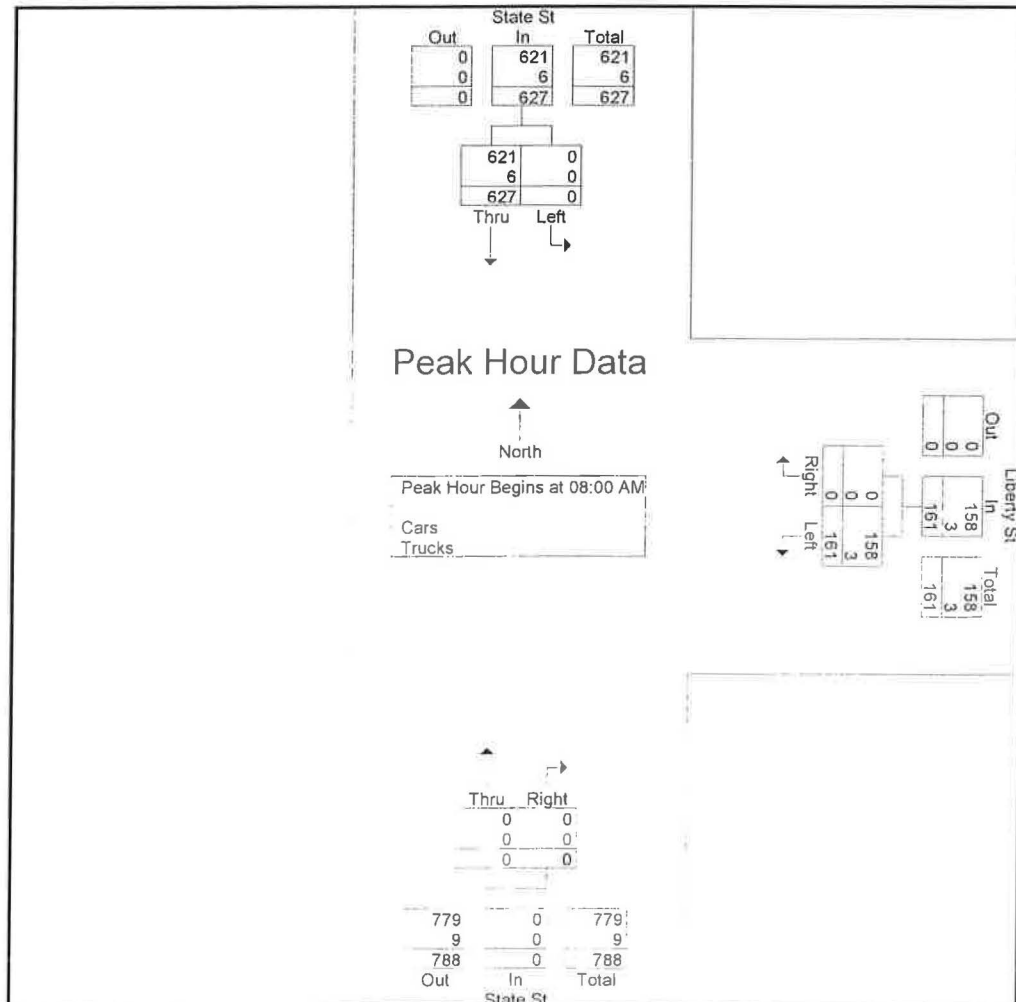
Accurate Counts

978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	State St From North			Liberty St From East			State St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	144	144	43	0	43	0	0	0	187
08:15 AM	0	151	151	41	0	41	0	0	0	192
08:30 AM	0	161	161	40	0	40	0	0	0	201
08:45 AM	0	171	171	37	0	37	0	0	0	208
Total Volume	0	627	627	161	0	161	0	0	0	788
% App. Total	0	100		100	0		0	0		
PHF	.000	.917	.917	.936	.000	.936	.000	.000	.000	.94
Cars	0	621	621	158	0	158	0	0	0	779
% Cars	0	99.0	99.0	98.1	0	98.1	0	0	0	98
Trucks	0	6	6	3	0	3	0	0	0	
% Trucks	0	1.0	1.0	1.9	0	1.9	0	0	0	1



Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	75	18	0	0	0	9
07:15 AM	0	91	25	0	0	0	11
07:30 AM	0	119	33	0	0	0	15
07:45 AM	0	127	36	0	0	0	16
Total	0	412	112	0	0	0	50
08:00 AM	0	142	42	0	0	0	18
08:15 AM	0	150	41	0	0	0	19
08:30 AM	0	158	38	0	0	0	19
08:45 AM	0	171	37	0	0	0	20
Total	0	621	158	0	0	0	77
Grand Total	0	1033	270	0	0	0	130
Apprch %	0	100	100	0	0	0	
Total %	0	79.3	20.7	0	0	0	

Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	3	0	0	0	0	
07:15 AM	0	3	0	0	0	0	
07:30 AM	0	1	2	0	0	0	
07:45 AM	0	3	0	0	0	0	
Total	0	10	2	0	0	0	
08:00 AM	0	2	1	0	0	0	
08:15 AM	0	1	0	0	0	0	
08:30 AM	0	3	2	0	0	0	
08:45 AM	0	0	0	0	0	0	
Total	0	6	3	0	0	0	
Grand Total	0	16	5	0	0	0	
Apprch %	0	100	100	0	0	0	
Total %	0	76.2	23.8	0	0	0	

978-664-2565

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

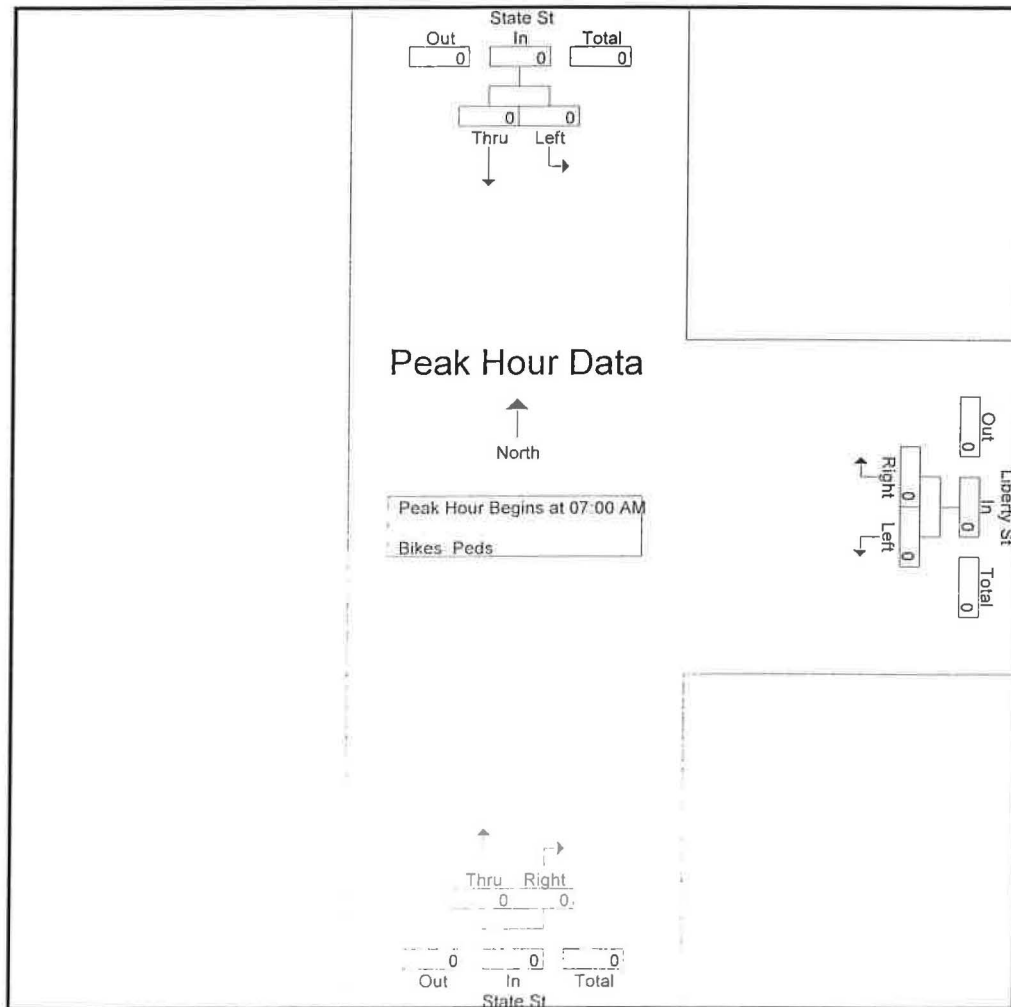
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Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

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



Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 1

Groups Printed- Cars - Trucks

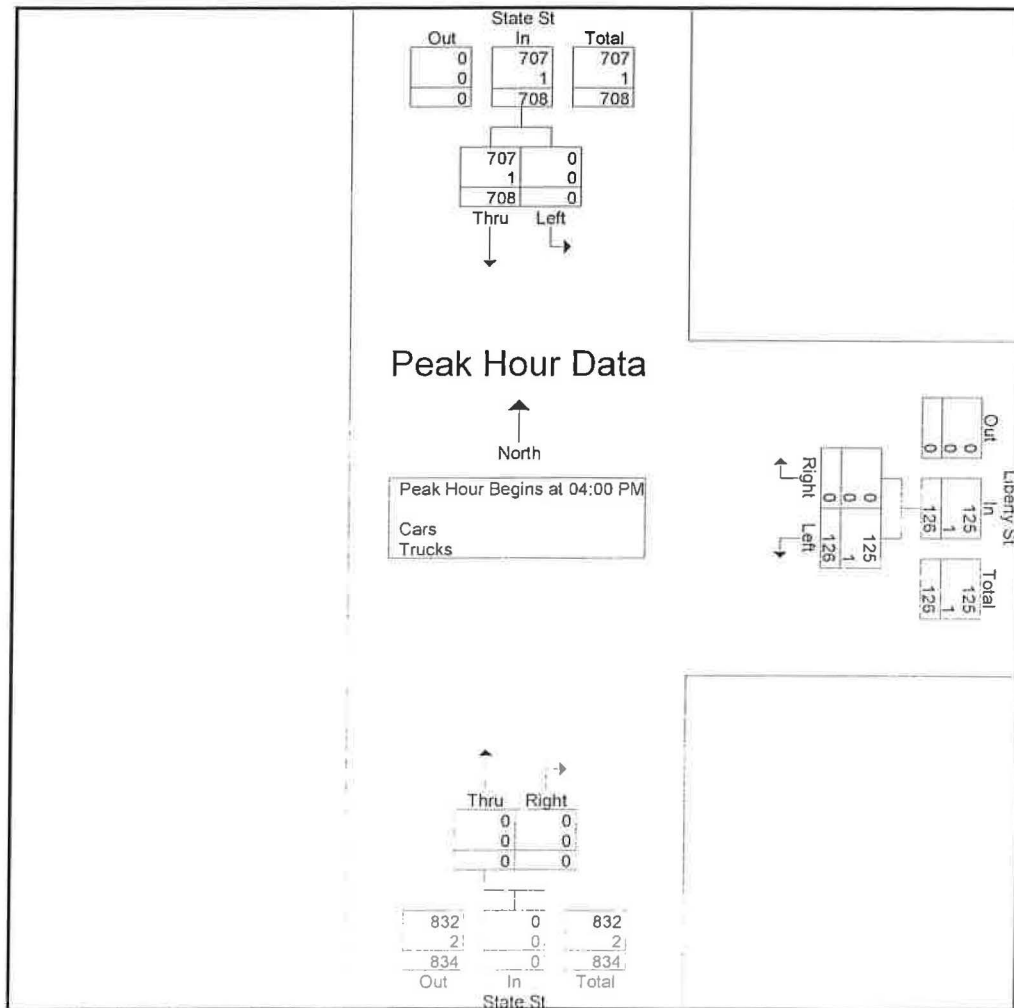
Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	185	29	0	0	0	2
04:15 PM	0	180	30	0	0	0	2
04:30 PM	0	175	38	0	0	0	2
04:45 PM	0	168	29	0	0	0	1
Total	0	708	126	0	0	0	8
05:00 PM	0	177	33	0	0	0	2
05:15 PM	0	188	17	0	0	0	2
05:30 PM	0	160	18	0	0	0	1
05:45 PM	0	169	20	0	0	0	1
Total	0	694	88	0	0	0	7
Grand Total	0	1402	214	0	0	0	16
Apprch %	0	100	100	0	0	0	
Total %	0	86.8	13.2	0	0	0	
Cars	0	1400	213	0	0	0	16
% Cars	0	99.9	99.5	0	0	0	99
Trucks	0	2	1	0	0	0	
% Trucks	0	0.1	0.5	0	0	0	0

Accurate Counts 978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 2

	State St From North			Liberty St From East			State St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	185	185	29	0	29	0	0	0	21
04:15 PM	0	180	180	30	0	30	0	0	0	21
04:30 PM	0	175	175	38	0	38	0	0	0	21
04:45 PM	0	168	168	29	0	29	0	0	0	19
Total Volume	0	708	708	126	0	126	0	0	0	83
% App. Total	0	100		100	0		0	0		
PHF	.000	.957	.957	.829	.000	.829	.000	.000	.000	.97
Cars	0	707	707	125	0	125	0	0	0	83
% Cars	0	99.9	99.9	99.2	0	99.2	0	0	0	99
Trucks	0	1	1	1	0	1	0	0	0	
% Trucks	0	0.1	0.1	0.8	0	0.8	0	0	0	0



Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 4

Groups Printed- Cars

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	184	29	0	0	0	2'
04:15 PM	0	180	30	0	0	0	2'
04:30 PM	0	175	38	0	0	0	2'
04:45 PM	0	168	28	0	0	0	18
Total	0	707	125	0	0	0	80
05:00 PM	0	176	33	0	0	0	20
05:15 PM	0	188	17	0	0	0	20
05:30 PM	0	160	18	0	0	0	17
05:45 PM	0	169	20	0	0	0	18
Total	0	693	88	0	0	0	78
Grand Total	0	1400	213	0	0	0	160
Approch %	0	100	100	0	0	0	
Total %	0	86.8	13.2	0	0	0	

Accurate Counts

978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 7

Groups Printed- Trucks

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	1	0	0	0	0	
04:15 PM	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	
04:45 PM	0	0	1	0	0	0	
Total	0	1	1	0	0	0	
05:00 PM	0	1	0	0	0	0	
05:15 PM	0	0	0	0	0	0	
05:30 PM	0	0	0	0	0	0	
05:45 PM	0	0	0	0	0	0	
Total	0	1	0	0	0	0	
Grand Total	0	2	1	0	0	0	
Apprch %	0	100	100	0	0	0	
Total %	0	66.7	33.3	0	0	0	

978-664-2565

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 10

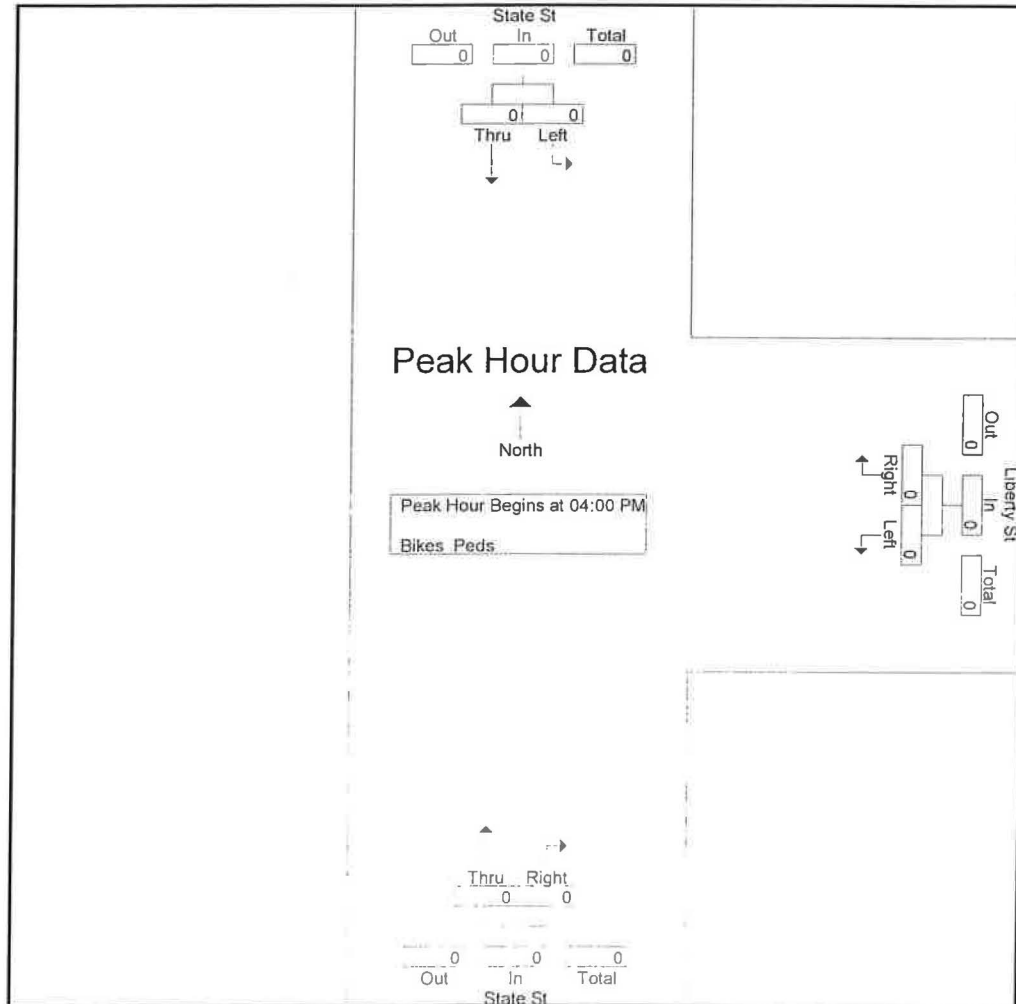
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Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
City/State : Newburyport, MA
Weather : Cloudy

File Name : 72810
Site Code : 72810
Start Date : 7/26/2
Page No : 11

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



Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 1

Groups Printed- Cars - Trucks

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	0	163	46	0	0	0	209
11:15 AM	0	184	36	0	0	0	220
11:30 AM	0	170	21	0	0	0	191
11:45 AM	0	177	22	0	0	0	199
Total	0	694	125	0	0	0	819
12:00 PM	0	179	22	0	0	0	201
12:15 PM	0	178	24	0	0	0	202
12:30 PM	0	140	20	0	0	0	160
12:45 PM	0	159	15	0	0	0	174
Total	0	656	81	0	0	0	737
01:00 PM	0	176	26	0	0	0	202
01:15 PM	0	174	30	0	0	0	204
01:30 PM	0	166	12	0	0	0	178
01:45 PM	0	197	18	0	0	0	215
Total	0	713	86	0	0	0	799
Grand Total	0	2063	292	0	0	0	2355
Apprch %	0	100	100	0	0	0	
Total %	0	87.6	12.4	0	0	0	
Cars	0	2048	291	0	0	0	2339
% Cars	0	99.3	99.7	0	0	0	99
Trucks	0	15	1	0	0	0	
% Trucks	0	0.7	0.3	0	0	0	0

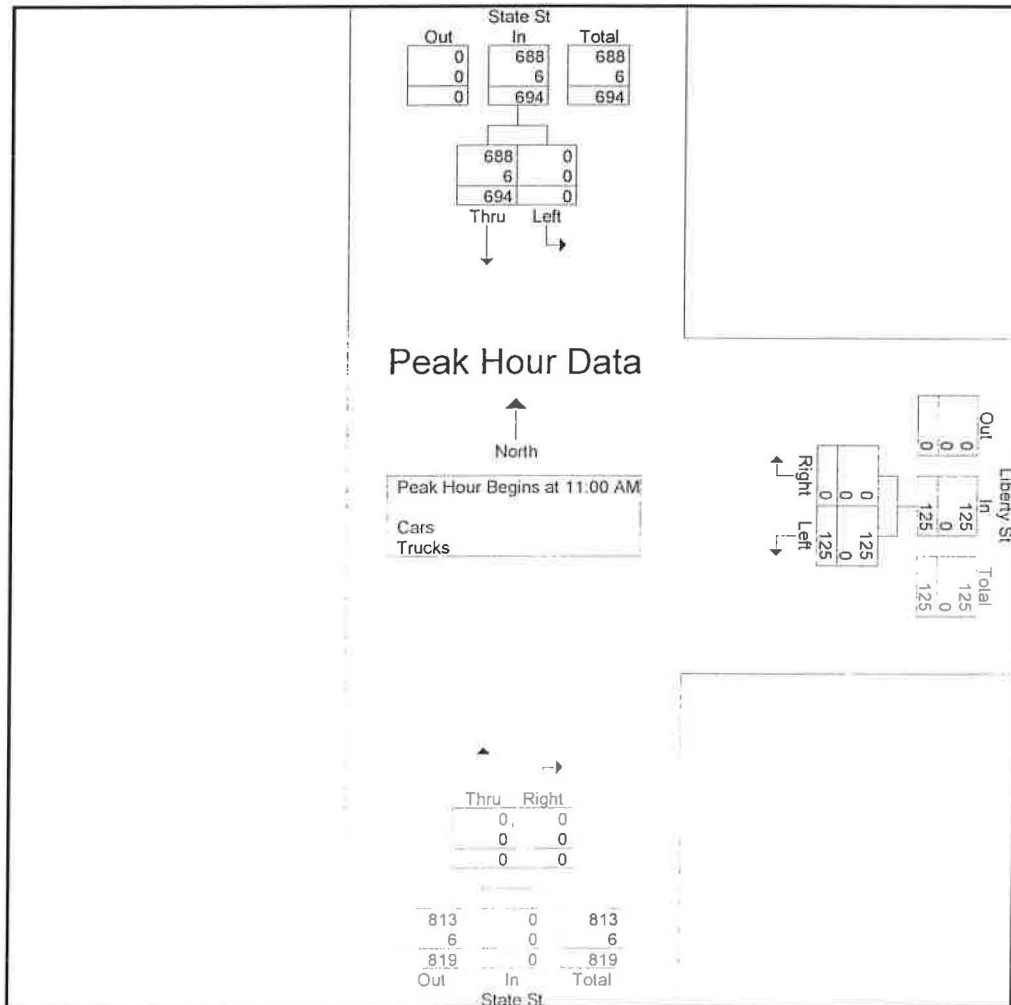
Accurate Counts

978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 2

	State St From North			Liberty St From East			State St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 11:00 AM										
11:00 AM	0	163	163	46	0	46	0	0	0	209
11:15 AM	0	184	184	36	0	36	0	0	0	220
11:30 AM	0	170	170	21	0	21	0	0	0	191
11:45 AM	0	177	177	22	0	22	0	0	0	199
Total Volume	0	694	694	125	0	125	0	0	0	819
% App. Total	0	100		100	0		0	0		
PHF	.000	.943	.943	.679	.000	.679	.000	.000	.000	.933
Cars	0	688	688	125	0	125	0	0	0	813
% Cars	0	99.1	99.1	100	0	100	0	0	0	99
Trucks	0	6	6	0	0	0	0	0	0	6
% Trucks	0	0.9	0.9	0	0	0	0	0	0	0



Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 4

Groups Printed- Cars

Start Time	State St From North		Liberty St From East		State St From South		Int. Tot
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	0	160	46	0	0	0	20
11:15 AM	0	181	36	0	0	0	27
11:30 AM	0	170	21	0	0	0	19
11:45 AM	0	177	22	0	0	0	19
Total	0	688	125	0	0	0	87
12:00 PM	0	179	22	0	0	0	20
12:15 PM	0	175	24	0	0	0	19
12:30 PM	0	138	20	0	0	0	19
12:45 PM	0	158	15	0	0	0	17
Total	0	650	81	0	0	0	73
01:00 PM	0	176	26	0	0	0	20
01:15 PM	0	173	30	0	0	0	20
01:30 PM	0	164	11	0	0	0	17
01:45 PM	0	197	18	0	0	0	27
Total	0	710	85	0	0	0	79
Grand Total	0	2048	291	0	0	0	233
Apprch %	0	100	100	0	0	0	
Total %	0	87.6	12.4	0	0	0	

Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 7

Groups Printed- Trucks

Start Time	State St From North		Liberty St From East		State St From South		Int. Tol
	Left	Thru	Left	Right	Thru	Right	
11:00 AM	0	3	0	0	0	0	
11:15 AM	0	3	0	0	0	0	
11:30 AM	0	0	0	0	0	0	
11:45 AM	0	0	0	0	0	0	
Total	0	6	0	0	0	0	
12:00 PM	0	0	0	0	0	0	
12:15 PM	0	3	0	0	0	0	
12:30 PM	0	2	0	0	0	0	
12:45 PM	0	1	0	0	0	0	
Total	0	6	0	0	0	0	
01:00 PM	0	0	0	0	0	0	
01:15 PM	0	1	0	0	0	0	
01:30 PM	0	2	1	0	0	0	
01:45 PM	0	0	0	0	0	0	
Total	0	3	1	0	0	0	
Grand Total	0	15	1	0	0	0	
Apprch %	0	100	100	0	0	0	
Total %	0	93.8	6.2	0	0	0	

Accurate Counts
978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
ather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 10

Groups Printed- Bikes Peds

Start Time	State St From North			Liberty St From East			State St From South			Exclu. Total	Inclu. Total	Int. Tot
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
11:00 AM	0	0	14	0	0	117	0	0	98	229	0	22
11:15 AM	0	0	2	0	0	86	0	0	66	154	0	15
11:30 AM	0	0	1	0	0	108	0	0	60	169	0	16
11:45 AM	0	0	3	0	0	79	0	0	74	156	0	15
Total	0	0	20	0	0	390	0	0	298	708	0	70
12:00 PM	0	0	2	0	0	127	0	0	112	241	0	24
12:15 PM	0	0	4	0	0	93	0	0	69	166	0	16
12:30 PM	0	0	3	1	0	113	0	0	88	204	1	20
12:45 PM	0	0	3	0	0	112	0	0	103	218	0	21
Total	0	0	12	1	0	445	0	0	372	829	1	83
01:00 PM	0	0	13	0	0	137	0	0	92	242	0	24
01:15 PM	0	0	8	1	0	153	0	0	127	288	1	28
01:30 PM	0	0	2	0	0	118	0	0	86	206	0	20
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	23	1	0	408	0	0	305	736	1	73
Grand Total	0	0	55	2	0	1243	0	0	975	2273	2	227
Apprch %	0	0		100	0		0	0				
Total %	0	0		100	0		0	0		99.9	0.1	

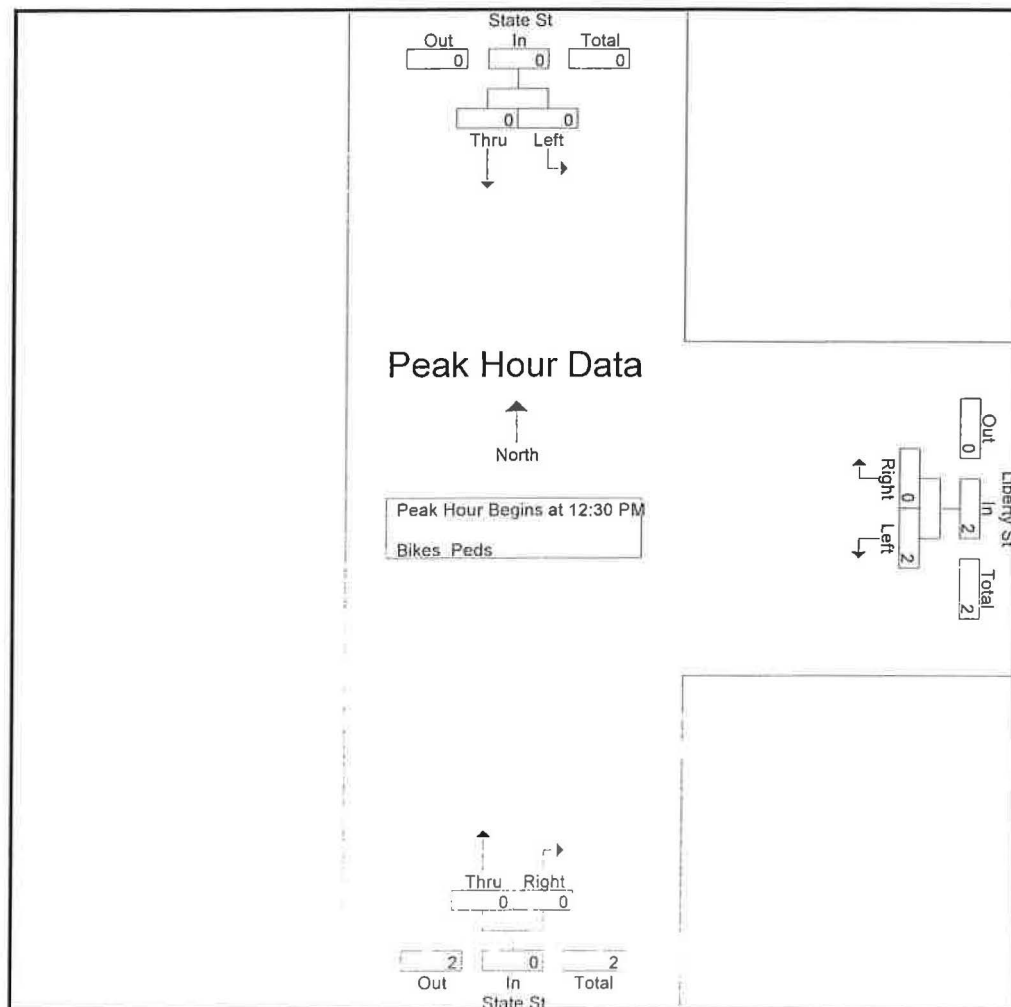
Accurate Counts

978-664-2565

S Street : State Street
W Street: Liberty Street
y/State : Newburyport, MA
eather : Cloudy

File Name : 728101
Site Code : 728101
Start Date : 7/28/21
Page No : 11

	State St From North			Liberty St From East			State St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tot
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:30 PM										
12:30 PM	0	0	0	1	0	1	0	0	0	
12:45 PM	0	0	0	0	0	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	
01:15 PM	0	0	0	1	0	1	0	0	0	
Total Volume	0	0	0	2	0	2	0	0	0	
% App. Total	0	0		100	0		0	0		
PHF	.000	.000	.000	.500	.000	.500	.000	.000	.000	.500



VEHICLE SPEED MEASUREMENTS

Accurate Counts

978-664-2565

Page 1

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281SPD1

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/02/18	0	0	0	2	1	1	3	3	7	1	2	0	0	0	20
01:00	0	0	0	0	1	2	1	3	1	3	0	0	0	0	11
02:00	0	0	0	0	0	0	0	1	1	2	1	0	0	0	5
03:00	0	0	0	0	0	0	0	0	5	1	0	0	0	0	6
04:00	0	0	0	0	0	3	2	5	5	0	1	0	0	0	16
05:00	1	0	0	0	1	1	14	20	22	5	2	0	0	0	66
06:00	8	0	0	2	4	7	20	60	56	19	3	1	0	0	180
07:00	24	0	2	3	17	44	102	136	75	29	4	1	0	0	437
08:00	59	1	18	31	89	173	173	122	32	5	0	0	0	0	703
09:00	88	23	40	64	127	143	124	58	10	1	0	0	0	0	678
10:00	136	28	77	79	104	99	82	35	4	2	0	0	0	0	646
11:00	145	35	85	58	85	85	55	18	9	0	0	0	0	0	575
12 PM	188	41	128	94	93	51	38	7	3	0	0	0	0	0	643
13:00	77	8	21	53	98	126	119	40	6	3	0	0	0	0	551
14:00	104	11	30	57	70	118	98	31	21	2	0	0	0	0	542
15:00	77	4	30	46	73	137	136	62	13	0	0	0	0	0	578
16:00	101	9	35	82	126	138	114	56	8	0	1	0	0	0	670
17:00	158	34	88	125	134	106	61	11	4	0	0	0	0	0	721
18:00	202	29	90	120	78	64	20	8	0	0	0	0	0	0	611
19:00	183	41	44	52	45	24	26	6	0	0	0	0	0	0	421
20:00	25	0	5	10	44	98	91	31	8	0	0	0	0	0	312
21:00	24	0	1	3	17	56	47	44	9	1	0	0	0	0	202
22:00	4	0	1	0	4	31	44	33	27	6	1	0	0	0	151
23:00	4	0	0	2	6	8	13	26	19	4	1	0	0	0	83
Total	1608	264	695	883	1217	1515	1383	816	345	84	16	2	0	0	8828

Daily

15th Percentile : 2 MPH
50th Percentile : 14 MPH
85th Percentile : 20 MPH
95th Percentile : 24 MPH

Mean Speed(Average) : 14 MPH
10 MPH Pace Speed : 12-21 MPH
Number in Pace : 4409
Percent in Pace : 49.9%
Number of Vehicles > 15 MPH : 4161
Percent of Vehicles > 15 MPH : 47.1%

Accurate Counts

978-664-2565

Page 2

Location : Merrimac Street
 Location : East of Market Street
 City/State: Newburyport, MA

7281SPD1

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total
	3	6	9	12	15	18	21	24	27	30	33	36	39	999	
08/03/18	0	0	0	0	0	3	0	8	9	6	1	0	0	0	27
01:00	0	0	0	0	0	0	2	6	8	2	1	0	0	0	19
02:00	0	0	0	0	2	0	0	1	2	2	0	0	0	0	7
03:00	0	0	0	0	1	0	2	3	2	1	1	0	0	0	10
04:00	1	0	0	0	0	2	5	5	4	2	0	0	0	0	19
05:00	4	0	0	0	1	12	6	24	18	10	1	0	0	0	76
06:00	6	0	0	0	4	12	23	56	69	23	1	1	0	0	195
07:00	18	0	4	8	24	59	120	131	50	20	2	0	0	0	436
08:00	99	10	24	68	103	142	125	57	20	4	3	0	0	0	655
09:00	96	7	26	63	137	145	105	55	7	2	1	0	0	0	644
10:00	99	8	46	58	109	142	131	48	7	3	0	0	0	0	651
11:00	153	25	74	57	93	101	59	34	4	0	0	0	0	0	600
12 PM	180	39	74	77	83	63	60	26	3	1	0	0	0	0	606
13:00	146	14	72	83	97	114	50	23	6	1	0	0	0	0	606
14:00	120	12	34	80	102	127	56	20	6	0	1	0	0	0	558
15:00	121	7	32	62	114	135	99	21	2	0	0	0	0	0	593
16:00	68	2	5	27	68	174	147	53	12	2	0	0	0	0	558
17:00	84	7	26	35	92	168	128	57	9	1	0	0	0	0	607
18:00	170	32	122	145	79	33	13	8	1	2	0	0	0	0	605
19:00	141	48	74	93	76	57	30	7	0	1	0	0	0	0	527
20:00	61	6	9	19	62	81	73	25	3	1	0	0	0	0	340
21:00	17	1	2	7	34	83	79	39	7	0	0	0	0	0	269
22:00	7	0	0	1	13	28	54	44	20	2	0	0	0	0	169
23:00	0	0	0	0	2	7	29	34	16	7	1	0	0	0	96
Total	1591	218	624	883	1296	1688	1396	785	285	93	13	1	0	0	8873

Daily

15th Percentile :	2 MPH
50th Percentile :	14 MPH
85th Percentile :	20 MPH
95th Percentile :	23 MPH
Mean Speed(Average) :	14 MPH
10 MPH Pace Speed :	12-21 MPH
Number in Pace :	4674
Percent in Pace :	52.7%
Number of Vehicles > 15 MPH :	4261
Percent of Vehicles > 15 MPH :	48.0%

Accurate Counts

978-664-2565

Page 3

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281SPD1

EB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/04/18	2	0	0	0	0	5	11	19	11	6	1	0	0	0	55
01:00	1	0	0	0	0	1	1	8	8	3	3	0	0	0	26
02:00	0	0	0	0	0	0	5	0	1	2	0	0	0	0	8
03:00	0	0	0	0	0	3	2	3	4	4	0	0	0	0	16
04:00	0	0	0	0	2	0	6	3	2	3	1	0	0	0	17
05:00	1	0	0	0	0	7	6	18	16	10	2	1	0	0	61
06:00	3	0	0	1	0	8	33	40	55	21	6	2	1	0	170
07:00	11	0	3	4	9	42	83	99	62	19	3	0	0	0	335
08:00	24	1	0	7	29	86	137	133	42	4	1	0	0	0	464
09:00	49	4	23	41	69	123	146	87	22	10	1	0	0	0	575
10:00	173	54	66	71	77	83	63	25	4	0	0	0	0	0	616
11:00	112	27	40	58	107	156	87	19	2	0	0	0	0	0	608
12 PM	65	1	17	49	107	162	144	43	6	1	0	0	0	0	595
13:00	55	5	16	26	95	144	127	67	16	1	0	0	0	0	552
14:00	36	1	5	25	85	160	149	52	19	0	0	0	0	0	532
15:00	93	10	30	46	97	165	115	30	10	0	0	0	0	0	596
16:00	117	19	65	90	88	96	76	33	1	5	0	0	0	0	590
17:00	132	39	88	77	94	91	33	7	3	0	0	0	0	0	564
18:00	160	45	102	88	90	68	29	5	0	0	0	0	0	0	587
19:00	68	10	23	32	69	83	69	38	16	4	0	0	0	0	412
20:00	45	6	16	23	45	61	51	28	11	4	0	0	0	0	290
21:00	36	4	11	20	34	45	37	21	9	2	0	0	0	0	219
22:00	29	3	6	9	27	63	48	30	4	2	0	0	0	0	221
23:00	5	0	0	3	6	36	46	41	18	7	1	0	0	0	163
Total	1217	229	511	670	1131	1688	1504	849	342	108	19	3	1	0	8272

Daily

15th Percentile : 3 MPH
50th Percentile : 15 MPH
85th Percentile : 21 MPH
95th Percentile : 24 MPH

Mean Speed(Average) : 15 MPH
10 MPH Pace Speed : 13-22 MPH
Number in Pace : 4606
Percent in Pace : 55.7%
Number of Vehicles > 15 MPH : 4514
Percent of Vehicles > 15 MPH : 54.6%

Grand	4416	711	1830	2436	3644	4891	4283	2450	972	285	48	6	1	0	25973
Total															

Overall

15th Percentile : 2 MPH
50th Percentile : 14 MPH
85th Percentile : 20 MPH
95th Percentile : 24 MPH

Mean Speed(Average) : 14 MPH
10 MPH Pace Speed : 13-22 MPH
Number in Pace : 13635
Percent in Pace : 52.5%
Number of Vehicles > 15 MPH : 12936
Percent of Vehicles > 15 MPH : 49.8%

Accurate Counts 978-664-2565

Page 4

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281SPD1

WB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/02/18	0	0	0	0	0	1	7	6	14	9	1	1	0	0	39
01:00	0	0	0	0	2	0	0	2	4	2	1	0	0	0	11
02:00	0	0	0	0	0	0	1	2	0	0	0	0	1	0	4
03:00	0	0	0	0	1	0	2	3	3	0	0	1	0	0	10
04:00	0	0	0	0	0	0	0	2	12	1	0	0	0	0	15
05:00	1	0	0	0	3	6	9	17	25	18	2	0	0	0	81
06:00	8	0	2	0	0	5	13	45	55	27	9	1	0	0	165
07:00	28	0	2	2	8	23	55	78	72	25	0	1	0	0	294
08:00	49	1	2	7	24	84	100	88	25	8	2	0	0	0	390
09:00	58	0	2	10	36	81	98	51	11	3	0	0	0	0	350
10:00	52	0	2	20	47	104	93	42	8	0	0	0	0	0	368
11:00	62	2	4	45	97	116	65	39	1	1	0	0	0	0	432
12 PM	56	1	2	31	99	126	57	18	2	1	0	0	0	0	393
13:00	43	0	1	12	62	150	103	33	3	2	0	0	0	0	409
14:00	72	1	11	29	106	166	110	34	11	0	0	0	0	0	540
15:00	60	1	5	27	74	125	142	55	15	1	0	0	0	0	505
16:00	65	0	3	22	96	135	131	39	11	0	0	0	0	0	502
17:00	66	0	2	32	96	122	83	22	9	2	0	0	0	0	434
18:00	74	2	5	68	124	110	34	9	1	0	0	0	0	0	427
19:00	79	10	47	134	135	87	26	4	1	0	0	0	0	0	523
20:00	32	1	5	29	110	206	115	30	4	1	0	0	0	0	533
21:00	22	0	3	29	100	178	108	41	7	1	0	0	0	0	489
22:00	6	0	1	6	8	65	87	90	42	8	2	1	1	0	317
23:00	1	0	0	1	2	11	21	43	32	4	2	1	0	0	118
Total	834	19	99	504	1230	1901	1460	793	368	114	19	6	2	0	7349

Daily

15th Percentile : 9 MPH
50th Percentile : 16 MPH
85th Percentile : 21 MPH
95th Percentile : 25 MPH

Mean Speed(Average) : 16 MPH
10 MPH Pace Speed : 13-22 MPH
Number in Pace : 4855
Percent in Pace : 66.1%
Number of Vehicles > 15 MPH : 4663
Percent of Vehicles > 15 MPH : 63.5%

Accurate Counts 978-664-2565

Page 5

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281SPD1

WB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/03/18	2	0	0	1	3	2	7	8	17	13	2	0	0	0	55
01:00	0	0	0	1	0	0	3	11	7	5	0	0	0	0	27
02:00	1	0	0	0	0	3	2	3	0	0	0	1	0	0	10
03:00	1	0	0	0	0	0	0	7	1	2	0	0	0	0	11
04:00	0	0	0	0	1	0	0	4	8	7	1	1	0	0	22
05:00	3	0	0	2	0	1	7	10	24	13	6	0	0	0	66
06:00	6	0	0	1	1	3	16	59	53	35	6	1	0	0	181
07:00	16	0	1	3	11	41	69	71	48	8	0	0	0	0	268
08:00	45	1	4	11	43	74	85	59	23	5	1	0	0	0	351
09:00	55	0	4	18	58	105	109	52	12	1	0	0	0	0	414
10:00	63	1	3	5	60	117	79	42	14	2	0	0	0	0	386
11:00	59	1	9	30	81	100	90	27	13	0	0	0	0	0	410
12 PM	73	0	3	26	127	116	59	34	6	1	0	0	0	0	445
13:00	74	0	4	32	127	133	63	31	4	0	0	0	0	0	468
14:00	60	2	9	40	133	131	95	33	3	3	0	0	0	0	509
15:00	71	1	9	46	111	152	113	25	5	2	1	0	0	0	536
16:00	50	1	6	16	57	176	151	38	12	1	0	0	0	0	508
17:00	49	0	1	4	60	142	131	63	17	2	0	0	0	0	469
18:00	63	1	10	35	95	107	51	23	1	2	0	0	0	0	388
19:00	40	0	19	40	101	85	51	11	0	0	0	0	0	0	347
20:00	42	4	12	78	149	137	69	28	3	0	0	0	0	0	522
21:00	25	0	11	29	92	131	112	49	10	1	0	0	0	0	460
22:00	9	1	1	3	12	56	94	75	32	2	2	0	0	0	287
23:00	2	0	0	1	5	27	38	59	41	5	2	1	0	0	181
Total	809	13	106	422	1327	1839	1494	822	354	110	21	4	0	0	7321

Daily

15th Percentile :	10 MPH
50th Percentile :	16 MPH
85th Percentile :	21 MPH
95th Percentile :	25 MPH
Mean Speed(Average) :	16 MPH
10 MPH Pace Speed :	13-22 MPH
Number in Pace :	4934
Percent in Pace :	67.4%
Number of Vehicles > 15 MPH :	4644
Percent of Vehicles > 15 MPH :	63.4%

Accurate Counts

978-664-2565

Location : Merrimac Street
 Location : East of Market Street
 City/State: Newburyport, MA

7281SPD1

WB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	
08/04/18	2	0	0	2	3	7	20	30	19	4	1	0	0	0	88
01:00	1	0	0	0	0	2	5	16	11	4	2	0	0	0	41
02:00	0	0	0	0	2	0	2	6	9	4	3	0	0	0	26
03:00	0	0	0	0	0	3	3	0	5	4	0	0	0	0	15
04:00	0	0	0	0	0	1	2	2	6	4	0	1	0	0	16
05:00	1	0	0	0	1	3	3	13	10	5	2	1	0	0	39
06:00	0	0	0	0	1	5	17	39	25	17	4	0	0	0	108
07:00	10	0	2	0	5	26	46	69	24	12	4	0	0	0	198
08:00	21	0	2	2	16	47	106	74	31	5	3	0	0	0	307
09:00	36	0	4	13	31	96	131	61	20	4	0	0	0	0	396
10:00	50	2	5	48	98	83	59	16	5	1	0	0	0	0	367
11:00	65	2	18	74	140	116	75	19	1	0	0	0	0	0	510
12 PM	40	1	3	47	84	127	94	38	7	0	1	0	0	0	442
13:00	43	1	1	13	65	140	114	37	5	1	0	0	0	0	420
14:00	34	2	1	25	90	109	82	35	9	4	0	0	0	0	391
15:00	51	1	4	21	80	136	90	25	1	0	0	0	0	0	409
16:00	48	0	0	20	89	137	90	25	0	0	0	0	0	0	409
17:00	58	1	3	49	110	97	42	24	2	0	0	0	0	0	386
18:00	45	3	11	58	117	85	28	10	1	0	0	0	0	0	358
19:00	36	29	52	79	114	53	18	1	1	0	0	0	0	0	383
20:00	12	12	31	66	70	41	12	0	0	0	0	0	0	0	244
21:00	35	20	37	55	60	23	7	1	0	0	0	0	0	0	238
22:00	28	24	61	52	111	101	74	14	4	0	0	0	0	0	469
23:00	5	0	0	3	13	49	82	73	25	8	1	0	0	0	259
Total	621	98	235	627	1300	1487	1202	628	221	77	21	2	0	0	6519

Daily

15th Percentile : 9 MPH
 50th Percentile : 15 MPH
 85th Percentile : 20 MPH
 95th Percentile : 23 MPH

Mean Speed(Average) : 16 MPH
 10 MPH Pace Speed : 13-22 MPH
 Number in Pace : 4198
 Percent in Pace : 64.4%
 Number of Vehicles > 15 MPH : 3638
 Percent of Vehicles > 15 MPH : 55.8%

Grand Total	2264	130	440	1553	3857	5227	4156	2243	943	301	61	12	2	0	21189
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Overall

15th Percentile : 9 MPH
 50th Percentile : 16 MPH
 85th Percentile : 21 MPH
 95th Percentile : 24 MPH

Mean Speed(Average) : 16 MPH
 10 MPH Pace Speed : 13-22 MPH
 Number in Pace : 13988
 Percent in Pace : 66.0%
 Number of Vehicles > 15 MPH : 12945
 Percent of Vehicles > 15 MPH : 61.1%

Accurate Counts

978-664-2565

Page 7

Location : Merrimac Street
 Location : East of Market Street
 City/State: Newburyport, MA

7281SPD1

EB, WB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/02/18	0	0	0	2	1	2	10	9	21	10	3	1	0	0	59
01:00	0	0	0	0	3	2	1	5	5	5	1	0	0	0	22
02:00	0	0	0	0	0	0	1	3	1	2	1	0	1	0	9
03:00	0	0	0	0	1	0	2	3	8	1	0	1	0	0	16
04:00	0	0	0	0	0	3	2	7	17	1	1	0	0	0	31
05:00	2	0	0	0	4	7	23	37	47	23	4	0	0	0	147
06:00	16	0	2	2	4	12	33	105	111	46	12	2	0	0	345
07:00	52	0	4	5	25	67	157	214	147	54	4	2	0	0	731
08:00	108	2	20	38	113	257	273	210	57	13	2	0	0	0	1093
09:00	146	23	42	74	163	224	222	109	21	4	0	0	0	0	1028
10:00	188	28	79	99	151	203	175	77	12	2	0	0	0	0	1014
11:00	207	37	89	103	182	201	120	57	10	1	0	0	0	0	1007
12 PM	244	42	130	125	192	177	95	25	5	1	0	0	0	0	1036
13:00	120	8	22	65	160	276	222	73	9	5	0	0	0	0	960
14:00	176	12	41	86	176	284	208	65	32	2	0	0	0	0	1082
15:00	137	5	35	73	147	262	278	117	28	1	0	0	0	0	1083
16:00	166	9	38	104	222	273	245	95	19	0	1	0	0	0	1172
17:00	224	34	90	157	230	228	144	33	13	2	0	0	0	0	1155
18:00	276	31	95	188	202	174	54	17	1	0	0	0	0	0	1038
19:00	262	51	91	186	180	111	52	10	1	0	0	0	0	0	944
20:00	57	1	10	39	154	304	206	61	12	1	0	0	0	0	845
21:00	46	0	4	32	117	234	155	85	16	2	0	0	0	0	691
22:00	10	0	2	6	12	96	131	123	69	14	3	1	1	0	468
23:00	5	0	0	3	8	19	34	69	51	8	3	1	0	0	201
Total	2442	283	794	1387	2447	3416	2843	1609	713	198	35	8	2	0	16177

Daily

15th Percentile : 2 MPH
 50th Percentile : 15 MPH
 85th Percentile : 21 MPH
 95th Percentile : 24 MPH

Mean Speed(Average) : 15 MPH
 10 MPH Pace Speed : 13-22 MPH
 Number in Pace : 9242
 Percent in Pace : 57.1%
 Number of Vehicles > 15 MPH : 8824
 Percent of Vehicles > 15 MPH : 54.5%

Accurate Counts 978-664-2565

Page 8

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281SPD1

EB, WB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/03/18	2	0	0	1	3	5	7	16	26	19	3	0	0	0	82
01:00	0	0	0	1	0	0	5	17	15	7	1	0	0	0	46
02:00	1	0	0	0	2	3	2	4	2	2	0	1	0	0	17
03:00	1	0	0	0	1	0	2	10	3	3	1	0	0	0	21
04:00	1	0	0	0	1	2	5	9	12	9	1	1	0	0	41
05:00	7	0	0	2	1	13	13	34	42	23	7	0	0	0	142
06:00	12	0	0	1	5	15	39	115	122	58	7	2	0	0	376
07:00	34	0	5	11	35	100	189	202	98	28	2	0	0	0	704
08:00	144	11	28	79	146	216	210	116	43	9	4	0	0	0	1006
09:00	151	7	30	81	195	250	214	107	19	3	1	0	0	0	1058
10:00	162	9	49	63	169	259	210	90	21	5	0	0	0	0	1037
11:00	212	26	83	87	174	201	149	61	17	0	0	0	0	0	1010
12 PM	253	39	77	103	210	179	119	60	9	2	0	0	0	0	1051
13:00	220	14	76	115	224	247	113	54	10	1	0	0	0	0	1074
14:00	180	14	43	120	235	258	151	53	9	3	1	0	0	0	1067
15:00	192	8	41	108	225	287	212	46	7	2	1	0	0	0	1129
16:00	118	3	11	43	125	350	298	91	24	3	0	0	0	0	1066
17:00	133	7	27	39	152	310	259	120	26	3	0	0	0	0	1076
18:00	233	33	132	180	174	140	64	31	2	4	0	0	0	0	993
19:00	181	48	93	133	177	142	81	18	0	1	0	0	0	0	874
20:00	103	10	21	97	211	218	142	53	6	1	0	0	0	0	862
21:00	42	1	13	36	126	214	191	88	17	1	0	0	0	0	729
22:00	16	1	1	4	25	84	148	119	52	4	2	0	0	0	456
23:00	2	0	0	1	7	34	67	93	57	12	3	1	0	0	277
Total	2400	231	730	1305	2623	3527	2890	1607	639	203	34	5	0	0	16194

Daily

15th Percentile :	3 MPH
50th Percentile :	15 MPH
85th Percentile :	21 MPH
95th Percentile :	24 MPH
Mean Speed(Average) :	15 MPH
10 MPH Pace Speed :	13-22 MPH
Number in Pace :	9576
Percent in Pace :	59.1%
Number of Vehicles > 15 MPH :	8905
Percent of Vehicles > 15 MPH :	55.0%

Accurate Counts

978-664-2565

Page 9

Location : Merrimac Street
Location : East of Market Street
City/State: Newburyport, MA

7281SPD1

EB, WB

Start	1	4	7	10	13	16	19	22	25	28	31	34	37	40	
Time	3	6	9	12	15	18	21	24	27	30	33	36	39	999	Total
08/04/18	4	0	0	2	3	12	31	49	30	10	2	0	0	0	143
01:00	2	0	0	0	1	3	6	24	19	7	5	0	0	0	67
02:00	0	0	0	0	2	0	7	6	10	6	3	0	0	0	34
03:00	0	0	0	0	0	6	5	3	9	8	0	0	0	0	31
04:00	0	0	0	0	2	1	8	5	8	7	1	1	0	0	33
05:00	2	0	0	0	1	10	9	31	26	15	4	2	0	0	100
06:00	3	0	0	1	1	13	50	79	80	38	10	2	1	0	278
07:00	21	0	5	4	14	68	129	168	86	31	7	0	0	0	533
08:00	45	1	2	9	45	133	243	207	73	9	4	0	0	0	771
09:00	85	4	27	54	100	219	277	148	42	14	1	0	0	0	971
10:00	223	56	71	119	175	166	122	41	9	1	0	0	0	0	983
11:00	177	29	58	132	247	272	162	38	3	0	0	0	0	0	1118
12 PM	105	2	20	96	191	289	238	81	13	1	1	0	0	0	1037
13:00	98	6	17	39	160	284	241	104	21	2	0	0	0	0	972
14:00	70	3	6	50	175	269	231	87	28	4	0	0	0	0	923
15:00	144	11	34	67	177	301	205	55	11	0	0	0	0	0	1005
16:00	165	19	65	110	177	233	166	58	1	5	0	0	0	0	999
17:00	190	40	91	126	204	188	75	31	5	0	0	0	0	0	950
18:00	205	48	113	146	207	153	57	15	1	0	0	0	0	0	945
19:00	104	39	75	111	183	136	87	39	17	4	0	0	0	0	795
20:00	57	18	47	89	115	102	63	28	11	4	0	0	0	0	534
21:00	71	24	48	75	94	68	44	22	9	2	0	0	0	0	457
22:00	57	27	67	61	138	164	122	44	8	2	0	0	0	0	690
23:00	10	0	0	6	19	85	128	114	43	15	2	0	0	0	422
Total	1838	327	746	1297	2431	3175	2706	1477	563	185	40	5	1	0	14791

Daily

15th Percentile : 6 MPH
50th Percentile : 15 MPH
85th Percentile : 21 MPH
95th Percentile : 24 MPH

Mean Speed(Average) : 15 MPH
10 MPH Pace Speed : 13-22 MPH
Number in Pace : 8804
Percent in Pace : 59.5%
Number of Vehicles > 15 MPH : 8152
Percent of Vehicles > 15 MPH : 55.1%

Grand Total	6680	841	2270	3989	7501	10118	8439	4693	1915	586	109	18	3	0	47162
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Overall

15th Percentile : 4 MPH
50th Percentile : 15 MPH
85th Percentile : 21 MPH
95th Percentile : 24 MPH

Mean Speed(Average) : 15 MPH
10 MPH Pace Speed : 13-22 MPH
Number in Pace : 27622
Percent in Pace : 58.6%
Number of Vehicles > 15 MPH : 25881
Percent of Vehicles > 15 MPH : 54.9%

MASSDOT HIGH CRASH LOCATION MAPPING

Top Crash Locations



TRIP-GENERATION CALCULATIONS

Multifamily Housing (Mid-Rise) (221)

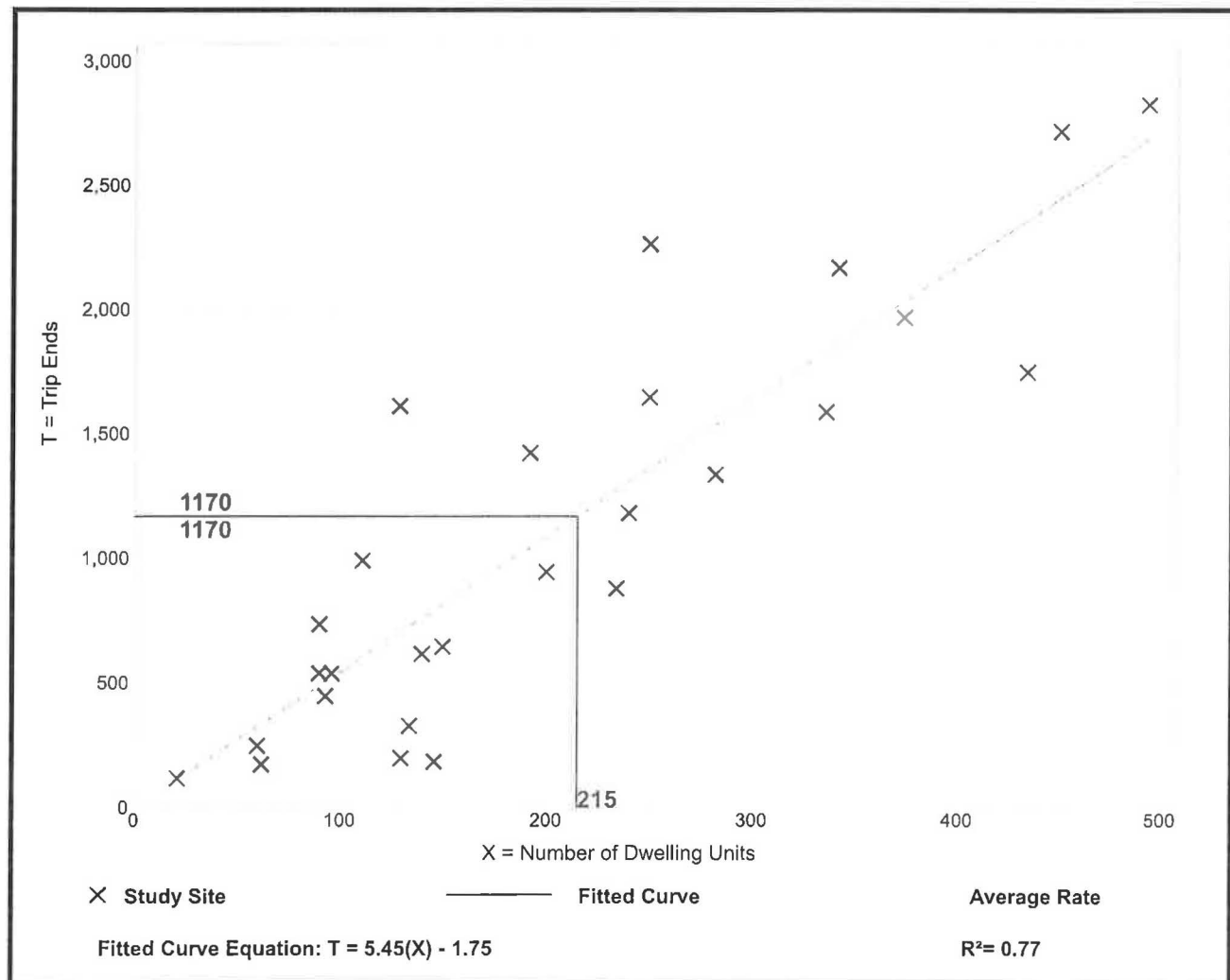
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 53

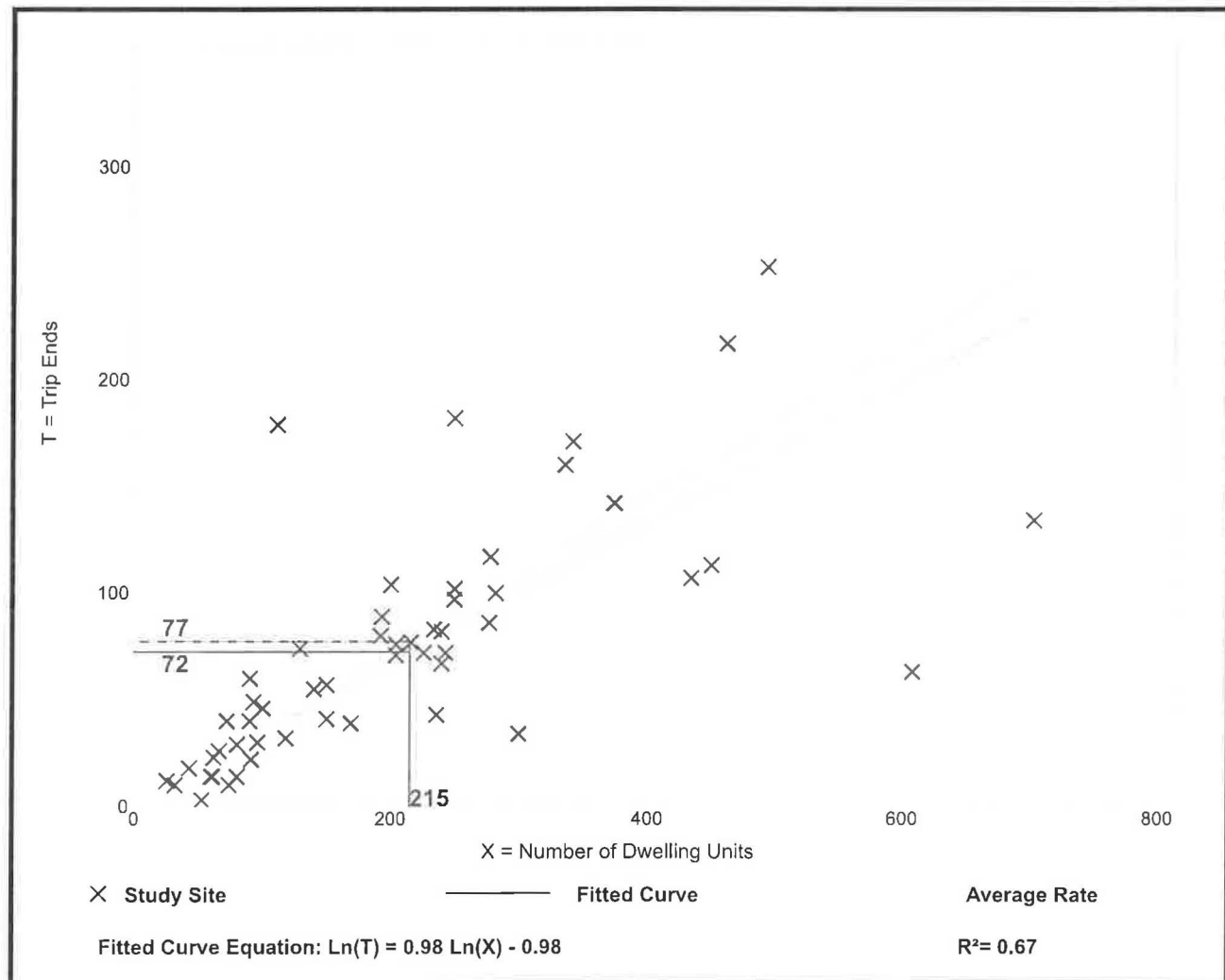
Avg. Num. of Dwelling Units: 207

Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 60

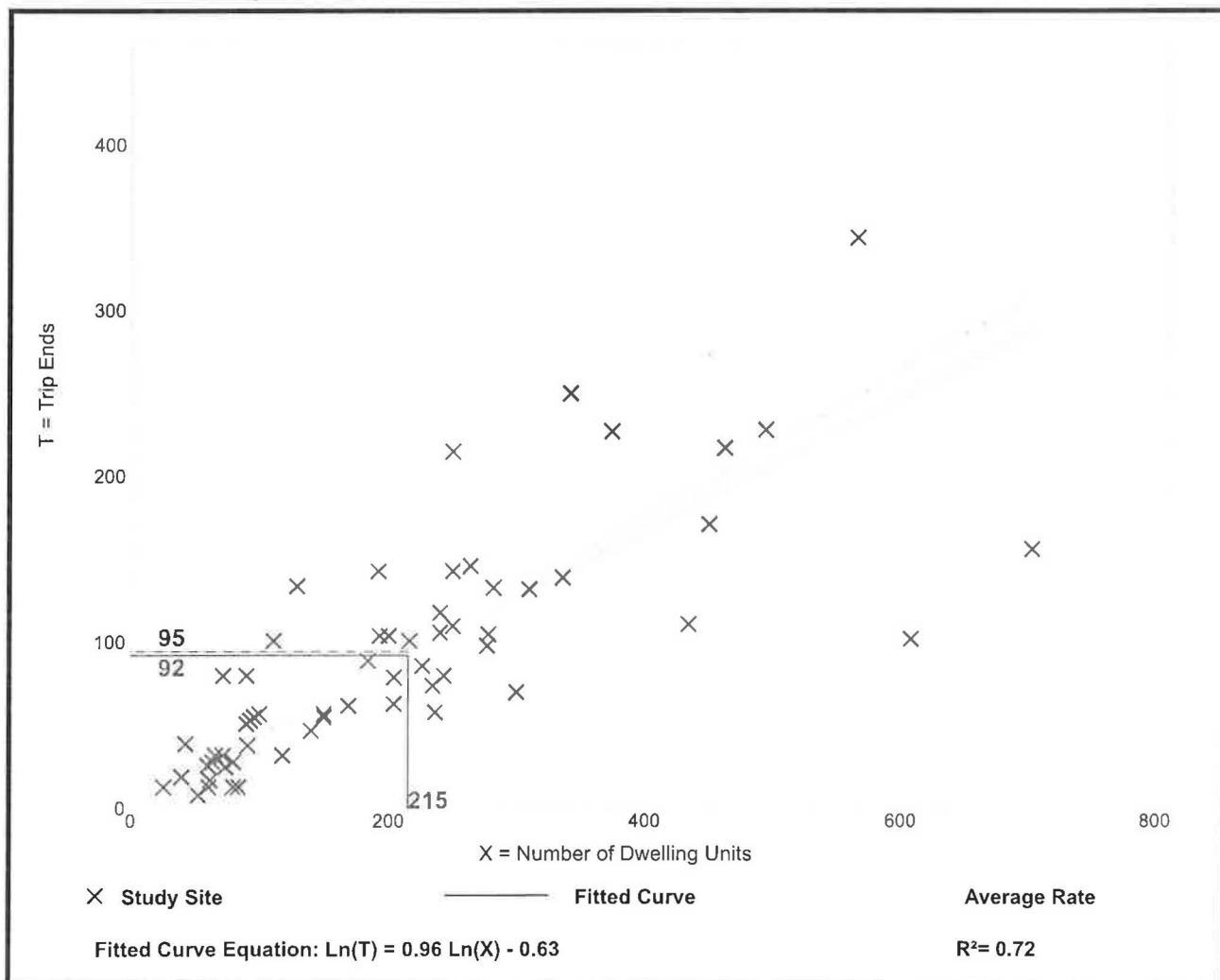
Avg. Num. of Dwelling Units: 208

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

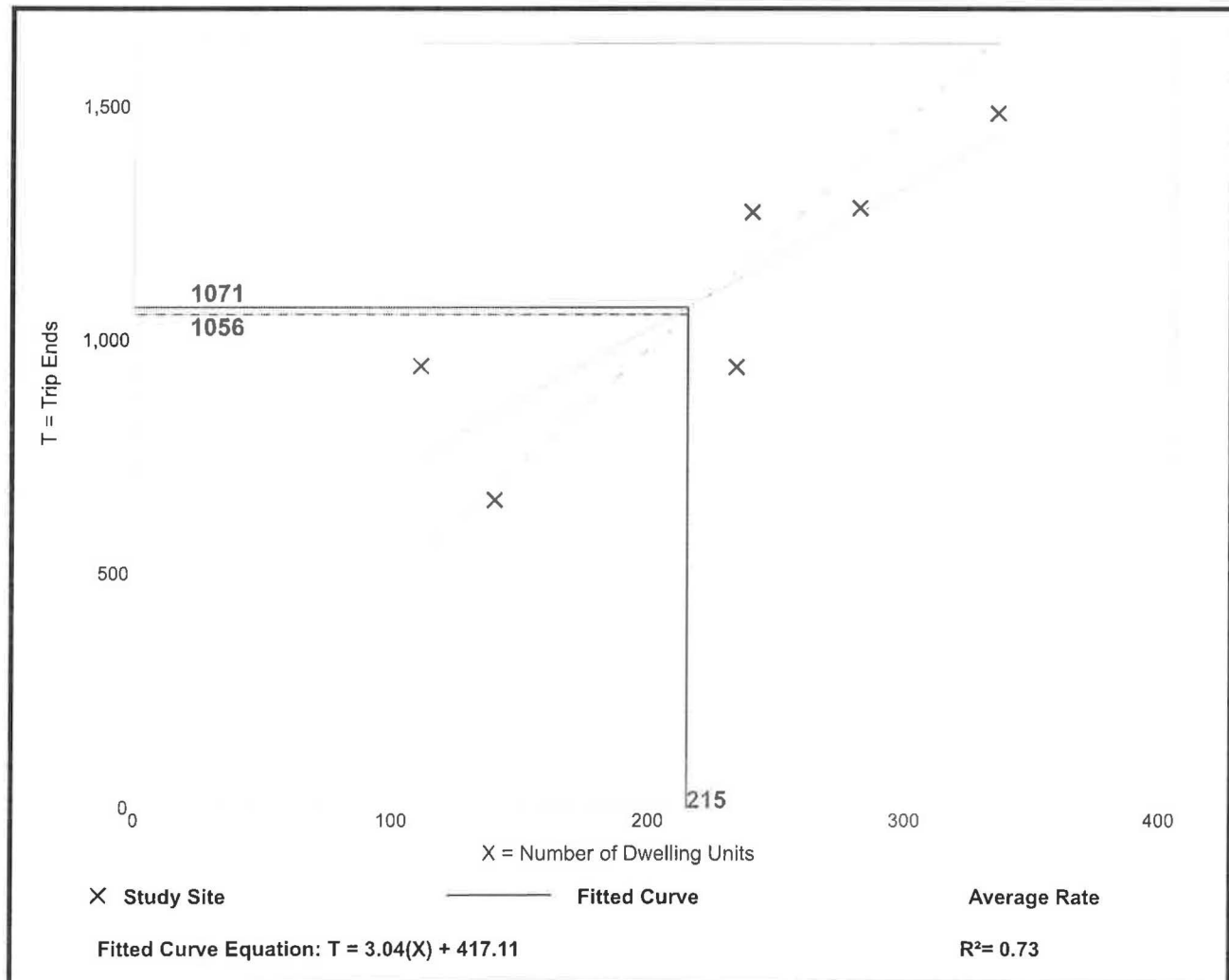
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 224
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.91	4.03 - 8.51	1.26

Data Plot and Equation



Multifamily Housing (Mid-Rise) (221)

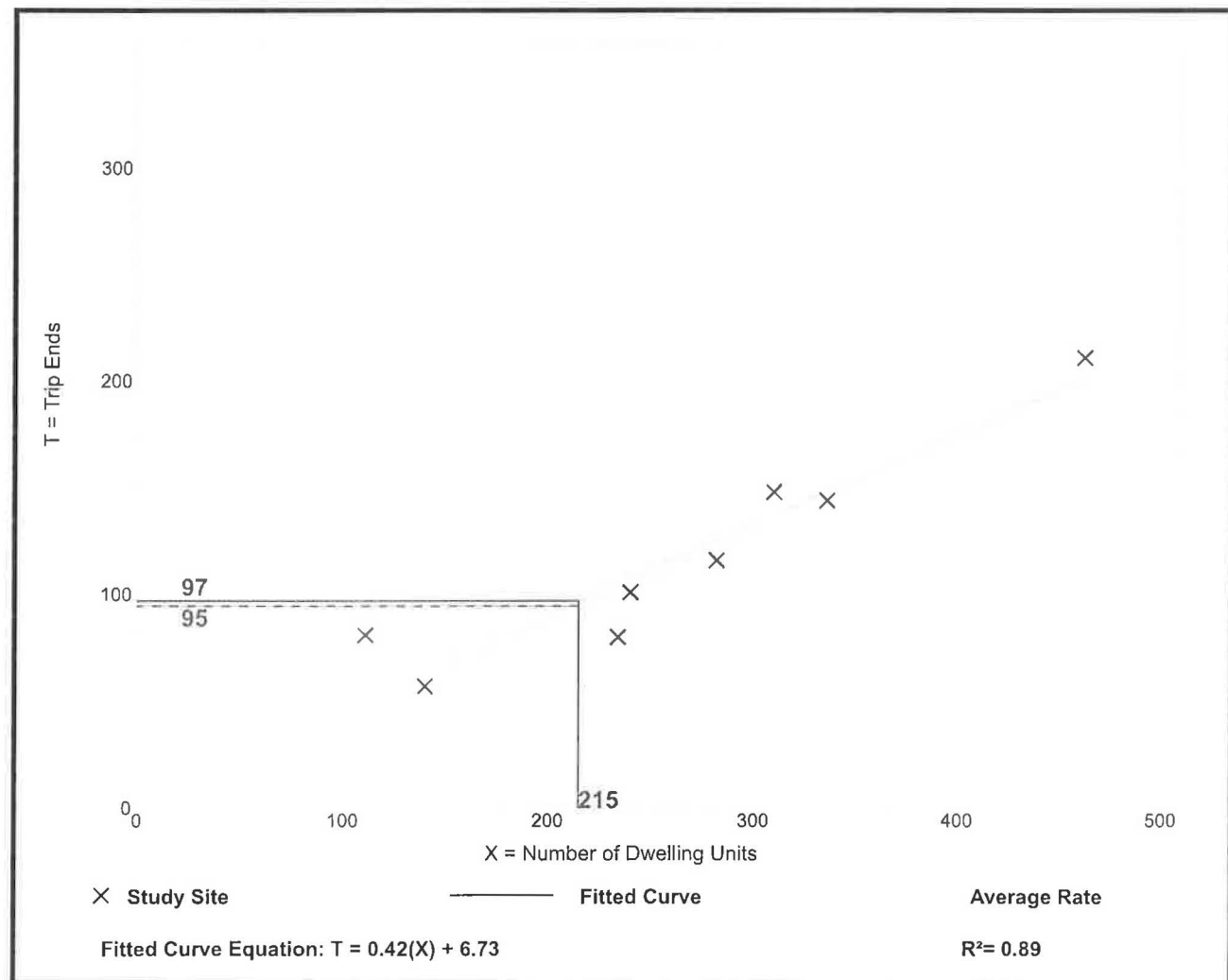
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Dwelling Units: 264
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.34 - 0.73	0.08

Data Plot and Equation



Hotel (310)

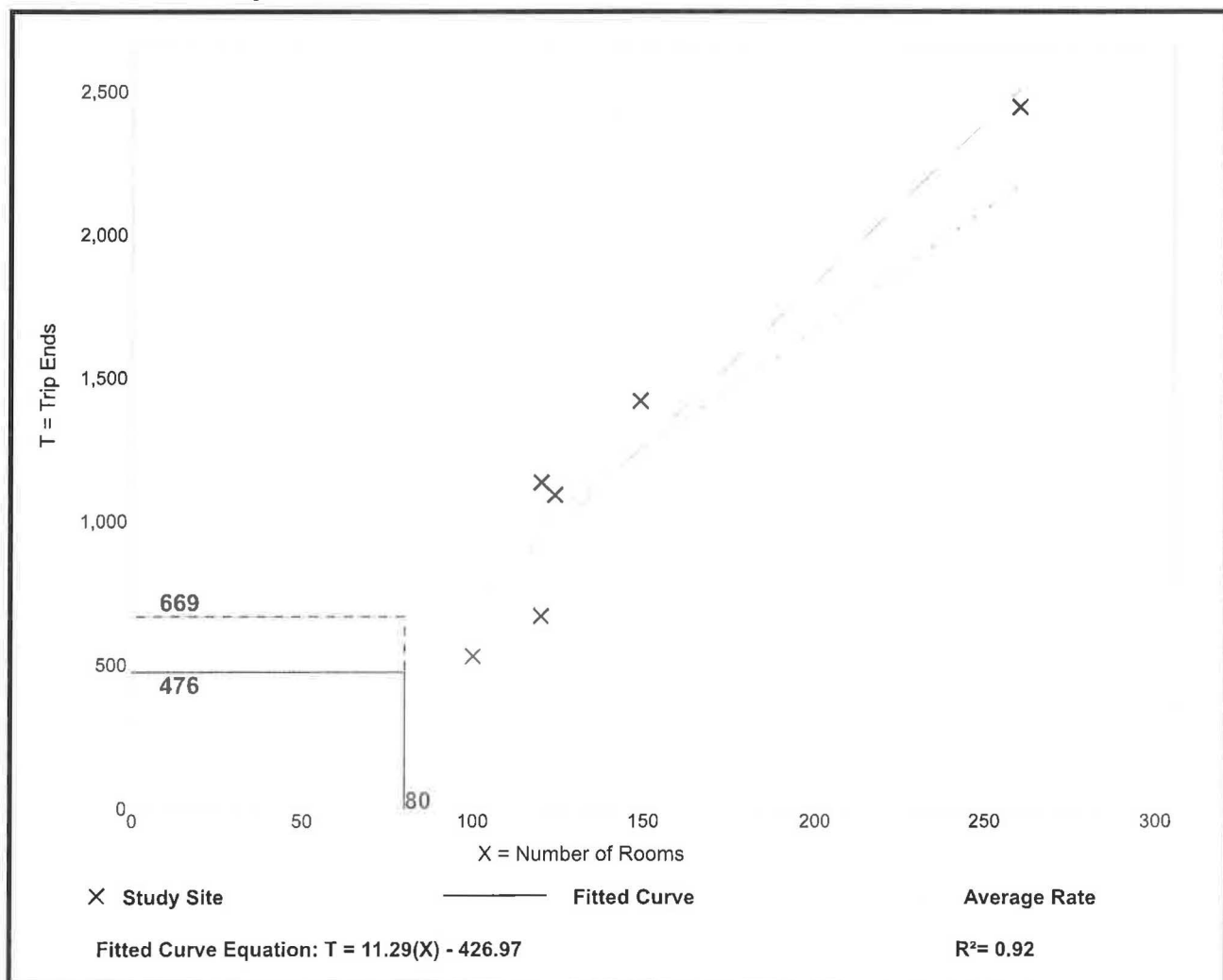
Vehicle Trip Ends vs: Rooms
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Rooms: 146
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
8.36	5.31 - 9.53	1.86

Data Plot and Equation



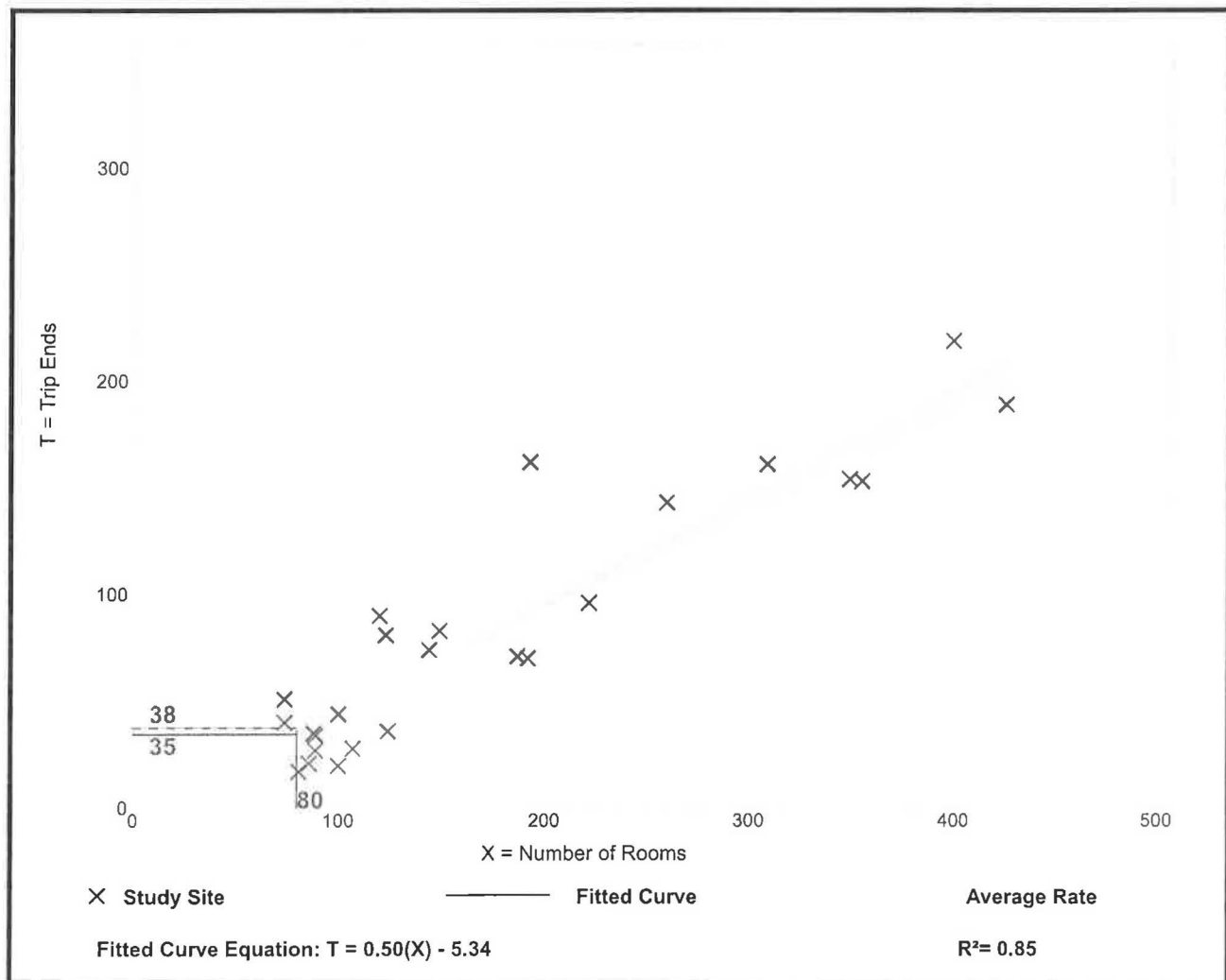
Hotel (310)

Vehicle Trip Ends vs: Rooms
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 25
 Avg. Num. of Rooms: 178
 Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.47	0.20 - 0.84	0.14

Data Plot and Equation



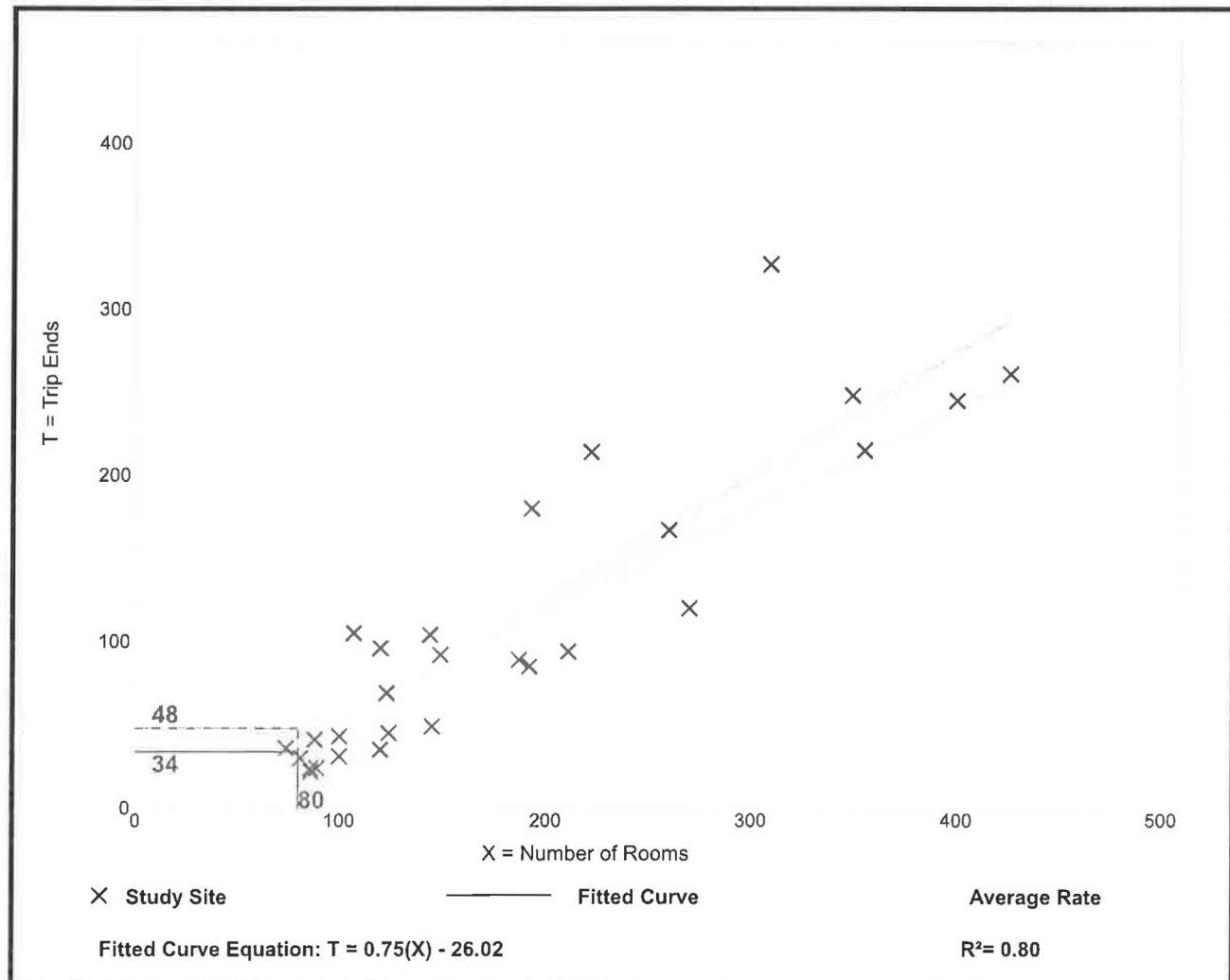
Hotel (310)

Vehicle Trip Ends vs: Rooms
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 28
 Avg. Num. of Rooms: 183
 Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.60	0.26 - 1.06	0.22

Data Plot and Equation



Hotel (310)

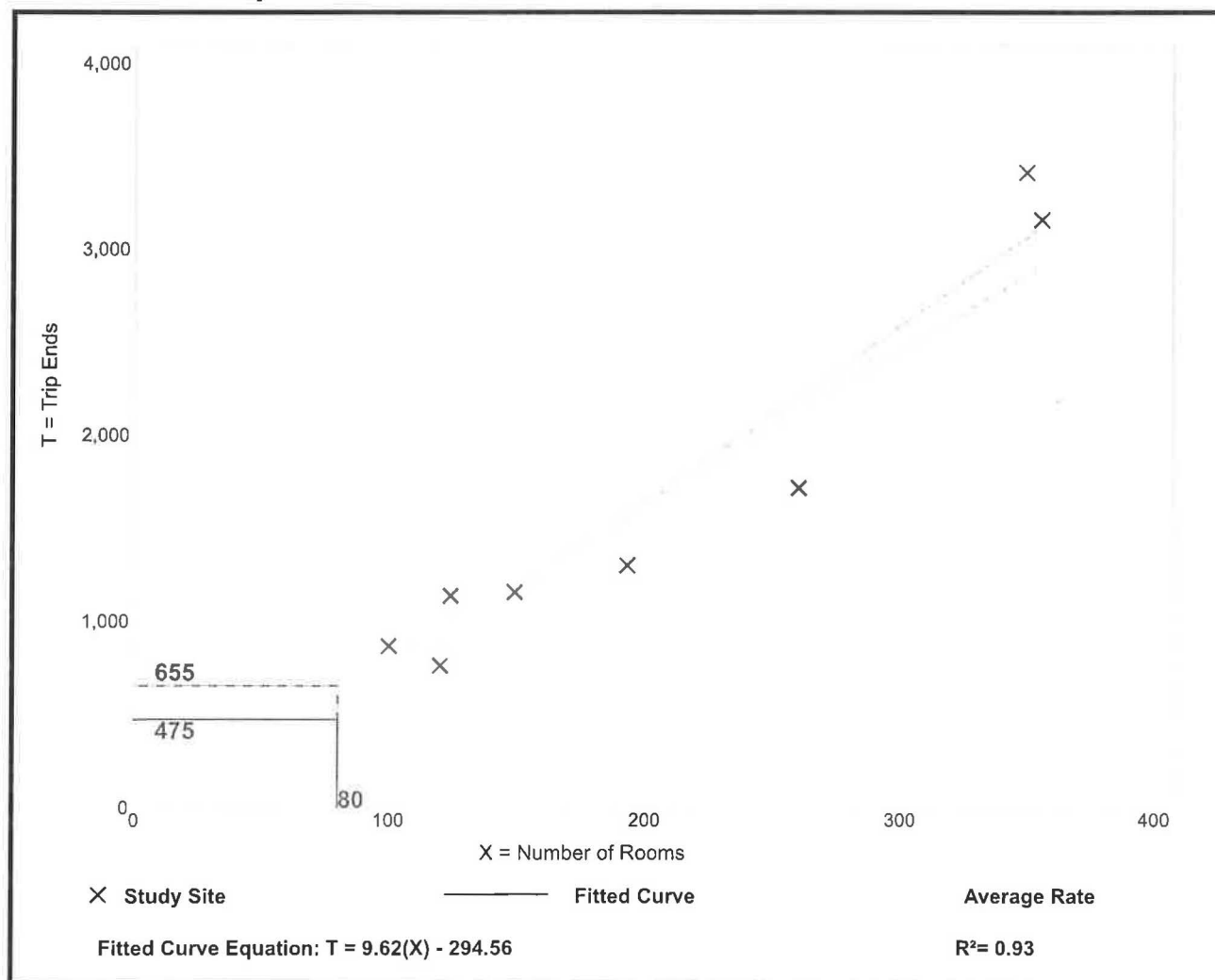
Vehicle Trip Ends vs: Rooms
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Rooms: 206
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
8.19	6.35 - 9.79	1.37

Data Plot and Equation



Hotel (310)

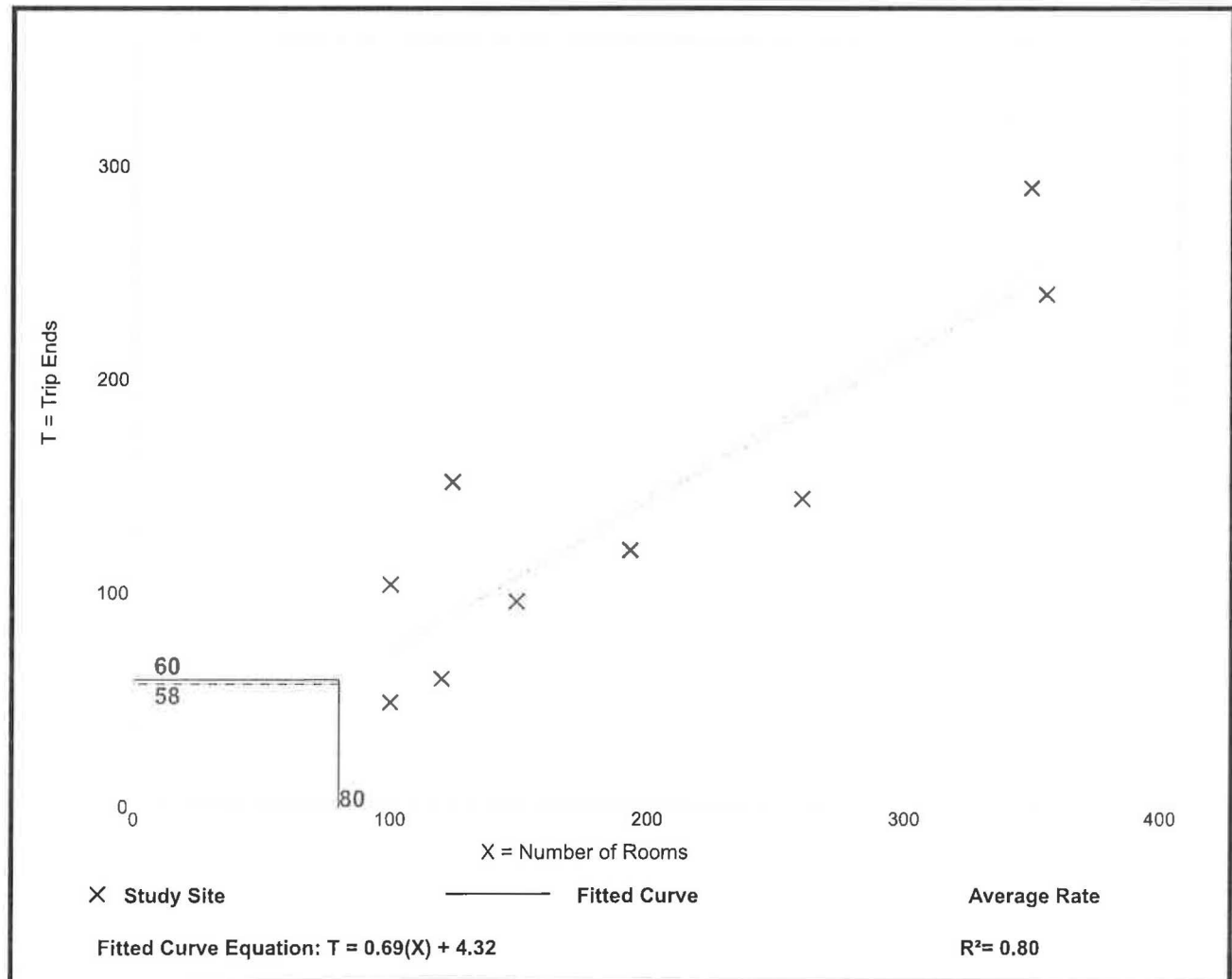
Vehicle Trip Ends vs: Rooms
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 9
Avg. Num. of Rooms: 194
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.72	0.49 - 1.23	0.21

Data Plot and Equation



Shopping Center (820)

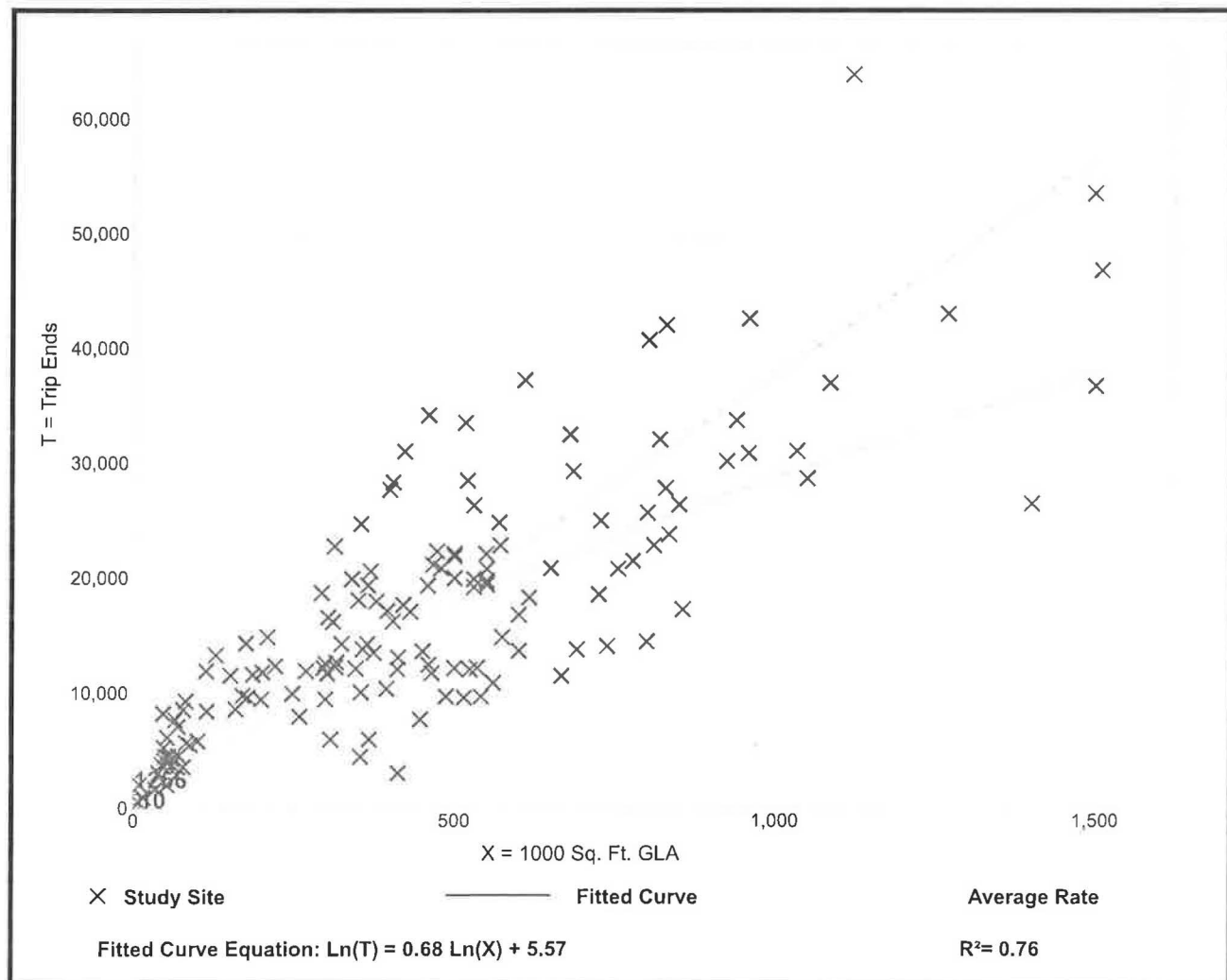
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 147
Avg. 1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 84

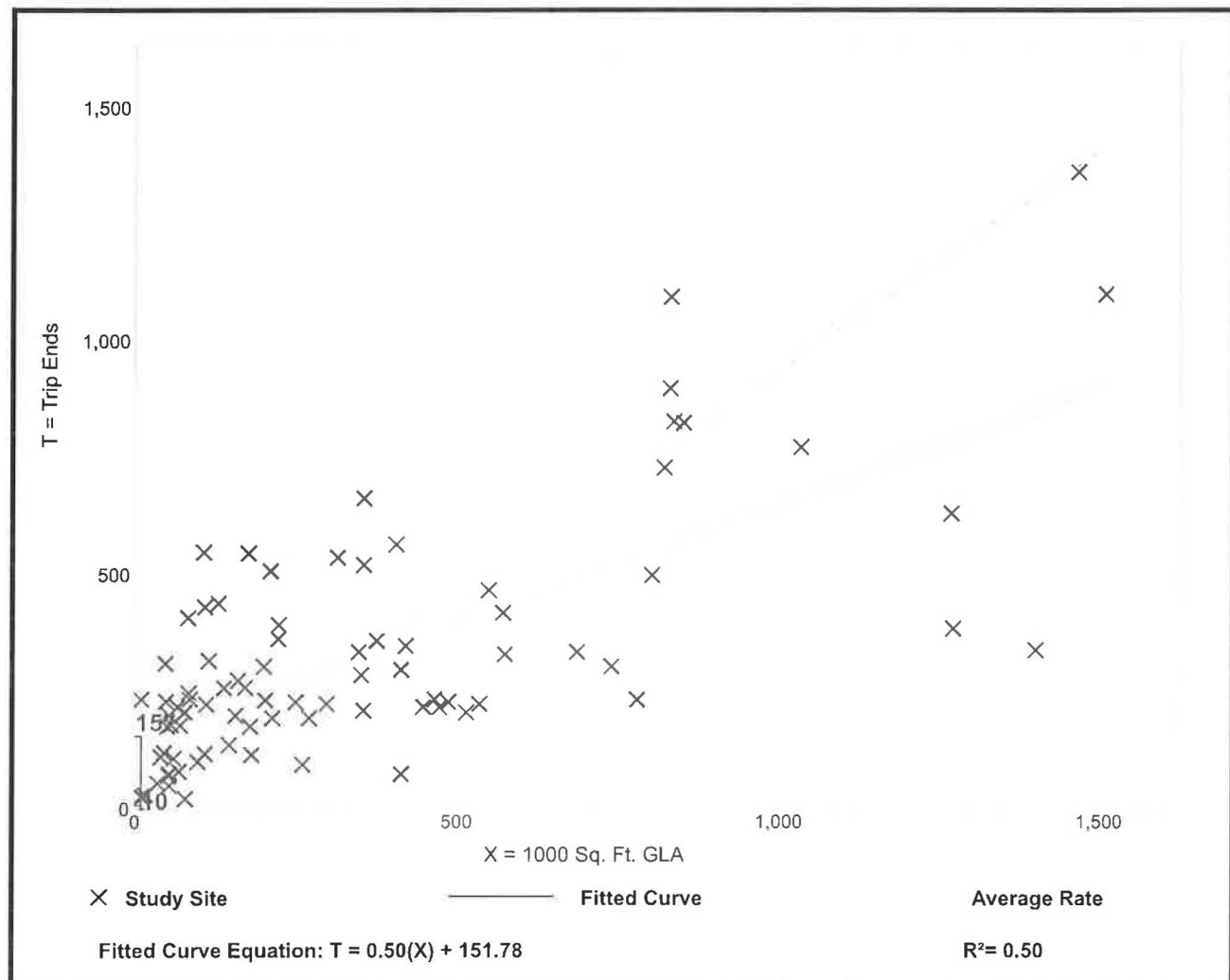
Avg. 1000 Sq. Ft. GLA: 351

Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.94	0.18 - 23.74	0.87

Data Plot and Equation



Shopping Center (820)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 261

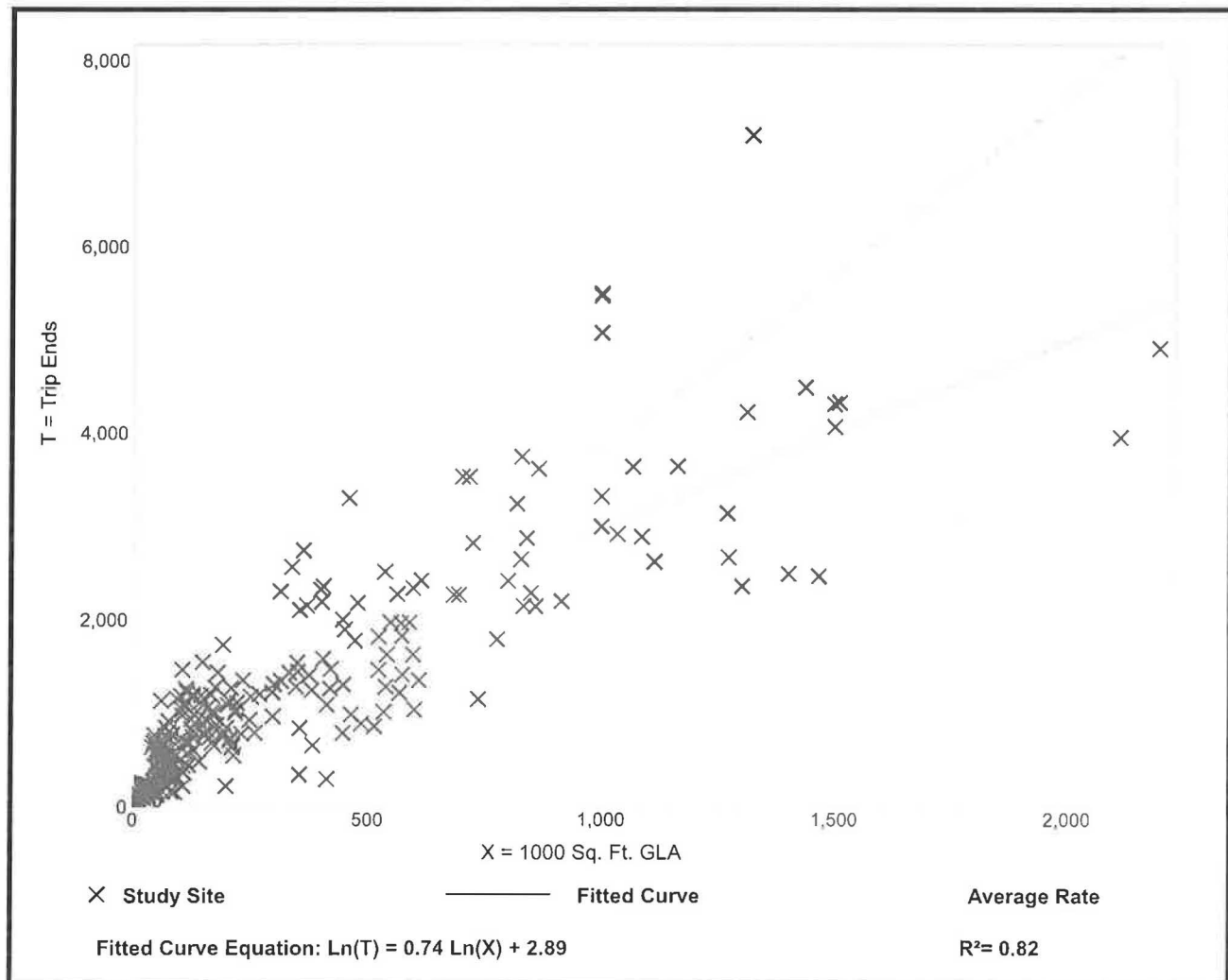
Avg. 1000 Sq. Ft. GLA: 327

Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



Shopping Center (820)

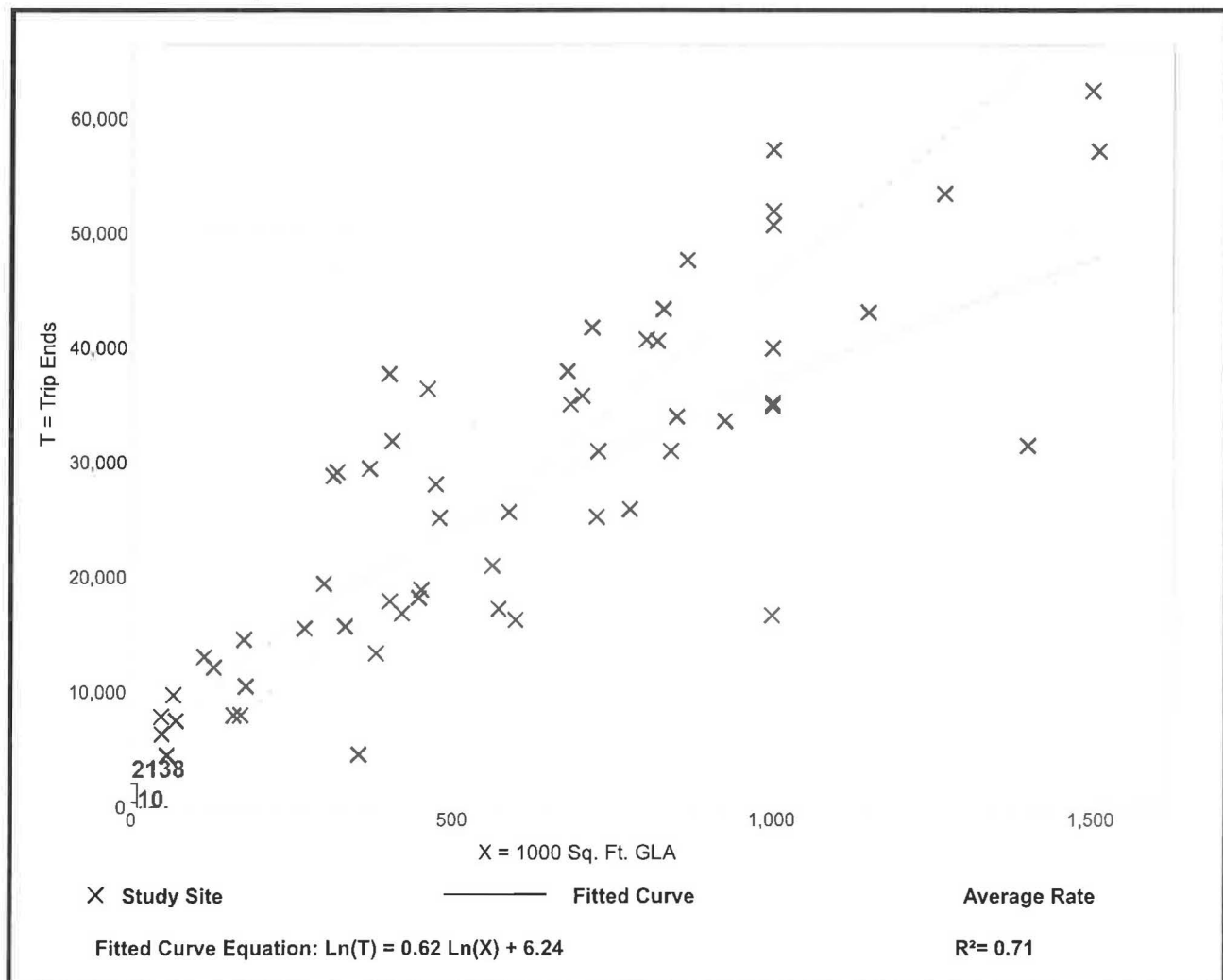
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 58
Avg. 1000 Sq. Ft. GLA: 602
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
46.12	13.01 - 167.89	17.91

Data Plot and Equation



Shopping Center (820)

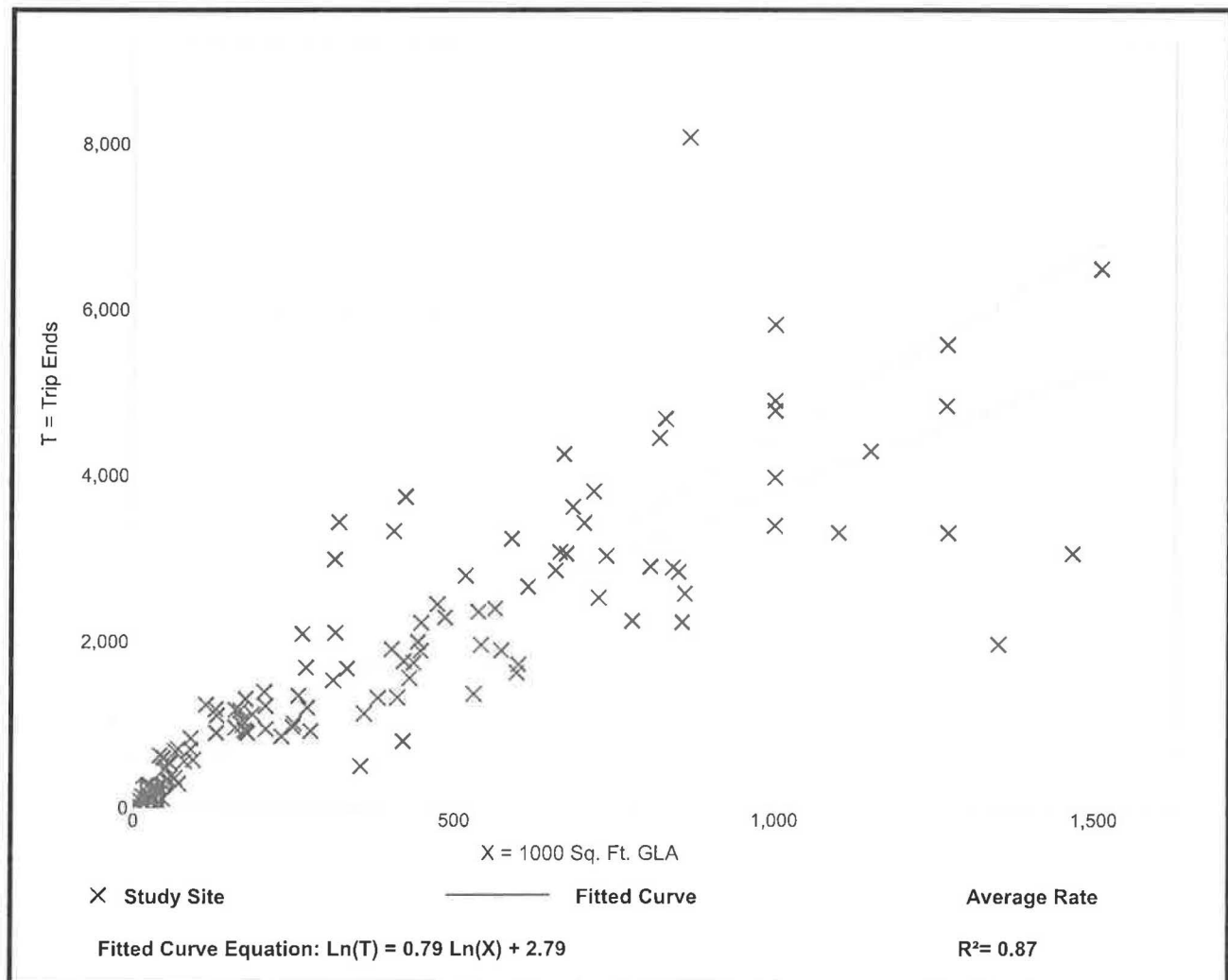
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 119
Avg. 1000 Sq. Ft. GLA: 416
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.50	1.42 - 15.10	1.88

Data Plot and Equation

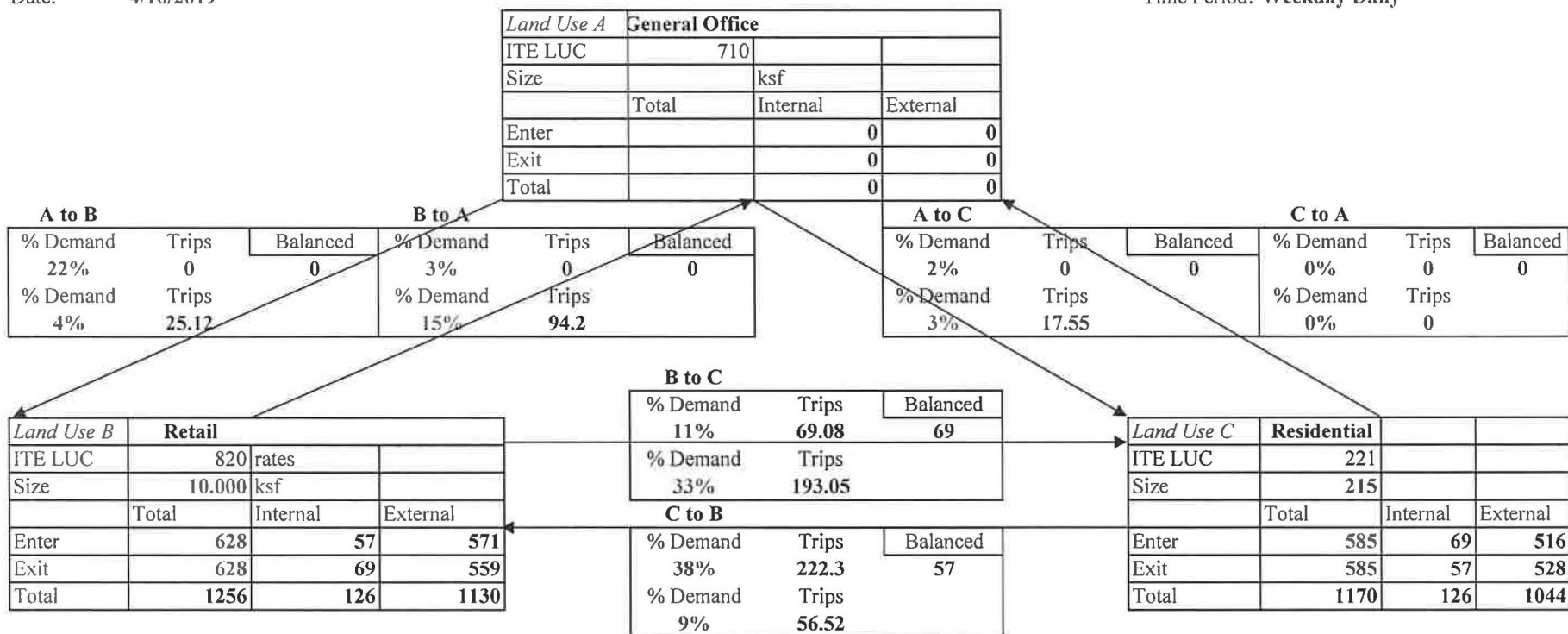


INTERNAL TRIP CALCULATIONS

Proposed Mixed-Use Development - Newburyport, MA

Analyst: BG
Date: 4/16/2019

Job No. 7991
Time Period: Weekday Daily



Net External Trips for Multi-Use Development

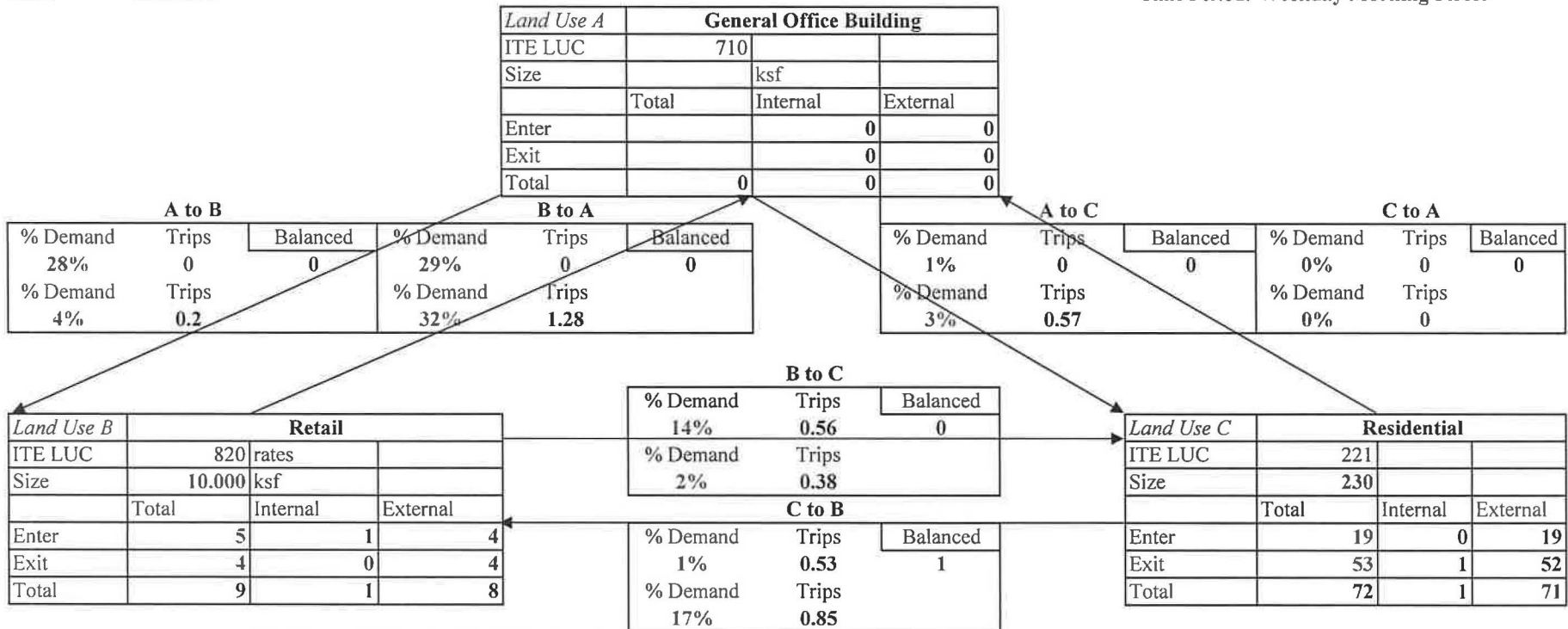
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	571	516	1087	
Exit	0	559	528	1087	
Total	0	1130	1044	2174	
Single-Use Trip Gen Est.	0	1256	1170	2426	Internal Capture Rate
					10%

* from ITE Trip Generation Manual, 9th Edition, 2012.

Proposed Mixed-Use Development - Newburyport, MA

Analyst: **BG**
Date: **4/16/2019**

Job No. 7991
Time Period: **Weekday Morning Pk Hr**



Net External Trips for Multi-Use Development

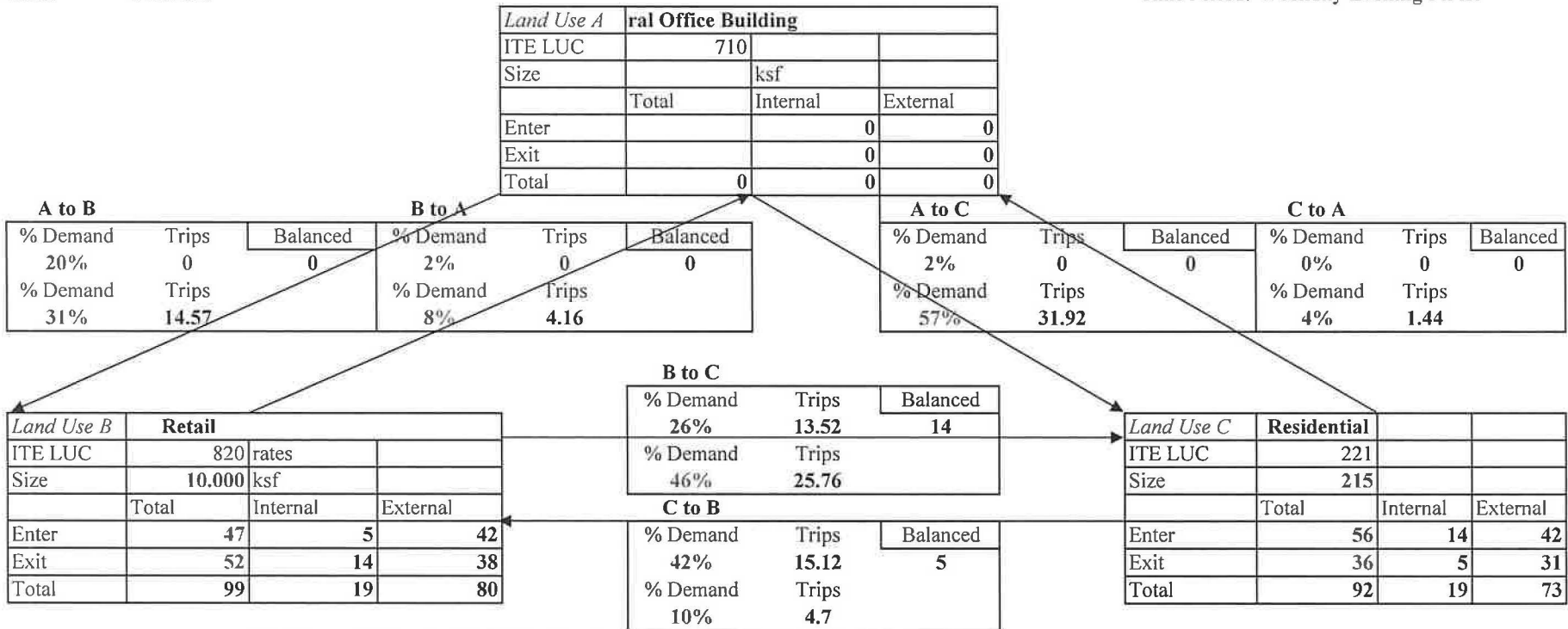
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	4	19	23	
Exit	0	4	52	56	
Total	0	8	71	79	
Single-Use Trip Gen Est.	0	9	72	81	Internal Capture Rate
					2%

* from ITE Trip Generation Handbook, 3rd Edition, 2017.

Proposed Mixed-Use Development - Newburyport, MA

Analyst: BG
Date: 4/16/2019

Job No. 7991
Time Period: Weekday Evening Pk Hr



Net External Trips for Multi-Use Development

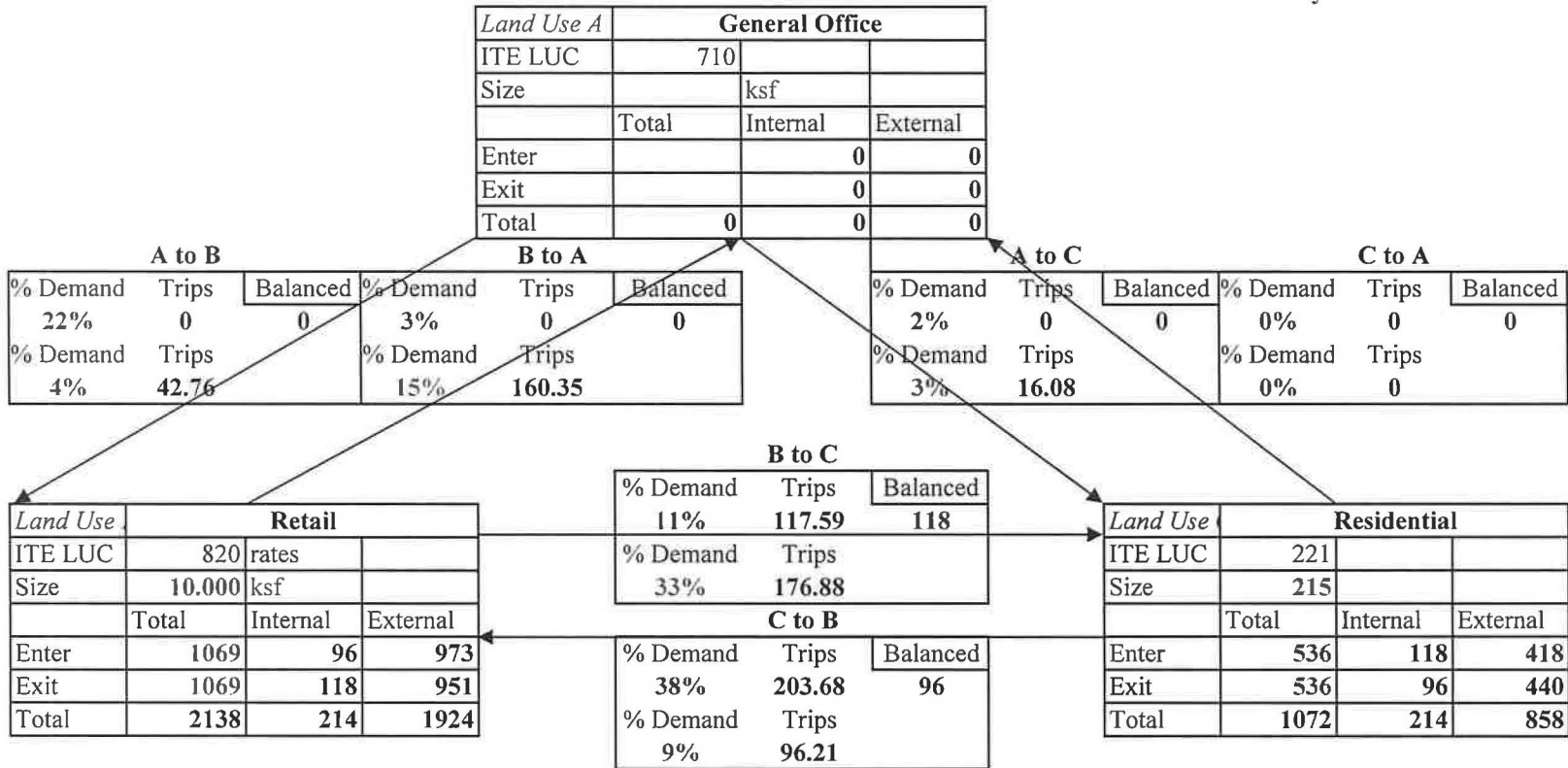
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	42	42	84	
Exit	0	38	31	69	
Total	0	80	73	153	
Single-Use Trip Gen Est.	0	99	92	191	Internal Capture Rate
					20%

* from ITE Trip Generation Handbook, 3rd Edition, 2017.

Proposed Mixed-Use Development - Newburyport, MA

Analyst: BG
Date: 4/16/2019

Job No. 7991
Time Period: Saturday



Net External Trips for Multi-Use Development

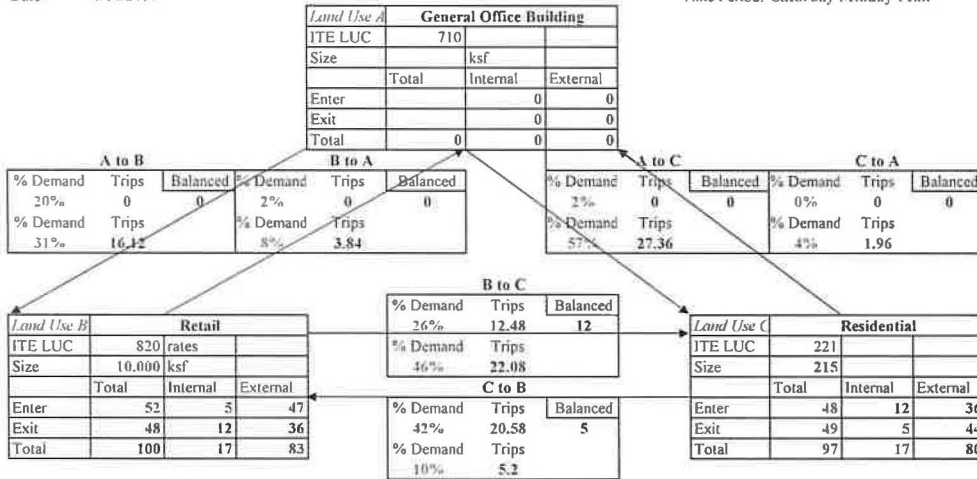
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	973	418	1391	
Exit	0	951	440	1391	
Total	0	1924	858	2782	
Single-Use Trip Gen	0	2138	1072	3210	Internal Capture Rate
					13%

* from ITE Trip Generation Manual, 9th Edition, 2012 (use weekday daily).

Proposed Mixed-Use Development - Newburyport, MA

Analyst: BG
Date: 4/16/2019

Job No. 7991
Time Period: Saturday Midday Peak



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Total	
Enter	0	47	36	83	
Exit	0	36	44	80	
Total	0	83	80	163	Internal Capture Rate
Single-Use Trip Gen	0	100	97	197	17%

* from ITE Trip Generation Handbook, 3rd Edition, 2017 (use weekday evening peak-hour)

Trip Origins			
	AM Peak Hour	PM Peak Hour	Daily
From Office to Office	n/a	n/a	2%
to Retail	28%	20%	22%
to Residential	1%	2%	2%
From Retail to Office	29%	2%	3%
to Retail	n/a	n/a	30%
to Residential	14%	26%	11%
From Resi to Office	2%	4%	n/a
to Retail	1%	42%	38%
to Residential	n/a	n/a	n/a

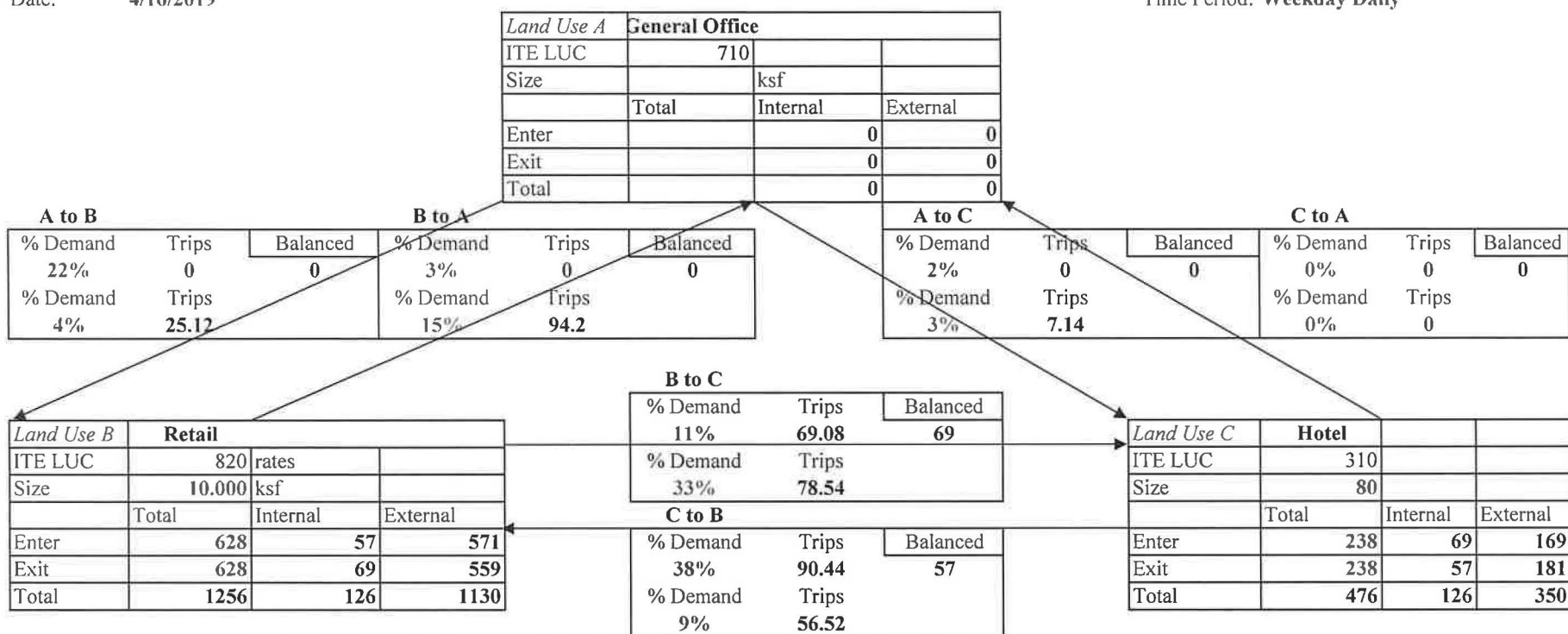
Trip Destinations			
	AM Peak Hour	PM Peak Hour	Daily
To Office from Office	n/a	n/a	2%
From Retail	4%	31%	15%
From Resi	3%	57%	n/a
to Retail From Office	32%	8%	4%
From Retail	n/a	n/a	28%
From Resi	17%	10%	9%
to Resi From Office	0%	4%	3%
From Retail	2%	46%	33%
From Resi	n/a	n/a	n/a

* from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)

Proposed Mixed-Use Development - Newburyport, MA

Analyst: **BG**
Date: **4/16/2019**

Job No. 7991
Time Period: **Weekday Daily**



Net External Trips for Multi-Use Development

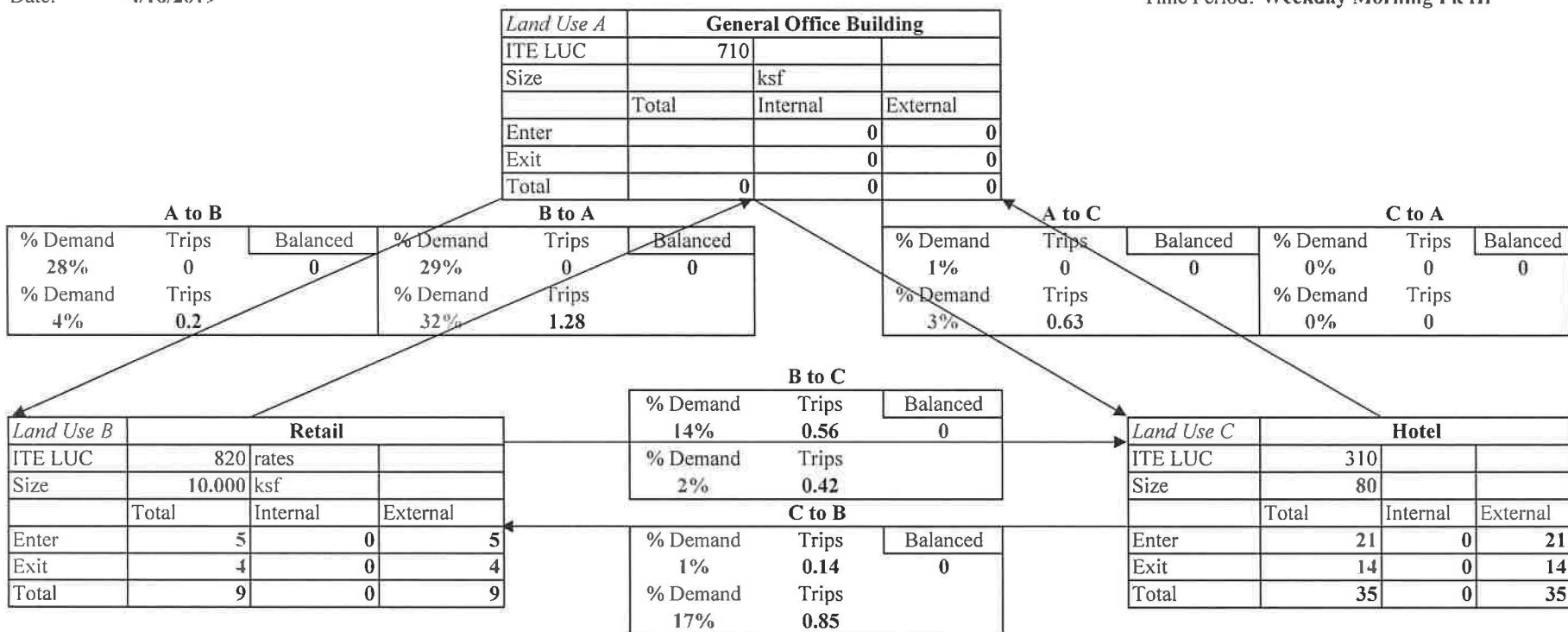
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	571	169	740	
Exit	0	559	181	740	
Total	0	1130	350	1480	
Single-Use Trip Gen Est.	0	1256	476	1732	Internal Capture Rate
					15%

* from ITE Trip Generation Manual, 9th Edition, 2012.

Proposed Mixed-Use Development - Newburyport, MA

Analyst: BG
Date: 4/16/2019

Job No. 7991
Time Period: Weekday Morning Pk Hr



Net External Trips for Multi-Use Development

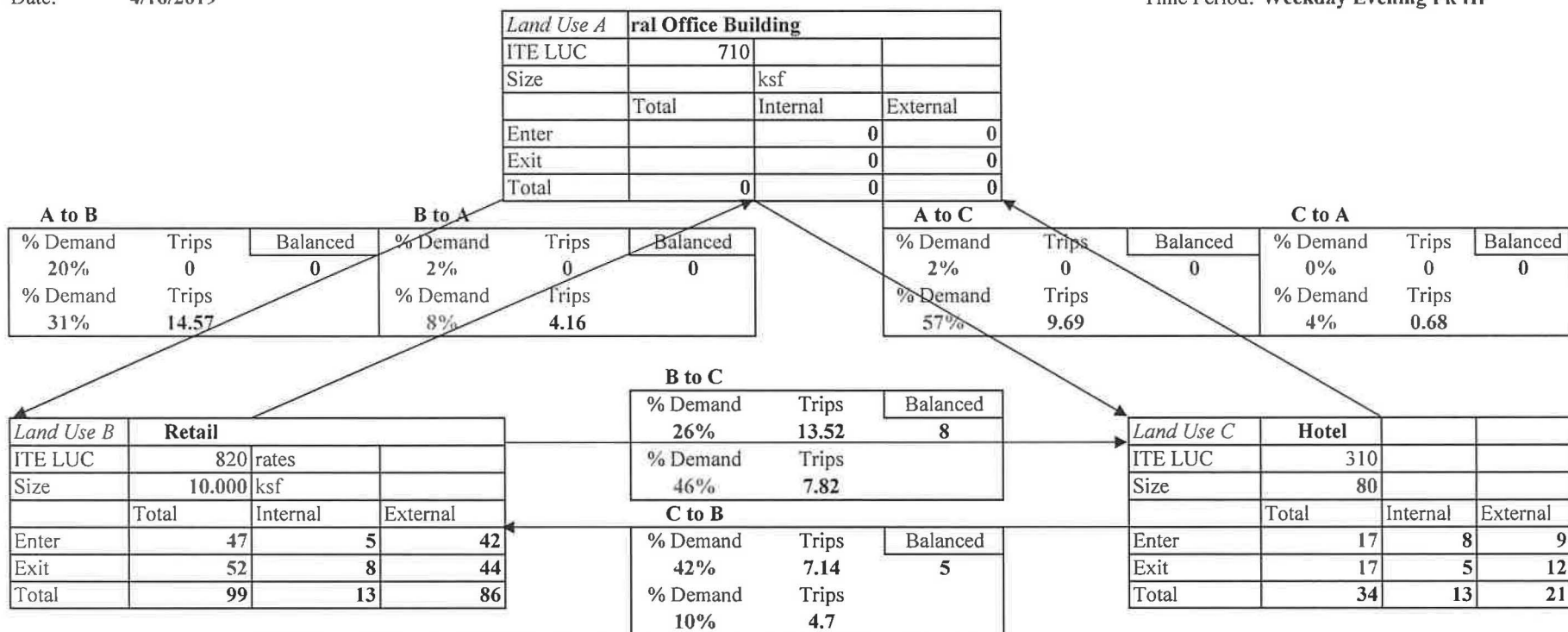
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	5	21	26	
Exit	0	4	14	18	
Total	0	9	35	44	
Single-Use Trip Gen Est.	0	9	35	44	Internal Capture Rate
					0%

* from ITE Trip Generation Handbook, 3rd Edition, 2017.

Proposed Mixed-Use Development - Newburyport, MA

Analyst: **BG**
Date: **4/16/2019**

Job No. **7281**
Time Period: **Weekday Evening Pk Hr**



Net External Trips for Multi-Use Development

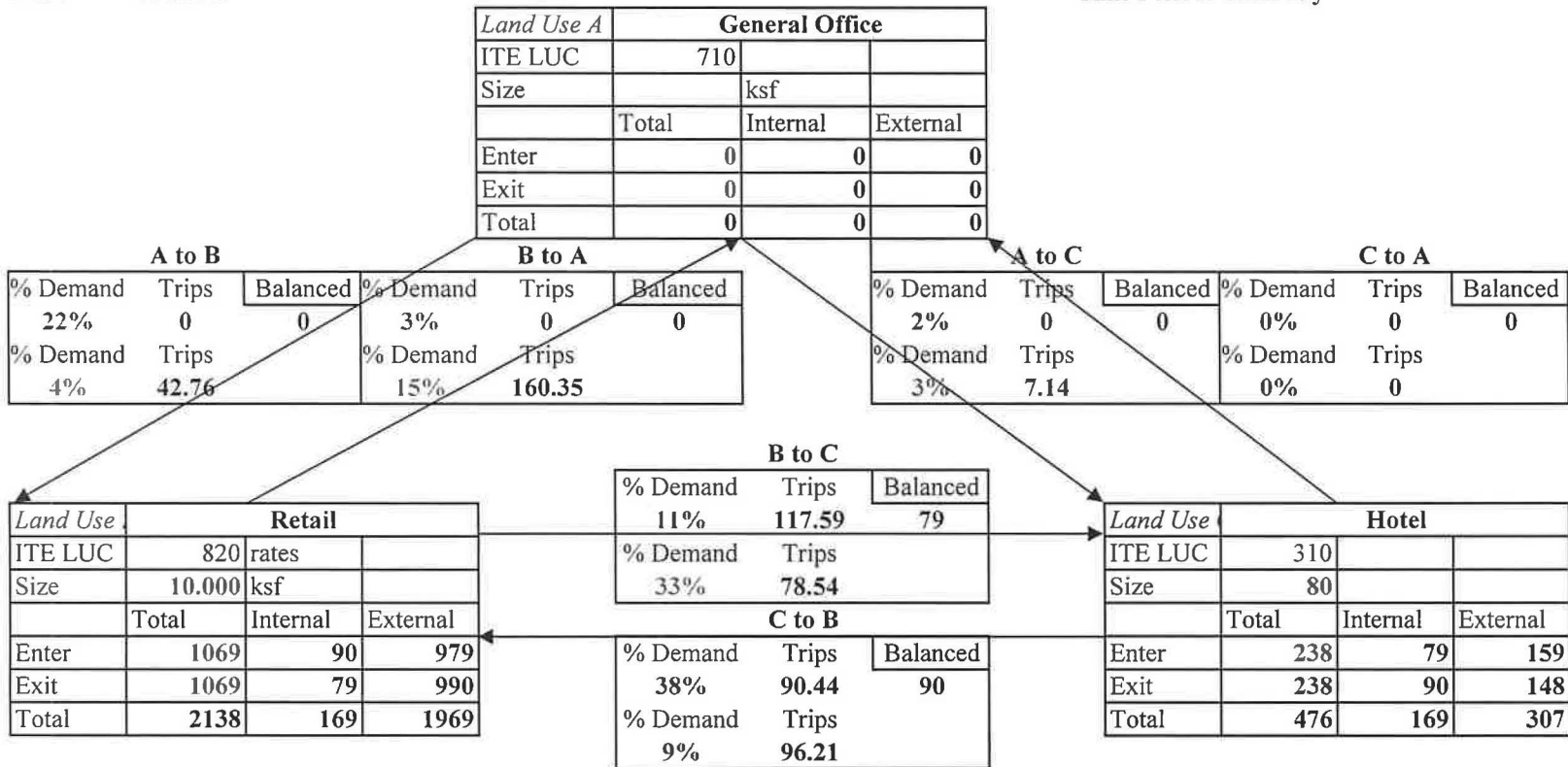
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	42	9	51	
Exit	0	44	12	56	
Total	0	86	21	107	
Single-Use Trip Gen Est.	0	99	34	133	Internal Capture Rate
					20%

* from ITE Trip Generation Handbook, 3rd Edition, 2017.

Proposed Mixed-Use Development - Newburyport, MA

Analyst: BG
Date: 4/16/2019

Job No. 7991
Time Period: Saturday



Net External Trips for Multi-Use Development

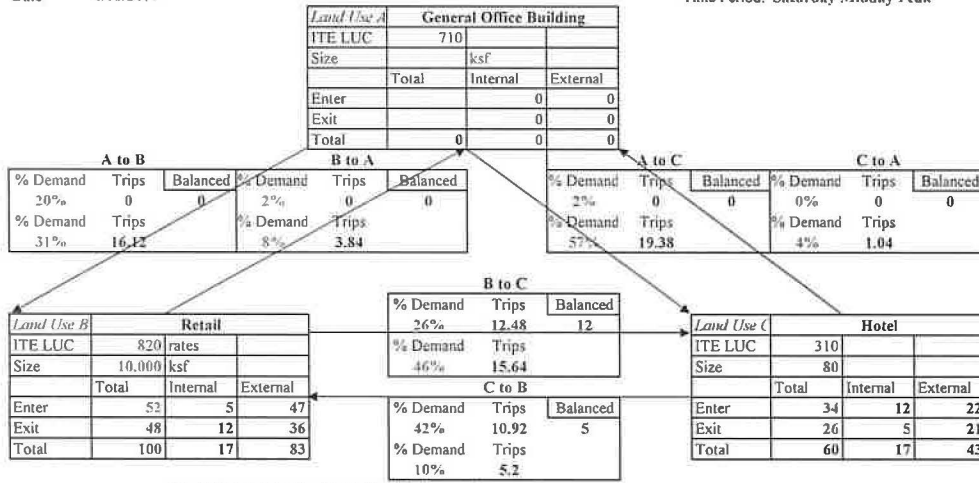
	Land Use A	Land Use B	Land Use C	Total	
Enter	0	979	159	1138	
Exit	0	990	148	1138	
Total	0	1969	307	2276	Internal Capture Rate
Single-Use Trip Gen	0	2138	476	2614	13%

* from ITE Trip Generation Manual, 9th Edition, 2012 (use weekday daily).

Proposed Mixed-Use Development - Newburyport, MA

Analyst BG
Date 4/16/2019

Job No. 7991
Time Period: Saturday Midday Peak



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Total	
Enter	0	47	22	69	
Exit	0	36	21	57	
Total	0	83	43	126	Internal Capture Rate
Single-Use Trip Gen	0	100	60	160	21%

* from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)

Trip Origins			
	AM Peak Hour	PM Peak Hour	Daily
From Office to Office	n/a	n/a	2%
to Retail	28%	20%	22%
to Residential	1%	2%	2%
From Retail to Office	29%	2%	3%
to Retail	n/a	n/a	30%
to Residential	14%	26%	11%
From Resi to Office	2%	4%	n/a
to Retail	1%	42%	38%
to Residential	n/a	n/a	n/a

Trip Destinations				
	AM Peak Hour	PM Peak Hour	Daily	
To Office from Office	n/a	n/a	2%	
From Retail	4%	31%	15%	
From Resi	3%	57%	n/a	
to Retail From Office	32%	8%	4%	
From Retail	n/a	n/a	28%	
From Resi	17%	10%	9%	
to Resi From Office	0%	4%	3%	
From Retail	2%	46%	33%	
From Resi	n/a	n/a	n/a	

* from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)