TRANSPORTATION IMPACT ASSESSMENT

WATERFRONT WEST REDEVELOPMENT PROJECT MERRIMAC STREET NEWBURYPORT, MASSACHUSETTS

Prepared for:

NEWBURYPORT MANAGER LLC Newburyport, Massachusetts

c/o:

NEW ENGLAND DEVELOPMENT

Boston, Massachusetts

November 2016

Prepared by:

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Dear Reviewer:

This letter shall certify that this *Transportation Impact Assessment* has been prepared under my direct supervision and responsible charge. I am a Registered Professional Engineer (P.E.) in the Commonwealth of Massachusetts (Massachusetts P.E. No. 38871, Civil) and hold Certification as a Professional Traffic Operations Engineer (PTOE) from the Transportation Professional Certification Board, Inc. of the Institute of Transportation Engineers (ITE) (PTOE Certificate No. 993). I am also a Fellow of the Institute of Transportation Engineers (FITE).

Sincerely,

VANASSE & ASSOCIATES, INC.

Leffrey S. Dirk, P.E., PTOE, FITE

Grey S. Dirk

Principal

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EXECUTIVE SUMMARY

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed 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"). At present, the Project site encompasses a mix of uses that include a marina, boat storage and associated commercial, industrial and non-water and water dependent uses.

The Project will require the issuance of a State Highway Access Permit from the Massachusetts Department of Transportation (MassDOT) for access to Newburyport Turnpike (Route 1/1A), a State Highway under the jurisdiction of MassDOT.

This assessment was prepared in consultation with the City of Newburyport and MassDOT; was performed in accordance with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*; and was conducted pursuant to the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports. Based on this assessment, we have concluded the following with respect to the Project:

- 1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE)¹ and without consideration of transit use, the Project is predicted to generate approximately 3,038 primary vehicle trips on an average weekday and 3,844 primary vehicle trips on a Saturday (both two-way, 24-hour volumes), with 159 primary vehicle trips expected during the weekday morning peak-hour, 266 primary vehicle trips expected during the weekday evening peak-hour and 349 primary vehicle trips expected during the Saturday midday peak-hour;
- 2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with the majority of the movements at the study intersections shown to continue to operate at a level-of-service (LOS) that represents "acceptable" traffic operations;

¹Trip Generation, 9th Edition; Institute of Transportation Engineers; Washington, DC; 2012.

- 3. In comparison to the existing uses that occupy the Project site, the Project is expected to result in 2,744 additional total (two-way and inclusive of pass-by trips) vehicle trips on an average weekday and 3,908 additional vehicle trips on a Saturday, with 97 additional total vehicle trips expected during the weekday morning peak-hour, 253 additional vehicle trips expected during the weekday evening peak-hour and 367 additional vehicle trips expected during the Saturday midday peak-hour;
- 4. Increased delays were noted for vehicles exiting the Project site with the completion of the redevelopment project; however, the potential vehicle queues can be contained within the Project site without impeding access or on-site circulation;
- 5. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study intersections; and
- 6. Lines of sight to and from the ways that provide access to the Project site from Merrimac Street were found to meet or could be made to meet or exceed the required minimum distance for the intersections to function in a safe manner based on the appropriate approach speed along Merrimac Street and with consideration of the urban environment in which the Project site is located.

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

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The improvements that have been recommended as a part of this evaluation, 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 and the associated impacts on the transportation infrastructure.

Project Access

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. The following recommendations are offered with respect to the design and operation of the ways that serve the Project site:

The access ways to the Project site should be a minimum of 24-feet in width for two-way travel and a minimum of 20-feet in width for one-way operation, or as required to accommodate fire truck turning maneuvers pursuant to the requirements of NFPA® 1.²

²National Fire Protection Association (NFPA)® 1, Fire Code, Seventh Edition; NFPA; Quincy, Massachusetts; 2015; as amended per 527 CMR.

- Fire lanes should be a minimum of 20-feet in width and constructed of bituminous asphalt concrete or other stabilized surface material that can support travel by the largest anticipated responding emergency vehicle pursuant to the requirements of NFPA® 1.
- ➤ Vehicles exiting the Project should be placed under STOP-sign control with marked STOP-lines provided.
- ➤ All signs and pavement markings to be installed within the Project shall conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).³
- > Sidewalks should be provided within the Project site linking the proposed buildings and other amenities to the sidewalk infrastructure along Merrimac Street.
- The ways serving the Project site should be constructed as "pan-type" driveways so that the sidewalk is flush across traveled-way or, where this design cannot be accommodated, Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided.
- > Signs and landscaping to be within intersection sight triangle areas of the ways serving the Project site should be designed and maintained so as not to restrict lines of sight.
- > Snow windrows within the sight triangle areas of the ways serving the Project site should be promptly removed where such accumulations would exceed 2.5 feet in height.
- ➤ The City should consider restricting on-street parking for a minimum distance of 20-feet on either side of the ways serving the Project site in order to provide and maintain the required lines of sight for the ways to operate in a safe manner.
- A school bus waiting area should be provided at an appropriate location defined in consultation with the City.

Transportation Demand Management

The Project site is ideally situated to take advantage of available public transportation opportunities, including the existing bus service operated by the Merrimack Valley Regional Transit Authority (MVRTA) along Merrimac Street to the east of the Project site, the future MVRTA bus terminal that is to be located opposite the Project site off Titcomb Street, and the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail service at Newburyport Station to the south. In addition, the Project site is directly accessible from the Clipper City Rail Trail which provides access to the Newburyport Commuter Rail Station and the trail system along the Merrimack River. 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 NuRide program which rewards individuals that

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³Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2009.

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;
- 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.

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). In order to improve traffic operations at this intersection and to reduce both motorist delays and vehicle queuing on the Green Street approach, the Project proponent will restore the traffic signal to full operation, including replacing the traffic signal controller and associated appurtenances to the extent necessary to reactivate the traffic signal. With reactivation of the traffic control signal at the Merrimac Street/Green Street intersection, overall operating conditions were shown to improve to acceptable conditions.

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

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed 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"). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Merrimac Street and at the intersections of Merrimac Street with the Newburyport Turnpike (Route 1) on and off-ramps, and at major intersections along Merrimac Street between Route 1 and Market Square (Merrimac Street/State Street/Water Street)

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 proposed, the redevelopment will entail the removal or rehabilitation of the existing structures that occupy the Project site to include up to 200 residential condominium/townhouse units, 100 hotel rooms and approximately 20,000 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.

The Project site encompasses approximately $5.6\pm$ acres bounded by the Merrimack River to the north; Merrimac Street and commercial properties to the south; commercial properties and a parking lot to the east; and commercial properties and Route 1 to the west. Figure 1 depicts the Project site location in relation to the existing roadway network.

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 300 vehicles with additional public parking located within a short walking distance of the Project site, including the future parking garage that is being advanced by the City and the Merrimack Valley Regional Transit Authority (MVRTA) that is to be located opposite the Project site off Titcomb Street.



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Site Location Map

The Project will require the issuance of a State Highway Access Permit from the Massachusetts Department of Transportation (MassDOT) for access to Newburyport Turnpike (Route 1/1A), a State Highway under the jurisdiction of MassDOT.

STUDY METHODOLOGY

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

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian and bicycle facilities; public transportation services; observations of traffic flow; and collection of daily and peak period traffic counts.

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future traffic demands due to expected traffic growth independent of the Project. A seven-year time horizon was selected for analyses consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

The third stage of the study presents and evaluates measures to address traffic and safety issues, if any, identified in stage two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in June, August and September 2016. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of the Merrimack Street corridor between Route 1 and Market Square, and the following specific intersections which are listed below and depicted on Figure 2, with Figure 3 indicating roadway jurisdiction and functional classification:

- 1. Merrimac Street at Winter Street and the Route 1 Southbound Off-Ramp
- 2. Merrimac Street at Summer Street and the Route 1 Northbound On-Ramp
- 3. Merrimac Street at Market Street and Tournament Wharf
- 4. Merrimac Street at McKay's Wharf
- 5. Merrimac Street at Titcomb Street
- 6. Merrimac Street at Brown's Wharf
- 7. Merrimac Street at Green Street and Waterfront Park
- 8. Merrimac Street at State Street and Water Street (Market Square)
- 9. State Street at Liberty Street
- 10. Winter Street at the Route 1 Southbound On-Ramp
- 11. Summer Street at Pleasant Street and the Route 1 Northbound Off-Ramp

The following describes Merrimac Street within the study area and the study area intersections.

Roadway

Merrimac Street

- Two-lane urban minor arterial roadway under City jurisdiction
- Traverses study area in a general northwest-southeast direction between Spofford Street and Market Square (Merrimac Street/State Street/Water Street)
- ➤ Provides two 11 to 25-foot wide travel lanes separated by a double-yellow centerline with no marked shoulders and on-street parking permitted excepted where signed otherwise
- A sidewalk is provided along both sides of the roadway
- > Illumination is provided by way of street lights mounted on wood poles

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Roadway Jurisdiction and Functional Classification

- > Posted speed limit is 30 miles per hour (mph)
- > Land use consists of the Project site, residential and commercial properties, cultural uses, and public open space.

Intersections

Table 1 and Figure 4 summarize existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in June 2016.

Table 1 STUDY AREA INTERSECTION DESCRIPTION

Intersection	Traffic Control Type ^a	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)	
Merrimac St./Winter St./Rte. 1 Southbound Off- Ramp	S Tolle-way southbould		Yes; 1 feet on Rte. 1 southbound off-ramp and 2 feet on Winter St. east side; on-street parking is permitted along the south side of Merrimac St. west of intersection and along the west side of Winter St.	Yes – both sides of Merrimac St. and west side of Winter St.; marked crosswalks for crossing Rte. 1 ramp and Winter St.	Yes - Shared traveled- way along the intersecting roadways; ^b Clipper City Rail-Trail is located west of intersection	
Merrimac St./Summer St./ Rte. 1 Northbound On-Ramp	and Rte. 1 ramp and 2 and along west side of Summer St. I Northbound and Rte. 1 ramp and 2 Summer St.; on-street parking is permitted and along west side of Summer St.; on-street parking is permitted and street street.		Yes; 1 feet on Rte. 1 ramp and along west side of Summer St.; on-street parking is permitted along the east side of Summer St.	Yes – both sides of Merrimac St. and east side of Summer St. and Rte. 1 ramp; crosswalks provided for crossing Rte. 1 ramp, Summer St. and Merrimac St. east leg	Yes - Shared traveled- way; access to the Clipper City Rail-Trail is located north of the intersection	
Merrimac St./ Market St./ Tournament Wharf	S	1 lane on all approaches	Yes – 6-feet along east side of Tournament Wharf; on- street parking is permitted along both sides of Market St. and Merrimac St. east of intersection	Yes – both sides of Merrimac St. and Market St.; crosswalk provided for crossing Market St.	Yes - Shared traveled- way	
Merrimac St./McKay's Wharf	1 lane on all approaches; Pvt. dwy is No; on-street parking is permitted along both sides		Yes – both sides of Merrimac St.	Yes - Shared traveled- way		
Merrimac St./Titcomb St.	S	1 lane on all approaches	No; on-street parking is permitted along both sides of Merrimac St. except where posted	Yes; both sides of Merrimac St. and Titcomb St.	Yes - Shared traveled- way	
Merrimac St./ Brown's Wharf	S	1 lane on all approaches	No; on-street parking is permitted along both sides of Merrimac St. except where posted	Yes; both sides of Merrimac St.	Yes - Shared traveled- way	

See notes at end of table.

Table 1 (Continued) STUDY AREA INTERSECTION DESCRIPTION

Intersection	Traffic Control Intersection Type ^a		Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)		
Merrimac St./ Green St./ Waterfront Park Dwy.		1 lane on Merrimac St. and Waterfront Park Dwy, 2-lanes (right and left-turn lane) on Green St.; Green St. is one- way northbound; traffic signal operates in flashing mode (flashing red for Green St. and flashing yellow for Merrimac St.	No; on-street parking (2- hr) is permitted along both sides of Green St. and along both sides of Merrimac St. except where posted	Yes; both sides of Merrimac St. and Green St.; crosswalks provided across Green St. and Merrimac St. east leg; ped. signal equipment and excl. ped. phase provided	Yes - Shared traveled- way		
Merrimac St./ State St./Water St. (Market Square) TS dir Sta on dir sep flu sig un		1 though lane and 1 right-turn lane on Merrimac St., 1 left-turn lane and 1 through lane on Water St., 2 lanes on State St.; State St. is one-way southbound; directions of travel are separated by raised or flush islands; traffic signal rests in green until push button actuation	turn lane on mac St., 1 left-turn nd 1 through lane ater St., 2 lanes on St.; State St. is vay southbound; ions of travel are ated by raised or islands; traffic rests in green bush button		Yes - Shared traveled- way with bicycles using full lane		
State St./Liberty St.	2 lanes on State St. and 1 lane on Liberty St.; State St. is one-way southbound, Liberty St. south		No; on-street parking is permitted along both sides of Liberty St. and State St. south of intersection except where posted	Yes; sidewalks along both side of the intersecting roadways; crosswalks provided across Liberty St. and State St. south leg	Yes - Shared traveled- way with bicycles using full lane		
Winter St./Rte. 1 Southbound On- Ramp	1 337 . C		permitted along the west	Yes; sidewalk along west side of Winter St.	Yes - Shared traveled- way		
Summer St./Pleasant St./ Rte. 1 Northbound Off-Ramp	nmer Pleasant St./ 1 Northbound 1 wide lane on all approaches; Summer St. is one-way northbound, of Pleasant		No; on-street parking is permitted along both sides of Pleasant St.	Yes; sidewalks along both sides of Pleasant St. and along east side of Summer St.	Yes - Shared traveled- way		

^aTS = traffic signal control; S = STOP-sign control; Y = YIELD-sign control; R = rotary/roundabout control; NC = no control present. ^bCombined shoulder and travel lane width equal to or exceed 14 feet.

Not To Scale

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

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Existing Intersection Lane Use, Travel Lane Width and Pedestrian Facilities

Figure 4

EXISTING TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, manual turning movement counts (TMCs) and vehicle classification counts were completed in June, August and September 2016. The ATR counts were conducted over a 72-hour period on Merrimac Street in the vicinity of the Project site in order to record weekday daily and Saturday traffic conditions over an extended period, with 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 period manual TMCs performed at the study intersections. These time periods were selected for analysis purposes as they are representative of the peak traffic volume hours for both the Project and the adjacent roadway network.

Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, traffic volume data from MassDOT Continuous Count Station No. 5258 located on I-95 north of Scotland Road in West Newbury were reviewed.⁴ Based on a review of this data, it was determined that traffic volumes for the month of June are approximately 5.0 percent above average month conditions, with traffic volumes for the months of August and September approximately 11 percent above average-month conditions. As such, the raw traffic count data that forms the basis of the assessment was not adjusted downward to average-month conditions in order to provide a conservative (above average) analysis condition. The 2016 Existing traffic volumes are summarized in Table 2, with the weekday morning, weekday evening and Saturday midday peak-hour traffic volumes graphically depicted on Figures 5, 6 and 7, respectively. Note that the peak-hour traffic volumes presented in Table 2 were obtained from the aforementioned figures.

Table 2 2016 EXISTING TRAFFIC VOLUMES

AWT ^a	Saturday ^b	VPH ^c	K Factor ^d	Directional Distribution ^e
17,265	17,710			
		1,078	6.2	62.6% EB
		1,398	8.1	50.4% WB
		1,294	7.3	52.6% EB
	17,265	17,265 17,710 	17,265 17,710 1,078 1,398	17,265 17,710 1,078 6.2 1,398 8.1

^aAverage weekday traffic in vehicles per day.

EB = eastbound; WB = westbound.

As can be seen in Table 2, Merrimac Street in the vicinity of the Project site was found to accommodate approximately 17,265 vehicles on an average weekday and 17,710 vehicles on a Saturday (both two-way, 24-hour volumes), with approximately 1,078 vehicles per hour (vph) during the weekday morning peak-hour, 1,398 vph during the weekday evening peak-hour and 1,294 vph during the Saturday midday peak-hour.

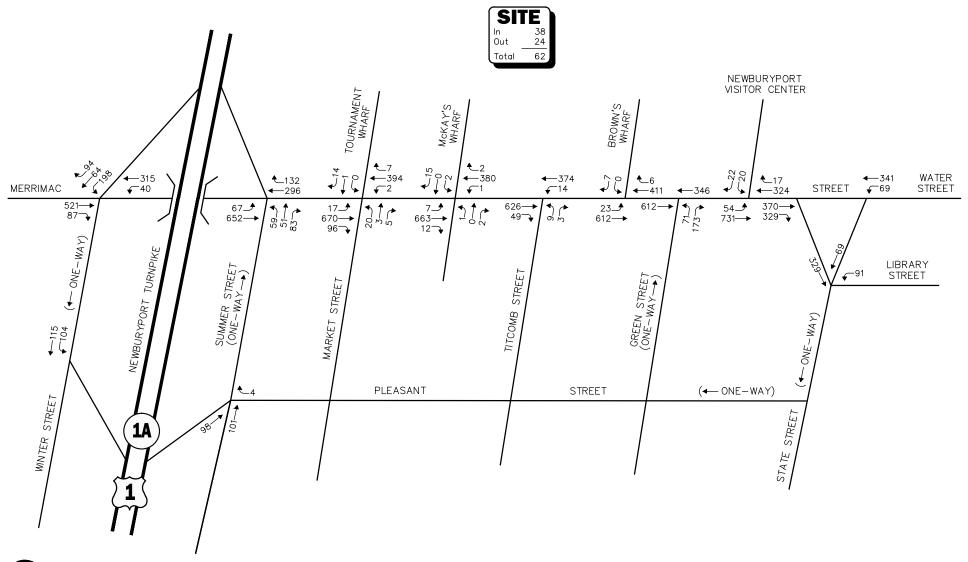
bVehicles.

^cVehicles per hour.

^dPercent of daily traffic occurring during the peak hour.

^ePercent traveling in peak direction.

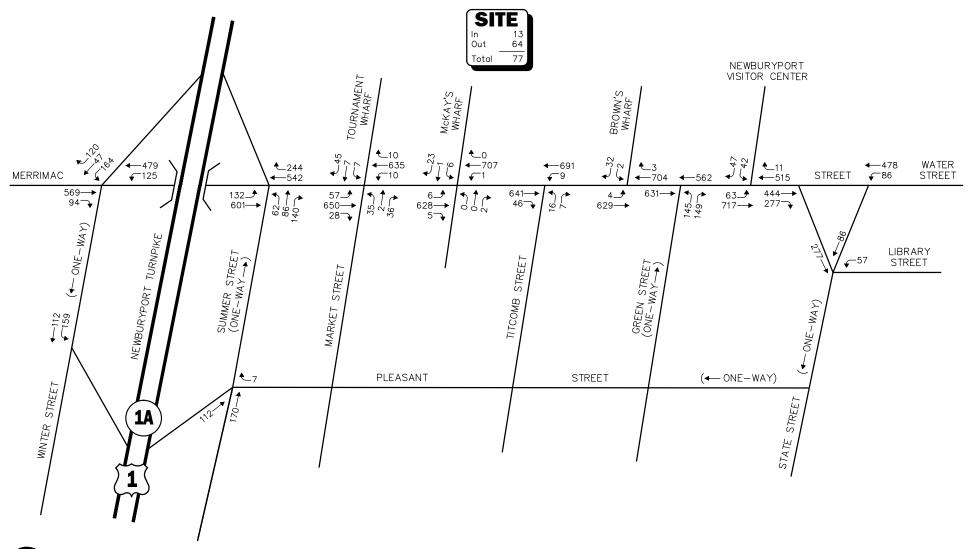
⁴MassDOT Traffic Volumes for the Commonwealth of Massachusetts; 2015; Continuous Count Station 5258 – I-95, north of Scotland Road, West Newbury, MA.



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2016 Existing
Weekday Morning
Peak Hour Traffic Volumes

Figure 5

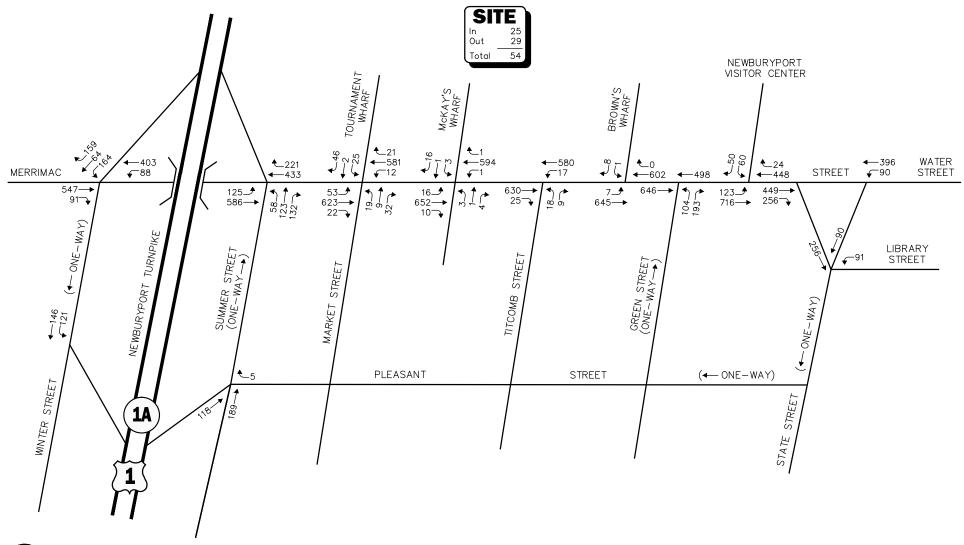


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2016 Existing
Weekday Evening
Peak Hour Traffic Volumes

Figure 6



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2016 Existing
Saturday Midday
Peak Hour Traffic Volumes

Figure 7

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in June 2016. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study intersections, as well as the location of existing and planned future bicycle facilities. As detailed on Figure 4, sidewalks are generally provided along one or both sides of the study area roadways, with marked crosswalks provided at the study intersections and pedestrian phasing and signal equipment provided at the signalized study intersections.

In general, the study area roadways provide sufficient width (combined travel lane and shoulder) to support bicycle travel in a shared traveled-way configuration. In addition, the Clipper City Rail Trail is located immediately adjacent to (west of) the Project site and provides access to the Massachusetts Bay Transportation Authority (MBTA) Newburyport Commuter Rail Station to the south and the trail system along the Merrimack River.

PUBLIC TRANSPORTATION

At present, public transportation services are not directly accessible at the Project site but are provided within the study area by the Merrimack Valley Regional Transit Authority (MVRTA). The MVRTA operates fixed-route bus service along High Street and State Street by way of Route 54, *Amesbury-Newburyport-Salisbury*, which provides service from the Costello Transportation Center in Amesbury and travels along Storey Avenue (Route 113), High Street, Low Street, Graf Road, Broomfield Street, Water Street and State Street, with service to the MBTA Newburyport Commuter Rail Station, Salisbury Center and Salisbury Beach. The closest stop to the Project site for the Route 54 bus is located at the Newburyport Public Library at 94 State Street and within an approximate 8-minute walking distance of the Project site. In addition, Route 53, *Newburyport Summer Shuttle*, operates from May through September and provides service between the Newburyport Commuter Rail Station and Plum Island by way of Graf Road, Low Street, Pond Street, Green Street, Merrimac Street, State Street, High Street, Federal Street and Water Street. The closest stop to the Project site for the Route 53 bus is located at the Merrimac Street/Green Street intersection, an approximate 1-minute walking distance. The public transportation schedules and fare information is provided in the Appendix.

As detailed in the preceding section, the Project site is linked to the Route 54 bus stop by way of the sidewalks along Merrimac Street and intersecting roadways, with marked crosswalks provided for crossing Merrimac Street at both Titcomb Street and Green Street (traffic signal control).

In addition, the City and the MVRTA are developing a bus terminal and public parking garage that are to be located opposite the Project site off Titcomb Street. Once constructed, MVRTA bus services will be conveniently located proximate to the Project site, offering additional opportunities to reduce single-occupant vehicle travel associated with the Project.

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

SPOT SPEED MEASUREMENTS

Vehicle travel speed measurements were performed on Merrimac Street in the vicinity of the Project site over a continuous 72-hour period (Thursday through Saturday, inclusive) in conjunction with the ATR counts. Table 3 summarizes the vehicle travel speed measurements.

Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	Merrimac Street				
	Eastbound	Westbound			
Mean Travel Speed (mph)	17	19			
85 th Percentile Speed (mph)	23	24			
Posted Speed Limit (mph)	30	30			

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Merrimac Street in the vicinity of the Project site was found to be 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 24 mph, which is slightly below the posted speed limit (30 mph). The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances, and is often used in establishing posted speed limits.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2010 through 2014, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, and day of occurrence, and presented in Table 4.

As can be seen in Table 4, the study area intersections were found to have experienced an average of two (2) or fewer reported motor vehicle crash per year over the five-year review period, and all were found to have a motor vehicle crash rate <u>below</u> both the MassDOT statewide and District averages for a signalized or an unsignalized intersection, as appropriate, for the MassDOT Highway Division District in which the intersections are located (District 4). A review of the MassDOT statewide High Crash Location List also indicated that none of the study area intersections are included on MassDOT's Highway Safety Improvement Program (HSIP) listing. In addition, no fatal motor vehicle crashes were reported to have occurred at the study area intersections over the five-year review period. *Based on a review of the MassDOT motor vehicle crash data, no discernible safety deficiencies were apparent at the study intersections.* The detailed MassDOT Crash Rate Worksheets are provided in the Appendix.

Table 4 MOTOR VEHICLE CRASH DATA SUMMARY^a

	Merrimac St./ Winter St./ Rte.1 Off-Ramp	Merrimac St./ Summer St./ Rte. 1 On-Ramp	Merrimac St./ Market St./ Tournament Wharf	Merrimac St./ McKay's Wharf	Merrimac St./ Titcomb St.	Merrimac St./ Brown's Wharf	Merrimac St./ Green St./ Waterfront Park	Merrimac St./ Water St./State St.	State St./Liberty St.	Winter St./ Rte. 1 On-Ramp	Summer St./ Pleasant St/ Rte. 1 Off-Ramp
Traffic Control Type: ^b	U	U	U	U	U	U	U	TS	U	U	U
Year: 2010 2011 2012 2013 2014	3 2 2 3 2 12	1 4 1 4 <u>1</u>	0 2 1 1 2	0 0 1 0 <u>1</u>	1 0 0 2 1	0 0 0 0 0	3 1 0 1 <u>0</u>	0 1 0 0 2	2 0 0 0 0	0 1 0 0 0	0 0 0 0
Total Average	2.40	2.20	1.20	0.40	0.80	0.00	1.00	0.60	0.40	0.20	0.00
Rate ^c MassDOT Crash Rate: ^d Significant? ^e	0.37 0.58/0.56 No	0.30 0.58/0.56 No	0.19 0.58/0.56 No	0.07 0.58/0.56 No	0.14 0.58/0.56 No	0.00 0.58/0.56 No	0.17 0.58/0.56 No	0.12 0.77/0.73 No	0.23 0.58/0.56 No	0.18 0.58/0.56 No	0.00 0.58/0.56 No
Type: Angle Rear-End Head-On Sideswipe Fixed Object Pedestrian/Bicycle	6 4 0 0 0 1	6 2 0 2 0 0	5 1 0 0 0 0	1 0 0 0 0	1 1 0 1 0	0 0 0 0 0	2 1 1 1 0 0	0 2 0 0 0	0 0 0 0 2	0 0 0 1 0	0 0 0 0 0
<u>Unknown/Other</u> Total	<u>1</u> 12	<u>1</u> 11	<u>0</u> 6	$\frac{0}{2}$	$\frac{1}{4}$	$\frac{0}{0}$	<u>0</u> 5	$\frac{0}{3}$	$\frac{0}{2}$	<u>0</u> 1	$\frac{0}{0}$
Day of Week: Monday through Friday Saturday Sunday Total	9 2 <u>1</u> 12	9 0 2 11	4 0 <u>2</u> 6	$\begin{array}{c} 2 \\ 0 \\ \underline{0} \\ 2 \end{array}$	$\begin{array}{c} 4 \\ 0 \\ \underline{0} \\ 4 \end{array}$	0 0 <u>0</u> 0	3 2 <u>0</u> 5	$\begin{array}{c} 2 \\ 0 \\ \frac{1}{3} \end{array}$	2 0 0 2	1 0 <u>0</u> 1	0 0 <u>0</u>
Severity: Property Damage Only Personal Injury <u>Fatality</u> Total	$ \begin{array}{c} 11 \\ 1 \\ \underline{0} \\ 12 \end{array} $	9 2 <u>0</u> 11	5 1 <u>0</u> 6	0 2 <u>0</u> 2	3 1 0 4	0 0 <u>0</u> 0	5 0 <u>0</u> 5	2 1 0 3	2 0 0 2	1 0 0 0 1	$\begin{matrix} 0 \\ 0 \\ \underline{0} \\ 0 \end{matrix}$

^aSource: MassDOT Safety Management/Traffic Operations Unit records, 2010 through 2014.

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

^cCrash rate per million vehicles entering the intersection.

^dStatewide/District crash rate.

^eThe intersection crash rate is significant if it is found to exceed the MassDOT crash rate for the MassDOT Highway Division District in which the Project is located (District 4).

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2023, which reflects a seven-year planning horizon consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. Independent of the Project, traffic volumes on the roadway network in the year 2023 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon the 2023 No-Build traffic volumes reflect 2023 Build traffic volume conditions with the Project.

FUTURE TRAFFIC GROWTH

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

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

Specific Development by Others

The City of Newburyport Office of Planning and Development was contacted in order to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on this discussion, the following projects were identified for inclusion in this assessment:

- ➤ Merrimac Ale House, 40 Merrimac Street, Newburyport, Massachusetts. This project is currently under construction and entails the redevelopment of the former Davis Auto-Parts building located at 40 Merrimac Street in Newburyport, Massachusetts, to encompass a 13,812 sf restaurant with 442 seats.
- ➤ MVRTA Intermodal Parking Facility, 90 Pleasant Street and 81-81 Merrimac Street, Newburyport, Massachusetts. This proposed project will entail the removal of the existing 27,400± sf commercial building and associated appurtenances located at 90 Pleasant Street and 81-81 Merrimac Street in Newburyport, Massachusetts, to accommodate the construction of a 212± space public parking garage and an MVRTA bus terminal. Access to the site will be provided by way of full access driveways that will intersect the south side of Merrimac Street opposite McKay's Wharf and the west side of Titcomb Street.

Traffic volumes associated with the aforementioned specific development projects by others were obtained from the respective traffic studies or using trip-generation information available from the Institute of Transportation Engineers (ITE)⁶ for the appropriate land use, and were assigned onto the study area roadway network based on existing traffic patterns where no other information was available. No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

General Background Traffic Growth

Traffic-volume data compiled by MassDOT from permanent count stations and historic traffic counts in the area were reviewed in order to determine general background traffic growth trends. Based on a review of this data and discussions with the City of Newburyport Office of Planning and Development, a 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

MassDOT and the City of Newburyport were consulted in order to determine if there were any planned future roadway improvement projects expected to be complete by 2023 within the study area. Based on these discussions, the following roadway improvement project was identified within the study area:

➤ Intersection Improvements – Route 1 at Merrimac Street, Newburyport (MassDOT Project Number 608029). This project is being undertaken by MassDOT and entails the installation of traffic control signals at the Route 1 north and southbound on and off-ramp intersections with Merrimac Street (two (2) locations), along with associated roadway rehabilitation, drainage improvements, sign and pavement marking installation, and sidewalk and bicycle accommodation improvements. These improvements are currently at the preliminary design stage; a construction date and funding source have not yet been established.

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⁶Ibid 1

> MVRTA Intermodal Facility Pedestrian Access Improvements, Newburyport. In conjunction with the construction of the MVRTA Intermodal Parking Facility, pedestrian access improvements are proposed along the Project frontage and at the Merrimac Street/Titcomb Street and Titcomb Street/Pleasant Street intersections that include sidewalk reconstruction, curb extensions, wheelchair ramp installation/reconstruction and the installation of crosswalks. In addition, a 100-foot long bus turn-out is proposed along the south side of Merrimac Street adjacent to the intermodal facility and on-street parking along both Merrimac Street and Titcomb Street will be reconfigured to accommodate the improvements and the driveways that will serve the intermodal facility. These improvements will improve pedestrian accommodations and accessibility in the area and are expected to be complete within the future conditions horizon year of this assessment (2023).

No other roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

No-Build Traffic Volumes

The 2023 No-Build condition peak-hour traffic-volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2016 Existing peak-hour traffic volumes and then adding the peak-hour traffic volumes associated with the identified specific development projects by others. The resulting 2023 No-Build weekday morning, weekday evening and Saturday midday peak-hour traffic volumes are shown on Figures 8, 9 and 10, respectively.

PROJECT-GENERATED TRAFFIC

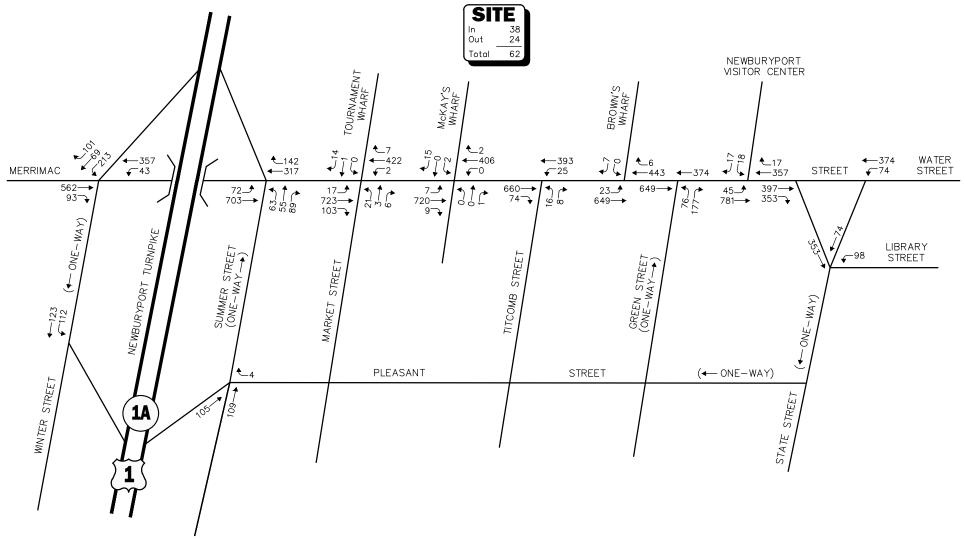
Design year (2023) Build traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

As proposed, the Project will entail the construction of a mixed-use development that will include up to 200 residential condominium/townhouse units, 100 hotel rooms and approximately 20,000 sf of retail/restaurant space. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE⁷ for similar land uses as those proposed were used. ITE Land Use Codes (LUCs) 230, *Residential Condominium/Townhouse*, 310, *Hotel*, and 820, *Shopping Center*, were used to establish the base traffic characteristics of the Project.

Internal Trips

A portion of the trips expected to be generated by the Project will consist of dual-purpose or internal trips. An internal trip consists of a resident, customer and/or employee that patronizes more than one of the uses planned within a development and is common in mixed-use projects with appropriate accommodations to facilitate trips between uses. By way of example, a resident of the Project or a hotel guest may also patronize one of the retail or restaurant uses located within the Project site. Performing the trip-generation calculations for the Project on an individual land use basis does not account for the interaction between the components of a mixed-

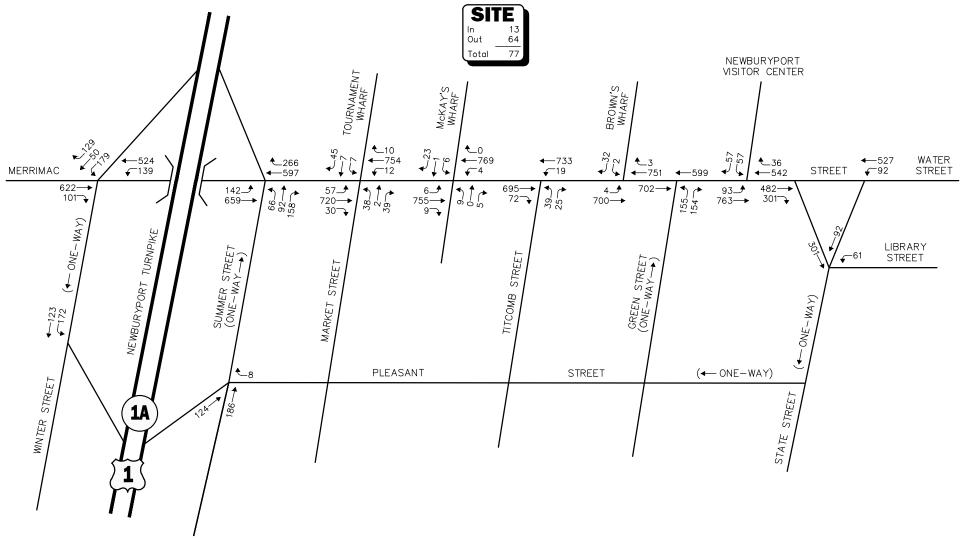
⁷Ibid 1.



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2023 No-Build Weekday Morning Peak Hour Traffic Volumes

Figure 8

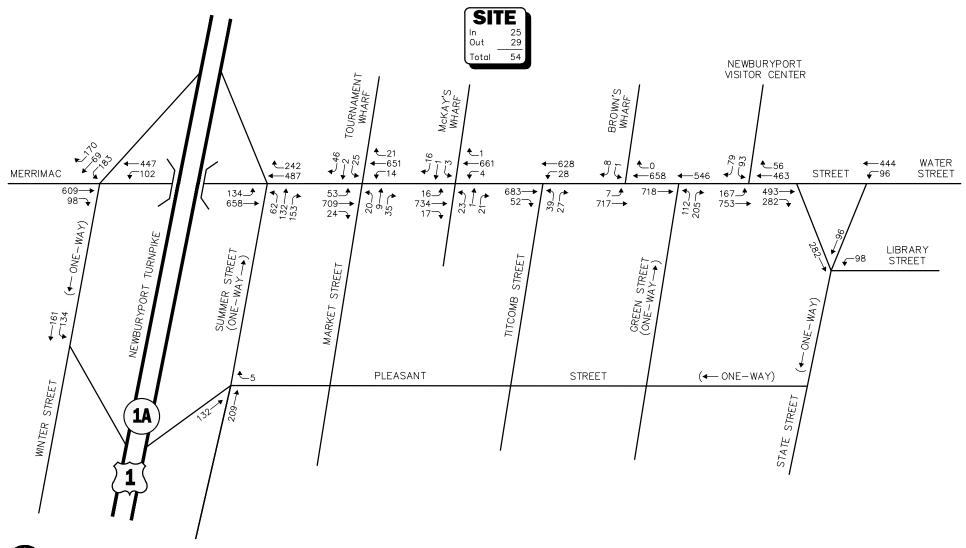


Not To Scale

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2016 Existing
Weekday Evening
Peak Hour Traffic Volumes

Figure 9



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2023 No-Build Saturday Midday Peak Hour Traffic Volumes

Figure 10

use development. In order to account for this interaction, the multi-use trip-generation calculation methodology promulgated by the ITE⁸ was applied to the base ITE trip-generation calculations.

Pass-By Trips

Not all of the trips expected to be generated by the retail/restaurant component of the Project will be new trips on the roadway network. A significant portion of these trips will consist of pass-by trips or 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. These trips are not new trips on the roadway network as a result of the Project. Statistics published by the ITE⁹ indicate that on average, approximately 34 percent of the trips generated by a composite retail/restaurant use (shopping center) may consist of pass-by trips. In accordance with MassDOT guidelines which limits pass-by trips to the lesser of 15 percent of the adjacent roadway traffic volume or the ITE pass-by trip rate for the specific use, the ITE published pass-by trips rates were applied to the base trip-generation calculations for the retail/restaurant component of the Project, excepting for the weekday morning peak-hour where a pass-by trip rate was not applied due to the relatively low volume of traffic associated with this use.

Primary Trips

A primary trip is a new trip on the roadway network that is generated as a direct result of a project and represents the project-related trips after consideration of internal trips and pass-by trips.

Transit Use

While public transportation services are provided within the study area and are accessible by walking or by bicycle, they are not currently provided in the immediate proximity of the Project site. With the completion of the future MVRTA Intermodal Parking Facility, an MVRTA bus stop will be located directly opposite the Project site, providing a convenient alternative to the use of single-occupant vehicles to access the Project. In order to provide conservative (high) traffic volume projections from which to assess the impact of the Project on the transportation infrastructure, a reduction in the base ITE trip-projections in order to account for transit use was not applied.

Table 5 summarizes the anticipated trip characteristics of the Project using the aforementioned methodology.

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⁸Trip Generation Handbook, Institute of Transportation engineers; Washington, D.C.; 2014

⁹Ibid.

Table 5 WATERFRONT WEST REDEVELOPMENT PROJECT TRIP GENERATION SUMMARY

	Residential Component			Hotel Component			Retail/Restaurant Component					-	
Time Period/Direction	(A) Residential Housing (200 Units) ^a	(B) Internal/Dual Purpose Trips	(C = A -B) Total Primary Trips	(D) Hotel (100 Rooms) ^b	(E) Internal/Dual Purpose Trips	(F = D-E) Total Primary Trips	(G) Retail/ Restaurant (20,000 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	
Average Weekday Daily													
Entering	588	54	534	261	43	218	1,193	97	1,096	329	767	1,519	
Exiting	588	<u>54</u> 108	534	<u>261</u>	<u>43</u> 86	<u>218</u>	<u>1,193</u>	<u>97</u>	1,096	<u>329</u>	<u>767</u>	<u>1,519</u>	
Total	1,176	108	1,068	522	86	436	2,386	194	2,192	658	1,534	3,038	
Weekday Morning Peak Hour													
Entering	15	1	14	32	1	31	12	1	11	0	11	56	
Exiting	75 90	<u>1</u>	<u>74</u> 88	<u>22</u> 54	<u>1</u>	<u>21</u> 52	$\frac{9}{21}$	1	_8	0	<u>8</u> 19	<u>103</u>	
Total	90	$\frac{1}{2}$	88	54	$\overline{2}$	52	21	$\frac{1}{2}$	19	$\frac{0}{0}$	19	159	
Weekday Evening Peak Hour													
Entering	71	5	66	31	5	26	98	10	88	32	56	148	
Exiting	$\frac{35}{106}$	$\frac{5}{10}$	<u>30</u> 96	<u>29</u> 60	$\frac{5}{10}$	<u>24</u> 50	<u>106</u>	<u>10</u>	96	<u>32</u> 64	_64	118	
Total	106	10	96	60	10	50	204	$\frac{10}{20}$	184	64	120	266	
Saturday													
Entering	576	76	500	334	55	279	1,676	131	1,545	402	1,143	1,922	
Exiting	<u>576</u>	<u>76</u> 152	500	<u>334</u>	<u>55</u> 110	<u>279</u>	<u>1,676</u>	<u>131</u>	1,545	<u>402</u>	1,143	1,922	
Total	1,152	152	1,000	668	110	558	3,352	262	3,090	804	2,286	3,844	
Saturday Midday Peak Hour													
Entering	55	8	47	41	7	34	160	15	145	36	109	190	
Exiting	<u>46</u>	<u>8</u> 16	<u>38</u> 85	<u>32</u> 73	$\frac{7}{14}$	<u>25</u>	147	15 30	<u>132</u>	<u>36</u> 72	96	<u>159</u>	
Total	101	16	85	73	14	59	307	30	277	72	205	349	

^aBased on ITE LUC 230, Residential Condominium/Townhouse.

^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 Trip Summary

As can be seen in Table 5, using the aforementioned methodology and without consideration of transit use, the Project is expected to generate approximately 3,038 primary vehicle trips on an average weekday (1,519 vehicles entering and 1,519 exiting over a 24-hour period) and approximately 3,844 primary vehicle trips on a Saturday (1,922 vehicles entering and 1,922 vehicles exiting over a 24-hour period), with approximately 159 primary vehicle trips (56 vehicles entering and 103 exiting) expected during the weekday morning peak-hour, 266 primary vehicle trips (148 vehicles entering and 118 exiting) expected during the weekday evening peak-hour and 349 primary vehicle trips (190 vehicles entering and 159 exiting) expected during the Saturday midday peak-hour.

Table 6 compares the traffic volumes associated with the Project to those of the existing uses that occupy the Project site. Note that pass-by trips are <u>included</u> in the subject traffic volumes, which represent the <u>total</u> volume of traffic entering and exiting the Project site.

Table 6
TRAFFIC VOLUME COMPARISON

	Vehicle Trips							
Time Period/Direction	(A) Waterfront West Development ^a	(B) Existing Uses ^b	(A-B) Difference					
Average Weekday Daily:	3,696	952	2,744					
Weekday Morning Peak Hour:	159	62	97					
Weekday Evening Peak Hour:	330	77	253					
Saturday:	4,648	740	3,908					
Saturday Midday peak Hour:	421	54	367					

^aBased on ITE LUC 230, *Residential Condominium/Townhouse*, LUC 310, *Hotel* and LUC 820, *Shopping Center*.

^bAs counted on Thursday, June 16, 2016; Saturday; June 18, 2016; Tuesday, August, 30, 2016; Saturday, August 27, 2016; Thursday through Saturday, September 8-10, 2016.

Traffic Volume Comparison

As can be seen in Table 6, in comparison to the existing uses that occupy the Project site, the Project is expected to result in 2,744 additional total (two-way) vehicle trips on an average weekday and 3,908 additional vehicle trips on a Saturday, with 97 additional total vehicle trips expected during the weekday morning peak-hour, 253 additional vehicle trips expected during the weekday evening peak-hour and 367 additional vehicle trips expected during the Saturday midday peak-hour.

Trip Distribution and Assignment

Separate trip-distribution patterns were developed for the residential and commercial components of the Project given the differing nature and purpose of the trips associated with these uses. For the residential component of the Project, the directional distribution was determined based on a review of Journey-to-Work data obtained from the U.S. Census for persons residing in the City of Newburyport and then refined based on a review of existing traffic patterns within the study area during the peak periods. For the commercial component of the Project, the directional distribution was determined based on a review of existing traffic patterns within the study area. The general trip distribution for the residential and commercial components for the Project are graphically depicted on Figures 11 and 12, respectively. Traffic volumes expected to be generated by the Project were assigned onto the study area roadway network as shown on Figures 13, 14 and 15 for the respective peak hours.

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

The 2023 Build condition traffic volumes consist of the 2023 No-Build traffic volumes with: i) the removal of the traffic associated with the existing uses that occupy the Project site; and ii) the addition of the traffic expected to be generated by the Project. The 2023 Build weekday morning, weekday evening and Saturday midday peak-hour traffic-volumes are graphically depicted on Figures 16, 17 and 18, respectively.

A summary of peak-hour projected traffic-volume increases outside of the study area that is the subject of this assessment is shown in Table 7. These volumes are based on the expected increases from the Project.

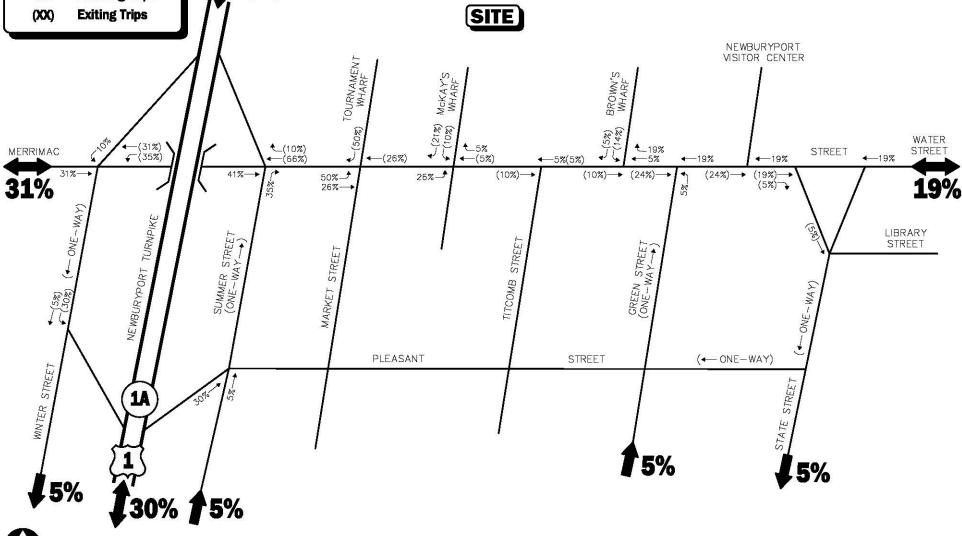
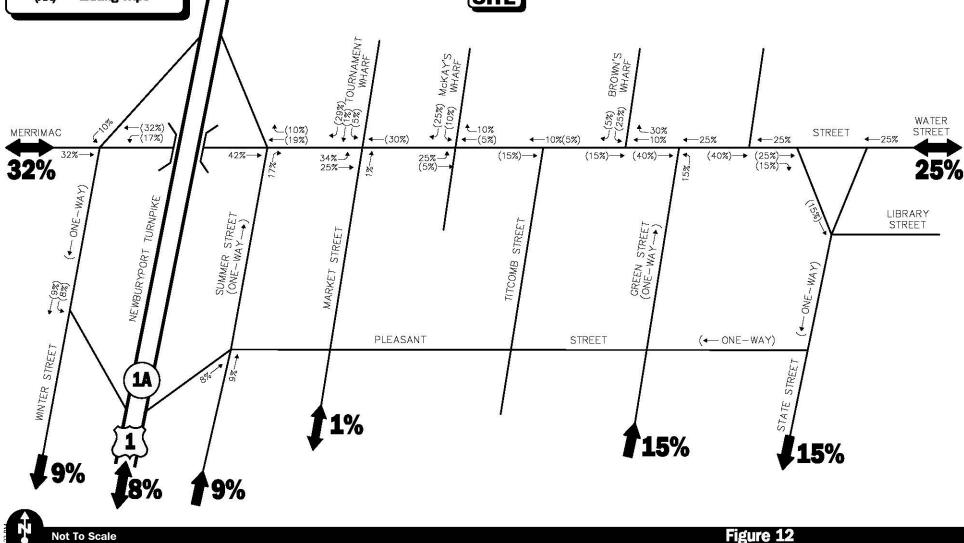


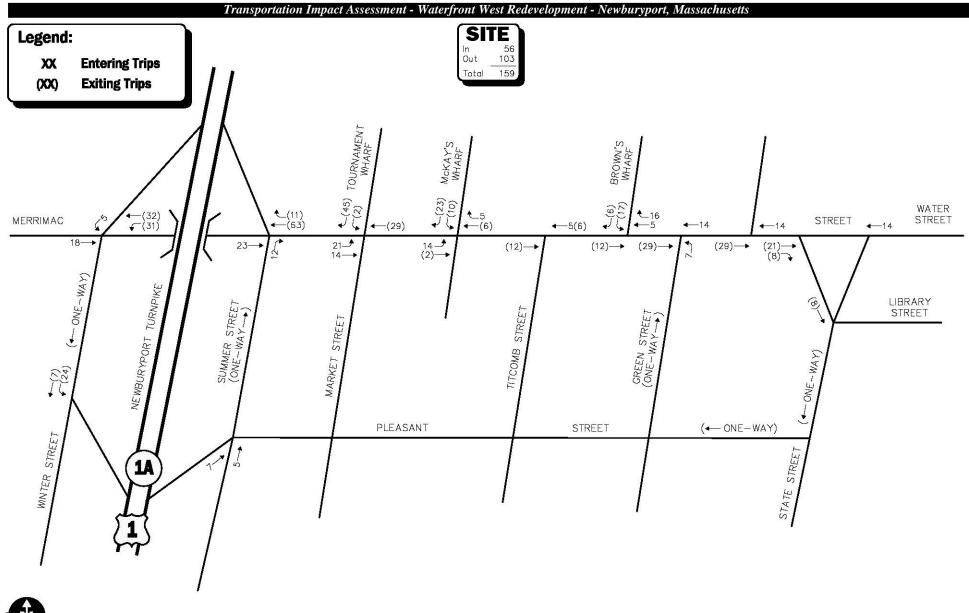
Figure 11 **Not To Scale** Vanasse & Associates, Inc. Transportation Engineers & Planners

Trip Distribution Map Residential Component



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Trip Distribution Map Commercial Component





Project - Generated Weekday Morning Peak Hour Traffic Volumes

Figure 13



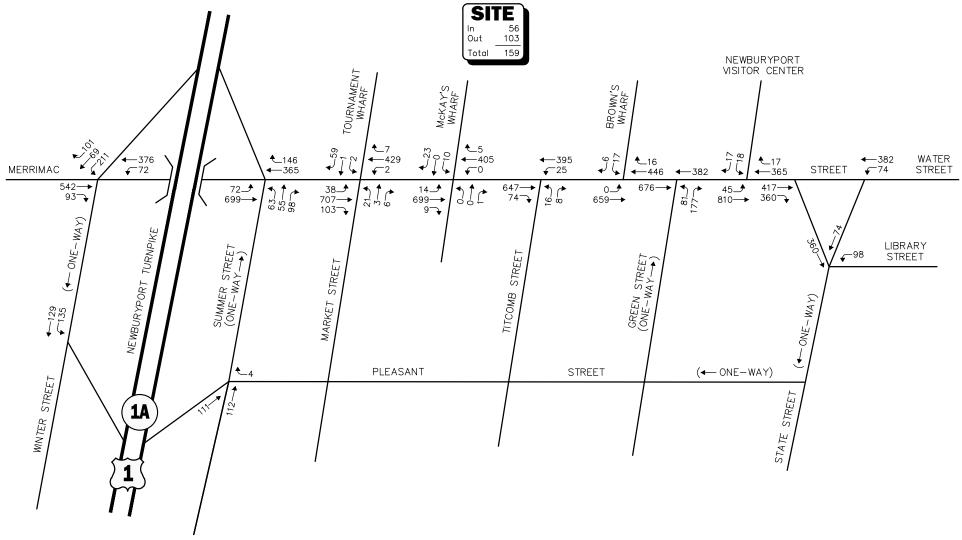
Project - Generated Weekday Evening Peak Hour Traffic Volumes

Figure 14



Project - Generated Saturday Midday Peak Hour Traffic Volumes

Figure 15



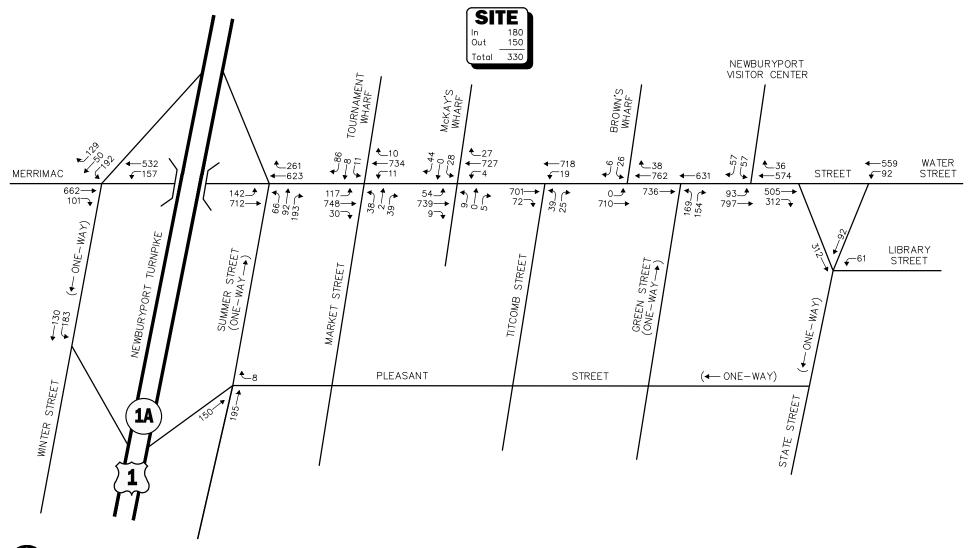
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

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2023 Build Weekday Morning Peak Hour Traffic Volumes

Figure 16

Not To Scale



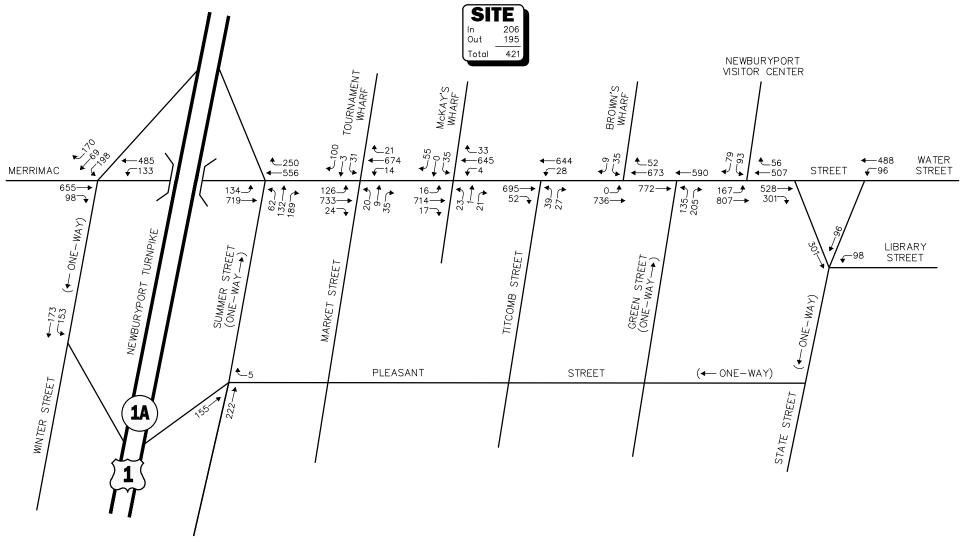
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

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2023 Build Weekday Evening Peak Hour Traffic Volumes

Figure 17

Not To Scale



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

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2023 Build Saturday Midday Peak Hour Traffic Volumes

Figure 18

Not To Scale

Table 7
PEAK-HOUR TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2016 Existing	2023 No-Build	2023 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
Manimas Studet West of Winter Studet				-	
Merrimac Street, West of Winter Street: Weekday Morning	1,017	1,113	1,113	0	0.0
Weekday Evening	1,017	1,113	1,113	48	3.5
Saturday Midday	1,202	1,324	1,424	84	6.3
Saturday Wildday	1,200	1,324	1,400	04	0.5
Water Street, east of State Street:					
Weekday Morning	780	845	873	28	3.3
Weekday Evening	1,008	1,101	1,156	55	5.0
Saturday Midday	935	1,033	1,112	79	7.6
State Street, south of Liberty Street:					
Weekday Morning	489	525	532	7	1.3
Weekday Evening	420	454	465	11	2.4
Saturday Midday	437	476	495	19	4.0
Winter Street, south of Route 1 Southbound					
On-Ramp:					
Weekday Morning	115	123	129	6	4.9
Weekday Evening	112	123	130	7	5.7
Saturday Midday	146	161	173	12	7.5
Summer Street, south of Pleasant Street:					
Weekday Morning	101	109	112	3	2.8
Weekday Evening	170	186	195	9	4.8
Saturday Midday	189	209	222	13	6.2
Market Street, south of Merrimac Street:					
Weekday Morning	127	136	136	0	0.0
Weekday Evening	118	128	128	0	0.0
Saturday Midday	96	104	105	1	1.0
Titcomb Street, south of Merrimac Street:					
Weekday Morning	75	123	123	0	0.0
Weekday Evening	78	155	155	0	0.0
Saturday Midday	69	146	146	0	0.0
Green Street, south of Merrimac Street:					
Weekday Morning	244	253	258	5	2.0
Weekday Evening	294	309	323	14	4.5
Saturday Midday	297	317	340	23	7.3

As shown in Table 7, Project-related traffic-volume increases outside of the study area relative to 2023 No-Build conditions are anticipated to range from 0.0 to 7.6 percent during the peak periods, with vehicle increases shown to range from 0 to 84 vehicles.

TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity and vehicle queue analyses were conducted under Existing, No-Build and Build traffic volume conditions. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

METHODOLOGY

Levels of Service

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

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

Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week, or period of year.

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¹⁰The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

Unsignalized Intersections

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

- LOS A represents a condition with little or no control delay to minor street traffic.
- LOS B represents a condition with short control delays to minor street traffic.
- LOS C represents a condition with average control delays to minor street traffic.
- LOS D represents a condition with long control delays to minor street traffic.
- LOS E represents operating conditions at or near capacity level, with very long control delays to minor street traffic.
- LOS F represents a condition where minor street demand volume exceeds capacity of an approach lane, with extreme control delays resulting.

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

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

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

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

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¹¹Highway Capacity Manual; Transportation Research Board; Washington, DC; 2010.

Signalized Intersections

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

- LOS A describes operations with very low control delay; most vehicles do not stop at all.
- LOS B describes operations with relatively low control delay. However, more vehicles stop than LOS A.
- LOS C describes operations with higher control delays. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
- LOS D describes operations with control delay in the range where the influence of congestion becomes more noticeable. Many vehicles stop and individual cycle failures are noticeable.
- LOS E describes operations with high control delay values. Individual cycle failures are frequent occurrences.
- LOS F describes operations with high control delay values that often occur with oversaturation. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Levels of service for signalized intersections were calculated using the Percentile Delay Method implemented as a part of the SynchroTM 8 software as suggested by MassDOT in order to compensate for errors found when employing the 2010 *Highway Capacity Manual* methodology as a part of the software. The Percentile Delay Method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on "percentile" delay. Level-of-service designations are based on the criterion of percentile delay per vehicle and is a measure of: i) driver discomfort; ii) motorist frustration; and iii) fuel consumption; and includes a uniform delay based on percentile volumes using a Poisson arrival pattern, an initial queue move-up time, and a queue interaction delay that accounts for delays resulting from queues extending from adjacent intersections. Table 9 summarizes the relationship between level-of-service and percentile delay, and uses the same numerical delay thresholds as the HCM method. The tabulated percentile delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

Table 9 LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

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

Vehicle Queue Analysis

Vehicle queue analyses are a direct measurement of an intersection's ability to process vehicles under various traffic control and volume scenarios and lane use arrangements. The vehicle queue analysis was performed using the SynchroTM intersection capacity analysis software which is based upon the methodology and procedures presented in the 2010 *Highway Capacity Manual*. The SynchroTM vehicle queue analysis methodology is a simulation based model which reports the number of vehicles that experience a delay of six seconds or more at an intersection. For signalized intersections, SynchroTM reports both the average (50th percentile) the 95th percentile vehicle queue. For unsignalized intersections, SynchroTM reports the 95th percentile vehicle queue lengths are a function of the capacity of the movement under study and the volume of traffic being processed by the intersection during the analysis period. The 95th percentile vehicle queue is the vehicle queue length that will be exceeded only 5 percent of the time, or approximately three minutes out of sixty minutes during the peak one hour of the day (during the remaining fifty-seven minutes, the vehicle queue length will be less than the 95th percentile queue length).

ANALYSIS RESULTS

Level-of-service and vehicle queue analyses were conducted for 2016 Existing, 2023 No-Build and 2023 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Tables 10 and 11. The detailed analysis results are presented in the Appendix.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area.

Table 10 SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2016	Existing			2023 N	o-Build		2023 Build			
Signalized Intersection/Peak-hour/Movement	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th
Merrimac Street and Water Street at State Street												
Weekday Morning:												
Merrimac Street EB TH	0.59	12.6	В	3/5	0.61	12.7	В	3/5	0.61	12.7	В	4/6
Merrimac Street EB RT	0.45	2.9	A	0/1	0.47	2.9	A	0/1	0.47	2.9	A	0/1
Water Street WB LT	0.28	10.3	В	1/1	0.32	10.7	В	1/2	0.32	10.7	В	1/2
Water Street WB TH	0.55	12.0	В	3/5	0.58	12.2	В	3/5	0.57	11.8	В	3/5
Overall		9.4	A			9.5	A			9.5	A	
Weekday Evening:												
Merrimac Street EB TH	0.60	12.4	В	3/6	0.61	12.4	В	4/6	0.63	12.4	В	4/7
Merrimac Street EB RT	0.35	2.3	Α	0/1	0.36	2.3	Α	0/1	0.37	2.3	Α	0/1
Water Street WB LT	0.34	11.1	В	1/2	0.37	11.2	В	1/2	0.37	11.3	В	1/2
Water Street WB TH	0.69	14.2	В	4/7	0.72	15.0	В	5/8	0.74	15.4	В	5/8
Overall		11.1	В			11.2	В			11.3	В	
Saturday Midday:												
Merrimac Street EB TH	0.03	13.5	В	3/6	0.65	13.5	В	4/6	0.67	13.5	В	4/7
Merrimac Street EB RT	0.34	2.5	Α	0/1	0.35	2.5	Α	0/1	0.36	2.5	Α	0/1
Water Street WB LT	0.39	12.7	В	1/2	0.43	13.5	В	1/2	0.44	13.9	В	1/2
Water Street WB TH	0.60	12.9	В	3/5	0.63	13.0	В	4/6	0.67	13.6	В	4/7
Overall		10.9	В			11.0	В			11.2	В	

^dQueue length in vehicles.

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

^aVolume-to-capacity ratio.
^bPercentile delay per vehicle in seconds.
^cLevel-of-Service.

Table 11 UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2016 Ex	isting			2023 No	-Build			2023 E	Build	
				Queue ^d				Queue				Queue
Unsignalized Intersection/Peak Hour/Movement	Demanda	Delay ^b	LOS ^c	95 th	Demand	Delay	LOS	95 th	Demand	Delay	LOS	95 th
Merrimac Street at the Route 1 Southbound Off-Ramp												
and Winter Street												
Weekday Morning:												
Merrimac Street EB TH/RT	608	0.0	Α	0	655	0.0	A	0	635	0.0	A	0
Merrimac Street WB LT/TH	355	1.0	Α	0	380	1.0	Α	1	448	1.5	Α	1
Route 1 Southbound Off-Ramp SB LT	198	>50.0	F	9	213	>50.0	F	12	211	>50.0	F	15
Route 1 Southbound Off-Ramp SB TH/RT	158	12.2	В	1	170	12.7	В	2	170	13.4	В	2
Weekday Evening:												
Merrimac Street EB TH/RT	663	0.0	A	0	723	0.0	A	0	763	0.0	A	0
Merrimac Street WB LT/TH	604	2.0	Α	1	663	3.2	Α	1	689	2.5	Α	1
Route 1 Southbound Off-Ramp SB LT	164	>50.0	F	13	179	>50.0	F	17	192	>50.0	F	20
Route 1 Southbound Off-Ramp SB TH/RT	167	14.4	В	2	179	15.7	C	2	179	15.8	C	2
Saturday Midday:												
Merrimac Street EB TH/RT	638	0.0	A	0	707	0.0	A	0	753	0.0	A	0
Merrimac Street WB LT/TH	491	1.7	A	1	549	1.9	A	1	618	2.3	A	1
Route 1 Southbound Off-Ramp SB LT	164	>50.0	F	11	183	>50.0	F	16	198	>50.0	F	21
Route 1 Southbound Off-Ramp SB TH/RT	223	14.4	В	2	239	16.3	C	3	239	17.5	C	3
Merrimac Street at Summer Street and the Route 1												
Northbound On-Ramp												
Weekday Morning:												
Merrimac Street EB LT	67	8.6	A	0	72	8.7	A	0	72	9.0	A	1
Merrimac Street EB TH	652	0.0	A	0	703	0.0	A	0	699	0.0	A	0
Merrimac Street WB TH/RT	428	0.0	A	0	459	0.0	Α	0	511	0.0	A	0
Summer Street NB LT	59	38.2	E	1	63	48.9	E	3	63	>50.0	F	3
Summer Street NB TH	51	38.2	E	1	55	48.9	E	3	55	>50.0	F	3
Summer Street NB RT	83	15.5	C	0	89	16.8	C	1	98	17.1	C	1
Weekday Evening:			_				_				_	
Merrimac Street EB LT	132	10.6	В	1	142	11.3	В	1	142	11.4	В	1
Merrimac Street EB TH	601	0.0	A	0	659	0.0	A	0	712	0.0	A	0
Merrimac Street WB TH/RT	786	0.0	A	0	863	0.0	A	0	884	0.0	A	0
Summer Street NB LT	62	>50.0	F	4	66	>50.0	F	6	66	>50.0	F	6
Summer Street NB TH	86	>50.0	F	4	92	>50.0	F	6	92	>50.0	F	6
Summer Street NB RT	140	16.5	В	2	158	18.9	C	2	193	23.6	C	3
Saturday Midday:							_				_	
Merrimac Street EB LT	125	9.8	A	1	134	10.3	В	1	134	10.8	В	1
Merrimac Street EB TH	586	0.0	A	0	658	0.0	A	0	719	0.0	A	0
Merrimac Street WB TH/RT	654	0.0	A	0	729	0.0	A	0	806	0.0	A	0
Summer Street NB LT	58	>50.0	F	3	62	>50.0	F	5	62	>50.0	F	6
Summer Street NB TH	123	>50.0	F	3	132	>50.0	F	5	132	>50.0	F	6
Summer Street NB RT	132	16.8	C	2	153	20.2	C	2	189	27.3	D	4

See notes at end of table.

Table 11 (Continued)
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2016 Existing		2023 No-Build				2023 Build				
				Queue ^d				Queue				Queue
Unsignalized Intersection/Peak Hour/Movement	Demand ^a	Delay ^b	LOS ^c	95 th	Demand	Delay	LOS	95 th	Demand	Delay	LOS	95 th
Merrimac Street at the Market Street and												
Tournament Wharf												
Weekday Morning:												
Merrimac Street EB LT/TH/RT	783	0.2	A	0	843	0.2	A	0	848	0.4	A	0
Merrimac Street WB LT/TH/RT	403	0.0	A	0	431	0.0	A	0	438	0.0	A	0
Market Street NB LT/TH/RT	28	33.8	D	1	30	40.0	E	1	30	48.3	E	1
Tournament Wharf SB LT/TH/RT	15	12.6	В	0	15	13.1	В	0	42	14.5	В	1
Weekday Evening:												
Merrimac Street EB LT/TH/RT	735	0.7	A	0	807	0.7	A	0	895	1.3	A	0
Merrimac Street WB LT/TH/RT	705	0.1	A	0	776	0.1	A	0	756	0.1	A	0
Market Street NB LT/TH/RT	73	>50.0	F	6	79	>50.0	F	8	79	>50.0	F	10
Tournament Wharf SB LT/TH/RT	59	33.3	D	2	59	45.3	Е	2	105	>50.0	F	5
Saturday Midday:												
Merrimac Street EB LT/TH/RT	698	0.7	Α	0	786	0.7	A	0	883	1.4	A	0
Merrimac Street WB LT/TH/RT	614	0.2	Α	0	686	0.2	A	0	709	0.2	A	0
Market Street NB LT/TH/RT	60	46.1	Е	3	64	>50.0	F	4	64	>50.0	F	6
Tournament Wharf SB LT/TH/RT	73	47.7	Е	2	73	>50.0	F	4	134	>50.0	F	11
Merrimac Street at McKay's Wharf												
Weekday Morning:												
Merrimac Street EB LT/TH/RT	682	0.1	A	0	736	0.1	A	0	722	0.2	Α	0
Merrimac Street WB LT/TH/RT	383	0.0	Α	0	408	0.0	A	0	410	0.0	Α	0
Driveway NB LT/TH/RT	3	17.5	C	0	1	13.7	В	0	1	13.7	В	0
McKay's Wharf SB LT/TH/RT	17	12.6	В	0	17	13.2	В	0	33	17.1	Ċ	1
Weekday Evening:			_	-			_	-			_	
Merrimac Street EB LT/TH/RT	689	0.1	A	0	770	0.1	A	0	802	0.6	Α	0
Merrimac Street WB LT/TH/RT	708	0.0	A	0	773	0.0	A	0	758	0.0	A	0
Driveway NB LT/TH/RT	2	13.2	В	0	14	>50.0	F	2	14	>50.0	F	2
McKay's Wharf SB LT/TH/RT	30	23.2	Č	1	30	28.2	Ď	1	72	>50.0	F	3
Saturday Midday:	50	23.2		•	50	20.2	D	•	, 2	> 50.0	•	5
Merrimac Street EB LT/TH/RT	678	0.2	A	0	767	0.2	A	0	797	0.8	Α	0
Merrimac Street WB LT/TH/RT	596	0.0	A	0	666	0.1	A	0	682	0.0	A	0
Driveway NB LT/TH/RT	8	26.0	D	0	45	>50.0	F	3	45	>50.0	F	4
McKay's Wharf SB LT/TH/RT	20	18.2	C	1	20	22.1	C	1	90	>50.0	F	5

See notes at end of table.

Table 11 (Continued)
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2016 Ex	isting			2023 No	-Build			2023 E	Build	
Unsignalized Intersection/Peak Hour/Movement	Demand ^a	Delay	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
Merrimac Street at Titcomb Street												
Weekday Morning:												
Merrimac Street EB TH/RT	675	0.0	Α	0	734	0.0	Α	0	721	0.0	Α	0
Merrimac Street WB LT/TH	398	0.3	Α	0	418	0.6	Α	0	420	0.6	A	0
Titcomb Street NB LT/ RT	12	21.1	C	1	24	24.5	C	1	24	24.1	C	1
Weekday Evening:												
Merrimac Street EB TH/RT	687	0.0	A	0	767	0.0	A	0	773	0.0	A	0
Merrimac Street WB LT/TH	700	0.1	A	0	752	0.2	A	0	737	0.2	A	0
Titcomb Street NB LT/ RT	23	31.8	D	1	64	>50.0	F	3	64	>50.0	F	3
Saturday Midday:												
Merrimac Street EB TH/RT	655	0.0	A	0	735	0.0	A	0	747	0.0	A	0
Merrimac Street WB LT/TH	597	0.3	A	0	656	0.4	A	0	672	0.4	A	0
Titcomb Street NB LT/RT	27	28.6	D	1	64	>50.0	F	4	64	>50.0	F	4
Merrimac Street at Brown's Wharf												
Weekday Morning:												
Merrimac Street EB LT/TH	635	0.3	A	0	672	0.3	A	0	659	0.0	A	0
Merrimac Street WB TH/RT	417	0.0	A	0	449	0.0	A	0	462	0.0	A	0
Brown's Wharf SB LT/RT	7	10.7	В	0	7	11.0	В	0	23	20.2	C	1
Weekday Evening:												
Merrimac Street EB LT/TH	633	0.1	A	0	704	0.1	A	0	710	0.0	Α	0
Merrimac Street WB TH/RT	707	0.0	Α	0	754	0.0	A	0	800	0.0	Α	0
Brown's Wharf SB LT/RT	34	17.4	C	0	34	18.8	C	1	32	45.9	Е	1
Saturday Midday:												
Merrimac Street EB LT/TH	652	0.1	A	0	724	0.1	A	0	736	0.0	A	0
Merrimac Street WB TH/RT	602	0.0	A	0	658	0.0	A	0	725	0.0	A	0
Brown's Wharf SB LT/RT	9	15.0	C	0	9	16.2	C	0	44	41.2	E	2

See notes at end of table

Table 11 (Continued)
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2016 Ex	sting			2023 No-B	uild			2023 Bu	ild	
Unsignalized Intersection/Peak Hour/Movement	Demand ^a	Delay ^b	LOSc	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
Merrimac Street at Green Street												
Weekday Morning:												
Merrimac Street EB TH	612	0.0	A	0	649	0.0	A	0	676	0.0	A	0
Merrimac Street WB TH	346	0.0	A	0	374	0.0	A	0	382	0.0	A	0
Green Street NB LT	71	27.0	D	2	76	31.9	D	2	81	35.9	Е	3
Green Street NB RT	173	20.0	C	3	177	22.0	C	3	177	23.4	C	3
Weekday Evening:												
Merrimac Street EB TH	631	0.0	A	0	702	0.0	A	0	736	0.0	A	0
Merrimac Street WB TH	562	0.0	A	0	599	0.0	A	0	631	0.0	A	0
Green Street NB LT	145	>50.0	F	7	155	>50.0	F	10	169	>50.0	F	12
Green Street NB RT	149	17.0	C	2	154	19.3	C	2	154	20.5	C	2
Saturday Midday:												
Merrimac Street EB TH	646	0.0	A	0	718	0.0	A	0	772	0.0	A	0
Merrimac Street WB TH	498	0.0	A	0	546	0.0	A	0	590	0.0	A	0
Green Street NB LT	104	48.0	Е	4	112	>50.0	F	5	135	>50.0	F	8
Green Street NB RT	193	20.7	C	3	205	25.6	D	4	205	29.5	D	4
Merrimac Street at a Private Driveway			_				_			_,	_	•
Weekday Morning:												
Merrimac Street EB LT/TH	785	0.6	A	0	826	0.4	A	0	855	0.4	A	0
Merrimac Street WB TH/RT	341	0.0	A	Ö	374	0.0	A	0	382	0.0	A	0
Private Driveway SB LT/RT	42	21.0	C	1	35	23.1	C	1	35	24.3	C	1
Weekday Evening:	.2	21.0	C	•	33	23.1	C	•	33	21.3	C	•
Merrimac Street EB LT/TH	780	0.7	A	0	856	1.0	A	0	890	1.0	A	1
Merrimac Street WB TH/RT	526	0.0	A	0	578	0.0	A	0	610	0.0	A	0
Private Driveway SB LT/RT	89	38.6	E	3	114	>50.0	F	6	114	>50.0	F	7
Saturday Midday:	67	50.0	L	3	117	/50.0	1	U	117	1.7	1	,
Merrimac Street EB LT/TH	839	1.3	A	1	920	1.7	A	1	974	0.0	A	1
Merrimac Street WB TH/RT	472	0.0	A	0	519	0.0	A	0	563	>50.0	A	0
Private Driveway SB LT/RT	110	>50.0	F	6	172	>50.0	F	17	172	> 50.0	F	18

See notes at end of table.

Table 11 (Continued) UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

	2016 Existing					2023 No-I	Build		2023 Build			
Unsignalized Intersection/Peak Hour/Movement	Demand ^a	Delay ^b	LOS ^c	Queue ^d 95 th	Demand	Delay	LOS	Queue 95 th	Demand	Delay	LOS	Queue 95 th
Winter Street at the Route 1 Southbound On-Ramp												
Weekday Morning:												
Winter Street SB LT/TH	219	0.0	A	0	235	0.0	A	0	264	0.0	A	0
Weekday Evening:												
Winter Street SB LT/TH	271	0.0	A	0	295	0.0	A	0	313	0.0	A	0
Saturday Midday:												
Winter Street SB LT/TH	267	0.0	A	0	295	0.0	A	0	326	0.0	A	0
Summer Street at Pleasant Street and the												
Route 1 Northbound Off-Ramp												
Weekday Morning:												
Route 1 Northbound Off-Ramp EB LT	98	9.8	A	1	105	9.9	A	1	111	10.0	В	1
Pleasant Street WB RT	4	8.8	A	0	4	8.9	A	0	4	8.9	A	0
Summer Street NB TH	101	0.0	A	0	109	0.0	A	0	112	0.0	A	0
Weekday Evening:												
Route 1 Northbound Off-Ramp EB LT	112	10.3	В	1	124	10.6	В	1	150	10.9	В	1
Pleasant Street WB RT	7	9.3	A	0	8	9.4	A	0	8	9.4	A	0
Summer Street NB TH	170	0.0	Α	0	186	0.0	Α	0	195	0.0	A	0
Saturday Midday:												
Route 1 Northbound Off-Ramp EB LT	118	10.7	В	1	132	11.0	В	1	155	11.5	В	1
Pleasant Street WB RT	5	9.5	A	0	5	9.6	A	0	5	9.7	A	0
Summer Street NB TH	189	0.0	A	0	209	0.0	A	0	222	0.0	A	0
State Street at Liberty Street												
Weekday Morning:												
State Street SB TH	398	0.0	A	0	427	0.0	A	0	434	0.0	A	0
Liberty Street WB LT	91	10.5	В	1	98	10.8	В	1	98	10.8	В	1
Weekday Evening:												
State Street SB TH	363	0.0	A	0	393	0.0	Α	0	404	0.0	A	0
Liberty Street WB LT	57	10.2	В	1	61	10.4	В	1	61	10.5	В	1
Saturday Midday:												
State Street SB TH	346	0.0	A	0	378	0.0	A	0	397	0.0	A	0
Liberty Street WB LT	91	10.3	В	1	98	10.5	В	1	98	10.6	В	1

^aDemand in vehicles per hour. ^bAverage control delay per vehicle (in seconds).

^cLevel-of-Service.

^dQueue length in vehicles.

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

Signalized Intersections

As can be seen in Table 10, the signalized intersection of Merrimac Street and Water Street at State Street was shown to operate at an overall LOS B or better during the weekday morning, weekday evening and Saturday midday peak hours under all analysis conditions. Project-related impacts at the intersection were identified as an increase in average motorist delay of less than 1.0 seconds over No-Build conditions with no reported change in LOS and vehicle queues predicted to increase by no more than one (1) vehicle during the peak hours.

Unsignalized Intersections

As can be seen in Table 11, the majority of the movements at the unsignalized study area intersections were shown to operate at LOS D or better during the peak hours under all analysis conditions; however, individual movements at specific intersections were identified to be operating at or over capacity independent of the Project. Project-related impacts at the unsignalized study area intersections were identified as follows:

Merrimac Street/Winter Street/Route 1 Southbound Off-Ramp — No change in LOS with a predicted increase in vehicle queuing of up to 5 vehicles. <u>Left-turn movements from the Route 1 off-ramp were identified to be operating at LOS F during the peak hours independent of the Project.</u> With the installation of a traffic control signal at the intersection in conjunction with the planned MassDOT improvement project, overall operating conditions could be improved to LOS C or better during the peak hours.

Merrimac Street/Summer Street/Route 1 Northbound On-Ramp — The LOS for left-turn and through movements from Summer Street were predicted to degrade from LOS E to F during the weekday morning peak-hour with the addition of Project-related traffic, with the LOS for the right-turn movement from Summer Street predicted to degrade from LOS C to LOS D during the Saturday midday peak-hour. Vehicle queues at the intersection were predicted to increase by up to 2 vehicles with the addition of Project-related traffic. Left-turn and through movements from the Summer Street approach were identified to be operating at LOS F during the weekday evening peak-hour independent of the Project. With the installation of a traffic control signal at the intersection in conjunction with the planned MassDOT improvement project, overall operating conditions could be improved to LOS C or better during the peak hours.

Merrimac Street/Market Street/Tournament Wharf – The LOS for all movements exiting Tournament Wharf was shown to degrade from LOS E to LOS F during the weekday evening peak-hour as a result of the addition of Project-related traffic, with increases in vehicle queuing of up to 7 vehicles predicted as a result of the Project. Independent of the Project, it was noted that both the Market Street and Tournament Wharf approaches operate at or over capacity (LOS E or F) during the peak hours as a result of the relatively large volume of conflicting traffic on Merrimac Street during these periods. The installation of traffic control signals at the Route 1/Merrimac Street intersections would provide gaps in the follow of traffic along Merrimac Street that would allow vehicles to exit Market Street and Tournament Wharf with reduced delays thereby improving traffic operations at this intersection.

Merrimac Street/McKay's Wharf – The LOS for the McKay's Wharf approach was shown to degrade from LOS B to LOS C during the weekday morning peak-hour, from LOS D to LOS F during the weekday evening peak-hour and from LOS C to LOS F during the Saturday midday peak-hour as a result of the addition of Project-related traffic. Vehicle queues at the intersection were predicted to increase by up to 4 vehicles with the addition of Project-related traffic. <u>All</u>

movements exiting the private driveway located opposite McKay's Wharf were shown to operate at LOS F during the weekday evening and Saturday midday peak hours independent of the Project. The installation of traffic control signals at the Route 1/Merrimac Street intersections would provide gaps in the follow of traffic along Merrimac Street that would allow vehicles to exit McKay's Wharf with reduced delays thereby improving traffic operations at this intersection.

Merrimac Street/Titcomb Street – No changes in LOS or vehicle queuing are predicted to occur as a result of the Project. All movements exiting Titcomb Street were identified to be operating at LOS F during the weekday evening and Saturday midday peak hours independent of the Project as a result of the relatively large volume of conflicting traffic on Merrimac Street during these periods. The installation of traffic control signals at the Route 1/Merrimac Street intersections would provide gaps in the follow of traffic along Merrimac Street that would allow vehicles to exit Titcomb Street with reduced delays thereby improving traffic operations at this intersection.

Merrimac Street/Brown's Wharf - The LOS for the Brown's Wharf approach was shown to degrade from LOS B to LOS C during the weekday morning peak-hour and from LOS C to LOS E during the weekday evening and Saturday midday peak hours as a result of the addition of Project-related traffic. Vehicle queues at the intersection were predicted to increase by up to 2 vehicles with the addition of Project-related traffic. Reactivation of the traffic control signal at the Merrimac Street/Green Street intersection would serve to reduce delays for motorists exiting Brown's Wharf as a result of the creation of gaps in the flow of traffic along Merrimac Street through normal operation of the traffic signal system.

Merrimac Street/Green Street/Waterfront Park - The LOS for left-turn movements exiting Green Street was shown to degrade from LOS D to LOS E during the weekday morning peakhour as a result of the addition of Project-related traffic, with increases in vehicle queuing of up to 3 vehicles predicted as a result of the Project. Independent of the Project, it was noted that the left-turn movement from the Green Street approach and all movements from the driveway serving Waterfront Park operate over capacity (LOS F) during the weekday evening and Saturday midday peak hours as a result of the relatively large volume of conflicting traffic on Merrimac Street during these periods. With the reactivation of the traffic control signal at the intersection, overall operating conditions at the intersection could be improved to LOS D or better during the peak hours.

Winter Street/Route 1 Southbound On-Ramp - All movements were shown to operate at LOS A under all analysis conditions with negligible vehicle queuing predicted.

Summer Street/Pleasant Street/Route 1 Northbound Off-Ramp - The LOS for the left-turn movement exiting the Route 1 off-ramp was shown to degrade slightly from LOS A to LOS B during the weekday morning peak-hour as a result of the addition of Project-related traffic, with no material change in vehicle queuing predicted as a result of the Project. All movements at this intersection were shown to operate at LOS A or B under all analysis conditions.

State Street/Liberty Street – All movements were shown to operate at LOS A or B under all analysis conditions with vehicle queues of up to 1 vehicle.

SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the intersections of Merrimac Street with Tournament Wharf, McKay's Wharf and Brown's Wharf, the ways that will provide access to the Project site, in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)¹² requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 12 presents the measured SSD and ISD at the subject intersections.

¹²A Policy on Geometric Design of Highway and Streets, 6th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2011.

Table 12 SIGHT DISTANCE MEASUREMENTS^a

		Feet	
Intersection/Sight Distance Measurement	Required Minimum (SSD)	Desirable (ISD) ^b	Measured
Merrimac Street at Tournament Way			
Stopping Sight Distance:			
Merrimac Street approaching from the east	200		158/221°/300 ^d
Merrimac Street approaching from the west	200		500+
Intersection Sight Distance:			
Looking to the east from Tournament Wharf	200	290/335	99/112 ^c /300 ^d
Looking to the west from Tournament Wharf	200	290/335	500+
Merrimac Street at McKay's Wharf			
Stopping Sight Distance:			
Merrimac Street approaching from the east	200		92/174°/260°
Merrimac Street approaching from the west	200		167/342°/300 ^d
Intersection Sight Distance:			
Looking to the east from McKay's Wharf	200	335/390	75/161°/200 ^d
Looking to the west from McKay's Wharf	200	335/390	103/129 ^c /300 ^d
Merrimac Street at Brown's Wharf Stopping Sight Distance:			
Merrimac Street approaching from the east	200		500+
Merrimac Street approaching from the west	200		296
	200		_, _,
Intersection Sight Distance:			
Looking to the east from Brown's Wharf	200	335/390	500+
Looking to the west from Brown's Wharf	200	335/390	289

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 6th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2011; and based on a 30 mph approach speed on Merrimac Street.

As can be seen in Table 12, the available sight lines at the intersections of Merrimac Street with the ways that provide access to the Project site currently meet, exceed or could be made to meet or exceed the recommended minimum sight distance requirements for safe operation (SSD) based on a 30 mph approach speed along Merrimac Street, which is consistent with the posted speed limit in the vicinity of the Project site and is 6 mph above the average measured 85th percentile vehicle travel speed (24 mph).

As noted in Table 12, lines of sight exiting the ways that serve the Project site were found to be partially obscured by on-street parking adjacent to the driveways; however, sight lines improved when the vehicle was positioned within the sidewalk area, typical of driveway exit maneuvers in an urban setting with on-street parking. That being said, independent of the Project, the City should consider restricting parking adjacent to subject intersections in order to provide the requisite sight lines and to facilitate emergency vehicle access.

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

cSight line that is available with driver positioned 7-10 feet from the edge of roadway (from within the sidewalk area).

^dWith the removal of on-street parking adjacent to the way.

CONCLUSIONS

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed 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. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

- 1. Using trip-generation statistics published by the ITE¹³ and without consideration of transit use, the Project is predicted to generate approximately 3,038 primary vehicle trips on an average weekday and 3,844 primary vehicle trips on a Saturday (both two-way, 24-hour volumes), with 159 primary vehicle trips expected during the weekday morning peak-hour, 266 primary vehicle trips expected during the weekday evening peak-hour and 349 primary vehicle trips expected during the Saturday midday peak-hour;
- 2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with the majority of the movements at the study intersections shown to continue to operate at a LOS that represents "acceptable" traffic operations;
- 3. In comparison to the existing uses that occupy the Project site, the Project is expected to result in 2,744 additional total (two-way and inclusive of pass-by trips) vehicle trips on an average weekday and 3,908 additional vehicle trips on a Saturday, with 97 additional total vehicle trips expected during the weekday morning peak-hour, 253 additional vehicle trips expected during the weekday evening peak-hour and 367 additional vehicle trips expected during the Saturday midday peak-hour;
- 4. Increased delays were noted for vehicles exiting the Project site with the completion of the redevelopment project; however, the potential vehicle queues can be contained within the Project site without impeding access or on-site circulation;

¹³Ibid 1.

- 5. No apparent safety deficiencies were noted with respect to the motor vehicle crash history at the study intersections; and
- 6. Lines of sight to and from the ways that provide access to the Project site from Merrimac Street were found to meet or could be made to meet or exceed the required minimum distance for the intersections to function in a safe manner based on the appropriate approach speed along Merrimac Street and with consideration of the urban environment in which the Project site is located.

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

RECOMMENDATIONS

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The improvements that have been recommended as a part of this evaluation, 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 and the associated impacts on the transportation infrastructure.

Project Access

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. The following recommendations are offered with respect to the design and operation of the ways that serve the Project site:

- The access ways to the Project site should be a minimum of 24-feet in width for two-way travel and a minimum of 20-feet in width for one-way operation, or as required to accommodate fire truck turning maneuvers pursuant to the requirements of NFPA® 1. 14
- Fire lanes should be a minimum of 20-feet in width and constructed of bituminous asphalt concrete or other stabilized surface material that can support travel by the largest anticipated responding emergency vehicle pursuant to the requirements of NFPA® 1.
- ➤ Vehicles exiting the Project should be placed under STOP-sign control with marked STOP-lines provided.
- ➤ All signs and pavement markings to be installed within the Project shall conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD). ¹⁵
- > Sidewalks should be provided within the Project site linking the proposed buildings and other amenities to the sidewalk infrastructure along Merrimac Street.

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¹⁴Ibid 3.

¹⁵Ibid 4.

- The ways serving the Project site should be constructed as "pan-type" driveways so that the sidewalk is flush across traveled-way or, where this design cannot be accommodated, Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided.
- > Signs and landscaping to be within intersection sight triangle areas of the ways serving the Project site should be designed and maintained so as not to restrict lines of sight.
- Snow windrows within the sight triangle areas of the ways serving the Project site should be promptly removed where such accumulations would exceed 2.5 feet in height.
- > The City should consider restricting on-street parking for a minimum distance of 20-feet on either side of the ways serving the Project site in order to provide and maintain the required lines of sight for the ways to operate in a safe manner.
- A school bus waiting area should be provided at an appropriate location defined in consultation with the City.

Transportation Demand Management

The Project site is ideally situated to take advantage of available public transportation opportunities, including the existing bus service operated by the MVRTA along Merrimac Street to the east of the Project site, the future MVRTA bus terminal that is to be located opposite the Project site off Titcomb Street, and the MBTA Commuter Rail service at Newburyport Station to the south. In addition, the Project site is directly accessible from the Clipper City Rail Trail which provides access to the Newburyport Commuter Rail Station and the trail system along the Merrimack River. 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 NuRide 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;
- 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
- > Secure 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.

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). In order to improve traffic operations at this intersection and to reduce both motorist delays and vehicle queuing on the Green Street approach, the Project proponent will restore the traffic signal to full operation, including replacing the traffic signal controller and associated appurtenances to the extent necessary to reactivate the traffic signal. As can be seen in Table 13, with reactivation of the traffic control signal at the Merrimac Street/Green Street intersection, overall operating conditions were shown to improve to LOS D or better.

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

Table 13 MITIGATED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

		2023 N	o-Build			2023	Build		2023 Build with Mitigation			
Signalized Intersection/Peak-hour/Movement	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th	V/C	Delay	LOS	Queue 50 th /95 th	V/C ^a	Delay ^b	LOS ^c	Queue ^d 50 th /95 th
Merrimac Street at Green Street and												
a Private Driveway												
Weekday Morning:												
Merrimac Street EB LT/TH									0.77	23.4	C	9/26
Merrimac Street WB TH/RT									0.42	14.3	В	4/11
Green Street NB LT									0.35	37.4	D	2/4
Green Street NB RT									0.49	10.1	В	0/2
Driveway SB LT/RT									0.14	1.0	A	0/0
Overall										19.3	В	
Weekday Evening:												
Merrimac Street EB LT/TH									0.91	36.3	D	15/38
Merrimac Street WB TH/RT		See U	Insignaliz	ed Intersect	ion Analy	sis (Table	11)		0.61	17.6	В	9/22
Green Street NB LT		200	11018114111			313 (14010	/		0.67	54.3	D	5/9
Green Street NB RT									0.43	9.9	A	0/3
Driveway SB LT/RT									0.65	32.7	C	1/3
Overall										28.9	C	
Saturday Midday:									0.00	50.6	ъ.	10/42
Merrimac Street EB LT/TH									0.99	52.6	D	19/42
Merrimac Street WB TH/RT									0.54	16.8	В	8/18
Green Street NB LT									0.67	64.1	Е	4/8
Green Street NB RT									0.57	12.7	В	0/3
Driveway SB LT/RT									0.83	54.7	D	3/8
Overall										38.5	D	

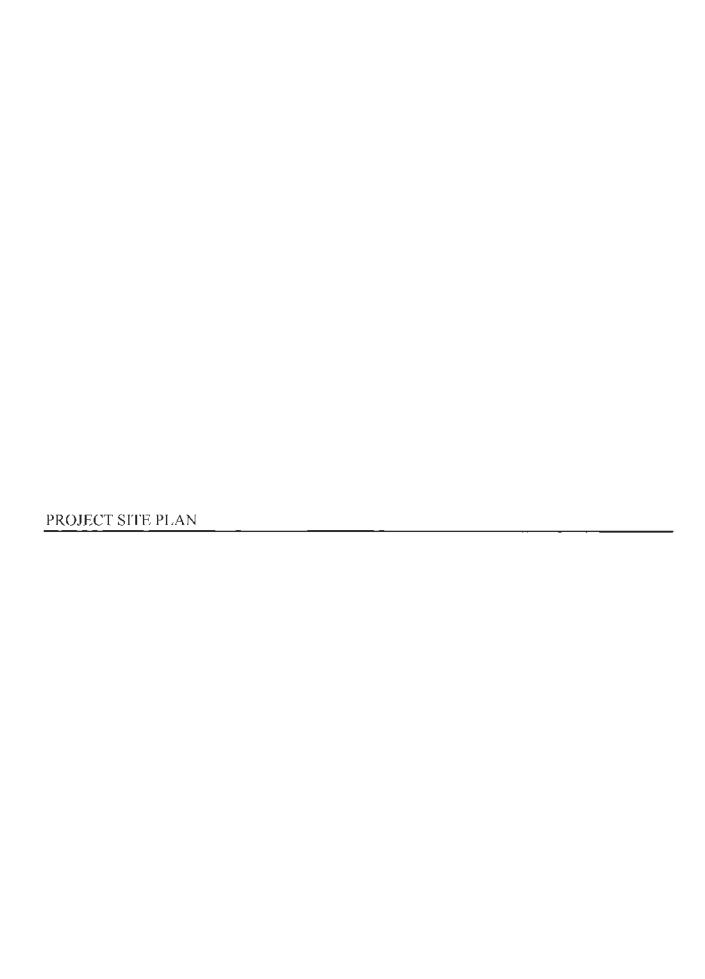
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

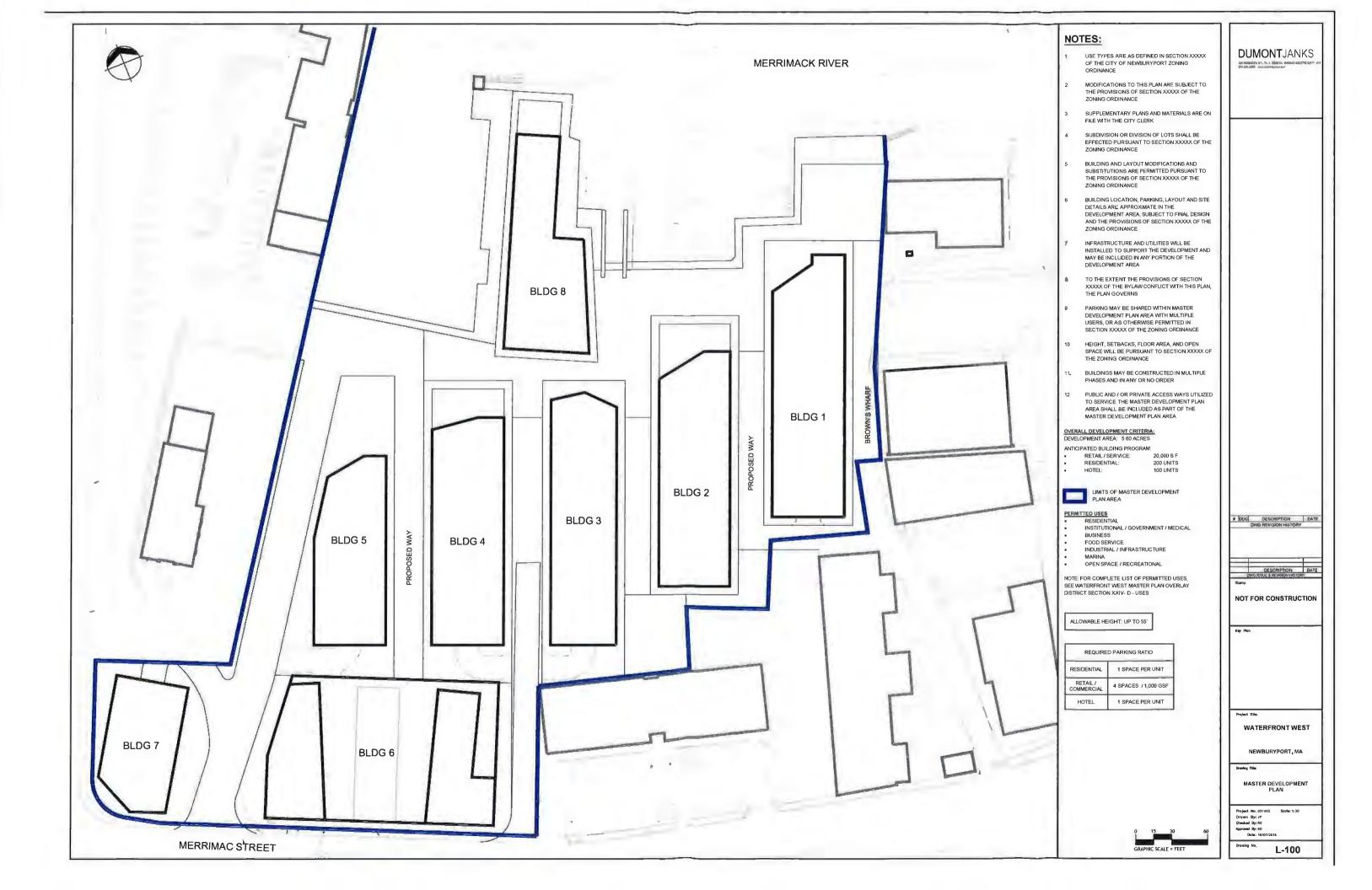
^aVolume-to-capacity ratio. ^bPercentile delay per vehicle in seconds. ^cLevel-of-Service.

^dQueue length in vehicles.

APPENDIX

PROJECT SITE PLAN
AUTOMATIC TRAFFIC RECORDER COUNT DATA
MANUAL TURNING MOVEMENT COUNT DATA
SEASONAL ADJUSTMENT DATA
PUBLIC TRANSPORTATION SCHEDULES
VEHICLE TRAVEL SPEED DATA
MASSDOT CRASH RATE WORKSHEETS
GENERAL BACKGROUND TRAFFIC GROWTH
BACKGROUND DEVELOPMENT NETWORKS
REMOVAL OF EXISTING SITE GENERATED TRAFFIC NETWORKS
TRIP-GENERATION CALCULATIONS
JOURNEY TO WORK TRIP DISTRIBUTION
PROJECT-GENERATED RESIDENTIAL AND COMMERCIAL TRAFFIC NETWORKS
CAPACITY ANALYSIS WORKSHEETS







Accurate Counts 978-664-2565

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

7281VOL1

Start	16-Jun-16		VB		Totals		В		Totals		ed Totals	
Time	Thu	Morning	Afternoon	Morning	Afternoon	Morning_	Afternoon	Morning	Afternoon	Morning	Afternoo	
12:00		16	127			8	168					
12:15		9	133			8	161					
12:30		9	137		1	2	154					
12:45		6	133	40	530	9	159	27	642	67	117	
01:00		4	121			4	167					
01:15		3	130		1	5	170					
01:30		5	133			6	146					
01:45		1	134	13	518	1	167	16	650	29	116	
02:00		0	150			3 2 3	117					
02:15		1	167			2	146					
02:30		0	129			3	162					
02:45		2	169	3	615	3	142	11	567	14	118	
03:00		1	152			0	161					
03:15		3	140			4	156					
03:30		3	146			4	169					
03:45		1	155	8	593	1	160	9	646	17	123	
04:00		3	149			1	155					
04:15		5	165			4	139					
04:30		1	149			4	152					
04:45		8	145	17	608	14	170	23	616	40	122	
05:00		7	191			23	141					
05:15		12	171			36	164					
05:30		30	152		- 1	40	157					
05:45		40	156	89	670	46	174	145	636	234	130	
06:00		37	149			25	167					
06:15		46	106		1	36	176					
06:30		63	116		1	57	165					
06:45		84	116	230	487	85	180	203	688	433	117	
07:00		71	132		1	83	152					
07:15		94	112		1	99	147					
07:30		96	117		i	123	103					
07:45		85	118	346	479	137	134	442	536	788	101	
08:00		106	108			163	115					
08:15		105	133			171	98					
08:30		94	113		1	177	90					
08:45		95	138	400	492	191	83	702	386	1102	87	
09:00		103	99			161	83					
09:15		85	76			165	56					
09:30		88	102			161	48					
09:45		92	69	368	346	144	47	631	234	999	58	
10:00		104	65		0.0	166	39					
10:15		94	58			147	25					
10:30		118	38			132	27					
10:45		104	36	420	197	162	22	607	113	1027	31	
11:00		101	30	0		163	16				0,	
11:15		115	53			150	14					
11:30		96	21			143	11					
11:45		113	19	425	123	202	15	658	56	1083	17	
Total	- territor	2359	5658	720	1,20 }	3474	5770	.0,00	50 [5833	1142	
Percent		29.4%	70.6%			37.6%	62.4%			33.8%	66,29	

Accurate Counts 978-664-2565

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

7281VOL1

Start	17-Jun-16	WB		Hour Totals		EB		Hour Totals			ed Totals
Time	Fri	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoo
12:00		22	140			15	193				
12:15		10	135			11	190		-		
12:30		14	117		- 1	10	195		I		
12:45		7	142	53	534	9 5	172	45	750	98	128
01:00		4	126			5	182				
01:15		4	129		- 1	15	172		1		
01:30		2	143			4	160				
01:45		1	161	11	559	4	178	28	692	39	125
02:00		3	152			2	169				
02:15		0	170			4 2 3 3 2 0 6	131				
02:30		1	155		- 1	3	162				
02:45			175	7	652	2	182	10	644	17	129
03:00		3 2	154		002	0	167	10	011		123
03:15		2	173		- 1	6	176				
03:30		0	173		- 1	2	167				
03:45		1	168	5	668	2	177	8	687	13	135
04:00		1	135	3	000	6	175	0	007	13	133
04:00		6	139			6 7	184				
04:15		4	172			5	144				
				20	000	13		24	670	54	407
04:45		9	154	20	600	13	175	31	678	51	127
05:00		17	153			13	173				
05:15		16	142			35	178				
05:30		31	143			35	186				
05:45		20	131	84	569	32	187	115	724	199	129
06:00		34	133			31	189				
06:15		45	142			37	179				
06:30		65	101			51	171				
06:45		77	124	221	500	83	154	202	693	423	119
07:00		73	135			90	165				
07:15		83	140			95	156				
07:30		90	133		1	122	139				
07:45		95	144	341	552	130	112	437	572	778	112
08:00		106	142			167	117				
08:15		127	112			139	87				
08:30		98	124			173	94				
08:45		90	129	421	507	203	82	682	380	1103	88
09:00		99	111			199	81				
09:15		82	116			157	75				
09:30		110	67		1	156	65				
09:45		101	92	392	386	182	76	694	297	1086	68
10:00		119	112	•	***	151	54				
10:15		115	102			145	49				
10:30		111	78		ĺ	178	45				
10:45		121	93	466	385	160	30	634	178	1100	56
11:00		123	65	400	300	146	31	004	170	1100	30
11:15		136	45		1	147	36				
11:30		108	27			199	37				
11:45		116	33	483	170	181	15	673	119	1156	28
Total				403	170 [6/3	119		
		2504 29.2%	6082 70.8%			3559 35.7%	6414 64.3%			6063 32,7%	1249 67.3%

Accurate Counts

978-664-2565

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

7281VOL1

Start	18-Jun-16	WB		Hour Totals		EB		Hour	Totals	Combined Totals	
Time	Sat	Morning	Afternoon		Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoor
12:00		31	115			16	174				
12:15		19	138			6	155				
12:30		17	132			9	166				
12:45		15	105	82	490	16	151	47	646	129	113
01:00		11	145			7	157		• • •		, , ,
01:15		16	143			12	166				
01:30		16 3	129			10	175				
01:45		5	145	35	562	8	170	37	668	72	1230
02:00		6	127	00	002	7	157	O,	000	, -	120
02:15		8	143			ó	157				
02:30		7	139			3	149				
02:45		4	124	25	533	6	157	16	620	41	115
03:00		4	169	25	333	3	139	10	020	41	115
03:00		1	143			3	158				
03:13		3	122			3	160				
03:45		6	145	14	579	0	152	10	000	00	140
03.45		3		14	5/9		102	12	609	26	1188
04:00		3	168			5	146				
04:15		3	140			5	153				
04:30		6	145			9	162				
04:45		8	150	20	603	13	169	32	630	52	123
05:00		8	154			10	146				
05:15		11	151			16	153				
05:30		8	149			24	160				
05:45		14	141	41	595	23	147	73	606	114	120
06:00		19	126			35	160				
06:15		26	113			49	167				
06:30		43	139			45	158				
06:45		39	120	127	498	75	151	204	636	331	1134
07:00		49	143			68	142				
07:15		55	152			92	126				
07:30		56	126			88	142				
07:45		72	116	232	537	118	121	366	531	598	1068
08:00		73	135			128	110				
08:15		67	130			145	95				
08:30		91	135			134	92				
08:45		95	134	326	534	172	94	579	391	905	92
09:00		110	130			140	78				
09:15		87	130			170	75		1		
09:30		122	99			170	82				
09:45		117	114	436	473	169	76	649	311	1085	78
10:00		114	100	100		191	64	0.10	011	,,,,,	, ,
10:15		129	113			187	52				
10:30		118	103		1	169	39				
10:45		115	83	476	399	196	42	743	197	1219	596
11:00		126	71	470	333	122	48	743	197	1213	330
11:15		97	59			188	31				
11:13		146	48			150	29				
11:30		140		400	220	150	29	604	494	4407	000
11:45		127	48	496	226	171	26	631	134	1127	36
Total		2310	6029			3389	5979			5699	1200
Percent		27.7%	72.3%			36.2%	63.8%			32.2%	67.8%
Grand Total		7173	17769			10422	18163			17595	35932
Percent		28.8%	71.2%			36.5%	63.5%			32.9%	67.1%

ADT

ADT 17,842

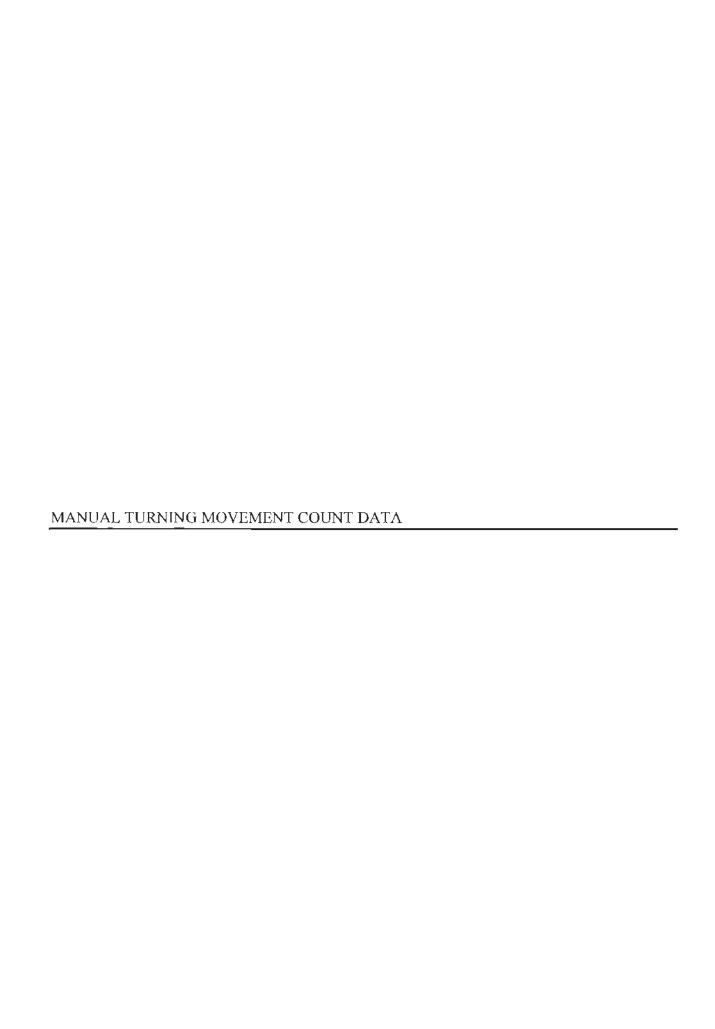
AADT 17,842

Accurate Counts 978-664-2565

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

7281VOL1

Start	13-Jun-16		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM		*	*	* [40	27	53	45	82	47	*	*	58	40
01:00		*	*	*	*		13	16	11	28	35	37	*	*	20	27
02:00	•	*	*	*	•		3	11	7	10	25	16	*	*	12	12
03:00		*	*	*	•		8	9	5	8	14	12	*	*	9	10
04:00	•	*	*	*	-	*	17	23	20	31	20	32	*	*	19	29
05:00		*	•	*	4	*	89	145	84	115	41	73	•	*	71	111
06:00		*	*	*	•	*]	230	203 [221	202	127	204	w/r	*	193	203
07:00		-	•	*	•		346	442	341	437	232	366	*	*	306	415
08:00		*	*	•	*	*	400	702	421	682	326	579	*	*	382	654
09:00	•	•	•	4	•		368	631	392	694	436	649	*	*	399	658
10:00		*	*	*		*	420	607	466	634	476	743	*	*	454	661
11:00	.*	•	*			*	425	658	483	673	496	631	*	*	468	654
12:00 PM		*	*		*	-	530	642	534	750	490	646	*	*	518	679
01:00		•	•		10		518	650	559	692	562	668	•	*	546	670
02:00	*	*	*	*	•		615	567	652	644	533	620	*	*	600	610
03:00		-	•	•	•		593	646	668	687	579	609	•		613	647
04:00		*]	*		•	*	608	616	600	678	603	630	*	*	604	641
05:00		*	•				670	636	569	724	595	606	*	*	611	655
06:00	*	*	*		•		487	688	500	693	498	636	*	*	495	672
07:00	*	*	+				479	536	552	572	537	531	*	*	523	546
08:00	*	*	*		•	*	492	386	507	380	534	391	*	*	511	386
09:00	*	•	*				346	234	386	297	473	311	*	*	402	281
10:00	*	*	*	(4)		*	197	113	385	178	399	197	*	+	327	163
11:00		•	*	*	•	*	123	56	170	119	226	134	*	*	173	103
Lane	0	0	0	0	0	0	8017	9244	8586	9973	8339	9368	0	0	8314	9527
Day	. 0		0		0		1720		185		1770		0		1784	
AM Peak	-	-	-		and .	-	11:00	08:00	11:00	09:00	11:00	10:00		_	11:00	10:00
Vol.		16-		4			425	702	483	694	496	743	-	-	_468	661
PM Peak	-	-	-	-	-		17:00	18:00	15:00	12:00	16:00	13:00	-		15:00	12:00
Vol.	*	95.	=	-mer	146	**	670	688	.668	750	<u>6</u> 03	668	-		613	679
Comb.	0		0 0		0 0		17261		18559		17707		0		17841	
Total	_															
ADT	ADT	ADT 17,842		2 AADT 17,842												



N/S Street: Rt I / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA

Weather : Clear

File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016

Page No : 1

		rimac St m West	Fre		St / Winte	Fro		rrimac St om East	Fr		Route 1 om North	Fro	
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru '	Left	Right	Thru	Left	Start Time
23	19	56	9	7	4	14	21	54	7	7	5	28	07:00 AM
28	25	68	14	10	10	13	25	56	7	24	18	16	07:15 AM
33	18	66	12	17	13	10	22	81	10	23	15	48	07:30 AM
35	32	78	17	23	8	14	29	63	12	23	15	42	07:45 AM
120	94	268	52	57	35	51	97	254	36	77	53	134	Total
37	30	118	13	11	10	15	33	57	6	19	16	51	08:00 AM
41	25	105	11	15	15	17	41	73	10	24	22	58	08:15 AM
38	12	116	20	32	14	11	25	59	13	19	18	46	08:30 AM
40	20	115	23	25	12	16	33	67	11	32	12	43	08:45 AM
158	87	454	67	83	51	59	132	256	40	94	68	198	Total
279	181	722	119	140	86	110	229	510	76	171	121	332	Grand Total
	17.7	70.6	11.6	41.7	25.6	32.7	28.1	62.6	9.3	27.4	19.4	53.2	Apprch %
	6.5	25.8	4.3	5	3.1	3.9	8.2	18.2	2.7	6.1	4.3	11.9	Total %
27 5	177	717	118	133	84	106	226	509	71	169	112	332	Cars
98.	97.8	99.3	99.2	95	97.7	96.4	98.7	99.8	93.4	98.8	92.6	100	% Cars
4	4	5	1	7	2	4	3	1	5	2	9	0	Trucks
1.	2.2	0.7	0.8	5	2.3	3.6	1.3	0,2	6,6	1.2	7.4	0	% Trucks

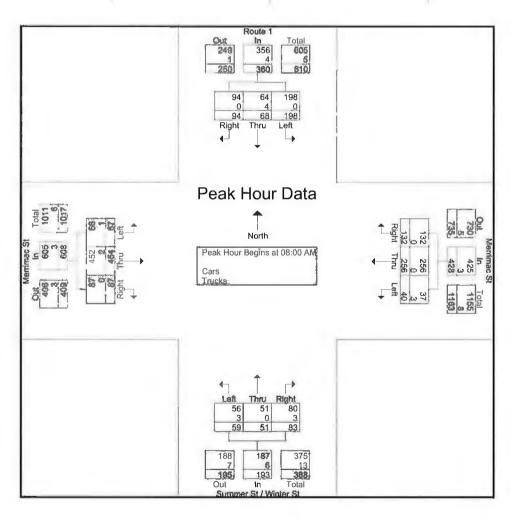
N/S Street: Rt 1 / Winter / Summer E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name # 72810001 Site Code # 72810001 Start Date # 6/16/2016

Page No * 2

			ute 1				mac St	T	Sur		t / Winte	er St			mac St		
		From	n North			Fron	n 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 Analys	sis From	07:00 /	AM to 08	:45 AM - P	eak 1 of	1		- NA	_							2 4	
Peak Hour for Ent	tire Inter	rsection	Begins a	at 08:00 AM	1												
08:00 AM	51	16	19	86	6	57	33	96	15	10	11	36	13	118	30	161	379
08:15 AM	58	22	24	104	10	73	41	124	17	15	15	47	11	105	25	141	416
08:30 AM	46	18	19	83	13	59	25	97	11	14	32	57	20	116	12	148	385
08:45 AM	43	12	32	87	11	67	33	111	16	12	25	53	23	115	20	158	409
Total Volume	198	68	94	360	40	256	132	428	59	51	83	193	67	454	87	608	1589
% App. Total	55	18.9	26,1		9.3	59.8	30.8		30.6	26.4	43		11	74.7	14.3		
PHF	. 853	.773	.734	,865	.769	.877	.805	.863	.868	.850	.648	.846	.728	.962	.725	.944	.955
Cars	198	64	94	356	37	256	132	425	56	51	80	187	66	452	87	605	1573
% Cars	100	94.1	100	98.9	92.5	100	100	99.3	94.9	100	96.4	96,9	98.5	99.6	100	99.5	99.0
Trucks	0	4	0	4	3	0	0	3	3	0	3	6	1	2	0	3	16
% Trucks	0	5,9	0	1.1	7.5	0	0	0.7	5.1	0	3.6	3.1	1,5	0.4	0	0.5	1.0



N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No : 4

-						ps Printed			- I				
		Route 1			errimac St			r St / Winto om South	er St		errimac St om West		
Start Time	Left	Thru	Right	Left!	Thru	Right 1	Left	Thru	Right	Left	Thru	Right	Int. Total
07:00 AM	28	5	7	6	54	20	13	4	7	9	56	18	227
07:15 AM	16	15	22	7	56	25	13	9	10	14	68	25	280
07:30 AM	48	13	23	10	80	21	10	13	15	12	64	18	327
07:45 AM	42	15	23	11	63	28	14	7	21	17	77	29	347
Total	134	48	75	34	253	94	50	33	53	52	265	90	1181
08:00 AM	51	15	19	5	57	33	14	10	10	13	118	30	375
08:15 AM	58	21	24	9	73	41	15	15	14	11	104	25	410
08:30 AM	46	17	19	13	59	25	11	14	31	19	116	12	382
08:45 AM	43	11	32	10	67	33	16	12	25	23	114	20	406
Total	198	64	94	37	256	132	56	51	80	66	452	87	1573
Grand Total	332	112	169	71	509	226	106	84	133	118	717	177	2754
Apprch %	54.2	18.3	27.6	8.8	63.2	28	32.8	26	41.2	11.7	70.8	17.5	
Total %	12.1	4.1	6.1	2.6	18.5	8.2	3.8	3.1	4.8	4.3	26	6.4	

N/S Street : Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No : 7

	1	rrimac St	Me	r St	St / Winte		Printed-	rrimac St	Me	T	Route 1	-	
		om West		, 0.	m South			om East			om North		
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left 1	Right	Thru	Left	Start Time
4	1	0	0	0	0	1	1,	0	1	0	0	0	07:00 AM
6	0	0	0	0	1	0	0	0	0	2	3	0	07:15 AM
8	0	2	0	2	0	0	1	1	0	0	2	0	07:30 AM
9	3	1	0	2	1	0	1_	0	1	0	0	0	07:45 A M
27	4	3	0	4	2	1	3	1	2	2	5	0	Total
2	0	0	0	1	0	1	0	0	1	0	1	0	08:00 AM
6	0	1	0	1	0	2	0	0	1	0	1	0	08:15 AM
3	0	0	1	1	0	0	0	0	0	0	1	0	08:30 AM
3	0	1	0	0	0	0	0	0	1	0	1	0	08:45 AM
16	0	2	1	3	0	3	0	0	3	0	4	0	Total
43	4	5	1	7	2	4	3	1	5	2	9	0	Grand Total
	40	50	10	53.8	15.4	30.8	33.3	11.1	55.6	18.2	81.8	0	Apprch %
	9.3	11.6	2.3	16.3	4.7	9.3	7	2.3	11.6	4.7	20.9	0	Total %

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street
City/State : Newburyport, MA
Weather : Clear

File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No : 10

-		Davis	in 4			Mannin	C+	2022		- Bikes		- 04		Manda	04		T		
1		Rou					nac St		Sun		/ Winte	rSt			nac St				
Divisi Time	1 (1	From	North	2	1 6	From		D 1	1 6	From		D .	1 6		West	D .			1
Start Time	Left		Right		Left	Thru			Left	inru	Right	1	Left	Inru	Right			Inclu Total	Int. Tota
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	0	2	2	4
07:15 AM	1	0	1	0	0	1	0	0	0	0	0	1	0	2	1	0	1	6	7
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	3	0	0	0	0	4	1	5
07:45 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	3
Total	1	0	1	1	0	2	1	1	0	1	0	6	0	4	1	0	8	11	19
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	3	0	1	0	0	3	2	
08:15 AM	0	0	0	3	0	0	0	1	0	0	0	2	0	2	0	Q	6	2	8
08:30 AM	0	0	0	1	0	0	0	0	0	0	0	a j	0	0	0	Ó	2	0	2
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	2	0	2	0	0	3	3	6
Total	0	1	0	5	0	0	0	1	0	1	0	8	0	5	0	Q	14	7	2
Grand Total	1	1	1	6 [0	2	1	2	0	2	0	14	0	9	1	0	22	18	40
Apprch %	33.3	33,3	33.3		0	66.7	33,3		0	100	0		0	90	10				
Total %	5.6	5,6	5.6		0	11.1	5.6		0	11.1	0		0	50	5.6		55	45	

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

Total Volume

% App. Total

PHF

50

.250

0

50

File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No : 11

11

.458

			ute 1 North				mac St n East		Su		t / Winte South	or St			mac St West		
Start Time	Left	Thru	Right	App. Total	App. Total				Left	Thru	Right	App, Total	Left	Thru ,	Right	App. Total	Int. Total
Peak Hour Analysi	is From	07:00 A	M to 08		eak 1 of	1										matrice for Fish Tracker	
Saak Haus for Enti	1-4																
Peak Hour for Enti	re inter	section I	Begins a	at 07:00 AM													
07:00 AM	o O	section I	Begins a	at 07:00 AM 0 ;	0	0	0	0	0	1	0	1	0	1	0	1	2
						0	0	0	0	1	0	1 0	0	1 2	0	1	2
07:00 AM		0		0 ;	0	0 1	0 0 0	0 1 1	0 0 0	1 0 0		1 0 0 ,	0 0 0	1 2 0	0 1 0	1 3 0	2 6

0

0

1

100

0

0

0

0

80

20

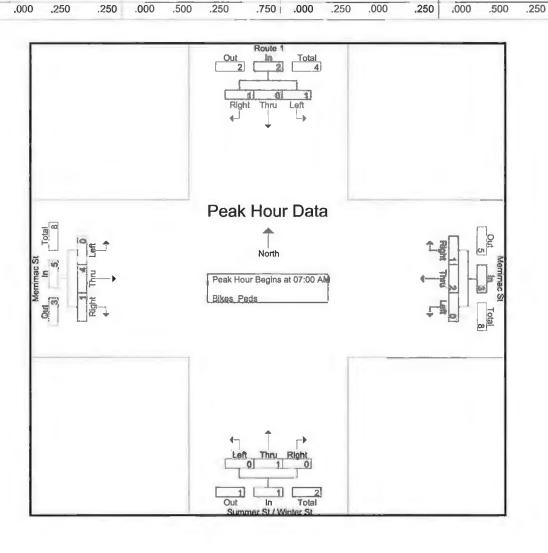
417

0

0

2

33.3



N/S Street : Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

Trucks

% Trucks

1

0.3

1

1

0

0

1

0.5

1

0.1

2

0.4

0

0

1

0.6

0

0

0

0

0

0

0

0

File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No : 1

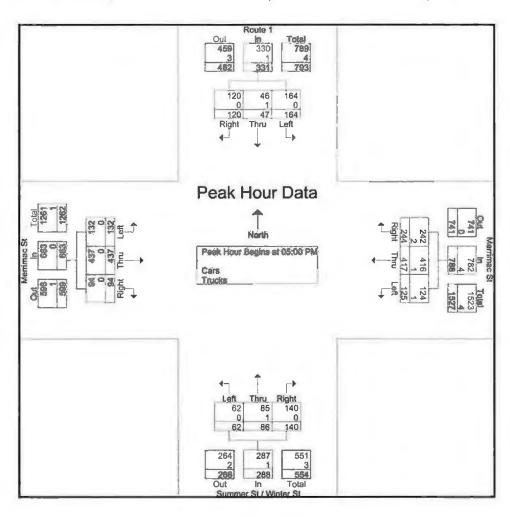
7

					Groups P	rinted- Car	8 - Trucks						
		Route 1 om North			rrimac St om East			r St / Winte	r St		errimac St om West		
Start Time	Left	Thru 1	Right	Left	Thru	Right	Left	Thru	Right:	Left	Thru	Right	Int. Total
04:00 PM	37	13	29	18	94	63	20	27	26	38	117	13	495
04:15 PM	46	20	29	26	90	68	12	24	25	46	76	16	478
04:30 PM	24	8	34	18	84	63	18	19	29	38	97	20	452
04:45 PM	40	8	27	15	90	55	17	25	30	39	111	19	476
Total	147	49	119	77	358	249	67	95	110	161	401	68	1901
05:00 PM	39	13	29	37	106	73	17	21	32	41	107	38	553
05:15 PM	45	13	26	39	114	55	14	26	34	31	111	17	525
05:30 PM	42	7	36	24	94	58	16	18	36	30	105	19	485
05:45 PM	38	14	29	25	103	58	15	21	38	30	114	20	505
Total	164	47	120	125	417	244	62	86	140	132	437	94	2068
Grand Total	311	96	239	202	775	493	129	181	250	293	838	162	3969
Apprch %	48.1	14.9	37	13.7	52.7	33.5	23	32.3	44.6	22.7	64.8	12.5	
Total %	7.8	2.4	6	5.1	19.5	12.4	3.3	4.6	6.3	7.4	21.1	4.1	
Cars	310	95	239	201	774	491	129	180	250	293	838	162	3962
% Cars	99.7	99	100	99.5	99.9	99.6	100	99.4	100	100	100	100	99.8

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No 2

		Rou	ıte 1			Merri	mac St		Su	mmer S	t / Winte	er St		Merri	mac St		
		From	North			Fron	n East			From	South	1		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 Analys	sis From	04:00 P	M to 05		eak 1 of	1		. 46				76		_		. 34	
Peak Hour for En	tire Inter	section l	Begins a	at 05:00 PM	1												
05:00 PM	39	13	29	81	37	106	73	216	17	21	32	70	41	107	38	186	553
05:15 PM	45	13	26	84	39	114	55	208	14	26	34	74	31	111	17	159	525
05:30 PM :	42	7	36	85	24	94	58	176	16	18	36	70	30	105	19	154	485
05:45 PM	38	14	29	81	25	103	58	186	15	21	38	74	30	114	20	164	505
Total Volume	164	47	120	331	125	417	244	786	62	86	140	288	132	437	94	663	2068
% App. Total	49.5	14.2	36.3		15,9	53.1	31		21.5	29.9	48.6		19.9	65.9	14.2		
PHF	.911	.839	.833	.974	.801	.914	.836	.910	,912	.827	.921	.973	.805	.958	.618	.891	.935
Cars	164	46	120	330	124	416	242	782	62	85	140	287	132	437	94	663	2062
% Cars	100	97.9	100	99.7	99.2	99.8	99,2	99.5	100	98.8	100	99.7	100	100	100	100	99.7
Trucks	0	1	0	1	1	1	2	4	0	1	0	1	0	0	0	0	6
% Trucks	0	2.1	0	0.3	0.8	0.2	8.0	0.5	0	1.2	0	0.3	0	0	0	0	0.3



N/S Street : Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name 72810001 Site Code : 72810001 Start Date 6/16/2016 Page No 4

						Cars	s Printed-	Group					
		errimac St		er St	St / Winte m South			rrimac St			Route 1 om North		
Int. Total	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
495	13	117	38	26	27	20	63	94	18	29	13	37	04:00 PM
478	16	76	46	25	24	12	68	90	26	29	20	46	04:15 PM
451	20	97	38	29	19	18	63	84	18	34	8	23	04:30 PM
476	19	111	39	30	25	17	55	90	15	27	8	40	04:45 PM :
1900	68	401	161	110	95	67	249	358	77	119	49	146	Total
551	38	107	41	32	21	17	72	106	37	29	12	39	05:00 PM
522	17	111	31	34	26	14	54	113	38	26	13	45	05:15 PM
484	19	105	30	36	17	16	58	94	24	36	7	42	05:30 PM
505	20	114	30	88	21	15	58	103	25	29	14	38	05:45 PM
2062	94	437	132	140	85	62	242	416	124	120	46	164	Total
3962	162	838	293	250	180	129	491	774	201	239	95	310	Grand Total
	12.5	64.8	22.7	44.7	32.2	23.1	33.5	52.8	13.7	37.1	14.8	48.1	Apprch %
	4.1	21.2	7.4	6.3	4.5	3.3	12.4	19.5	5.1	6	2.4	7.8	Total %

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 72810001 Site Code: 72810001 Start Date: 6/16/2016 Page No: 7

						s Printed-		04 1345 4				1	
		Route 1			rrimac St om East			St / Winte om South	er St		errimac St om West		
Start Time	Left I	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
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	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	ol	0
Total	1	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	2
05:15 PM	0	0	0	1	1	1	0	0	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	2	0	1	0	0	0	0	6
Grand Total	1	1	0	1	1	2	0	1	0	0	0	0	7
Apprch %	50	50	0	25	25	50	0	100	0	0	0	0	
Total %	14.3	14.3	0	14.3	14.3	28.6	0	14.3	0	0	0	0	

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA

Weather : Clear

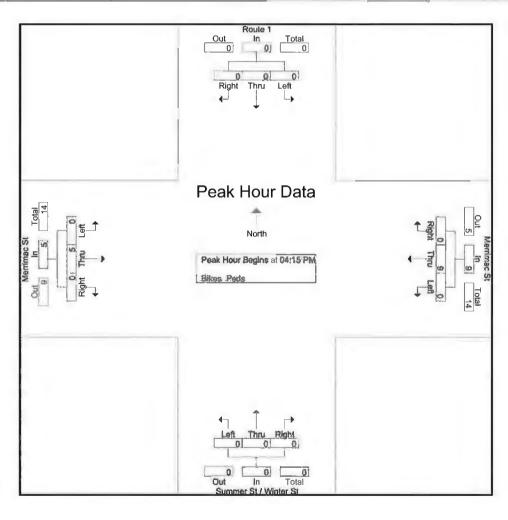
File Name: 72810001 Site Code : 72810001 Start Date : 6/16/2016 Page No : 10

								Groups	Printed	- Bikes	Peds								
		Rou From	ite 1 North				nac St East		Sun		: / Winte So⊌th	r St			nac St West				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu Total	Inclu Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:15 PM	0	0	0	0	0	1.	0	0	0	0	0	0	0	2	0	0	0	3	3
04:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	4	4
04:45 PM	0	0	0	0	0	4	0	0]	0	0	0	0	0	1	0	0	0	5	5
Total	0	0	0	0	0	8	0	0	0	0	0	0	0	5	0	0	0	13	13
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	0	0	1	0	0	0	0	0	0	1	1	0	0	0	3	3
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	o	0	3	0	0	0	4	4
Total	0	Œ.	0	0	0	4	0	0	0	0	0	0	1	5	0	0	0	10	10
Grand Total	0	0	0	0	0	12	0	0	0	0	0	0	1	10	0	0) 0	23	23
Apprch %	0	0	0		0	100	0		0	0	0		9.1	90.9	0				
Total %	0	0	0		0	52.2	0		0	0	0		4.3	43.5	0		0	100	

N/S Street: Rt 1 / Winter / Summer E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name ... 72810001 Site Code 72810001 Start Date 6/16/2016

			ite 1 North				mac St n East	7	Su	mmer S From	t / Winte South	er St			mac St 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 Analys	r Analysis From 04:00 PM to 05:45 Pl r for Entire Intersection Begins at 04:1					1										LT.	
Peak Hour for En	tire Inter	section I	Begins at	04:15 PM	1												
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
04:45 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
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	9	0	9	0	0	0	0]	0	5	0	5	14
% App. Total	0	0	0		0	100	0		0	0	0	i	0	100	0		
PHF	.000	.000	,000	.000	.000	.563	.000	.563	.000	.000	.000	.000	.000	.625	.000	.625	.700



N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name: 72810002 Site Code : 72810002 Start Date : 6/16/2016

		rrimac St m West	Fix		arket St nn South	Fro		rrimac St om East	En		ament Wha	Fro	
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thry	Left	Start Time
178	3	87	3	2	1	5	0	77	0	0	0	0	07:00 AM
184	5	86	0	3	0	3	1	81	1	2	1	1	07:15 AM ⁻
23	3	120	2	4	0	4	1	91	1	6	0	0	07:30 AM
248	8	124	2	3	0	6	2	102	0	1	0	0	07:45 AM
84:	19	417	7	12	1	18	4	351	2	9	1	1	Total
268	13	151	4	4	1	1	1	88	0	5	0	0	08:00 AM
323	19	165	5	2	0	10	4	114	1	3	0	0	08:15 AM
290	4	180	4	5	1	3	2	87	0	4	0	0	08:30 AM
303	5	174	4	4	1	6	0	105	1	2	1	0	08:45 AM
1184	41	670	17	15	3	20	7	394	2	1.4	1	0	Total
2020	60	1087	24	27	4	38	11 !	745	4	23	2	1	Grand Total
	5.1	92.8	2	39.1	5.8	55.1	1.4	98	0.5	88.5	7.7	3.8	Apprch %
	3	53.7	1.2	1.3	0.2	1.9	0.5	36.8	0.2	1.1	0.1	0	Total %
200	59	1076	24	27	4	38	10	736	4	22	2	1	Cars
98.9	98.3	99	100	100	100	100	90.9	98.8	100	95.7	100	100	% Cars
2:	1	11	0	Ō	0	0	1	9	Ō	1	0	0	Trucks
1.	1.7	1	0	o	0	0	9.1	1.2	0	4.3	0	0	% Trucks

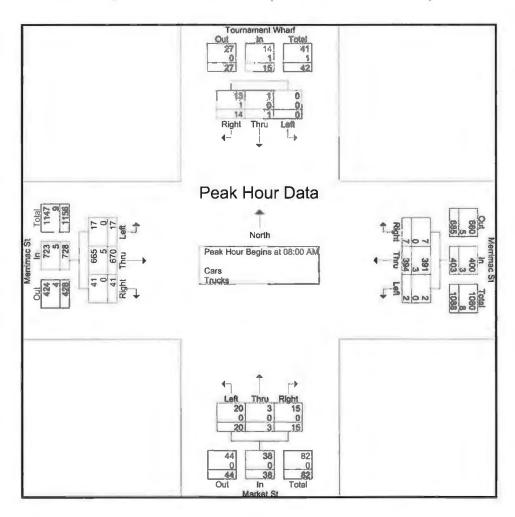
N/S Street : Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name • 72810002 Site Code 72810002 Start Date • 6/16/2016 Page No • 2

	Ť	ournam	ent Wha	arf		Merri	mac St				et St				mac St		
		From	North			Fron	n East			From	South			From	West		
Start Time	Left	Thru	Rìght	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int, Total
Peak Hour Analys	sis From	07:00 A	M to 08		eak 1 of	1		***								2,7	
Peak Hour for Ent	tire Inter	section	Begins a	t 08:00 AM	1												
08:00 AM	0	0	5	5	0	88	1	89	1	1	4	6	4	151	13	168	268
08:15 AM	0	0	3	3	1	114	4	119	10	0	2	12	5	165	19	189	323
08:30 AM	0	0	4	4	0	87	2	89	3	1	5	9	4	180	4	188	290
08:45 AM	0	1	2	3	1	105	0	106	6	1	4	11	4	174	5	183	303
Total Volume	0	1	14	15	2	394	7	403	20	3	15	38	17	670	41	728	1184
% App. Total	0	6.7	93.3		0.5	97.8	1.7		52. 6	7.9	39.5		2.3	92	5.6		
PHF	.000	.250	.700	.750	.500	.864	.438	.847	.500	.750	.750	.792	.850	.931	.539	.963	.916
Cars	0	1	13	14	2	391	7	400	20	3	15	38	17	665	41	723	1175
% Cars	0	100	92.9	93.3	100	99.2	100	99.3	100	100	100	100	100	99.3	100	99.3	99.2
Trucks	0	0	1	1	0	3	0	3	0	0	0	0	0	5	0	5	9
% Trucks	0	0	7.1	6.7	0	8,0	0	0.7	0	0	0	0	0	0.7	0	0.7	0.8



N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name : 72810002 Site Code : 72810002 Start Date : 6/16/2016

Page No : 4

		rrimac St			arket St m. South			rrimac St om East		arf	ment Wha m North		
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Th <u>ru</u>	Left	Right	Thru	Left	Start Time
17	3	87	3	2	1	5	0	75	0	0	0	0	07:00 AM
18	5	86	0	3	0	3	1	81	1	2	1	1	07:15 AM
22	3	116	2	4	0	4	1	89	1	6	0	0	07:30 AM
24	7	122	2	3	0	6	1	100	0	1	0	0	07:45 AM
82	18	411	7	12	1	18	3	345	2	9	1	1	Total
26	13	150	4	4	1	1	1	87	0	4	0	0	08:00 AM
32	19	163	5	2	0	10	4	113	1	3	0	0	08:15 AM
28	4	179	4	5	1	3	2	87	0	4	0	0	08:30 AM
30	5	173	4	4	1	6	0	104	1	2	1	0	08:45 AM
117	41	665	17	15	3	20	7	391	2	13	1	0	Total
200	59	1076	24	27	4	38	10	736	4	22	2	1	Grand Total
	5.1	92.8	2.1	39.1	5.8	55.1	1.3	98.1	0.5	88	8	4	Apprch %
	2.9	53.7	1.2	1.3	0,2	1.9	0.5	36.7	0.2	1.1	0.1	0	Total %

N/S Street : Tournament Wharf/ Market St

E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name: 72810002 Site Code : 72810002 Start Date : 6/16/2016 Page No : 7

		rrimac St om West			arket St om South	M	s Printed- T	rrimac St om East		ırf	ment Wha m North		
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
2	0	0	0	0	0	0	0	2	0	0	0	0	07:00 AM
C	0	0	0	0	0	0	0	0	0	0	0	0	07:15 AM
6	0	4	0	0	0	0	0	2	0	0	0	0	07:30 AM
6	1	2	0	0	0	0	1	2	0	0	0	0	07:45 AM
14	1	6	0	0	0	0	1	6	0	0	0	0	Total
3	0	1	0	0 [0	0	0	1	0	1	0	0	08:00 AM
3	0	2	0	0	0	0	0	1	0	0	0	0	08:15 AM
1	0	1	0	0	0	0	0	0	0	0	0	0	08:30 AM
2	0	1	0	0	0	0	0	1	0	0	0	0	08:45 AM
Ş	0	5	0	0	0	0	0	3	0	1	0	0	Total
23	1	11	0	0	0	0	1	9	0	1	0	0	Grand Total
	8.3	91.7	0	0	0	0	10	90	0	100	0	0	Apprch %
	4.3	47.8	0	0	0	0	4.3	39.1	0	4.3	0	0	Total %

N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name * 72810002 Site Code : 72810002 Start Date 6/16/2016
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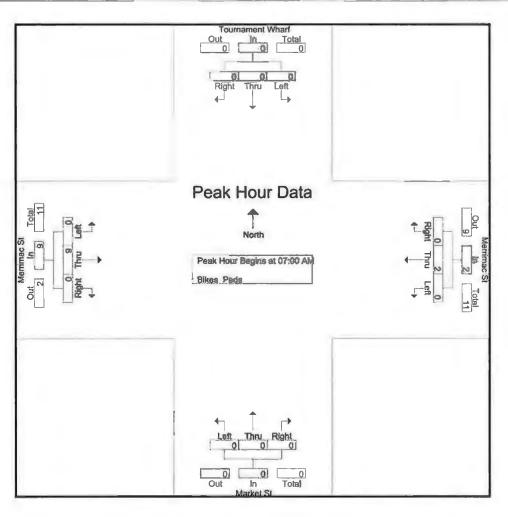
	To	From	ent Wha North			From	nac St East	Groups		Mark From	et St South			From	nac St West				
Start Time	Left	Thru	Right	Peds	Le <u>ft</u>	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu Total	Inclu. Total	Int, Tota
07:00 AM	0	0	0	1	0	0	0	0	0	0	0	2	0	2	0	0	3	2	5
07:15 AM	0	0	0	1	0	1	0	0	0	0	0	1	0	3	0	0	2	4	6
07:30 AM	0	0	0	0	0	1	0	1	0	0	O	3	0	0	0	0	4	1	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	4
Total	0	0	0	2	0	2	0	1	0	0	0	6	0	9	0	0	9	11	20
08:00 AM '	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	4	0	4
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0.	0	2	0	0	0	2	2
08:30 AM	0	0	0	3	0	0	0	0	0	0	0	4	0	0	0	1	8	0	8
08:45 AM	0	0	0	1	0	0	0	0	0	0	0	2	0	4	0	0	3	4	7
Total	0	0	0	4	0	0	0	1	0	0	0	9	0	6	0	1	15	6	2
Grand Total	0	0	0	6	0	2	0	2	0	0	0	15	0	15	0	1	24	17	41
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	11.8	0	1	0	0	0	į	0	88.2	0		58.5	41.5	

N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name : 72810002 Site Code : 72810002 Start Date : 6/16/2016 Page No : 11

	T	ournam	ent Whar	f	-	Merri	nac St			Mark	et St	T		Merrir	nac St		
		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 1	Right	App. Total	Int. Tota
Peak Hour Analys	sis From	07:00 A		منالف ش ه منافقت به آل م آليد	eak 1 of	1											7,010
Peak Hour for En	tire Inter	section .	Begins at	07:00 AN	Л												
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
07:30 AM	0	0	0	0	0	1	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	0	0	4	0	4	4
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	Ō	9	0	9	11
% App. Total	0	0	0	1	0	100	0		0	0	0	J	0	100	0		
PHF	,000	.000	.000	.000	000	.500	.000	.500	.000	.000	.000	.000	.000	.563	.000	.563	.688



N/S Street : Tournament Wharf/ Market St

Cars % Cars

Trucks

% Trucks

100

0

0

100

0

0

100

0

0

100

0

0

99.9

1

0.1

100

0

0

98.4

1

1.6

100

0

0

100

0

0

100

0

0

99.8

3

0.2

100

0

0

99.8

5

0.2

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name: 72810002 Site Code: 72810002 Start Date: 6/16/2016

		errimac St	Fr		arket St m South	Fro		rrimac St om East	Fr		ment Wha	Fro	
Int. Total	Right	Thru	Left	Right	Thru	Left:	Right	Thru	Left	Right	Thru i	Left	Start Time
358	2	159	20	1	1	4	1	162	0	7	0	1	04:00 PM
337	9	116	15	6	0	9	1	171	1	8	0	1	04:15 PM
331	5	141	8	4	3	8	2	152	0	8	0	0	04:30 PM
358	8	161	8	8	0	9	2	148	2	9	1	2	04:45 PM
1384	24	577	51	19	4	30	6	633	3	32	1	4	Total
421	5	168	14	11	0	12	2	191	3	13	1	1	05:00 PM
412	5	163	23	10	1	8	2	178	3	12	4	3	05:15 PM
381	10	158	12	7	1	6	4	168	2	11	1	1	05:30 PM
355	1	171	2	3	0	6	0	171	0	1	0	0	05:45 PM
1569	21	660	51	31	2	32	8	708	8	37	6	5	Total
2953	45	1237	102	50	6	62	14	1341	11	69	7	9	Grand Total
	3.3	89.4	7.4	42.4	5.1	52.5	1	98.2	0.8	81.2	8.2	10.6	Apprch %
	1.5	41.9	3.5	1.7	0.2	2.1	0.5	45.4	0.4	2.3	0.2	0.3	Total %
2948	45	1234	102	50	6	61	14	1340	11	69	7	9	Cars

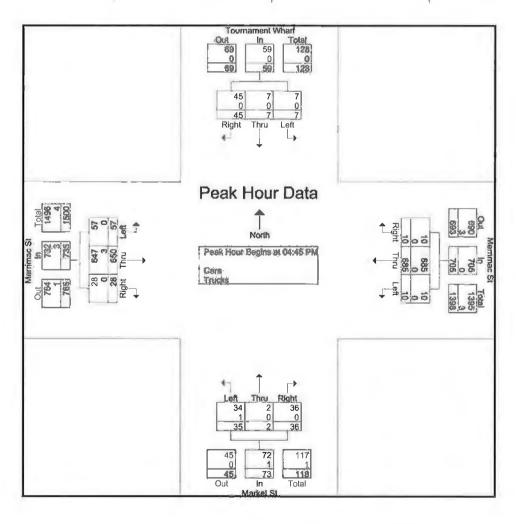
N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name 172810002 Site Code 172810002 Start Date 16/16/2016

	Т	ournam	ent Wha	arf T		Merri	mac St		_	Marl	ket St	T		Merri	mac St		
		From	North			Fron	n 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 Analys	sis From	04:00 F	M to 05		eak 1 of	1						***					
Peak Hour for En	tire Inter	section	Begins a	at 04:45 PM	1												
04:45 PM	2	1	9	12	2	148	2	152	9	0	8	17	8	161	8	177	358
05:00 PM	1	1	13	15	3	191	2	196	12	0	11	23	14	168	5	187	421
05:15 PM	3	4	12	19	3	178	2	183	8	1	10	19	23	163	5	191	412
05:30 PM	1	1	11	13	2	168	4	174	6	†	7	14	12	158	10	180	381
Total Volume	7	7	45	59	10	685	10	705	35	2	36	73	57	650	28	735	1572
% App. Total	11,9	11,9	76.3		1.4	97.2	1.4	į	47.9	2.7	49.3	1	7.8	88.4	3.8		
PHF	.583	.438	,865	.776	.833	.897	.625	.899	.729	.500	.818	.793	.620	.967	.700	.962	.933
Cars	7	7	45	59	10	685	10	705	34	2	36	72	57	647	28	732	1568
% Cars	100	100	100	100	100	100	100	100	97.1	100	100	98.6	100	99.5	100	99.6	99.7
Trucks	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	3	4
% Trucks	0	0	0	0	0	0	0	0	2.9	0	0	1.4	0	0.5	0	0.4	0.3



N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name: 72810002 Site Code : 72810002 Start Date : 6/16/2016 Page No : 4

					Groun	os Printed-	Cars						
		ment Wha	arf		rrimac St om East		M	larket St om South			errimac St om West		
Start Time	Left	Thru i	Right	Left !	Thru	Right [†]	Left	Thru	Right	Left	Thru	Right	Int. Total
04:00 PM	1	0	7	0	162	1	4	1	1	20	159	2 .	358
04:15 PM	1	0	8	1	171	1	9	0	6	15	116	9	337
04:30 PM	0	0	8	0	151	2	8	3	4	8	141	5	330
04:45 PM	2	1	9	2	148	2	9	0	8	8	161	8	358
Total	4	1	32	3	632	6	30	4	19	51	577	24	1383
05:00 PM	1	1	13	3	191	2	12	0	11	14	167	5	420
05:15 PM	3	4	12	3	178	2	7	1	10	23	162	5	410
05:30 PM	1	1	11	2	168	4	6	1	7	12	157	10	380
05:45 PM	0	0	1	0	171	0	6	0	3	2	171	1	355
Total	5	6	37	8	708	8	31	2	31	51	657	21	1565
Grand Total	9	7	69	11	1340	14	61	6	50	102	1234	45	2948
Apprch %	10.6	8,2	81.2	8.0	98.2	1	52.1	5.1	42.7	7.4	89.4	3.3	
Total %	0.3	0,2	2.3	0.4	45.5	0.5	2.1	0.2	1.7	3.5	41.9	1.5	

N/S Street : Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA
Weather: Clear

File Name , 72810002 Site Code : 72810002 Start Date : 6/16/2016

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						rucks	Printed- T	Groups					
		rrimac St em West			arket St m South			rrimac St om East		arf	ment Wha		
Int. Total	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
0	0	0	0	0	0	0	0	0	0	0	0	0	04:00 PM
0	0	0	0	0	0	0	0	0	0	0	0	0	04:15 PM
1	0	0	0	0	0	0	0	1	0	0	0	0	04:30 PM
0	0	0	0	0	0	0	0	0	0	0	0	0	04:45 PM
1	0	0	0	0	0	0	0	1	0	0	0	0	Total
1	0	1	0	0	0	0	0	0	0	0	0	0	05:00 PM
2	0	1.	0	0	0	1	0	0	0	o	0	0	05:15 PM
1	0	1	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	05:45 PM
4	0	3	0	0	0	1	0	0	0	0	0	0	Total
5	0	3	0	0	0	1	0	1	0	0	0	0	Grand Total
	0	100	0	0	0	100	0	100	0	0	0	0	Apprch %
	0	60	0	0	0	20	0	20	0	0	0	0	Total %

N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State ; Newburyport, MA

Weather : Clear

File Name: 72810002 Site Code: 72810002 Start Date: 6/16/2016

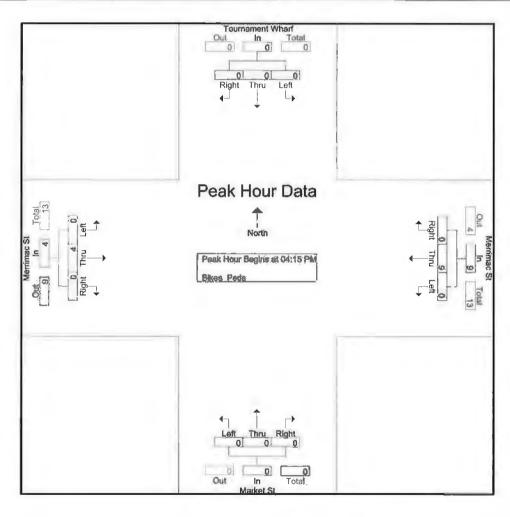
				1				Groups	Printed			_	_				2		
	10		ent Wha	art			nac St East				et St South			Merrin From	nac St West				
Start Time	Left	Thru		Peds	Left		Right	Peds	Left		Right	Peds:	Left			Peds	Exclu. Total	Inclu. Total	nt. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:30 PM	0	0	0	0	0	4	0	0	0	0	0	1	0	1	0	0	1	5	6
04:45 PM	0	0	0	3	0	2	0	0	0	0	0	1	0	1	0	0	4	3	7
Total	0	0	0	3	0	6	0	0	0	0	0	2	0	5	0	0	5	11	16
05:00 PM	0	0	0	3	0	3	0	0	0	0	0	3	0	1	0	0	6	4	10
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0	0	2	2	4
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	2	4	6
Total	0	0	0	3	0	5	0	1	0	0	0	7	0	6	0	0	11	11	22
Grand Total	0	0	0	6	0	11	0	1	0	0	0	9	0	11	0	0	16	22	38
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0				
Total %	0	0	0		0	50	0		0	0	0	1	0	50	0		42.1	57.9	

N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name : 72810002 Site Code 72810002 Start Date 6/16/2016 Page No 11

	Т	ournam	ent Wha	arf		Merri	nac St			Mar	ket St			Merrii	nac St		
		From	North	}		From	East	1		From	South			From	West		
Start Time	Left	Thru	Right	App. Tolat	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Tota
eak Hour Analys	is From	04:00 P	M to 05		eak 1 of	1	ré					- 		-		_pprotal	Inter Folds
eak Hour for En	tire Inter	section l	Begins a	at 04:15 PN	1												
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
04:45 PM	0	0	0	0 _T	0	2	0	2	0	0	0	0	0	1	0	1 .	. 3
05:00 PM	0	0	0	0	0	3	0	3	0	0	0	0.,	0	1	0	1	4
Total Volume	0	0	D	0.	0	9	0.	9	0	0	0	0	0	4	0	4	13
% App. Total	0	0	0	ŀ	0	100	0	ž	0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.563	.000	.563	.000	.000	.000	.000	.000	1.00	.000	1.00	.650



N/S Street: McKay's Wharf / Private Dr

Trucks

0

0

3.4

% Trucks

E/W Street : Merrimac Street City/State : Newburyport, MA

Weather ; Clear

File Name 72810003 Site Code 72810003 Start Date : 6/16/2016

Page No 1

		errimac St om West	Fr		ivate Dr m South	Fro		rrimac St om East	Fn		ay's Whari om North	Fre	
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
160	0	81	3	0	0	0	0	73	0	2	0	1	07:00 AM
177	0	90	3	0	0	0	0	80	0	4	0	0	07:15 AM
221	1	128	0	0	1	0	0	85	0	6	0	0	07:30 AM
218	0	121	3	0	0	0	1	90	0	2	0	1	07:45 AM
776	1	420	9	0	1	0	1	328	0	14	0	2	Total
268	2	163	3	1	0	1	1	95	0	2	0	0	08:00 AM
272	4	162	0	0	0	0	0	102	0	3	0	1	08:15 AM
269	2	168	2	1	0	0	1	90	1	4	0	0	08:30 AM
276	4	170	2	0	0	0	0	93	0	6	0	1	08:45 AM
1085	12	663	7	2	0	1	2	380	1	15	0	2	Total
1861	13	1083	16	2	1	1	3	708	1	29	0	4	Grand Total
	1.2	97.4	1.4	50	25	25	0.4	99.4	0.1	87.9	0	12.1	Apprch %
	0.7	58.2	0.9	0.1	0.1	0.1	0.2	38	0.1	1.6	0	0.2	Total %
1836	13	1069	16	2	1	1	3	698	1	28	0	4	Cars
98.7	100	98.7	100	100	100	100	100	98.6	100	96.6	0	100	% Cars

10

1.4

0

0

0

0

0

0

0

0

0

0

14

1.3

0

0

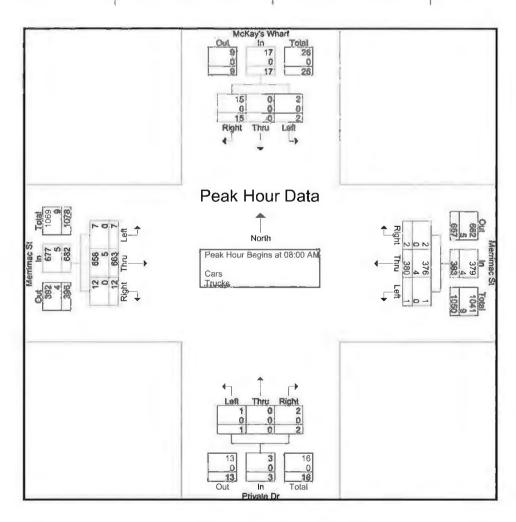
25

N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name , 72810003 Site Code * 72810003 Start Date : 6/16/2016 Page No 2

		McKay	's Wharf			Merri	mac St			Priva	ate Dr			Merrir	nac St		
		From	North			Fron	n East			From	South			From	West		
Start Time	Left	Thru	Right	App, Total	Left	Thru l	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int, Total
Peak Hour Analys	sis From	07:00 Å			eak 1 of	1						ar Cla				7 *	
Peak Hour for En	tire Inter	section	Begins at	08:00 AM	1												
MA 00:80	0	0	2	2	0	95	1	96	1	0	1	2	3	163	2	168	268
08:15 AM	1	0	3	4	0	102	0	102	0	0	0	0	0	162	4	166	272
08:30 AM	0	0	4	4	1	90	1	92	0	0	1	1	2	168	2	172	269
08:45 AM	1	0	6	7	0	93	0	93	0	0	0	0	2	170	4	176	276
Total Volume	2	0	15	17	1	380	2	383	1	0	2	3	7	663	12	682	1085
% App. Total	11.8	0	88.2		0.3	99.2	0.5		33.3	0	66.7		1	97.2	1.8		
PHF	.500	.000	.625	.607	.250	.931	.500	.939	.250	.000	.500	.375	.583	.975	.750	.969	.983
Cars	2	0	15	17	1	376	2	379	1	0	2	3	7	658	12	677	1076
% Cars	100	0	100	100	100	98.9	100	99.0	100	0	100	100	100	99.2	100	99.3	99,2
Trucks	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
% Trucks	0	0	0	0	0	1,1	0	1.0	0	0	0	0	0	0.8	0	0.7	0.8



N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 72810003 Site Code : 72810003 Start Date : 6/16/2016

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		rrimac St om West			ivate Dr m South			rrimac St om East	Fr		ay's Wharf om North		
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru i	Left	Start Time
15	0	81	3	0	0	0	0	72	0	2	0	1	07:00 AM
17	0	89	3	0	0	0	0	80	0	4	0	0	07:15 AM
21	1	121	0	0	1	0	0	84	0	5	0	0	07:30 AM
21	0	120	3	0	0	0	1	86	0	2	0	1	07:45 AM
76	1	411	9	0 ‡	1	0	1	322	0	13	0	2	Total
26	2	162	3	1	0	1	1	95	0	2	0	0	08:00 AM
26	4	160	0	0	0	0	0	101	0	3	0	1	08:15 AM
26	2	167	2	1	0	0	1	90	1	4	0	0	08:30 AM
27	4	169	2	0	0	0	0	90	0	6	0	1	08:45 AM
107	12	658	7	2	0	1	2	376	1	15	0	2	Total
183	13	1069	16	2	1	1	3	698	1	28	0	4	Grand Total
	1.2	97.4	1.5	50	25	25	0.4	99.4	0.1	87.5	0	12.5	Apprch %
	0.7	58.2	0.9	0.1	0.1	0.1	0.2	38	0.1	1.5 [0	0.2	Total %

N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name ; 72810003 Site Code : 72810003 Start Date : 6/16/2016

		rrimac St			ivate Dr m South	Pr	s Printed- T	rrimac St om East			ay's Wharl	McKa Fro	
Int. Tota	Right	Thru	Left	Right	Thru	Left _	Right	Thru	Left	Right	Thru	Left	Start Time !
•	0	0	0	0	0	0	0	1	0	0	0	0	07:00 AM
•	0	1	0	0	0	0	0	0	0	0	0	0	07:15 AM
9	0	7	0	0	0	0	0	1	0	1	0	0	07:30 AM
	0	1	0	0	0	0	0	4	0	0	0	0	07:45 AM
16	0	9	0	0	0	0	ol	6	0	#ri	0	0	Total
	0	1	0	0;	0	0	0	0	0	0	0	0	08:00 AM
3	0	2	0	0	0	0	0	1	0	0	0	0	08:15 AM
	0	1	0	0	0	0	0	0	0	0	0	0	08:30 AM
4	0	1	0	0	0	0	o	3	0	0	0	0	08:45 AM
9	0	5	0	0	0	0	0	4	0	0	0	0	Total
25	0	14	0	0	0	0	0	10	0	1	0	0	Grand Total
	0	100	0	0	0	0	0	100	0	100	0	0	Apprch %
	0	56	0	0	0	0	0	40	0	4	0	0	Total %

N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA

Weather : Clear

File Name: 72810003 Site Code : 72810003 Start Date : 6/16/2016 Page No : 10

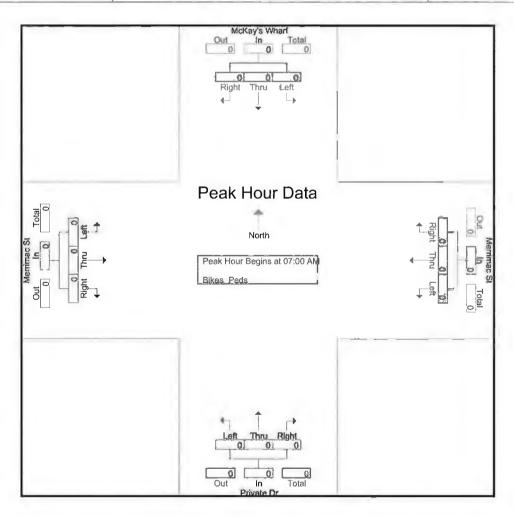
					Merrin From			te Dr South	Priva From	Printed		nac St East	Merrin From				From	N	
Int. To	Inclu, Total	Exclu. Total	Peds.	Right	Tḥru	Left 1	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left!	Start Time
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	07:00 AM
	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	07:15 AM
	0	3	0	0	0	0	3	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	1	0	0	0	07:45 AM
	0	5	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	Total
	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	08:00 AM
	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	08:15 AM
	0	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	08:30 AM
	0	6	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	08:45 AM
-	0	13	0	0	0	0	9	0	0	0	1	0	0	0	3	0	0	0	Total
1	0	18	0	0	0	0	13	0	0	0	1	0	0	0	4	0	0	0	Grand Total
		l		0	0	0		0	0	0		0	0	0		0	0	0	Apprch %
	0	100	,																Total %

N/S Street : McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name 72810003 Site Code 72810003 Start Date 6/16/2016 Page No 11

			's Whar North	f			mac St n East				ate Dr South				mac St 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 Analys	sis From	07:00 /	AM to 08	:45 AM - P	eak 1 of	1										-11 -4:	
Peak Hour for En	tire Inter	section	Begins a	at 07:00 AN	Л												
07:00 AM	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
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
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



N/S Street : McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 72810003 Site Code : 72810003 Start Date : 6/16/2016 Page No : 1

						- Trucks	inted- Cars	Groups P					
		errimac St om West			ivate Dr			rrimac St om East			ay's Wharf om North		
Int. Total	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left_	Right	Thru	Left	Start Time
319	1	150	2	0	0	2	0	152	0	9	1	2	04:00 PM
310	1	126	3	1	0	1	0	170	0	5	0	3	04:15 PM
304	1	150	0	0	0	0	0	147	0	5	0	1	04:30 PM
322	1	166	2	1	0	0	0	144	0	4	1	3	04:45 PM
1255	4	592	7	2	0	3	0	613	0	23	2	9	Total
379	1	179	0	0	0	0	0	196	0	3	0	0	05:00 PM
361	3	164	3	1	0	0	0	182	0	4	1	3	05:15 PM
337	0	162	1	0	0	0	0	166	0	8	0	0	05:30 PM
352	1	173	2	1	0	0	0	163	1	8	0	3	05:45 PM
1429	5	678	6	2	0	0	0	707	1	23	1	6	Total
2684	9	1270	13	4	0	3	0	1320	1	46	3	15	Grand Total
	0.7	98.3	1	57.1	0	42.9	0	99.9	0.1	71.9	4.7	23.4	Apprch %
	0.3	47.3	0.5	0.1	0	0.1	0	49.2	0	1.7	0.1	0.6	Total %
2681	9	1270	13	4	0	3	0	1317	1	46	3	15	Cars
99.9	100	100	100	100	0	100	0	99.8	100	100	100	100	% Cars
3	0	0	0	0	0	0	0	3	0	0	0	0	Trucks
0.1	0	0	0	0	0	0	0	0.2	0	0	0	0	% Trucks

N/S Street: McKay's Wharf / Private Dr

E/W Street: Merrimac Street City/State: Newburyport, MA

Cars

% Cars

Trucks

% Trucks

99.6

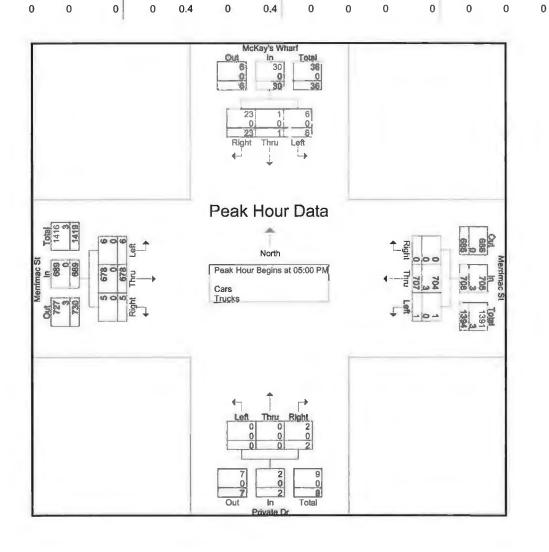
Weather : Clear

1		McKay	's Whan	F		Merrin	mac St			Priva	ate Dr			Merri	mac St		
		From	North			From	n East			From	South			From	ı 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 Analys	sis From	04:00 F	PM to 05	:45 PM - P	eak 1 of	1											
Peak Hour for En	tire Inter	section	Begins a	at 05:00 PN	0 196 0												
05:00 PM	0	0	3	3	0	196	0	196	0	0	0	0	0	179	1	180	379
05:15 PM	3	1	4	8	0	182	0	182	0	0	1	1	3	164	3	170	361
05:30 PM :	0	0	8	8	0	166	0	166	0	0	0	0	1	162	0	163	337
05:45 PM	3	0	8	11	1	163	0	164	0	0	1	1	2	173	1	176	352
Total Volume	6	1	23	30	1	707	0	708	0	0	2	2	6	678	5	689	1429
% App. Total	20	3.3	76.7		0.1	99.9	0		0	0	100		0.9	98.4	0.7		
PHF	.500	.250	.719	.682	,250	.902	.000	.903	.000	.000	.500	.500	.500	.947	.417	.957	.943

99.6

2!

99.8



N/S Street: McKay's Wharf / Private Dr

Total %

0.6

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name : 72810003 Site Code : 72810003 Start Date : 6/16/2016

Page No : 4

0.3

							os Printed-						
		errimac St om West	Fr		ivate Dr	Fro		rrimac St om East	Fr		ay's Wharf om North	Fro	
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
319	1	150	2	0	0	2	0	152	0	9	1	2	04:00 PM
310	1	126	3	1	0	1	0	170	0	5	0	3	04:15 PM
304	1	150	0	0	0	0	0	147	D	5	0	1	04:30 PM
322	1	166	2	1	0	0	0	144	0	4	1	3	04:45 PM
1255	4	592	7	2	0	3	0	613	0	23	2	9	Total
378	1	179	0	0	0	0	0	195	0	3	0	0	05:00 PM ₁
359	3	164	3	1	0	0	0	180	0	4	1	3	05:15 PM
337	0	162	1	0	0	0	0	166	0	8	0	0	05:30 PM
352	1	173	2	1	0	0	0	163	1	8	0	3	05:45 PM
1426	5	678	6	2	0	0	0	704	1	23	1	6	Total
2681	9	1270	13	4	0	3	0	1317	1	46	3	15	Grand Total
	0.7	98.3	1	57.1	0	42.9	0	99.9	0.1	71.9	4.7	23.4	Apprch %

0

0.1

49.1

0.1

0.5

47.4

0

1.7

0

N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA

Weather : Clear

File Name: 72810003 Site Code: 72810003 Start Date: 6/16/2016

_							Printed-T						4
		rrimac St im West	Fro		rivate Dr om South	Fre		rrimac St om East			ay's Wharf		
ht Int. T	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
0	0	0	0	0 '	0	0	0	0	0	0	0	0	04:00 PM
0	0	0	0	0	0	0	0	0	0	0	0	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	Ø	0	0	0	Total:
0	0	0	0	0	0	0	0	1	0	0	0	0	05:00 PM
0	0	0	0	0	0	0	0	2	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	0	0	0	0	05:45 PM
0	0	0	0	0	0	0	0	3	0	0	0	0	Total
0	0	0	0	0	0	0	0	3	0	0	0	0	Grand Total
0	0	0	0	0	0	0	0	100	0	0	0	0	Apprch %
0	0	0	0	0	0	0	0	100	0	0	0	0	Total %

N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

Total %

File Name : 72810003 Site Code † 72810003 Start Date : 6/16/2016 Page No : 10

100

0

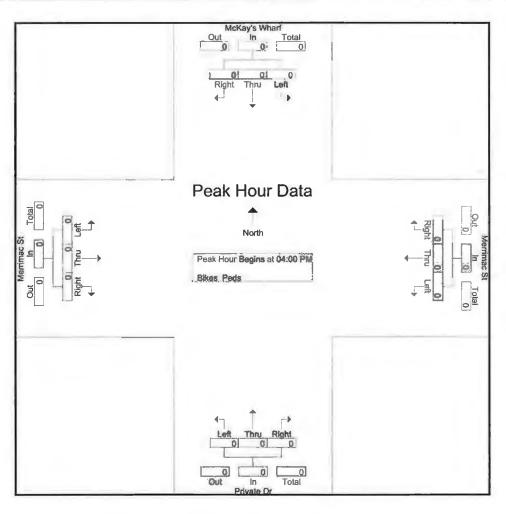
								Groups	Printed	- Bikes	Peds								
	N		s Wharl North				nac St East				te Dr South				nac St West				
Start Time	Left :	Thru	_Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Ench. Total	fricht. Total	Int. Total
04:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
04:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
04:30 PM	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	3	0	3
04:45 PM	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	4	0	4
Total	0	0	0	6	0	0	0	0	0	0	0	3	0	0	0	0	9	0	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	4
05:15 PM I	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0	2
05:30 PM ⁽	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	4	O	4
05:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	0	2	0	0	0	6	0	0	0	3	11	0	11
Grand Total	0	0	0	6	0	0	0	2	0	0	0	9	0	0	0	3	20	0	20
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				

N/S Street : McKay's Wharf / Private Dr

E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name • 72810003 Site Code . 72810003 Start Date . 6/16/2016 Page No . 11

		-	's Whan North				mac St n East				ate Dr South				mac St 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 Analys	sis From	04:00 F	M to 05		eak 1 of	1	-							and the same			
Peak Hour for En	tire Inter	section	Begins a	at 04:00 PN	/ 1												
04:00 PM	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
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



N/S Street: Titcomb Street E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name . 72810004 Site Code : 72810004 Start Date : 6/16/2016

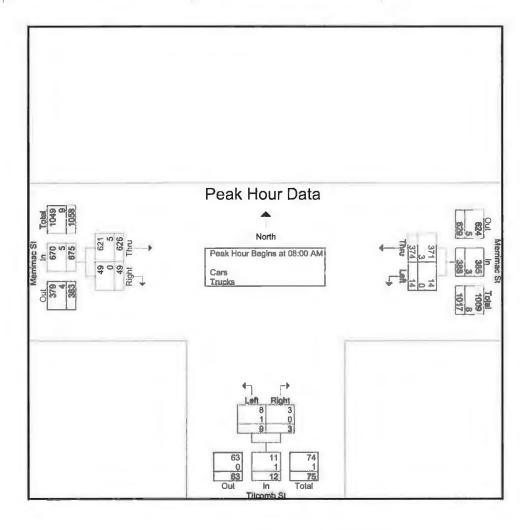
Page No 1

			iks	rinted- Cars - True			
		Merrimac S From West		Titcomb St From South		Merrimac Si From East	•
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
155	6	74	2	1	70	2	07:00 AM
171	3	87	0	0	80	1	07:15 AM
223	8	122	0	0	88	5	07:30 AM
217	14	109	2	0	89	3	07:45 AM
766	31	392	4	1	327	11	Total
262	14	147	0	0	96	5	08:00 AM
276	11	156	2	2	98	7	08:15 AM
262	7	160	0	3	90	2	08:30 AM
275	17	163	1	4	90	0	08:45 AM
1075	49	626	3	9	374	14	Total
1841	80	1018	7	10	701	25	Grand Total
	7.3	92.7	41.2	58.8	96.6	3.4	Apprch %
	4.3	55.3	0.4	0.5	38.1	1.4	Total %
1817	80	1004	7	9	692	25	Cars
98.7	100	98.6	100	90	98.7	100	% Cars
24	0	14	0	1	9	0	Trucks
1.3	О	1.4	0	10	1.3	0	% Trucks

N/S Street: Titcomb Street E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name: 72810004 Site Code : 72810004 Start Date : 6/16/2016 Page No : 2

	M	lerrimac St			Titcomb St			Merrimac St		
	F	rom East			From South			From West		
Start Time	Left;	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 08	3:45 AM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 08:00 A	М							
08:00 AM	5	96	101	0	0	0	147	14	161	262
08:15 AM	7	98	105	2	2	4	156	11	167	276
08:30 AM	2	90	92	3	0	3	160	7	167	262
08:45 AM	0	90	90	4	1	5	163	17	180	275
Total Volume	14	374	388	9	3	12	626	49	675	1075
% App. Total	3.6	96.4		75	25		92.7	7.3		
PHF	.500	.954	.924	.563	.375	.600	.960	.721	.938	.974
Cars	14	371	385	8	3	11	621	49	670	1066
% Cars	100	99.2	99.2	88.9	100	91.7	99.2	100	99.3	99.2
Trucks	0	3	3	1	0	1	5	0	5	9
% Trucks	0	0.8	0.8	11.1	0	8.3	8.0	0	0.7	0.8



N/S Street: Titcomb Street E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 72810004 Site Code: 72810004 Start Date: 6/16/2016 Page No: 4

	_			ps Printed- Cars	Gipu		
		Merrimac St		Titcomb St	•	Merrimac St	
Int. Total	Right	From West Thru	Right	From South	Thru	From East Left	Start Time
154	6	74	2		69	2	
154	0	74	2	1	09	2	07:00 AM
170	3	86	0	0	80	1	07:15 AM
215	8	115	0	0	87	5	07:30 AM
212	14	108	2	0	85	3	07:45 AM
751	31	383	4	1	321	11	Total
261	14	146	o	0	96	5	08:00 AM
201		140	· ·	O .	30	3	00.00 AW
273	11	154	2	2	97	7	08:15 AM
261	7	159	0	3	90	2	08:30 AM
271	17	162	1	3	88	0	08:45 AM
1066	49	621	3	8	371	14	Total
1817	80	1004	7	9	692	25	Grand Total
	7.4	92.6	43.8	56.2	96.5	3.5	Apprch %
	4.4	55.3	0.4	0,5	38,1	1.4	Total %

N/S Street: Titcomb Street E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name * 72810004 Site Code : 72810004 Start Date : 6/16/2016 Page No : 7

	Groups Printed-Trucks Marriago St. Titroph St. Marriago St.													
		Merrimac S		Titcomb St		Merrimac St								
		From West		From South		From East								
Int. Tota	Right	Thru	Right	Left	Thru	Left	Start Time							
•	0	0	0	0	1	0	07:00 AM							
-	0	1	0	0	0	0	07:15 AM							
8	0	7	0	0	1	0	07:30 AM							
5	0	1	0	0	4	0	07:45 AM							
15	0	9	0	0	6	0	Total							
	0	1	0	0	0	0	08:00 AM							
3	0	2	0	0	1	0	08:15 AM							
	0	1	0	0	0	0	08:30 AM							
4	0	1	0	1	2	0	08:45 AM							
9	0	5	0	1	3	0	Total							
24	0	14	0	1	9	0	Grand Total							
	0	100	0	100	100	0	Apprch %							
	0	58.3	0	4.2	37.5	0	Total %							

N/S Street: Titcomb Street E/W Street : Merrimac Street City/State: Newburyport, MA
Weather: Clear

File Name : 72810004 Site Code : 72810004 Start Date : 6/16/2016 Page No : 10

					Groups Prin	nted- Bikes	Peds					
		rrimac St om East		T	itcomb St		Me	errimac St				
Start Time	Left !	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM ^f	0	1	0	0	0	2	3	0	0	2	4	6
07:15 AM	0	0	0	0	0	0	2	0	1	1	2	3
07:30 AM	0	1	0	0	0	4	2	0	1	5	3	8
07:45 AM	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	2	0	0	0	6	8	0	2	8	10	18
08:00 AM	0	0	0	0	0	4	0	0	1	5	0	5
08:15 AM	0	0	1	0	0	2	1	0	2	5	1	6

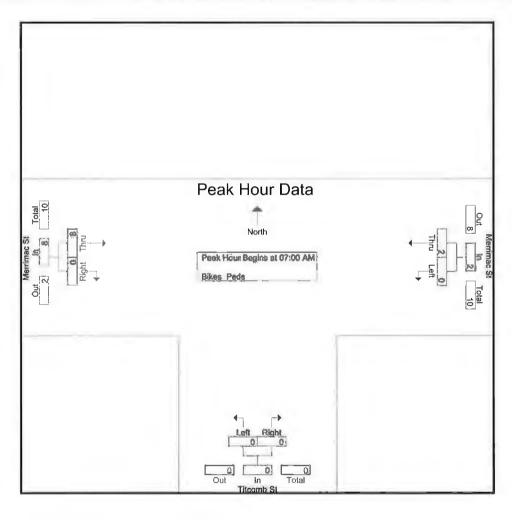
		om East		- 5	om South			rom west				
Start Time	Left!	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	1	0	0	0	2	3	0	0	2	4	6
07:15 AM	0	0	0	0	0	0	2	0	1	1	2	3
07:30 AM	0	1	0	0	0	4	2	0	1	5	3	8
07:45 AM	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	2	0	0	0	6	8	0	2	8	10	18
08:00 AM	0	0	0	0	0	4	0	0	1	5	0	5
08:15 AM	0	0	1	0	0	2	1	0	2	5	1	6
08:30 AM	0	0	0	0	0	3	0	0	0	3	0	3
08:45 AM	0	0	0	1	0	2	3	0	0	2	4	6
Total	0	0	1	1	0	11	4	0	3	15	5	20
Grand Total	0	2	1	1	0	17	12	0	5	23	15	38
Apprch %	0	100		100	0		100	0				
Total %	0	13.3		6.7	0		80	0		60.5	39.5	

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name . 72810004 Site Code 72810004

Start Date	: 6/16/20
Page No	_ 11

		lerrimac St From East	ţ.		Titcomb St rom South			vierrimac St From West		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 07:00 A	М							
07:00 AM	0	1	1	0	0	0	3	0	3	4
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	1	1	0	0	0	2	0	2	3
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	2	2	0	0	0	8	0	8	10
% App. Total	0	100		0	0		100	0		
PHF	2000	.500	,500	.000	,000	.000	.667	.000	.667	.625



N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name: 72810004 Site Code : 72810004 Start Date : 6/16/2016

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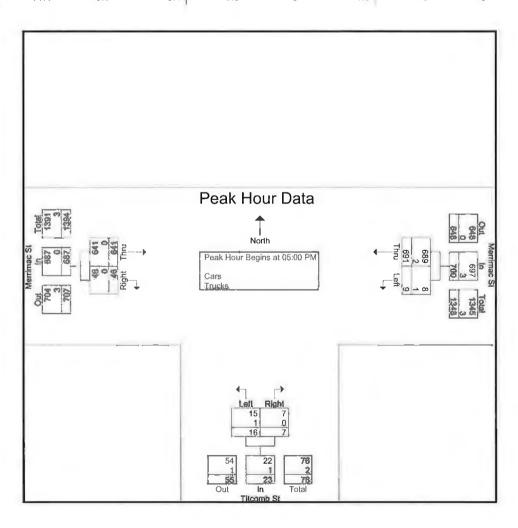
Groups	Printed.	Care -	Timeke
CHORDS	Littlian-	V215 -	ITUEKS

		Merrimac Si From West		Titcomb St From South	0.0000	Merrimac St From East	
Int. Total	Right	Thru	Right	Left	Thru :	Left	Start Time
304	7	137	2	3	150 '	5	04:00 PM
316	2	138	1	4	169	2	04:15 PM
304	6	148	2	3	141	4	04:30 PM
318	8,	161	3	6	137	3	04:45 PM
1242	23	584	8	16	597	14	Total
382	11	166	2	5	193	5	05:00 PM
355	13	156	1	4	180	1	05:15 PM
330	11	153	2	1	162	1	05:30 PM
343	11	166	2	6	156	2	05:45 PM
1410	46	641	7	16	691	9	Total
2652	69	1225	15	32	1288	23	Grand Total
	5.3	94.7	31.9	68.1	98.2	1.8	Apprch %
	2.6	46.2	0.6	1.2	48.6	0.9	Total %
2648	69	1225	15	31	1286	22	Cars
99.8	100	100	100	96.9	99.8	95.7	% Cars
4	0	0	0	1	2	1	Trucks
0,2	0	0	0	3.1	0.2	4.3	% Trucks

N/S Street: Titcomb Street E/W Street : Merrimac Street
City/State : Newburyport, MA
Weather : Clear

File Name : 72810004 Site Code : 72810004 Start Date : 6/16/2016 Page No : 2

		derrimac 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. Total
Peak Hour Analysis From 04	1:00 PM to 0	5:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 05:00 PI	М							
05:00 PM	5	193	198	5	2	7	166	11	177	382
05:15 PM	1	180	181	4	1	5	156	13	169	355
05:30 PM	1	162	163	1	2	3	153	11	164	330
05:45 PM	2	156	158	6	2	8	166	11	177	343
Total Volume	9	691	700	16	7	23	641	46	687	1410
% App. Total	1.3	98.7		69.6	30.4		93.3	6.7		
PHF	.450	.895	.884	.667	.875	.719	,965	.885	.970	.923
Cars	8	689	697	15	7	22	641	46	687	1406
% Cars	88.9	99.7	99.6	93.8	100	95.7	100	100	100	99.7
Trucks	1	2	3	1	0	1	0	0	0	4
% Trucks	11.1	0.3	0.4	6.3	0	4.3	0	0	0	0.3



N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA
Weather : Clear

Total %

0.8

48.6

File Name: 72810004 Site Code: 72810004 Start Date: 6/16/2016

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				os Printed- Cars	Grou		
		Merrimac S From West		Titcomb St From South	1	Merrimac S From East	
Int. Tota	Right	Thru	Right	Left	Thru	Left .	Start Time
304	7	137	2	3	150	5	04:00 PM
316	2	138	1	4	169	2	04:15 PM
304	6	148	2	3	141	4	04:30 PM
318	8	161	3	6	137	3	04:45 PM
1242	23	584	8	16	597	14	Total
381	11	166	2	4	193	5	05:00 PM
353	13	156	1	4	178	1	05:15 PM
330	11	153	2	1	162	1	05:30 PM
342	11	166	2	6	156	1	05:45 PM
1406	46	641	7	15	689	8	Total
2648	69	1225	15	31	1286	22	Grand Total
	5.3	94.7	32.6	67.4	98.3	1.7	Apprch %

1.2

0.6

46.3

2.6

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name : 72810004 Site Code : 72810004 Start Date : 6/16/2016

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				s Printed- Trucks	Group		
		Merrimac S		Titcomb St		Merrimac St	
Int. Total	Right	From West	Right	From South	Thru	From East Left	Start Time
0	0	0	0	0	0	0	04:00 PM
0	0	0	0	0	0	0	04:15 PM
0	0	0	0	0	0	0	04:30 PM
0	0	0	0	0	0	0	04:45 PM
0	0	0	0	0	0	0	Total
1	0	0	0	1	0	0	05:00 PM
2	0	0	0	0	2	0	05:15 PM
0	0	0	0	0	0	0	05:30 PM
1	0	0	0	0	0	1	05:45 PM
4	0	0	0	1	2	1	Total
4	0	0	0	1	2	1	Grand Total
	0	0	0	100	66.7	33.3	Apprch %
	0	0	οĺ	25	50	25	Total %

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State: Newburyport, MA

Total %

5.9

44.1

Weather : Clear

File Name: 72810004 Site Code: 72810004 Start Date: 6/16/2016

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	N/a	errimac St	1	Ti	Groups Printcomb St	red Dikes	M	errimac St	- 1			
		rom East			om South			rom West				
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right 1	Peds	Exclu, Total	Inclu. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	0	3	4	0	4
04:15 PM	0	2	0	0	0	1	2	0	0	1	4	5
04:30 PM	0	4	0	0	0	0	1	0	0	0	5	5
04:45 PM	0	3	0	0	0	4	3	0	6	10	6	16
Total	0	9	0	0	0	6	6	0	9	15	15	30
05:00 PM	1	2	0	1	0	9	1	0	2	11	5	16
05:15 PM	0	2	0	0	0	0	0	0	0	0	2	2
05:30 PM	0	1	0	0	0	6	1	0	2	8	2	10
05:45 PM	1	1	0	0	0	0	8	0	0	0	10	10
Total	2	6	0	1	0	15	10	0	4	19	19	38
Grand Total	2	15	0	1	0	21	16	0	13	34	34	68
Apprch %	11.8	88.2		100	0		100	0				

2.9

0

0

50

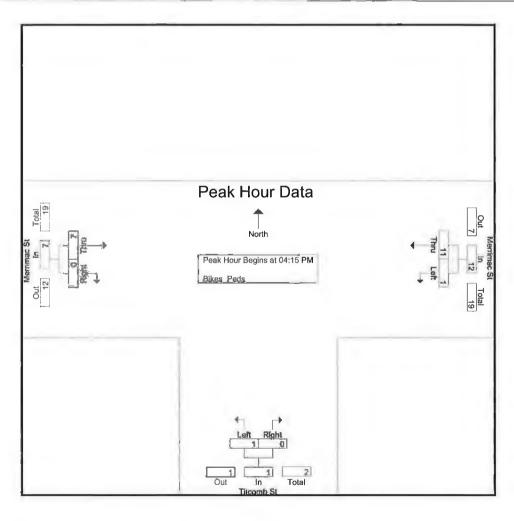
50

47.1

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name : 72810004 Site Code : 72810004 Start Date : 6/16/2016 Page No : 11

		/lerrimac 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. Total	
Peak Hour Analysis From 04	1:00 PM to 0	5:45 PM - F	Peak 1 of 1								
Peak Hour for Entire Interse	ction Begins	at 04:15 Pl	М								
04:15 PM	0	2	2	0	0	0	2	0	2	4	
04:30 PM	0	4	4	0	0	0	1	0	1	5	
04:45 PM	0	3	3	0	0	0	3	0	3	6	
05:00 PM	1	2	3	1	0	1	1	0	1	5	
Total Volume	1	11	12	1	0	ī	7	Ö	7	20	
% App. Total	8,3	91.7		100	0		100	0			
PHF	.250	,688	,750	,250	.000	.250	.583	.000	.583	.833	



S Street: Site Driveway W Street : Merrimac Street y/State : Newburyport, MA

eather ; Clear

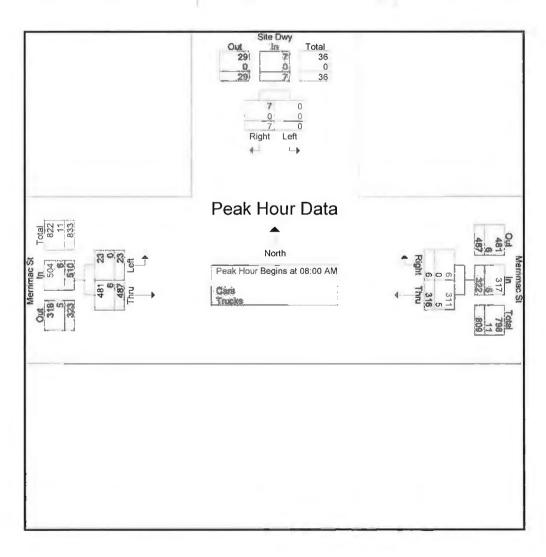
File Name : 72810 Site Code : 72810 Start Date : 8/30/2 Page No : 1

			S	rinted- Cars - Truck	Groups P	M1. **	
		Merrimac St From West		Merrimac St From East		Site Dwy From North	
Int To	Thru !	Left	Right	Thru _	Right	Left	Start Time
1	80	1	1	58	1	0	07:00 AM
1	79	2	1	69	1	0	07:15 AM
1	109	3	0	65	1	0	07:30 AM
2	112	4	0	88	4	0	07:45 AM
6	380	10	2	280	7	0	Total
1	88	7	2	65	3	0	08:00 AM
2	133	7	0	82	4	0	08:15 AM
2	108	4	1	90	0	0	08:30 AM
2	158	5	3	79	0	0	08:45 AM
8	487	23	6	316	7	0	Total
15	867	33	8 :	596	14	0	Grand Total
	96.3	3.7	1.3	98.7	100	0	Apprch %
	57.1	2,2	0.5	39.3	0.9	0	Total %
14	853	33	8	588	13	0	Cars
98	98.4	100	100	98.7	92.9	0	% Cars
	14	0	0	8	1	0	Trucks
1	1.6	0	0	1.3	7.1	0	% Trucks

S Street: Site Driveway W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name: 72810 Site Code : 72810 Start Date : 8/30/2 Page No : 2

		Site Dwy			Merrimac St Merrimac St					
		From North			From East					
Start Time	Left	Right	App. Total	Thru	Right	App, Total	Left	Thru	App. Total	Int. Tot
ak Hour Analysis From 07	:00 AM to 0	8:45 AM - F	Peak 1 of 1							
ak Hour for Entire Intersed	ction Begins	at 08:00 A	M							
08:00 AM	0	3	3	65	2	67	7	88	95	16
08:15 AM	0	4	4	82	0	82	7	133	140	22
08:30 AM	0	0	0	90	1	91	4	108	112	20
08:45 AM	0	0	0	79	3	82	5	158	163	24
Total Volume	0	7	7	316	6	322	23	487	51 0	83
% App. Total	0	100		98.1	1.9		4.5	95.5		
PHF	.000	.438	.438	.878	.500	.885	,821	.771	.782	.85
Cars	0	7	7	311	6	317	23	481	504	82
% Cars	0	100	100	98,4	100	98.4	100	98.8	98.8	98
Trucks	0	0	0	5	0	5	0	6	6 1	1
% Trucks	0	0	0	1.6	0	1.6	0	1.2	1.2	1



S Street : Site Driveway W Street : Merrimac Street y/State : Newburyport, MA eather : Clear

Apprch %

Total %

0

0

100

0.9

File Name: 72810 Site Code : 72810

Start Date: 8/30/2 Page No: 4

				ps Printed- Cars	Grou		
		Merrimac St From West		Merrimac St From East	1	Site Dwy From North	
Int. Tol	Thru	Left	Right	Thru	Right	Left	Start Time
18	77	1	1 .	57	0	0	07:00 AM :
15	77	2	1	69	1	0	07:15 AM
17	106	3	0	65	1	0	07:30 AM
20	112	4	0	86	4	0	07:45 AM
6€	372	10	2	277	6	0	Total
16	88	7	2	64	3	0	08:00 AM
2:	131	7	0	80	4	0	08:15 AM
15	105	4	1	89	0	0	08:30 AM
24	157	5	3	78	0	0	08:45 AM
82	481	23	6	311	7	0	Total
149	853 [33	8	588	13	0	Grand Total

98.7

39.3

1,3

0.5

3.7

2.2

96.3

57.1

S Street: Site Driveway W Street : Merrimac Street xy/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/30/2 Page No : 7

and it		
Company and a second	Printed-	Terrolea
C. PARTAGE AND THE PARTY OF THE	Priniea-	LTHCKS

	Site Dwy From Morth		Merrimac S From East		Merrimac St From West		
Start Time	Left	Right	Thru	Right	Left 1	Thru	Int. Tol
07:00 AM	0	1	1	0	0	3	
07:15 AM	0	0	0	0	0	2	
07:30 AM	0	0	0	0	0	3	
07:45 AM	0	0	2	0	0	0	
Total	0	1	3	0	0	8	
08.00 AM	0	О	1	0 :	0	0	
08.15 AM	0	0	2	0;	0	2	
08:30 AM	0	0	1	0	0	3	
08:45 AM	0	0	1	0	0	1	
Total	0	0	5	0	0	6	b
Grand Total	0	1	8	0	0	14	2
Apprch %	0	100	100	0	0	100	
Total %	0	4.3	34.8	0	0	60.9	

S Street : Site Driveway W Street: Merrimac Street
y/State: Newburyport, MA
eather: Clear

Apprch %

Total %

File Name : 72810 Site Code : 72810 Start Date : 8/30/2 Page No : 10

					Groups Pri	nted- Bikes	Peds					
	F	Site Dwy rom North		F	errimac St From East		F	errimac St rom West				
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu, Total	Int. Tot
07:00 AM	0	0	2	0	0	0	0	3	0	2	3	
07:15 AM	0	0	2	0	0	0	0	0	0	2	0	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	1	4	0	0	0	0	0	1	4	
Total	0	0	5	4	0	0	0	3	0	5	7	1
08:00 AM	0	0	3	0	0	0	0	0	1	4	0	
08:15 AM	0	0	1	1	0	1	0	0	0	2	1	
08:30 AM	0	0	6	0	0	0	0	1	1	7	1	
08:45 AM	0	0	5	0	0	0	0	1	0	5	1	
Total	0	0	15	1	0	1	0	2	2	18	3	2
Grand Total	0	0	20	5	0	1	0	5	2	23	10	3

0

0

100

50

69.7

30.3

100

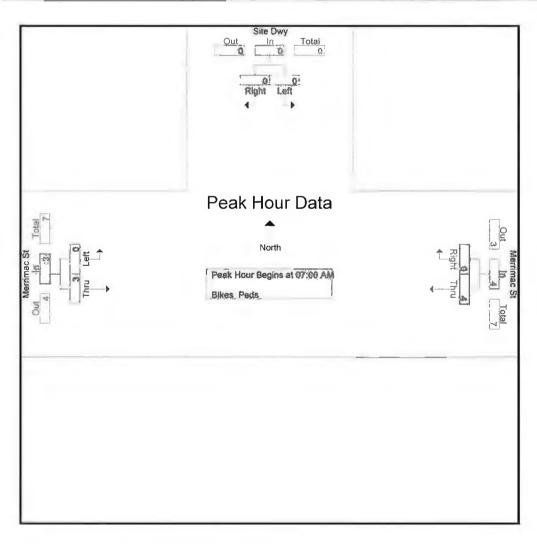
50

0

S Street: Site Driveway W Street : Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/30/2 Page No : 11

	Site Dwy 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. To
ak Hour Analysis From 0	7:00 AM to 0	8:45 AM - F	Peak 1 of 1	-		_	_			
ak Hour for Entire Interse	ction Begins	at 07:00 Al	М							
07:00 AM	0	0	0	0	0	0	0	3	3	
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	4	0	4	0	0	0	
Total Volume	Ō	0	0	4	0	4	0	3	3	
% App. Total	0	0		100	0		0	100		
PHF	000	.000	.000	.250	.000	.250	.000	.250	.250	.4



S Street: Site Driveway W Street: Merrimac Street :y/State: Newburyport, MA

eather : Clear

File Name * 72810 Site Code : 72810 Start Date : 8/30/2 Page No : 1

Groups Printed-Cars - Trucks Site Dwy Merrimac St Merrimac St From West From North From East Thru Start Time Left Right Thru: Right Left Int. Tol 04:00 PM 04:15 PM 2! 04:30 PM 2€ 04:45 PM Total 05:00 PM 05:15 PM 05:30 PM 05:45 PM 11* Total Grand Total Apprch % 7.3 92.7 99.6 0.4 1.3 98.7 Total % 0.2 2.3 47.5 0.2 0.6 49.1 Cars % Cars : 99.5 99.7

0.5

0.3

Ő

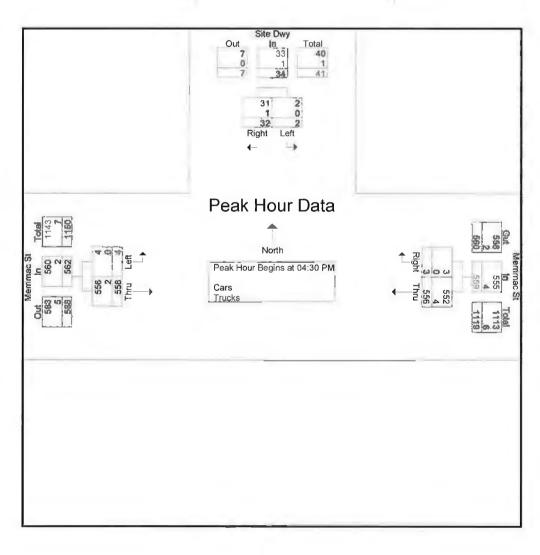
Trucks

% Trucks

S Street: Site Driveway W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/30/2 Page No ; 2

		Site Dwy			Merrimac St		1	Merrimac St		
		From North	1		From East			From West		
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
ak Hour Analysis From 04	4:00 PM to 0	5:45 PM - F	Peak 1 of 1			-				
ak Hour for Entire Interse	ction Begins	at 04:30 P	VI							
04:30 PM	0	4	4	129	0	129	2	133	135	26
04:45 PM	0	9	9	145	0	145	0	126	126	28
05:00 PM	1	16	17	151	1	152	1	160	161	33
05:15 PM	1	3	4	131	2	133	1	139	140	27
Total Volume	2	32	34	556	3	559	4	558	562	118
% App. Total	5.9	94.1		99.5	0.5		0.7	99.3		
PHF	.500	.500	.500	.921	.375	.919	.500	.872	.873	.87
Cars	2	31	33	552	3	555	4	556	560	114
% Cars	100	96.9	97.1	99.3	100	99.3	100	99.6	99.6	99
Trucks	0	1	1	4	0	4	0	2	2	
% Trucks	0	3.1	2.9	0.7	0	0.7	0	0.4	0.4	0



S Street: Site Driveway
W Street: Merrimac Street

y/State: Newburyport, MA

eather : Clear

Page No : 4

				Printed- Cars	Grou		
		Merrimac St From West		Merrimac St From East		Site Dwy From North	
Int. T	Thru	Left	Right	Thru	Rigḥt∃	Left _	Start Time
- :	125	1	1	140	6	1	04.00 PM
:	125	2	0	124	2	0	04:15 PM
:	132	2	0	128	3	0	04:30 PM
	126	0	0	144	9	0	04:45 PM
10	508	5	1	536	20	1	Total :
;	159	1	1	150	16	1	05:00 PM
2	139	1	2	130	3	1	05:15 P M
2	131	4	0	121	6	1	05:30 PM
:	139	3	0	102	5	0	05:45 P M
1:	568	9	3	503	30	3	Total
2	1076	14	4	1039	50	4	Grand Total
	98.7	1.3	0.4	99.6	92.6	7.4	Apprch %
	49.2	0.6	0.2	47.5	2.3	0.2	Total %

S Street : Site Driveway W Street : Merrimac Street y/State : Newburyport, MA eather : Clear

File Name: 72810 Site Code : 72810 Start Date : 8/30/2

Page No : 7

		Grou	ps Printed-Trucks				
	Site Dwy From North	0	Merrimac S From East		Merrimac S From West		
Start Time	Left	Right	Thru	Right	Left	Thru	Int. To
04:00 PM	0	0	0	0	0	0	
04:15 PM	0	0	1	0	0	1	
04:30 PM	0	1	1	0	0	1	
04:45 PM	0	0	1	0	0	0	
Total	0	1	3	0	0	2 :	
05:00 PM	0	0	1	0	0	1	
05:15 PM	0	0	1	0	0	0	
05:30 PM	0	0	0	0	0	0	
05:45 PM	0	0	0	0	0	0	
Total	0	0	2	0	0	1	
Grand Total	0	1	5	0	0	3	
		100		0			
Apprch %	0	100	100	0	0	100	
Total %	0	11.1	55.6	0	0	33.3	

S Street: Site Driveway
W Street: Merrimac Street
y/State: Newburyport, MA

0

Total %

eather : Clear

File Name: 72810 Site Code: 72810 Start Date: 8/30/2

Page No : 10

					Groups Pri	nted-Bikes	Peds					
		Site Dwy rom North	1		Ierrimac St From East			errimac St com West				
Start Time	Left	Right	Peds	Thru	Right	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	Int. Tot
04:00 PM	0	0	8	0	0	0	0	2	1	9	2	1
04:15 PM	0	0	7	1	0	0	0	1	2	9	2	1
04:30 PM	0	0	7	1	0	0	0	1	0	7	2	
04:45 PM	0	0	4	0	0	0	0	1	2	6	1	
Total	0	0	26	2	0	0	0	5	5	31	7	3
05:00 PM	0	0	5	1	0	0	0	0	2	7	1	
05:15 PM	0	0	7	0	0	0	0	3	2	9	3	1
05:30 PM	0	0	6	0	0	0	0	2	1	7	2	
05:45 PM	0	0	9	1	0	0	0	1	0	9	2	1
Total	0	0	27	2	0	0	0	6	5	32	8	4
Grand Total	0	0	53	4	0	0	0	11	10	63	15	7
Apprch %	0	0		100	0		0	100				

73.3

8.08

19.2

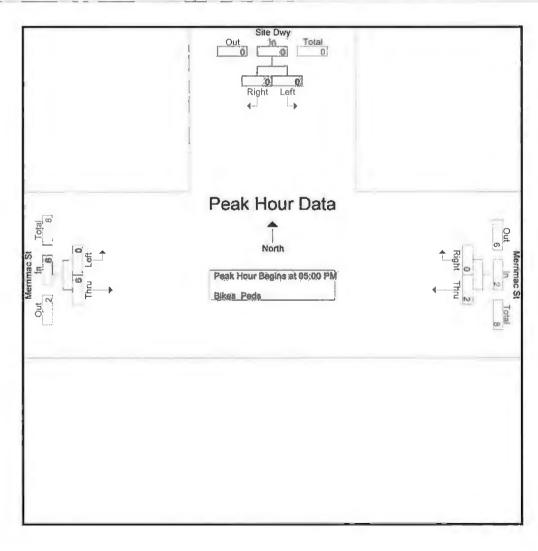
26.7

S Street: Site Driveway
W Street: Merrimac Street
y/State: Newburyport, MA

eather : Clear

File Name ±72810 Site Code ±72810 Start Date ±8/30/2 Page No ±11

	Site Dwy From North				Merrimac St From East			Merrimae St From West			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. To	
ak Hour Analysis From 04	4:00 PM to 0	5:45 PM - F	eak 1 of 1								
ak Hour for Entire Interse	ction Begins	at 05:00 PI	M								
05:00 PM	0	0	0	1	0	1	0	0	0		
05:15 PM	0	0	0	0	0	0	0	3	3		
05:30 PM	0	0	0	0	0	0	0	2	2		
05:45 PM	0	0	0	1	0	1	0	1	1		
Total Volume	0	0	0	2	0	2	0	6	6		
% App. Total	0	0		100	0		0	100			
PHF	.000	.000	.000	.500	.000	.500	.000	.500	.500	.6	



N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

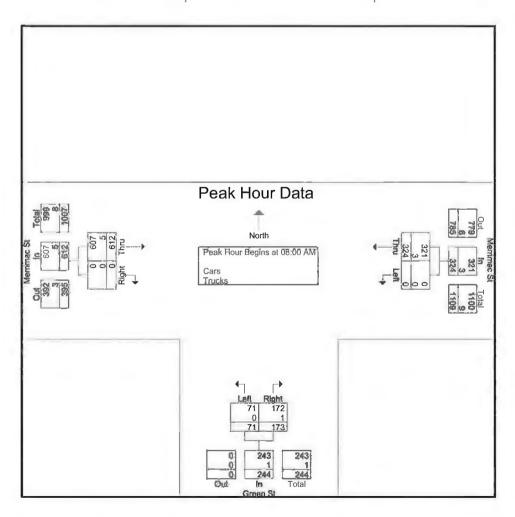
File Name : 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 1

	-		cks	rinted- Cars - Truc			_
		Merrimac St From West		Green St From South		Merrimac St From East	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
161	0	75	16	10	60	0	07:00 AM
195	0	84	24	16	71	0	07:15 AM
232	0	114	27	9	82	0	07:30 AM
239	0	113	30	16	80	0	07:45 AM
827	o	386	97	51	293	0	Total
268	0	135	35	18	80	0	08:00 AM
316	0	149	55	23	89	0	08: 1 5 AM
307	0	168	41	17	81	0	08:30 AM
289	0	160	42	13	74	0	08:45 AM
1180	0	612	173	71	324	0	Total !
2007	0	998	270	122	617	0	Grand Total
	0.	100	68.9	31.1	100	0	Apprch %
	0.	49.7	13.5	6.1	30.7	0	Total %
1982	0	984	267	121	610	0	Cars
98.8	0	98.6	98.9	99.2	98.9	0	% Cars
25	0	14	3	1	7	0	Trucks
1.2	0	1.4	1.1	0.8	1.1	0	% Trucks

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name: 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 2

	Merrimac St From West			
App. Lotal	Thru	Right	App. Total	Int. Total
				_
53	135	0	135	268
78	149	0	149	316
58	168	0	168	307
55	160	0	160	289
244	612	0	612	1180
	100	0		
.782	.911	.000	.911	.934
243	607	0	607	1171
99.6	99.2	0	99.2	99.2
1	5	0	5	9
0.4	0.8	0	0.8	0.8
	78 58 55 244 .782 243 99.6 1	53 135 78 149 58 168 55 160 244 612 100 .782 .911 243 607 99.6 99.2 1 5	53 135 0 78 149 0 58 168 0 55 160 0 244 612 0 100 0 .782 .911 .000 243 607 0 99.6 99.2 0 1 5 0	53 135 0 135 78 149 0 149 58 168 0 168 55 160 0 160 244 612 0 612 100 0 .782 .911 .000 .911 243 607 0 607 99.6 99.2 0 99.2 1 5 0 5



N/S Street; Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name : 72810005 Site Code 72810005 Start Date £6/16/2016

Page No . 4

				os Printed- Cars	Grou		
		Merrimac S From West		Green St From South	ţ	Merrimac St From East	
Int. Tota	Right	Thru	Right	Left	Thru	Left	Start Time
159	0	75	16	9	59	0	07:00 AM
192	0	83	22	16	71	0	07:15 AM
225	0	108	27	9	81	0	07:30 AM
235	0	111	30	16	78	0	07:45 AM
81	0	377	95	50	289	0	Total
266	0	134	35	18	79	0	08:00 AM
313	0	147	55	23	88	0	08:15 AM
306	0	167	41	17	81	0	08:30 AM
286	0	159	41	13	73	0	08:45 AM
117	0	607	172	71	321	0	Total
1982	0	984	267	121	610	0	Grand Total
	0	100	68.8	31.2	100	0	Apprch %
	0	49.6	13.5	6.1	30.8	0	Total %

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name : 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 7

	t	Merrimac S		s Printed- Trucks Green St		Merrimac St	
		From West		From South	1	From East	Ĭ
Int. Total	Right	Thru	Right	Left !	Thru	Left	Start Time
2	0	0	0	1	1	0	07:00 AM
3	0	1	2	0	0	0	07:15 AM
7	0	6	0	0	1	0	07:30 AM
4	0	2	0	0	2	0	07:45 AM
16	0	9	2	1	4	0	Total
2	o	1	0	0	1	0	08:00 AM
3	0	2	0	0	1	0	08:15 AM
1	0	1	0	0	0	0	08:30 AM
3	0	1	1	0	1	0	08:45 AM
9	0	5	1	0	3	0	Total
25	0	14	3]	1	7	0	Grand Total
	0	100	75	25	100	0	Apprch %
	0	56	12	4	28	0	Total %

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA
Weather: Clear

0

Total %

21.4

File Name 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 10

				9	Groups Prin	nted- Bikes	Peds					
		rrimac St om East		G	reen St om South		Me	errimac St rom West				
Start Time	Lef <u>t</u>	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	2	0	0	0	1	0	0	2	1	3
07:15 AM	0	1	1	0	0	4	3	0	0	5	4	9
07:30 AM	0	2	2	0	0	1	0	0	0	3	2	5
07:45 AM	0	0	2	0	0	0	2	0	1	3	2	5
Total	0	3	7	0	0	5	6	0	1	13	9	22
08:00 AM	0	0	11	1	0	2	0	0	0	13	1	14
08:15 AM	0	0	4	0	0	0	1	0	0	4	1	5
08:30 AM	0	0	1	0	0	3	0	0	0	4	0	4
08:45 AM	0	0	2	0	0	0	3	0	0	2	3	5
Total	0	0	18	1	0	5	4	0	0	23	5	28
Grand Total	0	3	25	1	0	10	10	0	1	36	14	50
Apprch %	0	100		100	0	ŀ	100	0				

0

71.4

0

72

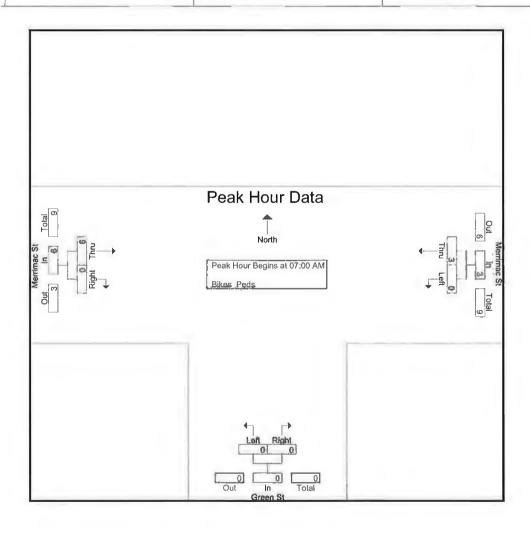
28

7.1

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name: 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 11

	Merrimac St From East			ı	Green St From South		Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right 1	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 07:00 A	M							
07:00 AM	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	1	1	0	0	0	3	0	3	4
07:30 AM	0	2	2	0	0	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	2	0	2	2
Total Volume	0	3	3 *	0	0	0	6	0	6	9
% App. Total	0	100		0	0		100	0		
PHF	.000	.375	.375	.000	.000	.000	.500	.000	.500	.563



N/S Street : Green Street E/W Street: Merrimac Street City/State : Newburyport, MA

Weather : Clear

File Name : 72810005 Site Code : 72810005 Start Date : 6/16/2016

Page No : 1

0

0.1

	t	Merrimac St		rinted- Cars - Truc Green St		Merrimac St	
		From West		From South		From East	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
347	0	151	44	43	109	0	04:00 PM
331	0	129	40	38	124	0	04:15 PM
331	0	145	42	34	110	0	04:30 PM
351	0	166	37	45	103	0	04:45 PM
1360	0	591	163	160	446	0	Total
388	0	163	42	36	147	0	05:00 PM
359	0	151	30	35	143	0	05:15 PM
342	0	151	40	29	122	0	05:30 PM
350	0	155	42	30	123	0	05:45 PM
1439	0	620	154	130	535	0	Total
2799	0	1211	317	290	981	0	Grand Total
	0	100	52.2	47.8	100	0	Apprch %
	0	43.3	11.3	10.4	35	0	Total %
2795	0	1210	317	289	979	0	Cars
99.9	О	99.9	100	99.7	99.8	0	% Cars
4	0	1	0	1	2	0	Trucks

0.3

0.2

% Trucks

0

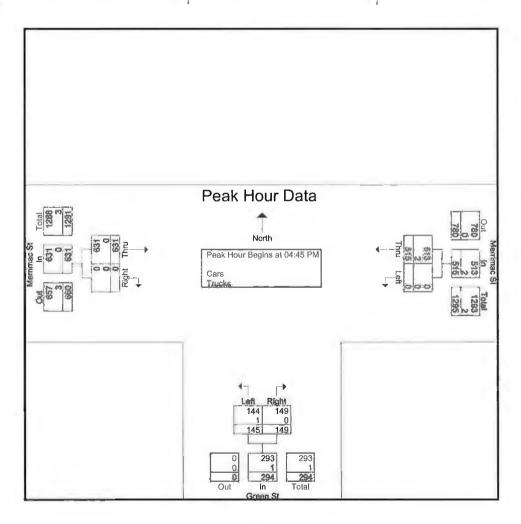
0.1

N/S Street: Green Street E/W Street; Merrimac Street City/State: Newburyport, MA
Weather: Clear

File Name | 72810005 Site Code : 72810005 Start Date : 6/16/2016

Page No : 2

		Merrimac St From East			Green St From South			Merrimac St From West		
Start Time	Left	Thru [†]	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04	4:00 PM to	05:45 PM - P	eak 1 of 1					_		
Peak Hour for Entire Interse	ction Begin	s at 04:45 PN	М							
04:45 PM	0	103	103	45	37	82	166	0	166	351
05:00 PM	0	147	147	36	42	78	163	0	163	388
05:15 PM	0	143	143	35	30	65	151	0	151	359
05:30 PM	0	122	122	29	40	69	151	0	151	342
Total Volume	_ 0	515	515	145	149	294	631	0	631	1440
% App. Total	0	100		49.3	50.7		100	0		
PHF	.000	.876	.876	.806	.887	.896	.950	.000	.950	.928
Cars	0	513	513	144	149	293	631	0	631	1437
% Cars	0	99.6	99.6	99.3	100	99.7	100	0	100	99.8
Trucks	0	2	2	1	0	1	0	0	0	3
% Trucks	0	0.4	0.4	0.7	0	0.3	0	0	0	0.2



N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA
Weather: Clear

File Name : 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 4

0

				os Printed- Cars	Group		
		Merrimac St		Green St		Merrimac St	
	From West			From South		From East	
Int. Tota	Right	Thru	Right	Left	<u>Th</u> ru	l_eft l	Start Time
347	0	151	44 ,	43	109	0	04:00 PM
331	0	129	40	38	124	0	04:15 PM
330	0	144	42	34	110	0	04:30 PM
351	0	166	37	45	103	0	04:45 PM
1359	0	590	163	160	446	0	Total
387	0	163	42	36	146	0	05:00 PM
357	0	151	30	34	142	0	05:15 PM
342	0	151	40	29	122	0	05:30 PM
350	0	155	42	30	123	0	05:45 PM
1436	0	620	154	129	533	0	Total
2795	0	1210	317	289	979 [0	Grand Total
	0	100	52.3	47.7	100	0	Apprch %

10.3

11.3

43.3

0

Total %

35

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA
Weather: Clear

			-	s Printed-Trucks	Group			
		Merrimac St From West		Green St From South		Merrimac St		
						From East	Stort Time	
Int, Tota	Right	Thru	Right	Left	Thru	Left	Start Time	
(0	0	0	0	0	0	04:00 PM	
(0	0	0	0	0	0	04:15 PM	
•	0	1	0	0	0	0	04:30 PM	
(0 -	0	0	0	0	0	04:45 PM	
	0	1	0	0	0	0	Total	
,	0	0	0	0	1	0	05:00 PM	
2	0	0	О	1	1	0	05:15 PM	
(0	0	0	0	o	0	05:30 PM	
(0	0	0	0	o	0	05:45 PM	
3	0	0	0	1	2	0	Total	
4	0	1	0	1	2	0	Grand Total	
	0	100	0	100	100	0	Apprch %	
	0	25	0	25	50	0	Total %	

N/S Street : Green Street E/W Street: Merrimac Street City/State : Newburyport, MA

Weather : Clear

File Name : 72810005 Site Code : 72810005 Start Date : 6/16/2016

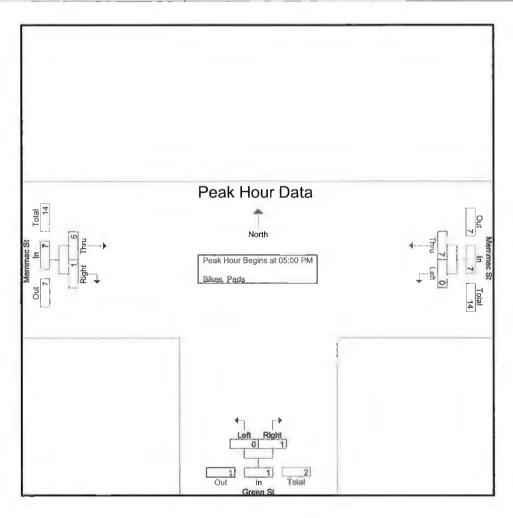
Page No : 10

		errimac St		G	reen St	nted-Bikes	Me	errimac St				
	Fı	From East		From South		From West						
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu Total	Int. Total
04:00 PM	0	0	4	0	0	3	0	0	0	7	0	7
04:15 PM	0	1	4	0	0	1	2	0	0	5	3	8
04:30 PM	0	0	7	0	0	3	0	0	0	10	0	10
04:45 PM	0	1	5	0	0	0	1	0	0	5	2	7
Total	0	2	20	0	0	7	3	0	0	27	5	32
05:00 PM	0	4	1	0	1	6	1	0	0	7	6	13
05:15 PM	0	1	1	0	0	2	1	1	1	4	3	7
05:30 PM	0	2	3	0	0	2	0	0	0	5	2	7
05:45 PM	0	0	2	0	0	2	4	0	1	5	4	9
Total	0	7	7	0	1	12	6	1	2	21	15	36
Grand Total	0	9	27	0	1	19	9	1	2	48	20	68
Apprch %	0	100		0	100		90	10				
Total %	0	45		0	5		45	5		70,6	29.4	

N/S Street : Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name: 72810005 Site Code : 72810005 Start Date : 6/16/2016 Page No : 11

	Merrimac St From East			ı	Green St rom South		M			
Start Time	Left	Thru 1	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tota
eak Hour Analysis From 04	:00 PM to 0	5:45 PM - F	Peak 1 of 1	-						
eak Hour for Entire Interse	ction Begins	at 05:00 PI	М							
05:00 PM	0	4	4	0	1	1	1	0	1	ϵ
05:15 PM	0	1	1	0	0	0	1	1	2	3
05:30 PM	0	2	2	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	4	0	4	4
Total Volume	0	7	7	0	1	1	6	1	7	15
% App. Total	0	100		0	100		85.7	14.3	·	
PHF	.000	.438	.438	.000	,250	.250	.375	.250	.438	.625



S Street : Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name: 72810 Site Code : 72810 Start Date : 6/16/2 Page No : 1

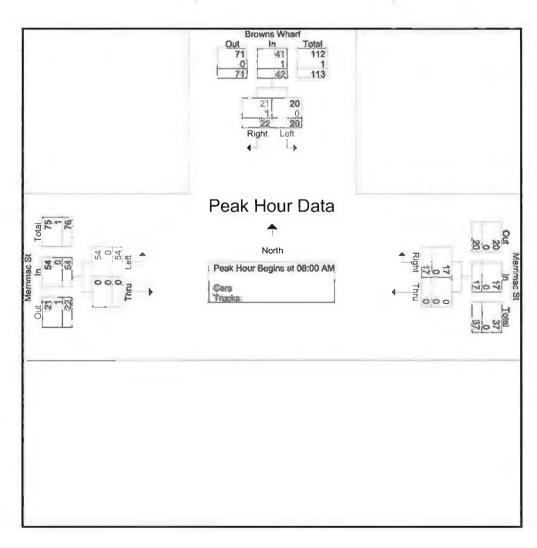
Int. To	Thru	Merrimac Si From West Left	t	rinted- Cars - Tru Merrimac S	rf	Browns Wha	
		l off		From East		From North	
2	•	Eq.	R ight	Thru	Right	Left	Start Time
	0	10	4	0	5	8	07:00 AM
	0	9	1	0	4	3	07:15 AM
	0	9	4	0	2	4	07:30 AM
:	0	11	0	0	9	5	07:45 AM
1	0	39	9	0	20	20	Total
	0	11	5	0	3	5	08:00 AM
	0	12	6	0	7	3	08:15 AM
	0	16	3	0	7	6	08:30 AM
:	0	15	3	0	5	6	08:45 AM
1	0	54	17	0	22	20	Total
26	0	93	26	0	42	40	Grand Total
	0	100	100	0	51.2	48.8	Apprch %
	0	46.3	12.9	0	20.9	19.9	Total %
1:	0	91	26	0	41	40	Cars
98	0	97.8	100	0	97.6	100	% Cars
	0	2	0	0	1	0	Trucks
1	0 '	2.2	0	0	2.4	0	% Trucks

S Street: Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA

eather : Clear

File Name: 72810 Site Code: 72810 Start Date: 6/16/2 Page No: 2

		rowns Whar 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
ak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
ak Hour for Entire Intersed	ction Begins	at 08:00 A	М							
08:00 AM	5	3	8	0	5	5	11	0	11	2
08:15 AM	3	7	10	0	6	6	12	0	12 -	2
08:30 AM	6	7	13	0	3	3	16	0	16	3
08:45 AM	6	5	11	0	3	3	15	0	1 5	2
Total Volume	20	22	42	0	17	17	54	0	54	11
% App. Total	47.6	52.4		0	100		100	0		
PHF	.833	.786	,808,	.000	.708	.708	.844	.000	.844	38.
Cars	20	21	41 :	0	17	17	54	0	54	11
% Cars	100	95.5	97.6	0	100	100	100	0	100	99
Trucks	0	1	1	0	0	0	0	0	0	
% Trucks	0	4.5	2.4	0	0	0	0	0	0	0



S Street : Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

Total %

20.2

20.7

File Name: 72810 Site Code: 72810 Start Date: 6/16/2 Page No: 4

				s Printed- Cars	Group		
		Merrimac St From West		Merrimac St From East		Browns Wha From North	
Int. To	Thru	Left	Right	Thru (Right	Left i	Start Time
	0	10	4	0	5	8	07:00 AM
	0	8	1	0	4	3	07:15 AM
	0	9	4	0	2	4	07:30 AM
	0	10	0	0	9	5	07:45 AM
	0	37	9	0	20	20	Total
	0	11	5	0	3	5	08:00 AM
	0	12	6	0	6	3	08:15 AM
	0	16	3	0	7	6	08:30 AM
	0 1	15	3	0	5	6	08:45 AM
1	0	54	17	0	21	20	Total
1	0	91	26	0	41	40	Grand Total
	0	100	100	0	50.6	49.4	Apprch %

13.1

46

S Street : Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA eather: Clear

File Name : 72810 Site Code : 72810 Start Date : 6/16/2 Page No : 7

		Merrimac St From West		S Printed- Trucks Merrimac St From East	rf	Browns Wha From North	
Int. To	Thru	Left	Right	Thru	Right	Left	Start Time
	0	0	0	0	0	0	07:00 AM
	0	1	0	0	0	0	07:15 AM
	0	0	0	0	0	0	07:30 AM
	0	1	0	0	0	0	07:45 AM
	0	2	0	0	0	0	Total
	o	0	0	0	0	0	08:00 AM
	0	0	0	0	1	0	08:15 AM
	o	0	o	0	0	0	08:30 AM
	0	0	0	0	0	0	08:45 AM
	0	0	0	0	1	0	Total
	0	2	0	0	1	0	Grand Total
	0	100	0	0	100	0	Apprch %
	0	66.7	0	0	33.3	0	Total %

S Street: Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA eather: Clear

Total %

File Name : 72810 Site Code : 72810 Start Date : 6/16/2 Page No : 10

33.3

66.7

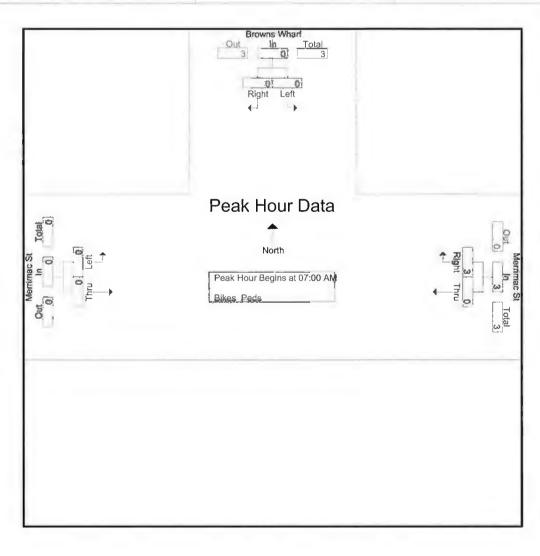
- //		144			Stoups Prir	nted-Blkes	Peds					
		wns Wharf om North			errimac St rom East			errimac St om West				
Start Time	Left	Right	Peds	Thru	Right.	Peds	Left	Thru	Peds	Exclu. Total	Inclu. Total	<u>Înt.</u> T
07:00 AM	0	0	o '	0	1	0	0	0	0	0	1	
07:15 AM	0	0	0	0	1	1	0	0	0	1	1	
07:30 AM	0	0	1	0	0	0	0	0	0	1	0	
07:45 AM	0	0	0	0	1	0	0	0	0	0	1	
Total	0	0	1	0	3	1	0	0	0	2	3	
08:00 AM	0	0	1	0	0	1	0	0	0	2	0	
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	
08:30 AM	0	0	1	0	0	0	0	0	0	1	0	
08:45 AM	0	0	2	0	1	0	0	0	0	2	1	
Total	0	0	4	0	1	2	0	0	0	6	1	
Grand Total	0	0	5	0	4	3	0	0	0	8	4	
Apprch %	0	0		0	100		0	0				

100

S Street: Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 6/16/2 Page No : 11

	Br	owns Whai	ď	N	Merrimac St		I.	/lerrimac St		
	F	rom North			From East		F			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. To
ak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
ak Hour for Entire Interse	ction Begins	at 07:00 A	M							
07:00 AM	0	0	0	0	1	1	0	0	0	
07:15 AM	0	0	0	0	1	1	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	1	1	0	0	0	
Total Volume	0	0	0	0	3	3	0	0	0	
% App. Total	0	0		0	100		0	0		
PHF	.000	.000	,000	,000	.750	.750	.000	.000	.000	.7



S Street : Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

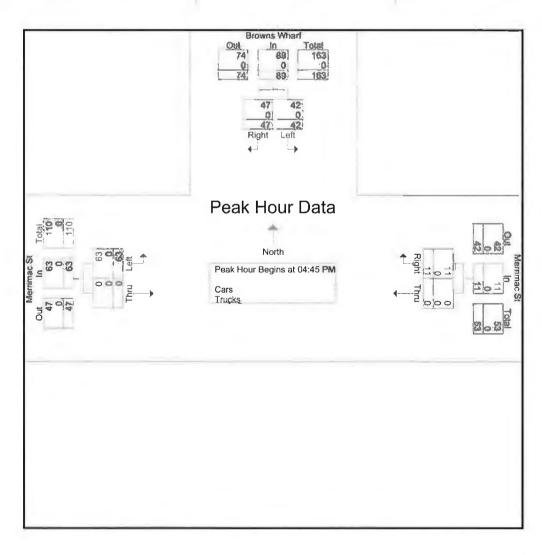
File Name: 72810 Site Code : 72810 Start Date: 6/16/2 Page No: 1

			жs	rinted- Cars - Truc	Groups P		
		Merrimac St From West		Merrimac St From East	rf	Browns Wha	
Int. Tol	Thru	Left	Right	Thru	Right	From North	Start Time
;	0	10	2	0	12	7	04:00 PM
;	0	9	1	0	17	6	04:15 PM
;	0	11	1	0	11	4	04:30 PM
;	0	15	1	0	15	5	04:45 PM
12	0	45	5	0	55	22	Total
4	О	20	4	0	13	10	05:00 PM
;	0	10	3	0	11	15	05:15 PM
	0	18	3	0	8	12	05:30 PM
;	0	20	2	0	7	5	05:45 PM
16	0	68	12	0	39	42	Total
28	0	113	17	0	94	64	Grand Total
	0	100	100	0	59.5	40.5	Apprch %
	0	39.2	5.9	0	32.6	22.2	Total %
28	0	113	17	0	94	64	Cars
10	0	100	100	0	100	100	% Cars
	0	0	0	0	0	0	Trucks
	0	0	0	0	0	0	% Trucks

S Street: Browns Wharf W Street: Merrimac Street y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 6/16/2
Page No : 2

		owns Whar	f		Merrimac St			Merrimac St		
	1	From North			From East			From West		
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
ak Hour Analysis From 04	4:00 PM to 0	5:45 PM - F	Peak 1 of 1							
ak Hour for Entire Interse	ction Begins	at 04:45 PI	М							
04:45 PM	5	15	20	0	1	1	15	0	15	3
05:00 PM	10	13	23	0	4	4	20	0	20	4
05:15 PM	15	11	26	0	3	3	10	0	10	9
05:30 PM	12	8	20	0	3	3	18	0	18	4
Total Volume	42	47	89	0	11	11	63	0	63	16
% App. Total	47.2	52.8		0	100		100	0		
PHF	.700	.783	.856	.000	,688	,688	,788	.000	.788	.8€
Cars	42	47	89	0	11	11	63	0	63	1€
% Cars	100	100	100	0	100	100	100	0	100	10
Trucks	0	0	0	0	0	0	0	0	0	
% Trucks	0	0	0	0	0	0	0	0	0	



S Street : Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name: 72810 Site Code : 72810 Start Date : 6/16/2 Page No : 4

				ps Printed- Cars	Grou		
		Merrimac St From West		Merrimac St From East		Browns Wha From North	
Int. To	Thru	Left	Right	Thru !	Right	Left	Start Time
	0	10	2	0	12	7	04:00 PM
	0	9	1	0	17	6	04:15 PM
	0	11	1	0	11	4	04:30 PM
	0	15	1	0	15	5	04:45 PM
1	0	45	5	0	55	22	Total
	О	20	4	0	13	10	05:00 PM
	0	10	3	0	11	15	05:15 PM
	O	18	3	0	8	12	05:30 PM
	0	20	2	0	7	5	05:45 PM
1	0	68	12	0	39	42	Total
2	0	113	17	0	94	64	Grand Total
	0	100	100	0	59.5	40.5	Apprch %
	0	39.2	5.9	0	32.6	22.2	Total %

S Street : Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

Total %

File Name: 72810 Site Code: 72810 Start Date : 6/16/2
Page No : 7

Groups Printed- Trucks												
	rf	Merrimac S	t									
From North	Right	From East	Pight !	From West	Thru	Int. Tof						
					- 1	1111. 101						
U	U	U	U	0	U							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	0							
0	o	0	0	0	0							
0	0	0	0	0	0							
0	0	0	0	0	O							
0	0	0	0	0	0							
0	О	0	0	0	0							
	From North Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Browns Wharf From North Left Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Browns Wharf From North Merrimac S From East Left Right Thru 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Browns Wharf From North Merrimac St From East Left Right Thru Right 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Browns Wharf From North Merrimac St From East Merrimac St From West Left Right Thru Right Left 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Browns Wharf From North From East From West From West						

S Street: Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA eather: Clear

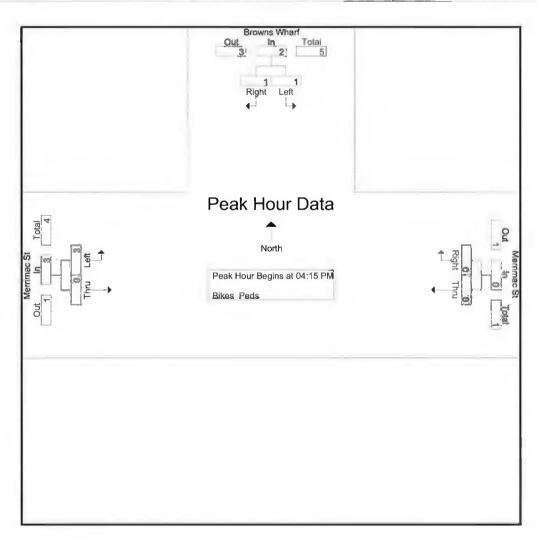
File Name 72810 Site Code: 72810 Start Date : 6/16/2 Page No : 10

		vns Wharf		Me	errimac St	ted- Bikes	Me	rrimac St				
Start Time	Left '	Right	Peds	Thru	rom East Right	Peds	Left	om West Thru	Peds	Exclu. Total	Inclu. Total	Int. To
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	1	1	0	0	0	0	0	0	0	0	2	
04:30 PM	0	0	0	0	0	0	1	0	0	0	1	
04:45 PM ¹	0	0	0	0	0	0	1	0	0	0	1	
Total	1	1	0	0	0	0	2	0	0	0	4	
05:00 PM	0	0	1	0	0	4	1	0	0	5	1	
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM	0	0	1	0	0	0	0	0	0	1	0	
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	2	0	0	4	1	0	0	6	1	
Grand Total	1	1	2	0	0	4	3	0	0	6	5	
Apprch %	50	50	Į	0	0		100	0				
Total %	20	20	1	0	0		60	0		54.5	45.5	

S Street: Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA eather: Clear

File Name: 72810 Site Code : 72810 Start Date : 6/16/2 Page No :11

		owns Whai 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
ak Hour Analysis From 04	1:00 PM to 0	5:45 PM - F	Peak 1 of 1		-	-	-			
ak Hour for Entire Interse	ction Begins	at 04:15 P	М							
04:15 PM	1	1	2	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	O 1	1	0	1	
04:45 PM	0	0	0	0	0	0	1	0	1	
05:00 PM	0	0	0	0	0	0	1	0	1	
Total Volume	1	1	2	0	0	0	3	0	3	
% App. Total	50	50		0	0	Ī	100	0		
PHF	.250	.250	.250	.000	,000	.000	,750	.000	.750	.62



N/S Street: State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA Weather: Clear

File Name : 72810006 Site Code : 72810006 Start Date : 6/16/2016 Page No : 1

			ķs	rinted- Çarş - Truc	Groups P		
		Merrimac St From West		State St From South		Water St From East	
Int. Total	Right	Thru	Right	Left	Thru	<u>Le</u> ft	Start Time
172	44	48	0	0	65	15	07:00 AM
188	58	46	0	0	66	18	07:15 AM
224	65	74	0	0	74	11	07:30 AM
216	77	49	0	0	76	14	07:45 AM
800	244	217	0	0	281	58	Total
249	80	76	0	0	80	13	08:00 AM
297	88	90	0	0	103	16	08:15 AM
305	87	117	0	0	80	21	08:30 AM
259	74	87	0	1	78	19	08:45 AM
1110	329	370	0	1	341	69	Total
1910	573	587	0	1	622	127	Grand Total ∮
	49.4	50.6	0	100	83	17	Apprch %
	30	30.7	0	0.1	32.6	6.6	Total %
1883	570	575	0	1	617	120	Cars
98.6	99.5	98	0	100	99.2	94.5	% Cars
27	3	12	0	0	5	7	Trucks
1.4	0.5	2	0	0	0.8	5,5	% Trucks

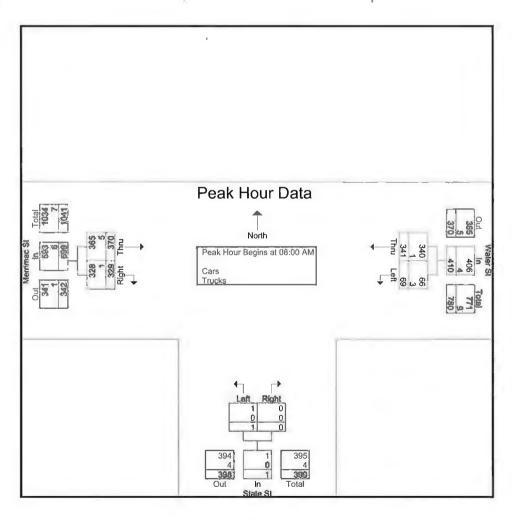
N/S Street: State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name: 72810006 Site Code * 72810006 Start Date * 6/16/2016

Page No 2

		Water St	- 1		State St		Ň	lerrimac St	i i	
		From East			From South		F	rom West]	
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru :	Right	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	eak 1 of 1	-						_
Peak Hour for Entire Interse	ction Begins	at 08:00 Al	М							
08:00 AM	13	80	93	0	0	0	76	80	156	249
08:15 AM	16	103	119	0	0	0	90	88	178	297
08:30 AM	21	80	101	0	0	0	117	87	204	305
08:45 AM	19	78	97	1	0	1	87	74	161	259
Total Volume	69	341	410	1	0	1	370	329	699	1110
% App. Total	16.8	83.2		100	0		52.9	47.1		
PHF	.821	.828	.861	.250	.000	.250	.791	.935	.857	.910
Cars	66	340	406	1	0	1	365	328	693	1100
% Cars	95.7	99.7	99.0	100	0	100	98.6	99.7	99.1	99.1
Trucks	3	1	4	0	0	0	5	1	6	10
% Trucks	4.3	0.3	1.0	0	0	0	1.4	0.3	0.9	0.9



N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name : 72810006 Site Code : 72810006 Start Date : 6/16/2016 Page No : 4

				os Printed-Cars	Grou		
		Merrimac S From West		State St From South		Water St From East	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time !
170	44	48	0	0	64	14	07:00 AM
185	58	44	0	0	66	17	07:15 AM
217	63	70	0	0	73	11	07:30 AM
211	77	48	0	0	74	12	07:45 AM
783	242	210	0	0	277	54	Total
248	80	75	0	0	80	13	MA 00:80
295	88	88	0	0	103	16	08:15 AM
304	87	116	0	0	80	21	08:30 AM
253	73	86	0	1	77	16	08:45 AM
1100	328	365	0	1	340	66	Total
1883	570	575	0	1	617	120	Grand Total
	49.8	50.2	0	100	83.7	16.3	Apprch %
	30.3	30.5	О	0.1	32.8	6.4	Total %

N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name: 72810006 Site Code : 72810006 Start Date : 6/16/2016 Page No : 7

			T	s Printed-Trucks	Group	141 (5)	E
		Merrimac S From West		State St From South		Water St From East	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
2	0	0	0	0	1	1	07:00 AM
3	0	2	0	0	0	1	07:15 AM
7	2	4	0	0	1	0	07:30 AM
5	0	1	o [0	2	2	07:45 AM
17	2	7	0	0	4	4	Total
1	0	1	0	0	0	0	08:00 AM
2	0	2	0	0	0	0	08:15 AM
1	0	1	0	0	0	0	08:30 AM
6	1	1	0	0	1	3	08:45 AM
10	1	5	0	0	1.	3	Total
27	3	12	o j	0	5	7	Grand Total
	20	80	0	0	41.7	58.3	Apprch %
	11.1	44.4	0	0	18.5	25.9	Total %

N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

Total %

6.2

12.5

File Name: 72810006 Site Code : 72810006 Start Date : 6/16/2016
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64

				_ (Groups Prin	ted-Bikes	Peds					
		/ater St			State St om South		Me	errimac St om West				
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	1	0	0	2	1	2	0	3	3	6
07:15 AM	0	1	0	0	0	0	2	0	0	0	3	3
07:30 AM	0	1	1	0	0	0	0	0	0	1	1	2
07:45 AM	0	0	0	1	0	0	2	0	0	0	3	3
Total	0	2	2	1	0	2	5	2	0	4	10	14
08:00 AM	1	0	2	0	0	1	0	0	0	3	1	4
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	1
08:30 AM	0	0	0	0	0	1	0	1	0	1	1	2
08:45 AM	0	0	0	0	0	0	2	2	0	0	4	4
Total	1	0	2	0	0	3	2	3	0	5	6	11
Grand Total	1	2	4	1	0	5	7	5	0	9	16	25
Apprch %	33.3	66.7		100	0		58.3	41.7				

6.2

0

43.8

31.2

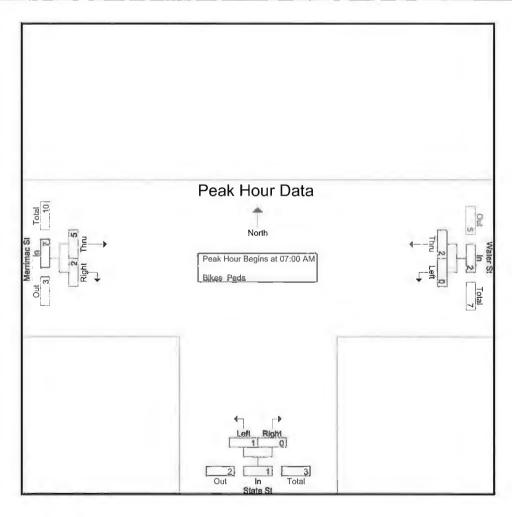
N/S Street: State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA Weather: Clear

File Name: 72810006 Site Code : 72810006 Start Date : 6/16/2016

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		Water St From East		f	State St From South			Merrimac St From West		
Start Time	Left _	Thru	App. Total	Left	Right	App. Total	Thru	Right [⊺]	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1	[-				1	
Peak Hour for Entire Interse	ction Begins	at 07:00 A	M							
07:00 AM	0	0	0	0	0	0	1	2	3	3
07:15 AM	0	1	1	0	0	0	2	0	2	(
07:30 AM	0	1	1	0	0	0	0	0	0	•
07:45 AM	0	0	0	1	0	1	2	0	2	3
Total Volume	0	2	2	1	0	1	5	2	7	10
% App. Total	0	100		100	0		71.4	28.6		
PHF	.000	,500	.500	.250	.000	.250	.625	.250	.583	.833



N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name * 72810006

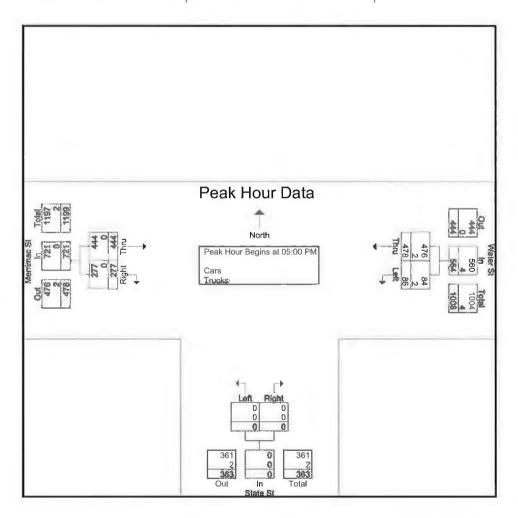
		<u>ks</u>	rinted- Cars - Truc	Groups P		
Right	Three	Right	Left Left	Thru	Left	Start Time
81	102	0	0	93	30	04:00 PM
71	103	0	0	103	17	04:15 PM
59 <u>]</u>	105	0	0	91	17	04:30 PM
74	125	0	0	89	20	04:45 PM
285	435	0	0	376	84	Total
87	103	0	0	128	25	05:00 PM
48	129	o	0	137	21	05:15 PM
66	102	0	0	108	20	05:30 PM
76	110	0	0	105	20	05:45 PM
277	444	0	0	478	86	Total
562	879	0	0	854	170	Grand Total
39	61	0	0	83.4	16.6	Apprch %
22.8	35.7	0	0	34.6	6.9	Total %
562	879	0	0 -	852	166	Cars
100	100	0	0	99.8	97.6	% Cars
0	0	0	0	2	4	Trucks
0	0	0	0	0,2	2.4	% Trucks
	81 71 59 74 285 87 48 66 76 277 562 39 22.8 562 100 0	102 81 103 71 105 59 125 74 435 285 103 87 129 48 102 66 110 76 444 277 879 562 61 39 35.7 22.8 879 562 100 100 0 0	Merrimac St From West Flight	State St From South Left Right Thru Right	Thru Left Right Thru Right 93 0 0 102 81 103 0 0 103 71 91 0 0 105 59 89 0 0 125 74 376 0 0 435 285 128 0 0 103 87 137 0 0 129 48 108 0 0 102 66 105 0 0 110 76 478 0 0 444 277 854 0 0 879 562 83.4 0 0 61 39 34.6 0 0 879 562 99.8 0 0 100 100 2 0 0 0 0	Water St From East From South Merrimac St From West 10 10 100

N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name: 72810006 Site Code : 72810006 Start Date : 6/16/2016 Page No : 2

		Water St			State St		N	1errimac St		
		From East		F	From South			rom West		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04	4:00 PM to 0	5:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 05:00 Pf	M							
05:00 PM	25	128	153	0	0	0	103	87	190	343
05:15 PM	21	137	158	0	0	0	129	48	177	335
05:30 PM	20	108	128	0	0	0	102	66	168	296
05:45 PM	20	105	125	0	0	0	110	76	186	311
Total Volume	86	478	564	0	0	0	444	277	721	1285
% App. Total	15.2	84.8		0	0		61.6	38.4		
PHF	.860	.872	.892	.000	.000	.000	.860	.796	.949	.937
Cars	84	476	560	0	0	0	444	277	721	1281
% Cars	97.7	99.6	99.3	0	0	0	100	100	100	99.7
Trucks	2	2	4	0	0	0	0	0	0	4
% Trucks	2.3	0.4	0.7	0	0	О	0	0	0	0.3



N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA Weather: Clear

File Name | 72810006 Site Code | 72810006 Start Date | 6/16/2016 Page No | 4

			-	es Printed- Cars	Grat		
		Merrimac S From West		State St From South		Water St From East	
Int. Total	Right	Thru	Right	Left I	<u>Thru</u>	Left	Start Time
305	81	102	0	0	93	29	04:00 PM
294	71	103	0	0	103	17	04:15 PM
271	59	105	0	0	91	16	04:30 PM
308	74	125	0	0	89	20	04:45 PM
1178	285	435	0 1	0	376	82	Total
342	87	103	0	0	127	25	05:00 PM
333	48	129	0	0	136	20	05:15 PM
295	66	102	0	0	108	19	05:30 PM
311	76	110	0	0	105	20	05:45 PM
1281	277	444	0	0	476	84	Total
2459	562	879	0	0	852 ↑	166	Grand Total
	39	61	0	0	83.7	16.3	Apprch %
	22.9	35.7	0	0	34.6	6.8	Total %

N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name 72810006 Site Code : 72810006 Start Date 6/16/2016 Page No 7

San and the same of	PROJECT BANKS	Tomas of Page
Larcition	Printeg-	Trucks

		Merrimac St From West		State St From South		Water St From East	
Int. Total	Right	Thru	Right	Left I	Thru.	Left	Start Time
1	0	0	0	0	0	1	04:00 PM
0	0	0	0	0	0	0	04:15 PM
1	0	0	0	0	0	1	04:30 PM
0	o ¹	0	0	0	0	0	04:45 PM
2	0	0	0	0	0	2	Total
1	0	0	0	0	1	0	05:00 PM
2	0	0	0	0	1	1	05:15 PM
1	0	0	0	0	0	1	05:30 PM
0	0	0	0	0	01	0	05:45 PM
4	0	0	0	0	2	2	Total
6	0	0	0	0	2	4	Grand Total
	0	0	0	0	33.3	66.7	Apprch %
	0	0	0	0	33.3	66.7	Total %

N/S Street: State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

Apprch %

Total %

15.4

9.5

84.6

52.4

100

4.8

0

0

28.6

9.5

71.4

23.8

63.2

36.8

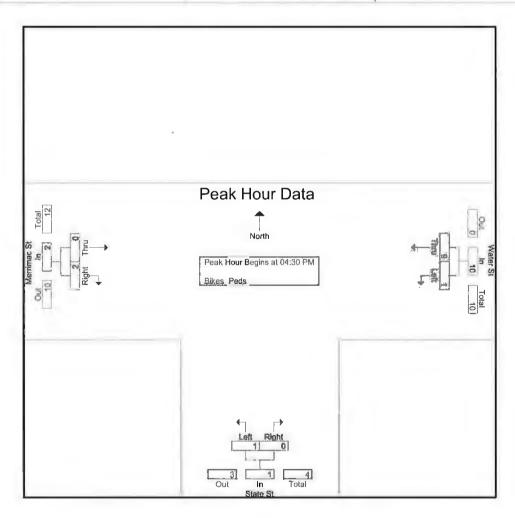
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		Vater St			State St om South	nted- Bikes	Me	errimac St om West					
Start Time	Left	Thru	Peds	Left	Right	Peds	T <u>hru</u>	Right	Peds	Exclu. Total	Inclu. Total	Int. Tota	
04:00 PM	1	0	0	0	0	0	1	0	0	0	2	2	
04: 1 5 PM	0	0	0	0	0	2	0	3	3	5	3	8	
04:30 PM	0	2	0	1	0	3	0	0	0	3	3	(
04:45 PM	1	3	0	0	0	3	0	.0.	Ω] 3	4		
Total ;	2	5	0	1	0	8	1	3	3	11	12	23	
05:00 PM	0	2	o {	0	0	14	0	0	1	15	2	1	
05:15 PM	0	2	0	0	0	2	0	2	0	2	4	(
05:30 PM	0	1	0	0	0	1	0	0	5	6	1		
05:45 PM	0	1	0	0	0	0	1	0	2	2	2	•	
Total	0	6	0	0	0	17	1	2	8	25	9	34	
Grand Total	2	11	0	1	0	25	2	5	11	l 36	21	5	

N/S Street: State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA Weather: Clear

	Water St From East			F	State St From South			Merrimac St From West		
Start Time	Left .	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04	1:00 PM to 0	5:45 PM - P	eak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 04:30 PM	M							
04:30 PM	0	2	2	1	0	1	0	0	0	3
04:45 PM	1	3	4	0	0	0	0	0	0	4
05:00 PM	0	2	2	0	0	0	0	0	0	2
05:15 PM	0	2	2	0	0	0	0	2	2	4
Total Volume	1	9	10	1	0	1	0	2	2	13
% App. Total	10	90		100	0		0	100		
PHF	.250	.750	.625	.250	.000	.250	.000	.250	.250	.813



N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA
Weather: Clear

File Name : 72810007 Site Code | 72810007 Start Date : 6/16/2016 Page No | 1

1.2

		Groups	Printed-Cars - Tru	cks			
	State St From North	1	Liberty St From East		State St From Sout		
Start Time	Left	Thru !	Left,	Right	Thru	Right	Int. Total
07:00 AM	0	59	17	0	0	0	76
07:15 AM	0	76	22	0	0	0	98
07:30 AM	0	76	25	0	0	0	101
07:45 AM Į	0	91	12	0	0	0	103
Total	0	302	76	0	0	0	378
08:00 AM	0	93	22	0	0	0	115
08:15 AM	0	104	18	0	0	0	122
08:30 AM	0	108	27	0	0	0	135
08:45 AM	0	93	24	0	0	0	117
Total	0	398	91	0	0	0	489
Grand Total	0	700	167	0	0	0	867
Apprch %	0	100	100	0	0	0	
Total %	0	80.7	19.3	0	0	0	
Cars	0	690	167	0	0	0	857
% Cars	0	98.6	100	0	0	0	98.8
Trucks	0	10	0	0	0	0	10

1.4

0

% Trucks

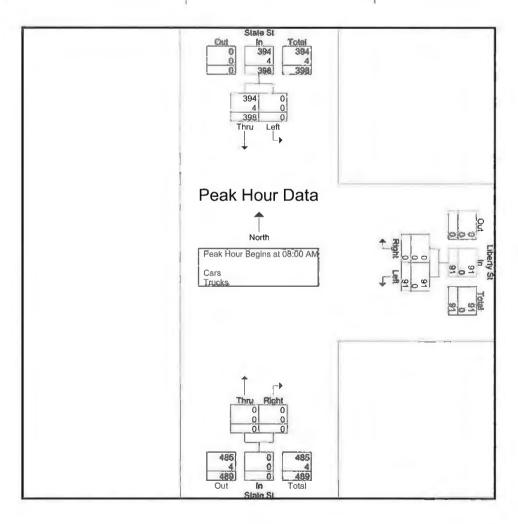
N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA

Weather : Clear

File Name : 72810007 Site Code : 72810007 Start Date : 6/16/2016

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		State St			Liberty St	1		State St		
		From North			From East			From South		
Start Time	Left	Thru	App. Total	Left	Ríght	App. Total	Thru .	Right	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 08:00 A	M							
08:00 AM	0	93	93	22	0	22	0	0	0	115
08:15 AM	0	104	104	18	0	18	0	0	0	122
08:30 AM	0	108	108	27	0	27	0	0	0	135
08:45 AM	0	93	93	24	0	24	0	0	0	117
Total Volume	Ô	398	398	91	0	91	0	0	0	489
% App. Total	0	100		100	0		0	0	1	
PHF	.000	.921	,921	.843	.000	.843	.000	.000	.000	.906
Cars	0	394	394	91	0	91	0	0	0	485
% Cars	0	99.0	99.0	100	0	100	0	0	0	99.2
Trucks	0	4	4	0	0	0	0	0	0	4
% Trucks	0	1.0	1.0	0	0	0	0	0	0	8.0



N/S Street : State Street E/W Street: Liberty Street City/State: Newburyport, MA Weather: Clear

File Name: 72810007 Site Code : 72810007 Start Date : 6/16/2016 Page No : 4

				os Printed- Cars	Grou		
		State St		Liberty St		State St	
Int. Tota	Right	From South Thru	Right	From East Left	Thru	From North Left	Start Time
75	0	0	0	17	58	0	07:00 AM
97	0	0	0	22	75	0	07:15 AM)
99	0	0	0	25	74	0	07:30 AM
101	0	0	0	12	89	0	07:45 AM
372	0	0	0	76	296	0	Total
115	0	0	0	22	93	0	08:00 AM
122	0	0	0	18	104	0	08:15 AM
135	0	0	o	27	108	0	08:30 AM
113	0	0	0	24	89	0	08:45 AM
485	0	0	0	91	394	0	Total
857	0	0	0	167	690	0	Grand Total
	0	0	0	100	100	0	Apprch %
	0	0	0	19.5	80.5	0	Total %

N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA Weather: Clear

File Name: 72810007 Site Code: 72810007 Start Date: 6/16/2016

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		State St		Printed- Trucks Liberty St	Олодро	State St	
	1	From South		From East		From North	
Int. Tota	Right	Thru	Right	Left	Thru	Left	Start Time
4	0	0	0	0	1	0	07:00 AM
1	0	0	0	0	1	0	07:15 AM
2	0	0	0	0	2	0	07:30 AM
2	0	0	0	0	2	0	07:45 AM
6	0 i	0	0	0	6	0	Total
(0 }	0	0	0	0	0	08:00 AM
(0	0	o	0	0	0	08:15 AM
(0	0	0	0	0	0	08:30 AM
4	0	0	0	0	4	0	08:45 AM
4	0	0	0	0	4	0	Total
10	0	0	0	0	10	0	Grand Total
	0	0	0	0	100	0	Apprch %
	0	0	0	0	100	0	Total %

N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA

25

Total %

25

Weather : Clear

File Name : 72810007 Site Code : 72810007 Start Date : 6/16/2016

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+						nted-Bikes						
		State St om North			iberty St om East			State St om South				
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Tota
07:00 AM	0	0	1	0	0	8	0	0	0	9	0	g
07:15 AM	0	0	1	0	0	3	0	0	0	4	0	4
07:30 AM	0	0	3	0	0	10	0	0	0	13	0	13
07:45 AM	0	0	4	0	0	10	0	0	0	14	0	14
Total	0	0	9	0	0	31	0	0	0	40	0	40
08:00 AM	0	1	2	0	0	11	0	0	0	13	1	14
08:15 AM	0	0	0	0	0	10	0	0	0	10	0	10
08:30 AM	0	0	2	0	0	13	0	0	0	15	0	15
08:45 AM	1	0	1	1	0	19	1	0	0	20	3	23
Total	1	1	5	1	0	53	1	0	0	58	4	62
Grand Total	1	1	14	1	0	84	1	0	0	98	4	102
Apprch %	50	50		100	0		100	0				

0

25

0

96.1

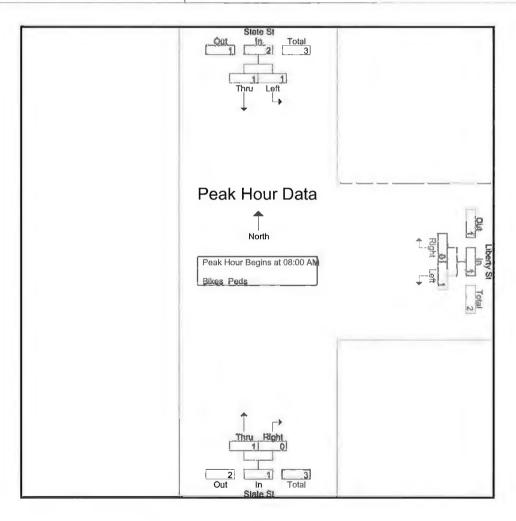
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25

N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA Weather: Clear

File Name . 72810007 Site Code . 72810007 Start Date . 6/16/2016 Page No . 11

	F	State St rom North			Liberty St From East		State St From South			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
eak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
eak Hour for Entire Interse	ction Begins	at 08:00 Al	М							
08:00 AM	0	1	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	1	1	0	1	1	0	1	3
Total Volume	1	1	2	1	0	1	1	0	1	4
% App. Total	50	50		100	0		100	0		
PHF	.250	.250	.500	.250	.000	.250	.250	.000	.250	.333



N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA Weather: Clear

File Name : 72810007 Site Code : 72810007 Start Date : 6/16/2016 Page No : 1

			ks	rinted- Cars - True	Groups P		
		State St From South		Liberty St From East		State St From North	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
128	0	0	0	17	111	0	04:00 PM
97	0	0	0	9	88	0	04:15 PM
90	0	0	0	14	76	0	04:30 PM
111	0	0	0	17	94	0	04:45 PM
426	0	0	0	57	369	0	Total
127	0	0	0	15	112	0	05:00 PM
79	0	0	0	10	69	0	05:15 PM
97	0	0	0	11	86	0	05:30 PM
101	0	0	0	5	96	0	05:45 PM
404	0	0	0	41	363	0	Total
830	0	0	0	98	732	0	Grand Total
	0	0	0	100	100	0	Apprch %
	0	0	0	11.8	88.2	0	Total %
825	0	0	0	97	728	0	Cars
99.4	0	0	0	99	99.5	0	% Cars
5	0	0	0	1	4	0	Trucks
0.6	0	0	0	1	0,5	0	% Trucks

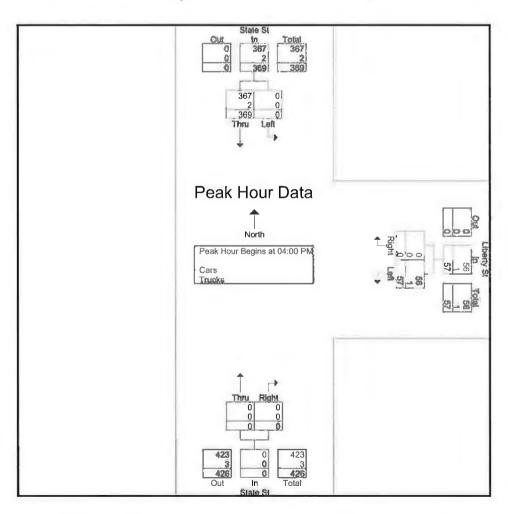
N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA

Weather : Clear

File Name : 72810007 Site Code : 72810007 Start Date : 6/16/2016

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	F	State St			Liberty St From East			State St From South		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int, Total
eak Hour Analysis From 04	1:00 PM to 0	5:45 PM - F	Peak 1 of 1						1	
eak Hour for Entire Interse	ction Begins	at 04:00 PI	М							
04:00 PM	0	111	111	17	0	17	0	0	0	128
04:15 PM	0	88	88	9	0	9	0	0	0	97
04:30 PM	0	76	76	14	0	14	0	0	0	90
04:45 PM	0	94	94	17	0	17	0	0	0	111
Total Volume	0	369	369	57	0	57	0	0	0	426
% App. Total	0	100		100	0		0	0		
PHF	.000	.831	.831	.838	.000	.838	.000	.000	.000	.832
Cars	0	367	367	56	0	56	0	0	0	423
% Cars	0	99.5	99.5	98.2	0	98.2	0	0	0	99.3
Trucks	0	2	2	1	0	1	0	0	0	3
% Trucks	0	0.5	0.5	1.8	0	1,8	0	0	0	0.7



N/S Street : State Street E/W Street: Liberty Street City/State: Newburyport, MA Weather: Clear

File Name: 72810007

				ps Printed- Cars	Grou		
		State St From South		Liberty St From East		State St From North	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
127	0 *	0	0	17	110	0	04:00 PM
96	0	0	0	8	88	0	04:15 PM
89	0	0	0	14	75	0	04:30 PM
111	0	0	0	17	94	0	04:45 PM
423	0	0	0	56	367	0	Total
127	0 1	0	0	15	112	0	05:00 PM
78	0	0	0	10	68	0	05:15 PM
96	О	0	0	11	85	0	05:30 PM
101	0	0	o	5	96	0	05:45 PM
402	0	0	0	41	361	0	Total
825	0	0	0	97	728	0	Grand Total
	0	0	0	100	100	0	Apprch %
	0	0	0	11.8	88.2	0	Total %

N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA

Weather : Clear

File Name: 72810007 Site Code: 72810007 Start Date: 6/16/2016

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				Printed-Trucks	Group:		
		State St		Liberty St		State St	
4	1	From South		From East		From North	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
	0	0	0	0	1 '	0	04:00 PM
	0	0	0	1	0	0	04:15 PM
	0	0	0	0	1	0	04:30 PM
4	0	0	0	0	0	0	04:45 PM
;	0	0	0	1	2	0	Total
(0	0	0	0	0	0	05:00 PM
,	0	0	0	0	1	0	05:15 PM
	0	0	0	0	1	0	05:30 PM
(0	0	0	0	0	0	05:45 PM
:	0	0	0	0	2	0	Total
	0	0	0 1	1	4	0	Grand Total
,				1			
	0	0	0	100	100	0	Apprch %
	0	0	0	20	80	0	Total %

N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA
Weather: Clear

File Name: 72810007 Site Code : 72810007 Start Date : 6/16/2016

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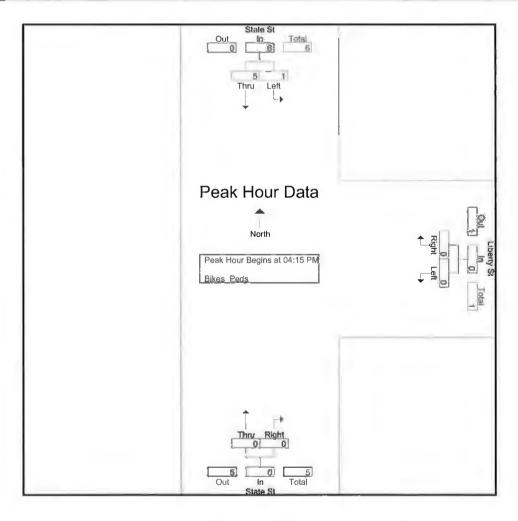
Groups	Printed-	Bikes	Peds	
Liberty 9	St			

			Groups Printed- Bikes Peds								
6		State St From South		Liberty St From East			State St From North				
Inclu. Total	Exelu. Total	Peds	Right	Thru	Peds	Right	Left	Peds	Thru	Left	Start Time
0	50	0	0	0	50 :	0	0	0 "	0	0	04:00 PM
2	40	0	0	0	34	0	0	6	1	1	04:15 PM
2	21	0	0	0	17	0	0	4	2	0	04:30 PM
0	44	0	0	0	41	0	0	3	0	0	04:45 PM
4	155	0	0	0	142	0	0	13	3	1	Total
2	40	0	0	0	36	0	0	4	2	0	05:00 PM
2	40	0	0	0	36	0	0	4	0	2	05:15 PM
0	39	0	0	0	36	0	0	3	0	0	05:30 PM
2	22	0	0	0	21	0	0	1	0	2	05:45 PM
6	141	0	0	0	129	0	0	12	2	4	Total
10	296	0 [0	0	271	0	0	25	5	5	Grand Total
]	0	0	- 1	0	0		50	50	Apprch %
3.3	96.7		0	0		0	0		50	50	Total %
	0 2 2 0 4 2 2 0 2 6	50 0 40 2 21 2 44 0 155 4 40 2 40 2 40 2 39 0 22 2 141 6 296 10	0 50 0 0 40 2 0 21 2 0 44 0 0 155 4 0 40 2 0 40 2 0 39 0 0 22 2 0 141 6 0 296 10	Peds Exclu Total Inclu Total 0	State St From South Thru Right Peds Exclus Total Inclus Total	State St From South Peds Thru Right Peds Exclus Total Inclus Total 50 0 0 0 50 0 34 0 0 0 40 2 17 0 0 0 21 2 41 0 0 0 44 0 142 0 0 0 155 4 36 0 0 0 40 2 36 0 0 0 40 2 36 0 0 0 39 0 21 0 0 0 22 2 129 0 0 0 141 6	State St From South Right Peds Exclu Total Inclu Total	Liberty St From East Peds Thru Right Peds Exclu Total Inclu Total	Peds Left Right Peds Thru Right Peds Exclu Total Inclu Total	tate St mm North Liberty St From East Imm North Left Right Pads Pads Thru Right Peds Pads Pads From South From South Pads Pads Pads Pads Pads Pads Pads Pads	State St From North From East From South

N/S Street : State Street E/W Street: Liberty Street City/State: Newburyport, MA Weather: Clear

File Name : 72810007 Site Code : 72810007 Start Date : 6/16/2016 Page No : 11

	F	State St rom North			Liberty St From East		F			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04	4:00 PM to 0	5:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 04:15 PI	М							
04:15 PM	1	1	2	0	0	0	0	0	0	2
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	2	2	0	0	0 ;	0	0	0	2
Total Volume	1	5	6	0	0	0	0	0	0	6
% App. Total	16,7	83.3		0	0		0	0		
PHF	.250	.625	.750	.000	.000	.000	.000	.000	.000	.750



N/S Street: Winter Street E/W Street; Route 1 SB On Ramp City/State: Newburyport, MA
Weather: Clear

File Name: 72810008 Site Code : 72810008 Start Date : 6/16/2016

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0

4.6

Groups Printed- Cars - Trucks													
Left !	Thru	Left	Right	Thru	Right	Int. Total							
17	22	0	0	0	0	39							
19	28	0	0	0	0	47							
21	22	0	0	0	0	43							
36	28	0	0	0	0	64							
93	100	0	0	0	0	193							
25	26	0	0	0	o	51							
22	39	0	0	0	0	61							
14	28	0	0	0	0	42							
14	29	0	0	0	0	43							
75	122	0	0	0	0	197							
168	222	0	0	0	0	390							
43.1	56.9	0	0	0	0								
43.1	56.9	0	0	0	О								
160	212	0	0	0	0	372							
95.2	95.5	0	0	0	0	95.4							
8	10	0	0	0	0	18							
	Left 1 17 19 21 36 93 25 22 14 14 75 168 43.1 43.1 160 95.2	Winter St From North Left Thru 17 22 19 28 21 22 36 28 93 100 25 26 22 39 14 28 14 29 75 122 168 222 43.1 56.9 43.1 56.9 160 212 95.2 95.5	Winter St From North Route 1 SB On From East Left Thru 17 22 19 28 21 22 36 28 93 100 25 26 22 39 0 0 14 28 0 0 75 122 0 0 168 222 43.1 56.9 0 0 160 212 95.2 95.5 0	Winter St Route 1 SB On Ramp From East Left Thru Left Right 17 22 0 0 19 28 0 0 21 22 0 0 36 28 0 0 93 100 0 0 25 26 0 0 22 39 0 0 14 28 0 0 14 29 0 0 75 122 0 0 168 222 0 0 43.1 56.9 0 0 43.1 56.9 0 0 160 212 0 0 95.2 95.5 0 0	Winter St Route 1 SB On Ramp Winter St From North Thru Left Right Thru 17 22 0 0 0 19 28 0 0 0 21 22 0 0 0 36 28 0 0 0 93 100 0 0 0 25 26 0 0 0 22 39 0 0 0 14 28 0 0 0 14 29 0 0 0 75 122 0 0 0 43.1 56.9 0 0 0 43.1 56.9 0 0 0 43.1 56.9 0 0 0 95.2 95.5 0 0 0	Winter St From North Route 1 SB On Ramp From East Winter St From South Left 1 Thru Left Right Thru I Right 17 22 0 0 0 0 19 28 0 0 0 0 21 22 0 0 0 0 36 28 0 0 0 0 93 100 0 0 0 0 25 26 0 0 0 0 22 39 0 0 0 0 14 28 0 0 0 0 14 29 0 0 0 0 75 122 0 0 0 0 43.1 56.9 0 0 0 0 43.1 56.9 0 0 0 0 95.2 95.5 0 0 0 0							

0

4.8

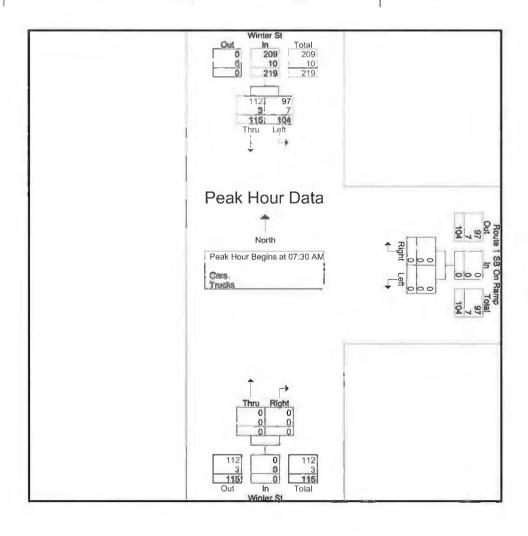
% Trucks

4.5

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

File Name | 72810008 Site Code | 72810008 Start Date : 6/16/2016
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		Winter St rom North			e 1 SB On R From East	amp		Winter St From South		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 07:30 A	M							
07:30 AM ¹	21	22	43	0	0	0	0	0	0	43
07:45 AM	36	28	64	0	0	o ¹	0	0	0	64
08:00 AM	25	26	51	0	0	0	0	0	0	51
08:15 AM	22	39	61	0	0	0	0	0	0	61
Total Volume	104	115	219	0	0	0	0	0	0	219
% App. Total	47.5	52.5		0	0		0	0		
PHF	.722	737،	.855	,000	.000	,000	.000	.000	.000	.855
Cars	97	112	209	0	0	0	0	0	0	209
% Cars	93.3	97.4	95.4	0	0	0	0	0	0	95.4
Trucks	7	3	10	0	0	.0	0	0	0	10
% Trucks	6.7	2.6	4.6	0	0	0	0	0	0	4.6



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

Weather : Clear

File Name: 72810008 Site Code : 72810008 Start Date : 6/16/2016 Page No : 4

				oups Printed-Cars	Gre	191.	4
		Winter St	Ramp	Route 1 SB On F	1	Winter St	
		From South		From East		From North	
Int. Tota	Right	Thru	Right	Left	Thru	Left	Start Time
37	o l	0	0	0	21	16	07:00 AM
44	0	0	0	0	25	19	07:15 AM
41	0	0	0	0	21	20	07:30 AM
60	0	0	0	0	27	33	07:45 AM
182	0	0	0	0	94	88	Total
49	0	0	0	0	25	24	08:00 AM
59	О	0	0	0	39	20	08:15 AM
41	0	0	0	0	27	14	08:30 AM
41	0	0	0	0	27	14	08:45 AM
190	0	0	0	0	118	72	Total
372	0	0	o J	0	212	160	Grand Total
	0	0	o !	0	57	43	Apprch %
	0	0	0	0	57	43	Total %

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

File Name 72810008 Site Code 72810008 Start Date 6/16/2016 Page No 7

				ps Printed-Trucks	Grou		
		Winter St	Ramp	Route 1 SB On F		Winter St	
Int. Tota	Right	From South	Right	From East Left	Thru	From North Left	Start Time
	0	0	0	0	111114	1	07:00 AM
2	U	U	U	U	'		07.00 AW
3	0	0	0	0	3	0	07:15 AM
2	0	0	0	0	1	1	07:30 AM
4	0	0	0	0	1	3	07:45 AM
11	0	0	0	0	6	5	Total
2	О	0	0	0	1	1	08:00 AM
2	0	0	0	0	0	2	08:15 AM
1	0	0	0	0	1	0	08:30 AM
2	0	0	0	0	2	0	08:45 AM
7	0	0	0	0	4	3	Total
18	0	0	0	0	10	8	Grand Total
	0	0	0	0	55.6	44.4	Apprch %
	0	0	0	0	55.6	44.4	Total %

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

File Name : 72810008 Site Code : 72810008 Start Date : 6/16/2016

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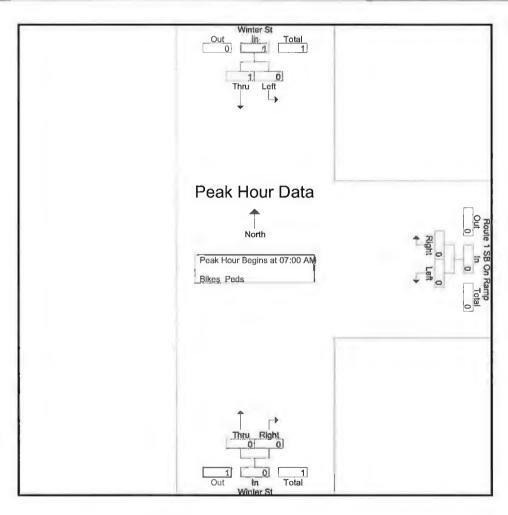
				Vinter St om South	Fre		SB On Ra om East	Route 1		Vinter St om North		
Int. Tota	Inclu. Total	Exclu. Total	Peds	Right	Thru	Peds	Right	Left	Peds	Thru	Left	Start Time
	0	0	0	0	0	0	0	0	0	0	0	07:00 AM
	1	0	0	0	0	0	0	0	0	1	0	07:15 AM
	0	0	0	0	0	0	0	0	0	0	0	07:30 AM
	0	0	0	0	0	0	0	0	0	0	0	07:45 AM
	1	0	0	0	0	0	0	0	0	1	0	Total
	0	0	0	0	0	0	0	0	o	0	0	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	0	0	0	0	0	0	08:45 AM
	0	0	0	0	0	0	0	0	0	0	0	Total
	1	0	0	0	0	0	0	0	0	1	0	Grand Total
				0	0		0	0		100	0	Apprch %
	100	0		0	0		0	0		100	0	Total %

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

Weather : Clear

File Name 72810008 Site Code : 72810008 Start Date : 6/16/2016 Page No : 11

		Winter St rom North			e 1 SB On R From East	amp	-	Winter St From South		
Start Time	Left	Thru :	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07	7:00 AM to 0	8:45 AM - P	eak 1 of 1		1					-
Peak Hour for Entire Interse	ction Begins	at 07:00 AM	М							
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	1	0	0	0	0	0	0	1
% App. Total	0	100		0	0		0	0		
PHF	.000	.250	.250	.000	.000	.000	.000	.000	.000	.250



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

% Trucks

0.4

0.5

File Name: 72810008 Site Code : 72810008 Start Date : 6/16/2016

0.4

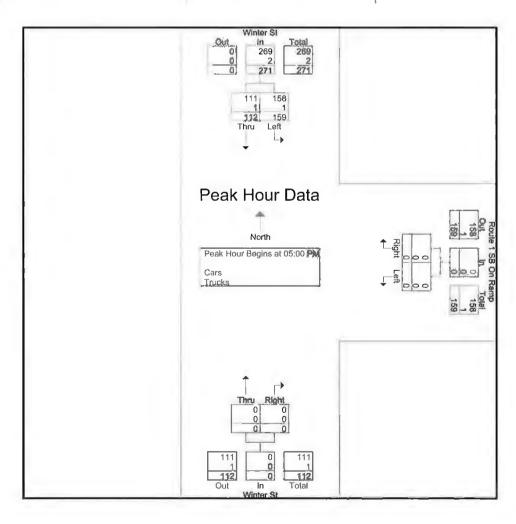
Page No : 1

		Winter St	Ramp	Printed- Cars - True Route 1 SB On F From East		Winter St	
Int. Total	Right	From South Thru	Right	Left	Thru :	From North Left	Start Time
48	0	0	0	0	28	20	04:00 PM
59	0	0	0	0	34	25	04:15 PM
46	0	0	0	0	22	24	04:30 PM
47	0	0	0	0	21	26	04:45 PM
200	0	0	0	0	105	95	Total
84	0	0	0	0	36	48	05:00 PM
69	۵	0	0	0	25	44	05:15 PM
60	ø	0	0	0	26	34	05:30 PM
58	σ	0	0	0	25	33	05:45 PM
271	0	0	0	0	112	159	Total
471	0	0	0	0	217	254	Grand Total
	0	0	0	0	46.1	53.9	Apprch %
	0	0	0	0	46.1	53.9	Total %
469	0	0	0	0	216	253	Cars
99.6	0	0	0	0	99.5	99.6	% Cars
2	0	0	0	0	1	1	Trucks

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

Page No : 2

		Winter St		Route	1 SB On R	amp		Winter St		
	F	rom North			From East			From South		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04	4:00 PM to 0	5:45 PM - F	Peak 1 of 1					_		
Peak Hour for Entire Interse	ction Begins	at 05:00 P	M							
05:00 PM	48	36	84	0	0	0	0	0	0	84
05:15 PM	44	25	69	0	0	0	0	0	0	69
05:30 PM	34	26	60	0	0	0	0	0	0	60
05:45 PM	33	25	58	0	0	0	0	0	0	58
Total Volume	159	112	271	0	0	0	0	0	0	271
% App. Total	58.7	41.3		0	0		0	0		
PHF	.828	,778	.807	.000	.000	.000	.000	.000	.000	.807
Cars	158	111	269	0	0	0	0	0	0	269
% Cars	99.4	99.1	99.3	0	0	0	0	0	0	99.3
Trucks	1	1	2	0	0	0	0	0	0	2
% Trucks	0.6	0.9	0.7	0	0	0	0	0	0	0.7



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

File Name 72810008 Site Code 72810008 Start Date 6/16/2016 Page No 4

				oups Printed- Cars	Gro		
		Winter St	Ramp	Route 1 SB On F		Winter St	
Int. Total	Right	From South	Right	From East Left	Thru	From North	Start Time
48	0	0	0	0	28	20	04:00 PM
59	o 1	0	0	0	34	25	04:15 PM
46	0	0	0	0	22	24	04:30 PM
47	0	0	0	0	21	26	04:45 PM
200	0	0	0	0	105	95	Total
83	0	0	0	0	35	48	05:00 PM
68	0	0	0	0	25	43	05:15 PM
60	o	0	0	0	26	34	05:30 PM
58	О	0	0	0	25	33	05:45 PM
269	0	0	0	0	111	158	Total
469	0	0	0	0	216	253	Grand Total
	0	0	0	0	46.1	53.9	Apprch %
	0	0	0	0	46.1	53.9	Total %

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

File Name : 72810008 Site Code : 72810008 Start Date : 6/16/2016 Page No : 7

		Winter St	omn 1	Printed-Trucks	5100	Winter St	
		From South	капр	Route 1 SB On F From East		From North	
Int. Total	Right	Thru	Right	Left	Thru	Left	Start Time
0	0	0	0	0	0	0	04:00 PM
0	0	0	0	0	0	0	04:15 PM
0	0	0	0 [0	0	0	04:30 PM
0	0	0	o 1	0	0	0	04:45 PM
0	0	0	0	0	0	0	Total
1	0	0	o	0	1	0	05:00 PM
1	0	0	0	0	0	1	05:15 PM
0	0	0	0	0	0	0	05:30 PM
0	0	0	0	0	o [0	05:45 PM
2	0	0	0	0	1	1	Total
2	0	0	0	0	1	1	Grand Total
	0	0	0	0	50	50	Apprch %
	0	0	o	0	50 ¹	50	Total %

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

Total %

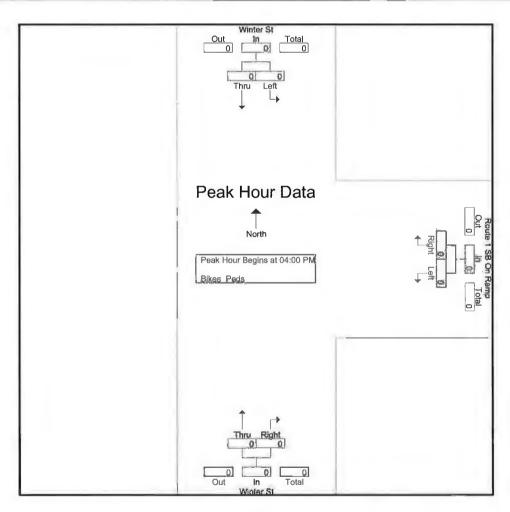
File Name : 72810008 Site Code : 72810008 Start Date : 6/16/2016 Page No : 10

9			7			nted-Bikes	Peds			ř		
		Vinter St om North		Route 7	1 SB On Ra rom East	amp		Vinter St om South				
Start Time	Left	Thru	Peds	Ļeft	Right	Peds	Thru _	Right I	Peds	Exclu. Total	Inclu. Total	Int. Tota
04:00 PM	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	C
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	C
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	C
Total	0	0	0	0	0	0	0	0	0	0	0	C
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	C
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	C
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	C
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	C
Total	0	0	0	0	0	0	0	0	0	0	0	C
Grand Total	0	0	0 [0	0	0	0	0	0	0	0	(
Apprch %	0	0		0	0		0	0				

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

File Name 72810008 Site Code : 72810008 Start Date 6/16/2016 Page No .11

		Winter St rom North			1 SB On R From East	amp		Winter St rom South		
Start Time	Left	Thru	App. Total	Left	Right 1	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04	1:00 PM to 0	5:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 04:00 P	М							
04:00 PM	0	0	0	0	0	0	0	0	0 1	C
04:15 PM	0	0	0	0	0	0	0	0	0 1	C
04:30 PM	0	0	0	0	0	0	0	0	0	C
04:45 PM	0	0	0	0	0	0	0	0	0	C
Total Volume	0	0	0	0	0	0	Ō	Ō	0	C
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA

Weather : Clear

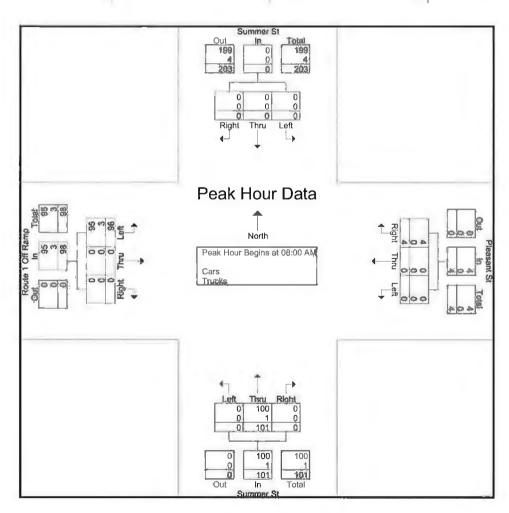
File Name: 72810009 Site Code : 72810009 Start Date : 6/16/2016
Page No : 1

		1 Off Ram om West	Fro		mmer St m South	Fro		asant St om East			mmer St m North	Fro	
Int, Tota	Right	Thru̯l	Left	Right	Thru	Left	Right	Thru	Left	Right 1	Thru	Left	Start Time
28	0	0	11	0	16	0	1	0	0	0	0	0	07:00 AM
36	0	0	19	0	15	0	2	0	0	o]	0	0	07:15 AM
39	0	0	20	0	18	0	1	0	0	0	0	0	07:30 AM
42	0	0	24	0	17	0	1	0	0	0	0	0	07:45 AM
145	0	0	74	0	66	0	5	0	0	1 0	0	0	Total
4	0	0	17	0	22	0	2	0	0	o	0	0	08:00 AM
46	0	0	20	0	25	0	1	0	0	0	0	0	08:15 AM
58	0	0	29	0	28	0	1	0	0	0	0	0	08:30 AM
58	0	0	32	0	26	0	0	0	0	0	0	0	08:45 AM
203	0	0	98	0	101	0	4	0	0	0	0	0	Total
348	0	0	172	0	167	0	9	0	0	0 }	0	0	Grand Total
	0	0	100	0	100	0	100	0	0	0	0	0	Apprch %
	0	0	49.4	0	48	0	2.6	0	0	0	0	0	Total %
33	0	0	166	0	162	0	9	0	0	0	0	0	Cars
96.	0	0	96.5	0	97	0	100	0	0	o	0	0	% Cars
1	0	0	6	0	5	0	0	0	0	0	0	0	Trucks
3.2	0	0	3.5	0	3	0	0	0	0	0	0	0	% Trucks

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA Weather: Clear

File Name: 72810009 Site Code : 72810009 Start Date : 6/16/2016
Page No : 2

			mer St North				sant St n East				mer St South		F		Off Ram	0	
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 Analys	sis From	07:00 A	M to 08		eak 1 of	1		212				100		4			
Peak Hour for En	tire Inter	section	Begins a	at 08:00 AN	1												
08:00 AM	0	0	0	0	0	0	2	2	0	22	0	22	17	0	0	17	41
08:15 AM	0	0	0	0	0	0	1	1	0	25	0	25	20	0	0	20	46
08:30 AM	0	0	0	0	0	0	1	1	0	28	0	28	29	0	0	29	58
08:45 AM	0	0	0	0	0	0	0	0	0	26	0	26	32	0	0	32	58
Total Volume	0	0	0	0	0	0	4	4	0	101	0	101	98	0	0	98	203
% App. Total	0	0	0		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.902	.000	,902	,766	.000	.000	.766	.875
Cars	0	0	0	0	0	0		4	0	100	0	100	95	0	0	95	199
% Cars	0	0	0	0	0	0	100	100	0	99.0	0	99.0	96.9	0	0	96.9	98.0
Trucks	0	0	0	0	0	0	0	0	0	1	0	1	3	0	0	3	4
% Trucks	0	0	0	0	0	0	0	0	0	1.0	0	1.0	3.1	0	0	3.1	2.0



N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA Weather: Clear

File Name : 72810009 Site Code : 72810009 Start Date : 6/16/2016 Page No : : 4

	р	1 Off Ram om West		ł	mmer St m South	Su	s isunad-i	asant St om East			mmer St om North		
Int. Total	Right	Thru	Left	Right	Thru	Left	Right	Thru i	Left	Right	Thru	Left	Start Time
27	0	0	11	0	15	0	1	0	0	0	0	0	07:00 AM
34	0	0	18	0	14	0	2	0	0	0	0	0	07:15 AM
38	0	0	19	0	18	0	1	0	0	0 =	0	0	07:30 AM
39	0	0	23	0	15	Ó	1	0	0	0	0	0	07:45 AM
138	0	0	71	0	62	0	5	0	0	0	0	0	Total
38	0	0	15	0	21	0	2	0	0	0	0	0	08:00 AM
46	0	0	20	0	25	0	1	0.	0	0	0	0	08:15 AM
57	0	0	28	0	28	0	1	0	0	0	0	0	08:30 AM
58	0	0	32	0	26	0	0	0	0	0	0.	0	08:45 AM
199	0	0	95	0	100	0	4	0	0	0	0	0	Total
337	0	0	166	0	162	0	9	0	0	0	0	0	Grand Total
	0	0	100	0	100	0	100	0	0	0	0	0	Apprch %
	0	0	49.3	0	48.1	0	2.7	0	0	0	0	0	Total %

N/S Street : Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA
Weather: Clear

File Name: 72810009 Site Code : 72810009 Start Date : 6/16/2016 Page No : 7

	~			,			Printed-T	Groups					
		1 Off Ram om West			mmer St m <u>Sou</u> th	Fro		asant St om East	Fro		mmer St om North	Fro	
Int. Tota	Right	Thru	Left	<u>Rig</u> ht	Thru ^T	Left	Right	Thru '	Left '	Right	Thru	Left	Start Time
1	0	0	0	0	1	0	0	0	0	0	0	0	07:00 AM
2	0	0	1	0	1	0	0	O	0	0	0	0	07:15 AM
1	0	0	1	0	0	0	0	0	0	0	0	0	07:30 AM
3	0	0	1	0	2	0	0	0	0	0	0	0	07:45 AM
7	0	0	3	0	4	0	0	0	0	0	0	0	Total
3	0	0	2	0	1	0	0	0	0	0	0	0	08:00 AM
(0	0	0	0	0	0	0	0	0	0	0	0	08:15 AM
1	0	0	1	0	0	0	0	0	0	0	0	0	08:30 AM
(0	0	0	0	0	0	0	0	0	0	0	0	08:45 AM
4	0	0	3	0	1	0	0	0	0	0	0	0	Total
11	0	0	6	0	5	0	0	0	0	0	0	0	Grand Total
	0	0	100	0	100	0	0	0	0	0	0	0	Apprch %
	0	0	54.5	0	45.5	0	0	0	0	0	0	0	Total %

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA Weather: Clear

File Name : 72810009 Site Code : 72810009 Start Date : 6/16/2016 Page No : 10

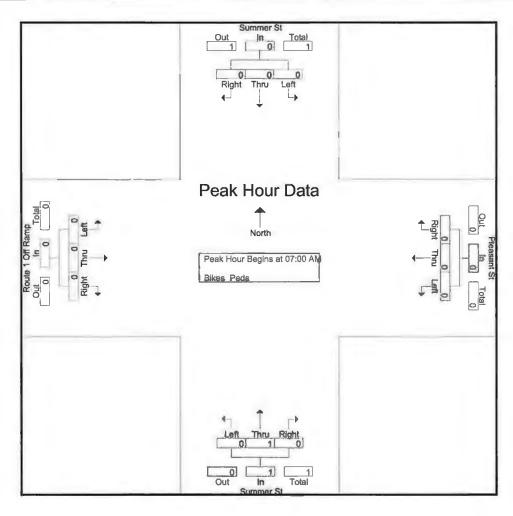
ig-								Groups	Printed			7					1		
			North				ant St East			From	ner St South	,	R		Off Ram West	р			
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Exclu, Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	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	1	0	0	0	0	0	0	0	0	1	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
08:00 AM	0	0	0	0	0	0	0	*	0	1	0	0	0	0	0	0	1	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0 -	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	1	1	2
Grand Total	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	2	4
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		50	50	

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA

Weather : Clear

File Name : 72810009 Site Code | 72810009 Start Date : 6/16/2016 Page No | 11

1			mer St North		Pleasant St From East Left Thru Right Ass Talet Left					-	mer St South		F	Route 1 From	Off Ran West	np	ı
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 Analys	sis From	07:00 A	M to 08:		eak 1 of	1								•		. #	
Peak Hour for En	tire Inter	section	Begins a	t 07:00 AM	1												
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	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
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0	1	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250



N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA Weather: Clear

File Name: 72810009 Site Code • 72810009 Start Date = 6/16/2016

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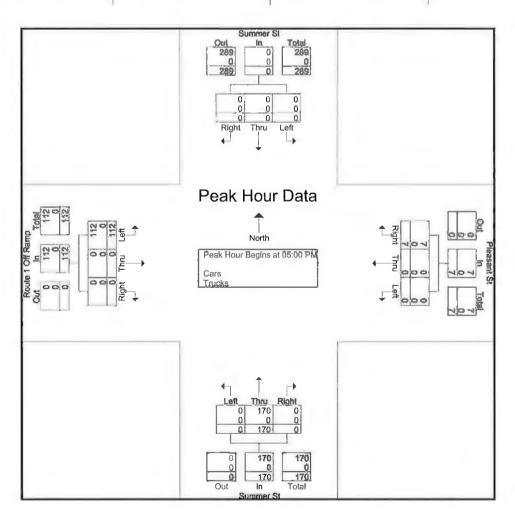
						- Trucks	inted- Cars	Groups Pr					
	ip	1 Off Ram			mmer St om South			asant St om East			mmer St m North		
Int, Total	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left]	Right	Thru	Left	Start Time
73	0	0	29	0	42	0	2	0	0	0	0	0	04:00 PM
62	0	0	19	0	42	0	1	0	0	0	0	0	04:15 PM
63	0	0	29	0	34	0	0	0	0	0	0	0	04:30 PM
73	0	0	31	0	40	0	2	0	0	0	0	0	04:45 PM
271	0	0	108	0	158	0	5	0	0	0	0	0	Total
72	0	0	24	О	48	0	0	0	0	0	0	0	05:00 PM
72	0	0	27	0	42	0	3	0	0	0	0	0	05:15 PM
68	0	0	29	0	37	0	2	0	0	0	0	0	05:30 PM
77	0	0	32	0	43	0	2	0	0	0	0	0	05:45 PM
289	0	0	112	0	170	0	7	0	0	0	0	0	Total
560	0	0	220	0	328	0	12	0	0	0	0	0	Grand Total
	0	0	100	0	100	0	100	0	0	0	0	0	Apprch %
	0	0	39.3	0	58.6	0	2.1	0	0	0	0	0	Total %
560	0	0	220	0	328	0	12	0	0	0	0	0	Cars
100	0	0	100	0	100	0	100	0	0	0	0	0	% Cars
0	0	0	0	0	0	0	0	0	0	0	0	0	Trucks
0	0	0	0	0	0	0	0	0	0	0	0	0	% Trucks

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off

City/State: Newburyport, MA Weather: Clear

File Name : 72810009 Site Code : 72810009 Start Date _ 6/16/2016 Page No _ 2

		Sumr	ner St			Pleas	sant St		_	Sumi	mer St		F	Route 1	Off Ran	ηp	1
		From	North			Fron	n East	- 1		From	South			From	West		
Start Time	Left	Thru	Right	App. Tolal	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	int, Total
Peak Hour Analys	sis From	04:00 P	M to 05		eak 1 of	1			•								•
Peak Hour for Ent	tire Inter	section I	Begins a	t 05:00 PM	1												
05:00 PM	0	0	0	0	0	0	0	0	0	48	0	48	24	0	0	24	72
05:15 PM	0	0	0	0	0	0	3	3	0	42	0	42	27	0	0	27	72
05:30 PM	0	0	0	0	0	0	2	2	0	37	0	37	29	0	0	29	68
05:45 PM	0	0	0	0	0	0	2	2	0	43	0	43	32	0	0	32	77
Total Volume	0	0	0	0	0	0	7	7	0	170	0	170	112	0	0	112	289
% App. Total	0	0	0		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.583	.583	.000	.885	.000	.885	.875	.000	.000	.875	.938
Cars	0	0	0	0	0	0	7	7	0	170	0	170	112	0	0	112	289
% Cars	0	0	0	0	0	0	100	100	0	100	0	100	100	0	0	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA Weather: Clear

File Name: 72810009 Site Code : 72810009 Start Date : 6/16/2016

Page No : 4

	1	4 O# D	D1	-			s Printed-						
	ip	1 Off Ram om West			mmer St m South			asant St om East			mmer St m North		
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru !	Left	Start Time
7:	0	0	29	0	42	0	2	0	0	0	0	0	04:00 PM
62	0	0	19	0	42	0	1	0	0	0	0	0	04:15 PM
6	0	0	29	0 -	34	0	0	0	0	0	0	0	04:30 PM
7:	0	0	31	0	40	0	2	0	0	0	0	0	04:45 PM
27	0	0	108	0	158	0	5	0	0	0	0	0	Total
7:	0	0	24	0	48	0	0	0	0	0	0	0	05:00 PM
7:	0	0	27	0	42	0	3	0	0	0	0	0	05:15 PM
6	0	0	29	0	37	0	2	0	0	0	0	0	05:30 PM
7	0	0	32	0	43	0	2	0	0	0	0	0	05:45 PM
28	0	0	112	0	170	0	7	0	0	0	0	0	Total
56	0	0	220	0	328	0	12	0	0	0	0	0	Grand Total
	0	0	100	0	100	0	100	0	0	0	0	0	Apprch %
	0	0	39.3	0	58.6	0	2.1	0	0	0	0	0	Total %

N/S Street : Summer Street E/W Street: Pleasant St / Route 1 Off

City/State: Newburyport, MA
Weather: Clear

File Name : 72810009 Site Code : 72810009 Start Date : 6/16/2016 Page No : 7

	ın	1 Off Ram	Route		mmer St		s Printed- T	asant St	Ple		mmer St	Su	
	iP	m West	Fro		m South			om East			m North		1
Int. Total	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Start Time
0	0	0	0	0	0	0	0	0	0	0	0	0	04:0 0 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	О	0	0	o 1	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	0	0	0	0	05:45 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	Grand Total
	0	0	0	0	0	0	0	0	0	0	0	0	Apprch %
													Total %

N/S Street: Summer Street

E/W Street: Pleasant St / Route 1 Off City/State : Newburyport, MA

Weather : Clear

File Name: 72810009 Site Code : 72810009 Start Date : 6/16/2016

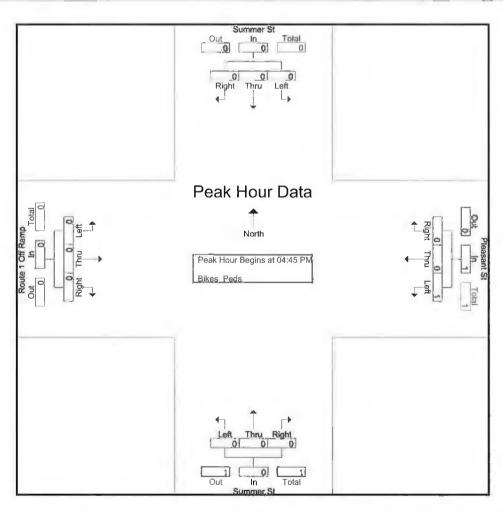
Page No : 10

								Groups	Printed			,		_			1		
			ner St North			Pleas From	ant St East				ner St South		Ro		Off Ram West	p			
Start Time	Left	Thru	Right	Peds	Left	Thru		Peds	Left	Thru	Right	Peds	Left	Thru		Peds	Exclu. Total	Inclu. Total	Int. Tota
04:00 PM	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	1	0	0	0	0	0	0	0	0	1	0	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	
05:00 PM	0	0	0	o ^I	0	0	0	o	0	0	0	0	0	0	0	0	0	0	
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
05:30 PM	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	2	1	
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	2	1	
Grand Total	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0	3	1	
Apprch %	0	0	0		100	0	0		0	0	0		0	0	0				
Total %	0	0	0	1	100	0	0	1	0	0	0		0	0	0		75	25	

N/S Street : Summer Street E/W Street: Pleasant St / Route 1 Off

City/State: Newburyport, MA
Weather: Clear

		Sumr	ner St	1		Pleas	ant St			Sumr	ner St		F	Route 1	Off Ran	np	
		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 Analys	sis From	04:00 P			eak 1 of	1					,					,,,,,	
Peak Hour for En	tire Inters	section l	Begins a	t 04:45 PN	1												
04:45 PM	0	0	0	0 1	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		100	0	0		0	0	0	- 1	0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	,250



N/S Street : Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name : 728100S1 Site Code : 72810001 Start Date : 6/18/2016

Page No 1

0.4

0.3

		Route 1 om North			errimac St	rinted- Car	Summe	r St / Wintom South			errimac St		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left -	Thru	Right	Int. Tota
11:00 AM	22	8	20	12	56	45	14	30	23	21	75	11	33
11:15 AM	42	18	61	21	68	41	11	39	27	31	123	15	49
11:30 AM	33	13	57	21	83	65	12	34	28	36	89	12	483
11:45 AM	40	24	43	22	87	49	16	36	38	26	108	26	518
Total	137	63	181	76	294	200	53	139	116	114	395	64	1832
12:00 PM	47	18	25	25	76	47	15	23	29	30	123	30	488
12:15 PM	44	9	34	20	99	60	15	30	37	33	102	23	506
12:30 PM	45	19	28	31	79	44	14	26	24	37	94	27	468
12:45 PM	36	16	21	24	60	59	18	25	35	29	94	13	430
Total	172	62	108	100	314	210	62	104	125	129	413	93	1892
01:00 PM	33	17	32	16	95	38	10	25	29	32	102	17	446
01:15 PM	68	16	26	28	83	59	13	33	33	29	72	18	478
01:30 PM	59	15	28	18	82	55	12	24	35	25	96	19	468
01:45 PM	53	8	22	16	90	54	10	33	36	30	79	24	455
Total	213	56	108	78	350	206	45	115	133	116	349	78	1847
Grand Total	522	181	397	254	958	616	160	358	374	359	1157	235	5571
Apprch %	47.5	16.5	36.1	13.9	52.4	33.7	17.9	40.1	41.9	20.5	66.1	13.4	
Total %	9.4	3.2	7.1	4.6	17.2	11.1	2.9	6.4	6.7	6.4	20.8	4.2	
Cars	519	177	397	250	958	614	159	358	373	358	1155	234	555
% Cars	99.4	97.8	100	98.4	100	99.7	99.4	100	99.7	99.7	99.8	99.6	99.7
Trucks	3	4	0	4	0	2	1	0	1	1	2	1	19

0.3

0.6

2.2

0,6

% Trucks

1,6

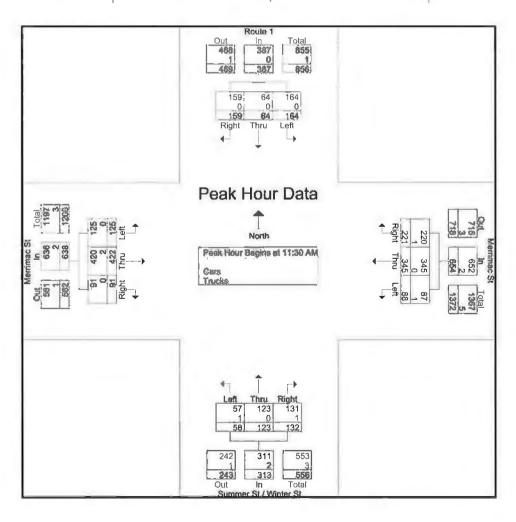
0.3

0.3

N/S Street ; Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name 728100S1 Site Code : 72810001 Start Date : 6/18/2016 Page No : 2

		Ro	ute 1			Merri	mac St		Su	mmer S	t / Winte	er St		Merrin	nac St		
		From	North			Fron	n 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 Analys	sis From	11:00 A	M to 01	1-3	eak 1 of	1						1,002		_			
Peak Hour for En	tire Inter	section	Begins a	at 11:30 AN	Λ												
11:30 AM	33	13	57	103	21	83	65	169	12	34	28	74	36	89	12	137	483
11:45 AM	40	24	43	107	22	87	49	158	16	36	38	90	26	108	26	160	515
12:00 PM	47	18	25	90	25	76	47	148	15	23	29	67	30	123	30	183	488
12:15 PM	44	9	34	87	20	99	60	1 79	15	30	37	82	33	102	23	158	506
Total Volume	164	64	159	387	88	345	221	654	58	123	132	313	125	422	91	638	1992
% App. Total	42.4	16.5	41.1		13.5	52.8	33.8		18.5	39.3	42.2		19.6	66.1	14.3		
PHF ,	.872	.667	.697	.904	.880	.871	.850	.913	.906	.854	.868	.869	.868	.858	.758	.872	.967
Cars	164	64	159	387	87	345	220	652	57	123	131	311	125	420	91	636	1986
% Cars	100	100	100	100	98.9	100	99.5	99.7	98.3	100	99.2	99.4	100	99.5	100	99.7	99.7
Trucks	0	0	0	0	1	0	1	2	1	0	1	2	0	2	0	2	6
% Trucks	0	0	0	0	1.1	0	0.5	0.3	1.7	0	0.8	0.6	0	0.5	0	0.3	0.3



N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA

Total %

9.3

3.2

7.2

4.5

17.3

11.1

2.9

6.4

6.7

6.4

Weather : Clear

File Name : 728100S1 Site Code : 72810001 Start Date : 6/18/2016

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20.8

4.2

	-	Davide 4	-			ps Printed-		- 04 / 14/5 1	- 04		-1		
		Route 1			errimac St rom East			r St / Winte om_South	er St		errimac St		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Tota
11:00 AM	22	8	20	12	56	45	14	30	23	20	75	11	336
11:15 AM	42	16	61	21	68	41	11	39	27	31	123	15 -	495
11:30 AM	33	13	57	21	83	65	12	34	27	36	89	12	482
11:45 AM	40	24	43	21	87	48	15	36	38	26	107	26	511
Total	137	61	181	75	294	199	52	139	115	113	394	64	1824
12:00 PM	47	18	25	25	76	47	15	23	29	30	123	30	488
12:15 PM	44	9	34	20	99	60	15	30	37	33	101	23	505
12:30 PM	45	18	28	31	79	44	14	26	24	37	94	27	467
12:45 PM	36	16	21	22	60	59	18	25	35	29	94	13	428
Total	172	61	108	98	314	210	62	104	125	129	412	93	1888
01:00 PM	32	17	32	16	95	38	10	25	29	32	102	17	445
01:15 PM	66	16	26	27	83	59	13	33	33	29	72	18	475
01:30 PM	59	14	28	18	82	55	12	24	35	25	96	19	467
01:45 PM	53	8	22	16	90	53	10	33	36	30	79	23	453
Total	210	55	108	77	350	205	45	115	133	116	349	77	1840
Grand Total	519	177	397	250	958	614	159	358	373	358	1155	234	5552
Apprch %	47.5	16.2	36.3	13.7	52.6	33.7	17.9	40.2	41.9	20.5	66.1	13.4	

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name : 728100S1 Site Code : 72810001 Start Date : 6/18/2016

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Was II	Fr	Route 1		一	errimac St	s Printed-	Summer Fro	r St / Winte <u>om S</u> outh	ţ	Fr	errimac St om West		
Start Time	Left	Thru	Right	Left	Thru J	Right	Left	Thru	Right	Left	Thru	Right	Int. Tota
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	
11:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	
11:45 AM	0	0	0	1	0	1	1	0	0	0	1	0	4
Total	0	2	0	1	0	1	1	0	1	1	1	0	
12:00 PM :	0	0	0	0	0	0	0	0	0	0	0	0	(
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	
12:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	,
12:45 PM	0	0	o t	2	0	0	0	0	0	0	0	0	2
Total	0	1	0 [2	0	0	0	0	0	0	1	0	4
01:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	
01:15 PM	2	0	0	1	0	0	0	0	0	0	0	0	;
01:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	71	0	0	0	0	0	1	:
Total	3	1	0	1	0	4	0	0	0	0	0	1	-
Grand Total	3	4	0	4	0	2	1	0	1	1	2	1	19
Apprch %	42.9	57.1	0 1	66.7	0	33.3	50	0	50	25	50	25	
Total %	15.8	21.1	0	21.1	0	10.5	5.3	0	5.3	5.3	10.5	5.3	

N/S Street: Rt 1 / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA

Weather : Clear

File Name . 728100S1 Site Code . 72810001 Start Date . 6/18/2016

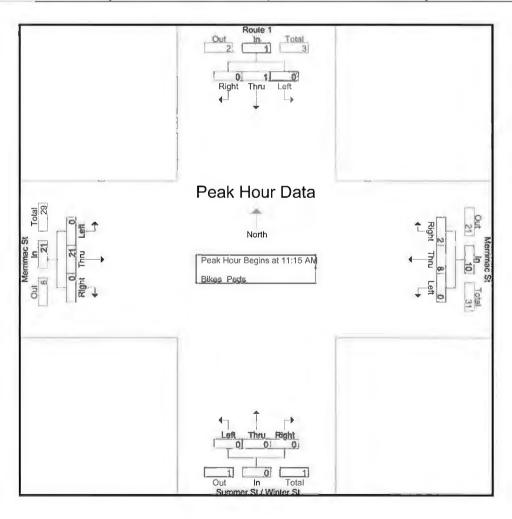
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		-						Groups									1		
ì		Rou					nac St		Sum		/ Winte	r St		Merrin					
Start Time	Left	Thru	North	Peds	Left	From Thru		Doda	Left		South Right	Doda	Left	From	Right	Dodo	Exclu Total		Int Tate
11:00 AM			ragiit i		Ceir	2	_	0	-	1	rsignt 0	0	reir	1180		reus 0		Inclu: Inlai	Int, Tota
11:00 AM	0	0	0	2	U	2	0	O	0	1	U	0	U	1	0	0	2	4	(
11:15 AM	0	0	0	2	0	1	0	0	0	0	0	2	0	11	0	0	4	12	16
\$1:30 AM	0	1	0	1	0	4	1	0	0	0	0	4	0	4	0	0	5	10	15
11;45 AM	0	0	0	4	0	2	0	7	0	0	0	6	0	3	0	1	18	5	23
Total	0	1	0	9	0	9	1	7	0	1	0	12	0	19	0	1	29	31	60
12:00 PM	0	0	0	1	0	1	1	2	0	0	0	9	0	3	0	0	12	5	17
12:15 PM	0	0	0	1 }	0	2	1	0	0	0	0	2	0	2	0	0	3	5	8
12:30 PM	2	1	0	0	0	4	0	3	0	0	0	2	0	2	0	0	5	9	14
12:45 PM	0	0	0	0	0	0	0	3	0	0	0	1	0	1	0	0	4	-1	
Total	2	1	0	2	0	7	2	8	0	0	0	14	0	8	0	0	24	20	44
01:00 PM	1	0	0	7	0	0	0	1	0	0	0	0	1	1	0	0	8	3	1
01:15 PM	0	0	0	9	0	4	0	1	0	0	0	3	0	2	0	0	13	6	19
01:30 PM	0	1	0	1	0	0	0	2	0	0	1	1	0	2	0	0	4	4	8
01:45 PM	0	0	0	1	0	2	0	7	0	0	0	0 =	0	3	0	0	8	5	13
Total	1	1	0	18	0	6	0	11	0	0	1	4	1	8	0	0	33	18	5
Grand Total	3	3	0	29	0	22	3	26	0	1	1	30	1	35	0	1	. 86	69	155
Apprch %	50	50	0	Į.	0	88	12		0	50	50		2.8	97.2	0				
Total %	4.3	4.3	0	J	0	31.9	4.3		0	1.4	1.4		1.4	50.7	0		55.5	44.5	

N/S Street: Rt I / Winter / Summer E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name : 728100S1 Site Code : 72810001 Start Date : 6/18/2016 Page No : 11

		Rou	ıte 1			Merri	mac St	1	Şur	nmer Š	t / Winte	er St		Merri	mac St		
		From	North	ı		Fron	ı 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 Analys	sis From	11:00 A			eak 1 of	1		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				TE					-
Peak Hour for Ent	tire Inter	section I	Begins a	t 11:15 AN	1												
11:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	11	0	11	12
11:30 AM	0	1	0	1	0	4	1	5	0	0	0	0	0	4	0	4	10
11:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
12:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	3	0	3	5
Total Volume	0	1	0	1	0	8	2	10	0	0	0	Ö	0	21	0	21	32
% App. Total	0	100	0		0	80	20		0	0	0		0	100	0		
PHF	.000	.250	,000	.250	.000	.500	.500	,500	.000	.000	.000	.000	.000	.477	.000	.477	.667



N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name: 728100S2 Site Code : 72810002 Start Date : 6/18/2016

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		ament Wha			errimac St rom East		Fre	larket St		Fr	errimac St om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
11:00 AM	2	2	3	11	113	0	3	0	10	5	108	2	259
11:15 AM	1	0	7	2	133	2	6	0	11 :	13	182	2	359
11:30 AM	3	0	6	1	136	1	8	0	10 :	14	139	6	324
11:45 AM	0	0	6	1	145	7	4	4	9	18	153	1	348
Total	6	2	22	15	527	10	21	4	40	50	582	11	1290
12:00 PM	1	3	7	2	127	8	6	1	10	28	169	6	368
12:15 PM	0	2	9	0	156	4	8	3	12	23	146	10	373
12:30 PM	0	2	9	0	145	3	7	1	12	18	145	4	346
12:45 PM	7	2	7	2	123	7	4	0	7	21	139	8	327
Total	8	9	32	4	551	22	25	5	41	90	599	28	1414
01:00 PM	7	1	14	2	138	3	3	3	8	8	148	4	339
01:15 PM	4	0	11	3	159	5	6	0	8	18	165	4	383
01:30 PM	5	1	10	3	141	4	4	2	8	11	165	4	358
01:45 PM	9	0	11	4	143	9	6	4	8	16	145	10	365
Total	25	2	46	12	581	21	19	9	32	53	623	22	1445
Grand Total	39	13	100	31	1659	53	65	18	113	193	1804	61	4149
Apprch %	25.7	8.6	65.8	1.8	95.2	3	33.2	9.2	57.7	9.4	87.7	3	
Total %	0.9	0.3	2.4	0.7	40	1.3	1.6	0.4	2.7	4.7	43.5	1.5	
Cars	39	12	100	31	1655	52	65	18	113	193	1800	61	4139
% Cars	100	92.3	100	100	99.8	98.1	100	100	100	100	99.8	100	99.8
Trucks	0	1	0	0	4	1	0	0	0	0	4	0	10
% Trucks	0	7.7	0	0	0.2	1.9	0	0	0	0	0,2	0	0.2

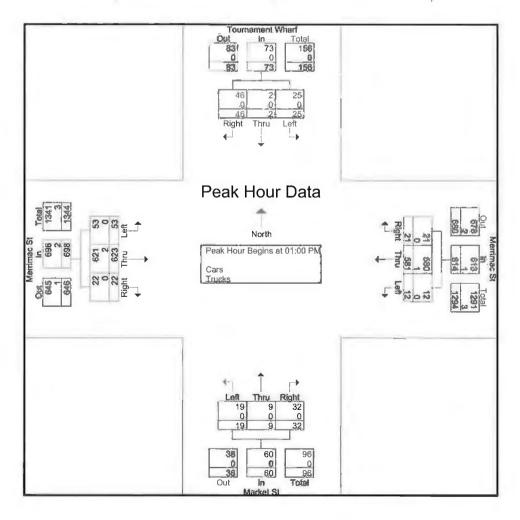
N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name : 728100S2 Site Code : 72810002 Start Date : 6/18/2016 Page No : 2

	T	ournam	ent Wha	arf		Merri	mac St			Marl	ket St			Merri	mac St		
		From	North			Fron	n East			From	South			From	West		
Start Time	Left	Thru	Right	App. Total	Left ^r	Thru	Right	App, Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analys	sis From	11:00 A	AM to 01:		eak 1 of	1		TE							-		
Peak Hour for En	tire Inter	section	Begins a	t 01:00 PM	1												
01:00 PM	7	1	14	22	2	138	3	143	3	3	8	14	8	148	4	160	339
01:15 PM	4	0	11	15	3	159	5	167 ;	6	0	8	14	18	165	4	187	383
01:30 PM	5	1	10	16	3	141	4	148	4	2	8	14	11	165	4	180	358
01:45 PM	9	0	11	20	4	143	9	156	6	4	8	18	16	145	10	171	365
Total Volume	25	2	46	73	12	581	21	614	19	9	32	60	53	623	22	698	1445
% App. Total	34.2	2.7	63		2	94.6	3.4		31.7	15	53.3		7,6	89.3	3.2		
PHF '	.694	.500	.821	.830	.750	.914	.583	.919	.792	.563	1.00	.833	-736	.944	.550	.933	.943
Cars	25	2	46	73	12	580	21	613	19	9	32	60	53	621	22	696	1442
% Cars	100	100	100	100	100	99.8	100	99.8	100	100	100	100 ,	100	99.7	100	99.7	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	0.2	0	0.2	0	0	0	0	0	0.3	0	0.3	0.2



N/S Street : Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name: 728100S2 Site Code: 72810002 Start Date: 6/18/2016 Page No: 4

		rrimac St			rket St	Ma	s Printed-	rrimac St		arf	ment Wha		
Int. Tota	Right	Thru	Left	Right	m South Thru	Left	Right	om East Thru	Left Left	Right	m North Thru	Left	Start Time
259	2	108	5	10	0	3	0	113	11	3	2	2	11:00 AM
20.	_	100			Ü	Ü				Ü	-	_	11.0071111
359	2	182	13	11	0	6	2	133	2	7	0	1	11:15 AM
323	6	138	14	10	0	8	1	136	1	6	0	3	11:30 AM
347	1	153	18	9	4	4	7	144	1	6	0	0	11:45 AM
128	11 1	581	50	40	4	21	10	526	15	22	2	6	Total
36	6	168	28	10	1	6	7	127	2	7	2	1	12:00 PM
373	10	146	23	12	3	8	4	156	0	9	2	0	12:15 PM
340	4	145	18	12	1	7	3	145	0	9	2	0	12:30 PM
321	8	139	21	7	0	4	7	121	2	7	2	7	12:45 PM
140	28	598	90	41	5	25	21	549	4	32	8	8	Total
339	4	148	8	8	3	3	3	138	2	14	1	7	01:00 PM
38	4	163	18	8	0	6	5	159	3	11	0	4	01:15 PM
35	4	165	11	8	2	4	4	141	3	10	1	5	01:30 PM
364	10	145	16	8	4	6	9	142	4	11	0	9	01:45 PM
144:	22	621	53	32	9	19	21	580	12	46	2	25	Total
413	61	1800	193	113	18	65	52	1655	31	100	12	39	Grand Total
	3	87.6	9.4	57.7	9.2	33.2	3	95.2	1.8	66.2	7.9	25,8	Apprch %
	1.5	43.5	4.7	2.7	0.4	1.6	1.3	40	0.7	2.4	0.3	0.9	Total %

N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name . 728100S2 Site Code 72810002 Start Date : 6/18/2016

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		rrimac St			arket St			rimac St		arf	ment Wha	Tourna	
Int. Tota	Right	om West Thru	Left L	Right	m South Thru	Left Left	Right	om East Thru	Left	Right	m North Thru	Left Left	Start Time
nin rola	0	0	0	0	0	0	0	0	0	0	0	0	11:00 AM
C	0	0	0	0	0	0	0	0	0	0	0	0	11;15 AM
.1	0	1	0	0	0	0	0	0	0	0	0	0	11:30 AM
1	0	0	0	0	0	0	0	1	0	0	0	0	11:45 AM
2	0	1	0	0	0	0	0	1	0	0	0	0	Total
3	0	1	0	0	0	0	1	0	0	0	1	0	12:00 PM
C	0	0	0	0	0	0	0	0	0	0 1	0	0	12:15 PM
C	0	0	0	0	0	0	0	0	0	0	0	0	12:30 PM
2	0	0	0	0	0	0	0	2	0	0	0	0	12:45 PM
5	0	1	0	0	0	0	1	2	0	0	1	0	Total
C	0	0	0	0	0	0	o	0	0	0	0	0	01:00 PM
2	0	2	0	0	0	0	0	0	0	0	0	0	01:15 PM
C	0	0	0	0	0	0	0	0	0	0	0	0	01:30 PM
1	0	0	0	0	0	0	0	1	0	0	0	0	01:45 PM
3	0	2	0	0	0	0	0	1	0	0	0	0	Total
10	0	4	0	0	0	0	1	4	0	0	1	0	Grand Total
	0	100	0	0	0	0	20	80	0	0	100	0	Apprch %
	0	40	0	0	0	0	10	40	0	o l	10	0	Total %

N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

Total %

10.4

1.6

1.6

26.4

3.2

Page No ‡10

34.9

65.1

								Groups	Printed	- Bikes	Peds								
	To		ent Wha	arf		Merrin	nac St			Mark From	et St				nac St West		i		
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left		Right	Peds	Exclu. Tollis	India Total	Int. Total
11:00 AM	4	0	0	2	0	2	0	2	0	0	2	2	1	1	0	0	6	10	16
11:15 AM	0	0	0	4	0	2	1	0	0	0	0	1	1	7	0	0	5	11	16
11:30 AM	1	0	0	4	0	8	1	0	0	0	0	0	8	7	0	0	4	25	29
11:45 AM	1	0	0	3	0	6	0	0	0	0	0	4	2	2	0	1	8	11	19
Total	6	0	0	13	0	18	2	2	0	0	2	7	12	17	0	1	23	57	80
12:00 PM	1	0	0	3	0	3	0	0	0	0	0	7	1	2	0	1	11	7	18
12:15 PM	0	0	0	1	0	4	1	2	0	0	0	0	0	7	0	0	3	12	15
12:30 PM	2	2	2	0	0	5	0	0	0	0	4	1	1	5	0	0	1	21	22
12:45 PM	4	0	0	0	0	1	0	2	0	0	0	1	1	1	0	0	3	7	10
Total	7	2	2	4	0	13	1	4	0	0	4	9	3	15	0	1	18	47	65
01:00 PM	0	0	0	8	0	0	0	0	0	0	0	1	0	2	0	0	9	2	11
01:15 PM	0	0	0	8	0	2	0	0	1	0	0	3;	0	5	1	0	11	9	20
01:30 PM	0	0	0	0	0	0	1	0	0	0	1	3	0	4	0	0	3	6	9
01:45 PM	0	0	0	2	0	0	0	0	0	0	0	1;	0	4	0	0	3	4	7
Total	0	0	0	18	0	2	1	0	1	0	1	8:	0	15	1	0	26	21	47
Grand Total	13	2	2	35	0	33	4	6	1	0	7	24	15	47	1	2	67	125	192
Apprch %	76.5	11.8	11.8		0	89.2	10.8		12.5	0	87.5		23.8	74.6	1.6				

8.0

5.6

12 37.6

8.0

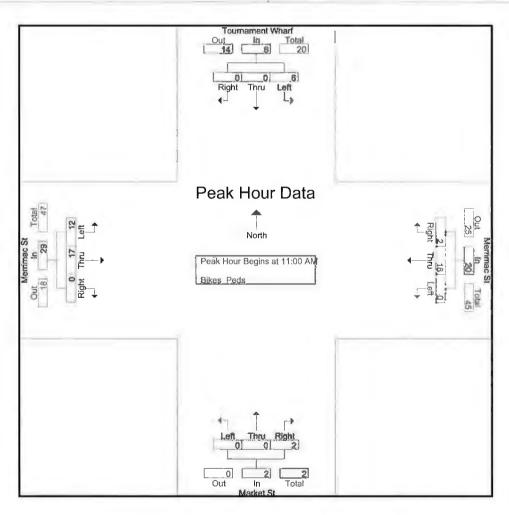
N/S Street: Tournament Wharf/ Market St

E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name * 728100S2 Site Code : 72810002 Start Date - 6/18/2016 Page No : 11

	T	ournam	ent Wha	rf		Merri	mac St	i		Mar	ket St			Merri	mac St		
		From	North			From East			From	South			From	n 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 Analys	sis From	11:00 A	AM to 01:		eak 1 of	1											
Peak Hour for En	tire Inter	section	Begins a	t 11:00 AM	1												
11:00 AM	4	0	0	4	0	2	0	2	0	0	2	2	1	1	0	2	10
11:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	7	0	8	11
11:30 AM	1	0	0	1	0	8	1	9	0	0	0	0	8	7	0	15	25
11:45 AM	1	0	0	1	0	6	0	6	0	0	0	0	2	2	0	4	11
Total Volume	6	0	0	6	0	18	2	20	0	0	2	2	12	17	0	29	57
% App. Total	100	0	0		0	90	10		0	0	100		41.4	58,6	0		
PHF	.375	.000	.000	.375	.000	.563	.500	.556	.000	.000	.250	.250	.375	.607	.000	.483	.570



N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA

% Trucks

0

0

Weather : Clear

File Name: 728100S3 Site Code: 72810003

Start Date : 6/18/2016 Page No : 1

	McK	ay's Whar	f	Me	errimac St	rinted- Car		rivate Dr		Me	errimac St		
	Fr	om North		F	rom East		Fre	m South		Fi	rom West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Tot
11:00 AM	1	0	5	0	117	1	2	0	0	5	117	0	24
11:15 AM	0	0	5	1	130	0	0	0	1	8	184	0	32
11:30 AM	1	0	5	1	131	o]	1	0	4	5	150	3	30
11:45 AM	0	0	11	1	148	0	1	0	2	5	155	1	32
Total	2	0	26	3	526	1	4	0	7	23	606	4	120
12:00 PM	2	0	11	0	118	1	2	0	1	0	178	1	31
12:15 PM	1	0	5	0	151	0	0	0	0	5	158	0	32
12:30 PM	1	0	9	0	143	0	0	0	0	3	156	0	31
12:45 PM	0	2	6	0	126	0	0	0	1	7	141	1	28
Total	4	2	31	0	538	1	2	0	2	15	633	2	123
01:00 PM	0	1	3	0	138	0 }	0	0	2	3	155	3	30
01:15 PM	2	0	5	0	160	0	1	1	0	2	169	2	34
01:30 PM	1	0	4	0	142	1	1	0	0	4	178	2	33
01:45 PM	0	0	4	1	154	0	1	0	2	7	150	3	32
Total	3	1	16	1	594	1	3	1	4	16	652	10	130
Grand Total	9	3	73	4	1658	3	9	1	13	54	1891	16	373
Apprch %	10.6	3.5	85.9	0.2	99.6	0.2	39.1	4.3	56.5 1	2.8	96.4	0.8	
Total %	0.2	0.1	2	0.1	44.4	0.1	0.2	0	0.3	1.4	50.6	0.4	
Cars	9	3	73	4	1653	3	9	1	13	54	1887	16	372
% Cars	100	100	100	100	99.7	100	100	100	100	100	99.8	100	99
Trucks	0	0	0	0	5	0	0	0	0	0	4	0	

0

0

0

0

0.2

0

0.2

0

0

0

0.3

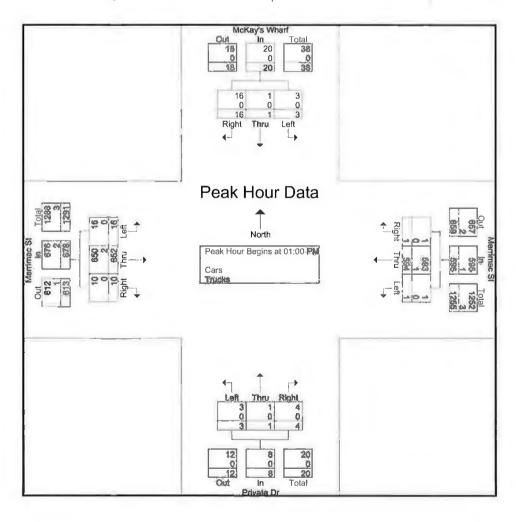
N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name : 728100S3 Site Code : 72810003 Start Date : 6/18/2016

Page No : 2

_		McKay	's Whar	f		Merri	mac St			Priv	ate Dr			Merrir	nac St		
		From	North			Fron	n 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 Analys	sis From	11:00 A	AM to 01		eak 1 of	1											
Peak Hour for En	tire Inter	section	Begins a	at 01:00 PM	1												
01:00 PM	0	1	3	4	0	138	0	138	0	0	2	2	3	155	3	161	305
01:15 PM	2	0	5	7	0	160	0	160	1	1	0	2	2	169	2	173	342
01:30 PM	1	0	4	5	0	142	1	143	1	0	0	1	4	178	2	184	333
01:45 PM	0	0	4	4	1	154	0	155	1	0	2	3	7	150	3	160	322
Total Volume	3	1	16	20	1	594	1	596	3	1	4	8	16	652	10	678	1302
% App. Total	15	5	80		0.2	99.7	0.2		37.5	12.5	50		2.4	96.2	1.5		
PHF	.375	.250	.800	.714	.250	.928	.250	.931	.750	.250	.500	.667	.571	.916	.833	.921	.952
Cars	3	1	16	20	1	593	1	595	3	1	4	8	16	650	10	676	1299
% Cars	100	100	100	100	100	99.8	100	99.8	100	100	100	100	100	99.7	100	99.7	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	0.2	0	0.2	0	0	0	0	0	0.3	0	0.3	0.2



N/S Street : McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name : 728100S3 Site Code : 72810003 Start Date : 6/18/2016

Page No . 4

	En	ay's Whar om North		F	errimac St rom East	ps Printed-	Pi Fro	rivate Dr om South		Fr	errimac St om West		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left!	Thru	Right	Int. Tota
11:00 AM	1	0	5	0	117	1	2	0	0	5	117	0	248
11:15 AM	0	0	5	1	130	0	0	0	1	8	184	0	329
11:30 AM	1	0	5	1	131	0	1	0	4	5	149	3	300
11:45 AM	0	0	11	1	147	0	1	0	2	5	155	1	323
Total	2	0	26	3	525	1	4	0	7	23	605	4	1200
12:00 PM	2	0	11	0	117	1	2	0	1	0	177	1	312
12:15 PM	1	0	5 ¹	0	151	0	0	0	0	5	158	0	320
12:30 PM	1	0	9	0	143	0	0	0	0	3	156	0	312
12:45 PM	0	2	6	0	124	0	0	0	1	7	141	1	282
Total	4	2	31	0	535	1	2	0	2	15	632	2	1226
01:00 PM	0	1	3	0	138	0	0	0	2	3	155	3	305
01:15 PM	2	0	5	0	160	0	1	1	0	2	167	2	340
01:30 PM	1	0	4	0	142	1	1	0	0	4	178	2	333
01:45 PM	0	0	4	1	153	0	1	0	2	7	150	3	321
Total	3	1	16	1	593	1	3	1	4	16	650	10	1299
Grand Total	9	3	73	4	1653	3]	9	1	13	54	1887	16	3725
Apprch %	10.6	3.5	85.9	0.2	99.6	0.2	39.1	4.3	56.5	2.8	96.4	0.8	
Total %	0.2	0.1	2	0.1	44.4	0.1	0.2	0	0.3	1.4	50.7	0.4	

N/S Street: McKay's Wharf / Private Dr E/W Street: Merrimac Street

City/State : Newburyport, MA
Weather : Clear

File Name . 728100S3
Site Code . 72810003
Start Date . 6/18/2016
Page No . 7

		rrimac St om West	Fro		ivate Dr m South	Fro		rrimac St om East	Fre		ay's Wharl om North	Fro	
Int. Tot	Right	Thru	Left	Right	Thru!	Left	Right	Thru	Left .	Right .	T <u>h</u> ru	Left	Start Time
	0	0	0	0 '	0	0	0 "	0	0	0	0	0	11:00 AM
	0	0	0	0	0	0	0	0	0	0	0	0	11:15 AM
	0	1	0	0	0	0	0	0	0	0	0	0	11:30 AM
	0	0	0	0	0	0	0	1	0	0	0	0	11:45 AM
	0	1	0	0	0	0	0	1	0	0	0	0	Total
	0	1	0	0	0	0	0	1	0	0	0	0	12:00 PM
	0	0	0	0	0	0	0	0	0	0	0	0	12:15 PM
	0	0	0	0	0	0	0	0	0	0	0	0	12:30 PM
	0	0	0	0	0	0	0	2	0	0	0	0	12:45 PM
	0	1	0	0	0	0	0	3	0	0	0	0	Total
	0	0	0	0	0	0	0	0	0	0	0	0	01:00 PM
	0	2	0	0	0	0	0	0	0	0	0	0	01:15 PM
	0	0	0	0	0	0	0	0	0	0	0	0	01:30 PM
	0	0	0	0	0	0	0	1	0	0	0	0	01:45 PM
	0	2	0	0	0	0	0	1	0	0	0	0	Total
	0	4	0	0	0	0	0	5	0	0	0	0	Grand Total
	0	100	0	0	0	0	0	100	0	0	0	0	Apprch %
	0	44.4	0	0	0	0	0	55.6	0	0	0	0	Total %

N/S Street: McKay's Wharf / Private Dr E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name : 728100S3 Site Code : 72810003 Start Date : 6/18/2016 Page No : 10

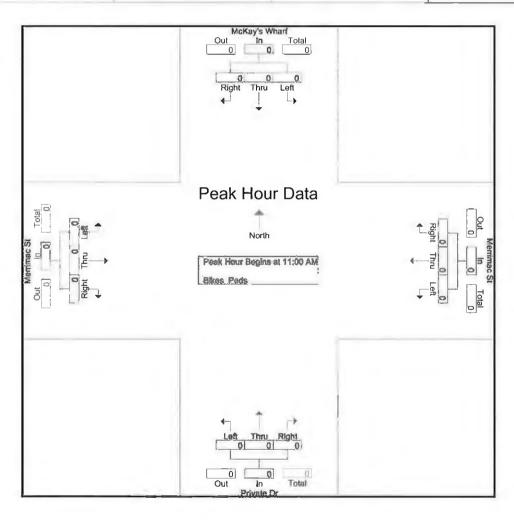
T								Groups	Printed	I- Bikes	Peds	-					7		
	V		s Wharf	ł			nac St	,			te Dr				mac St West				
Start Time	Left	From	Right	Parle	Left	The	East Right	Parle	Left		South Right	Pode	Left		Right	Dode	Exclu Total	Jacky Total	Int. Tota
11:00 AM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	4	0	1114 TOTA
11:15 AM	0	0	0	4	0	0	0	0	0	0	0	6	0	0	0	0	10	0	10
11:30 AM	0	0	0	5	0	0	0	0	0	0	0	6	0	0	0	0	11	0	11
11:45 AM	0	0	٥	3	0	0	0	0	0	0	0	3	0	0	0	2	8	0	8
Total	0	0	0	15	0	0	0	0	0	0	0	15	0	0	0	3	33	0	33
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	8
12:15 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	4	0	4
12:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	3	0	3
12:45 PM	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Total	0	0	0	8	0	0	0	0	0	0	0	8	0	0	0	2	18	0	18
01:00 PM	0	0	0	16	0	0	0	0	0	0	0	9	0	0	0	0	25	0	25
01:15 PM	0	0	0	8	0	0	0	0	0	0	0	8	0	0	0	0	16	0	16
01:30 PM	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	5	0	5
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	2
Total	0	0	0	25	0	0	0	0	0	0	0	25	0	0	0	0	50	0	50
Grand Total	0	0	0	48	0	0	0	0	0	0	0	48	0	0	0	5	101	0	101
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0				
Total %								1									100	0	

N/S Street: McKay's Wharf / Private Dr

E/W Street : Merrimac Street City/State : Newburyport, MA
Weather : Clear

File Name 728100S3 Site Code : 72810003 Start Date = 6/18/2016 Page No : 11

		McKay'	s Wharf			Merri	mac St			Priva	ate Dr	ſ		Merri	mac St		
		From	North	'		Fron	n East			From	South			From	n West		
Start Time	Left	Thru:	Right	Total	Left	Thru	Right	App₌ Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Tota
Peak Hour Analys	is From	11:00 A			eak 1 of	1					_		*				
Peak Hour for Ent	ire Inter	section I	Begins at	11:00 AN	Л												
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	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	0	0	0 1	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	Ø	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0	Ť	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	,000	,000	.000	.000	.000	.000	.000	.000	.000	.000



N/S Street: Titcomb Street E/W Street: Merrimac Street City/State: Newburyport, MA

Grand Total

Apprch %

Total %

% Cars

Trucks

% Trucks

Cars

51

1.4

50

98

1

2

3

1624

44.3

1620

99.8

4

0.2

97

Weather : Clear

File Name : 728100S4 Site Code : 72810004 Start Date : 6/18/2016

Page No : 1

73 |

3.8

2

73

100

0

0

3669

3659

99.7

10

0.3

	Merrimac S From East	it l	Titcomb Si From Sout	1	Merrimac S From Wes	t .	
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
11:00 AM	15	118	3	3	114	4	257
11:15 AM	3	126	2	2	172	9	314
11:30 AM	1	129	2	4	153	7	296
11:45 AM	1	142	5	3	158	6	315
Total	20	515	12	12	597	26	1182
12:00 PM	4	113	3	2	168	4	294
12:15 PM	1	153	6	1	151	6	318
12:30 PM	4	144	2	2	153	8	313
12:45 PM	5	119	3	2	150	4	283
Total	14	529	14	7	622	22	1208
01:00 PM ;	5	133	8	4	146	10	306
01:15 PM	4	162	1	1	163	4	335
01:30 PM	4	143	3	2	168	4	324
01:45 PM	4	142	6	2	153	7	314
Total	17	580	18	9	630	25	1279

44

61.1

1.2

43

1

2.3

97.7

28

38.9

8.0

28

100

0

0

1849

96.2

50.4

1845

99.8

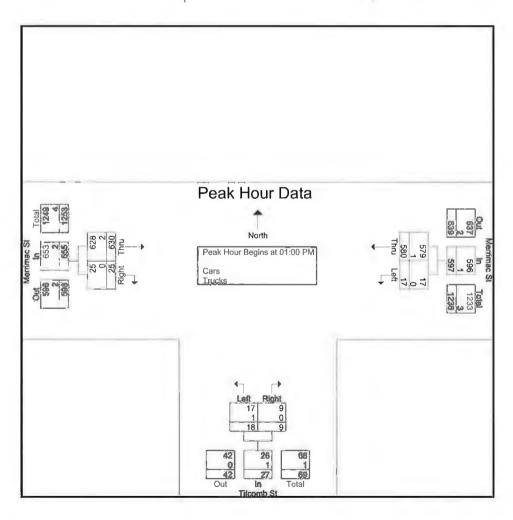
4

0.2

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name 728100S4 Site Code 72810004 Start Date : 6/18/2016 Page No 2

		/lerrimac 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. Total
Peak Hour Analysis From 11	:00 AM to 0	1:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Intersed	ction Begins	at 01:00 PI	М							
01:00 PM :	5	133	138	8	4	12	146	10	156	306
01:15 PM :	4	162	166	1	1	2	163	4	167	335
01:30 PM	4	143	147	3	2	5	168	4	172	324
01:45 PM	4	142	146	6	2	8	153	7	160	314
Total Volume	17	580	597	18	9	27	630	25	655	1279
% App. Total	2.8	97.2		66.7	33.3		96.2	3.8		
PHF	,850	.895	.899	.563	.563	.563	.938	.625	.952	.954
Cars	17	579	596	17	9	26	628	25	653	1275
% Cars	100	99.8	99.8	94.4	100	96.3	99.7	100	99.7	99.7
Trucks	0	1	1	1	0	1	2	0	2	4
% Trucks	0	0.2	0.2	5.6	0	3.7	0.3	0	0.3	0.3



N/S Street: Titcomb Street E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name: 728100S4 Site Code : 72810004 Start Date : 6/18/2016 Page No : 4

		×	-	ps Printed- Cars	Grou		†-
		Merrimac St		Titcomb St		Merrimac S	
Int. Tota	Right	From West Thru	Right	From South Left	Thru	From East Left	Start Time
256	4	114	3	3	118	14	11:00 AM
314	9	172	2	2	126	3	11 :15 AM
295	7 1	152	4	2	129	1	11:30 AM
313	6	157	3	5	141	1	11:45 AM
1178	26	595	12	12	514	19	Total
294	4	168	2	3	113	4	12:00 PM
318	6	151	1	6	153	1	12:15 PM
312	8	153	2	2	143	4	12:30 PM
282	4	150	2	3	118	5	12:45 PM
1206	22	622	7	14	527	14	Total
305	10	145	4	8	133	5	01:00 PM
334	4	162	1	1	162	4	01:15 PM
323	4	168	2	2	143	4	01:30 PM
313	7	153	2	6	141	4	01:45 PM
1275	25	628	9	17	579	17	Total
3659	73	1845	28	43	1620	50	Grand Total
	3.8	96.2	39.4	60.6	97	3	Apprch %
	2	50.4	8.0	1.2	44.3	1.4	Total %

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name : 728100S4 Site Code : 72810004 Start Date : 6/18/2016 Page No : 7

		Merrimac St		s Printed- Trucks Titcomb St		Merrimac St	
		From West		From South		From East	
Int. Tota	Right	Thru :	Right	Left	Thru	<u>Left</u>	Start Time
	0	0	0	0	0	1	11:00 AM
(0	0	0	0	0	0	11:15 AM
	0	1	0	0	0	0	11:30 AM
2	0	1	0	0	1	0	11:45 AM
4	0	2	0	0	1	1	Total
(0	0	0	0	0	0	12:00 PM
(0	0	0	0	0	0	12:15 PM
	0	0	0	0	1	0	12:30 PM
	0	0	0	0	1	0	12:45 PM
-	0	0	0	0	2	0	Total
			,		,		
	0	1	0	0	0	0	01:00 PM
	0	1	0	0	0	0	01:15 PM
	0	0	0	1	0	0	01:30 PM
1	0	0	0	0	1	0	01:45 PM
	0	2	0	1	1	0	Total
10	0	4	0	1	4	1	Grand Total
	0	100	0	100	80	20	Apprch %
	0	40	0	10	40	10	Total %

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name : 728100S4 Site Code : 72810004 Start Date : 6/18/2016 Page No : 10

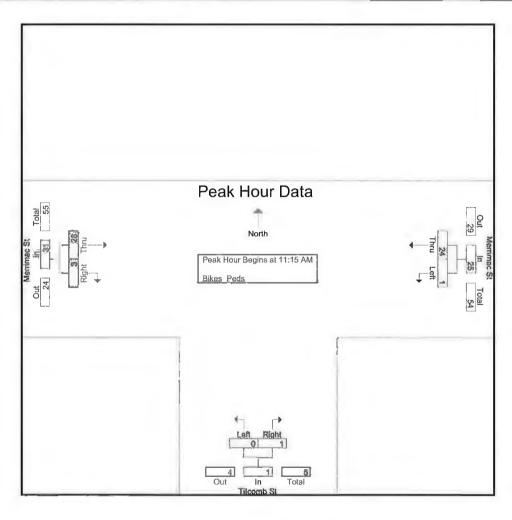
Groupe	Printed-	Rikee	Parie
Laronos	FTINIRO-	BIKES	Pens

	Me Fi	errimac St rom East		T Fr	itcomb St om South		M F	errimac St rom West				
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
11:00 AM	0	2	1	0	0	2	9	0	3	6	11	17
11:15 AM	1	4	0	0	0	3	11	2	6	9	18	27
11:30 AM	0	7	0	0	0	7	4	1	2	9	12	21
11:45 AM	0	6	0	0	1	3	4	0	3	6	11	17
Total	1	19	1	0	1	15	28	3	14	30	52	82
12:00 PM	0	7	0	0	0	8	9	0	3	11	16	27
12:15 PM	0	2	0	0	0	2	5	0	2	4	7	11
12:30 PM	0	5	1	0	0	3	6	0	0	4	11	15
12:45 PM	0	2	0 ,	0	0	7	6	0	2	9	8	17
Total	0	16	1	0	0	20	26	0	7	28	42	70
01:00 PM	0	0	0	0	0	4	2	0	8	12	2	14
01:15 PM	0	3	0	0	0	11	6	0	3	14	9	23
01:30 PM	0	2	0	1	1	3	4	1	6	9	9	18
01:45 PM	0	5	0	0	0	12	4	0	4	16	9	25
Total	0	10	0	1	1	30	16	1	21	51	29	80
Grand Total	1	45	2	1	2	65	70	4	42	109	123	232
Apprch %	2.2	97.8		33.3	66.7		94.6	5.4				
Total %	8.0	36.6		0.8	1.6		56.9	3.3		47	53	

N/S Street: Titcomb Street E/W Street: Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name : 728100S4 Site Code : 72810004 Start Date : 6/18/2016
Page No : 11

		errimac St rom East			Titcomb St rom South			Merrimac St From West			
Start Time	Left ¹	Thru ¹	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total	
Peak Hour Analysis From 11	:00 AM to 0	I:45 PM - P	eak 1 of 1								
Peak Hour for Entire Intersec	tion Begins	at 11:15 AN	Л								
11:15 AM	1	4	5	0	0	0	11	2	13 1	18	
11:30 AM ;	0	7	7	0	0	0	4	1	5	12	
11:45 AM	0	6	6	0	1	1	4	0	4	11	
12:00 PM	0	7	7	0	0	0	9	0	9 1	16	
Total Volume	1	24	25	0	1	1	28	3	31	57	
% App. Total	4	96		0	100	1	90.3	9.7	J		
PHF	.250	.857	.893	.000	.250	.250	.636	.375	.596	.792	



N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

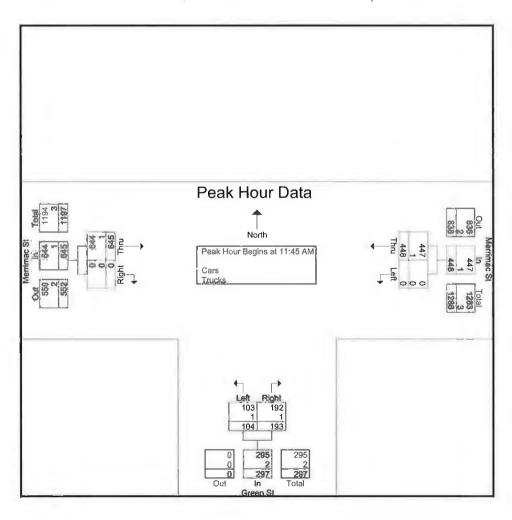
File Name ; 728100S5 Site Code : 72810005 Start Date : 6/18/2016 Page No : 1

		Merrimac St		Green St		Merrimac St	
		From West		From South		From East	
Int. Tot	Right	Thru I	Right	Left !	Thru	Left 1	Start Time
29	0	122	42	30	101	0	11:00 AM ;
33	0	172	43	26	91	0	11:15 AM
33	0	155	38	34	108	0	11:30 AM
34	0	154	5 3	25	108	0	11 :45 AM
130	0	603	176	115	408	0	Total
35	0	177	51	30	97	0	12:00 PM
34	0	156	42	27	122	0	12:15 PM
34	0	158	47	22	121	0	12:30 PM
33	О	149	49	29	103	0	12:45 PM
138	0	640	189	108	443	0	Total
35	0	153	49	29	120	0	01:00 PM
35	0	165	29	32	129	0	01:15 PM
33	o	166	32	30	106	0	01:30 PM
32	О	143	30	35	115	0	01:45 PM
136	0	627	140	126	470	0	Total
404	0	1870	505	349	1321	0	Grand Total
	0	100	59.1	40.9	100	0	Apprch %
	0	46.2	12.5	8.6	32.7	0	Total %
403	0	1866	503	346	1319	0	Cars
99.	0	99.8	99.6	99.1	99.8	0	% Cars
1	0	4	2	3	2	0	Trucks
0.	0	0.2	0.4	0.9	0.2	0	% Trucks

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name : 728100S5 Site Code : 72810005 Start Date : 6/18/2016 Page No : 2

		ferrimac St From East			Green St From South		Merrimac St From West			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 1	1:00 AM to 0	1:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 11:45 A	М							
11:45 AM	0	108	108	25	53	78	154	0	154	340
12:00 PM	0	97	97	30	51	81	177	0	177	355
12:15 PM	0	122	122	27	42	69	156	0	156	347
12:30 PM	0	121	121	22	47	69	158	0	158	348
Total Volume	0	448	448	104	193	297	645	0	645	1390
% App, Total	0	100		35	65		100	0		
PHF	.000	.918	.918	.867	.910	.917	.911	.000	.911	.979
Cars	0	447	447	103	192	295	644	0	644	1386
% Cars	0	99.8	99.8	99.0	99.5	99.3	99.8	0	99.8	99.7
Trucks	0	1	1	1	1	2	1	0	1	4
% Trucks	0	0.2	0.2	1.0	0.5	0.7	0.2	0	0.2	0.3



N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA
Weather: Clear

File Name: 728100S5 Site Code : 72810005 Start Date : 6/18/2016 Page No : 4

				ps Printed- Cars	Grou		
		Merrimac St		Green St		Merrimac St	
_	-	From West		From South		From East	
Int. Total	Right	Theu	Right	Left	Three	Left	Start Time
295	0	122	42	30	101	0	11:00 AM
332	0	172	43	26	91	0	11:15 AM
334	0	154	38	34	108	0	11:30 AM
338	0	154	53	24	107	0	11:45 AM
1299	0	602	176	114	407	0	Total
354	0	176	51	30	97	0	12:00 PM
347	0	156	42	27	122	0	12:15 PM
347	0	158	46	22	121	0	12:30 PM
328	0	149	49	27	103	0	12:45 PM
1376	0	639	188	106	443	0	Total
351	0	153	49	29	120	0	01:00 PM
353	0	163	29	32	129	0	01:15 PM
334	0	166	32	30	106	0	01:30 PM
321	0	143	29	35	114	0	01:45 PM
1359	o	625	139	126	469	0	Total
4034	0	1866	503	346	1319	0	Grand Total
	0	100	59.2	40.8	100	0	Apprch %
	0	46.3	12.5	8.6	32.7	0	Total %

N/S Street; Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name : 728100S5 Site Code : 72810005 Start Date : 6/18/2016 Page No : 7

		Grou	ups Printed- Trucks				
	Merrimac S		Green St		Merrimac S	t	
	From East		From South	1	From West		
Start Time	Left	Thru	Left	Right	Thru	Right	Int. Total
11:00 AM	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	1	0	1
11:45 AM	0	1	1	o 1	0	0	2
Total	0	1	1	0	1	0	3
12:00 PM	0	0	0	0	1	0	1
12:15 PM	0	0	0	0	0	0	0
12:30 PM	0	0	0	1	0	0	1
12:45 PM	0	0	2	o	0	0	2
Total	0	0	2	1	1	0	4
01:00 PM	0	0	0	o †	0	0	0
01:15 PM	0	О	0	0	2	0	2
01:30 PM	0	0	0	0	0	0	0
01:45 PM	0	1	0	1	0	0	2
Total	0	1	0	1	2	0	4
Grand Total	0	2	3	2	4	0	11
Apprch %	0	100	60	40	100	0	
Total %	0	18.2	27.3	18.2	36.4	0	

N/S Street : Green Street E/W Street: Merrimac Street City/State: Newburyport, MA Weather: Clear

File Name . 728100S5 Site Code + 72810005 Start Date : 6/18/2016
Page No : 10

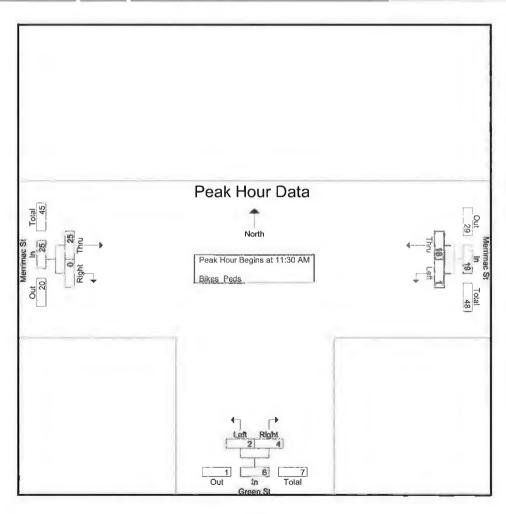
				errimac St om West	Fr		Green St om South	Fre		rimac St om East	.Fr	
Int. Tota	Inclu. Total	Exclu. Total		Right	Thru	Peds	Right	Left	Peds	Thru	Left	Start Time
3	6	26	2	0	4	10	1	0	14	1	0	11:00 AM
6	7	60	0	0	4	22	0	0	38	3	0	11:15 AM
5	20	36	0	0	7	7	3	1	29	9	0	11:30 AM
3	8	28	2	0	2	11	1	0	15	5	0	11:45 AM
19	41	150	4	0	17	50	5	1	96	18	0	Total
3	11	27	5	0	7	8	0	0	14	3	1	12:00 PM
4	11	38	0	0	9	15	0	1	23	1	0	12:15 PM
5	14	39	2	0	9	8	0	0	29	5	0	12:30 PM
2	4	20	0	0	4	4	0	0	16	0	0	12:45 PM
16	40	124	7	0	29	35	0	1	82	9	1	Total
1	2	17	0	0	2	4	0	0	13	0	0	01:00 PM
4	8	36	0	0	6	10	0	0	26	2	0	01:15 PM
2	4	16	О	0	3	7	0	0	9	1	0	01:30 PM
3	9	27	0	0	4	7	0	0	20	5	0	01:45 PM
11	23	96	0	0	15	28	0	0	68	8	0	Total
47	104	370	11	0	61	113	5	2	246	35	1	Grand Total
				0	100		71.4	28.6		97.2	2.8	Apprch %
	21.9	78.1		0	58.7	1	4.8	1.9		33.7	1	Total %

N/S Street: Green Street E/W Street: Merrimac Street City/State: Newburyport, MA

Weather : Clear

File Name . 728100S5 Site Code 72810005 Start Date : 6/18/2016 Page No . 11

		lerrimac St From East			Green St rom South	Ī		Merrimac St From West		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tota
Peak Hour Analysis From 11	:00 AM to 0	1:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 11:30 A	М							
11:30 AM	0	9	9	1	3	4	7	0	7	20
11:45 AM	0	5	5	0	1	1	2	0	2	4
12:00 PM	1	3	4	0	0	0	7	0	7	1.
12:15 PM	0	1	1	1	0	1	9	0	9	11
Total Volume	9	18	19	2	4	6	25	0	25	50
% App. Total	5,3	94.7		33.3	66.7		100	0		
PHF	.250	.500	.528	.500	.333	.375	.694	.000	.694	.625



N/S Street: State Street

E/W Street: Water St / Merrimac St City/State : Newburyport, MA Weather : Clear

File Name : 728100S6 Site Code 72810006 Start Date 6/18/2016

Page No 1

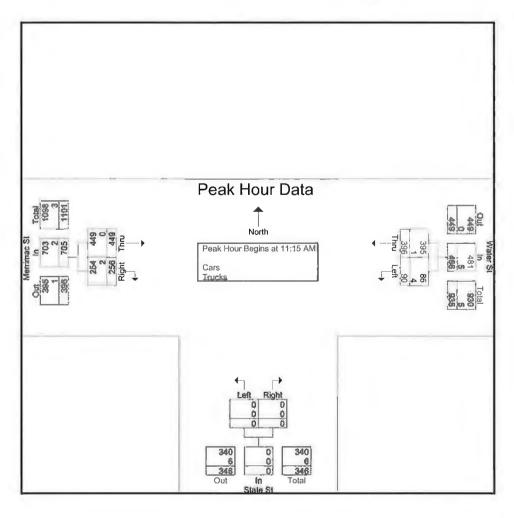
	Water St		State St		Merrimac S	t	
	From East		From South	1	From West		
Start Time	Left	Th <u>ru</u>	Left	Right	Thru	Right	Int. Total
11:00 AM	18	107	0	0	86	66	277
11:15 AM	21	90	0	0	115	66	292
11:30 AM	28	107	0	0	114	56	305
11:45 AM	20	108	0	0	95	65	288
Total	87	412	0	0	410	253	1162
12:00 PM	21	91	0	0	125	69	306
12:15 PM	16	105	0	О	109	58	288
12:30 PM	20	109	0	0	95	53	277
12:45 PM	24	87	0	О	122	55	288
Total	81	392	0	0	451	235	1159
01:00 PM	13	106	0	0	121	49	289
01:15 PM	19	97	0	o	112	58	286
01:30 PM	10	99	0	0	106	78	293
01:45 PM	18	102	0	O	89	60	269
Total	60	404	0	0	428	245	1137
Grand Total	228	1208	0	0	1289	733	3458
Appreh %	15.9	84.1	0	0	63.7	36.3	
Total %	6.6	34.9	0	0	37.3	21.2	
Cars	218	1206	0	0	1288	728	3440
% Cars	95.6	99.8	0	0	99.9	99.3	99.5
Trucks	10	2	0	0	1	5	18
% Trucks	4.4	0.2	0	О	0.1	0.7	0.5

N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name: 728100S6 Site Code : 72810006 Start Date : 6/18/2016 Page No : 2

		Water St From East		ı	State St From South			Merrimac St From West		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tota
Peak Hour Analysis From 1	1:00 AM to 0	1:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 11:15 A	M							
11:15 AM	21	90	111	0	0	0	115	66	181	292
11:30 AM	28	107	135	0	0	0	114	56	170	305
11:45 AM	20	108	128	0	0	0	95	65	160	288
12:00 PM	21	91	112	0	0	0	125	69	194	306
Total Volume	90	396	486	0	0	0	449	256	705	1191
% App. Total	18.5	81.5		0	0		63.7	36.3		
PHF	.804	,917	.900	.000	.000	.000	.898	.928	.909	.973
Cars	86	395	481	0	0	0	449	254	703	1184
% Cars	95.6	99.7	99.0	0	0	0	100	99.2	99.7	99.4
Trucks	4	1	5	0	0	0	0	2	2	7
% Trucks	4,4	0.3	1.0	0	0	0	0	0.8	0.3	0.6



N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name , 728100S6 Site Code , 72810006 Start Date ; 6/18/2016

Page No ± 4

				ps Printed- Cars	Grou		
		Merrimac S		State St		Water St	
let Total	Right	From West	Right	From South Left	Thru	From East Left	Start Time
Int. Total	_	Thru			1		
276	66	85	0	0	107	18	11:00 AM
291	66	115	0	0	90	20	11:15 AM
303	55	114	0	0	107	27	11:30 AM
286	65	95	0	0	107	19	11:45 AM
1156	252	409	0	0	411	84	Total
304	68	125	0	0	91	20	12:00 PM
288	58	109	0	0	105	16	12:15 PM
276	53	95	0	0	109	19	12:30 PM
287	54	122	0	0	87	24	12:45 PM
1155	233	451	0	0	392	79	Total
288	49	121	О	0	106	12	01:00 PM
284	57	112	О	0	97	18	01:15 PM
293	78	106	О	0	99	10	01:30 PM
264	59	89	o	0	101	15	01:45 PM
1129	243	428	0	0	403	55	Total
3440	728	1288	0	0	1206	218	Grand Total
	36.1	63.9	0	0	84.7	15.3	Apprch %
	21.2	37.4	0	0	35.1	6.3	Total %

N/S Street ; State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA Weather: Clear

Total %

55.6

11.1

		Manning O		s Printed-Trucks	Group	Mater Ot	
		Merrimac S From West		State St From South		Water St From East	
Int. Total	Right	Thru	Right	Left	Thru !	Left	Start Time
1	0	1	0	0	0	0	11:00 AM
1	0	0	0	0	0	1	11:15 AM
2	1	0	0	0	0	1	11:30 AM
2	0	0	0	0	1	1	11:45 AM
6	1	1	0	0	1	3	Total
2	1	0	0	0	0	1	12:00 PM
0	0	0	0	0	0	0	12:15 PM
1	0	0	0	0	0	1	12:30 PM
1	1	0	0	0	0	0	12:45 PM
4	2	0	0	0	0	2	Total
1	0	0	o	0	0	1	01:00 PM
2	1	0	0	0	0	1	01:15 PM
0	0	0	0	0	0	0	01:30 PM
5	1	0	0	0	1	3	01:45 PM
8	2	0	0	0	1	5	Total
18	5	1	0	0	2	10	Grand Total
	83.3	16.7	0	0	16.7	83.3	Apprch %

0

5.6

27.8

N/S Street: State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name: 728100S6 Site Code : 72810006 Start Date : 6/18/2016

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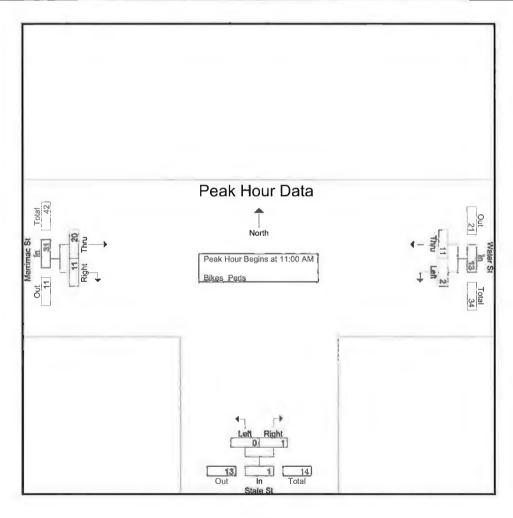
			-		Groups Prin	nted-Bikes	Peds					
	V	Vater St om East			State St om South		Me	errimac St rom West				
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru ¹¹	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
11:00 AM	0	1	0	0	1	6	5	2	0	6	9	15
11:15 AM	2	2	0	0	0	5	5	2	0	5	11	16
11:30 AM	0	4	0_	0	0	0	7	6	0	0	17	17
11:45 AM	0	4	0	0	0	1	3	1	0	1	8	9
Total	2	11	0	0	-1	12	20	11	0	12	45	57
12:00 PM	0	1	0	0	0	0	3	0	2	2	4	6
12:15 PM	0	4	0	0	0	1	4	0	1	2	8	10
12:30 PM	0	5	4	0	0	4	3	3	0	8	11	19
12:45 PM	0	0	1	0	0	9	3	2	8	18	5	23
Total	0	10	5	0	0	14	13	5	11	30	28	58
01:00 PM	0	0	o	0	1	4	3	1	0	4	5	9
01:15 PM	0	7	o	1	0	3	1	0	4	7	9	16
01:30 PM	0	1	0	0	0	7	1	1	0	7	3	10
01:45 PM	0	1	0	0	1	5	4	0	0	5	6	11
Total	0	9	0	1	2	19	9	2	4	23	23	46
Grand Total	2	30	5	1	3	45	42	18	15	65	96	161
Apprch %	6.2	93.8		25	75		70	30				
Total %	2.1	31.2		1	3.1		43.8	18.8		40.4	59.6	

N/S Street : State Street

E/W Street: Water St / Merrimac St City/State: Newburyport, MA
Weather: Clear

File Name : 728100S6 Site Code : 72810006 Start Date : 6/18/2016 Page No : 11

1		Water St			State St		1	Merrimac St		
		From East			rom South			From West		
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11	:00 AM to 0	1:45 PM - F	Peak 1 of 1					-		
Peak Hour for Entire Interse	ction Begins	at 11:00 A	М							
11:00 AM	0	1	1	0	1	1	5	2	7	9
11:15 AM	2	2	4	0	0	0	5	2	7	11
11:30 AM	0	4	4	0	0	0	7	6	13	17
11:45 AM	0	4	4	0	0	0	3	1	4	8
Total Volume	2	11	13	0	1	1	20	11	31	45
% App. Total	15,4	84.6		0	100		64.5	35,5		
PHF	,250	.688	.813	.000	.250	.250	,714	.458	.596	.662



N/S Street : State Street E/W Street: Liberty Street City/State: Newburyport, MA
Weather: Clear

File Name : 728100S7 Site Code : 72810007 Start Date : 6/18/2016 Page No : 1

		State St		Cars - Trucks - Bil Liberty St		State St	
		From South		From East		From North	7
Int. Tota	Right	T <u>h</u> ru	Right	Left	Thru	Left	Start Time
105	0	0	0	21	84	0	11:00 AM
111	0	0	0	23	87	1	11:15 AM
103	0	0	0	18	85	0	11:30 AM
112	0	0	0	26	85	1	11:45 AM
43	0	0	0	88	341	2	Total
114	0	0	0	24	90	0	12:00 PM
103	0	0	0	29	74	0	12:15 PM
96	0	0	0	23	73	0	12:30 PM
102	0	0	o	23	79	0	12:45 PM
41	0	0	0	99	316	0	Total
84	0	0	8	14	62	0	01:00 PM
92	0	0	0	14	78	0	01:15 PM
10	0	0	0	13	88	0	01:30 PM
10	0	0	2	21	78	0	01:45 PM
37	0	0	10	62	306	0	Total
1224	0	0	10	249	963	2	Grand Total
	0	0	3.9	96.1	99.8	0.2	Apprch %
	0	0	0.8	20.3	78.7	0.2	Total %
118	0	0	0	241	946	0	Cars
9	0	0	0.1	96.8	98.2	0	% Cars
1	0	0	0	2	15	0	Trucks
1.4	0	0	0	8.0	1.6	0	% Trucks
2	0	0	10	6	2	2	Bikes Peds
1.0	0	0	100	2,4	0.2	100	% Bikes Peds

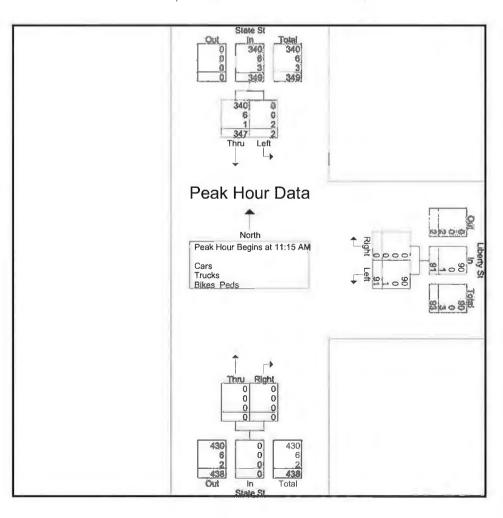
N/S Street: State Street E/W Street: Liberty Street City/State: Newburyport, MA

Weather : Clear

File Name: 728100S7 Site Code: 72810007 Start Date: 6/18/2016

Page No : 2

		State St			Liberty St			State St		
	F	rom North			From East		F	From South		
Start Time	Left	Thru "	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Tota
eak Hour Analysis From 11	1:00 AM to 0	1:45 PM - F	Peak 1 of 1				-			
eak Hour for Entire Interse	ction Begins	at 11:15 Al	M							
11:15 AM	1	87	88	23	0	23	0	0	0	111
11:30 AM	0	85	85	18	0	18	0	0	0	103
11:45 AM	1	85	86	26	0	26	0	0	0	112
12:00 PM	0	90	90	24	0	24	0	0	0	114
Total Volume	2	347	349	91	0	91	0	0	0	440
% App. Total	0.6	99.4		100	0		0	0		
PHF	.500	.964	.969	.875	.000	.875	.000	.000	.000	.965
Cars	0	340	340	90	0	90	0	0	0	430
% Cars	0	98.0	97.4	98.9	0	98.9	0	0	0	97.7
Trucks	0	6	6	0	0	0	0	0	0	6
% Trucks	0	1.7	1.7	0	0	0	0	0	0	1.4
Bikes Peds	2	1	3	1	0	1	0	0	0	4
% Bikes Peds	100	0.3	0.9	1,1	0	1,1	0	0	0	0.9



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

File Name : 728100S8 Site Code | 72810008 Start Date | 6/18/2016

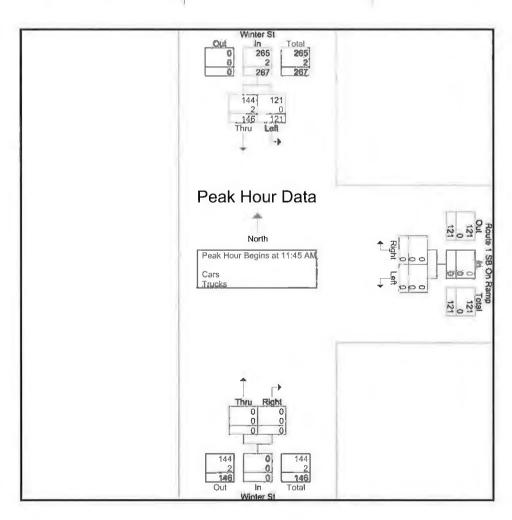
Page No : 1

		Winter St	KS	Printed- Cars - Truc Route 1 SB On F	Groups	Winter St	
		From South	amp	From East		From North	
Int. Tota	Right	Thru	Right	Left	Thru	Left I	Start Time
3	0	0	0	0	16	14	11:00 AM
5	0	0	0	0	32	23	11:15 AM
5	0	0	0	0	25	25	11:30 AM
7	0	0	0	0	48	22	11:45 AM
20	0	0	0	0	121	84	Total
7	0	0	0	0	41	32	12:00 PM
5	0	0	0	0	23	27	12:15 PM
7	0	0	0	0	34	40	12:30 PM
5	0	0	0	0	35	21	12:45 PM
25	0	0	0	0	133	120	Total
4	0	0	o ¹	0	21	25	01:00 PM
6	0	0	0	0	32	28	01:15 PM
5	0	0	0 (0	28	28	01:30 PM
5	0	0	0	0	21	30	01:45 PM
21	0	0	0	0	102	111	Total
67	0	0	0	0	356	315	Grand Total
	0	0	0	0	53.1	46.9	Apprch %
	0	0	0	0	53.1	46.9	Total %
66	0	0	0	0	351	314	Cars
99.	0	0	0	0	98.6	99.7	% Cars
	0	0	0	0	5	1	Trucks
0.	0	0	0	0	1.4	0.3	% Trucks

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

File Name , 728100S8 Site Code ; 72810008 Start Date : 6/18/2016 Page No 2

		Winter St		Route	1 SB On F	lamp		Winter St		
	F	rom North			From East		1	rom South		
Start Time	Left '	Thru !	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11	1:00 AM to 0	1:45 PM - P	eak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 11:45 AM	М							
11:45 AM	22	48	70	0	0	0	0	0	0	70
12:00 PM	32	41	73	0	0	0	0	0	0	73
12:15 PM	27	23	50	0	0	0	0	0	0	50
12:30 PM	40	34	74	0	0	0	0	0	0	74
Total Volume	121	146	267	0	0	0	0	0	0	267
% App. Total	45.3	54.7	t	0	0		0	0		
PHF	.756	.760	.902	.000	.000	.000	.000	.000	.000	.902
Cars	121	144	265	0	0	0	Ō.	0	0.1	265
% Cars	100	98.6	99.3	0	0	0	0	0	0	99.3
Trucks	0	2	2	0	0	0	0	0	0	2
% Trucks	0	1.4	0.7	0	0	0	0	0	0	0.7



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

File Name * 728100S8 Site Code 72810008 Start Date . 6/18/2016 Page No 4

				ps Printed- Cars	Grou		
	1	Winter St From South	amp	Route 1 SB On R		Winter St	
Int. Total	Right	Thru i	Right	From East Left	Thru	From North Left	Start Time
30	0	0	0	0	16	14	11:00 AM
54	0	0	0	0	31	23	11:15 AM ⁽
50	0	0	o	0	25	25	11:30 AM
69	0	0	O O	0	47	22	11:45 AM
203	0	0	0	0	119	84	Total
73	0	0	0	0	41	32	12:00 PM
50	0	0	0	0	23	27	12:15 PM
73	0	0	0	0	33	40	12:30 PM
54	0	0	0	0	34	20	12:45 PM
250	0	0	0	0	131	119	Total
46	0	0	o	0	21	25	01:00 PM
60	0	0	0	0	32	28	01:15 PM
55	0	0	0	0	27	28	01:30 PM
51	0	0	0	0	21	30	01:45 PM
212	0	0	0	0	101	111	Total
665	0	0	0	0	351	314	Grand Total
	0	0	0	0	52.8	47.2	Apprch %
	0	0	0	0	52.8	47.2	Total %

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

Weather : Clear

File Name: 728100S8 Site Code : 72810008 Start Date : 6/18/2016

Page No : 7

		Winter St	amp	ups Printed- Trucks Route 1 SB On R		Winter St	
		From South	1	From East		From North	
Int. Tota	Right	Thru	Right	Left	Thru	Left	Start Time
(0	0	0	0	0	0	11:00 AM
	0	0	0	0	1	0	11:15 AM
(0	0	0	0	0	0	11:30 AM
	0	0	0	0	1	0	11:45 AM
- - - 	gi]	Q	0	0	2	0	Total
(0	0	0	0	0	0	12:00 PM
(0	0	0	0	0	0	12:15 PM
	0	0	0	0	1	0	12:30 PM
2	0	0	0	0	1	1	12:45 PM
;	0	0	0	0	2	1	Total
(o	0	0	0	0	0	01:00 PM
(0	0	0	0	0	0	01:15 PM
	0	0	0	0	1	0	01:30 PM
(0	0	0	0	0	0	01:45 PM
	0	0	0	0	1	0	Total
(0	0	0	0	5	1	Grand Total
	0	0	οţ	0	83.3	16.7	Apprch %
	0	0	0	0	83.3	16.7	Total %

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

File Name : 728100S8 Site Code . 72810008 Start Date ; 6/18/2016 Page No : 10

Groups Printed- Bikes Peds

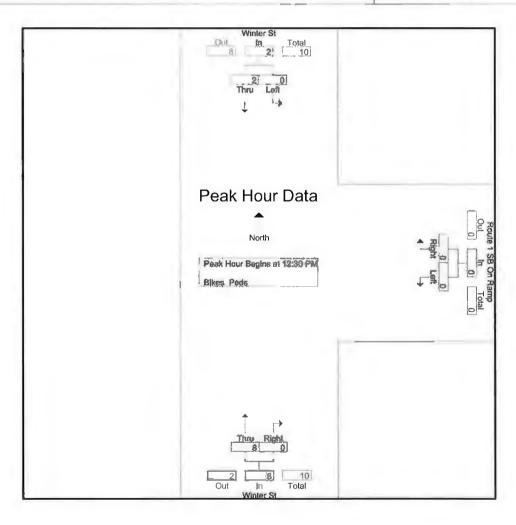
	V	Vinter St om North		Route	1 SB On Ra	mp	\	Vinter St				
Start Time	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds	Exclu. Total	Inclu. Total	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	1	0	0	0	0	0	0	0	0	1	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	1	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	2	0	0	0	0	0	0	0	0	2	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	0	0	0	0	2	2
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	8	0	0	0	8	8
01:30 PM	0	1	0	0	0	0	0	0	0	0	1	1
01:45 PM	0	1	0	0	0	0	0	0	0	0	1	1
Total	0	2	0	0	0	0	8	0	0	0	10	10
Grand Total	0	5	0	0	0	0	8	0	0	0	13	13
Apprch %	0	100		0	0	1	100	0				
Total %	0	38.5		0	0		61.5	0		0	10 0	

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

Weather : Clear

File Name : 728100S8 Site Code : 72810008 Start Date : 6/18/2016 Page No : 11

		Winter St From North			1 SB On R From East	amp				
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 1	1:00 AM to 0	1:45 PM - I	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 12:30 P	M							
12:30 PM	0	2	2	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	8	0	8	8
Total Volume	0	2	2	0	0	0	8	0	8	10
% App. Total	0	100		0	0		100	0		
PHF	,000	.250	.250	.000	.000	.000	.250	.000	.250	.313



N/S Street : Summer Street E/W Street: Pleasant St / Route 1 Off City/State : Newburyport, MA Weather : Clear

File Name : 728100S9 Site Code . 72810009 Start Date : 6/18/2016 Page No : 1

Groups	Water than the	dan-	Tours alone
I STITLING	MUNICIPAL .	1 .345.5	Intriks

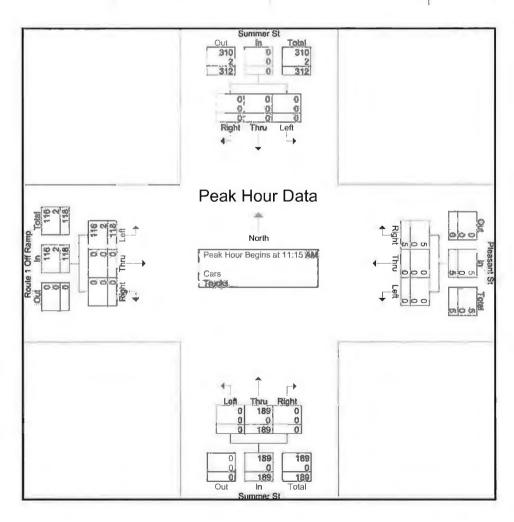
	Fr	om North		Pl-	easant St		Su	ummer St om South		Fr	1 Off Ran		
Start Time	Left	Thru 1	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Tota
11:00 AM	0	0	0	0	0	5	0	42	0	20	0	0	67
11:15 AM	0	0	0	0	0	0	0	56	0	29	0	0	85
11:30 AM	0	0	0	0	0	1	0	37	0	31	0	0	69
11:45 AM	0	0	0	0	0	1	0	52	o	33	0	0	86
Total	0	0	0	0	0	7	0	187	0	113	0	0	307
12:00 PM	0	0	0	0	0	3	0	44	0	25	0	0	72
12:15 PM	0	0	0	0	0	4	0	39	0	34	0	0	77
12:30 PM	0	0	0	0	0	2	0	37	0	25	0	0	64
12:45 PM	0	0	0	0	0	4	0	38	0	36	0	0	78
Total	0	0	0	0	0	13	0	158	0	120	0	0	291
01:00 PM	0	0	0	0	0	4	0	38	0	28	0	0	70
01:15 PM	0	0	0	0	0	4	0	44	0	31	0	0	79
01:30 PM	0	0	0	0	0	2	0	39	0	32	0	0	73
01:45 PM	0	0	0	0	0	3	0	51	0	29	0	0	83
Total	0	0	0	0	0	13	0	172	0	120	0	0	305
Grand Total	0	0	οİ	0	0	33	0	517	0	353	0	0	903
Apprch %	0	0	0	0	0	100	0	100	0	100	0	0	
Total %	0	0	0	0	0	3.7	0	57.3	0	39.1	0	ο¦	
Cars	0	0	0	0	0	33	0	517	0	351	0	0	901
% Cars	0	0	0	0	0	100	0	100	0	99.4	0	0	99.8
Trucks	0	0	0	0	0	0	0	0	0	2	0	0	2
% Trucks	0	0	0	0	0	0	0	0	0	0.6	0	0	0.2

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off

City/State: Newburyport, MA
Weather: Clear

File Name : 728100S9 Site Code \$72810009 Start Date \$6/18/2016 Page No \$2

		Sumr	ner St			Plea	sant St			Sumi	mer St		F	Route 1	Off Ran	np	
		From	North			Fror	n 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 Analys	sis From	11:00 A	M to 01	:45 PM - P	eak 1 of	1											
Peak Hour for En	tire Inter	section I	Begins a	at 11:15 AN	1												
11:15 AM	0	0	0	0	0	0	0	0	0	56	0	56	29	0	0	29	85
11:30 AM	0	0	0	0	0	0	1	1	0	37	0	37	31	0	0	31	69
11:45 AM	0	0	0	0	0	0	1	1	0	52	0	52	33	0	0	33	86
12:00 PM	0	0	0	0	0	0	3	3	0	44	0	44	25	0	0	25	72
Total Volume	0	0	0	0	0	0	5	5	0	189	0	189	118	0	0	118	312
% App. Total	0	0	0		0	0	100		0	100	0		100	0	0		
PHF	.000	.000	,000	.000	.000	.000	.417	.417	.000	.844	.000	.844	.894	.000	.000	,894	.907
Cars	0	0	0	0	0	0	5	5	0	189	0	189	116	0	0	116	310
% Cars	0	0	0	0	0	0	100	100	0	100	0	100	98.3	0	0	98.3	99.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1.7	0	0	1.7	0.6



N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA
Weather: Clear

0

0

Total %

0

0

0

3.7

0

57.4

0

39

Site Code : 72810009 Start Date : 6/18/2016 Page No : 4

0

his more		Route 1 Off Ramp From West			Summer St From South			Pleasant St From East			Summer St From North		
Int. Tota	Right	Thru	Left	Right	Thru	Left	Right	Thru.	Left	Right	Thru	_ Left_	Start Time
6	0	0	20	0	42	0	5	0	0	0	0	0	11:00 AM
8	0	0	29	0	56	0	0	0	0	0 }	0	0	11:15 AM
6	0	0	30	0	37	0	1	0	.0	0	0	0	11:30 AM
8	0	0	32	0	52	0	1	0	0	0	0	0	11:45 AM
30	0	0	111	0	187	0	7	0	0	0 [0	0	Total
7	0	0	25	0	44	0	3	0	0	0	0	0	12:00 PM
7	0	0	34	0	39	0	4	0	0	0	0	0	12:15 PM
6	0	0	25	0	37	0	2	0	0	0	0	0	12:30 PM
7	0	0	36	0	38	0	4	0	0	0	0	0	12:45 PM
29	0	0	120	0	158	0	13	0	0	0	0	Ö	Total
7	0	0	28	0	38	0	4	0	0	0	0	0	01:00 PM
7	0	0	31	0	44	0	4	0	0	0	0	0	01:15 PM
7	0	0	32	0	39	0	2	0	0	0	0	0	01:30 PM
8	0	0	29	0	51	0	3	0	0	0	0	0	01:45 PM
30	0	0	120	0	172	0	13	0	0	0	0	0	Total
90	0	0	351	0	517	0	33	0	0	0	0	0	Grand Total
	0	0	100	О	100	0	100	0	0	ol	0	0	Apprch %

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA Weather: Clear

File Name * 728100S9 Site Code ... 72810009 Start Date ... 6/18/2016

Page No : 7

				-		rucks	s Printed-T	Group					
	ıp	1 Off Ram om West	Route		mmer St m South			asant St om East		[mmer St om North	Su	
Int. Total	Right	Thru	Left	Right	Thru	Left :	Right	Thru	Left.	Right	Thru	Left	Start Time
0	0	0	0	0	0	0	0	0	0	0	0	0	11:00 AM
0	0	0	0	0	0	0	0	0	0	0	0	0	11:15 AM
1	0	0	1	0	0	0	0	0	0	0	0	0	11:30 AM
1	0	0	1	0	0	0	0	0	0	0	0	0	11:45 AM
2	0	0	2	0	0	0	0	0	0	0	0	0	Total
0	0	0	0	0	0	0	0	0	0	0	0	0	12:00 PM
0	0	0	0	0	0	0	0	0	0	0	0	0	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	О	0	Q	О	0	0	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	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
2	0	0	2	0	0	0	0]	0	0	0	0	0	Grand Total
	0	0	100	0	0	0	0	0	0	0	0	0	Apprch %
	0	0	100	0	0	0	0 1	0	0	0	0	0	Total %

N/S Street: Summer Street E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA

Weather : Clear

File Name : 728100S9 Site Code : 72810009 Start Date : 6/18/2016

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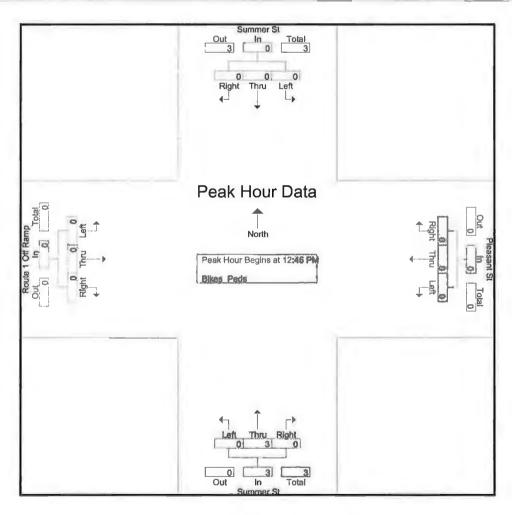
								Groups	Printed	- Bikes	Peds								
			ner St North	Ţ		Pleas:				Sumn From	ner St		Ro	oute 1 (From	Off Ram	р			
Start Time	Left	Thru	Right	Peds	Left	Thru		Peds	Left	Thru	Right	Peds	Left		Right	Peds	Exclu. Total	Inclu Tolal	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
11:15 AM	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	.0	0	0	0	2	0	0	0	0	0	0	0	2	2
12:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
12:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	1	0	1-	0	0	0	0	0	٥	1	1	2
Total	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	3	2	5
01:00 PM	0	0	0	0	0	0	0	0 [0	0	0	О	0	0	0	0	0	0	.0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2
01:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
Total	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	2	4
Grand Total	0	0	0	0	0	0	0	5	0	6	0	0	0	0	0	0	5	6	11
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		45.5	54.5	

N/S Street : Summer Street

E/W Street: Pleasant St / Route 1 Off City/State: Newburyport, MA
Weather: Clear

File Name * 728100S9 Site Code ... 72810009 Start Date :: 6/18/2016 Page No : 11

		Sum	mer St			Pleas	ant St			Sumi	mer St		-	Route 1	Off Ram	пр	
		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 1	App. Total	Int. Tota
Peak Hour Analys	sis From	11:00 /	AM to 01		eak 1 of	1		L. COM.									
Peak Hour for En	tire Inter	section	Begins a	at 12:45 PM													
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(
01:30 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



S Street: Site Driveway W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/27/2
Page No : 1

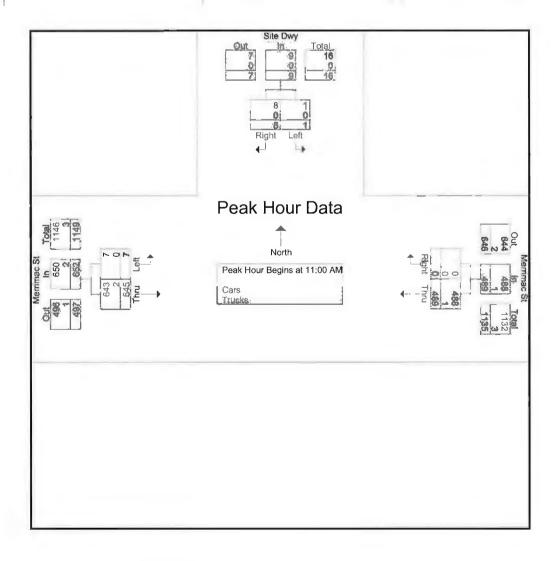
		Groups .	Printed- Cars - True	ks			
	Site Dwy		Merrimac St		Merrimac S	t	
Start Time	From North	Disht	From East Thru	Diaht:	From West Left	Thru	int. Tot
	Left _	Right		Right			
11:00 AM	0	2	136	0	4	164	3(
11:15 AM	0	5	111	0	1	156	27
11:30 AM	1	1	126	0	2	156	28
11:45 AM	0	0	116	0	0	169	28
Total	1	8	489	0	7	645	11!
12:00 PM	0	1	117	1	2	147	26
12:15 PM	0	2	115	0	1	163	28
12:30 PM	0	4	114	1	0	123	24
12:45 PM	1	4	142	1	3	141	29
Total	1	11	488	3	6	574	108
01:00 PM	0	1	100	0	1	170	27
01:15 PM	1	2	114	0	4	142	26
01:30 PM	0	1,	143	1 1	1	134	28
01:45 PM	1	3	162	1	1	134	30
Total	2	7	519	2	7	580	11.
Grand Total	4	26	1496	5	20	1799	33!
Apprch %	13.3	86.7	99.7	0.3	1.1	98.9	
Total %	0.1	0.8	44.7	0.1	0.6	53.7	
Cars	4	26	1492	5	20	1793	334
% Cars	100	100	99.7	100	100	99.7	99
Trucks	0	0	4	0	0	6	
% Trucks	0	0	0.3	0	0	0.3	0
/6 TIUCKS	U	o	0.0	١	U	0.0	U

S Street: Site Driveway
W Street: Merrimac Street
y/State: Newburyport, MA

eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/27/2 Page No : 2

		Site Dwy		1	Merrimac St		N	derrimac St		
		From North			From East			From West		
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
ak Hour Analysis From 11	1:00 AM to 0	1:45 PM - F	Peak 1 of 1	_						
ak Hour for Entire Interse	ction Begins	at 11:00 A	M							
11:00 AM	0	2	2	136	0	136	4	164	168	30
11:15 AM	0	5	5	111	0	111	1	156	157	27
11:30 AM	1	1	2	126	0	126	2	156	158	28
11:45 AM	0	0	0	116	0	116	0	169	169	28
Total Volume	1	8	9	489	0	489	7	645	652	115
% App. Total	11.1	88.9		100	0		1.1	98.9		
PHF	.250	.400	.450	.899	.000	,899	.438	.954	.964	,94
Cars	1	8	9	488	0	488	7	643	650	114
% Cars	100	100	100	99.8	0	99.8	100	99.7	99.7	99
Trucks	0	0	0	1	0	1	0	2	2	
% Trucks	0	0	0	0.2	0	0,2	0	0.3	0.3	0



S Street : Site Driveway
W Street : Merrimac Street
y/State : Newburyport, MA
eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/27/2 Page No : 4

				ps Printed- Cars	Grou		
		Merrimac St		Merrimac St		Site Dwy	
		From West		From East		From North	
Int. Tof	Thru	Left	Right	Thru	Right	Left	Start Time
3(163	4	0	136	2	0	11:00 AM
2,	156	1	0	110	5	0	11:15 AM
28	156	2	0	126	1	1	11:30 AM
28	168	0	0	116	0	0	11:45 AM
114	643	7	0	488	8	1	Total
26	146	2	1	117	1	0	12:00 PM
28	162	1	0	115	2	0	12:15 PM
24	123	0	1	113	4	0	12:30 PM
29	141	3	1	141	4	1	12:45 PM
107	572	6	3	486	11	1	Total
27	169	1	0	100	1	0	01:00 PM
26	142	4	0	114	2	1	01:15 PM
27	133	1	1	142	1	0	01:30 PM
30	134	1	1	162	3	1	01:45 PM
11*	578	7	2	518	7	2	Total
334	1793	20	5	1492	26	4	Grand Total
	98.9	1.1	0.3	99.7	86.7	13.3	Apprch %
	53.7	0.6	0.1	44.7	8,0	0.1	Total %

S Street: Site Driveway
W Street: Merrimac Street y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/27/2

Page No : 7

	1	Merrimac St		<u>Printed- Trucks</u> Merrimac St		Site Dwy	
	-	From West		From East		From North	
Int. 1	Thru	Left	Right	Thru	Right	Left	Start Time
	1	0	0	0	0	0	11:00 AM
	0	0	0	1	0	0	11:15 AM
	0	0	0	0	0 ;	0	11:30 AM
	1	0	0	0	0	0	11:45 AM
	2	0	0	1	0	0	Total
	1	0	0	0	0	0	12:00 PM
	1	0	0	0	0	0	12:15 PM
	0	0	0	1	0	0	12:30 PM
	0	0	0	1	0	0	12:45 PM
	2	0	0	2	0	0	Total
	1	0	0	0	0	0	01:00 PM
	0	0	0	0	0	0	01:15 PM
	1	0	0	1	0	0	01:30 PM
	0	0	0	0	0	0	01:45 PM
	2	0	0	1	0	0	Total
	6	0	0	4	0	0	Grand Total
	100	0	0	100	0	0	Apprch %
	60	0	0	40	0	0	Total %

S Street: Site Driveway
W Street: Merrimac Street
y/State: Newburyport, MA

Grand Total

Apprch %

Total %

6.5

95.2

43.5

4.8

2,2

47.8

72.8

27.2

eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/27/2 Page No : 10

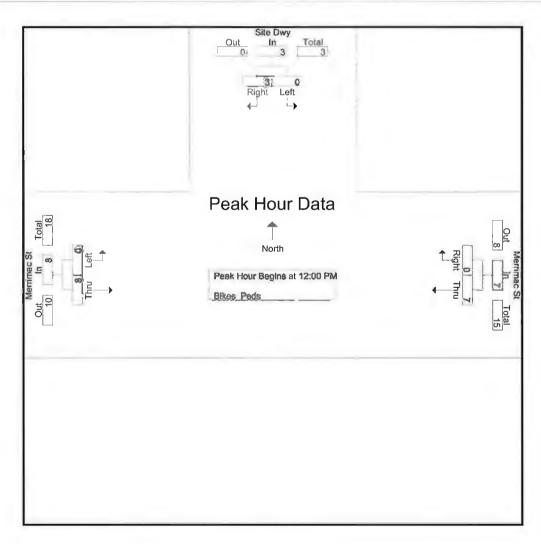
Groups Printed-Bikes Peds Site Dwy Merrimac St Merrimac St From North From East From West Thru Exclu. Total Inclu. Total Start Time Left Right ! Peds Thru Right Peds Left Peds Int. Tot 11:00 AM 11:15 AM 11:30 AM 11:45 AM £ Total 12:00 PM 12:15 PM 12:30 PM 12:45 PM Total 01:00 PM 01:15 PM 01:30 PM 01:45 PM Total

S Street: Site Driveway W Street: Merrimac Street :y/State: Newburyport, MA

eather : Clear

File Name : 72810 Site Code : 72810 Start Date : 8/27/2 Page No : 11

		Site Dwy 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. To
ak Hour Analysis From 11	:00 AM to 0	1:45 PM - F	Peak 1 of 1						· · · · · · · · · · · · · · · · · · ·	
ak Hour for Entire Intersec	ction Begins	at 12:00 P	М							
12:00 PM	0	0	0	3	0	3	0	3	3	
12:15 PM	0	0	0	2	0	2	0	2	2	
12:30 PM	0	3	3	2	0	2	0	0	0	
12:45 PM	0	0	0	0	0	0	0	3	3	
Total Volume	0	3	3	7	0	7	0	8	8	
% App. Total	0	100		100	0		0	100		
PHF	.000	.250	.250	.583	.000	.583	.000	.667	.667	.75



N/S Street: Site Driveway E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

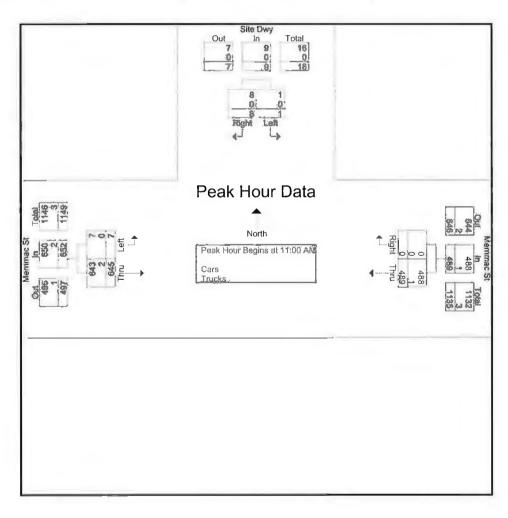
File Name * 72810S11

		Merrimac St		Merrimac St		Site Dwy	
		From West		From East		From North	
Int. Tota	Thru	Left !	Right	Thru	Right	Left:	Start Time
306	164	4	0	136	2	0	11:00 AM
273	156	1	0	111	5	0	11:15 AM
286	156	2	0	126	1	1	11:30 AM
28	169	0	0	116	0	0	11:45 AM
1150	645	7	0	489	8	1	Total
268	147	2	1	117	1	O	12:00 PM
28	163	1	0	115	2	0	12:15 PM
242	123	0	1	114	4	0	12:30 PM
292	141	3	1	142	4	1	12:45 PM
1083	574	6	3	488	11	1	Total
272	170	1	0	100	1	0	01:00 PM
263	142	4	0	114	2	1	01:15 PM
280	134	1	1	143	1	0	01:30 PM
302	134	1	1	162	3	1	01:45 PM
111	580	7	2	519	7	2	Total
3350	1799	20	5	1496	26	4	Grand Total
	98.9	1.1	0.3	99.7	86.7	13.3	Apprch %
	53.7	0.6	0.1	44.7	0.8	0.1	Total %
3340	1793	20	5	1492	26	4	Cars
99.	99.7	100	100	99.7	100	100	% Cars
10	6	0	0	4	0	0	Trucks
0.3	0.3	0	0	0.3	0	0	% Trucks

N/S Street: Site Driveway E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name 72810S11 Site Code : 72810011 Start Date : 8/27/2016 Page No : 2

		Site Dwy 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. Tota
Peak Hour Analysis From 11	1:00 AM to 0	1:45 PM - F	Peak 1 of 1				-	propriessor, design		
Peak Hour for Entire Interse	ction Begins	at 11:00 A	M							
11:00 AM	0	2	2	136	0	136	4	164	168	306
11;15 AM	0	5	5	111	0	111	1	156	157 ;	273
11;30 AM	1	1	2	126	0	126	2	156	158 .	286
11:45 AM	0	0	0	116	0	116	0	169	169 ;	285
Total Volume	1	8	9	489	0	489	7	645	652	1150
% App. Total	11.1	88.9	1	100	0		1,1	98.9	1	
PHF	,250	,400	.450 (.899	.000	.899	.438	.954	.964	.940
Cars	1	8	9	488	0	488	7	643	650	1147
% Cars	100	100	100	99.8	0	99.8	100	99.7	99.7	99.7
Trucks	0	0	0	1	0	1	0	2	2	3
% Trucks	0	0	0	0.2	0	0.2	0	0.3	0.3	0.3



N/S Street: Site Driveway
E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name: 72810S11 Site Code : 72810011 Start Date : 8/27/2016

Page No : 4

		Gro	ups Printed- Cars				
	Site Dwy		Merrimac S		Merrimac S		
Start Time	From North Left	Right	From East Thru	Right	From West	Thru	Int. Total
11:00 AM			136	0	4	163	305
11:00 AM	0	2	136	U	4	163 [305
11:15 AM	0	5	110	0	1	156	272
11:30 AM	1	1	126	0	2	156	286
11:45 AM	0	0	116	0	0	168	284
Total	1	8	488	0	7	643	1147
12:00 PM	0	1	117	1	2	146	267
12:15 PM	0	2	115	0	1	162	280
12:30 PM	0	4	113	1	0	123	241
12:45 PM	1	4	141	1	3	141	291
Total	4	11	486	3	6	572	1079
01:00 PM	0	1	100	o	1	169	27
01:15 PM	1	2	114	0	4	142	263
01:30 PM	0	1 !	142	1	1	133	278
01:45 PM	1	3	162	1	1	134	302
Total	2	7	518	2	7	578	1114
Grand Total	4	26	1492	5	20	1793	3340

99.7

44.7

86.7

8.0

13.3

0.1

Apprch %

Total %

0.3

0.1

98.9

53.7

1.1

0.6

N/S Street: Site Driveway E/W Street: Merrimac Street
City/State: Newburyport, MA
Weather: Clear

File Name: 72810S11 Site Code : 72810011 Start Date : 8/27/2016 Page No : 7

		34		s Printed- Trucks	Oroug	01. 7	
		Merrimac St		Merrimac St		Site Dwy	
Int. Tota	Thru	From West	Right	From East	Right	From North	Start Time
	1	0	0	0	0	0	11:00 AM
	0	0	0	1	0	0	11:15 AM
	0	0	0	0	0	0	11:30 AM
	1	0	0	0	0	0	11:45 AM
	2	0	0	1	0	0	Total
	1	0	0	0	0	0	12:00 PM
	1	0	0	0	0	0	12:1 5 PM
	0	0	0	1	0	0	1 2:30 PM
	0	0	0	1	0	0	1 2;45 PM
	2	0	0	2	0	0	Total
	1	0	0	0	0	0	01:00 PM
	0	0	0	0	0	0	01:15 PM
	1	0	0	1	0	0	01:30 PM
	0	0	0	0	0	0	01:45 PM
	2	0	0	1	0	0	Total
1	6	0	0	4	0	0	Grand Total
	100	0	0	100	О	0	Apprch %
	60	0	0	40	0	0	Total %

N/S Street: Site Driveway E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

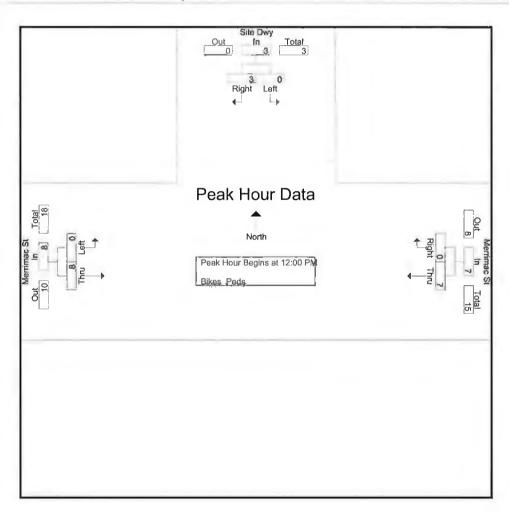
File Name: 72810S11 Site Code : 72810011 Start Date : 8/27/2016 Page No : 10

						ted-Bikes I				n. 1	_	
				errimac St			rrimac St			Site Dwy		
Int. Tot	Inclu. Total	Exclu. Total	Peds	rom West_	Left	Peds	om East Right	Thru	Peds	rom North Right	Left	Start Time
1	4	15	0	3	0	0	0	1	15	0	0	11:00 AM
1	3	7	0	2	0	3	0	1	4	0	0	11:15 AM
1	5	9	0	3	0	0	0	2	9	0	0	11:30 AM
1	1	10	0	0	0	0	0	1	10	0	0	11:45 AM
5	13	41	0	8	0	3	0	5	38	0	0	Total
1	6	11	0	3	0	0	0	3	11	0	0	12:00 PM
1	4	9	0	2	0	0	0	2	9	0	0	12:15 PM
1	5	12	0	0	0	0	0	2	12	3	0	12:30 PM
1	3	9	0	3	0	0	0	0	9	0	0	12:45 PM
5	18	41	0	8	0	0	0	7	41	3	0	Total
1	1	13	0	0	0	o	0	1	13	0	0	01:00 PM
1	7	9	1.	1	0	0	0	6	8	0	0	01:15 PM
1	2	10	0	1	0	0	0	1	10	0	0	01:30 PM
1	5	9	0	4	0	0	1	0	9	0	0	01:45 PM
5	15	41	1	6	0	0	1	8	40	0	0	Total
16	46	123	1	22	0	3	1	20	119	3	0	Grand Total
				100	0		4.8	95.2		100	0	Apprch %
	27.2	72.8		47.8	0		2.2	43.5		6.5	0	Total %

N/S Street: Site Driveway E/W Street : Merrimac Street City/State : Newburyport, MA Weather : Clear

File Name 72810S11 Site Code . 72810011 Start Date 8/27/2016 Page No - 11

		Site Dwy			Merrimac St			Merrimac St		
1		From North			From East			From West		
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru:	App. Total	Int. Total
Peak Hour Analysis From 11	1:00 AM to 0	1:45 PM - F	Peak 1 of 1							
Peak Hour for Entire Interse	ction Begins	at 12:00 PI	М							
12:00 PM	0	0	0	3	0	3	0	3	3	6
12:15 PM	0	0	0	2	0	2	0	2	2	4
12:30 PM	0	3	3	2	0	2	0	0	0	5
12:45 PM	0	0	0	0	0	0	0	3	3	3
Total Volume	0	3	3	7	0	7	0	8	8	18
% App. Total	0	100		100	0	i	0	100		
PHF	.000	.250	.250	,583	.000	.583	.000	.667	.667	.750



S Street : Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA

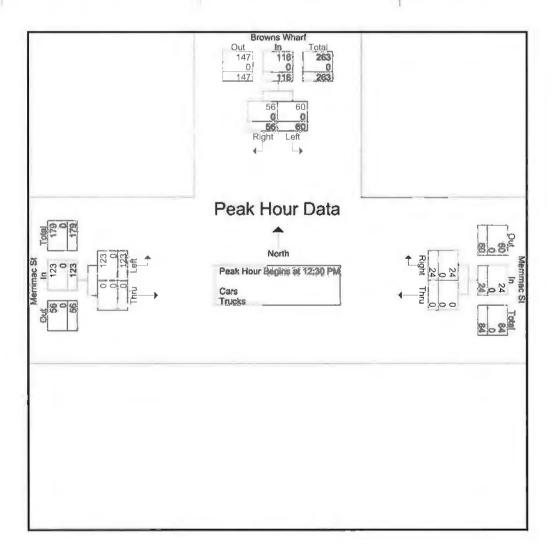
File Name: 72810 Site Code : 72810 Start Date : 6/18/2
Page No : 1

		Merrimac St From West		Merrimac St From East		Browns What From North	
Int. To	Thru	Left	Right	Thru	Right	Left	Start Time
	0	18	3	0	7	6	11:00 AM
	0	24	5	0	2	11	11:15 AM
	0	18	12	0	10	8	11:30 AM
	0	26	5	0	8	5	11:45 AM
1	0	86	25	0	27	30	Total
	0	31	4	0	10	9	12:00 PM
	0	25	10	0	10	6	12:15 PM
	0	26	6	0	17	7	12:30 PM
	o ¹	36	8	0	16	18	12:45 PM
2	0	118	28	0	53	40	Total
	0	31	4	0	12	20	01:00 PM
	0	30	6	0	11	15	01:15 PM
	0	17	6	0	10	16	01:30 PM
	o ⁱ	25	4	0	14	11	01:45 PM
2	0	103	20	0	47	62	Total
6	0	307	73	0	127	132	Grand Total
	0	100	100	0	49	51	Apprch %
	0	48	11.4	0	19.9	20.7	Total %
6	0	307	73	0	127	132	Cars
1	0	100	100	0	100	100	% Cars
	0	0	0	0	0	0	Trucks
	0	0	0	0	0	0	% Trucks

S Street : Browns Wharf W Street: Merrimac Street ry/State: Newburyport, MA eather: Clear

File Name ; 72810 Site Code : 72810 Start Date : 6/18/2 Page No . 2

	Ві	rowns Whar	f	1	Merrimac St		ין	Merrimac St		
4		From North			From East			From West		
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Tot
ak Hour Analysis From 1	1:00 AM to 0	1:45 PM - F	eak 1 of 1							
ak Hour for Entire Interse	ction Begins	at 12:30 PI	М							
12:30 PM	7	17	24	0	6	6	26	0	26	5
12:45 PM	18	16	34	0	8	8	36	0	36	7
01:00 PM	20	12	32	0	4	4	31	0	31	ε
01:15 PM	15	11	26	0	6	6	30	0	30	E
Total Volume	60	56	116	0	24	24	123	0	123	26
% App. Total	51.7	48.3		0	100	1	100	0		
PHF	.750	.824	.853	.000	.750	.750	.854	.000	.854	.84
Cars	60	56	116	0	24	24	123	0	123	26
% Cars	100	100	100	0	100	100	100	0	100	10
Trucks	0	0	0	0	0	0	0	0	0	
% Trucks	0	0	0	0	0	0	0	0	0	



S Street : Browns Wharf W Street: Merrimac Street
y/State: Newburyport, MA
eather: Clear

File Name = 72810 Site Code = 72810 Start Date = 6/18/2 Page No = 4

				os Printed- Cars	Grou		
		Merrimac St		Merrimac St	rf	Browns What	
Int. Tol	Thru	From West Left	Right	From East Thru	Right	From North Left	Start Time
72.22 2.24	0	18	3	0	7	6	11:00 AM
	0	24	5	0	2	11	11:15 AM
4	0	18	12	0	10	8	11:30 AM
4	0	26	5	0	8	5	11:45 AM
16	0	86	25	0	27	30	Total
ī	0	31	4	0	10	9	12:00 PM
	0	25	10	0	10	6	12:15 PM
í	0	26	6	0	17	7	12:30 PM
*	0	36	8	0	16	18	12:45 PM
23	0	118	28	0	53	40	Total
(О	31	4	0	12	20	01:00 PM
•	0	30	6	0	11	15	01:15 PM
4	0	17	6	0	10	16	01:30 PM
	0	25	4	0	14	11	01:45 PM
23	0	103	20	0	47	62	Total
65	0	307	73	0	127	132	Grand Total
	0	100	100	0	49	51	Apprch %
	o l	48	11.4	0	19.9	20.7	Total %

S Street: Browns Wharf W Street: Merrimac Street :y/State: Newburyport, MA eather: Clear

Total %

File Name : 72810 Site Code # 72810 Start Date # 6/18/2 Page No # 7

		Sign	s Printed- Trucks				
·	Browns Wha From North	rf i	Merrimac S From East	it	Merrimac S From West	1	
Start Time	Left I	Right	Thru	Right	Left	Thru	Int. To
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	0	
Total	0	0	0	0	0	0	
12:00 PM	0	0	0	0	0	0	
12:15 PM	0	0	0	0	0	0	
12:30 PM	0	0	0	0	0	О	
12:45 PM	0	0	0	0	0	0	
Total	0	0	0	0	0	0	
01:00 PM	0	0	0	o	0	0	
01:15 PM	0	0	0	0	0	0	
01:30 PM	0	0	0	0	0	0	
01:45 PM	0	0	0	0	0	0	
Total	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	
Apprch %	0	0	0	0	0	0	

S Street: Browns Wharf W Street: Merrimac Street :y/State : Newburyport, MA eather : Clear

File Name : 72810 Site Code : 72810

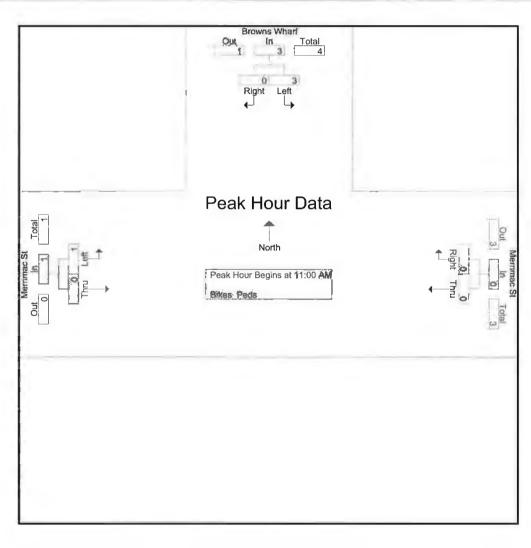
Start Date : 6/18/2 Page No : 10

				rrimac St m West	Fro		rrimac St om East	Fr		wns Wharf om North	Fr	
Int. T	Inclu. Total	Exclu. Total		Thru	Left	Peds	Right	Thru	Peds	Right	Left	Start Time
	0	4	0	0	0	1	0	0	3	0	0	11:00 AM
	1	2	0	0	0	1	0	0	1	0	1	11:15 AM
	1	9	0	0	1	0	0	0	9	0	0	11:30 AM
	2	7	0	0	0	1	0	0	6	0	2	11:45 AM
	4	22	0	0	1	3	0	0	19	0	3	Total
	0	4	0	0	0	0	0	0	4	0	0	12:00 PM
	1	4	0	0	1	1	0	0	3	0	0	12:15 PM
	0	2	0	0	0	0	0	0	2	0	0	12:30 PM
	0	6	0	0	0	2	0	0	4	0	0	12:45 PM
	1	16	0	0	1	3	0	0	13	0	0	Total
	0	5	0	0	0	1	0	0	4	0	0	01:00 PM
	1	0	0	0	0	0	1	0	0	0	0	01:15 PM
	0	2	0	0	0	2	0	0	0	0	0	01:30 PM
	0	3	0	0	0	0 =	0	0	3	0	0	01:45 PM
	1	10	0	0	0	3	1	0	7	0	0	Total
	6	48	0	0	2	9	1	0	39	0	3	Grand Total
				0	100		100	0		0	100	Apprch %
	11.1	88.9		0	33.3		16.7	0		0	50	Total %

S Street : Browns Wharf W Street: Merrimac Street y/State: Newburyport, MA eather: Clear

File Name : 72810 Site Code: 72810 Start Date : 6/18/2
Page No : 11

		owns Whai rom 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
ak Hour Analysis From 11	1:00 AM to 0	1:45 PM - F	Peak 1 of 1							
ak Hour for Entire Interse	ction Begins	at 11:00 A	М							
11:00 AM	0	0	0	0	0	0	0	0	0	
11:15 AM	1	0	1	0	0	0	0	0	0 -	
11:30 AM	0	0	0	0	0	0	1	0	1 =	
11:45 AM	2	0	2	0	0	0	0	0	0	
Total Volume	3	0	3	0	0	0	1	0	1	
% App. Total	100	0		0	0		100	0		
PHF	.375	.000	.375	.000	.000	.000	.250	.000	.250	.50





Massachusetts Highway Department 5258: Monthly Hourly Volume for June 2015

Location ID: 5258
County: ESSEX

Daily Factor Group:
Axle Factor Group: R1

R1

Funcation Class 1

Growth Factor Group:

Seasonal Factor Group:

Location: INTERSTATE 95

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL
1	310	211	191	302	809	2807	3809	4752	4202	3337	3320	3446	3423	3271	3669	4442	4732	5221	3637	2466	1577	1290	738	539	62501
2	349	213	200	290	731	2535	3594	4677	4187	3226	3071	3 1 41	3148	3295	3924	4515	5164	5411	3783	2396	1790	1398	967	701	62706
3																									
4	391	283	195	289	765	2660	3 834	4902	4370	3541	3456	3689	3675	3808	4382	5056	5438	5677	4086	3173	2519	1983	1272	813	70257
5	502	302	205	311	710	2429	3645	4447	4171	3762	4033	4348	4615	4973	5413	5989	6517	6344	5077	4085	2894	2146	164 9	1151	79718
6	659	407	228	182	321	782	1550	2551	3317	4333	5087	5352	5489	5162	5124	4857	4746	4403	3626	3056	2828	2432	1808	1155	69455
7	653	427	235	180	209	456	925	1465	2344	3488	4728	5594	5693	5558	5689	5715	5689	5444	4899	3970	3174	2026	1126	623	70310
8	370	236	221	321	922	3000	4089	4883	4398	3568	3649	3657	3475	3874	4005	4725	5122	5387	3855	2602	1872	1284	883	594	66992
9	393	279	245	295	774	2745	3849	4796	4406	3535	3335	3381	3415	3414	4039	4692	5006	5438	3967	2480	1896	1457	1000	638	65475
10	381	282	187	299	790	2676	3893	4627	4510	3670	3 7 27	3688	3484	3648	4234	5053	5442	5581	4085	2876	2259	1786	1143	703	69024
11	442	248	227	270	774	2696	37 57	4773	4477	3702	3835	3703	3811	4099	4550	5321	5662	5860	4252	3318	2599	2017	1345	787	72525
12	559	317	218	321	734	2452	3721	4719	4152	3941	4517	4761	4811	5235	5595	6362	6715	6581	5233	4048	3283	2325	1699	1339	83638
13	764	443	246	204	348	790	1636	2783	3872	4707	5564	5698	5485	5113	4999	5010	4953	4902	4105	3400	2817	2305	1817	1231	73192
14	763	512	253	201	258	489	1048	1744	2699	4036	5461	6068	6138	5803	5680	5615	5748	5969	5753	4662	3599	2342	1289	745	76875
15	390	286	177	305	871	2850	3898	4490	4582	3403	3539	3865	3758	3663	3994	4595	4920	5396	3740	2640	1860	1325	990	678	66215
16	395	248	204	310	765	2755	3841	4768	4332	3483	3625	3577	3421	3660	4166	4860	5238	5503	3929	2807	2073	1526	1025	761	672 7 2
17	405	245	213	292	801	2759	3852	4829	4335	3568	3764	3743	3590	3748	4254	4932	5576	5803	4152	3164	2325	1811	1316	749	70226
18	458	276	199	288	810	2705	3819	4854	4391	3730	3892	4037	3888	4003	4523	5233	5695	5794	4417	3280	2467	2055	1278	864	72956
19	5 25	293	245	288	714	2311	3484	4550	4265	3831	4461	4849	4767	4966	5663	6319	6626	6411	5563	4453	3249	2388	1649	1085	82955
20	735	413	252	249	373	849	1627	2547	3591	4894	5689	5794	5448	5373	5423	4950	5079	4740	4182	3630	2890	2507	2023	1286	74544
21	675	389	225	194	215	369	663	1123	1845	2979	4511	5785	5896	5792	5891	6 1 31	6010	5229	4182	3751	3136	2079	1189	625	68884
22	359	202	178	284	816	2994	4043	5025	4412	3651	4042	4336	4091	4082	4372	5119	5349	5752	4154	2842	2200	1636	1134	638	71711
23	379	242	218	314	7 75	2788	3861	4808	4378	3681	3673	3855	3698	3829	4264	4878	5394	5326	3570	2635	1966	1506	1126	1022	68186
24	612	266	227	310	814	2732	3889	4837	4523	4022	4165	4267	3902	4147	4557	5381	5914	6008	4494	3241	2653	1937	1557	1111	75566
25	627	286	235	326	783	2699	3809	4708	4355	4069	4383	4583	4587	4531	5103	5579	5972	5994	4920	3826	3035	2319	1478	945	79152
26	720	380	275	292	740	2310	3476	4497	4270	4245	4745	5328	5404	5526	5836	6395	6561	6630	5319	4561	3383	2418	1716	1280	86307
27	656	422	228	247	365	889	1627	2638	3831	4927	5875	6304	5927	5622	5507	5445	5254	5171	4271	3475	2980	2596	1876	1235	77368
28	726	443	226	192	208	356	688	994	1706	2800	4252	5541	6073	5799	5669	5620	5521	5171	4050	3061	2274	1717	1065	686	64838
29	325	226	188	345	859	2884	3881	4608	4332	3789	4219	4383	4268	4085	4594	5153	5510	5820	4061	2950	2201	1679	1115	718	72193
30	393	222	233	304	773	2653	3650	4604	4387	3989	4240	4334	4116	4114	4647	5181	5476	6009	4634	3396	2517	1996	1306	799	73973

Average = 70086.66

Yearly Average = 67,000

67000/70087 = 0.95

Massachusetts Highway Department 5258: Monthly Hourly Volume for August 2015

R1

Location ID: 5258 Seasonal Factor Group:

County: ESSEX Daily Factor Group:

Funcation I Class 1 Axle Factor Group: R1

Location: INTERSTATE 95 Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL
1	802	498	282	244	384	833	1819	3016	4868	6995	6899	7 3 48	7032	6041	5944	5895	5668	5200	4816	4391	3618	2991	2459	1825	89868
2	828	527	245	202	288	491	1042	1747	3336	5302	6957	7 16 5	6699	6485	6292	6004	6097	5797	5698	5425	5242	4979	2478	1029	90295
3																									
4	407	247	187	311	730	2529	3582	4601	4352	3909	4395	4445	4405	4343	4715	5266	5502	5692	4322	2992	2220	1779	1195	804	72930
5	533	308	233	187	865	2471	3578	4589	4578	4335	4701	4772	4445	4360	5045	5442	5885	6092	4670	3564	2 758	2124	1499	845	77879
6	468	291	248	305	778	2402	9562	4670	4584	4381	4947	5046	4769	4964	5486	6025	6292	6359	4961	3897	3004	2270	1481	1182	82372
7	668	401	295	296	742	2131	3383	4455	4566	4699	5576	5778	5838	6078	6030	6489	7020	6731	5505	4867	3648	2759	1804	1363	91122
8	894	451	228	232	366	776	1647	2969	4578	5878	6740	6967	6569	6388	6086	5728	5491	5238	4507	3926	3225	2932	2303	1880	85999
9	870	454	245	186	243	462	972	1497	27 1 0	4148	5963	6708	6762	6564	6439	6272	5874	5780	5364	5017	4208	3190	1835	1148	82911
10	509	283	199	321	865	2761	4032	4910	4419	4299	4972	5080	5038	4904	5170	5648	5984	6285	4526	3342	2671	1902	1136	640	79896
11	380	235	205	326	753	24 3 7	3681	4617	4324	3926	3881	4 19 5	4327	4271	4552	4991	5306	5579	3751	2596	2030	1477	1075	619	69534
12	369	232	228	299	766	2504	3693	4600	4562	4270	4648	4716	4536	4459	4820	5253	5835	6140	4668	3724	2769	2018	1514	866	77489
13	496	309	228	300	810	2480	3660	4664	4568	4486	4751	4748	5215	5114	5352	\$853	6524	6552	5143	4115	3258	2439	1634	1160	83859
14	731	390	235	305	764	2 1 74	3364	4537	4648	4920	5471	5997	6118	6271	6516	6831	7219	7251	6016	5155	3894	2814	1801	1368	94790
15	834	458	231	251	407	776	1694	2952	4439	6217	6963	6613	6783	5442	6177	5912	5894	5428	4682	3798	3177	2548	1993	1448	86117
16	835	560	304	252	278	470	991	1841	3216	5141	6964	7240	6879	6638	6492	6037	5901	5815	5591	5516	5434	4348	2143	1047	89933
17	499	285	178	343	919	2754	4005	4927	4811	4595	5249	5286	5005	4749	4973	5501	6245	6383	467 6	3343	2766	1936	1265	854	81547
18	421	276	240	291	817	2444	3741	4838	4585	4207	4588	4742	4519	4482	4991	5351	5835	6264	4566	3133	2515	1794	1364	1010	77014
19	461	269	243	289	786	2409	3650	4714	4455	4396	4847	4757	4657	4585	5042	5650	5983	6321	4866	3384	2781	2096	1595	1074	79310
20	490	273	221	313	785	2370	3531	4664	4612	4346	4926	5286	5012	4659	5031	5899	6371	6541	4958	3903	3031	2192	1604	1063	82081
21	549	336	336	355	721	2025	3274	4216	3948	3935	4659	5619	5650	5882	5910	6490	6705	6637	5269	4048	3406	2266	1560	1241	85037
22	628	395	243	195	375	714	1419	2519	3741	5228	6227	6974	6456	6487	5982	5755	5287	4948	3994	3277	2814	2470	1827	1486	79441
23	993	63 9	317	190	229	459	886	1360	2343	3668	5517	6434	6323	6085	5882	5755	5825	5903	5537	4929	3389	2201	1282	771	76917
24	466	278	189	315	877	2652	3822	4724	4456	4008	4621	4994	4750	4555	4812	5287	5550	5722	4234	2894	2399	1620	1114	639	74978
25	379	249	204	281	734	2379	3 569	4704	4387	3808	4006	4319	4120	4199	4773	5300	5592	5804	4340	2913	2246	1589	973	650	71518
26	323	245	200	285	771	2342	3598	4724	4359	4041	4629	4737	4460	4368	4777	5522	5893	5947	4564	3529	2755	1869	1942	735	76015
27	417	261	208	283	738	2317	3715	4679	4514	4157	4719	4920	4759	4655	5216	5828	6018	6343	4907	3826	2998	2221	1364	817	79880
28	444	269	208	270	680	2075	3314	4387	4545	4749	5616	5879	5843	6028	6331	6823	7022	6899	5635	4440	3371	2385	1545	1188	89946
29	807	627	303	198	334	728	1508	2505	4173	5773	6375	6630	6182	5772	5643	5459	5317	5116	4370	3679	3468	2581	2072	1298	80918
30	795	597	281	197	240	441	829	1541	2850	4355	5939	6677	6410	6228	5998	5841	5852	5796	5666	5205	4136	2776	1479	855	80984
31	428	247	193	314	853	2681	3923	4936	4472	4025	4263	4413	4401	4276	4709	5348	5799	5770	4150	2939	2273	1489	911	734	73547

Average = 75465 47

Yearly Average = 67,000

67C0C/75466 = 0.89

Massachusetts Highway Department 5258: Monthly Hourly Volume for September 2015

Location ID: 5258 Seasonal Factor Group: R1

County: ESSEX Daily Factor Group:

FuncationI Class 1 Axle Factor Group: R1

Location: INTERSTATE 95 Growth Factor Group:

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	TOTAL
1	471	223	206	307	756	2530	3806	4827	4391	3648	3803	3943	3833	3732	4394	5040	5548	5613	4035	2845	2088	1575	1092	755	69461
2	308	198	174	309	754	2425	3857	4843	4396	3876	3927	4006	3797	4026	4328	5235	5519	5692	4199	3099	2428	1837	1176	689	71098
3	330	236	217	312	750	2478	3818	4810	4450	3821	4171	4125	4165	4367	4796	5570	6023	6433	4850	3832	2994	2098	1255	876	76777
4	688	320	252	312	762	2032	3319	4237	4278	4330	5136	5830	6010	5906	6108	6408	6462	6364	5356	4498	3823	2619	1706	1215	87971
5	656	385	241	220	305	707	1587	2882	4310	5678	6109	5826	5722	5526	4826	4990	4638	4644	4146	3749	3331	2575	1729	1241	76023
6	587	341	190	159	187	401	830	1476	2886	4604	5929	6368	5773	5487	5240	5174	5119	5449	5163	4871	4418	3310	2118	1151	77231
7	582	298	217	188	288	504	868	1530	2773	4561	5 75 6	6111	6068	5647	5607	5412	5378	5265	4914	4775	47 9 5	3755	1538	624	77454
8	332	184	182	337	931	3030	4310	5296	4914	4059	4197	4463	4232	4129	4611	5217	5534	5737	3984	2762	1905	1401	944	697	73388
9	419	287	197	298	811	2661	3949	4974	4432	3636	3565	3651	3706	3677	4332	4996	5362	5759	4107	2924	2064	1567	979	725	69078
10																									

Average = 75386.78

Yearly Average = 67,000

67000/75387 = 0.89

6/000//538/ = 0.89



Our Services > Fixed Routes & Schedules > All Routes Listed (New) > Amesbury-Newburyport-Salisbury

Print | Show Print Help



Printable Map PDF (8.66MB)



Effective: October 19, 2015

This route runs Monday - Sunday.

*Bus service Senior Center from High Street.

No Stop Zones:

Exiting Costello Center till Washington St. (Pass Fire House)

Exiting Stop & Shop till 7/11 Convenience Store on Storey Ave. in Newburyport

Exiting Hertiage House (OB & IB) on Low St. to Pond St.

One stop allowed at the CVS beyond crosswalk

Departing CVS stop till Green St.

One stop allowed at Post Office (Blinking Caution Light)

From Post Office till Merrimac St.

One stop allowed across of Waterfront Park (Blue (P) sign on sidewalk)

Merrimac St. till State

One stop allowed after Library at Bus Stop

From State St. till Rte. 1

One stop allowed acrosss of CVS

From CVS on Pond St. till March Rd. (Pass Stripers Grill) OB & IB

Rte. 1 and Elm St. (before set of lights) till Beach Rd. pass Salisbury House of Pizza (OB)

From CVS on Beach Rd. till turning back on Rte. 1 with exception of The Laundromat on Elm St. (IB)

View Inbound/Outbound Map

OUTBOUND SCHEDULE

style=">Bus Lea	ves from	State Stre	et							
11	2	3	4	5	6	7	8	9	10	11
Bus Starts	Bus	Bus	Bus	Bus Leaves from	Bus	Bus	Bus	Bus	Bus	Bus
at Costello	Leaves	Leaves	Leaves	Newburyport	Leaves	Leaves	Leaves	Leaves	Leaves	Ends
Transportation	from	from	from	Senior /	from	from	from	from	from	at
Center	Stop &	Port	Market	Community	Anna	Commuter	Heritage	James	State	Salisbury
	Charac	Diama	Donalous	Comton	Anna anna anna	D-:I	Harres	Character & Atl	Camara	Daniela

	at Costello Transportation Center	Leaves from Stop & Shop	Leaves from Port Plaza	Leaves from Market Basket	Newburyport Senior / Community Center	Leaves from Anna Jacques	Leaves from Commuter Rail	Leaves from Heritage House	Leaves from James Steam Mill	from State Street	Ends at Salisbury Beach
					WEEKD	AYS					
AM	6:23	•	6:28	6:35	_*	-	6:40	6:43	6:48	6:53	7:08
	7:23	7:26	-		·*	-	7:35	7:38	7:43	7:48	8:03
	8:48	8:51	8:59	9:04	9:07	9:11	9:17	9:20	9:25	9:30	9:45
	9:58	10:01	10:09	10:14	10:17	10:21	10:27	10:30	10:35	10:40	10:55
PM	11:08	11:11	11:19	11:24	11:27	11:31	11:37	11:40	11:45	11:50	12:05
	12:18	12:21	12:29	12:34	12:37	12:41	12:47	12:50	12:55	1:00	1:15
	1:28	1:31	1:39	1:44	1:47	1:51	1:57	2:00	2:05	2:10	2:25
	2:38	2:41	2:49	2:54	.*	3:01	3:07	3:10	3:15	3:20	3:35
	3:48	3:51	3:59	4:04	4:07	4:11	4:17	4:20	4:25	4:30	4:45
	4:58	5:01	5:09	5:14	-π	5:21	5:27	5:30	5:35	5:40	5:55
	6:08	6:11	6:19	6:24	**	6:31	6:37	6:40	6:45	6:50	7:05
					SATURDAY/	SUNDAY					
AM	8:48	8:51	8:59	9:04	_m W	9:11	9:17	9:20	9:25	9:30	9:45
	9:58	10:01	10:09	10:14	**	10:21	10:27	10:30	10:35	10:40	10:55
PM	11:08	11:11	11:19	11:24	"W	11:31	11:37	11:40	11:45	11:50	12:05
	12:18	12:21	12:29	12:34	_#	12:41	12:47	12:50	12:55	1:00	1:15
	1:28	1:31	1:39	1:44	_*	1:51	1:57	2:00	2:05	2:10	2:25
	2:38	2:41	2:49	2:54	**	3:01	3:07	3:10	3:15	3:20	3:35
	3:48	3:51	3:59	4:04	_#:	4:11	4:17	4:20	4:25	4:30	4:45

6:08 INBOUND SCHEDULE

4:58

INB	OUND SCH	HEDULE											
	9	10	11	12	13	14	15	16	17	18	19	20	

5:21

5:27

5:30

6:40

5:35

5:40

5:55

7:05

5:14

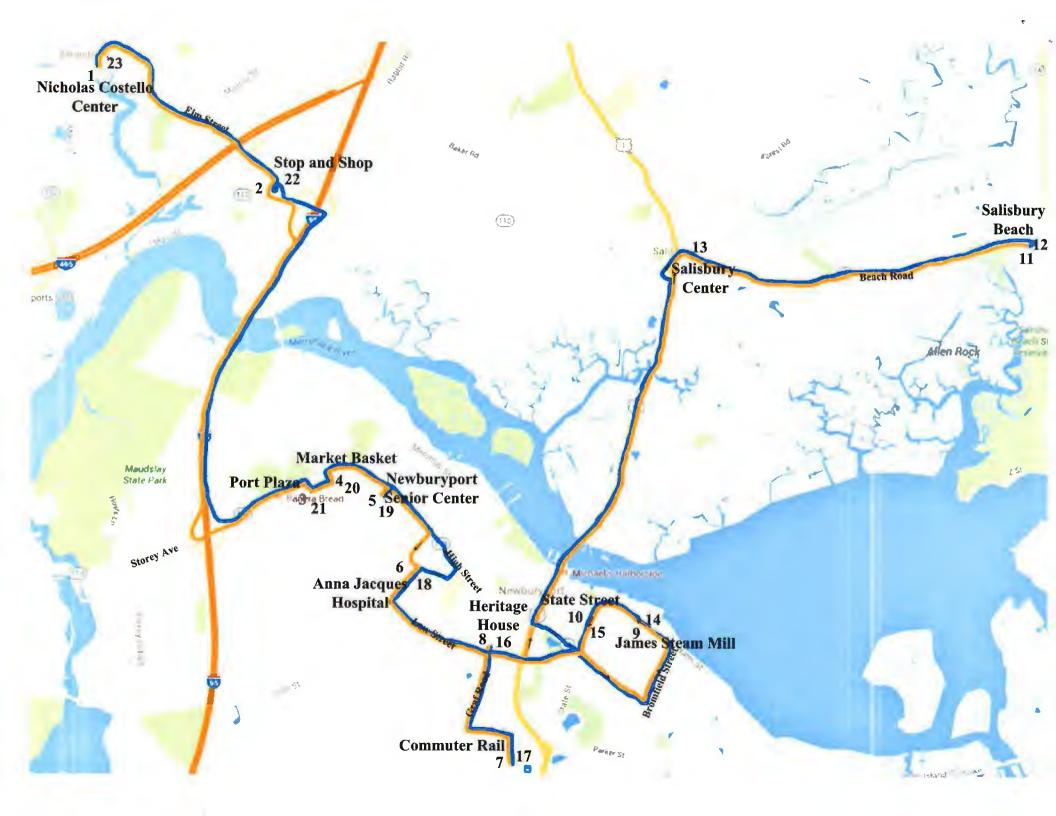
6:24

5:09

6:19

5:01

	Bus Starts at Salisbury Beach	Bus Leaves from Salisbury Center	Bus Leaves from James Steam Mill	Bus Leaves from State Street	from	Bus Leaves from Commuter Rail	Bus Leaves from Anna Jaques	Bus Leaves from Newburyport Senior / Community Center	Leaves from Market	Bus Leaves from Port Plaza	Bus Leaves at Stop and Shop	Bus Ends at Costello Transportation Center	Bus Continue: on as Route:
							WEEKD	AYS					
AM		de .	-#	5:00		5:05	•	•	5:12	5:16	5:21	5:32	51
	6:24	6:30	6:37	6:40	6:50	6:53	6:59	_**	7:06	7:15	7:20	7:22	51
	7:28	7:34	7:41	7:44	7:54	7:57	8:03	**	8:10	8:19	8:24	8:26	51
	8:23	8:29	8:36	8:39	8:49	8:52	8:58	9:02	9:05	9:14	9:19	9:21	51
	9:54	10:00	10:07	10:10	10:20	10:23	10:29	10:33	10:36	10:45	10:50	10:52	51
PM	11:04	11:10	11:17	11:20	11:30	11:33	11:39	11:43	11:46	11:55	12:00	12:02	51
	12:14	12:20	12:27	12:30	12:40	12:43	12:49	12:53	12:56	1:05	1:10	1:12	51
	1:24	1:30	1:37	1:40	1:50	1:53	1:59	_*	2:06	2:15	2:20	2:22	51
	2:34	2:40	2:47	2:50	3:00	3:03	3:09	3:13	3:16	3:25	3:30	3:32	51
	3:44	3:50	3:57	4:00	4:10	4:13	4:19	4:23	4:26	4:35	4:40	4:42	51
	4:54	5:00	5:07	5:10	5:20	5:23	5:29	, *	5:36	5:45	5:50	5:52	51
	6:04	6:10	6:17	6:20	6:30	6:33	6:39	*	6:46	6:55	7:00	7:02	51
						SAT	URDAY/	SUNDAY					
AM	7:34*	7:40*	7:47*	7:50*	8:00	8:03	8:09	, ti	8:16	8:25	8:30	8:32	51
	8:44	8:50	8:57	9:00	9:10	9:13	9:19	·*	9:26	9:35	9:40	9:42	51
	9:54	10:00	10:07	10:10	10:20	10:23	10:29	**	10:36	10:45	10:50	10:52	51
PM	11:04	11:10	11:17	11:20	11:30	11:33	11:39	_*	11:46	11:55	12:00	12:02	51
	12:14	12:20	12:27	12:30	12:40	12:43	12:49	_*	12:56	1:05	1:10	1:12	51
	1:24	1:30	1:37	1:40	1:50	1:53	1:59	-*	2:06	2:15	2:20	2:22	51
	2:34	2:40	2:47	2:50	3:00	3:03	3:09	"*	3:16	3:25	3:30	3:32	51
	3:44	3:50	3:57	4:00	4:10	4:13	4:19	"*	4:26	4:35	4:40	4:42	51
	4:54	5:00	5:07	5:10	5:20	5:23	5:29	*x	5:36	5:45	5:50	5:52	51
	6:04*	6:10*	6:17*	6:20*	6:30*	6:33*	6:39*	<u>.</u> ₩	6:46*	6:55*	7:00*	7:02*	51



Summer Shuttle Cost

CHARLIE CARD*

Adult	\$1.00
Senior/Disabled/Student	\$0.50

1 DAY PASS

Adult	\$3.00
Senior/Disabled/Student	\$1.50

CASH

Adult	\$1.25
Senior/Disabled/Student	\$0.60

CHILDREN

Ages 5 & under with an adult FREE

*Stored Value is a transfer of cash to a "Charlie Card". Once you store your cash on a Charlie Card, you can TAP and RIDE on any transit system Charlie Cards are accepted (for example: the MBTA or Lowell Regional Transit Authority). A minimum of \$5.00 is required to activate your Charlie Card. Upon activation, when using the Charlie Card, full fare is \$1.00 per person (a cost savings of \$0.25 per trip). If you transfer to Route 54 (the Amesbury/Newburyport/Salisbury Route), a free transfer is automatically added to your card; transfers expire within 90-minutes of the time you board the bus.

Flag Policy

Persons wishing to board the bus must wave to the bus operator as the bus approaches and be on the same side of the street as the bus.

For More Information

PLEASE VISITE

www.cityofnewburyport.com or www.facebook.com/pages/NBPT-Summer-Shuttle/592674390869714









Summer Shuttle











Friday, Saturday & Sunday Service Only - MAY 29 - SEPTEMBER 6, 2015

LEAVES PLUM (SLAND	STATE STREET	COMMUTER RAIL / INDUSTRIAL PARK	STATE STREET	FLUM ISLAND
	4	10:40	10:50	19/00
11/15	11:30	-	•	11.45
11.45	12:00	-		12.15
12/15	12:30	12:40	12:50	1390
115	1:30	-	-	1:48
/1/45	2:00	-	м	205
2.15	2:30	2:40	2:50	3:00
3:15	3:30	-	-	9.45
3/45	4:00	-	-	415
4/(5)	4:30°	4:40	4:50	5:00
8/15	5:30	5:40	5:50	6:00

*FINAL TRAIN TO NORTH STATION - Friday 5:26 p.m. / Weekends 5:34 p.m.

Fare Info > Fixed Routes & Schedules

Charlie Card One Way Fare Information						
Fare						
\$1.00						
\$.50						
\$.50						
\$.50						
\$.50						
\$.50						
Free						
Free						
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The MBTA Charlie Card is also accepted at these fares.

* A valid Medicare card may be used as proof of age to qualify for a half-fare Charlie Card
** A valid Medicare card or Statewide Access Pass may be used as proof of disability

Cash One Way Fare Information					
Туре	Fare				
Full Fare (Adulto)	\$1.25				
Senior Citizens, age 60 & over (Mayores de 60 años o más)*	\$.60				
Transportation Disabled (Discapacitados)**	\$.60				
Passengers with valid Medicare Card (Con Tarjeta de Medicare)**	\$.60				
Students, (Estudiates) ages 13-17	\$.60				
Children, (Niños) 6-12	\$.60				
Children, 5 & under with adult (Niños menos de 5 con un adulto)	Free				
Transfer (Transferencia)	Free				

* A valid Medicare card may be used as proof of age to qualify for half-fare

** A valid Medicare card or Statewide Access Pass may be used as proof of disability

Pass & Fare Information					
Туре	Price				
31 Day Pass Full Fare (Pase para 31 días, Adulto):	\$30.00 Each				
31 Day Pass Half Fare (Pase para 31 días, Mayores de 60 años o Discapacitados:	\$15.00 Each				
*All Day Pass Full Fare (Pase para 31 días, Adulto):	\$3.00 Each				
*All Day Pass Half Fare (Pase para 31 días, Mayores de 60 años o Discapacitados:	\$1.50 Each				

*All-Day Passes allow one passenger unlimited rides for an entire day. When boarding the MVRTA bus simply advise the bus operator that you would like to purchase an All-Day Pass. The All-Day Pass will then be issued directly from the farebox once you deposit the appropriate fare. When using the All-Day Pass you will simply have to swipe the pass through the MVRTA farebox each time you board the bus throughout the day.

*Tickets are not refundable and lost, stolen, or damaged tickets cannot be replaced. Lost, stolen, and damaged Charlie Cards should be reported immediately to preserve as much value as possible. Riders are responsible for fares while lost, stolen, or damaged Charlie Cards issues are resolved.

View "Places to Purchase Passes"

Statewide Transportation Access Pass Application

The Statewide Transportation Access Pass program is a reduced-fare program for Massachusetts

residents who have a disability and use the public transportation system. This pass allows you to pay a reduced fare in your local service area and use other Transit Authority services across the state at a reduced rate.

Forms can be printed out from this link or picked up from our Haverhill or Lawrence Transit Center. Completed forms should be returned to a transit center or mailed to the MVRTA office at:

Merrimack Valley Regional Transit Authority

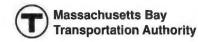
Administration Office

85 Railroad Avenue

Haverhill, MA 01835

For more farebox information click here: English Spanish

NEWBURYPORT/ROCKPORT LINE Train Schedule Effective May 23, 2016





	und to Boston								-	M																PM								
	statum talance		100	150	152	102	154	104	156	106	158	160	192	108	162	110		112 10		168	116	170	118	172	194	120	122	174	176	124	178	126	180	128
	Bikes Alloweri		560	36		=				2.00					9-9	66		රේව ර		940	46	db	бъ	96	de	56	de	50	de	de	de	d=10	\$6	Q.p.
	Rockport		1:55	-		5:48		6:30		7:10		-	-	8:15	4	9:20		1:00	12:30	-	1:50	-	3:22	-	-	5:10	5:45	-	-	7:15	-	8:45	-	10:30
	Sloucester		5:02	-		5:55	-	6:37		7:17	4	-	-	8:22		9:27		11:07	12:37	-	1:57	-	3:29	-	-	5:17	5:52	-	-	7:22	-	8:52	-	10:37
	Nest Gloucester		5:08	-		6:01		6:43		7:23		-	-	8:28		f 9:33		11:13	(12:43		f 2:03		f 3:35				f 5:58			17:28	-	f 8:58		f 10:43
	Manchester		5:15	•		6:08	-	6:50		7:30		-	-	8:35	40	9:40		1:20	12:50		2:10		3:42	de	*	5:30	6:05	*		7:35		9:05		10:50
	Beverly Farms	6	5:22	~		6:15		6:57		7:37		-	-	B:42		f 9:47	T'	11:27	f 12:57	,	f 2:17		f 3:49			f 5:37	f 6:12		-6	f7:42		f 9:12	1	f 10;57
	Prides Crossing			•	-9	f 6:18		f 7:00	-	f 7:40	-	-	-	~ .	4	4	-				4			4				39	ď				-	4
	Montserrat	B	5:30		C 200	6:24		7:06	2.00	7:46	7.00		-	8:51		f 9:55		11:35	f 1:05		f 2:25		f 3:57			15:45	16:20			f 7:50		f 9:20		f 11:05
	Newburyport	6	-	5:20	5:50	-	6:25	-	7:00	-	7:30	7:55	-	- 1	9:15		0:00	- 11;		1:10	-	2:55	-	4:44	0.	4		6:20	7:06		8:10	P	9:25	
	Rowley	6		5:25	5:55	-	6:30	-	7:05	-	7:35	8:00	-	- 1	f 9:20		10:05	- # 91		f 1:15	~	f 3:00		4:49				f 6:25	£ 7:11		f 8:15		f 9:30	- '
	pswich	6	**	5:31	6:02	-	6:37	-	7:12	-	7:42	8:07	-	~	9:26		10:11	- 11:		1:21	-	3:06		4:55			- 10	6:31	7:17		8:21		9:36	-
	femilton/Wenham	9		5:37	6:08	~	6:43	-	7:18	~	7:48	8:13	-	- 1	f 9:32		10:17	- [11		ſ 1:27	-	f 3:12		5:01				4	f7:23		f 8:32		f 9:42	- 1
	North Beverly	6	4	5:41	6:13		6:48		7:23		7:53	8:18			f 9:36		10:21	- f13		f 1:31		f 3:16		5:05			-		f 7:27		f 8:36		f 9:46	- '
	Beverly			5:47	6:18	6:27	6:53	7:09	7:28	7:49	7:58	8:24	8:33	8:54	9:42			11:38 12:		1:37	2:28	3:22	4:00		5.35	5:48	6:23	6:48	7:33	7:53	8:42	9:23	9:52	11:08
	Salem			5:51	6:22	6:31	6:57	7:13	7:32	7:53	8:02	8:28	8:37	8:58				1:42 12		1:41	2:32	3:26			5:39	5:52	6:27	6:52	7:37	7:57	8 4 6	9:27	9:56	11:12
	Swampscott			5:59	-		7:05	-	7:40	-	8:10	-	8:45	9:06				1:50 12		1:49	2:40	3:34		5:23	-	6:00	6:35		7:45	8:05	854	9:35		11 20
	ynn			6:03	-	6:43	7:09	-	7:44	-	8:14	-	8:49	9:10	9:58	10:14 1	10:43	11:54 12	23 1:24	1:53	2:44	3:38		5:27		6:04	6:39	4	7:49	8:09	8 58	9:39	10:08	11;24
	River Works		5:52		*		f 7:12	-	f 7:47	-	f 8:17		f 8:52	-	4				- 1					5:30	-	f 6:07	f 6:42		4			f 9:42		f 11:27
	Chelsea	1 5	5 59	6:13	-	6:53	7:19	-	7:54	~	8:24	-	8:59						32 / 1/33					5:37	-	f 6:14	f 6:49	-	f 7:58					f 11:34
									8:06	3.20	R:365	8-55	9:13	9:31	10:18	10:34	n:03 1	12:14 12:	43 1:44	2:13	3:05	3:59	4:37	5:50	6:05	6:25	7:00	7:18	8:09	8:29	9.18	10:00	10:28	11:45
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da	y to Friday Sund from Boston	Ti	rains in	purple	191	Ai	k penod M 103	trains	105	159	107	101	109	163	111	165	113		167 193	117	169	119	171	173	121	175		177	125				129	183
da bo	ny to Friday out of from Boston whom kes.Allowed	Tr	153	purple	191	Ai 155	M 103	trains	105	159 &	107 &6	101 64)	d4	disp	46	165 %b		115			169	119	171				disp	de	dib	de	óъ	de	129 6%	183
da br	ny to Friday pure from Baston anon Robe kes Allowed orth Station	Tr	rains in	101 % 6:39	191 % 7:08	155 % 7:37	M 103 % 7:50	trains	105	159 ජා 9:40	107 ජේව 10:35	101 64 11/20	d6 12:00	5% 1:20	d% 1:50	165 %6 3:15	3:37	4:15	1:30 4:4	5:00			171 5:40	6:05	6:25	6:45	7:15	ქა 7:35	64b 8:45	්ර 5 9;10	්ච 10:2	ශ්ර 0 10:5	129 % 0 12:10	183 5% 12:19
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Saturday & Sunday

1A North Station

Monday to Friday

ound to Bester			A	M						PM				
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Bikes Allowed		واقل	dillo	de	Jila	(64)	6%	60	σb	5%	σb	efelo	Æ	dib
Rockport	ь	7:00	-	10:00	-	12:00	46	2:00	-	5:10	-	7:30	-	10:00
Gloucester	6	7:07	-	10:07	-	12:07	100	2:07	-	5:17	-	7;37	nin-	10:07
West Gloucester	8	17:13		f10:13	-	f 12:13		f 2:13	-	f 5:23		f 7:43	p-	f 10:13
Manchester	8	7:20	-	10:20	-	12:20	de	2:20	10.	5:30	- 10	7:50	in-	10:20
Beverly Farms	8	f 7:25	-	110:25	-	f 12:25	4	f 2:25		f 5:35	10	f 7:55	P	f 10:25
Montserrat	8	f 7:31		f 10:31	-	f 12:31	4	f 2:31	**	15:41		f 8:01	-	f 10:31
Newburyport	8		8:52	-	10:52	-	12:52	-	2:52	-	5:52		9:00	-
Rowley	6	-	8:58	~	10:58		12:58	-	2:58	-	5:58	-	9:06	-
lpswich	8	-	9:05	-	11:05	a	1:05	-	3:05	-	6:05	~	9:13	-
Hamilton/Wenham	Ь	-	9;12	-	11:12	0	1:12	-	3:12	-	6:12	~	9:20	-
North Beverly	6		f 9:15	-	f 11:15	-	f 1:15	-	f 3:15	-	f 6:15	-	f 9:23	
Beverly	8	7:36	9:20	10:36	11:20	12:36	1:20	2 36	3:20	5.46	6:20	8:06	9:28	10:36
Salem	8	7:40	9:24	10:40	11:24	12:40	1:24	240	3:24	5 50	6:24	8:10	9:32	10:40
Swampscott	6	7:46	9:30	10:46	11:30	12:46	1:30	2.46	3:30	5 56	6:30	8:16	9:38	10:46
Lynn	6	7:50	9:34	10:50	11:34	12:50	1:34	2 50	3:34	6.00	6:34	8:20	9:42	10:50
Chelsea		f 7:59	f 9:44	110:59	f 11:44	f 12:59	11:44	f 2:59	f 3:44	f 6:09	f 6:44	18:29	f 9:52	f 10:59
	Station Baddler Traces. Bikes Allowed Rockport Gloucester West Gloucester Manchester Beverly Farms Montserrat Newburyport Rowley Ipswich Hamilton/Wenham North Beverly Beverly Salem Swampscott Lynn	station where a station of the property flags a fine of the property flags a fine of the property flags and the pr	SALES SALE	SAZUMBAN 1100 115	1100 1150 1100 1150 1100 1150 1100 1150 1100 1150 1100 1150 1100 1150 1100 1150 1100 1150 1100 1150 1100	1100 1150 1102 1152 1100 1150 1102 1152 1100 1150 1102 1152 1100 1150 1102 1152 1100 1150 1102 1152 1100 1150 1102 1152 1100 1150 1102 1152 1100 1150 1102 1152 1100 1100 1100 1100 110	1100 1150 1152 1104 1155 1105	SATURINAY PRIMER 1100 1150 1152 1104 1155 1154 1154 1154 1155 1154 1154 1155 1154 1155 1154 1155 1154 1155 1154 11	SATURNAM NAME 1100 1150 1102 1152 1104 1154 1106 SATURNAM NAME 2100 2150 2102 2152 2104 2154 2106 Sikes Allowed 54	SATIONAL PRINCIPLE 1100 1150 1102 1152 1104 1154 1106 1156 1156 1150 1152 1104 1154 1106 1156	Sazumban Manual Manual	Second S	Second S	Second S

2	ln	purple box	ndicate	peak	pelioc
		Saturda	y & S	und	ay

Out	tbound from Boston	AM				PM									
	SATURDAY TRAIN		1101	1151	1103	1153	1105	1155	1107	1157	1109	1159	1111	1161	1113
ZONE	STATION SUNDAY TRAIN #		2101	2151	2103	2153	2105	2155	2107	2157	2109	2159	2111	2161	2113
	Bikes Allowed		50	Ø€b	50	රම	රුව	dib	de	చేస్తే	60	చోల్	රම්භ	50	∂ Pu
1A	North Station	b	8:30	9:30	10:20	11:30	12:20	1:30	2:20	4:30	5:30	7:15	8:30	10:20	11:30
1A	Chelsea		f 8:41	f 9:41	f 10:31	f 11:61	f 12:31	f 1:41	f 2:31	f 4:41	f 5:41	f 7:26	f 8:41	f 10:31	f 11:41
2	Lynn	8	8:51	9:51	10:41	11:51	12:41	1:51	2:41	4:51	5:51	7:36	8:51	10:41	11:51
3	Swampscott	8	8:54	9:54	10:44	11:54	12:44	1:54	2:44	4:54	5:54	7:39	8:54	10:44	11:54
3	Salem	8	9:01	10:01	10:51	12:01	12:51	2:01	2:51	5:01	5:01	7:46	9:01	10:51	12:01
4	Beverly	8	9:05	10:05	10:55	12:05	12:55	2:05	2:55	5:05	6:05	7:50	9:05	10:55	12:05
5	North Beverly	6	-	f 10:09	-	f 12:09	-	f 2:09	-	f 5:09	-	17:54	-	f 10:59	-
5	Hamilton/Wenham	Ь	-	10:13	-	12:13		2:13		5:13		7:58	-	11:03	64
6	Ipswich	Ь	-	10:20	-	12:20	-	2:20	-	5:20	-	8:05	-	11:10	-
7	Rowley	8	-	10:27	-	12:27	-	2:27	-	5:27	-	8:12	-	11:17	-
8	Newburyport	6	-	10:34		12:34	-	2:34	-	5:34	-	8:19	~	11:24	-
4	Montserrat	8	f 9:09		f 10:59	-	f 12:59	-	f 2:59	-	f 6:09	-	f 9:09	*	f 12:09
5	Beverly Farms	8	f 9:14		f 11:04	-	f 1:04	-	f 3:04	la.	16:14	*	f 9:14	-	f 12:14
6	Manchester	8	9:20	-	11:10	- 0	1:10	-	3:10	-	6:20	-	9:20	-	12:20
7	West Gloucester	b	f 9:27		F 11:17		f 1:17	-	13:17	-	f 6:27		19:27	-	f 12:27
7	Gloucester	b	9:34		11:24		1:24	-	3:24		6:34	-	9:34	-	12:34
8	Rockport	b	9:42		11:32		1:32	-	3:32	-	6:42	-	9:42		12:42

Keep in Mind

This schedule will be effective from May 23, 2016, and will replace the schedule of December 14, 2015.

Holiday Service:

Saturday service: Presidents' Day, 4th of July

Sunday service: New Year's Day, Memorial Day, Labor Day, Thanksgiving Day, Christmas Day

For additional holiday travel information and service modifications, please check MBTA com or call 617-222-3200

Times in purple with "f" indicate a flag stop: Passengers must advise the conductor they wish to stop. Passengers waiting to board must be visible on the platform for the train to stop.

Times in blue indicate an early departure (L stop): The train may leave ahead of schedule at these stops.

Bikes: Bicycles are allowed on trains with the bicycle symbol shown below the train number.



\$ 8:11 9:56 11:11 11:56 1:11 1:56 3:11 3:56 6:21 6:56 8:41 10:04 11:11

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Schedules & Maps







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About the MBTA

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25 Boston Way Newburyport, MA 01950-4067

Fares & Gifts

For train information at Newburyport Station tune to 1630 AM

This MBTA station is accessible (Accessibility Key)

Parking

Parking Spaces: 814

Average Weekday Availability:

Parking Rate: \$4,00 daily

\$70.00/Month

Park & Pay By Phone

Location #: 4239

Accessible Spaces: 24

Bike Spaces: 22

Managed By: LAZ Parking

(781) 794-1791 Website

Comments:

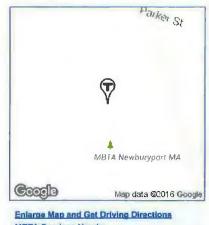
LAZ Parking is responsible for parking lot snow removal, maintenance and fee collection. Please contact MBTA Customer Service regarding station and platform snow removal, cleanliness and maintenance issues.

Commuter Rail Lines

Newburyport/Rockport Line

Intercity Bus Service

Merrimack Valley Regional Transit Authority



MBTA Services Nearby

Plan your trip

Preferences: Using:

Med Alte

Trip must be accessible

Plan your trip



Safety

Service Alerts

Transit Police

Newburyport/Rockport Line:



Policy Change: New fares go into effect Friday, July 1,

Click here for all service alerts

Fare Information

Travel anywhere on the MBTA system for the same price. See all Fares & Passes information.

TRANSIT MODE

PASSES / TICKETS

Rail

\$2.10 - \$11.50 Zones 1A - 10 \$75 - \$362 Monthly Pass, unlimited travel to and from your zone plus travel

on all bus, subway and Inner Harbor Ferry,

50% Seniors and Persons with

Disabilities

Accessibility Key (Back to Top)

























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Accessibility at the T | Business Center | Fares & Gifts | Privacy Policy | Terms of Use

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Commuter Rail Fares and Passes

Commuter Rail fares are based on a "Zone" and "Interzone" system with Zone 1A servicing the Greater Boston area and Zones 1 through 10 servicing communities and suburban areas outside of Boston. Each Commuter Rail station's zone is identified in the chart below.

Zone Fares

"Zone fares" are intended for direct travel between any suburban area commuter rail station to a Zone 1A station and the Greater Boston area, including North Station, South Station, and Back Bay. Your fare or pass is based on the Zone from which you are travelling.

For example, if your commute includes boarding the Lowell Line at Lowell Station (Zone 6) and getting off the train at North Station (Zone 1A), you would buy one single ride Zone 6 ticket.

Interzone Fares

"Interzone fares" are intended for travel between suburban area stations outside of the Zone 1A Greater Boston area. Interzone fares and passes are NOT valid for travel to Zone 1A stations, including North Station, South Station, and Back Bay. Interzone monthly pass and ticket fares are based on TOTAL zones "travelled" in.

For example, if your commute includes boarding the Lowell Line at Lowell Station (Zone 6) and getting off the train at Anderson/Woburn Station (Zone 2), you would pass through three zones and would buy one single ride Interzone 5 ticket.

Effective July 1, 2012, Commuter Rail tickets will have the following expiration periods:

- All 10-ride tickets will be sold with an expiration time limit of ninety (90) days.
- Single ride tickets will be sold with an expiration time limit of ninety (90) days.

ZONE	RIDE FARE M	MONTHLY PASS	10-RIDE PASS ¹	CASH-ON-BOARD	
1A	\$2.10 ²	\$75.00 ³	\$21.00	\$5.10	Buy Now
1	\$5.75 ²	\$182.00 ⁴	\$57.50	\$8.75	Buy Now
Interzone 1 ⁷	\$2.75	\$86.00 ⁶			Buy Now

2	\$6.25 ²	\$198.00 ⁴	\$62.50	\$9.25	Buy Now
Interzone 2 ⁷	\$3.25	\$105.00 ⁶			Buy Now
3	\$7.00 ²	\$222.00 ⁴	\$70.00	\$10.00	Buy Now
Interzone 3 ⁷	\$3.50	\$114.00 ⁶			Buy Now
4	\$7.50 ²	\$239.00 ⁴	\$75.00	\$10.50	Buy Now
Interzone 4 ⁷	\$3.75	\$124.00 ⁶			Buy Now
5	\$8.50 ²	\$265.00 ⁴	\$85.00	\$11.50	Buy Now
Interzone 5 ⁷	\$4.25	\$141.00 ⁶			Buy Now
6	\$9.25 ²	\$289.00 ⁵	\$92.50	\$12.25	Buy Now
Interzone 6 ⁷	\$4.75	\$159.00 ⁶			Buy Now
7	\$9.75 ²	\$306.00 ⁵	\$97.50	\$12.75	Buy Now
Interzone 7 ⁷	\$5.25	\$175.00 ⁶			Buy Now
8	\$10.50 ²	\$330.00 ⁵	\$105.00	\$13.50	Buy Now
Interzone 8 ⁷	\$5.75	\$193.00 ⁶			Buy Now
9	\$11.00 ²	\$345.00 ⁵	\$110.00	\$14.00	Buy Now
Interzone 9 ⁷	\$6.25	\$211.00 ⁶			Buy Now
10	\$11.50 ²	\$362.00 ⁵	\$115.00	\$14.50	Buy Now
A ' IB	=00/ O/C DI I				

Seniors and Persons with Disabilities

50% Off Rides

(Blind persons ride for free)Percentage off based on Commuter Rail 'ride' fares noted above.

Requires a Senior/TAP ID or Mass Commission for the Blind ID.

10-Ride Tickets available based on ten half fares.

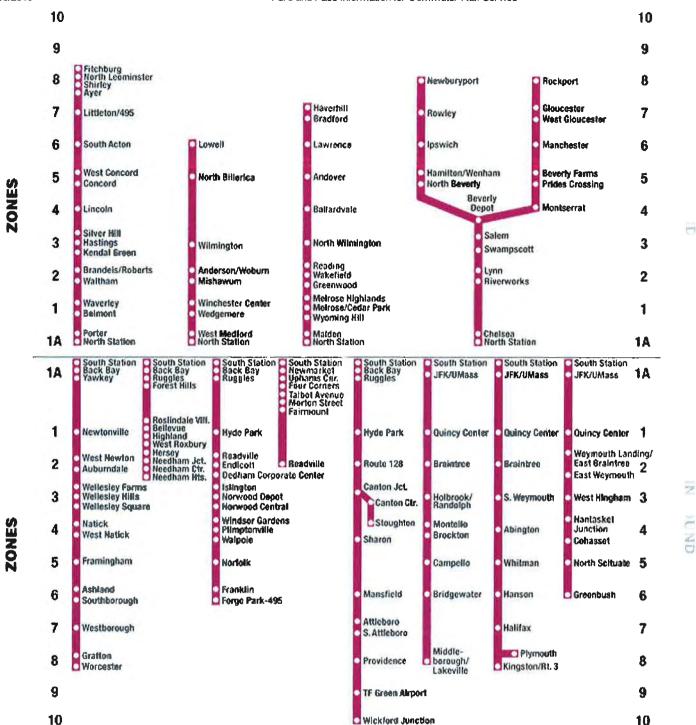
Children 11 years old and under

Free

Children under the age of twelve ride free when accompanied by an adult with a limit of two children for each adult.

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Commuter Rail Zone Chart



Back to top

¹ 10-Ride passes cannot be bought online.

² A \$3.00 surcharge wil be added to tickets purchased on-board all trains departing from North Station, South Station, and Back Bay Station. Monday-through-Friday customers will be charged \$3.00 surcharge by the conductor when a ticket is purchased on board from a station with an MBTA ticket vending machine or where a Ticket Vendor is open. A list of these stations can be found on the MBTA website here: http://www.mbta.com/fares_and_passes/sales_locations/

³ Zone passes valid on Local Bus, Subway, and Inner Harbor Ferries.

⁴ Zone passes valid on Local Bus, Subway, Express Bus, and Inner Harbor Ferries.

- ⁵ Zone passes valid on Local Bus, Subway, Express Bus, Inner Harbor Ferries, and Commuter Boat.
 - ⁶ Interzone passes valid on Local bus.
 - ⁷ Interzone tickets and passes are not available on our automated ticket vending machines. Interzone tickets and passes are sold on our mTicketing app, at ticket sales offices, at retail sales outlets, and passes are sold online. A list of sales locations can be found here: http://www.mbta.com/fares and passes/sales locations/

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978-664-2565

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

7281SPD1

V															
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
06/16/16	0	0	0	0	0	1	3	9	6	10	8	3	0	0	40
01:00	0	0	0	0	0	0	0	2	3	2	4	1	1	0	13
02:00	0	0	0	0	0	0	0	1	0	2	0	0	0	0	3
03:00	0	0	0	0	0	0	0	1	3	3	0	0	1	0	8
04:00	0	0	0	0	0	0	1	4	5	2	2	3	0	0	17
05:00	0	0	0	0	0	0	5	12	22	26	14	8	2	0	89
06:00	9	0	0	0	0	5	13	33	66	68	26	9	1	0	230
07:00	16	0	0	0	2	6	26	74	95	83	34	9	1	0	346
08:00	30	0	0	1	3	7	48	117	122	56	14	2	0	0	400
09:00	28	0	3	0	5	28	73	120	79	25	7	0	0	0	368
10:00	36	0	1	2	9	41	120	120	70	21	0	0	0	0	420
11:00	32	0	1	0	15	46	148	110	62	9	2	0	0	0	425
12 PM	56	0	2	7	25	112	164	105	51	8	0	0	0	0	530
13:00	44	0	3	7	24	122	156	111	42	8	1	0	0	0	518
14:00	48	1	3	10	52	146	176	1 2 6	46	7	0	0	0	0	615
15:00	62	0	5	6	24	92	200	139	54	8	3	0	0	0	593
16:00	52	0	2	9	26	85	203	162	57	12	0	0	0	0	608
17:00	90	4	8	27	49	96	175	168	46	7	0	0	0	0	670
18:00	49	2	2	2	18	75	136	130	58	14	0	1	0	0	487
19:00	32	1	3	5	34	73	159	118	43	10	1	0	0	0	479
20:00	27	0	0	2	8	49	136	175	78	15	2	0	0	0	492
21:00	11	0	0	0	1	6	62	119	106	34	7	0	0	0	346
22:00	1	0	0	1	0	2	14	38	73	56	10	2	0	0	197
23:00	2	0	0	0	0	0	8	32	38	34	8	0	1	0	123
Total	625	8	33	79	295	992	2026	2026	1225	520	143	38	7	0	8017

Daily

Mean Speed(Average)

10 MPH Pace Speed

Number in Pace

Percent in Pace

Number of Vehicles > 20 MPH

Percent of Vehicles > 20 MPH

20 MPH 18-27 MPH 5608 70.0% 4634 57,8%

Accurate Counts 978-664-2565

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

7281SPD1

N A D													_		
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
06/17/16	0	0	0	0	0	0	4	4	16	20	7	0.	2	0	53
01:00	0	0	0	0	0	0	2	0	3	1	2	2	1	0	11
02:00	0	0	0	0	0	0	0	0	2	2	2	1	0	0	7
03:00	0	0	0	0	0	0	0	1	2	0	1	0	1	0	5
04:00	0	0	0	0	0	0	4	2	2	3	6	3	0	0	20
05:00	0	0	0	0	0	0	3	10	18	30	15	6	2	0	84
06:00	4	0	0	0	0	2	15	37	58	68	28	9	0	0	221
07:00	24	0	0	0	0	4	28	61	125	67	25	6	1	0	341
08:00	39	0	2	2	1	7	38	133	118	61	19	1	0	0	421
09:00	33	0	0	1	2	26	87	140	83	13	7	0	0	0	392
10:00	45	1	1	3	17	59	113	125	80	20	2	0	0	0	466
11:00	69	0	2	8	15	58	165	111	41	12	2	0	0	0	483
12 PM	97	0	1	8	31	89	160	115	28	5	0	0	0	0	534
13:00	86	1	3	17	49	103	143	118	28	10	1	0	0	0	559
14:00	68	0	6	12	46	145	196	121	43	13	2	0	0	0	652
15:00	79	2	1	11	42	128	189	160	47	10	1	0	0	0	668
16:00	64	0	7	21	39	118	178	136	28	7	1	1	0	0	600
17:00	88	4	6	25	57	136	116	89	38	7	2	0	0	1	569
18:00	56	0	6	12	34	96	151	86	45	12	2	0	0	0	500
19:00	56	2	9	24	41	139	170	83	24	3	1	0	0	0	552
20:00	44	0	4	8	25	107	163	121	29	4	2	0	0	0	507
21:00	16	0	2	3	5	53	130	113	49	13	2	0	0	0	386
22:00	6	0	0	0	3	3 5	104	164	51	16	6	0	0	0	385
23:00	1	0	0		0	5_	10	43	53	37	7	4	0	0	170
Total	875	10	50	158	407	1308	2178	1973	1011	434	143	33	7	1	8586

Daily

15th Percentile 50th Percentile : 85th Percentile : 95th Percentile :

13 MPH 20 MPH 25 MPH 28 MPH

Mean Speed(Average) : 10 MPH Pace Speed : Number in Pace :

19 MPH 16-25 MPH 5796 67.5% 4328 50.4%

Percent in Pace Number of Vehicles > 20 MPH :
Percent of Vehicles > 20 MPH :

Accurate Counts 978-664-2565

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	
							21		27						Total
Time	3	6	9	12	15	18		24		30	33	36	39	999	Total
06/18/16	0	0	0	0	1	0	4	18	28	18	9	3	1	0	82
01:00	0	0	0	0	0	0	0	3	11	15	2	2	2	0	35
02:00	0	0	0	0	0	0	3	3	8	8	1	2	0	0	25
03;00	0	0	0	0	2	0	0	0	2	4	5	1	0	0	14
04:00	0	0	0	0	0	0	1	1	4	7	6	1	0	0	20
05:00	0	0	0	0	1	1	2	.5	10	10	9	2	0	1	41
06:00	3	0	0	0	1	4	8	17	40	38	13	3	0	0	127
07:00	8	0	0	1	1	3	29	60	69	39	20	2	0	0	232
08:00	25	0	2	3	9	24	66	108	72	15	2	0	0	0	326
09:00	38	0	1	3	9	55	124	133	62	11	0	0	0	0	436
10:00	53	0	1	10	34	79	119	123	45	9	2	1	0	0	476
11:00	76	5	4	20	34	103	147	85	17	5	0	0	0	0	496
12 PM	73	0	2	13	55	135	136	52	20	4	0	0	0	0	490
13:00	78	1	7	11	69	150	139	83	19	5	0	0	0	0	562
14:00	72	0	18	27	59	120	136	68	27	6	0	0	0	0	533
15:00	81	0	11	11	60	156	160	85	12	1	1	0	1	0	579
16:00	72	3	6	21	85	143	165	80	25	3	0	0	0	0	603
17:00	81	1	1	9	64	152	182	81	23	1	0	0	0	0	595
18:00	55	0	0	8	43	120	145	87	31	8	1	0	0	0	498
19:00	42	2	1	25	52	119	187	81	26	2	0	0	0	0	537
20:00	31	0	0	0	28	114	207	111	36	7	0	0	0	0	534
21:00	25	1	3	13	18	82	156	122	44	8	1	0	0	0	473
22:00	12	0	0	3	9	48	113	125	58	27	3	1	0	D	399
23:00	3	0	11	0	0	3	23	68	76	40	9	3	0	0	226
Total	828	13	58	178	634	1611	2252	1599	765	291	84	21	4	1	8339
Daily			50th F 85th F	Percentile : Percentile : Percentile : Percentile :		12 MPH 19 MPH 23 MPH 26 MPH									
			ean Speed(a		16	18 MPH -25 MPH 5717									
				t in Pace :		68.6%									
		Number of	Vehicles >			3516									
			Vehicles >			42.2%									
Grand	2328	31	141	413	1336	3911	6456	5598	3001	1 24 5	370	92	18	2	24942
Total	- -														
Overall			50th F 85th F	Percentile : Percentile : Percentile : Percentile :		13 MPH 20 MPH 24 MPH 28 MPH									

Overall	15th Percentile ;
	50th Percentile :
	85th Percentile :
	95th Percentile :
	Mean Speed(Average):

19 MPH 16-25 MPH 16965 68.0% 12478 50.0% Mean Speed(Average):

10 MPH Pace Speed:

Number in Pace:

Percent in Pace:

Number of Vehicles > 20 MPH;

Percent of Vehicles > 20 MPH;

978-664-2565

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
06/16/16	0	0	0	0	0	2	2	8	7	6	2	0	0	0	27
01:00	0	0	0	0	0	0	1	2	4	5	4	0	0	0	16
02:00	0	0	1	0	0	0	0	2	2	3	2	1	0	0	11
03:00	0	0	0	0	0	0	1	2	4	1	0	1	0	0	9
04:00	0	0	0	0	0	1	6	4	5	4	3	0	0	0	23
05:00	2	0	0	0	4	8	16	32	40	29	9	4	1	0	145
06:00	7	0	0	0	1	3	20	34	60	53	19	6	0	0	203
07:00	19	0	0	3	1	11	42	124	158	67	15	2	0	0	442
08:00	35	0	4	6	22	78	166	221	129	37	4	0	0	0	702
09:00	39	0	1	11	31	107	180	185	64	11	2	0	0	0	631
10:00	42	2	8	10	45	147	162	140	44	6	1	0	0	0	607
11:00	64	4	14	34	57	147	185	112	37	4	0	0	0	0	658
12 PM	82	6	13	24	85	127	164	103	33	5	0	0	0	0	642
13:00	76	1	17	24	80	169	140	100	36	7	0	0	0	0	650
14:00	65	1	9	36	65	116	140	94	34	6	1	0	0	0	567
15:00	81	4	6	26	73	153	170	98	34	1	0	0	0	0	646
16:00	76	2	3	16	58	121	195	107	30	7	1	0	0	0	616
17:00	74	4	9	30	101	155	159	72	27	4	1	0	0	0	636
18:00	56	1	4	22	68	147	204	144	35	6	0	1	0	0	688
19:00	40	0	2	9	34	114	155	130	43	9	0	0	0	0	536
20:00	35	0	1	6	15	57	109	114	38	10	1	0	0	0	386
21:00	12	0	0	0	2	12	45	69	75	14	5	0	0	0	234
22:00	5	0	0	0	1	4	18	33	35	10	7	0	0	0	113
23:00	1_	.0	0	0	0	1	3	15	17	9	10	0	0	0	56
Total	811	25	92	257	743	1680	2283	1945	991	314	87	15	1	0	9244

Daily

 15th Percentiled
 12 MPH

 50th Percentiled
 19 MPH

 85th Percentiled
 24 MPH

 95th Percentiled
 26 MPH

Mean Speed(Average): 19 MPH
10 MPH Pace Speed; 16-25 MPH
Number in Pace; 6238
Percent in Pace; 67,5%
Number of Vehicles > 20 MPH; 4114
Percent of Vehicles > 20 MPH; 44,5%

978-664-2565

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	1.5	18	21	24	27	30	33	36	39	999	Total
06/17/16	0	0	0	0	0	0	6	10	13	11	3	2	0	0	45
01:00	0	0	0	0	0	0	0	10	6	4	3	2	2	1	28
02:00	0	0	0	0	0	0	1	3	2	3	1	0	0	0	10
03:00	0	0	0	0	0	0	2	1	2	2	0	1	0	0	8
04:00	0	0	0	0	2	3	2	6	3	6	9	0	0	0	31
05:00	0	0	0	1	0	5	10	19	32	27	16	5	0	0	115
06:00	6	0	0	0	0	2	15	39	66	60	11	3	0	0	202
07:00	29	0	0	0	1	10	40	107	158	64	25	3	0	0	437
08:00	40	2	9	13	23	55	144	206	141	43	5	1	0	0	682
09:00	58	0	4	20	52	124	231	138	51	13	3	0	0	0	694
10:00	68	0	9	36	79	138	168	105	27	3	1	0	0	0	634
11:00	87	8	27	75	104	132	135	78	22	5	0	0	0	0	673
12 PM	164	35	68	109	127	122	95	23	7	0	0	0	0	0	750
13:00	147	20	53	98	102	109	106	44	12	1	0	0	0	0	692
14:00	90	1	6	33	75	154	169	84	25	5	1	1	0	0	644
15:00	89	9	14	22	85	161	175	87	39	6	0	0	0	0	687
16:00	105	2	18	46	99	133	153	94	25	2	1	0	0	0	678
17:00	121	5	19	51	141	197	118	59	10	2	1	0	0	0	724
18:00	91	14	26	55	119	161	148	61	14	4	0	0	0	0	693
19:00	69	1	6	48	95	170	106	65	11	1	0	0	0	0	572
20:00	32	2	7	9	29	69	102	81	42	7	0	0	0	0	380
21:00	19	0	0	1	12	32	78	94	43	15	3	0	0	0	297
22:00	6	0	0	0	1	12	44	65	34	14	2	0	0	0	178
23:00	3	0_	0	0	0	0	12	34	41	23	_ 5	1	0	0	119
Total	1224	99	266	617	1146	1789	2060	1513	826	321	90	19	2	1	9973

Daily

15th Percentile 2 7 MPH
50th Percentile 2 17 MPH
85th Percentile 2 23 MPH
95th Percentile 2 26 MPH

Mean Speed(Average) ; 17 MPH
10 MPH Pace Speed 15-24 MPH
Number in Pace 5744
Percent in Pace 57,6%
Number of Vehicles > 20 MPH 3459
Percent of Vehicles > 20 MPH 34,7%

978-664-2565

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
08/18/16	0	0	0	0	.0:	2	5	7.	19	9	.3	1	1	0	47
01:00	0	0	0	0	0	0	2	8	15	9	3	0	0	0	37
02:00	0	0	0	0	0	0	2	6	3	3	0	2	0	0	16
03:00	0	0	0	0	0	0	2	1	3	5	1	0	0	0	12
04:00	1	0	0	0	0	1	6	1	9	6	3	4	1	0	32
05:00	0	0	0	0	0	2	8	16	19	13	13	2	0	0	73
06:00	2	0	0	1	4	7	20	46	65	40	15	3	1	0	204
07:00	10	0	0	1	3	18	48	102	116	51	16	1	D	0	366
08:00	27	0	0	3	40	77	156	176	74	21	4	1	0	0	579
09:00	50	1	4	19	84	168	169	110	38	6	0	0	0	0	649
10:00	87	7	41	101	154	159	135	48	9	2	0	0	0	0	743
11:00	112	14	39	71	96	103	133	48	13	2	0	0	0	0	631
12 PM	153	61	128	147	76	33	35	8	5	0	0	0	0	0	646
13:00	111	23	54	95	104	152	91	30	3	5	0	0	0	0	668
14:00	122	23	54	38	104	1 1 9	99	43	16	2	0	0	0	0	620
15:00	94	6	28	42	106	149	127	45	11	1	0	0	0	0	609
16:00	111	20	54	70	97	117	106	43	12	0	0	0	0	0	630
17:00	103	13	37	44	85	129	123	57	11	4	0	0	0	0	606
18:00	60	3	21	39	88	155	152	86	25	7	0	0	0	0	636
19:00	58	6	5	21	64	132	\$20	79	41	5	0	0	0	0	531
20:00	33	0	0	5	16	92	117	91	26	11	0	0	0	0	391
21:00	23	0	0	0	12	47	84	80	53	10	2	0	0	0	311
22:00	11	0	0	0	5	11	43	68	45	12	2	0	0	0	197
23:00	5	0	0	2	1	1	16	38 _	36 _	23	11	1.	0	0	134
Total	1173	177	465	699	1139	1674	1799	1237	667	247	73_	15	3_	- 0	9368
Daily			50th F 85th F	Percentile : Percentile : Percentile : Percentile :		6 MPH 16 MPH 23 MPH 26 MPH									

16 MPH 15-24 MPH 5090

Mean Speed(Average):
10 MPH Pace Speed:
Number in Pace
Percent in Pace:

Number of Vehicles > 20 MPH : Percent of Vehicles > 20 MPH :

54.3% 2842 30.3%

Grand 3208 301 823 1573 3028 5143 6142 4695 2484 882 250 49 28585 6 1 Total

Overall

15th Percentile

8 MPH

50th Percentile: 85th Percentile : 95th Percentile : 18 MPH 23 MPH 26 MPH

Mean Speed(Average) = 10 MPH Pace Speed :

Number in Pace : Percent in Pace:

17 MPH 15-24 MPH 16989

Number of Vehicles > 20 MPH : Percent of Vehicles > 20 MPH :

59.4% 10414 36.4%

978-664-2565

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

7281SPD1

WB, 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
06/16/16	0	0	0	0	0	3	5	17	13	16	10	3	0	0	67
01:00	0	0	0	0	0	0	1	4	7	7	8	1	1	0	29
02:00	0	0	1	0	0	0	0	3	2	5	2	1	0	0	14
03:00	0	0	0	0	0	0	1	3	7	4	0	1	1	0	17
04:00	0	0	0	0	0	1	7	8	10	6	5	3	0	0	40
05:00	2	0	0	0	4	8	21	44	62	55	23	12	3	0	234
06:00	16	0	0	0	1	8	33	67	126	121	45	15	1	0	433
07:00	35	0	0	3	3	17	68	198	253	150	49	11	1	0	788
08:00	65	0	4	7	25	85	214	338	251	93	18	2	0	0	1102
09:00	67	0	4	11	36	135	253	305	143	36	9	0	0	0	999
10:00	78	2	9	12	54	188	282	260	114	27	1	0	0	.0	1027
11:00	96	4	15	34	72	193	333	222	99	13	2	0	0	0	1083
12 PM	138	6	15	31	110	239	328	208	84	13	0	0	0	0	1172
13:00	120	1	20	31	104	291	296	211	78	15	1	0	0	0	1168
14:00	113	2	12	46	117	262	316	220	80	13	1	0	0	0	1182
15:00	143	4	11	32	97	245	370	237	88	9	3	0	0	0	1239
16:00	128	2	5	25	84	206	398	269	87	19	1	0	0	0	1224
17:00	164	8	17	57	150	251	334	240	73	11	1	0	0	0	1306
18:00	105	3	6	24	86	222	340	274	93	20	0	2	0	0	1175
19:00	72	1	5	14	68	187	314	248	86	19	1	0	0	0	1015
20:00	62	0	1	8	23	106	245	289	116	25	3	0	0	0	876
21:00	23	0	0	0	3	18	107	188	181	48	12	0	0	0	580
22:00	6	0	0	1	1	6	32	71	108	66	17	2	0	0	310
23:00	3	0	0	0	.0	1	11	47	55	43	18	0	1	0	179
Total	1436	33	125	336	1038	2672	4309	3971	2216	834	230	53	8	Ó	17261

Daily

15th Percentile : 50th Percentile : 85th Percentile : 95th Percentile :

13 MPH 20 MPH 25 MPH 27 MPH

Mean Speed(Average)

10 MPH Pace Speed
Number in Pace
Percent in Pace
Number of Vehicles > 20 MPH;
Percent of Vehicles > 20 MPH;

19 MPH 16-25 MPH 11691 67.7% 8748 50.7%

978-664-2565

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

7281SPD1

WB, 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
06/17/16	0	0	0	0	0	0	10	14	29	31	10	2	2	0	98
01:00	0	0	0	0	0	0	2	10	9	5	5	4	3	1	39
02:00	0	0	0	0	0	0	1	3	4	5	3	1	0	0	17
03:00	0	0	0	0	0	0	2	2	4	2	1	1	1	0	13
04:00	0	0	0	0	2	3	6	8	5	9	15	3	0	0	51
05:00	0	0	0	1	0	5	13	29	50	57	31	11	2	0	199
06:00	10	0	0	0	0	4	30	76	124	128	39	12	0	0	423
07:00	53	0	0	0	1	14	68	168	283	131	50	9	1	0	778
08:00	79	2	11	15	24	62	182	339	259	104	24	2	0	0	1103
09:00	91	0	4	21	54	150	318	278	134	26	10	0	0	0	1086
10:00	113	1	10	39	96	197	281	230	107	23	3	0	0	0	1100
11:00	156	8	29	83	119	190	300	189	63	17	2	0	0	0	1156
12 PM	261	35	69	117	158	211	255	138	35	5	0	0	0	0	1284
13:00	233	21	56	115	151	212	249	162	40	11	1	0	0	0	1251
14:00	158	1	12	45	121	299	365	205	68	18	3	1	0	0	1296
15:00	168	11	15	33	127	287	364	247	86	16	1	0	0	0	1355
16:00	169	2	25	67	138	251	331	230	53	9	2	1	0	0	1278
17:00	209	9	25	76	198	333	234	148	48	9	3	0	0	1	1293
18:00	147	14	32	67	153	257	299	147	59	16	2	0	0	0	1193
19:00	125	3	15	72	136	309	276	148	35	4	1	0	0	0	1124
20:00	76	2	11	17	54	176	265	202	71	11	2	0	0	0	887
21:00	35	0	2	4	17	85	208	207	92	28	5	0	0	0	683
22:00	12	0	0	0	4	47	148	229	85	30	8	0	0	0	563
23:00	4	0	0	1	0	.5	31_	77	94	_60	12	5	0	0	289
Total	2099	109	316	773	1553	3097	4238	3486	1837	755	233	52	9	2	18559

Daily

15th Percentile : 10 MPH 50th Percentile : 18 MPH 85th Percentile : 24 MPH 95th Percentile ; 27 MPH

Mean Speed(Average): 18 MPH
10 MPH Pace Speed: 16-25 MPH
Number in Pace: 11433
Percent in Pace: 61,6%
Number of Vehicles > 20 MPH: 7787
Percent of Vehicles > 20 MPH: 42.0%

978-664-2565

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	Tota
06/18/16	0	0	0	0	1	2	9	25	47	27	12	4	2	0	129
01:00	0	o	ő	0	Ó	ō	2	11	26	24	5	2	2	Ö	72
02:00	0	ō	0	0	0	0	5	9	11	11	1	4	ō	0	4
03:00	0	Ō	0	0	2	Ō	2	1	5	9	6	1	0	0	26
04:00	1	0	0	0	0	1	7	2	13	13	9	5	1	0	52
05:00	0	0	0	0	1	3	10	21	29	23	22	4	0	1	114
06:00	5	0	0	1	5	11	28	63	105	78	28	6	1	0	331
07:00	18	0	0	2	4	21	77	162	185	90	36	3	0	0	598
08:00	52	0	2	6	49	101	222	284	146	36	6	1	0	0	908
09:00	88	1	5	22	93	223	293	243	100	17	0	0	0	0	1085
10:00	140	7	42	111	188	238	254	171	54	11	2	1	0	0	1219
11:00	188	19	43	91	130	206	280	133	30	7	0	0	8	0	1127
12 PM	226	61	130	160	131	168	171	60	25	4	0	0	0	0	1136
13:00	189	24	61	106	173	302	230	113	22	10	0	0	0	0	1230
14:00	194	23	72	65	163	239	235	111	43	8	0	0	0	0	1153
15:00	175	6	39	53	166	305	287	130	23	2	1	0	1	0	1188
16:00	183	23	60	91	182	260	271	123	37	3	0	0	0	0	1233
17:00	184	14	38	53	149	281	305	138	34	5	0	0	0	0	120
18:00	115	3	21	47	131	275	297	173	56	15	1	0	0	0	1134
19:00	100	8	6	46	116	251	307	160	67	7	0	0	0	0	1068
20:00	64	0	0	5	44	206	324	202	62	18	0	0	0	0	925
21:00	48	1	3	13	30	129	240	202	97	18	3	0	Đ	0	784
22:00	23	o o	0	3	14	59	156	193	103	39	5	1	0	0	596
23:00	- 8	. 0	1	2	- 1	4	39	106	112	63	20	4	0	0	360
Total	2001	190	523	877	1773	3285	4051	2836	1432	538	157	36	7.	1	17707
Daily			50th F 85th F	Percentile ; Percentile ; Percentile ;		8 MPH 18 MPH 23 MPH 26 MPH									
		1 Number of		ce Speed : r in Pace : it in Pace : 20 MPH :	15	17 MPH -24 MPH 10763 60.8% 6357 35.9%									
Grand Total	5536	332	964	1986	4364	9054	12598	10293	5485	2127	620	141	24	3	5352
Overall			15th E	Percentile :		10 MPH									

 15th Percentile;
 10 MPH

 50th Percentile;
 19 MPH

 85th Percentile;
 24 MPH

 95th Percentile;
 27 MPH

Mean Speed(Average): 18 MPH
10 MPH Pace Speed: 16-25 MPH
Number in Pace: 33773
Percent in Pace: 63.1%
Number of Vehicles > 20 MPH: 22892
Percent of Vehicles > 20 MPH: 42.8%



CITY/TOWN:	Newburypo	rt		COUNT DA	ATE:	2016	MHD USE ONLY
DISTRICT: 4	UNSIGN	ALIZED:	Yes	SIGNA	LIZED:		Source #
		~ IN	TERSECTIO	N DATA A	_		
consequences po reconstitutivi i in read a time to read a decity by byte de	****************	e v i p d po no ni na ha u v o v i v il v o u o q			-	Î ran e e da mejçê çê ê ê ê ê ê ê ê î ê î ê ê ê ê ê ê	počeý:
MAJOR STREET :	Merrimac S	treet				_	ST#
MINOR STREET(S):	Winter Stree	et/Route 1 S	B Off-Ramp				ST#
							ST#
							ST#
	-						ST#
							51#
	†						
INITEDOCOTION	N . "		004	0			
INTERSECTION DIAGRAM	North].	331	1/4	604	- 1	INTERSECTION REF #
(Label Approaches)			1,	12	004		IXLI #
			k	. 4		1	
		663	3	1			
				0			
			Peak Hou	r Volumes			
APPROACH:	1	2	3	4	5	Total Entering	
DIRECTION:	NB	SB	EB	WB		Vehicles	
VOLUMES (AM/PM):	0	331	663	604		1,598	
"K" FACTOR:	0.090	APPROA	CH ADT :	17,756	ADT = TOTA	L VOL/"K" FACT	
TOTAL # OF	12	# OF	5		GE#OF	2.40	
ACCIDENTS:		YEARS:	3	ACCIDE	NTS(A):	2.40	
CRASH RATE CALC		0.37 RATE = (A * 1,000,000) (ADT * 365)					
				(ADT	300)		
Comments: Crash rat							
and >0.7	3 crashes per m	ev for a signali:	zed intersection	for MassDO	Γ District 4.		

CITY/TOWN:	Newburypo	t		COUNT DA	TE;	2016	MHD USE ONLY			
DISTRICT:4_	UNSIGN	ALIZED :	Yes	SIGNA	LIZED:		Source #			
		~ IN	TERSECTIO	N DATA ~						
MAJOR STREET:	Merrimac S	***********		inenenminerengerrern NA PALIA	rénésanése nere o sociale nemecane	assess sassansas akak hoku ahin	ST#			
			ND On Don				ST#			
MINOR STREET(S):	Summer Sti	Summer Street/Route 1 NB On-Ra mp								
	<u> </u>						ST# ST# ST#			
INTERSECTION DIAGRAM (Label Approaches)	North	733	0 2 3	1 288	786		INTERSECTION REF#			
			Peak Hou	r Volumes		16				
APPROACH:	1	2	3	4	5	Total Entering				
DIRECTION:	NB	SB	EB	WB		Vehicles				
VOLUMES (AM/PM):	288	0	733	786		1,807	N.			
"K" FACTOR:	0.090	APPROA	CH ADT :	20,078	ADT = TOTA	L VOL/"K" FAC	т.			
TOTAL # OF ACCIDENTS :	11	# OF YEARS:	5	ACCIDE	GE#OF NTS(A):	2.20				
CRASH RATE CALC		0.30	RATE =		000,000) * 365)					
Crash rate is significant if > 0.56 crashes per mev for an unsignalized intersection and > 0.73 crashes per mev for a signalized intersection for MassDOT District 4.										

CITY/TOWN:	Newburypo	rt		COUNT DA	ATE:	2016	MHD USE ONLY			
DISTRICT: 4	UNSIGN	ALIZED:	Yes	SIGNA	LIZED:		Source #			
		~ IN	TERSECTIO	N DATA	~	\$\$\$\$\$				
MAJOR STREET :	Merrimac S	treet	**************************************				ST#			
MINOR STREET(S):	Market Stre	Market Street/Tournment Wharf								
							ST#			
			_				ST#			
	†									
INTERSECTION	 North		59				INTERSECTION			
DIAGRAM	7757.117	ı	2	4	705		REF#			
(Label Approaches)	9-0	_								
		735	3	1						
				/3						
			Peak Hou	r Volumes						
APPROACH:	1	2	3	4	5	Total				
DIRECTION:	NB	SB	EB	WB		- Entering Vehicles				
VOLUMES (AM/ <u>PM</u>):	73	59	735	705		1,572				
"K" FACTOR:	0.090	990 APPROACH ADT:		17,467	ADT = TOTA	L VOL/"K" FACT,				
TOTAL # OF ACCIDENTS :	6	# OF YEARS :	5	AVERAGE # OF ACCIDENTS (A):		1.20				
CRASH RATE CALC	ULATION:	0.19	RATE =	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
Crash rate is significant if > 0.56 crashes per mev for an unsignalized intersection										
and >0.7	3 crashes per m	ev tor a signali	zed intersection	i tor MassDO	I District 4.					

CITY/TOWN;	Newburypo			1	TE:	2016	MHD USE ONLY
DISTRICT: 4	_ UNSIGN	ALIZED :	Yes	J SIGNA	LIZED :		Source #
<u> </u>	-5+2 \$4500 \$01 6 \$ 600 \$44+4+0 \$1 4.4.4.4.4.	~ IN	TERSECTION	ON DATA		ena-caac-siiiisankababbbbbbbbbbbbbbbb	angus
MAJOR STREET:	Merrimac S	treet					ST#
MINOR STREET(S):	McKay's W	harf					ST#
							ST#
							ST#
							ST#
				1			
INTERSECTION DIAGRAM	North		30	14	708		INTERSECTION REF #
(Label Approaches)			4	1			
		689	1 3 N	11			
		000		2			
			Peak Hou	r Volumes			
APPROACH:	1	2	3	4	5	Total Entering	
DIRECTION:	NB	SB	EB	WB		Vehicles	
VOLUMES (AM/PM):	2	30	689	708		1,429	
"K" FACTOR:	0.090	APPROA	CH ADT :	15,878	ADT = TOTA	L VOL/"K" FACT,	
TOTAL # OF ACCIDENTS :	2	# OF YEARS:	5		GE#OF NTS(A);	0.40	
CRASH RATE CALC	ULATION :	0.07	0.07 RATE = (A*1,000,000) (ADT*365)				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Comments: Crash rate is significant if > 0.56 crashes per mev for an unsignalized intersection							
and >0.7	3 crashes per m	ev for a signali	zed intersection	n for MassDO	Γ District 4.		

CITY/TOWN:	Newburypo	rt		COUNT DA	TE:	2016	MHD USE ONLY			
DISTRICT: 4	UNSIGN	ALIZED:	Yes	SIGNA	LIZED:		Source #			
		~ IN	TERSEÇTIC	ON DATA ~						
MAJOR STREET :	Merrimac S			MA 24 AMAS ROSSO SO SO SE CO OS POR		*B0973*9*6KirpertKirpe g2*******	ST#			
MINOR STREET(S):	Titcomb Str						ST#			
(-,:										
							ST#			
	-						ST#			
	1 1									
INTERSECTION	North		0				INTERSECTION			
DIAGRAM (Label Approaches)			12	4	700	\vee	REF #			
` ,			\	17		1				
		687	3	23						
						1				
			Peak Hou	r Volumes						
APPROACH:	1	2	3	4	5	Total Entering				
DIRECTION:	NB	SB	EB	WB		Vehicles				
VOLUMES (AM/PM):	23	0	687	700		1,410				
"K" FACTOR:	0.090	APPROA	CH ADT :	15,667	ADT = TOTA	L VOL/"K" FACT				
TOTAL # OF ACCIDENTS :	4	# OF	5		GE#OF	0.80				
ACCIDENTS:	15451550156454141415454545454	YEARS :			NTS(A);		nteriori _d			
CRASH RATE CALC	ULATION :	0.14	RATE =	(A * 1,0 (ADT	* 365)					
Comments : Crash rat	Comments: Crash rate is significant if > 0.56 crashes per mev for an unsignalized intersection									
and >0.7	3 crashes per m	ev for a signali	zed intersection	ı for MassDOI	District 4.		10			

CITY/TOWN:	Newburypo	rt		COUNT DA	TE:	2016	MHD USE ONLY			
DISTRICT: 4	UNSIGN	ALIZED :	Yes	SIGNA	LIZED:		Source #			
		~ INI	TERSECTION	ON DATA ~						
AAA IOD CTDEET.		*****************************	TENGLOTIC	DIV DATA	***************************************	***************************************				
MAJOR STREET :	Merrimac S					•	ST#			
MINOR STREET(S):	Green Stree	Green Street								
							ST#			
	-				_		ST#			
							ST#			
	_									
INTERSECTION	North		0				INTERSECTION			
DIAGRAM (Label Approaches)			2	4	562		REF#			
(Label Applications)				47						
		631	3	1						
				294						
			Peak Hou	r Volumes	1					
APPROACH:	1	2	3	4	5	Total Entering				
DIRECTION:	NB	SB	EB	WB		Vehicles				
VOLUMES (AM/PM):	294	0	631	562		1,487				
"K" FACTOR:	0.090	APPROA	CH ADT :	16,522	ADT = TOTA	L VOL/"K" FACT,				
TOTAL # OF	5	# OF	5		GE#OF	1.00				
ACCIDENTS:		YEARS:		į.	NTS(A);	1.00				
CRASH RATE CALC		0.17	RATE =		000,000) * 365)					
Comments: Crash rat	e is significant	if > 0.56 crache	es per mey for	an uncionaliza	d intersection					
	3 crashes per m		-							

CITY/TOWN:	Newburypo	rt		COUNT DA	ATE:	2016	MHD USE ONLY				
DISTRICT: 4	UNSIGN	ALIZED :		SIGNA	LIZED ;	Yes	Source #				
		~ IN	TERSECTIO	N DATA ^	.						
MAJOR STREET:	Merrimac S	********************		***************************************	, n. d. n. d. n. d. n.	************************	ST#				
MINOR STREET(S):	Water Stree		ot .				ST#				
WINVOIT OTTLET(O):	vater offer										
	-						ST#				
						-	ST#				
							ST#				
	†										
INTERSECTION	 North		0				INTERSECTION				
DIAGRAM	North	Ц	2	4	564		REF#				
(Label Approaches)		_	<u> </u>	4							
		721	3	1,1							
			/	0							
			Peak Hou	r Volumes							
APPROACH:	1	2	3	4	5	Total Entering					
DIRECTION:	NB	SB	EB	WB		Vehicles					
VOLUMES (AM/PM);	0	0	721	564		1,285					
"K" FACTOR:	0.090	APPROA	CH ADT :	14,278	ADT = TOTA	L VOL/"K" FACT.					
TOTAL # OF	3	# OF	5		GE#OF	0.60					
ACCIDENTS :		YEARS ;	***************		NTS(A):	*****************************	ŧ				
CRASH RATE CALC	ULATION :	0.12	RATE = $\frac{(A * 1,000,000)}{(ADT * 365)}$								
Comments: Crash rat	Comments: Crash rate is significant if > 0.56 crashes per mev for an unsignalized intersection										
-	3 crashes per m										

CITY/TOWN:	Newburypo	rt		COUNT DA	TE:	2016	MHD USE ONLY	
DISTRICT: 4	UNSIGN	IALIZED :	Yes	SIGNA	LIZED ;		Source #	
~ INTERSECTION DATA ~								
MAJOR STREET:	State Stree	*************************	ILINOLOTIC		中中市中市中市中市中市中市中市市市市市	. K.K. 3.86-7.8-5-8-7-8-9-8-9-8-9-8-9-8-9-8-9-8-9-8-9-8-9	ST#	
MINOR STREET(S):	Liberty Stre	et			_		ST# []	
							ST#	
							ST#	
							ST#	
	A					1		
INTERSECTION	North		363	A	F-7		INTERSECTION	
DIAGRAM (Label Approaches)			$\frac{1}{2}$	4	57		REF #	
(2020pp.ouoo)				1				
		0	3	1				
				0				
						-		
			ax .	r Volumes		1 1		
APPROACH:	1	2	3	4	5	Total Entering		
DIRECTION:	NB	SB	EB	WB		Vehicles		
VOLUMES (AM/ <u>PM</u>);		363	0	57		420		
"K" FACTOR:	0.090	APPROA	CH ADT :	4,667	ADT = TOTA	L VOL/"K" FAC1		
TOTAL # OF	2	# OF	5		GE#OF	0.40		
ACCIDENTS:		YEARS:			NTS(A):	0.40	- 10	
CRASH RATE CALC		0.23		(A * 1,0 (ADT				
					,			
Comments: Crash rat		if > 0.56 crashe					- 1	

CITY/TOWN:	Newburypo	rt		COUNT DA	TE:	2016	MHD USE ONLY
DISTRICT: 4	UNSIGN	ALIZED:	Yes	SIGNA	LIZED :		Source #
**************************************	24 (~ 1N'	TERSECTIO	ON DATA ~	,	55555555555555	**************************************
MAJOR STREET:	Winter Stree	et					ST#
MINOR STREET(S):	Route 1 SB	On-Ramp					ST#
							ST#
							ST#
	•						ST#
			-				
INTERSECTION	North		271	ſ			INTERSECTION
DIAGRAM	TVOITI	l.	2	4	0		REF#
(Label Approaches)		_	47	4			
		0	3	1,7			
			V	0			
			Peak Hou	r Volumes			
APPROACH:	1	2	3	4	5	Total Entering	
DIRECTION:	NB	SB	EB	WB		Vehicles	
VOLUMES (AM/PM):		271	0	0		271	
"K" FACTOR:	0.090	APPROA	CH ADT :	3,011	ADT = TOTA	L VOL / "K" FACT	
TOTAL # OF ACCIDENTS :	1	# OF YEARS :	5		GE#OF NTS(A):	0.20	
CRASH RATE CALCULATION: 0.18 RATE = (A * 1,000,000) (ADT * 365)						***************************************	
Comments: Crash rat	Comments: Crash rate is significant if > 0.56 crashes per mev for an unsignalized intersection						
***************************************	3 crashes per me		· <u>-</u>				









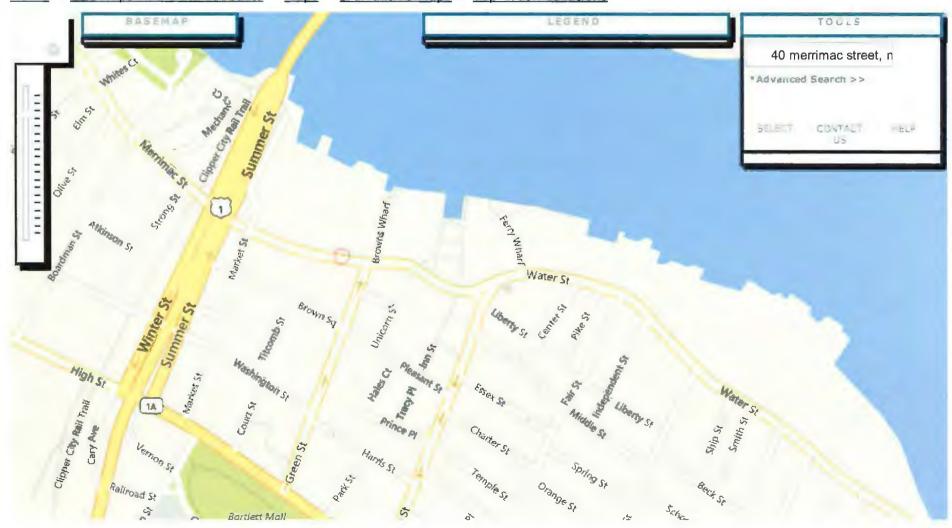


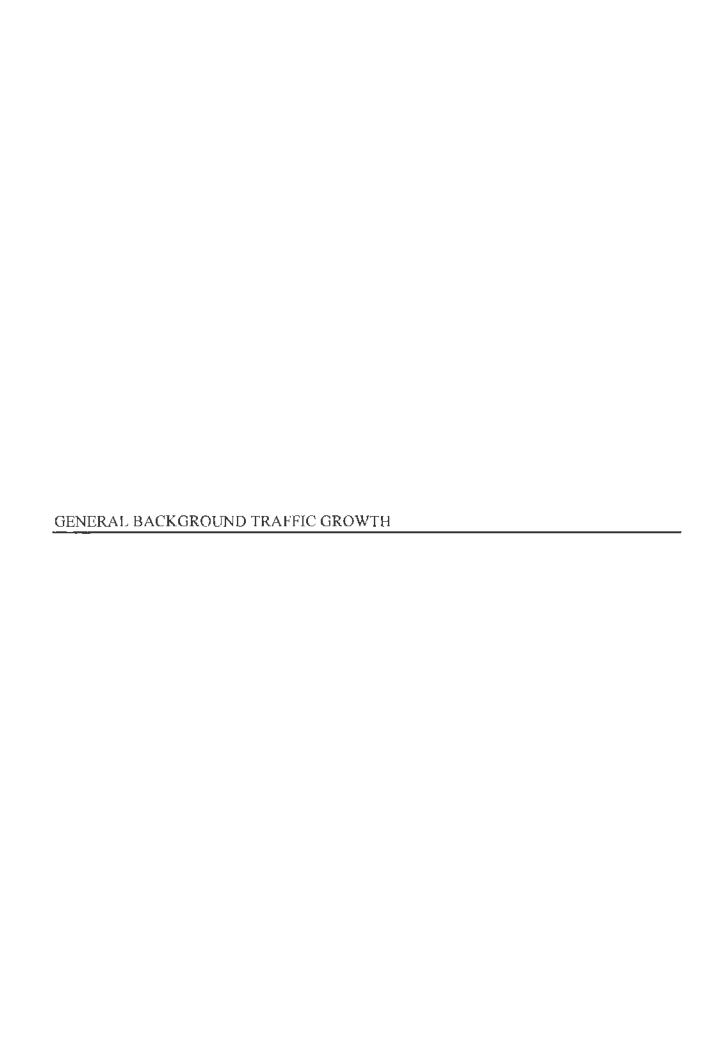
The Official Website of The Massachusetts Department of Transportation



Top Crash Locations

Home > GIS Maps And Data Products > Maps > Interactive Maps > Top Crash Locations







Calculated by: _____

10 New England Business Center Drive Suite 314 Andover, MA 01810-1066 Office 978-474-8800

		Fax 970-008-0006
Job:	West and Development	Job Number: _728/
Location:	Newburggolt, MA	Date: 11/3-1/6
Title:	Annual Browth Calculations	Sheet of

Checked by:____

Count station \$5258 I 95, north of Sothand load, Newbury, MA

2006 = 65,791 2015 = 67,000

Annual Growth & 67,000/65,781 × 0.2% per yr.

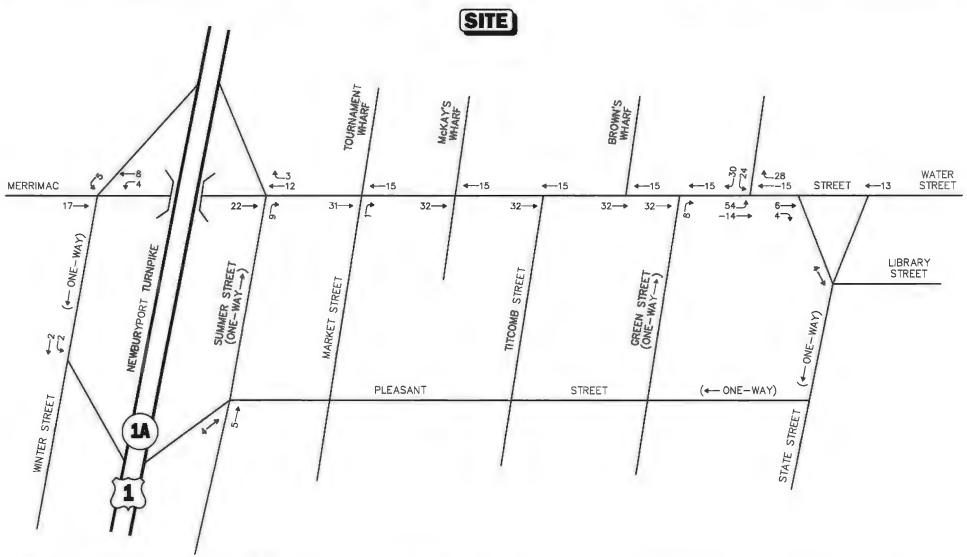


Merrimac Ale Houses Weekday Morning

Peak Hour Traffic Volumes

Tangportation Engineers & Planners Vanasse & Associates, Inc.

Not To Scale



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

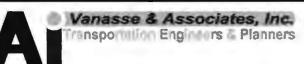


Figure A-2

Merrimac Ale House Weekday Evening Peak Hour Traffic Volumes

Figure A-3

Merrimac Ale House Saturday Midday Peak Hour Traffic Volumes

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Vanasse & Associates, Inc.

Not To Scale

Figure A-4

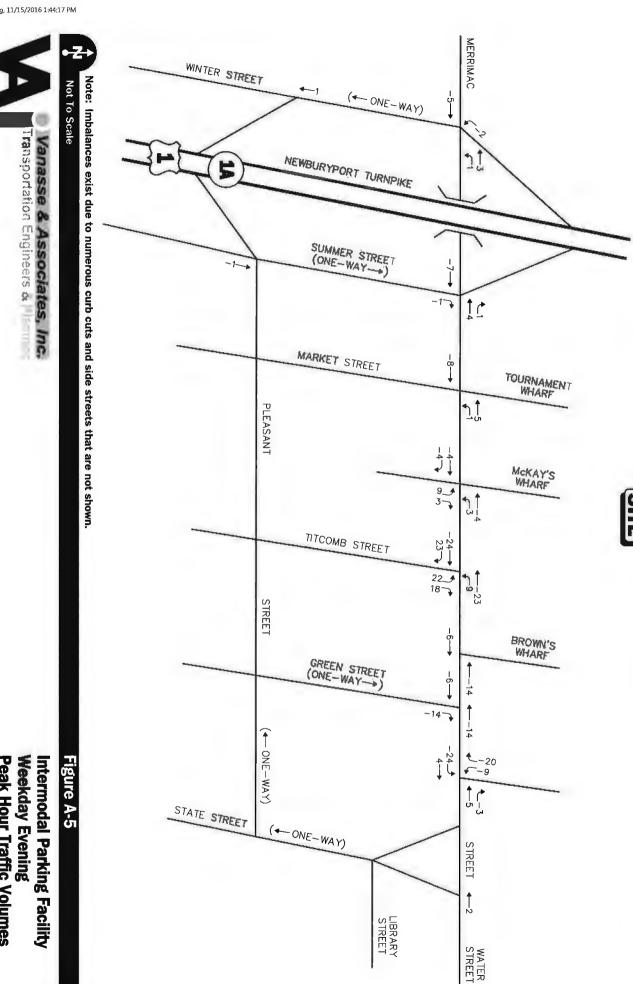
Intermodal Parking Facility Weekday Morning Peak Hour Traffic Volumes

ransportation Engine is & Planner

Not To Scale

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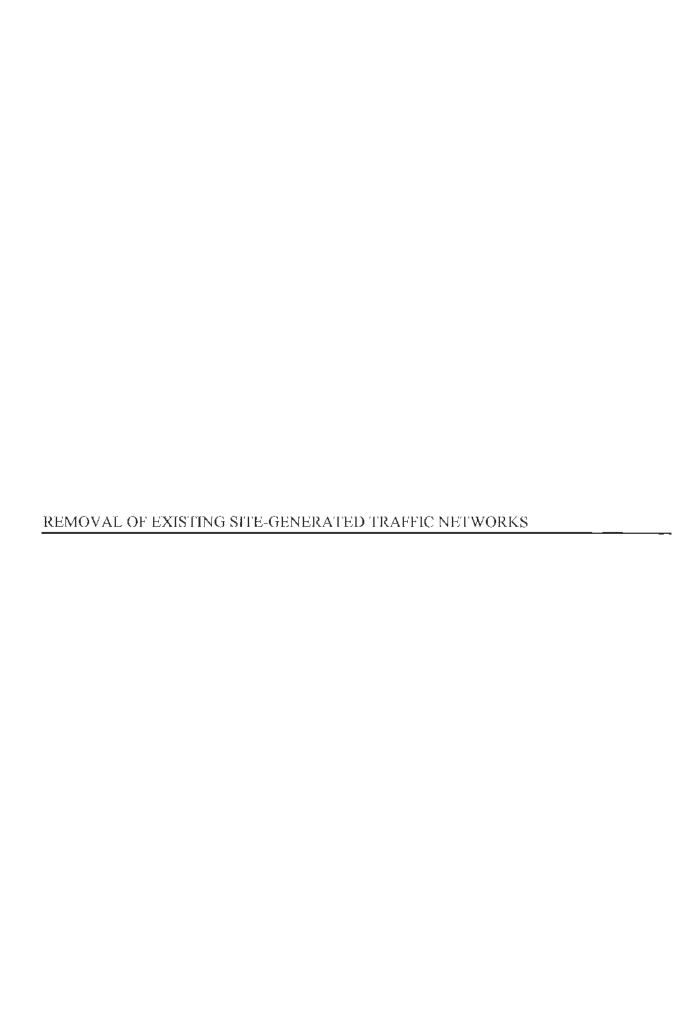


Peak Hour Traffic Volumes

Figure A-6

intermodal Parking Facility Saturday Midday Peak Hour Traffic Volumes

Not To Scale



MERRIMAC (- ONE-WAY) -20-NEWBURYPORT TURNPIKE 1-13 SUMMER STREET (ONE-WAY-) -27--37 15 MARKET STREET -30-TOURNAMENT WHARF .22 -7.→ -23→ MCKAY'S WHARF TITCOMB STREET 38 24 62 9 STREET -23 BROWN'S WHARF GREEN STREET (ONE-WAY-) 1 -6 -2 -2_4 9 (ONE-WAY) -2-‡ţ STATE STREET ĺ -ONE-WAY) STREET LIBRARY WATER STREET

Figure A-7

Peak Hour Traffic Volumes Weekday Morning Removel of Existing Trips

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1

Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale



Vanasse & Associates, Inc.

ransportation Engineers & Planners

Figure A-8

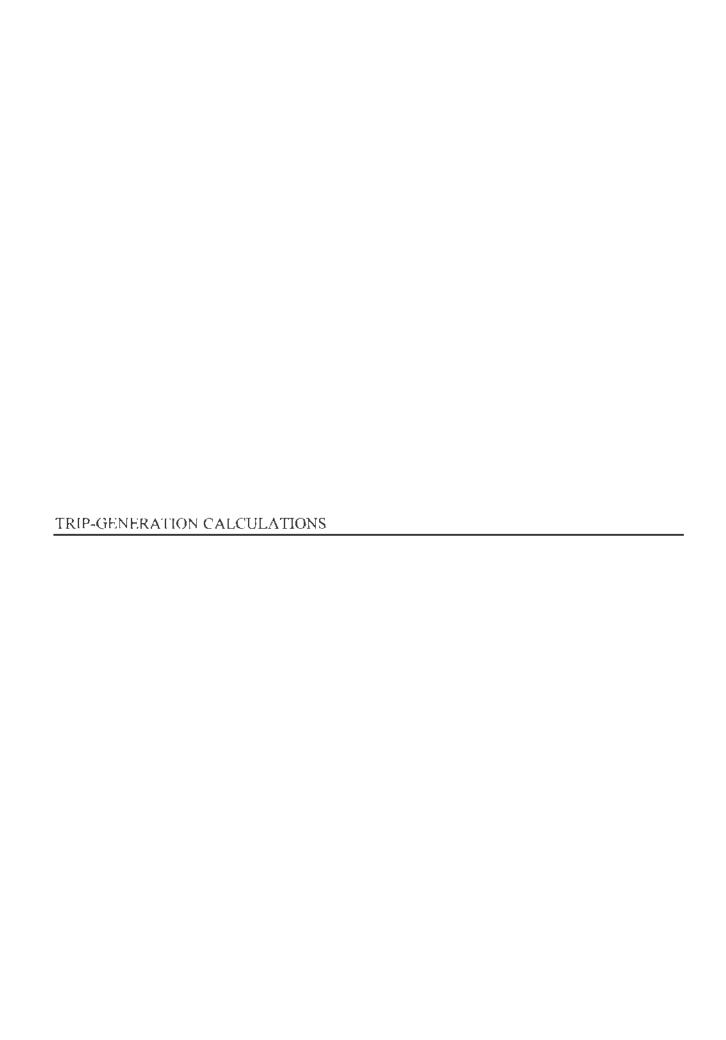
Removel of Existing Trips Weekday Evening Peak Hour Traffic Volumes

Peak Hour Traffic Volumes

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nspor or manners. Plane's

Not To Scale



Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition Land Use Code (LUC) 230 - Residential Condominium/Townhouse

Average Vehicle Trips Ends vs: Dwelling Units

Independent Variable (X): 200

AVERAGE WEEKDAY DAILY

```
Ln T = 0.87 Ln (X) + 2.46

Ln T = 0.87 Ln 200 + (2.46)

Ln T = 7.07

T = 1175.60

T = 1,176 vehicle trips

with 50% (588 vpd) entering and 50% (588 vpd) exiting.
```

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

```
Ln T = 0.80 Ln (X) + 0.26

Ln T = 0.80 Ln 200 + (0.26)

Ln T = 4.50

T = 89.90

T = 90 vehicle trips

with 17% ( 15 vph) entering and 83% ( 75 vph) exiting.
```

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

```
Ln T = 0.82 Ln (X) + 0.32

Ln T = 0.82 Ln 200 + (0.32)

Ln T = 4.66

T = 106.13

T = 106 vehicle trips

with 67% ( 71 vph) entering and 33% ( 35 vph) exiting.
```

SATURDAY DAILY

```
T = 3.62 * (X) + 427.93

T = 3.62 * 200 +427.93

T = 1,152 vehicle trips

with 50% ( 576 vph) entering and 50% ( 576 vph) exiting.
```

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

```
T = 0.29 * (X) +42.63

T = 0.29 * 200 +42.63

T = 100.63

T = 101 vehicle trips

with 54% ( 55 vph) entering and 46% ( 46 vph) exiting.<sup>1</sup>
```

Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition Land Use Code (LUC) 310 - Hotel

Average Vehicle Trips Ends vs: Rooms Independent Variable (X): 100

AVERAGE WEEKDAY DAILY

```
T = 8.95 * (X) - 373.16

T = 8.95 * 100 -373.16

T = 521.84

T = 522 vehicle trips
```

with 50% (261 vpd) entering and 50% (261 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

```
T = 0.53 * (X)

T = 0.53 * 100

T = 53.00

T = 54.00 vehicle trips

with 59% ( 32 vpd) entering and 41% ( 22 vpd) exiting.
```

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

```
T = 0.60 * (X)

T = 0.60 * 100

T = 60.00

T = 60 vehicle trips

with 51% ( 31 vpd) entering and 49% ( 29 vpd) exiting.
```

SATURDAY DAILY

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

```
T = 0.69 * (X) + 4.32 

T = 0.69 * 100 + 4.32 

T = 73.32 

T = 73 vehicle trips 

with 56% ( 41 vph) entering and 44% ( 32 vph) exiting.
```

Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition Land Use Code (LUC) 820 - Shopping Center

Average Vehicle Trips Ends vs: 1,000 Square Feet Gross Leasable Area Independent Variable (X): 20.000

AVERAGE WEEKDAY DAILY

```
Ln T = 0.65 Ln (X) + 5.83

Ln T = 0.65 Ln 20.000 + (5.83)

Ln T = 7.78

T = 2385.65

T = 2,386 vehicle trips

with 50% ( 1,193 vpd) entering and 50% ( 1,193 vpd) exiting.
```

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

```
T = 0.96 * (X)
T = 0.96 * 20.000
T = 19.20
T = 19 vehicle trips
with 62% ( 12 vph) entering and 38% ( 7 vph) exiting.
```

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

SATURDAY DAILY

```
\begin{array}{lll} \text{Ln T} = 0.63 \text{ Ln (X)} + 6.23 \\ \text{Ln T} = 0.63 \text{ Ln} & 20.000 & + (6.23) \\ \text{Ln T} = 8.12 & & \\ \text{T} = 3352.00 & \\ \text{T} = 3,352 & \text{vehicle trips} \\ & & \text{with } 50\% \ ( & 1,676 & \text{vpd}) \text{ entering and } 50\% \ ( & 1,676 & \text{vpd}) \text{ exiting.} \end{array}
```

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

```
Ln T = 0.65 Ln (X) + 3.78

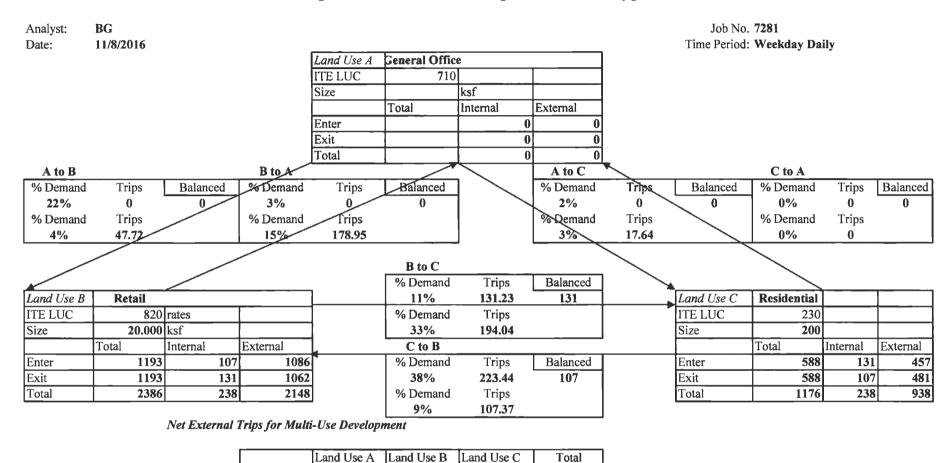
Ln T = 0.65 Ln 20.000 + (3.78)

Ln T = 5.73

T = 307.12

T = 307 vehicle trips

with 52% ( 160 vph) entering and 48% ( 147 vph) exiting.
```



Single-Use Trip Gen Est.

Enter

Total

Exit

0

0

0

457

481

938

1176

1543

1543

3086

3562

Internal Capture Rate

13%

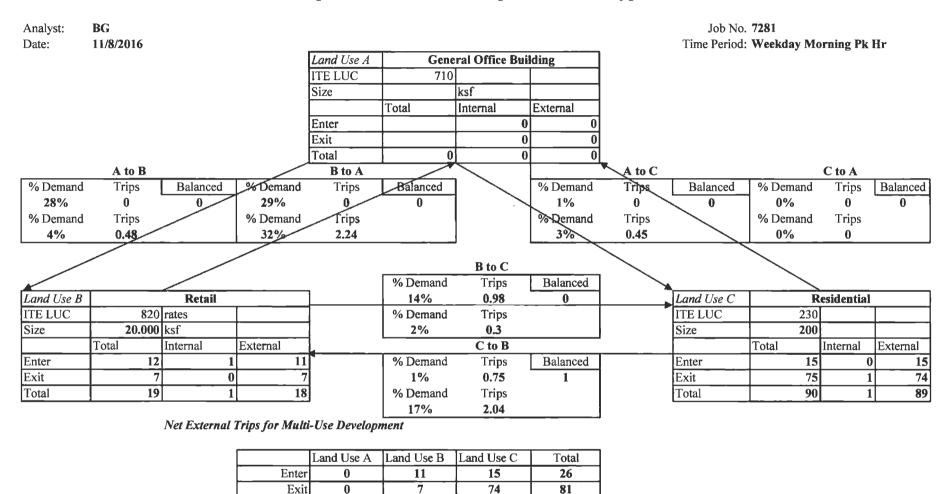
1086

1062

2148

2386

^{*} from ITE Trip Generation Handbook, 9th Edition, 2012.



Single-Use Trip Gen Est.

Total

0

89

90

107

109

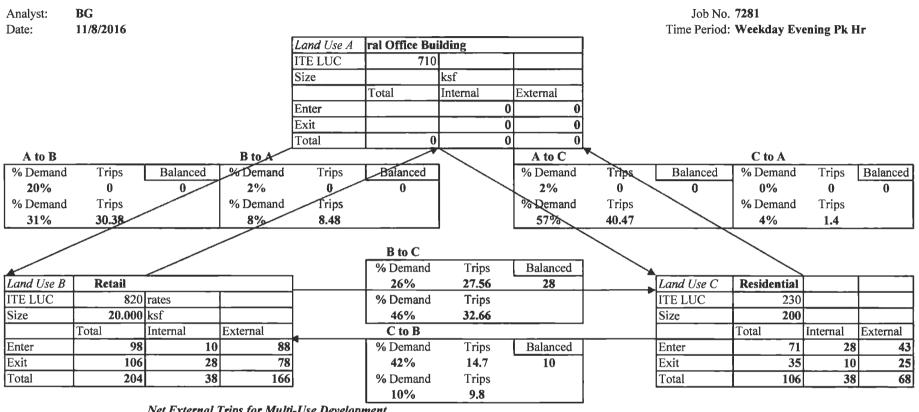
18

19

Internal Capture Rate

2%

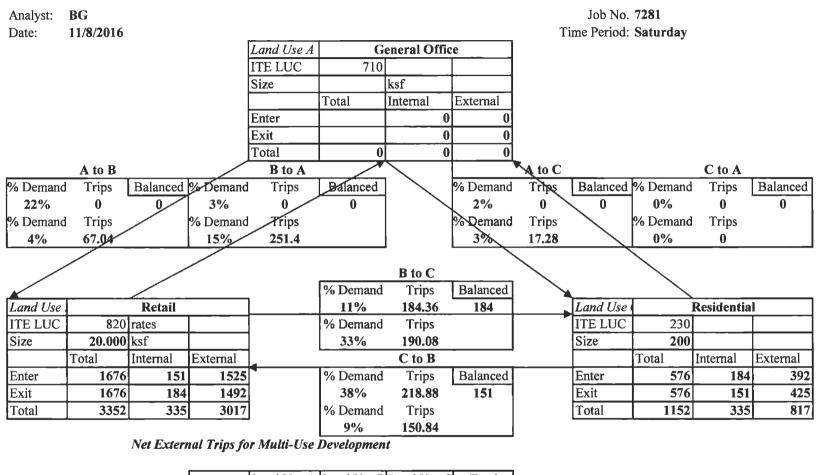
^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014.



Net External Trips for Multi-Use Development

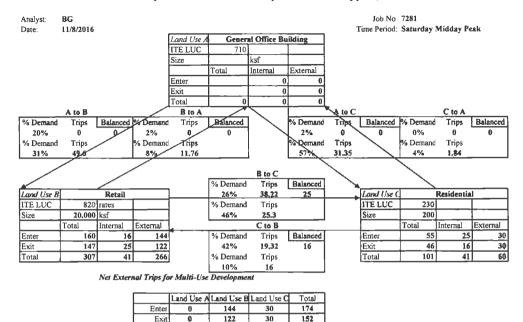
		Land Use A	Land Use B	Land Use C	Total	
	Enter	0	88	43	131	
	Exit	0	78	25	103]
	Total	0	166	68	234	Internal Capture Rate
Single-Use Tri	p Gen Est.	0	204	106	310	25%

^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014.



			Land Use A	Land Use B	Land Use C	Total	
		Enter	0	1525	392	1917	
		Exit	0	1492	425	1917	
		Total	0	3017	817	3834	Internal Capture Rate
5	Single-Use	Trip Gen	0	3352	1152	4504	15%

^{*} from ITE Trip Generation Handbook, 9th Edition, 2012 (use weekday daily).



266

307

60

101

326

408

Internal Capture Rate

20%

ũ

Total

Single-Use Trip Gen I

Trip Origins

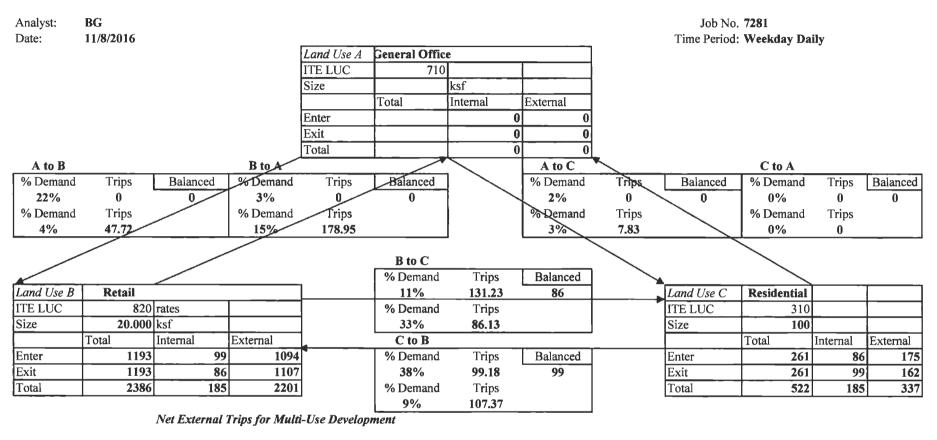
	AM Peak Hou	PM Peak Hou	Daily
From Offic to Office	n/a	n/a	2%
to Retail	28%	20%	22%
to Residentia	1%	2%	2%
From Reta to Office	29%	2%	3%
to Retail	n/a	n/a	30%
to Residentia	14%	26%	11%
From Resi to Office	2%	4%	n/a
to Retail	1%	42%	38%
to Residentia	п/а	n/a	n/a

Trip Destinations

		AM Peak Hour	PM Peak Hous	Daily
To Office	from Office	0/8	n/a	2%
	From Retail	4%	31%	15%
	From Residen	3%	57%	n/a
to Retail	From Office	32%	8%	4%
	From Retail	n/a	n/a	28%
	From Residen	L7%	10%	9%
to Residen	From Office	0%	4%	3%
	From Retail	2%	46%	33%
	From Residen	15/8	n/a	n/a

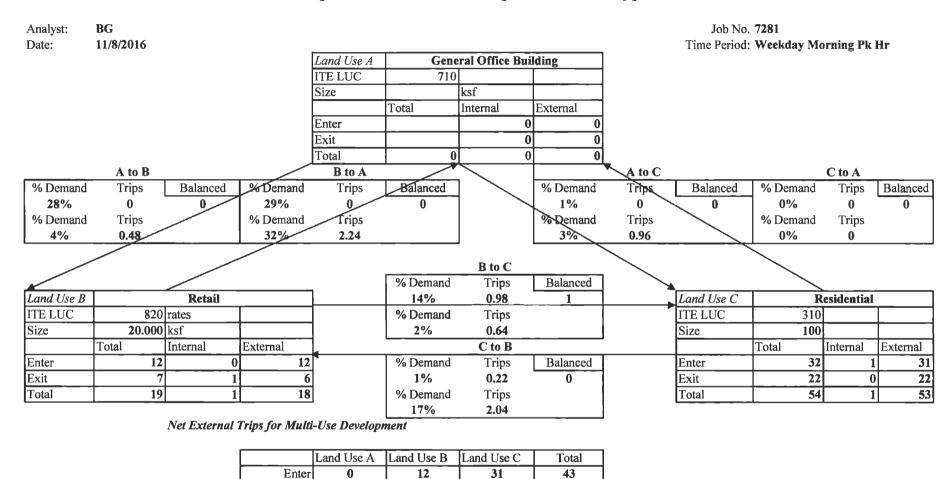
^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)

^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)



		Land Use A	Land Use B	Land Use C	Total]
	Enter	0	1094	175	1269]
	Exit	0	1107	162	1269]
	Total	0	2201	337	2538	Internal Capture Rate
Single-Use Tri	p Gen Est.	0	2386	522	2908	13%

^{*} from ITE Trip Generation Handbook, 9th Edition, 2012.



Single-Use Trip Gen Est.

0

0

0

Exit

Total

22

53

54

6

18

19

28

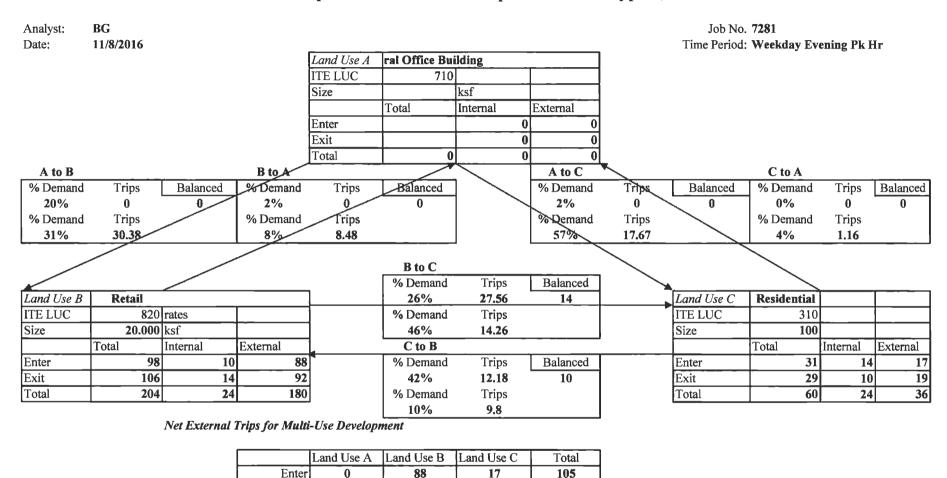
71

73

Internal Capture Rate

3%

^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014.



Single-Use Trip Gen Est.

Exit

Total

0

0

0

92

180

204

19

36

60

111

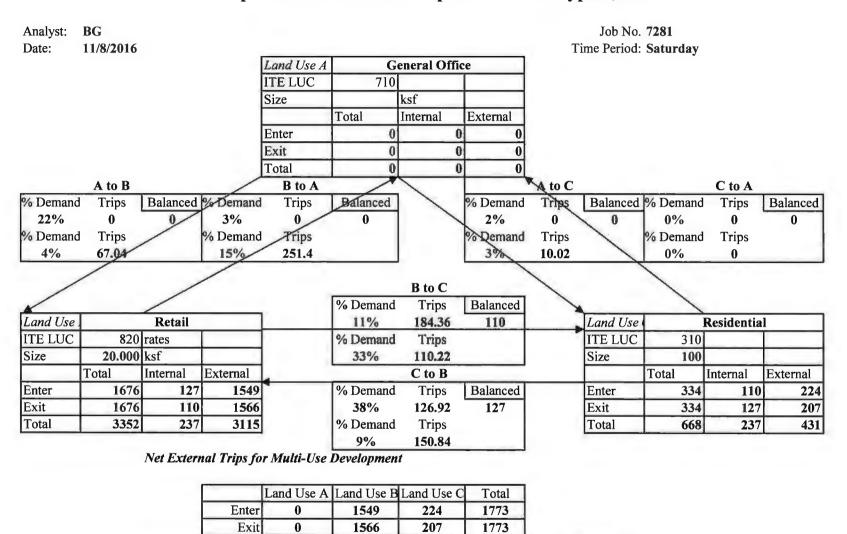
216

264

Internal Capture Rate

18%

^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014.



3546

4020

431

668

Internal Capture Rate

12%

0

0

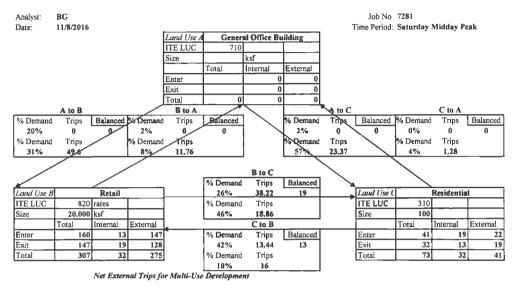
Total

Single-Use Trip Gen

3115

3352

^{*} from ITE Trip Generation Handbook, 9th Edition, 2012 (use weekday daily).



,		Land Use A	Land Use B	Land Use C	Total	
	Enter	0	147	22	169	
	Exit	0	128	19	147	
	Total	0	275	41	316	Internal Capture Rate
Single-Use	Trip Gen I	0	307	73	380	17%

^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)

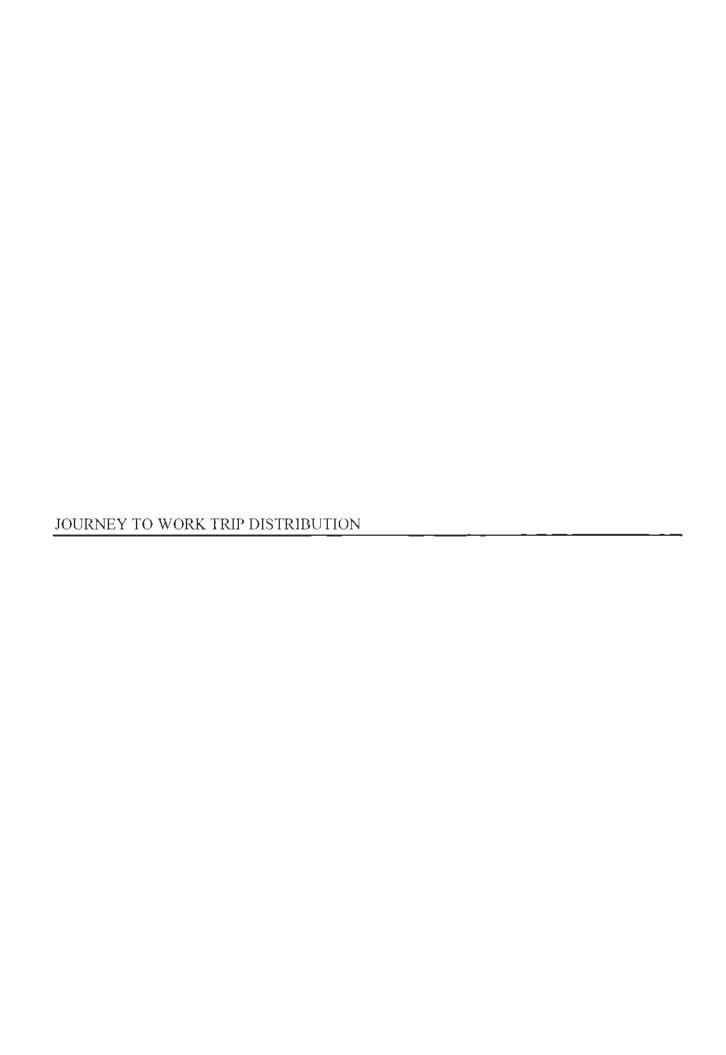
Trip Origins

	AM Peak Hour	PM Peak Hou	Daily
From Offic to Office	n/a	n/a	2%
to Retail	28%	20%	22%
to Residential	1%	2%	2%
From Reta 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	п/а	n/a	n/a

Trip Destinations

_		AM Peak Hou	PM Peak Hou	Daily
To Office	from Office	n/a	n/a	2%
	From Retail	4%	31%	15%
	From Residen	3%	57%	п/а
to Retail	From Office	32%	8%	4%
	From Retail	п/а	n/a	28%
	From Residen	17%	10%	9%
to Residen	From Office	0%	4%	3%
	From Retail	2%	46%	33%
	From Residen	n/a	n/a	п/а

^{*} from ITE Trip Generation Handbook, 3rd Edition, 2014 (use weekday evening peak-hour)



	Residence			Workplace					·			
			State/U S. Island				Merrimac	Maniana	Davida 4	B. A. A	State	Summer Street/Winte
	_		Area/Foreign				Street	Merrimac	Route 1	_	Street/Green	r Street
State	County	MCD	Country	County	MCD	Number	(East)	Street West	North	South	Street South	South
Massachusetts	Essex County	Newburyport city	Massachusetts	Essex County	Newburyport city	3,532	1413	1237		177		353
Massachusetts	Essex County		Massachusetts	Suffolk County	Boston city	709				709		
Massachusetts	Essex County	Newburyport city		Essex County	Haverhill city	235		235				
Massachusetts		Newburyport city		Essex County	Andover town	234		234				<u> </u>
Massachusetts	Essex County	Newburyport city	Massachusetts	Essex County	Peabody city	229				229		<u> </u>
Massachusetts	Essex County	Newburyport city	Massachusetts	Essex County	Danvers town	192				192		
Massachusetts	Essex County	Newburyport city	Massachusetts	Essex County	Salisbury town	188			188			
Massachusetts	Essex County	Newburyport city	Massachusetts	Essex County	Newbury town	170			170			
Massachusetts	Essex County	Newburyport city	New Hampshire	Rockingham County	Portsmouth city	169			169			
Massachusetts	Essex County	Newburyport city		Essex County	Amesbury Town city	155			155		ĺ	
Massachusetts		Newburyport city		Essex County	Lawrence city	136		136				
		Newburyport city		Essex County	Rowley town	132				132		
Massachusetts		Newburyport city		Middlesex County	Medford city	128				128		
Massachusetts		Newburyport city		Essex County	Beverly city	124				124		
Massachusetts	Essex County	Newburyport city		Essex County	Ipswich town	114				114	F	
Massachusetts		Newburyport city		Rockingham County	Seabrook town	104			104			
Massachusetts		Newburyport city		Middlesex County	Cambridge city	102				102		
Massachusetts		Newburyport city		Essex County	Georgetown town	87		87				
Massachusetts		Newburyport city		Essex County	Lynn city	85				85		
Massachusetts		Newburyport city			West Newbury town	85		85				
Massachusetts		Newburyport city		Essex County	Gloucester city	82	21			61		
Massachusetts		Newburyport city		Middlesex County	Chelmsford town	75		75			l	
Massachusetts		Newburyport city		Middlesex County	Lowell city	75		75				
Massachusetts		Newburyport city			North Andover town	73	-	37	-	36		-
Massachusetts		Newburyport city			Salem town	67		- 37		67		
Massachusetts		Newburyport city		Suffolk County	Winthrop Town city	65		33		32		
Massachusetts				Middlesex County	Tewksbury town	64	_	32		32		
		Newburyport city		Middlesex County		61		31		30		
Massachusetts	Essex County	Newburyport city	Iniassacriusetts	Imiggiesex County	Burlington town				765		<u> </u>	L
						7,472	1,434	2,297	786	2,250	353	353
							19%	31%	10%	30%	5%	5%







Figure A-10

Project - Generated Weekday Morning Peak Hour Traffic Volumes Residential Component

WATER STREET

Engineers & Planners

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Project - Generated
Weekday Evening
Peak Hour Traffic Volumes
Residential Component

Figure A-12

Peak Hour Traffic Volumes Residential Component Project - Generated Saturday Midday

Not To Scale

Vanasse & Associates, Inc. Transportation Engineers & Planners

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Project - Generated
Weekday Morning
Peak Hour Traffic Volumes
Commercial Component



Vanasse & Associates, Inc.

Figure A-14

Project - Generated Weekday Evening Peak Hour Traffic Volumes Commercial Component



Vanasse & Associates, Inc.

Figure A-15

Project - Generated Saturday Midday Peak Hour Traffic Volumes Commercial Component

CAPACITY ANALYSIS WORKSHEETS

Merrimac Street and Water Street at State Street

Merrimac Street at the Route 1 Southbound Off-Ramp and Winter Street

Merrimac Street at the Route 1 Northbound On-Ramp and Summer Street

Merrimac Street at Market Street and Tournament Wharf

Merrimac Street at McKay's Wharf

Merrimac Street at Titcomb Street

Merrimac Street at Brown's Wharf

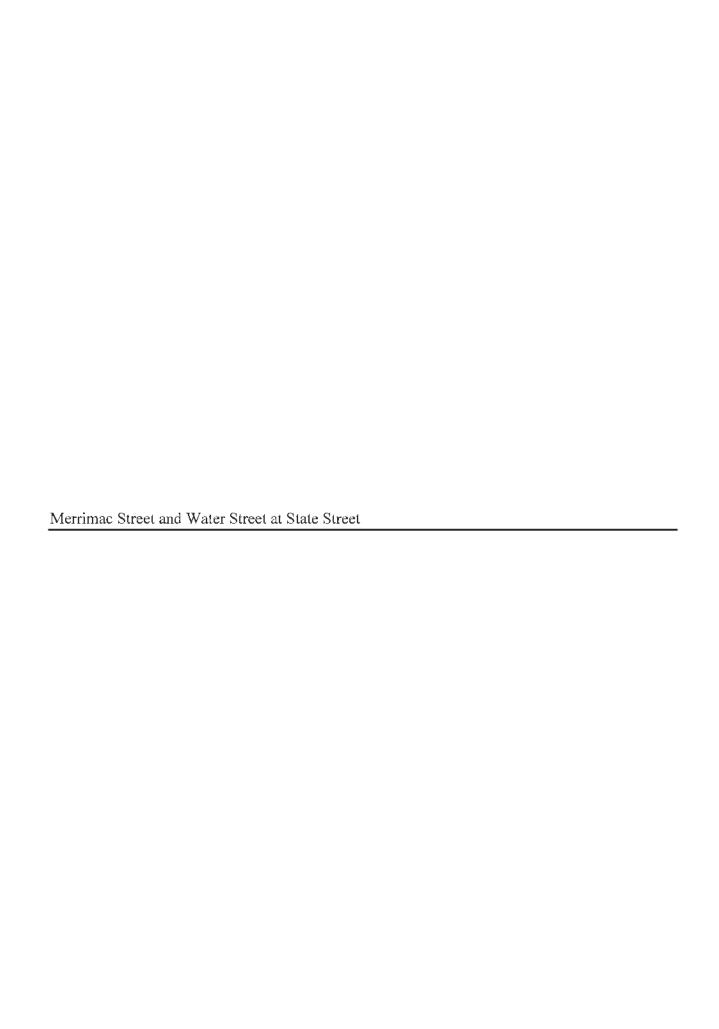
Merrimac Street at Green Street

Merrimac Street at the Waterfront Park Drive

State Street at Liberty Street

Winter Street at the Route 1 Southbound On-Ramp

Summer Street at the Route 1 Northbound Off-Ramp and Pleasant Street



	→	-	•	-	1	-
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1	7	ሻ	1		7
Volume (vph)	370	329	69	341	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	11%	1000		12%	11%	
Satd. Flow (prot)	1796	151 1	1631	1768	0	1796
Fit Permitted	1700	1011	0.402	1700		1700
Satd. Flow (perm)	1796	1511	690	1768	0	1796
Right Turn on Red	1730	Yes	030	1700	U	Yes
Satd. Flow (RTOR)		383				163
	30	303		30	30	
Link Speed (mph)						
Link Distance (ft)	605			749	167	
Travel Time (s)	13.8	0.00	0.00	17.0	3.8	0.00
Peak Hour Factor	0.86	0.86	0.86	0.86	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	1%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	430	383	80	397	0	0
Turn Type	NA	Perm	Perm	NA		Perm
Protected Phases	4			8		
Permitted Phases		4	8			2
Detector Phase	4	4	8	8		2
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0
Total Split (s)	40.0	40.0	40.0	40.0		19.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5
, ,	0.5	0.5	0.5	0.5		0.5
All-Red Time (s)						
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?			414			
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	None	None		Max
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	16.9	16.9	16.9	16.9		
Actuated g/C Ratio	0.41	0.41	0.41	0.41		
v/c Ratio	0.59	0.45	0.28	0.55		
Control Delay	12.6	2.9	10.3	12.0		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	12.6	2.9	10.3	12.0		
LOS	В	Α.	В	В		
	8.0		D	11.7		
Approach Delay						
Approach LOS	A 71	^	4.4	B		
Queue Length 50th (ft)	71	0	11	64		
Queue Length 95th (ft)	117	25	29	107		
Internal Link Dist (ft)	525			669	87	

	-	*	•	-	4	-
Lane Group	EBT T	EBR	WBL	WBT	NBL	NBR
Turn Bay Length (ft)						
Base Capacity (vph)	1564	1365	601	1540		
Starvation Cap Reductn	0	0	0	0		
Spillback Cap Reductn	0	0	0	0		
Storage Cap Reductn	0	0	0	0		
Reduced v/c Ratio	0.27	0.28	0.13	0.26		
Intersection Summary						
Area Type:	Other					
Cycle Length: 59						
Actuated Cycle Length: 4	1.4					
Natural Cycle: 40						
Control Type: Semi Act-U						
Maximum v/c Ratio: 0.59						
Intersection Signal Delay	: 9.4			Int	tersection	LOS: A
Intersection Capacity Util	ization 30.9%			IC	U Level c	of Service A

Splits and Phases: 9: State Street & Merrimac Street/Water Street

Analysis Period (min) 15

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2016 Existing Wkdy PM Peak 9: State Street & Merrimac Street/Water Street

	-	-	•	←	4	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1	7	7	†		7	
Volume (vph)	444	277	86	478	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	11%			12%	11%		
Satd. Flow (prot)	1796	1526	1663	1786	0	1796	
Flt Permitted			0.376				
Satd. Flow (perm)	1796	1526	658	1786	0	1796	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		292					
Link Speed (mph)	30			30	30		
Link Distance (ft)	605			749	167		
Travel Time (s)	13.8			17.0	3.8		
Peak Hour Factor	0.95	0.95	0.89	0.89	0.92	0.92	
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	467	292	97	537	0	0	
Turn Type	NA	Perm	Perm	NA		Perm	
Protected Phases	4			8			
Permitted Phases		4	8			2	
Detector Phase	4	4	8	8		2	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0	
Total Split (s)	40.0	40.0	40.0	40.0		19.0	
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%	
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0	
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None	None		Max	
Walk Time (s)	5.0	5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0	
Act Effct Green (s)	18.8	18.8	18.8	18.8			
Actuated g/C Ratio	0.43	0.43	0.43	0.43			
v/c Ratio	0.60	0.35	0.34	0.69			
Control Delay	12.4	2.3	11.1	14.7			
Queue Delay	0.0	0.0	0.0	0.0			
Total Delay	12.4	2.3	11.1	14.7			
LOS	В	A	В	В			
Approach Delay	8.6	, ,		14.2			
Approach LOS	Α			В			
Queue Length 50th (ft)	79	0	14	96			
Queue Length 95th (ft)	138	25	37	164			
Internal Link Dist (ft)	525	20	Ų,	669	87		
internal Link Dist (It)	020			000	07		

	-	*	1	←	1	-		
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	- 35-	19.58
Turn Bay Length (ft)								
Base Capacity (vph)	1514	1332	554	1505				
Starvation Cap Reductn	0	0	0	0				
Spillback Cap Reductn	0	0	0	0				
Storage Cap Reductn	0	0	0	0				
Reduced v/c Ratio	0,31	0.22	0.18	0,36				
Intersection Summary								
Area Type:	Other							

Cycle Length: 59

Actuated Cycle Length: 43.3

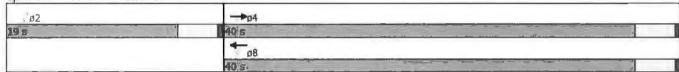
Natural Cycle: 45

Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.69 Intersection Signal Delay: 11.1 Intersection Capacity Utilization 34.8%

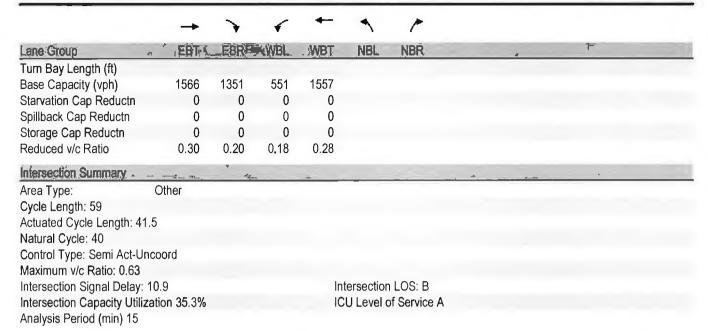
Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: State Street & Merrimac Street/Water Street



	→	*	1	←	4	-
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1	7	ሻ	1		7
Volume (vph)	449	256	90	396	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	11%			12%	11%	
Satd. Flow (prot)	1796	1511	1631	1786	0	1796
Flt Permitted	., 00	1011	0.368	1,00	•	
Satd. Flow (perm)	1796	1511	632	1786	0	1796
Right Turn on Red	17 30	Yes	002	1700	U	Yes
Satd. Flow (RTOR)		264				163
	30	204		30	30	
Link Speed (mph)						
Link Distance (ft)	605			749	167	
Travel Time (s)	13.8			17.0	3.8	
Peak Hour Factor	0.97	0.97	0.90	0.90	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	463	264	100	440	0	0
Turn Type	NA	Perm	Perm	NA		Perm
Protected Phases	4			8		
Permitted Phases		4	8	_		2
Detector Phase	4	4	8	8		2
Switch Phase	,		•			
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0
	40.0	40.0	40.0	40.0		19.0
Total Split (s)						
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	None	None		Max
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effet Green (s)	17.0	17.0	17.0	17.0		U
	0.41	0.41	0.41	0.41		
Actuated g/C Ratio						
v/c Ratio	0.63	0.34	0.39	0.60		
Control Delay	13.5	2.5	12.7	12.9		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	13.5	2.5	12,7	12.9		
LOS	В	A	В	В		
Approach Delay	9.5			12.9		
Approach LOS	A			В		
Queue Length 50th (ft)	78	0	15	73		
Queue Length 95th (ft)	138	25	41	129		
Internal Link Dist (ft)	525			669	87	
miles and and the	0.20			300		



Splits and Phases: 9: State Street & Merrimac Street/Water Street

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1	7	ሻ	†		7	
Volume (vph)	397	353	74	374	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	11%			12%	11%		
Satd. Flow (prot)	1796	1511	1631	1768	0	1796	
Flt Permitted			0.376				
Satd. Flow (perm)	1796	1511	646	1768	0	1796	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		410					
Link Speed (mph)	30			30	30		
Link Distance (ft)	605			749	167		
Travel Time (s)	13.8			17.0	3.8		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.92	0.92	
Heavy Vehicles (%)	0%	1%	4%	1%	0%	0%	
Shared Lane Traffic (%)	070	170	770	1 70	0 70	070	
Lane Group Flow (vph)	462	410	86	435	0	0	
Turn Type	NA	Perm	Perm	NA	U	Perm	
Protected Phases	4	1 CIIII	1 CIIII	8		i Cilli	
Permitted Phases	4	4	8	O		2	
Detector Phase	4	4	8	8		2	
Switch Phase	*	4	0	0		2	
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0	
* *	20.0	20.0	20.0	20.0		20.0	
Minimum Split (s)	40.0	40.0	40.0			19.0	
Total Split (s)				40.0			
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%	
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0	
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None	None		Max	
Walk Time (s)	5.0	5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0	
Act Effct Green (s)	18.1	18.1	18.1	18.1			
Actuated g/C Ratio	0.42	0.42	0.42	0.42			
v/c Ratio	0.61	0.47	0.32	0.58			
Control Delay	12.7	2.8	10.7	12.2			
Queue Delay	0.0	0.0	0.0	0.0			
Total Delay	12.7	2.8	10.7	12.2			
LOS	В	Α	В	В			
Approach Delay	8.1			12.0			
Approach LOS	Α			В			
Queue Length 50th (ft)	78	0	12	72			
Queue Length 95th (ft)	127	25	32	118			
Internal Link Dist (ft)	525	20	V#	669	87		
mond and sor (II)	520				Ų1		

	-	1	1	←	1	1				
Lane Group	EBT	₽EBR.	WBL	WBT	NBL	NBR		- + + +	7 ===	
Turn Bay Length (ft)										
Base Capacity (vph)	1529	1347	550	1505						
Starvation Cap Reductn	0	0	0	0						
Spillback Cap Reductn	0	0	0	0						
Storage Cap Reductn	0	0	0	0						
Reduced v/c Ratio	0.30	0.30	0.16	0.29						
Intersection Summary		<	_				- 3	A		
Area Type:	Other									
Cycle Length: 59										
Actuated Cycle Length: 42	2.7									
Natural Cycle: 40										
Control Type: Semi Act-Ur	ncoord									
Maximum v/c Ratio: 0.61										
Intersection Signal Delay:	9.5			ln	tersection	n LOS: A				
Intersection Capacity Utiliz		1		IC	U Level o	of Service A				
Analysis Period (min) 15										

Splits and Phases: 9: State Street & Merrimac Street/Water Street

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑	7	ሻ	†		7	
Volume (vph)	482	301	92	527	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	11%			12%	11%		
Satd. Flow (prot)	1796	15 2 6	1663	1786	0	1796	
Flt Permitted	., .,		0.351				
Satd. Flow (perm)	1796	1526	615	1786	0	1796	
Right Turn on Red	.,	Yes	0.0	.,	_	Yes	
Satd. Flow (RTOR)		317					
Link Speed (mph)	30	• • • •		30	30		
Link Distance (ft)	605			749	167		
Travel Time (s)	13.8			17.0	3.8		
Peak Hour Factor	0.95	0.95	0.89	0.89	0.92	0.92	
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	
Shared Lane Traffic (%)	070	070	270	0 70	070	070	
Lane Group Flow (vph)	507	317	103	592	0	0	
Turn Type	NA	Perm	Perm	NA	U	Perm	
Protected Phases	4	I CIIII	I CIIII	8		I CIIII	
Permitted Phases		4	8	U		2	
Detector Phase	4	4	8	8		2	
Switch Phase		7	U	U		2	
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0	
Total Split (s)	40.0	40.0	40.0	40.0		19.0	
	67.8%	67.8%	67.8%	67.8%		32.2%	
Total Split (%) Maximum Green (s)	36.0	36.0	36.0	36.0		15.0	
	3.5	3.5	3.5			3.5	
Yellow Time (s)				3.5		0.5	
All-Red Time (s)	0.5	0.5	0.5	0.5			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	
Lead/Lag							
Lead-Lag Optimize?	0.0	0.0	0.0	0.0		0.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None	None		Max	
Walk Time (s)	5.0	5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0	
Act Effct Green (s)	21.0	21.0	21.0	21.0			
Actuated g/C Ratio	0.46	0.46	0.46	0.46			
v/c Ratio	0.61	0.36	0.37	0.72			
Control Delay	12.2	2.2	11.2	15.0			
Queue Delay	0.0	0.0	0.0	0.0			
Total Delay	12.2	2.2	11.2	15.0			
LOS	В	Α	В	В			
Approach Delay	8.4			14.5			
Approach LOS	A			В			
Queue Length 50th (ft)	89	0	16	111			
Queue Length 95th (ft)	151	25	40	185			
Internal Link Dist (ft)	525			669	87		

		-	*	1	←	1	-
Lane Group	51	EBT_	EBR	WBL	WBT	NBL	NBR
Turn Bay Length (ft)							
Base Capacity (vph)		1455	1296	498	1 446		
Starvation Cap Reduc	ctn	0	0	0	0		
Spillback Cap Reduct	n	0	0	0	0		
Storage Cap Reductr		0	0	0	0		
Reduced v/c Ratio		0.35	0.24	0.21	0.41		
intersection Summar	1			4	- 37		-
Area Type:	(Other					
Cycle Length: 59							
Actuated Cycle Lengt	h: 45.6						
Natural Cycle: 45							
Control Type: Semi A	ct-Unc	oord					
Maximum v/c Ratio: 0	.72						
Intersection Signal De	elay: 11	.2			Int	tersection	LOS: B
Intersection Capacity	Utilizat	ion 37.1%			IC	U Level o	of Service A
Analysis Period (min)	15						

Splits and Phases: 9: State Street & Merrimac Street/Water Street

62	→ 04
98	40.8.
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1	7	1	1		7
Volume (vph)	493	282	96	444	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	11%	1300	1300	12%	11%	1300
Satd. Flow (prot)	1796	1511	1631	1786	0	1796
Flt Permitted	1790	1311	0.336	1700	U	1730
	4700	1511		4700	0	4700
Satd. Flow (perm)	1796	1511	577	1786	0	1796
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		291				
Link Speed (mph)	30			30	30	
Link Distance (ft)	605			749	167	
Travel Time (s)	13.8			17.0	3.8	
Peak Hour Factor	0.97	0.97	0.90	0.90	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	508	291	107	493	0	0
Turn Type	NA	Perm	Perm	NA		Perm
Protected Phases	4	1 01111	1 01111	8		1 01111
Permitted Phases	7	4	8	Ū		2
Detector Phase	4	4	8	8		2
Switch Phase	4	4	O	U		2
	4.0	4.0	4.0	4.0		4.0
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0
Total Split (s)	40.0	40.0	40.0	40.0		19.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	None	None		Max
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
. ,						
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	19.0	19.0	19.0	19.0		
Actuated g/C Ratio	0.44	0.44	0.44	0.44		
v/c Ratio	0.65	0.35	0.43	0.63		
Control Delay	13.4	2.3	13.5	13.0		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	13.4	2.3	13.5	13.0		
LOS	В	A	В	В		
Approach Delay	9.4			13.1		
Approach LOS	A			В		
Queue Length 50th (ft)	89	0	16	85		
Queue Length 95th (ft)	153	25	45	148		
Internal Link Dist (ft)	525	20	40	6 69	87	
internal Link Dist (It)	323			003	01	

	-	1	1	4	1	1			
Láne Group	EBT	EBR	WBL	WBT	NBL.	NBR_	J	1-	1
Turn Bay Length (ft)									
Base Capacity (vph)	1501	1311	482	1493					
Starvation Cap Reductn	0	0	0	0					
Spillback Cap Reductn	0	0	0	0					
Storage Cap Reductn	0	0	0	0					
Reduced v/c Ratio	0.34	0.22	0.22	0.33					

Intersection Summary

Area Type: Other

Cycle Length: 59

Actuated Cycle Length: 43.6

Natural Cycle: 40

Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.65 Intersection Signal Delay: 11.0 Intersection Capacity Utilization 37.9%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: State Street & Merrimac Street/Water Street

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	†	7	ሻ	↑		7	
Volume (vph)	417	360	74	382	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Grade (%)	11%			12%	11%		
Satd. Flow (prot)	1796	1511	1631	1768	0	1796	
FIt Permitted			0.361				
Satd. Flow (perm)	1796	1511	620	1768	0	1796	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		419					
Link Speed (mph)	30			30	30		
Link Distance (ft)	605			749	167		
Travel Time (s)	13.8			17.0	3.8		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.92	0.92	
Heavy Vehicles (%)	0%	1%	4%	1%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	485	419	86	444	0	0	
Turn Type	NA	Perm	Perm	NA	_	Perm	
Protected Phases	4			8			
Permitted Phases	•	4	8	_		2	
Detector Phase	4	4	8	8		2	
Switch Phase	,					_	
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0	
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0	
Total Split (s)	40.0	40.0	40.0	40.0		19.0	
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%	
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0	
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None	None	None	None		Max	
Walk Time (s)	5.0	5.0	5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0		0	
Act Effct Green (s)	19.3	19.3	19.3	19.3			
Actuated g/C Ratio	0.44	0.44	0.44	0.44			
v/c Ratio	0.61	0.47	0.32	0.57			
Control Delay	12.6	2.7	10.6	11.8			
Queue Delay	0.0	0.0	0.0	0.0			
Total Delay	12.6	2.7	10.6	11.8			
LOS	В	Α	В	В			
Approach Delay	8.0			11.6			
Approach LOS	Α.			В			
Queue Length 50th (ft)	83	0	13	74			
Queue Length 95th (ft)	133	25	32	120			
Internal Link Dist (ft)	525	20	JZ	669	87		
	525			003	O1		

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Lane:Group	EBT	EBR	WBL	WBT,	NBL	NBR	
Turn Bay Length (ft)							
Base Capacity (vph)	1498	1330	517	1475			
Starvation Cap Reductn	0	0	0	0			
Spillback Cap Reductn	0	0	0	0			
Storage Cap Reductn	0	0	0	0			
Reduced v/c Ratio	0.32	0.32	0.17	0.30			
Intersection, Summary,							
Area Type: Cycle Length: 59	Other				-		

Actuated Cycle Length: 43.9

Natural Cycle: 40

Control Type: Semi Act-Uncoord Maximum v/c Ratio: 0.61 Intersection Signal Delay: 9.3

Intersection Signal Delay: 9.3 Intersection LOS: A Intersection Capacity Utilization 33.1% ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 9: State Street & Merrimac Street/Water Street

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	40.5

2023 Build Wkdy PM Peak 9: State Street & Merrimac Street/Water Street

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1	7	ሻ	1		7
Volume (vph)	505	312	92	559	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	11%	1300	1300	12%	11%	1300
Satd. Flow (prot)	1796	1526	1663	1786	0	1796
1.	1790	1320		1700	U	1790
Flt Permitted	4700	4500	0.334	4700	0	4700
Satd. Flow (perm)	1796	1526	585	1786	0	1796
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		328				
Link Speed (mph)	30			30	30	
Link Distance (ft)	605			749	167	
Travel Time (s)	13.8			17.0	3.8	
Peak Hour Factor	0.95	0.95	0.89	0.89	0.92	0.92
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%
Shared Lane Traffic (%)	0 /0	0 /0	270	0 70	0 70	070
Lane Group Flow (vph)	532	328	103	628	0	0
					U	
Turn Type	NA	Perm	Perm	NA		Perm
Protected Phases	4			8		
Permitted Phases		4	8			2
Detector Phase	4	4	8	8		2
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0
Total Split (s)	40.0	40.0	40.0	40.0		19.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0
• •						
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	None	None		Max
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
, ,						
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	22.2	22.2	22.2	22.2		
Actuated g/C Ratio	0.47	0.47	0.47	0.47		
v/c Ratio	0.63	0.37	0.37	0.74		
Control Delay	12.2	2.1	11.3	15.4		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	12.2	2.1	11.3	15.4		
LOS	В	Α	В	В		
Approach Delay	8.4	,,	_	14.9		
				В.		
Approach LOS	A	0	40			
Queue Length 50th (ft)	95	0	16	122		
Queue Length 95th (ft)			40	מחני		
Internal Link Dist (ft)	1 59 5 2 5	25	40	200 669	87	

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR			
Tum Bay Length (ft)									
Base Capacity (vph)	1418	1273	461	1410					
Starvation Cap Reductn	0	0	0	0					
Spillback Cap Reductn	0	0	0	0					
Storage Cap Reductn	0	0	0	0					
Reduced v/c Ratio	0.38	0.26	0.22	0.45					
Intersection Summary								b	
Area Type:	Other								
Cycle Length: 59									
Actuated Cycle Length: 46.9)								
Natural Cycle: 50									
Control Type: Semi Act-Unc	oord								
Maximum v/c Ratio: 0.74									
Intersection Signal Delay: 1	1.3			In	tersection	LOS: B			
Intersection Capacity Utiliza				1C	U Level	of Service A	,		
Analysis Period (min) 15									
,, ,									
Splits and Phases: 9: Sta	te Street &	Merrimac	Street/W	ater Stree	et				
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	†	7	ሻ	†		7
Volume (vph)	528	301	96	488	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)	1300 11%	1500	1000	12%	11%	1000
Satd. Flow (prot)	1796	1511	1631	1786	0	1796
Flt Permitted	1730	1311	0.312	1700	U	1730
	4700	4544		4700	0	4700
Satd. Flow (perm)	1796	1511	536	1786	0	1796
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		310				
Link Speed (mph)	30			30	30	
Link Distance (ft)	605			749	167	
Travel Time (s)	13.8			17.0	3.8	
Peak Hour Factor	0.97	0.97	0.90	0.90	0.92	0.92
Heavy Vehicles (%)	0%	1%	4%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	544	310	107	542	0	0
Turn Type	NA	Perm	Perm	NA	_	Perm
Protected Phases	4			8		
Permitted Phases	7	4	8	J		2
Detector Phase	4	4	8	8		2
Switch Phase	4	*	0	O		2
	4.0	4.0	4.0	4.0		4.0
Minimum Initial (s)	4.0	4.0	4.0	4.0		4.0
Minimum Split (s)	20.0	20.0	20.0	20.0		20.0
Total Split (s)	40.0	40.0	40.0	40.0		19.0
Total Split (%)	67.8%	67.8%	67.8%	67.8%		32.2%
Maximum Green (s)	36.0	36.0	36.0	36.0		15.0
Yellow Time (s)	3.5	3.5	3.5	3.5		3.5
All-Red Time (s)	0.5	0.5	0.5	0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None	None	None		Max
Walk Time (s)	5.0	5.0	5.0	5.0		5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0		11.0
Pedestrian Calls (#/hr)	0	0	0	0		0
Act Effct Green (s)	20.5	20.5	20.5	20.5		
Actuated g/C Ratio	0.45	0.45	0.45	0.45		
v/c Ratio	0.67	0.36	0.44	0.67		
Control Delay	13.5	2.2	13.9	13.6		
Queue Delay	0.0	0.0	0.0	0.0		
Total Delay	13.5	2.2	13.9	13.6		
LOS	8	A	В	В		
Approach Delay	9.4			13.6		
Approach LOS	A			В		
Queue Length 50th (ft)	98	0	17	97		
Queue Length 95th (ft)	165	25	46	166		
		20	40		07	
Internal Link Dist (ft)	525			669	87	

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Lane Group	EBT	EBR	WBEA	NWBT	NBL.	NBR	The State of the s
Turn Bay Length (ft)							
Base Capacity (vph)	1 461	1287	436	1453			
Starvation Cap Reductn	0	0	0	0			
Spillback Cap Reductn	0	0	0	0			
Storage Cap Reductn	0	0	0	0			
Reduced v/c Ratio	0,37	0.24	0.25	0.37			
Intersection Summary			_ +-				5 - TA ₄
Area Type:	Other						
Cycle Length: 59							
Actuated Cycle Length: 45.2	2						
Natural Cycle: 45							
Control Type: Semi Act-Unc	oord						
Maximum v/c Ratio: 0.67							
Intersection Signal Delay: 17				Int	ersection	LOS: B	
Intersection Capacity Utiliza	tion 39.8%			IC	U Level c	of Service A	
Analysis Period (min) 15							
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Splits and Phases: 9: State	te Street &	ivierrimac	Street/W	ater Stree	et		
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1			4					7	7>	
Volume (vph)	0	521	87	40	315	0	0	0	0	198	64	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1786	0	0	2103	0	0	0	0	1745	1633	0
Flt Permitted					0.994					0.950		
Satd. Flow (perm)	0	1786	0	0	2103	0	0	0	0	1745	1633	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	1%	0%	8%	1%	2%	0%	0%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	647	0	0	413	0	0	0	0	228	182	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary - Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 67.8%

Analysis Period (min) 15

ICU Level of Service C

Intersection	2.5				- 6	259		33	1.0				913	53.	3.0
Int Delay, s/veh	16.7														
Movement		EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h		0	521	87		40	315	0		0	0	0	198	64	94
Conflicting Peds, #/hr		0	0	0		0	0	0		0	0	0	0	0	(
Sign Control		Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		-	#	None			-	None		-	-	None	*	-	None
Storage Length							_			_		-	0		
Veh in Median Storage,	#	_	0	_		_	0			_	0		_	0	
Grade, %	"	_	0			_	0	-		_	0		_	0	
Peak Hour Factor		94	94	94		86	86	86		92	92	92	87	87	87
Heavy Vehicles, %		0	1	0		8	1	2		0	0	0	0	6	(
Mymt Flow		0	554	93		47	366	0		0	0	0	228	74	108
WWITE FIOW		U	334	93		41	300	U		U	U	U	220	74	100
Major/Minor		Major1.				Aajor2							Minor2	+	311
Conflicting Flow All		366	0	0		647	0	0					1060	1106	366
Stage 1		-	-	-		-	_	-					459	459	
Stage 2		-		_			-						601	647	
Critical Hdwy		4.1		-		4.18	-						6.4	6.56	6.2
Critical Hdwy Stg 1		-	+	-			-	-					5.4	5.56	
Critical Hdwy Stg 2						_	-						5.4	5.56	
Follow-up Hdwy		2.2				2.272	_	-					3.5	4.054	3.3
Pot Cap-1 Maneuver		1204	-	_		911	-	_					250	207	684
Stage 1		1204	_			-	_	4-					641	560	00-
Stage 2				_			_						551	460	
Platoon blocked, %		•		_		·	_	·					551	400	
		1 2 04	-	•		911	-						234	0	684
Mov Cap-1 Maneuver		1204	-			911	_	-							004
Mov Cap-2 Maneuver		-	46	*		+	•	"					234	0	
Stage 1		-	-	-		•	No.						599	0	
Stage 2		-		*		*	-	*					5 51	0	4
Approach		EB				WB.				Ŧ	۵	3 . 3.	SB		AT
HCM Control Delay, s		0				1	-						59.1		
HCM LOS		Ĭ											F		
4 A A		<u>.</u>	Mark	-	4.01	'a a v - C-	d a section								*
Minor Lane/Major Mvmt		EBL	EBT	EBR		WBT	WBR		SBLn2	i	-00	200		- 37	. 9
Capacity (veh/h)		1204	-	+	911	-	+	234	684						
HCM Lane V/C Ratio		-			0.051	-		0.973	0.266						
HCM Control Delay (s)		0		-	9.2	0		96.5	12.2						
HCM Lane LOS		A	-	-	A	A		F	В						
HCM 95th %tile Q(veh)		0			0.2	-		8.8							

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1>			4					7	1	
Volume (vph)	0	56 9	94	125	479	0	0	0	0	164	47	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1802	0	0	2132	0	0	0	0	1745	1629	0
Flt Permitted					0.990					0.950		
Satd. Flow (perm)	0	1802	0	0	2132	0	0	0	0	1745	1629	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	745	0	0	6 63	0	0	0	0	169	172	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 87.6%

Analysis Period (min) 15

ICU Level of Service E

Intersection	AFF											-	ming.
Int Delay, s/veh 38.	1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	0	569	94	125	479	0		0	0	0	164	47	120
Conflicting Peds, #/hr	0	0	0	C	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-		None		-	-	None	-	-	None
Storage Length	-	-	-		-	-		-	-	-	0	-	
Veh in Median Storage, #	-	0	-		0	-		-	0	-	-	0	
Grade, %	-	0	-		0	-		-	0	-	-	0	
Peak Hour Factor	89	89	89	91	91	91		92	92	92	97	97	97
Heavy Vehicles, %	0	0	0	C	0	0		0	0	0	0	2	(
Mvmt Flow	0	639	106	137	526	0		0	0	0	169	48	124
Major/Minor -	Majort			Major2							Minor2		
Conflicting Flow All	526	0	0	745	0	0					1493	1546	526
Stage 1	Α.	-	an-			-					801	801	
Stage 2	in,		-		-	-					692	745	
Critical Hdwy	4.1	-	-	4.1	-	-					6.4	6.52	6.2
Critical Hdwy Stg 1	-				-	-					5.4	5.52	
Critical Hdwy Stg 2	-		-		_	-					5.4	5.52	
Follow-up Hdwy	2.2			2.2	100						3.5	4.018	3.3
Pot Cap-1 Maneuver	1051		~	872	-	-					~ 137	114	556
Stage 1	-		-		-						445	397	
Stage 2	-	_	_		_	_					500	421	
Platoon blocked, %		_	-										
Mov Cap-1 Maneuver	1051	_	_	872	_	-					~ 107	0	556
Mov Cap-2 Maneuver	_		*			-					~ 107	0	
Stage 1		_	-		_						346	0	
Stage 2	•										500	0	
Approach '	* *CB		7	WE							SB	-	1000
HCM Control Delay, s	0			2							191.4		
HCM LOS											F		
Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL WBT	WRR	SBLn1	SRI n2		-			-	
Capacity (veh/h)	1051	LDI	CDIN	872		107	556						~ ~
HCM Lane V/C Ratio	1001			0.158		10 12 20	0.31						
HCM Control Delay (s)	0			9.9		371.6	14.4						
HCM Lane LOS	0	-	-										
	A	-		A A			B 1.3						
HCM 95th %tile Q(veh)	0	_	•	0.6	-	14.1	1.9						
Notes													

	*	-	*	1	←	*	1	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1>			र्स					4	1>	
Volume (vph)	0	547	91	88	403	0	0	0	0	164	64	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1802	0	0	2134	0	0	0	0	1745	1640	0
Flt Permitted					0.991					0.950		
Satd. Flow (perm)	0	1802	0	0	2134	0	0	0	0	1745	1640	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	734	0	0	540	0	0	0	0	182	248	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary
Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 83.5%

Analysis Period (min) 15

ICU Level of Service E

Intersection	23.5										1		
Int Delay, s/veh 24	.6												
Movement	EN	EBT-	FERM			SWER		WB.	NBT	NBR	SBIZ	*SBT	
Vol, veh/h	0	547	91	88	403	0		0	0	0	164	64	159
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	_	None		-	-	None	-	-	None
Storage Length	-	-			-	+		-		-	0	-	
Veh in Median Storage, #	-	0	49	-	0	-		-	0	-	-	0	
Grade, %	-	0	-	-	0	-		-	0	-		0	
Peak Hour Factor	87	87	87	91	91	91		92	92	92	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0		0	0	0	0	0	(
Mvmt Flow	0	629	105	97	443	0		0	0	0	182	71	17
Major/Minor	Major1			Major2							Minor2		
Conflicting Flow All	443	0	0	733	0	0					1317	1369	44
	443	U		133	U	U					636	636	44
Stage 1	•	•	4	•	•	•					681	733	
Stage 2	- 4.4	-	-	44	-	_						6.5	6.3
Critical Hdwy	4.1	+	-	4.1	-	-					6.4		0.4
Critical Hdwy Stg 1	-	-	→	-	-	-					5.4	5.5	
Critical Hdwy Stg 2	0.0		_	0.0	-	-					5.4	5.5	2 .
Follow-up Hdwy	2.2	-	-	2.2	-	-					3.5	4	3.3
Pot Cap-1 Maneuver	1128	-	-	881	-	-					~ 175	148	619
Stage 1	-	-	-	-	-	-					531	475	
Stage 2		-	-	-	~	-					506	429	
Platoon blocked, %		-	*		-	-							
Mov Cap-1 Maneuver	1128	ь	-	881	-	-					~ 149	0	619
Mov Cap-2 Maneuver	-	-	-	-	-	•					~ 149	0	
Stage 1	-	-	-	-	_	-					453	0	
Stage 2	100	-	-	•		•					506	0	
Approach	EB,		F	WB	,	-				1230	SB	**	A. T
HCM Control Delay, s	0			1.7							95.3		
HCM LOS											F		
Minor Lane/Major Mymt	EBL	EBT	EBR.	WBL WET	WBR	SBLn1	SBLn2	73	25				
Capacity (veh/h)	1128	-	-	881 -	_	149	619						-
HCM Lane V/C Ratio	1120			0.11 -		1.223	0.4						
HCM Control Delay (s)	0			9.6 0	_		14.6						
HCM Lane LOS	A			A A	_	200.1	B						
HCM 95th %tile Q(veh)	Ô	-	_	0.4 -		10.6	1.9						
	Ü			U.T -		10.0	1,0						
Notes													

	٦	-	*	•	←	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4					*	1>	
Volume (vph)	0	562	93	43	337	0	0	0	0	213	69	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1786	0	0	2103	0	0	0	0	1745	1633	0
Flt Permitted					0.994					0.950		
Satd. Flow (perm)	0	1786	0	0	2103	0	0	0	0	1745	1633	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	1%	0%	8%	1%	2%	0%	0%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	697	0	0	442	0	0	0	0	245	195	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary.			40 18,	7.5	215		\$		#	. 1	PAR	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 72.3%

Analysis Period (min) 15

ICU Level of Service C

Intersection		£5.	£ .	1 11 42		.1 = =		4	- 	- 1		_	AM
Int Delay, s/veh 27.	2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR.		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	0	562	93	43	337	0		0	0	0	213	69	10
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None		-	-	None	-	-	None
Storage Length	-	-	-	-	-	-		-	-	•	0		
Veh in Median Storage, #	-	0	-	-	0	-		-	0	-	-	0	
Grade, %	-	0	-	-	0	-			0	-	-	0	
Peak Hour Factor	94	94	94	86	86	86		92	92	92	87	87	87
Heavy Vehicles, %	0	1	0	8	1	2		0	0	0	0	6	(
Mvmt Flow	0	598	99	50	392	0		0	0	0	245	79	116
Major/Minor	Major1			Major2					-		Minor2		
Conflicting Flow All	392	0	0	697	0	0					1139	1189	392
Stage 1	332	U	U	091	U	U					492	492	032
	_		_	-		_					647	697	
Stage 2 Critical Hdwy	4.1		-	4.18	4	_					6.4	6.56	6.2
Critical Hdwy Stg 1	4.1	•		4.10	•	•					5.4	5.56	0.2
Critical Hdwy Stg 2	-	_	-	-	•	-					5.4	5.56	
Follow-up Hdwy	2.2		_	2.272	-	-					3.5	4.054	3.3
Pot Cap-1 Maneuver	1178	*	-	872		-					~ 225	185	66
Stage 1	1110		e.	072		-					619	541	00
Stage 2	_	•	_	-	•						525	437	
Platoon blocked, %	•		-	-							323	401	
Mov Cap-1 Maneuver	1178	-	-	872	•	-					~ 209	0	66
•	11/0		Apr	012	-						~ 209	0	00
Mov Cap-2 Maneuver	-	-	-	•	-	•					574		
Stage 1			-	-		10					525	0	
Stage 2	-	-	•		•	-					525	U	
Ageosea Iv	intel		<u> </u>	W.	- ' '			·	·		<u> </u>	: :: <u>:</u>	
HCM Control Delay, s	0			1.1							96.6		
HCM LOS											F		
Kinga kanakan dikada			1500	NE WE	William	Spenie (· ·	·				
Capacity (veh/h)	1178	174 <u>76</u>		872 -		209	661		· - · - ·				
HCM Lane V/C Ratio	1170		_	0.057 -	-	1.171							
HCM Control Delay (s)	0			9.4 0	_	163.6	12.7						
HCM Lane LOS	A			A A	•	100.0	В.						
HCM 95th %tile Q(veh)	0	-		0.2	-	12.1	1.2						
Notes								888					000

	*	-	*	1	-	*	4	†	-	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		7+			4					7	7	
Volume (vph)	0	622	101	139	524	0	0	0	0	179	5 0	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1802	0	0	2132	0	0	0	0	1745	1629	0
Flt Permitted					0.990					0.950		
Satd. Flow (perm)	0	1802	0	0	2132	0	0	0	0	1745	1629	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	812	0	0	729	0	0	0	0	185	185	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary			<u>1</u>	,	+ 3,		x					

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 94.7%

Analysis Period (min) 15

ICU Level of Service F

Intersection	pa-	A 1	A	A. F.	27								
Int Delay, s/veh 69.5	5												
Movement	EBL	EBT	EBR	WB	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBI
Vol, veh/h	0	622	101	13		0		0	0	0	179	50	12
Conflicting Peds, #/hr	0	0	0		0	0		0	0	0	0	0	
Sign Control	Free	Free	Free	Fre		Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		*	None			None			•	None	-	-107	None
Storage Length			-								0		
Veh in Median Storage, #		0			- 0				0			0	
Grade, %		0			- 0				0			0	
Peak Hour Factor	89	89	89	9		91		92	92	92	97	97	97
Heavy Vehicles, %	0	0	0		0	0		0	0	0	0	2	
Mymt Flow	0	699	113	15		0		0	0	0	185	52	133
MALL FIOW	U	023	113	10	5 570	U		U	U	U	100	JZ	150
Major/Minor	Majort		tr A	Major	2				₹°		Minor2		
Conflicting Flow All	576	0	0	81:		0					1637	1693	576
Stage 1	-		-								881	881	,
Stage 2	-		-44			-					756	812	4
Critical Hdwy	4.1			4.							6.4	6.52	6.2
Critical Hdwy Stg 1	7.1	-		7.							5.4	5.52	0.2
Critical Hdwy Stg 2											5.4	5.52	
Follow-up Hdwy	2.2	_		2.:	> _	_					3.5	4.018	3.3
Pot Cap-1 Maneuver	1007	-		82		_					~ 112	93	521
Stage 1	1007			02	_						408	365	JE
Stage 2		-	•			-					467	392	
Platoon blocked, %	•	-	-			-					407	392	
	1007	•	-	00	_	•					~ 81	0	521
Mov Cap-1 Maneuver	1007	•	-	82	-	-						0	521
Mov Cap-2 Maneuver	-	-	**			-					-81	0	•
Stage 1	-		-		-	-					297	0	•
Stage 2	- •				•	-					467	0	
	172		•••	w w							\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
HCM Control Delay, s	0	<u> </u>		2.		: :::	· · · · ·				\$ 355.5	· Landing	<u> </u>
HCM LOS				-	•						F		
TIOM EGG													
Minor Lane/Major Mymte	EBL	EBT	EBR.	WBL WB	WBR	SBLn1	SBLn2	. 2					
Capacity (veh/h)	1007	*	*	823		81	521						
HCM Lane V/C Ratio						2.278							
HCM Control Delay (s)	0					695.2	15.7						
HCM Lane LOS	A					F	C						
HCM 95th %tile Q(veh)	0					17	1.6						
Notes			100	C 9.5 (2.9)	OH C	00000	(27)			- 3			
~: Volume exceeds capacity	\$: De	lay exc	eeds 30	00s +: Co	nputatio	n Not D	efined	*: All	maior v	olume in	platoon		

	*	→	*	1	-	*	4	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1			र्स					M	1	
Volume (vph)	0	609	98	102	447	0	0	0	0	183	69	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1802	0	0	2134	0	0	0	0	1745	1640	0
Flt Permitted					0.991					0.950		
Satd. Flow (perm)	0	1802	0	0	2134	0	0	0	0	1745	1640	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	813	0	0	603	0	0	0	0	203	266	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary]				1		+ A	4	一型

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 91.2%

Analysis Period (min) 15

ICU Level of Service F

Intersection													
Int Delay, s/veh 5	0.7												
Movement	EBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR.	ŚBL	SBT	SBR
Vol, veh/h	0	609	98	102	447	0		0	0	0	183	69	170
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	*	-	None	-	-	None		-	-	None	-	-	None
Storage Length		-	-		-	-		-	=		0	-	
Veh in Median Storage, #		0		-	0	-		-	0		-	0	
Grade, %		0		-	0			-	0	-	-	0	
Peak Hour Factor	87	87	87	91	91	91		92	92	92	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0		0	0	0	0	0	(
Mvmt Flow	0	700	113	112	491	0		0	0	0	203	77	189
Major/Minor	Major1			Major2							Minor2		
	491	0	0	813	0	0					1471	1528	49
Conflicting Flow All	491	U	U	010	Ų	U					715	715	43
Stage 1	-		-	-	-	-					715		
Stage 2	- 4.4	-	-	4.4	-	-						813	0.0
Critical Hdwy	4.1	-	-	4.1	-	-					6.4	6.5	6.2
Critical Howy Stg 1	*	-	-	-	*	-					5.4	5.5	
Critical Hdwy Stg 2	-	-	~	-	-9	-					5.4	5.5	0.0
Follow-up Hdwy	2.2	-	-	2.2	-	*					3.5	4	3.3
Pot Cap-1 Maneuver	1083		-	823	-	-					~ 141	119	582
Stage 1	•		-	-	-	-					488	438	
Stage 2	-	_	-	-	-	-					467	395	
Platoon blocked, %			-		-	-							
Mov Cap-1 Maneuver	1083	-	46	823	-	-					~ 115	0	582
Mov Cap-2 Maneuver	*			4	-	-					~ 115	0	
Stage 1	-	-	-		-	-					397	0	
Stage 2	÷	-	-		-	-					467	0	
Approach	EB			WB							SB		
HCM Control Delay, s	0			1.9							201.4		
HCM LOS				1,0							F		
And residing that			1 1 1 0	181212 NVISTO	Allen	STATE	337574						
Capacity (veh/h)	1083			823 -	- A	115	582		:	- 	<u> </u>	<u> </u>	
HCM Lane V/C Ratio	1003			0.136 -		1.768	0.456						
HCM Control Delay (s)	0	_	-	10.1 0		443.2	16.3						
HCM Lane LOS	A	-	_	B A	7	F	C						
HCM 95th %tile Q(veh)		-	-		-	15.9	2.4						
	0		•	0.5 +		10.8	2.4						
Notes		-3-4											

	1	-	-	1	←		1	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1			4					7	1	
Volume (vph)	0	542	93	72	376	0	0	0	0	211	69	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1785	0	0	2092	0	0	0	0	1745	1633	0
Flt Permitted					0.992					0.950		
Satd. Flow (perm)	0	1785	0	0	2092	0	0	0	0	1745	1633	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	1%	0%	8%	1%	2%	0%	0%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	676	0	0	521	0	0	0	0	243	195	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary .			T. A.	1							t.	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 79.6%

Analysis Period (min) 15

ICU Level of Service D

Intersection	37. 33	3		3.73.53	933						333		3
Int Delay, s/veh	41												
Movement		ESF	EBR	·WBL	WBT	WBR	-	'VBW	સાહ્ય		¥S⟨SBL≥	SBF	SB
Vol, veh/h	0	542	93	72	376	0		0	0	0	211	69	10
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	_	None				None	_	_	None
Storage Length	-	_	**							-	0		
Veh in Median Storage, #	_	0	→	-	0	-		-	0	-	_	0	
Grade, %		0		-	0				0	-		0	
Peak Hour Factor	94	94	94	86	86	86		92	92	92	87	87	87
Heavy Vehicles, %	0	1	0	8	1	2		0	0	0	0	6	(
Mvmt Flow	0	577	99	84	437	0		0	0	0	243	79	116
Major/Minor	Majorit.	Ŧ	- ped	Major2					<u></u>	Park.	Minor2		
Conflicting Flow All	437	0	0	676	0	0					1231	1281	437
Stage 1	-		-	-	-	-					605	605	
Stage 2		-	-		-	-					626	676	
Critical Hdwy	4,1	-	-	4.18		-					6.4	6.56	6.2
Critical Hdwy Stg 1	-	_	_	-	-						5.4	5.56	
Critical Hdwy Stg 2		-	-	-	-	-					5.4	5.56	
Follow-up Hdwy	2.2	-		2.272							3.5	4.054	3.3
Pot Cap-1 Maneuver	1134	_		888	-	_					~ 198	163	624
Stage 1											549	481	
Stage 2			**	-	_	_					537	447	
Platoon blocked, %			-			-						- 11	
Mov Cap-1 Maneuver	1134	_		888							~ 173	0	624
Mov Cap-2 Maneuver		_	_	=							~ 173	0	-
Stage 1						_					480	0	
Stage 2		-	-			-					537	0	
Approach_	, JEBA	Lat w	- 41/	VVD	10.5	*	. ເ	7	1112	7	SB		
HCM Control Delay, s	0			1.5							151.2		
HCM LOS											F		
Miles I and Alain Mark	FOY	Ent	Ted to	பேடு பஞ்ச	Winn	èni -a	වරු - ව					_	
Minor Lane/Major Mymt		EBT	EBR.		AADIL		SBLn2			" ESS.			
Capacity (veh/h)	1134	-	-	888 -		173	624						
HCM Lane V/C Ratio	^	*		0.094 -	-		0.313						
HCM Control Delay (s)	0	+	-	9.5 0			13.4						
HCM Lane LOS	A	*		A A	*	F	В						
HCM 95th %tile Q(veh)	0	-		0.3	-	14.8	1.3						
Notes	3 10 19	The	912	100		-	Al a	35					
~: Volume exceeds capac	city \$: De	lay exc	eeds 30	0s +: Com	putatio	n Not D	efined	*: All	major v	olume in p	platoon		

	*	-	*	1	-	*	1	†	-	-	↓	1
His China	1				WEI WEI	War.	NBL	NB		<u> </u>	Sil	8:18
Lane Configurations		7>			ન					N.	7	
Volume (vph)	0	662	101	157	532	0	0	0	0	192	50	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1804	0	0	2130	0	0	0	0	1745	1629	0
Flt Permitted					0.989					0.950		
Satd. Flow (perm)	0	1804	0	0	2130	0	0	0	0	1745	1629	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	857	0	0	758	0	0	0	0	198	185	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary -	4.	उ र्घा.	_						4	6	177	Z

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 98.3%

ICU Level of Service F

Analysis Period (min) 15

Intersection =	7	-	*					4		J 14			3
)4.9												
Morenene Talan	Jics."	LEST	EBR.	'WBL	. WBT	WBR		NBL	MDT-	NBR	SBL	(SBT)	,epc
Vol, veh/h	0	662	101	157		0		14GPF	0	0	192	50 50	129
Conflicting Peds, #/hr	0	0	0	137		0		0	0	0	0	0	123
Sign Control	Free	Free	Free	Free		Free		Stop	Stop	Stop	Stop	Stop	Stor
RT Channelized	1100	1100	None	1100	1166	None		Stop	Stop	None	Stop	Stop	None
Storage Length	_		None			NONE				INOIIG	0		NONE
Veh in Median Storage, #		0	_		0				0	•	U	0	
Grade, %		0	-		0	-		_	0		_	0	
Peak Hour Factor	89	89	89	91		91		92	92	92	97	97	97
Heavy Vehicles, %	0	0	0	470		0		0	0	0	0	2	400
Mvmt Flow	0	744	113	173	585	0		0	0	0	198	52	133
Major/Minor	Majort			Major2							Minor2		
Conflicting Flow All	585	0	0	857		0					1731	1787	585
Stage 1	-	-	-	GOT	_	-					930	930	000
Stage 2	Ţ.										801	857	
Critical Howy	4.1	_		4.1							6.4	6.52	6.2
Critical Hdwy Stg 1	44.1	-	-	9,1		•					5.4	5.52	0.2
	-			•	-	-					5.4	5.52	
Critical Hdwy Stg 2	2.2	-	-	2.5		-							2.5
Follow-up Hdwy		-	-	2.2		_					3.5	4.018	3.3
Pot Cap-1 Maneuver	1000	_		792	-	_					~ 98	81	515
Stage 1	-	-			•	-					387	346	•
Stage 2	•	-	-	•	-	•					445	374	
Platoon blocked, %		-	-		-	-						_	
Mov Cap-1 Maneuver	1000	-	-	792	-	-					~ 66	0	515
Mov Cap-2 Maneuver	-	-	-			•					~ 66	0	
Stage 1	-	+	-		-	-					262	0	
Stage 2	ě	-	-	•	-	-					445	0	•
Approach	EB		-	WE					3 3 3		SB		0.00
HCM Control Delay, s	0			2.5							\$.543		
HCM LOS	Ū			۵.۷							F		
Minor Läne/Major Mymb	, "EBL	EBT	EBR	WBL WBT	WBR	SBLn1	SBLn2	4			7. T 3	4	
Capacity (veh/h)	1000			792 -		66	515						
HCM Lane V/C Ratio	-	*	-	0.218	_								
HCM Control Delay (s)	0			10.8		1034.6	15.8						
HCM Lane LOS	A			B A		F	C						
HCM 95th %tile Q(veh)	Ô		-	0.8		20.2	1.6						
Notes		STREET	Br.	6	18			200	39		- 3.		3.9
~: Volume exceeds capac	city \$ De	lav exc	eeds 30	00s +: Cor	nputatio	n Not D	efined	*· All	maior v	olume in pl	atoon		

	*	-	*	1	-	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		7>			4					7	7+	
Volume (vph)	0	655	98	133	485	0	0	0	0	198	69	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	16	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1804	0	0	2130	0	0	0	0	1745	1640	0
Flt Permitted					0.989					0.950		
Satd. Flow (perm)	0	1804	0	0	2130	0	0	0	0	1745	1640	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	866	0	0	679	0	0	0	0	220	266	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary					3, ,				d	Ą		

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 97.4%

Analysis Period (min) 15

ICU Level of Service F

													and ?
EBL	EBT	EBR	- 1	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBR
													170
0	0	0		0	0	0		0	0	0	0	0	0
Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
-	-			-	-				-			-	None
_	44								-	-	0		
-	0	_		-	0				0	-		0	
	0	-				_				-		0	
87		87		91		91		92		92	90		90
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0	753	113		146	533	0		0	0	0	220	77	189
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4.1	-	-		4.1	-	-							6.2
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1045	-	-		786		-							551
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44	+	-		des	-	-					441	373	
						-							
1045	-			786	-	-							551
-	-	-		-	-	-						0	-
-	24			-	-	-						0	
•				•	•	*					441	0	•
EB	75-3			WB	180	24.00	8 PF		25	2.565	SB	50	
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0	-	-	0.7	-	-	21.2	2.6						
		1020	1.56	E fan	1	to a	-	7-9					- 31
	0 0 Free	0 655 0 0 Free Free 0 87 87 0 0 753 Major1	0 655 98 0 0 0 Free Free Free - None - 0 - 87 87 87 0 0 0 0 753 113 Major1 - 4.1 2.2 - 1045 1045	0 655 98 0 0 0 Free Free Free - None - 0 0 - 87 87 87 0 0 0 0 0 753 113 Major1	0 655 98 133 0 0 0 0 0 Free Free Free Free None - 0 87 87 87 91 0 0 0 0 0 0 753 113 146 Major1 - Major2- 533 0 0 866 2.2 2.2 1045 786 1045 - 786 1045 - 786 1045 - 786 1045 - 786 1045 - 786 0.186 0 10.6 0 A - B A 0 0.7 -	0 655 98 133 485 0 0 0 0 0 0 Free Free Free Free Free Free None 0 - 0 0 0 87 87 87 91 91 0 0 0 0 0 0 0 0 0 753 113 146 533 Major1 - Major2	0 655 98 133 485 0 0 0 0 0 0 0 0 0 Free Free Free Free Free Free Free Fre	0 655 98 133 485 0 0 0 0 0 0 0 0 0 Free Free Free Free Free Free Free Fre	0 655 98 133 485 0 0 0 Free Free Free Free Free Free Free Stop - None -	0 655 98 133 485 0 0 0 0 Free Free Free Free Free Free Free Fre	0 655 98 133 485 0 0 0 0 0 0 Free Free Free Free Free Free Free Fre	0	0 655 98 133 485 0 0 0 0 0 198 69 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

	٠	-	1	•	←	•	4	†	<i>></i>	-	ļ	4
land Group and a	EBL	EBT	EBR	Well		WER		ENBIR	NBR	SBL	,23B)	بالوزق .
Lane Configurations		↑		75	^					T	1→	
Volume (vph)	0	542	93	72	376	0	0	0	0	211	69	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1785	0	1671	1881	0	0	0	0	1745	1633	0
Flt Permitted				0.232						0.950		
Satd. Flow (perm)	0	1785	0	408	1881	0	0	0	0	1745	1633	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15									90	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.92	0.92	0.92	0.87	0.87	0.87
Heavy Vehicles (%)	0%	1%	0%	8%	1%	2%	0%	0%	0%	0%	6%	0%
Shared Lane Traffic (%)	070	170	0 70	070	170	_ /0	0 70	0,0	0 70	0 70	070	0 70
Lane Group Flow (vph)	0	676	0	84	437	0	0	0	0	243	19 5	0
Turn Type	O	NA	O	pm+pt	NA	U	U	O	· ·	Perm	NA	· ·
Protected Phases		4		3	8					Cilii	6	
Permitted Phases		4		8	U					6	U	
Detector Phase		4		3	8					6	6	
Switch Phase		4		3	0					0	Ų	
		4.0		4.0	4.0					4.0	4.0	
Minimum Initial (s)		21.0		9.0	21.0					21.0	21.0	
Minimum Split (s)		44.0		11.0	55.0					25.0	25.0	
Total Split (%)		55.0%		13.8%	68.8%					31.3%	31.3%	
Total Split (%)		39.0		6.0	50.0					20.0	20.0	
Maximum Green (s)		4.0		4.0	4.0					4.0	4.0	
Yellow Time (s)		1.0		1.0	1.0					1.0	1.0	
All-Red Time (s)										-1.0	-1.0	
Lost Time Adjust (s)		-1.0		-1.0	-1.0					4.0		
Total Lost Time (s)		4.0		4.0	4.0					4.0	4.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes	2.0					2.0	2.0	
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		C-Max		None	C-Max					None	None	
Walk Time (s)		5.0			5.0					5.0	5.0	
Flash Dont Walk (s)		11.0			11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		55.0	0					0	0	
Act Effct Green (s)		45.9		55.0	55.0					17.0	17.0	
Actuated g/C Ratio		0.57		0.69	0.69					0.21	0.21	
v/c Ratio		0.66		0.21	0.34					0.66	0.47	
Control Delay		17.3		4.8	4.3					37.1	17.9	
Queue Delay		0.0		0.8	0.6					15.9	0.0	
Total Delay		17.3		5.6	4.9					53.0	17.9	
LOS		В		Α	Α					D	В	
Approach Delay		17.3			5.0						37.4	
Approach LOS		В			Α						D	
Queue Length 50th (ft)		229		9	48					111	44	
Queue Length 95th (ft)		391		17	64					168	92	
Internal Link Dist (ft)		222			63			145			265	

Lane Group	ø2	ENESS.	2		11.000	- 100 Maria
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type	_					
Protected Phases	2					
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	4.0					
Minimum Split (s)	21.0					
Total Split (s)	25.0					
Total Split (%)	31%					
Maximum Green (s)	20.0					
Yellow Time (s)	4.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	5.0					
Flash Dont Walk (s)	11.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						

	*	-	*	•	←	*	4	†	-	-	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		1031		396	1293					458	495	
Starvation Cap Reductn		0		156	492					0	0	
Spillback Cap Reductn		8		0	0					196	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.66		0.35	0.55					0.93	0.39	
Intersection Summary												

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

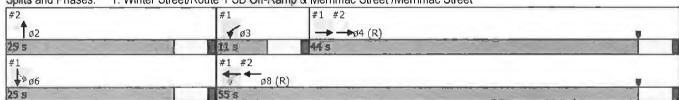
Maximum v/c Ratio: 0.68

Intersection Signal Delay: 18.8 Intersection Capacity Utilization 88.7%

Intersection LOS: B ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Winter Street/Route 1 SB Off-Ramp & Merrimac Street /Merrimac Street



	۶	-	•	1	-	*	4	†	-	1	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		7>		7	1					7	7>	
Volume (vph)	0	662	101	157	532	0	0	0	0	192	50	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1804	0	1805	1900	0	0	0	0	1745	1629	0
FIt Permitted				0.115						0.950		
Satd. Flow (perm)	0	1804	0	218	1900	0	0	0	0	1745	1629	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				,			,		133	,
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.97	0.97	0.97
Heavy Vehicles (%)	0.03	0.03	0.03	0.51	0.51	0.51	0.32	0.52	0.52	0.57	2%	0.57
Shared Lane Traffic (%)	0 /0	U /0	U /0	0 /0	0 70	0 /6	0 /0	0 /0	U /0	070	2 /0	0 /0
	0	857	0	173	585	0	0	0	0	198	185	0
Lane Group Flow (vph)	0		U			0	U	0	0			U
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8					0	6	
Permitted Phases				8	•					6	•	
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0					4.0	4.0	
Minimum Split (s)		21.0		9.0	21.0					21.0	21.0	
Total Split (s)		45.0		11.0	56.0					24.0	24.0	
Total Split (%)		56.3%		13.8%	70.0%					30.0%	30.0%	
Maximum Green (s)		40.0		6.0	51.0					19.0	19.0	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0	-1.0	
Total Lost Time (s)		4.0		4.0	4.0					4.0	4.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		C-Max		None	C-Max					None	None	
Walk Time (s)		5.0			5.0					5.0	5.0	
Flash Dont Walk (s)		11.0			11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		44.5		56.7	56.7					15.3	15.3	
Actuated g/C Ratio		0.56		0.71	0.71					0.19	0.19	
v/c Ratio		0.85		0.55	0.43					0.59	0.44	
Control Delay		26.4		18.2	3.3					36.4	12.4	
Queue Delay		1.1		4.3	1.0					6.9	0.0	
Total Delay		27.4		22.4	4.2					43.3	12.4	
LOS		C C		22.4 C	Α.2					43.5 D	B	
					8.4					U	28.4	
Approach LOS		27.4										
Approach LOS		C 242		40	A					04	C	
Queue Length 50th (ft)		342		13	45					91	22	
Queue Length 95th (ft)		#617		m69	60					146	71	
Internal Link Dist (ft)		222			63			145			265	

Lane Group	\$2 ± 1	5=	Darlier da	S all se	HE TO SEE	District Co.
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Satd. Flow (prot)						
FIt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s) Peak Hour Factor						
Heavy Vehicles (%)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type	2					
Protected Phases	2					
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	4.0					
Minimum Split (s)	21.0					
Total Split (s)	24.0					
Total Split (%)	30%					
Maximum Green (s)	19.0					
Yellow Time (s)	4.0					
All-Red Time (s)	1.0					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					
Recall Mode	None					
Walk Time (s)	5.0					
Flash Dont Walk (s)	11.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						

	*	-	*	1	←	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL.	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		1010		316	1346					436	507	
Starvation Cap Reductn		0		83	483					0	0	
Spillback Cap Reductn		40		0	0					188	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.88		0.74	0.68					0.80	0.36	
hadran as a softia as An a concentration					-		-	-				_

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 20.4 Intersection Capacity Utilization 120.1% Intersection LOS: C ICU Level of Service H

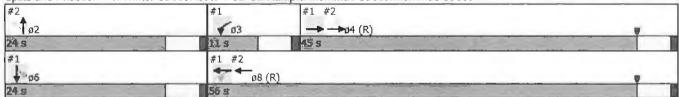
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Winter Street/Route 1 SB Off-Ramp & Merrimac Street / Merrimac Street



2023 Build Saturday Midday Peak w/Mitigation 1: Winter Street/Route 1 SB Off-Ramp & Merrimac Street /Merrimac Street

	1	-	7	•	-	*	4	†	-	1	↓	1
Elegation of the			HESR.	Webs	WBT_	WBR	NBL_	News		7783	'হাংয়া'	
Lane Configurations		1.		75	†					7	7.	
Volume (vph)	0	655	98	133	485	0	0	0	0	198	69	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	11	12
Satd. Flow (prot)	0	1804	0	1805	1900	0	0	0	0	1745	1640	0
Flt Permitted				0.118						0.950		
Satd. Flow (perm)	0	1804	0	224	1900	0	0	0	0	1745	1640	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15									143	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		302			143			225			345	
Travel Time (s)		6.9			3.3			5.1			7.8	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	866	0	146	533	0	0	0	0	220	266	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Detector Phase		4		3	8					6	6	
Switch Phase												
Minimum Initial (s)		4.0		4.0	4.0					4.0	4.0	
Minimum Split (s)		21.0		9.0	21.0					21.0	21.0	
Total Split (s)		47.0		11.0	58.0					22.0	22.0	
Total Split (%)		58.8%		13.8%	72.5%					27.5%	27.5%	
Maximum Green (s)		42.0		6.0	53.0					17.0	17.0	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		-1.0		-1.0	-1.0					-1.0	-1.0	
Total Lost Time (s)		4.0		4.0	4.0					4.0	4.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Vehicle Extension (s)		3.0		3.0	3.0					3.0	3.0	
Recall Mode		C-Max		None	C-Max					None	None	
Walk Time (s)		5.0		110110	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0			11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0			0					0	0	
Act Effct Green (s)		45.2		56.5	56.5					15.5	15.5	
Actuated g/C Ratio		0.56		0.71	0.71					0.19	0.19	
v/c Ratio		0.84		0.48	0.40					0.65	0.62	
Control Delay		25.1		14.3	3.1					38.9	19.8	
Queue Delay		0.8		1.9	0.8					32.7	0.0	
Total Delay		25.8		16.2	3.9					71.5	19.8	
LOS		23.0 C		В	Α					7 1.5 E	13.0 B	
Approach Delay		25.8		D	6.5						43.2	
Approach LOS		25.6 C			Α.5						43.2 D	
Queue Length 50th (ft)		351		11	42					99	53	
Queue Length 95th (ft)		#576		m49	56					168		
Internal Link Dist (ft)		222		11149	63			145		100	125 265	
micinal Filix Dist (II)		222			00			1+0			200	

2023 Build Saturday Midday Peak w/Mitigation 1: Winter Street/Route 1 SB Off-Ramp & Merrimac Street /Merrimac Street

62	Strategic Control		ACEL -	all the same
2				
Z				
4.0				
1.0				
5.0				
1 1.0				
0				
	2 4.0 21.0 22.0 28% 17.0 4.0 1.0	4.0 21.0 22.0 28% 17.0 4.0 1.0	4.0 21.0 22.0 28% 17.0 4.0 1.0	2 4.0 21.0 22.0 28% 17.0 4.0 1.0 3.0 None 5.0 11.0

	*	-	*	1	-	*	4	†	-	-	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	-SBR
Turn Bay Length (ft)												
Base Capacity (vph)		1025		303	1341					392	479	
Starvation Cap Reductn		0		66	487					0	0	
Spillback Cap Reductn		33		0	0					173	0	
Storage Cap Reductn		0		0	0					0	0	
Reduced v/c Ratio		0.87		0.62	0.62					1.00	0.56	
Intersection/Summary												

Huerzechou Primilian

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 23.5
Intersection Capacity Utilization 120.2%

Intersection LOS: C
ICU Level of Service H

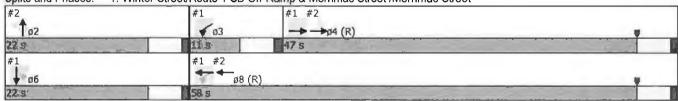
Analysis Period (min) 15

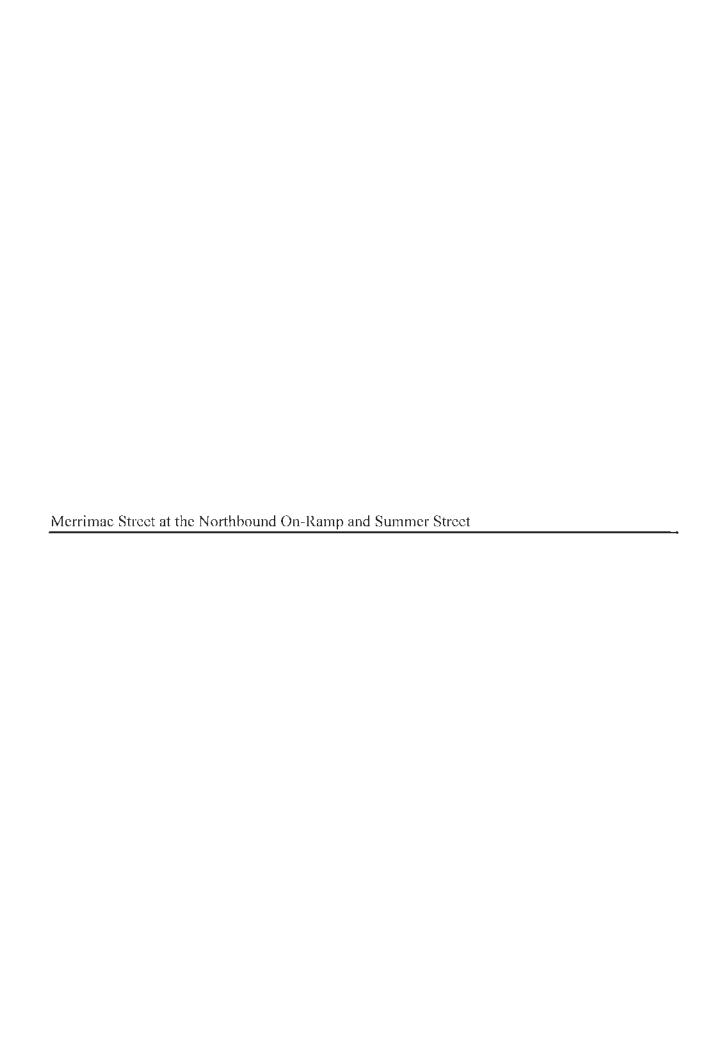
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Winter Street/Route 1 SB Off-Ramp & Merrimac Street /Merrimac Street





	*	-	*	•	←	*	4	†	-	-		1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1			4		7	†	7			
Volume (vph)	67	652	0	0	296	132	59	51	83	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1728	1900	0	0	2049	0	1770	1900	1760	0	0	0
FIt Permitted	0.950						0.950					
Satd. Flow (perm)	1728	1900	0	0	2049	0	1770	1900	1760	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	1%	0%	0%	0%	1%	0%	2%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	694	0	0	497	0	69	60	98	0	0	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary					g.m		70			7-	~源	A CE

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 46.1%

Analysis Period (min) 15

Intersection		_		3 9 97			wc	~	AF Q	SPECIAL STATE			533
Int Delay, s/veh	0.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	\$BL	SBT	SBF
Vol, veh/h	67	652	0	C	296	132		59	51	83	0	0	
Conflicting Peds, #/hr	0	0	0	C	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None			None				None			None
Storage Length	0					-		0	-	0		-	
Veh in Median Storage, #	40	0	-		0	-		_	0	_		0	
Grade, %		0	-	_	•	_			0		_	0	
Peak Hour Factor	94	94	94	86		86		85	85	85	92	92	
Heavy Vehicles, %	1	0	0	0		0		2	0	4	0	0	
Mvmt Flow	71	694	0	C	•	153		69	60	98	0	0	(
Major/Minor	Major1			* Major2	,			Vinori.	-	*			
Conflicting Flow All	498	0	0	694		0		1257	1334	694	·		*
-	450	U	U	094	U	U		836	836	094			
Stage 1		-	-	_	_	-		421	498	-			
Stage 2	4 4 4	-	-	4.4		-				0.04			
Critical Hdwy	4.11		-	4.1	-	-4		6.42	6.5	6.24			
Critical Hdwy Stg 1	-	-	-		-	-		5.42	5.5	-			
Critical Hdwy Stg 2		-	-			-		5.42	5.5	-			
Follow-up Hdwy	2.209	-	-	2.2		-		3,518		3.336			
Pot Cap-1 Maneuver	1071	-	-	911	-	-		189	155	439			
Stage 1			*	4	-	-		425	385	-			
Stage 2		•	•			•		662	548	-			
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	1071	-	-	911	-	-		176	0	439			
Mov Cap-2 Maneuver	-	-			_	-		176	0	-			
Stage 1	-	-	-	-	→	-		397	0	H-			
Stage 2	*	-	-		**	*		662	0	*			
Approach	EB			We	7	- 3-6	~	NB	77	. 3	T .	I	,
HCM Control Delay, s	0.8			0				_					
HCM LOS	0.8			U				,					
Minor Lane/Major Mymt	NBLn1 t	BLn2	NBLn3	EBL EBT	EBR	WBL	WBT	WBR		18.2			
Capacity (veh/h)	176	-	439	1071 -	-	911		-					
HCM Lane V/C Ratio	0.394	-	0.222			¥		-					
HCM Control Delay (s)	38.2		15.5	8.6	Sar	0	-						
HCM Lane LOS	E		C	Α -		Å							
HCM 95th %tile Q(veh)	1.7		0.8	0.2		Ô		_					

	1	→	*	•	-	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	1			7>		7	1	7			
Volume (vph)	132	601	0	0	542	244	62	86	140	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2057	0	1805	1881	1830	0	0	0
FIt Permitted	0.950						0.950					
Satd. Flow (perm)	1745	1900	0	0	2057	0	1805	1881	1830	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.97	0.97	0.97	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	675	0	0	864	0	64	8 9	144	0	0	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 65.2%

Analysis Period (min) 15

Intersection			28 4		- 8 - 1		275		- 3		\$1 Te-	1	7201	-
Int Delay, s/veh 0	.8													
Mayement.	EBL.		ZEBR		WBL	WBT	WBR		NBL	NBIL	NBRa.	SBE	_ 8BT	्रह्य
Vol, veh/h	132	601	0		0	542	244		62	86	140	0	0	(
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	{
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	4-	-	None		-	-	None		-	-	None	-	-	None
Storage Length	0	-	-		-		-		0	-	0		-	
Veh in Median Storage, #		0			-	0	-			0	-	-	0	
Grade, %		0			-	0	-		-	0			0	
Peak Hour Factor	89	89	89		91	91	91		97	97	97	92	92	92
Heavy Vehicles, %	0	0	0		0	0	1		0	1	0	0	0	(
Mvmt Flow	148	675	0		0	596	268		64	89	144	0	0	(
Mainthlines	kinland				Majari)				Manad					
Major/Minor	Major1				Major2			J	Minor1	4000	075			=
Conflicting Flow All	864	0	0		675	0	0		1702	1836	675			
Stage 1	-		-		-	-	-		972	972	-			
Stage 2	-	-				-	-		730	864				
Critical Hdwy	4.1	-	-		4.1	-	-		6.4	6.51	6.2			
Critical Hdwy Stg 1	*	_	-		-	-	*		5.4	5.51	*			
Critical Hdwy Stg 2		H	-		-	-			5.4	5.51	-			
Follow-up Hdwy	2.2	je-	*		2.2	-	*		3.5	4.009	3.3			
Pot Cap-1 Maneuver	787	-	-		926	-	-		102	~ 76	457			
Stage 1	who who	- Mar-	-				-		370	332	-			
Stage 2	-	-	-			-	_		481	373				
Platoon blocked, %		_	-			198	*							
Mov Cap-1 Maneuver	787	-	-		926		-		83	0	457			
Mov Cap-2 Maneuver		-			-	-	-		83	0				
Stage 1		_			_	_	_		300	0	-			
Stage 2	-				-	-	-		481	0	-			
Annyasah	EB				WB			_	NB				_	
Approach							_		IND					
HCM Control Delay, s HCM LOS	1.9				0									
Minor Lane/Major Mymt	NBLn11	√Ω1Ω1	MDI 52	EBL	EBT	EBR	WBL	WBT	WBR		-11-			
		ADDITION				LOR		TIOI						- 5
Capacity (veh/h)	83		457	787	-	-	926	-	-					
HCM Lane V/C Ratio	0.77		0.316			-	-	-	•					
HCM Control Delay (s)	129.7	-	16.5	10.6		*	0	-	-					
HCM Lane LOS	F		C	В	*	H	A	44	-					
HCM 95th %tile Q(veh)	3.8		1.3	0.7	-	-	0	-	-					
Notes ~: Volume exceeds capacit	- 1	ela y e xc	100	JU, U	+: Com		THE REAL PROPERTY.	41			olume in			

	•	-	*	1	←	•	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	↑			7>		7	↑	7			
Volume (vph)	125	586	0	0	433	221	58	123	132	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2047	0	1770	1900	1812	0	0	0
FIt Permitted	0.950						0.950					
Satd. Flow (perm)	1745	1900	0	0	2047	0	1770	1900	1812	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.87	0.87	0.87	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	674	0	0	719	0	67	141	152	0	0	0
Sign Control		Free			Free			Stop			Stop	
total discountry of				4		-		-			-	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 59.7% Analysis Period (min) 15

ICU Level of Service B

VAI

Intersection	-		\$+ 6	5		1	. 7	, gills	4	· ~	Ĭ	
Int Delay, s/veh 0.7	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	N	BL NB	T NBR	SBL	SBT	SBI
Vol, veh/h	125	586	0	0	433	221		58 12	3 132	0	0	(
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0 0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free	Ste	op Sto	p Stop	Stop	Stop	Sto
RT Channelized	-	-	None	-	-	None		-	- None	-	-	None
Storage Length	0	-	-	-	-	-		0	- 0	-	-	
Veh in Median Storage, #	-	0	-	-	0	-		-	0 -	-	0	
Grade, %		0	-	-	0	-		-	0 -	-	0	
Peak Hour Factor	87	87	87	91	91	91		87 8	7 87	92	92	9:
Heavy Vehicles, %	0	0	0	0	0	1		2	0 1	0	0	(
Mvmt Flow	144	674	0	0	476	243		67 14	1 152	0	0	(
Major/Minor_	Major1	-		Major2			Mino	ert				
Conflicting Flow All	719	0	0	674	0	0	15:		0 674			
Stage 1	113		U	0/4	0	-		30 100 31 96				
Stage 2		-		_				97 71				
Critical Hdwy	4.1		-	4.1	-	•	6.4					
Critical Hdwy Stg 1	4.1	-	-	4.1	_	-	5.4					
Critical Hdwy Stg 2	•	•	-	-	-	•	5.4					
Follow-up Hdwy	2.2	•		2.2	-		3.5		4 3.309			
Pot Cap-1 Maneuver	892		-	927	-			24 ~ 9				
•	032	•		921				71 33				
Stage 1 Stage 2	-	•	-	_	-			50 43				
Platoon blocked, %	-		-	_	-	-	3	30 43	0 -			
	892	-	-	927	-	-	1	04	0 456			
Mov Cap-1 Maneuver	692	-	-	927	-							
Mov Cap-2 Maneuver	-	-	-	-	•	•			0 -			
Stage 1	-	_	-	-	-	-			0 -			
Stage 2	*	-	**	*	•	-	0	50	0 -			
Approach	EB			WB			1	IB	5.2			
HCM Control Delay, s	1.7			0								
HCM LOS								-				
Minor Lane/Major Mymt	NBLn1	VRI no	NRI n3	EBL EBT	EBR	WAI	-WBT WE	NR .				
Capacity (veh/h)	104	- -	456	892 -	LUIT	927	**************************************	-		<u> </u>		
HCM Lane V/C Ratio	0.641		0.333			341						
HCM Control Delay (s)	87.3		16.8	9.8 -		0						
HCM Lane LOS	07.3 F		0.0			A						
HCM 95th %tile Q(veh)	3.2		1.4	A -	-	0						
	3.2		1.79	0.0		J						
Notes		Willey.	والمرسوا	Part L	-	الماليا	متمسط					

	۶	-	7	1	4-	*	1	†	~	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	†			7+		7	†	7			
Volume (vph)	72	703	0	0	317	142	63	55	89	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1728	1900	0	0	2049	0	17 7 0	1900	1760	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1728	1900	0	0	2049	0	1770	1900	1760	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	1%	0%	0%	0%	1%	0%	2%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	748	0	0	534	0	74	65	105	0	0	0
Sign Control		Fre e			Free			Stop			Stop	
Intersection Summary.	Yest a				*	- 4		155	•	, ,	, >	75

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.2%

Analysis Period (min) 15

703 0 Free - 0 0 94 0	EBR 0 0 Free None -	- WBL 0 0 Free - -	317 0 Free -	WBR 142 0 Free None	NBL 63 0 Stop	NBT 55 0 Stop	NBR 89 0 Stop None	SBL 0 0 Stop	SBT 0 0 Stop	SBF () () Stop
703 0 Free - 0 0 94 0	0 0 Free None - -	0	317 0 Free	142 0 Free	63 0 Stop	55 0 Stop	89 0 Stop	0	0	(
0 Free - 0 0 94 0	0 0 Free None - -	0	317 0 Free	142 0 Free	63 0 Stop	0 Stop	89 0 Stop	0	0	(
Free - 0 0 94 0	Free None - -		Free -	Free	Stop	Stop	Stop			
0 0 0 94 0	None - -	Free	-		-			Stop	Stop	Stor
0 94 0			-	None -	-		None	-	·	Olop
0 94 0			-	-	^				-	None
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748	0	0	369	165	74	65	105	0	0	(
		Major?		_	Minort				3	
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44	•		-	•						
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-	7		-	-						
-	-	870	-	-			409			
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-	-	-	-	-	642	528	-			
-	-		-	-						
-	-	870	-	-	153	0	40 9			
	all all	-	-	-	153	0				
-	-	-		-	367	0	-			
-	-	•	•	7*	642	0				
		(1.4.a			18/2					
		0								
	0	• •	4.1 2.2 - 870 870	0 0 748 0	0 0 748 0 0	0 0 748 0 0 1352 901 451 - 4.1 6.42 5.42 5.42 3.518 870 165 396 642 153 153 642	0 0 748 0 0 1352 1435 - - - 901 901 901 901 901 901 - - - 451 534 - - - 5.42 6.5 - - - 5.42 5.5 - - - - 5.42 5.5 - - - - 5.42 5.5 - - - - 3.518 4 - - - - 365 360 - - - - 642 528 - - - - - 153 0 - - - - - - 642 0	0 0 748 0 0 1352 1435 748 - - - 901 901 - - - - 451 534 - - - - 6.42 6.5 6.24 - - - 5.42 5.5 - - - - 5.42 5.5 - - - - 5.42 5.5 - - - - 5.42 5.5 - - - - 3.518 4 3.336 - - - 396 360 - - - - - 642 528 - -	0 0 748 0 0 1352 1435 748 901 901 451 534 4.1 6.42 6.5 6.24 5.42 5.5 5.42 5.5 2.2 - 3.518 4 3.336 - 870 - 165 135 409 642 528 153 0 409 153 0 409 367 0 642 0 -	0 0 748 0 0 1352 1435 748 901 901 451 534 4.1 6.42 6.5 6.24 5.42 5.5 5.42 5.5 5.42 5.5 5.42 5.5 6.42 5.5 6.42 6.5 6.24 5.42 5.5 5.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5 6.42 5.5

	•	-	7	1	•	*	4	†	1	-	Ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	1			7		7	1	7			
Volume (vph)	142	659	0	0	597	266	66	92	158	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2057	0	1805	1881	1830	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1745	1900	0	0	2057	0	1805	1881	1830	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.97	0.97	0.97	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	740	0	0	948	0	68	95	163	0	0	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	m^				. F	e A	. 7					

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 70.3%

Analysis Period (min) 15

Infersection)		-	ut-	€	1-0.		- 3							3
Int Delay, s/veh 0.	.8													
Movement-	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	142	659	0		0	597	266		66	92	158	0	0	(
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None		-	-	None		-	-	None	-	-	None
Storage Length	0	-	-		-	-			0	-	0	-	-	
Veh in Median Storage, #	-	0	-		-	0	-		-	0	-	-	0	
Grade, %	-	0	-		-	0	-		-	0	-	-	0	
Peak Hour Factor	89	89	89		91	91	91		97	97	97	92	92	92
Heavy Vehicles, %	0	0	0		0	0	1		0	1	0	0	0	(
Mvmt Flow	160	740	0		0	656	292		68	95	163	0	0	(
Major/Minor	Major1		. 3 6	W	ajor2	-	-		vinor1				3	
Conflicting Flow All	948	0:	0-		740	0	0	,	1862	2008	740			
Stage 1	-	_	_	*	- 10	_	-		1060	1060	-			
Stage 2									802	948				
Critical Hdwy	4.1	_	-		4.1		_		6.4	6.51	6.2			
Critical Hdwy Stg 1	7.1		_		****		-		5.4	5.51	-			
Critical Hdwy Stg 2	_	_			_	_	_		5.4	5.51	-			
Follow-up Hdwy	2.2	_			2.2		-		3.5	4.009	3.3			
Pot Cap-1 Maneuver	732				876				81	~ 60	420			
Stage 1	104				-				336	302	-			
Stage 2									445	341				
Platoon blocked, %			-						110	V				
Mov Cap-1 Maneuver	732				876				~ 63	0	420			
Mov Cap-2 Maneuver	102				-				~ 63	0	720			
Stage 1									263	0				
Stage 2	-	-	-						445	0	-			
West State of Co.	-				1110				1100					
Approach	EB	-			WB			-	NB					
HCM Control Delay, s	2				0									
HCM LOS									- to					
Minor Lane/Major Mymt	NBLn11	VBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	200				
Capacity (veh/h)	63	=	420	732		-	876	-	-					
HCM Lane V/C Ratio	1.08	-	0.388	0.218		-		P.	-					
HCM Control Delay (s)	247.8	-	18.9	11.3	-	-	0	-	-					
HCM Lane LOS	F		C	В	=,	-	Α	-	-					
HCM 95th %tile Q(veh)	5.4		1.8	0.8	-	-	0	-	-					
Notes	00-1		- 50			Vir.						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

	٠	→	-	1	-	*	4	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	1			1		7	1	7			
Volume (vph)	134	658	0	0	487	242	62	132	153	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2050	0	1770	1900	1812	0	0	0
Fit Permitted	0.950						0.950					
Satd. Flow (perm)	1745	1900	0	0	2050	0	1770	1900	1812	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.87	0.87	0.87	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	756	0	0	801	0	71	152	176	0	0	(
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	4				- 3		_ ,					4

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.8%

Analysis Period (min) 15

Intersection		9.54											- 3	
Int Delay, s/veh	0.7													
Movement	EBL	EBT	EBR		-WBL	WBT	WBR		NBL	NBT	NERAL	- Sil	(83)	4SE
Vol, veh/h	134	658	0		0	487	242		62	132	153	0	0	
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Sto
RT Channelized		-	None			-	None			-	None	-	-	None
Storage Length	0	-	-						0	-	0	-	-	
Veh in Median Storage, #	-	0			-	0	-		-	0	-	-	0	
Grade, %	-	0				0				0	_	-	0	
Peak Hour Factor	87	87	87		91	91	91		87	87	87	92	92	9:
Heavy Vehicles, %	0	0	0		0	0	1		2	0	1	0	0	(
Mvmt Flow	154	756	0		0	535	266		71	152	176	0	0	(
Major/Minor	Major 1			بإ	vlajor2				Vinor1			29_	,	-
Conflicting Flow All	801	0	0		756	0	0		1732	1865	756			
Stage 1	-	-	-		-	-	-		1064	1064				
Stage 2		in the			-	-	-		668	801	-			
Critical Hdwy	4.1		*		4.1	-	-		6.42	6.5	6.21			
Critical Hdwy Stg 1		-	-				-		5.42	5.5	-			
Critical Hdwy Stg 2	-	-	_		-	-	-		5.42	5.5	-			
Follow-up Hdwy	2.2				2.2	-	-		3.518	4	3.309			
Pot Cap-1 Maneuver	831	100	-		864	÷	-		97	~ 74	410			
Stage 1	-	-				-	-		332	302	-			
Stage 2		-	-		-	-	_		510	400	_			
Platoon blocked, %		-	-			-	-							
Mov Cap-1 Maneuver	831	-	-		864		-		79	0	410			
Mov Cap-2 Maneuver	-	_	-		-	-	-		79	0	-			
Stage 1	-	-	_			-	-		270	0	-			
Stage 2		-			-	-			510	0	-			
Approach	EB				WB				NB					
HCM Control Delay, s	1.7				0									
HCM LOS									-					
Minor Langillaine March	NBLn1	udi -o:	مُحافَان	EBL	EBT	EBŘ	WBL	MOT	WBR		.9.4	4,		
Minor Lane/Major Mymt		ADLI121				EDIX		AAD I	MOL		.,,,	A		
Capacity (veh/h)	79	-	410	831	-		864		-					
HCM Lane V/C Ratio	0.902	-	0.429			-	-	-	-					
HCM Control Delay (s)	166.3		20.2	10.3	_	-	0	•	-					
HCM Lane LOS	F	**	C	В			A	54	+					
HCM 95th %tile Q(veh)	4.7	-	2.1	0.7	**	-	0	-	-					
Notes														

	•	-	*	•	-	*	4	†	-	-		1
ane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
ane Configurations	ሻ	^			1		7	↑	7			
Volume (vph)	72	699	0	0	365	146	63	55	98	0	0	0
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
ane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1728	1900	0	0	2055	0	1770	1900	1760	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1728	1900	0	0	2055	0	1770	1900	1760	0	0	0
ink Speed (mph)		30			30			30			30	
ink Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	1%	0%	0%	0%	1%	0%	2%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
` '	77	744	0	0	594	0	74	65	115	0	0	0
Sign Control		Free			Free			Stop			Stop	
ane Group Flow (vph)	77		0	0		0	74		115	0		_

Intersection Summary
Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.5%

Analysis Period (min) 15

Intersection			- 4-	41	-		4			-14	`C		
Int Delay, s/veh 0	.4												-
Movement	EBL	EBT	EBR	Wat	. WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBI
Vol, veh/h	72	699	0	(146		63	55	98	0	0	(
Conflicting Peds, #/hr	0	0	0	(0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-		None			None		-	-	None	-	-	None
Storage Length	0					-		0		0			
Veh in Median Storage, #	-	0			0	-		_	0	_	1	0	
Grade, %		0			0	-			0			0	
Peak Hour Factor	94	94	94	86		86		85	85	85	92	92	92
Heavy Vehicles, %	1	0	0	(0		2	0	4	0	0	
Mvmt Flow	77	744	0	Č		170		74	65	115	Ō	0	(
Májor/Minor	Majord			Major₂				Minor1					-
Conflicting Flow All	594	0	0	744		0		1406	1491	744			
Stage 1	007		_	7.7"	_	_		897	897				
Stage 2	_					_		509	594				
Critical Hdwy	4.11			4.1	-			6.42	6.5	6.24			
Critical Howy Stg 1	76.11			***		_		5.42	5.5	0.24			
Critical Hdwy Stg 2								5.42	5.5	_			
Follow-up Hdwy	2.209	-	_	2.2	1			3.518	4	3.336			
	987	**	•	873		-		153	125	411			
Pot Cap-1 Maneuver	901	-	-	010	-	•		398	361				
Stage 1	•	-	-	•		-		604	496	-			
Stage 2	•	-	-		-	-		004	490	-			
Platoon blocked, %	0.07	-	-	0.76	-	-		444	^	444			
Mov Cap-1 Maneuver	987	-	-	873	-	-		141	0	411			
Mov Cap-2 Maneuver	-	-	-	•		-		141	0	•			
Stage 1			-	•	-	~		367	0	-			
Stage 2	-	•	-	•		-		604	0	-			
Approximent A		<u> </u>		i jak	<u> </u>	<u></u>			· · · · · · · · · · · · · · · · · · ·	, <u>J.</u>	<u>, '</u>		
HCM Control Delay, s HCM LOS	8.0			(
HOW LOO													
Minor Lane/Major Mvmt	NBLn11	VBLn2		EBL EBT	EBR		WBT	WBR					
Capacity (veh/h)	141	*	411	987		873	-	-					
HCM Lane V/C Ratio	0.526	-	0.281	0.078				-					
HCM Control Delay (s)	55.8	-	17.1	9		0	-	-					
HCM Lane LOS	F		C	Α .	-	A		-					
HCM 95th %tile Q(veh)	2.5		1.1	0.3		0	-						

	*	-	*	1	-	*	1	†	-	-		1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	↑			1>		7	1	7			
Volume (vph)	142	7.12	0	0	623	261	66	92	193	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2061	0	1805	1881	1830	0	0	0
Fit Permitted	0.950						0.950					
Satd. Flow (perm)	1745	1900	0	0	2061	0	1805	1881	1830	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.97	0.97	0 .97	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	800	0	0	972	0	68	95	199	0	0	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 71.4%

Analysis Period (min) 15

Intersection				-2.5							-	22		
Int Delay, s/veh 0	.8													
Mavements		대립왕류		OL.	WBŁ.	WBT	WBR		NBL	INSTA	. Nega		<u> </u>	- 333
Vol, veh/h	142	712	0		0	623	261		66	92	193	0	0	(
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None		_	-	None		-		None	-	-	None
Storage Length	0	_	-		-		-		0		0	-	-	
Veh in Median Storage, #	+	0			_	0	_		_	0	_	_	0	
Grade, %		0				0	-		-	0	-		0	,
Peak Hour Factor	89	89	89		91	91	91		97	97	97	92	92	92
Heavy Vehicles, %	0	0	0		0	0	1		0	1	0	0	0	(
Mymt Flow	160	800	0		0	685	287		68	95	199	0	0	Č
WWITELLOW	100	000	U		U	000	201		00	30	100	·	U	,
Major/Minor .	Majord			<u>.</u>	Major2				Vinor1		3	1		53
Conflicting Flow All	971	0	0		800	0	0		1947	2090	800			
Stage 1	-		_		-		-		1119	1119				
Stage 2			_		-	-	_		828	971	_			
Critical Hdwy	4.1				4.1				6.4	6.51	6.2			
Critical Hdwy Stg 1	-		_		7.1				5.4	5.51	-			
Critical Hdwy Stg 2	-								5.4	5.51	_			
Follow-up Hdwy	2.2	_	_		2.2		_		3.5	4.009	3.3			
Pot Cap-1 Maneuver	718		~		832	-			72	~ 53	388			
Stage 1	1 10				002				315	283	300			
Stage 2	•	•	•		•	•			432	332				
	-	_			_	-	-		432	332	-			
Piatoon blocked, %	740	•	-		000	•	-		50		200			
Mov Cap-1 Maneuver	718	-	-		832	•	-		~ 56	0	388			
Mov Cap-2 Maneuver	-	-	-		-	•	-		~ 56	0	-			
Stage 1	-	-	-		-	-	-		245	0.	-			
Stage 2	-	-	-		-	-	-		432	0	-			
Approach	EBT	laser	93.5	*	. WB		,		NB			70 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	4	- 197
HCM Control Delay, s	1.9				0									
HCM LOS	110				Ť				•					
Minor:Lane/Major Mymt.	NBLn11	VBL'n2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBŘ	4				757
Capacity (veh/h)	56	-	388	718	-	-	832	-	-					
HCM Lane V/C Ratio	1.215		0.513				-							
HCM Control Delay (s)	\$ 311.3		23.6	11.4		_	0							
HCM Lane LOS	\$ 311.3 F		23.0 C	В	-		A	-						
HCM 95th %tite Q(veh)	5.9		2.8	0.8		_	0	-	-					
Notes	L TOUR	No.		SWITTE			. 30			-	1000	77.00		

	*	-	+	1	-		•	†	-	-	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	1			7+		7	1	14			
Volume (vph)	134	719	0	0	556	250	62	132	189	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2057	0	1770	1900	1812	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1745	1900	0	0	2057	0	1770	1900	1812	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.87	0.87	0.87	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	826	0	0	886	0	71	152	217	0	0	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	127		T				b-	· tu	1		1	·····································

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 68.9%

Analysis Period (min) 15

Intersection					-					200	=	3 3 -		
Int Delay, s/veh 0.7	7													
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	134	719	0		0	556	250		62	132	189	0		(
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	_	_	None		_	-	None				None	-	-	None
Storage Length	0	-			-	-	_		0	-	0			
Veh in Median Storage, #		0	-		_	0	_		-	0	_	_	0	
Grade, %	-	0			_	0				0		_	0	
Peak Hour Factor	87	87	87		91	91	91		87	87	87	92		
Heavy Vehicles, %	0	0	0		0	0	1		2	0	1	0		
Mvmt Flow	154	826	0		Ô	611	275		71	152	217	0		Č
TVTVIII T TOW	104	020	Ů		· ·	011	210		, ,	102	211		Ů	
Major/Minor	Major1			i N	Major2			ı j	Minor1		Bee a W	1 2		= 3
Conflicting Flow All	886	0	0		826	0	0		1882	2020	826			
Stage 1	**								1134	1134	-			
Stage 2	-	_			-	_	-		748	886				
Critical Hdwy	4.1	*			4.1	-	_		6.42	6.5	6.21			
Critical Hdwy Stg 1	"."	-				-	-		5.42	5.5	0.21			
Critical Hdwy Stg 2	_	e.							5.42	5.5				
Follow-up Hdwy	2.2	_	_		2.2	_	_		3.518	4	3.309			
Pot Cap-1 Maneuver	773	_	_		813	_			78	~ 59	373			
Stage 1	113	_			013		_		307	280	313			
Stage 2	_	_			-	-	-		468	365				
Platoon blocked, %	_	_	_		_	_	_		400	303				
	772	-	-		042				60	0	373			
Mov Cap-1 Maneuver	773	-	-		813	-	-		~ 62		3/3			
Mov Cap-2 Maneuver	-	-	*		-	-	*		~ 62	0	-			
Stage 1	44	-	+-		7	-	+		246	0	=			
Stage 2	•		48				- *		468	0	-			
Approach	EB.	-		6-1	WB.			-	NB:	*	¥.	क्षा र	14	À.
HCM Control Delay, s	1.7				0									
HCM LOS					·				-					
Minor Lane/Major Mvmt	NBLn1 t	VBLn2	VBLn3	EBL	EBT	EBR	WBL	WBT	WBR			· ·		Lange
Capacity (veh/h)	62	-	373	773	-	-	813		-					
HCM Lane V/C Ratio	1.149	_	0.582	0.199	-	-	-	-	-					
HCM Control Delay (s)	273.2	-	27.3	10.8	-	-	0	-	-					
HCM Lane LOS	F	-	D	В	-	-	A	-	=					
HCM 95th %tile Q(veh)	5.8	-	3.5	0.7	-	-	0	-	-					
Notes	3 45		1953	10-1	100	700	300				3,5		395	500
~: Volume exceeds capacity	\$: De	lay exc	eeds 3	00s -	+: Comi	outation	Not De	efined	*: All	maior v	olume i	in platoon		

2023 Build Wkdy AM Peak w/Mitigation 2: Summer Street/Route 1 NB On-Ramp & Merrimac Street

-	٠	→	•	6	←	•	4	†	~	-		1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	1			₽		7	†	i*			
Volume (vph)	72	699	0	0	365	146	63	55	98	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1728	1900	0	0	2055	0	1770	1900	1760	0	0	0
Flt Permitted	0.440						0.950					
Satd. Flow (perm)	800	1900	0	0	2055	0	1770	1900	1760	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					50				115			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.94	0.94	0.94	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	1%	0%	0%	0%	1%	0%	2%	0%	4%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	744	0	0	594	0	74	65	115	0	0	0
Turn Type	Perm	NA			NA		Perm	NA	Perm			
Protected Phases		4			8			2				
Permitted Phases	4	·			_		2		2			
Detector Phase	4	4			8		2	2	2			
Switch Phase	•	·			· ·		_	_	_			
Minimum Initial (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Minimum Split (s)	21.0	21.0			21.0		21.0	21.0	21.0			
Total Split (s)	44.0	44.0			55.0		25.0	25.0	25.0			
Total Split (%)	55.0%	55.0%			68.8%		31.3%	31.3%	31.3%			
Maximum Green (s)	39.0	39.0			50.0		20.0	20.0	20.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	0.0	0.0			
Total Lost Time (s)	4.0	4.0			4.0		4.0	5.0	5.0			
Lead/Lag	Lag	Lag										
Lead-Lag Optimize?	Yes	Yes										
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	C-Max	C-Max			C-Max		None	None	None			
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	45.9	45.9			55.0		17.0	16.0	16.0			
Actuated g/C Ratio	0.57	0.57			0.69		0.21	0.20	0.20			
v/c Ratio	0.17	0.68			0.42		0.20	0.17	0.26			
Control Delay	10.1	15.2			5.6		25.6	25.9	6.8			
Queue Delay	1.5	3.5			0.0		0.1	0.0	0.0			
Total Delay	11.6	18.7			5.6		25.7	25.9	6.8			
LOS	В	В			A		C	C	A			
Approach Delay		18.0			5.6		Ū	17.2	,,			
Approach LOS		10.0			Α			В				
Queue Length 50th (ft)	14	180			83		30	27	0			
Queue Length 95th (ft)	m25	336			151		58	53	33			
Internal Link Dist (ft)	11123	63			55		30	84	00		255	
Internal Link Dist (It)		00			00			04			200	

Lane Group	ø3	ø6	-	 The state of the s
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Satd. Flow (prot)				
FIt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type	•	^		
Protected Phases	3	6		
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	4.0	4.0		
Minimum Split (s)	9.0	21.0		
Total Split (s)	11.0	25.0		
Total Split (%)	14%	31%		
Maximum Green (s)	6.0	20.0		
Yellow Time (s)	4.0	4.0		
All-Red Time (s)	1.0	1.0		
Lost Time Adjust (s)				
Total Lost Time (s)				
_ead/Lag	Lead			
_ead-Lag Optimize?	Yes			
Vehicle Extension (s)	3.0	3.0		
Recall Mode	None	None		
Nalk Time (s)		5.0		
Flash Dont Walk (s)		11.0		
Pedestrian Calls (#/hr)		0		
Act Effct Green (s)				
Actuated g/C Ratio				
v/c.Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				

	۶	-	*	•	←	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	459	1090			1428		464	475	526			
Starvation Cap Reductn	262	249			0		0	0	0			
Spillback Cap Reductn	0	0			8		70	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	0.39	0.88			0.42		0.19	0.14	0.22			
Intersection Summary											then	1

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Natural Cycle: 60

Control Type: Actuated-Coordinated

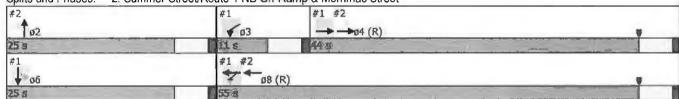
Maximum v/c Ratio: 0.68

Intersection Signal Delay: 13.5 Intersection Capacity Utilization 88.7% Intersection LOS: B ICU Level of Service E

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

2: Summer Street/Route 1 NB On-Ramp & Merrimac Street Splits and Phases:



2023 Build Wkdy PM Peak w/Mitigation 2: Summer Street/Route 1 NB On-Ramp & Merrimac Street

	۶	→	*	•	-	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	†			f _r		ሻ	↑	7			
Volume (vph)	142	712	0	0	623	261	66	92	193	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2061	0	1805	1881	1830	0	0	0
Flt Permitted	0.232						0.950					
Satd. Flow (perm)	426	1900	0	0	2061	0	1805	1881	1830	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					54				199			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.89	0.89	0.89	0.91	0.91	0.91	0.97	0.97	0.97	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%
Shared Lane Traffic (%)	0 70	0 70	0 70	0 70	0 70	170	0 70	170	070	070	0 70	0 70
Lane Group Flow (vph)	160	800	0	0	972	0	68	95	199	0	0	0
Turn Type	Perm	NA	· ·	Ū	NA	Ū	Perm	NA	Perm	Ū		
Protected Phases	1 01111	4			8		1 01111	2	1 01111			
Permitted Phases	4	7			U		2	_	2			
Detector Phase	4	4			8		2	2	2			
Switch Phase	7	7			U		_	_	_			
Minimum Initial (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Minimum Split (s)	21.0	21.0			21.0		21.0	21.0	21.0			
Total Split (s)	45.0	45.0			56.0		24.0	24.0	24.0			
Total Split (%)	56.3%	56.3%			70.0%		30.0%	30.0%	30.0%			
Maximum Green (s)	40.0	40.0			51.0		19.0	19.0	19.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	-1.0	-1.0			-1.0		-1.0	-1.0	-1.0			
Total Lost Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Lead/Lag	Lag	Lag			4.0		4.0	4.0	4.0			
Lead-Lag Optimize?	Yes	Yes										
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	C-Max	C-Max			C-Max		None	None	None			
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effet Green (s)	44.5	44.5			56.7		15.3	15.3	15.3			
Actuated g/C Ratio	0.56	0.56			0.71		0.19	0.19	0.19			
v/c Ratio	0.68	0.76			0.66		0.19	0.19	0.19			
Control Delay	22.5	13.7			9.5		26.9	28.0	6.4			
•	6.9	23.8			0.1		0.1	0.0	0.0			
Queue Delay	29.3	37.5			9.5		27.0	28.0	6.4			
Total Delay	29.3 C	57.5 D			9.5 A		21.0 C	20.0 C	Α			
LOS Approach Dolov	C	36.2			9.5		C	16.0	А			
Approach LOS		30.2 D			9.5 A			16.0 B				
Approach LOS	20						20		0			
Queue Length 50th (ft)	22	113			205		29	41				
Queue Length 95th (ft)	m47	m239			401		58	76	49		OFF	
Internal Link Dist (ft)		63			55			84			255	

Lane Group	ø3	Ø61)
Lane Configurations		
Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s) Peak Hour Factor		
Heavy Vehicles (%)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type	•	^
Protected Phases	3	6
Permitted Phases		
Detector Phase		
Switch Phase		_
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	9.0	21.0
Total Split (s)	11.0	24.0
Total Split (%)	14%	30%
Maximum Green (s)	6.0	19.0
Yellow Time (s)	4.0	4.0
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	140116	5.0
Flash Dont Walk (s)		11.0
		0
Pedestrian Calls (#/hr)		U
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
0 1 0 500 (0)		
Queue Length 50th (ft)		
Queue Length 50th (ft) Queue Length 95th (ft)		

	*	-	*	•	-	*	4	†	1	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	237	1057			1476		451	470	606			
Starvation Cap Reductn	43	279			0		0	0	0			
Spillback Cap Reductn	0	0			32		75	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	0.82	1.03			0.67		0.18	0.20	0.33			
Intersection Summary												

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 21.7
Intersection Capacity Utilization 120.1%

Intersection LOS: C ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

	١	-	*	•	-	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1			1		*	↑	7			
Volume (vph)	134	719	0	0	556	250	62	132	189	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	16	12	12	12	16	12	12	12
Satd. Flow (prot)	1745	1900	0	0	2057	0	1770	1900	1812	0	0	0
Flt Permitted	0.279						0.950					
Satd. Flow (perm)	512	1900	0	0	2057	0	1770	1900	1812	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					60				217			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		143			135			164			335	
Travel Time (s)		3.3			3.1			3.7			7.6	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.87	0.87	0.87	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)	070	070	070	0 70	0 70	170	270	0 70	170	0 70	0 70	0 70
Lane Group Flow (vph)	154	826	0	0	886	0	71	152	217	0	0	0
Turn Type	Perm	NA	Ü	Ū	NA	Ū	Perm	NA	Perm	J	Ū	Ū
Protected Phases	1 01111	4			8		1 01111	2	1 01111			
Permitted Phases	4				O		2	_	2			
Detector Phase	4	4			8		2	2	2			
Switch Phase	,				Ū		_	_	_			
Minimum Initial (s)	4.0	4.0			4.0		4.0	4.0	4.0			
Minimum Split (s)	21.0	21.0			21.0		21.0	21.0	21.0			
Total Split (s)	47.0	47.0			58.0		22.0	22.0	22.0			
Total Split (%)	58.8%	58.8%			72.5%		27.5%	27.5%	27.5%			
Maximum Green (s)	42.0	42.0			53.0		17.0	17.0	17.0			
Yellow Time (s)	4.0	4.0			4.0		4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0			0.0		-1.0	0.0	0.0			
Total Lost Time (s)	5.0	5.0			5.0		4.0	5.0	5.0			
Lead/Lag	Lag	Lag			0.0		.,,	0.0	0,0			
Lead-Lag Optimize?	Yes	Yes										
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0			
Recall Mode	C-Max				C-Max		None	None	None			
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)	44.2	44.2			55.5		15.5	14.5	14.5			
Actuated g/C Ratio	0.55	0.55			0.69		0.19	0.18	0.18			
v/c Ratio	0.55	0.79			0.61		0.21	0.44	0.43			
Control Delay	14.5	15.2			8.8		27.4	32.7	7.0			
Queue Delay	6.3	34.9			0.0		0.1	0.0	0.0			
Total Delay	20.8	50.1			8.8		27.5	32.7	7.0			
LOS	C C	D			Α		C C	C	Α.			
Approach Delay	O	45.5			8.8		0	19.2				
Approach LOS		45.5 D			Α			19.2 B				
Queue Length 50th (ft)	24	137			199		29	66	0			
Queue Length 95th (ft)	m36	m302			317		61	114	48			
Internal Link Dist (ft)	11130	63			55		UI	84	40		255	
internal Link Dist (II)		03			55			04			200	

Lane Group	ø3'	Ø6	P-S	17 197	3 1	5-35	ET.	-	-	
Lane Configurations										
Volume (vph)										
ldeal Flow (vphpl)										
Lane Width (ft)										
Satd. Flow (prot)										
FIt Permitted										
Satd. Flow (perm)										
** ,										
Right Turn on Red										
Satd. Flow (RTOR)										
_ink Speed (mph)										
_ink Distance (ft)										
Travel Time (s)										
Peak Hour Factor										
Heavy Vehicles (%)										
Shared Lane Traffic (%)										
ane Group Flow (vph)										
Turn Type										
Protected Phases	3	6								
Permitted Phases										
Detector Phase										
Switch Phase										
Minimum Initial (s)	4.0	4.0								
/linimum Split (s)	9.0	21.0								
Total Split (s)	11.0	22.0								
otal Split (%)	14%	28%								
	6.0									
Maximum Green (s)		17.0								
/ellow Time (s)	4.0	4.0								
All-Red Time (s)	1.0	1.0								
ost Time Adjust (s)										
Total Lost Time (s)										
.ead/Lag	Lead									
.ead-Lag Optimize?	Yes									
ehicle Extension (s)	3.0	3.0								
Recall Mode	None	None								
Valk Time (s)		5.0								
lash Dont Walk (s)		11.0								
edestrian Calls (#/hr)		0								
ct Effct Green (s)										
ctuated g/C Ratio										
/c Ratio										
Control Delay										
Queue Delay										
otal Delay										
OS										
Approach Delay										
Approach LOS										
Queue Length 50th (ft)										
Queue Length 95th (ft)										
nternal Link Dist (ft)										

	*	→	*	1	←	*	4	†	-	-	ļ	1
Lane Group.	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	282	1049			1445		398	403	555			
Starvation Cap Reductn	83	271			0		0	0	0			
Spillback Cap Reductn	0	0			4		49	0	0			
Storage Cap Reductn	0	0			0		0	0	0			
Reduced v/c Ratio	0.77	1.06			0.61		0.20	0.38	0.39			
Intersection Summary												

A T

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

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

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

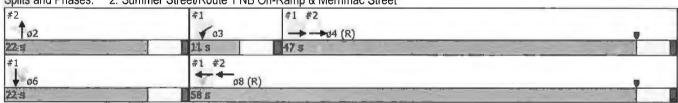
Intersection Signal Delay: 26.4
Intersection Capacity Utilization 120.2%

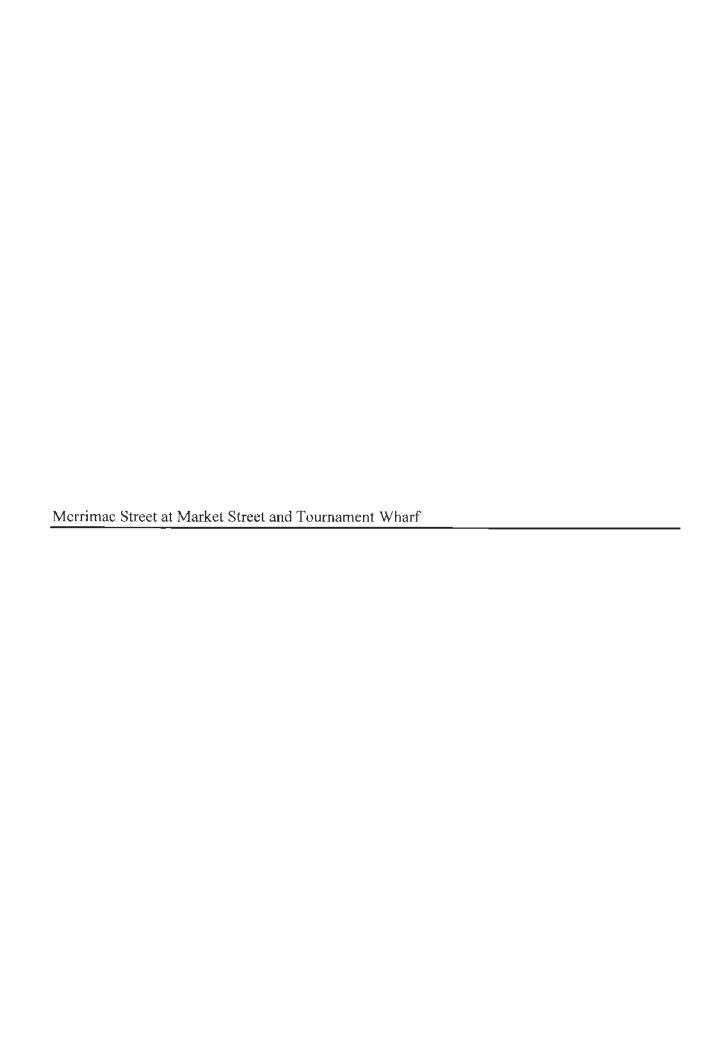
Intersection LOS: C
ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Summer Street/Route 1 NB On-Ramp & Merrimac Street





	*	→	*	1	—	*	1	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL.	WBT .	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			43-			4	
Volume (vph)	17	670	96	2	394	7	20	3	5	0	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2097	0	0	2128	0	0	2032	0	0	1398	0
Flt Permitted		0.999						0.966				
Satd. Flow (perm)	0	2097	0	0	2128	0	0	2032	0	0	1398	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.96	0.96	0.96	0.85	0.85	0.85	0.79	0.79	0.79	0.75	0.75	0.75
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	816	0	0	474	0	0	35	0	0	20	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary		477	-130	F	3 3					-\$		

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 68.1%

Analysis Period (min) 15

2. Market Ctroot	Courses ont \Albert	O Marringo	Ctroot
3: Market Street/1	oumament vynan	α iviernmad	Sueet

Intersection			1	47	بري					NOT TE	an. A	100
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	_SBT	SBF
Vol, veh/h	17	670	96	2	394	7	20		5	0	1	
Conflicting Peds, #/hr	0	0	0	0	0	0	C		0	0	0	C
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None			None			None			None
Storage Length	_	-				-		_			_	
Veh in Median Storage, #	-	0	-		0	_		0	-		0	
Grade, %	_	0			0	_		. 0	_	4	0	
Peak Hour Factor	96	96	96	85	85	85	79		79	75	75	
Heavy Vehicles, %	0	1	0	0	1	0	0		0	0	0	
Mvmt Flow	18	698	100	2	464	8	25		6	Ő	1	19
Maior/Minor	Marinet			Metar			Missel			Missieli		
Major/Minor	Majort			Major2			Minor		740	Minor2.		
Conflicting Flow All	472	0	0	798	0	0	1265		748	1260	1305	
Stage 1	-	-	-	-	-	-	783		-	472	472	
Stage 2	-	-	-	-	-	-	482		-	788	833	
Critical Hdwy	4.1	-	-	4.1	-	-	7.1		6.2	7.1	6.5	
Critical Hdwy Stg 1	-	-	-	2	-		6.1		-	6.1	5.5	
Critical Hdwy Stg 2	-	-	-		-	-	6.1			6.1	5.5	
Follow-up Hdwy	2.2	-		2.2	•	-	3.5		3.3	3.5	4	
Pot Cap-1 Maneuver	1100		-	833	-	-	147		416	149	162	
Stage 1	-	*	•			-	390		-	576	562	
Stage 2	-	-	-	-	-	-	569	560	-	387	386	
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1100	2	-	833	-	-	138	166	416	141	157	585
Mov Cap-2 Maneuver	-	-	-		-		138	166		141	157	
Stage 1	-	-	-		-	-	378	395		559	560	
Stage 2	-	-	•	-	-		548	558	-	366	374	
Approach	EB			WB		5 3	NE		733	SB	14.3	500
HCM Control Delay, s	0.2			0			33.8			12.6		
HCM LOS	0.2			·			00.0			В		
Miceleach Agailtain)	10:1476	v (Hel		en we	Affinar	nya k	etelling.					
Capacity (veh/h)	160	1100	_ <u> </u>	- 833		. 77	495	· <u> ·</u> .				
HCM Lane V/C Ratio		0.016		- 0.003			0.04					
	33.8		^		^	*	12.6					
HCM Control Delay (s) HCM Lane LOS		8.3	0	- 9.3	0							
	D	A	A	- A	Α	*	В					
HCM 95th %tile Q(veh)	8.0	0		- 0	-	-	0.1					

	۶	→	*	•	4-	*	4	†	1	-	1	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	57	650	28	10	685	10	35	2	36	7	7	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2115	0	0	2147	0	0	1935	0	0	1525	0
FIt Permitted		0.996			0.999			0.977			0.994	
Satd. Flow (perm)	0	2115	0	0	2147	0	0	1935	0	0	1525	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.96	0.96	0.96	0.90	0.90	0.90	0.79	0.79	0.79	0.78	0.78	0.78
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	765	0	0	783	0	0	93	0	0	76	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 87.5%

Analysis Period (min) 15

Intersection	FI S							5					
Int Delay, s/veh	9.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	57	650	28	10	685	10		35	2	36	7	7	45
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		-	None	~	*	None		-		None	-		None
Storage Length	-	-	-	-	-	4		-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	46	0	-		•	0	-	-	0	-
Grade, %	-	0	-	-	0	-		-	0	-	-	0	-
Peak Hour Factor	96	96	96	90	90	90		79	79	79	78	78	78
Heavy Vehicles, %	0	1	0	0	0	0		3	0	0	0	0	0
Mvmt Flow	59	677	29	11	761	11		44	3	46	9	9	58
Majo Mino EX-14-14	Majort_			Major2.			37	Alli Odik.	W.		1Minor22	<u> </u>	**
Conflicting Flow All	772	0	0	706	0	0		1632	1604	692	1623	1614	767
Stage 1		_	_	-		-		810	810	-	789	789	-
Stage 2			-	-	-			822	794		834	825	
Critical Hdwy	4.1		-	4.1		-		7.13	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	···			-		-		6.13	5.5	0.2	6.1	5.5	
Critical Hdwy Stg 2	_					-		6.13	5.5	_	6.1	5.5	
Follow-up Hdwy	2.2			2.2	_	-		3.527	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	852			902				81	107	447	83	105	405
Stage 1	-			302				372	396	7-17	387	405	-
Stage 2			_			_		367	403		365	390	
Platoon blocked, %								307	700		300	000	
Mov Cap-1 Maneuver	852			902		-		58	93	447	66	91	405
Mov Cap-1 Maneuver	002		_	502	_ [_		58	93		66	91	400
•	*	-	_	•		-		329	350	-	342	396	
Stage 1	-		-	-	•	-		301	395		288	345	
Stage 2	•	•	-	•	•	•		301	393	•	200	340	•
Approach .	EB			WB.				NB	92.52	Г	SB	3	
HCM Control Delay, s	0.7			0.1				137.8			33.3		
HCM LOS								F			D		
Minor Lane/Major Mymt	NBLn1	EBL	EBT	EBR WBL	WBT	WBR	SBLn1		- 2.0	7		150	65
Capacity (veh/h)	103	852	344	- 902	-	-	201						
HCM Lane V/C Ratio	0.897	0.07		- 0.012			0.376						
HCM Control Delay (s)	137.8	9.5	0	- 9	0	*	33.3						
HCM Lane LOS	F	A	A	- A	A		D						
HCM 95th %tile Q(veh)	5.3	0.2	-	- 0	_	-	1.6						
THE PROPERTY OF STATES	0.0	0.2		U			1.0						

	*	-	*	•	←	*	4	†	1	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	53	623	22	12	581	21	19	9	32	25	2	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2136	0	0	2140	0	0	1966	0	0	1540	0
FIt Permitted		0.996			0.999			0.984			0.983	
Satd. Flow (perm)	0	2136	0	0	2140	0	0	1966	0	0	1540	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.83	0.83	0.83	0.83	0.83	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	751	0	0	668	0	0	73	0	0	85	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary			-f -+	-		_	3.		23	220	-	- w

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 75.2%

ICU Level of Service D

Analysis Period (min) 15

Intersection													
Int Delay, s/veh 5	.1												
Movement	EBL	ÉBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	53	623	22	12	581	21		19	9	32	25	2	46
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	_	-	None	+	+	None		-	-	None			None
Storage Length	_		-		-	_		+	_	-	_	-	
Veh in Median Storage, #	_	0	_	_	0	_		-	0	-	_	0	
Grade, %	_	0			0			_	0	_	_	0	
Peak Hour Factor	93	93	93	92	92	92		83	83	83	83	83	87
Heavy Vehicles, %	0	0	0	0	0	0		0	0	0	0	0	(
Mymt Flow	57	670	24	13	632	23		23	11	39	30	2	53
WINTER IOW	31	010	24	10	002	20		25	- ' '	55	30	2	0.
Major/Minor	Major1			Major2			Mir	nor1			Minor2	T	30.00
Conflicting Flow All	654	0	0	694	0	0		493	1476	682	1489	1477	643
Stage 1	_		_					796	796	_	669	669	
Stage 2	_		_	-	-	-		697	680	-	820	808	
Critical Hdwy	4.1		_	4.1		_		7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1								6.1	5.5	-	6.1	5.5	0.2
Critical Hdwy Stg 2		_	_		_	_		6.1	5.5		6.1	5.5	
Follow-up Hdwy	2.2		_	2.2	_			3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	943		_	911	_	_		103	127	453	103	127	477
Stage 1	J-10		_	311	_			383	402	700	450	459	711
	Ĵ	Ū	-	-		_		435	454		372	397	
Stage 2 Platoon blocked, %			-	-	-	-		455	404	-	3/2	291	
·	042	-	•	044	-	-		00	112	450	70	440	47-
Mov Cap-1 Maneuver	943	-	_	911	**	-		82		453	79	112	477
Mov Cap-2 Maneuver	^	*	•	_	-	*		82	112	•	79	112	
Stage 1	*	*	-	•	-			345	362	•	405	448	
Stage 2	*	-	-	•	-	•		376	444	•	297	358	
Approach -	EB			WB:			_	NB		24 Ay	SB.	To The	
HCM Control Delay, s	0.7			0.2				46.1			47.7		. , , -
HCM LOS	0.1			0.1				E			E		
Minor Lane/Major Mymt	NBLn1	EBL	EBT-	EBR. WBL.	WBT	WBR	SBLn1			i.	. 7	4	- VE T
Capacity (veh/h)	157	943		- 911		-	166						
HCM Lane V/C Ratio	0.46	0.06	_	- 0.014	_		0.514						
HCM Control Delay (s)	46.1	9.1	0	- 9	0	_	47.7						
HCM Lane LOS	40.1		_				47.7 E						
		A	Α	- A	Α	-							
HCM 95th %tile Q(veh)	2.1	0.2	-	- 0	-	-	2.5						

	*	-	*	•	-	*	1	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR.	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	17	723	103	2	422	7	21	3	6	0	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2099	0	0	2128	0	0	2024	0	0	1398	0
Flt Permitted		0.999						0.967				
Satd. Flow (perm)	0	2099	0	0	2128	0	0	2024	0	0	1398	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.96	0.96	0.96	0.85	0.85	0.85	0.79	0.79	0.79	0.75	0.75	0.75
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	878	0	0	506	0	0	39	0	0	20	0
Sign Control		Free			Free			Stop			Stop	
Internation Olimpian	3 4 953	2000	1					3				-

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 71.5%

Analysis Period (min) 15

Intersection:	Mr		Ê	*	1	<u>a_</u>	<i>a</i> 1		-	্লা	ठ	48
Int Delay, s/veh 1.	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NE	L NBT	NBR:	SBL	SBT	SBF
Vol, veh/h	17	723	103	2	422	7		21 3	6	0	1	14
Conflicting Peds, #/hr	0	0	0	0	0	0		0 0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free	Sto	p Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-		None			None	-	· ·	None
Storage Length	-				-						-	
Veh in Median Storage, #	-	0	-		0	-		- 0	_	-	0	
Grade, %	-	0	-	-	0	-		- 0			0	
Peak Hour Factor	96	96	96	85	85	85		9 79		75	75	
Heavy Vehicles, %	0	1	0	0	1	0		0 0		0	0	
Mvmt Flow	18	753	107	2	496	8	2	27 4		0	1	19
Major/Minor	Majorf		-35	Major2		r 1	Mino	i1	· .	Minor2	24 .84	
Conflicting Flow All	505	0	0	860	0	0	13		807	1353	1401	501
Stage 1	-	_	-	000	_		84			505	505	
Stage 2							5			848	896	
Critical Hdwy	4.1	_		4.1	_			.1 6.5		7.1	6.5	6.27
Critical Hdwy Stg 1	7.1			7.1		_		.1 5.5		6.1	5.5	
Critical Hdwy Stg 2	_				_			.1 5.5		6.1	5.5	
Follow-up Hdwy	2.2	_		2.2		_		,5 4		3.5	4	
Pot Cap-1 Maneuver	1070		_	790	_		1:			128	141	560
Stage 1	1070	_		130			36			553	544	
Stage 2		_	_		_	-	54			359	362	
Platoon blocked, %	•		-	•			J.	10 541		555	JUZ	
	1 0 70	-	-	790	-	•	1	8 146	3 85	120	136	560
Mov Cap-1 Maneuver	1070	_	-	790	-	-	1			120	136	
Mov Cap-2 Maneuver	-	-	-	-	**	*					542	
Stage 1	-	-	-	•	-	-	35			535		
Stage 2	-	•	-	-	•	-4	52	24 539	~	337	350	
Approach	EB	Í.		WB		179.71		В		SB		
HCM Control Delay, s	0.2			0			4	10		13.1		
HCM LOS								E		В		
King reservite postavan	REGGG.					Will.	Silvin					19.
Capacity (veh/h)	140	1070	+	- 790	-	-	464					
HCM Lane V/C Ratio		0.017	-	- 0.003			0.043					
HCM Control Delay (s)	40	8.4	0	- 9.6	0	-	13.1					
HCM Lane LOS	E	A	A	- A	A		В					
	The same			1 2	7.1		_					

	*	-	-	1	←	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			44			43-	
Volume (vph)	57	720	30	12	754	10	38	2	39	7	7	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2117	0	0	2147	0	0	1937	0	0	1525	0
FIt Permitted		0.997			0.999			0.977			0.994	
Satd. Flow (perm)	0	2117	0	0	2147	0	0	1937	0	0	1525	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.96	0,96	0.96	0.90	0.90	0.90	0.79	0.79	0.79	0.78	0.78	0.78
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	840	0	0	862	0	0	100	0	0	76	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	1 1		1 -				-	* 4		23		

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 90.6%

Analysis Period (min) 15

Intersection											1		
nt Delay, s/veh 1	8												
Movement *	EBL	EBT	EBR	WBL.	WBT	WBR		NBL,	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	57	720	30	12	754	10		38	2	39	7	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Sto
RT Channelized	-	-	None	-	-	None		-	-	None	-	-	None
Storage Length	-	-	-	-	-	_		-	-	-	-	-	
Veh in Median Storage, #	-	0	-		0			-	0	-	-	0	
Grade, %	-	0	-	-	0	-			0	-	-	0	
Peak Hour Factor	96	96	96	90	90	90		79	79	79	78	78	78
Heavy Vehicles, %	0	1	0	0	0	0		3	0	0	0	0	(
Mvmt Flow	59	750	31	13	838	11		48	3	49	9	9	58
Major/Minor	Major1			Major2	5-8		1	Minor1			Minor2		-3
Conflicting Flow All	849	0	0	781	0	0		1787	1760	766	1780	1770	843
Stage 1	-	_	-	-	-	_		884	884	-	870	870	
Stage 2	-				•	-		903	876	-	910	900	
Critical Hdwy	4.1	-	-	4.1	-	-		7.13	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1		-	_	-	-	_		6.13	5.5		6.1	5.5	
Critical Hdwy Stg 2	_	-	-	_	_	-		6.13	5.5	_	6.1	5.5	
Follow-up Hdwy	2.2	_	-	2.2	-	-		3.527	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	798	-	-	845		-		63	85	406	65	84	36
Stage 1	_	-	-	_	-	-		339	366	-	349	372	
Stage 2	_	-		_		-		330	369	_	332	360	
Platoon blocked, %			-			_							
Mov Cap-1 Maneuver	798	-		845				~ 42	72	406	49	71	36
Mov Cap-2 Maneuver	-	-	_	-		_		~ 42	72	-	49	71	
Stage 1	-	-		_	-	4		295	318	_	303	361	
Stage 2								263	358	_	251	313	
Olago Z			-		-			200	550		201	010	
Approach -	· EB	1		WB.	· (*-	1 5	•	TANB	d		SB		3 (
HCM Control Delay, s	0.7			0.1				297.4			45.3		
HCM LOS								F			Е		
and alter the same and also	a Long M		61-5-	Table in the North Control	Fa S been mit	To be - '	T						
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR WBL		WBR							
Capacity (veh/h)	77	798	•	- 845	-	•	162						
HCM Lane V/C Ratio	1.299	0.074		- 0.016		-	0.467						
HCM Control Delay (s)	297.4	9.9	0	- 9.3	0	•	45.3						
HCM Lane LOS	F	A	Α	- A	A	-	E						
HCM 95th %tile Q(veh)	7.7	0.2	-	- 0	-	-	2.2						
Notes	Dur	200	3475	4-5-33	-	-	7233	2 3				-/-	- 000

Proposed Mixed-Use Development VAI

	•	-	*	1	-	*	1	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL.	SBT	SBR
Lane Configurations		4		-	4			4			4	
Volume (vph)	53	709	24	14	651	21	20	9	35	25	2	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2138	0	0	2143	0	0	1964	0	0	1540	0
FIt Permitted		0.997			0.999			0.985			0.983	
Satd. Flow (perm)	0	2138	0	0	2143	0	0	1964	0	0	1540	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.83	0.83	0.83	0.83	0.83	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	845	0	0	746	0	0	77	0	0	85	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	£ "K.	F				_2,	· ·	4 -	7	Y Y	- 3	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 79.2%

Analysis Period (min) 15

Intersection *								* *	-				A 6	'ALL'
Int Delay, s/veh 7.	7													
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	53	709	24		14	651	21		20	9	35	25	2	
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None		-	-	None		-		None	-	-	None
Storage Length	-	-	-			-	-		-	-		-		
Veh in Median Storage, #	-	0	-			0			-	0	-	_	0	
Grade, %		0	-		-	0			-	0	-	-	0	
Peak Hour Factor	93	93	93		92	92	92		83	83	83	83	83	87
Heavy Vehicles, %	0	0	0		0	0	0		0	0	0	0	0	
Mvmt Flow	57	762	26		15	708	23		24	11	42	30	2	
Major/Minor	Major1			I.	lajór2			j.	Ninor1			Minor2		44
Conflicting Flow All	730	0	0		788	0	0		1666	1650	775	1665	1651	719
Stage 1	700	_	-		700	_	_		889	889	770	749	749	
Stage 2	_				_	_	_		777	761		916	902	
Critical Hdwy	4.1		_		4.1				7.1	6.5	6.2	7.1	6.5	
Critical Hdwy Stg 1	7.1	_			7.1	_	_		6.1	5.5	0.2	6.1	5.5	
Critical Hdwy Stg 2			_		_		_		6.1	5.5	_	6.1	5.5	
Follow-up Hdwy	2.2		_		2.2				3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	883	_	_		840		_		78	100	401	78	100	
Stage 1	000				040				341	364	401	407	422	
Stage 2	•	_	_		-				393	417	•	329	359	
Platoon blocked, %	_	-	_		-	-	-		353	417	-	329	308	
Mov Cap-1 Maneuver	883	-	-		840	-	-		60	86	401	EC	86	432
Mov Cap-1 Maneuver	003	-	-		040	-	•		60	86	401	56 56	86	432
	-	-	-		-	-	-				•			•
Stage 1	-	-	-			-	-		302	322	•	360	409	
Stage 2			•		•	•	*		333	404	•	252	318	
Approach	EB	2-3-	33		WB			. 5	NB			SB	9,50	
HCM Control Delay, s	0.6				0.2				75.2			81.9		
HCM LOS									F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1						
Capacity (veh/h)	122	883			840	-	-	124						
HCM Lane V/C Ratio		0.065	-	-	0.018	-		0.689						
HCM Control Delay (s)	75.2	9.4	0	án	9.4	0		81.9						
HCM Lane LOS	F	A	A		A	A		F						
HCM 95th %tile Q(veh)	3.3	0.2	-		0.1			3.7						

	٠	→	*	•	←	*	4	†	-	-	ţ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	38	707	103	2	429	7	21	3	6	2	1	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2097	0	0	2128	0	0	2024	0	0	1401	0
FIt Permitted		0.998						0.967			0.997	
Satd. Flow (perm)	0	2097	0	0	2128	0	0	2024	0	0	1401	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.96	0.96	0.96	0.85	0.85	0.85	0.79	0.79	0.79	0.75	0.75	0.75
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	7%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	883	0	0	5 15	0	0	39	0	0	56	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	THE TOWN	. }.	der Li	,	١.	<u>.</u>	-	क्षण				

Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 86.3%

Analysis Period (min) 15

intersection " "		1		E	4-7	*	- Jeg.						
Int Delay, s/veh	2												
Mövement	EBL	EBT	EBR	WBI	. WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	38	707	103		`	7		21	3	6	2	1	39
Conflicting Peds, #/hr	0	0	0	(0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free		Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None			None		- 10	-	None	-	-	None
Storage Length		_	-			-							. 10110
Veh in Median Storage, #		0			- 0				0			0	
Grade, %		0			. 0				0			0	
Peak Hour Factor	96	96	96	85		85		79	79	79	75	75	75
	0	1		(0		0	0	0	0	0	7
Heavy Vehicles, %	-		107						4		3	1	52
Mvmt Flow	40	736	107	2	505	8		27	4	8	3	1	02
Major/Minor	Major1	2 -		Majora		- 3	N	Ainor1			Minor2		
Conflicting Flow All	513	0	0	844		0		1409	1387	790	1389	1437	509
Stage 1			-	15.00		_		869	869	-	514	514	
Stage 2			-					540	518		875	923	
Critical Hdwy	4.1			4.1				7.1	6.5	6.2	7.1	6.5	6.27
Critical Hdwy Stg 1	7.1	_		74				6.1	5.5	0.2	6.1	5.5	0.2
Critical Hdwy Stg 2			_					6.1	5.5	_	6.1	5.5	
	2.2	-	•	2.2		-		3.5	4	3.3	3.5	4	3.363
Follow-up Hdwy		-	-			-							
Pot Cap-1 Maneuver	1063	-	-	801	-	-		117	144	3 93	121	135	554
Stage 1	do	-	-			-		349	372	-	547	539	
Stage 2	-	-	-			-		530	536	-	347	351	
Platoon blocked, %		**	-		-	-							
Mov Cap-1 Maneuver	1063	-	-	801		-		99	133	393	109	125	554
Mov Cap-2 Maneuver	•	-	-	-		-		99	133	-	109	125	
Stage 1	-	-	-			-		324	345	-	508	537	
Stage 2	٠	•	-			-		478	534	*	312	326	
Approach	EB*			· WE		24		NB	- 11	16	SB	-	7
	0.4			19%				48.3			14.5		
HCM Control Delay, s	0.4			,	,								
HCM LOS								Е			В		
Minor Lane/Major Mymt	NBLn1	EBL	EBT	EBR WBI	. WBT	WBR	SBLn1	=, 3					
Capacity (veh/h)	120			- 80		4							
HCM Lane V/C Ratio		0.037		- 0.003			0.129						
HCM Control Delay (s)	48.3	8.5	0	- 9.6			14.5						
HCM Lane LOS	40.5 E	Α	A	- 4			14.3 B						
			Α.			-	0.4						
HCM 95th %tite Q(veh)	1.2	0.1	-	~ (, -	-	U. 4						

	٦	→	*	1	←	*	4	†	1	1	\downarrow	1
Lane Group	- EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	117	748	30	12	734	10	38	2	39	11	8	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2112	0	0	2147	0	0	1937	0	0	1485	0
Flt Permitted		0.993			0.999			0.977			0.995	
Satd. Flow (perm)	0	2112	0	0	2147	0	0	1937	0	0	1485	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5 .7			4.8			6.9	
Peak Hour Factor	0.96	0.96	0.96	0.90	0.90	0.90	0.79	0.79	0.79	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	3%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	932	0	0	840	0	0	100	0	0	114	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary		₽		-3			-	1 1	ے سب	_ =		

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 108.8%

Analysis Period (min) 15

Intersection	-			**							и-	TOTAL S	17.0
Int Delay, s/veh	40												
Movement	EBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	∡SBJ
Vol, veh/h	117	748	30	12	734	10		38	2	39	11	8	86
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free	(Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None		-	-	None	-	-	None
Storage Length	*	-	-	-	-	-		-	-	-	-	-	
Veh in Median Storage, #	-	0	-		0	-40		-	0	-	-	0	
Grade, %	*	0	-		0	-		-	0	-		0	
Peak Hour Factor	96	96	96	90	90	90		79	79	79	92	92	92
Heavy Vehicles, %	0	1	0	0	0	0		3	0	0	2	2	2
Mvmt Flow	122	779	31	13	816	11		48	3	49	12	9	93
Major/Micona.	Majort	7		Majoi2	MA.	1	1Mi	nort.		-	Minor2	7 1 % F1 4 7	(1 -1 17.∰
Conflicting Flow All	827	0	0	810	0	0		938	1892	795	1912	1902	82
Stage 1	021	0	-	010	-	-		039	1039	7,50	848	848	.02
Stage 2		_		_	_	_		899	853		1064	1054	
Critical Hdwy	4.1			4.1	•	-		7.13	6.5	6.2	7.12	6.52	6.22
•	4.1	_	-	4,1		-		6.13	5.5		6.12	5.52	
Critical Howy Stg 1	-	_	-	•	•	•		6.13	5.5	•	6.12	5.52	
Critical Hdwy Stg 2	2.2	-	-	2.2	-	-		.527	3.3	3.3	3.518		2 240
Follow-up Hdwy		-	-		*	-	3			391			
Pot Cap-1 Maneuver	813	-	-	825	+	-		49	71	391	52	69	374
Stage 1	+	-	-	-		-		277	310	-	356	378	
Stage 2	-	-		-	-	-		332	378	-	270	303	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	813		-	825	-	-		~ 25	50	391	34	49	374
Mov Cap-2 Maneuver	-	-	-	-	-	-		~ 25	50		34	49	
Stage 1	-	-	-		-	-		201	225	•	258	367	
Stage 2	•	-	-		-	-		236	367	-	169	220	
Approach	EB	250		WB	-			NB		20.00	SB		
HCM Control Delay, s	1.3			0.1			\$ 6	83.9			85.8		
HCM LOS								F			F		
Kara andukijenijimi			100gF	1525. WE	17/12/1	\(\V_\V_\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	งไร้ไฟก์ _เ			1	a - 4 - 5 - 6 - 1 - 1		
Capacity (veh/h)	48	813		- 825			146				<u> </u>		
HCM Lane V/C Ratio	2.083	0.15	_	- 0.016			0.782						
	\$ 683.9	10.2	0	- 9.4	0		85.8						
HCM Control Delay (s) HCM Lane LOS						-							
	10.2	0.5	Α	- A	Α		F 4.8						
HCM 95th %tile Q(veh)	10.2	0.0	-	- 0	+	-	4.0						
Notes													

	*	-	*	1	—	*	•	†	-	1	↓	1
Lane Group:	FB0					() [] 2		(0)=1				3:15
Lane Configurations		43			44>			43			4	
Volume (vph)	126	733	24	14	674	21	20	9	35	31	3	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	16	12	12	16	12	12	9	12
Satd. Flow (prot)	0	2130	0	0	2143	0	0	1964	0	0	1489	0
FIt Permitted		0.993			0.999			0.985			0.988	
Satd. Flow (perm)	0	2130	0	0	2143	0	0	1964	0	0	1489	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		135			252			212			305	
Travel Time (s)		3.1			5.7			4.8			6.9	
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	949	0	0	771	0	0	77	0	0	146	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	1	Name of			alk fill	1		r -	*			

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 104.2%

Analysis Period (min) 15

2023 Build Saturday Midday Peak 3: Market Street/Tournament Wharf & Merrimac Street

Intersection											_ 4		T.
Int Delay, s/veh	33.6												
Movement	EBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	"SBF
Vol, veh/h	126	733	24	14	674	21		20	9	35	31	3	100
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	_	_	None	-	_	None		-	-	None	-	-	None
Storage Length		-		10	-			-	-	-		-	
Veh in Median Storage, #	-	0	-		0	-		-	0	-	_	0	
Grade, %		0			0			-	0	-	_	0	
Peak Hour Factor	93	93	93	92	92	92		83	83	83	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0		0	0	0	2	2	
Mvmt Flow	135	788	26	15	733	23		24	11	42	34	3	
h de le strate d'une	Adalase			Violein				R diament			Nin a di	· _	•
Major/Minor	Major1			Major2		- 0		Minori	4050	004	- Minor2		74
Conflicting Flow All	755	0	0	814	0	0		1902	1858	801	1873	1859	744
Stage 1	-	-	-	-	-	-		1072	1072	-	774	774	
Stage 2		-	-	7	-	-		830	786	-	1099	1085	
Critical Hdwy	4.1	-	-	4.1	-	-		7.1	6.5	6.2	7.12	6.52	
Critical Hdwy Stg 1	-	-	-	-	-	-		6.1	5.5	-	6,12	5.52	
Critical Hdwy Stg 2	-	-	-	-	-	-		6.1	5.5	-	6.12	5.52	
Follow-up Hdwy	2.2		*	2.2	-			3.5	4	3.3		4.018	
Pot Cap-1 Maneuver	865	-	-	822	-	-		53	74	388	55	73	415
Stage 1	-	-				-		269	299		391	408	
Stage 2	-	_	-	_	-	-		367	406	-	258	293	
Platoon blocked, %													
Mov Cap-1 Maneuver	865	-	-	822	-	-		28	51	388	~ 32	50	415
Mov Cap-2 Maneuver		-	=	-		-		28	51	-	~ 32	50	
Stage 1		-	_		-	-		192	213	-	279	395	
Stage 2		-			•	*		260	393	-	156	209	
Approach	EB		100	WB				NB	M Hoss	00000	SB	- 5	-
HCM Control Delay, s	1.4			0.2			d beauty	279.3	104 95		290.7		
HCM LOS	1.4			0.2				2/9.5 F			290.7 F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR WBL	WBT	WBR	SBLn1						
Capacity (veh/h)	65	865	-	- 82 2	-	-	106						
HCM Lane V/C Ratio	1.186	0.157	*	- 0.019		-	1.374						
HCM Control Delay (s)	279.3	9.9	0	- 9.5	0	-	290.7						
HCM Lane LOS	F	A	Α	- A	A		F						
HCM 95th %tile Q(veh)	6.2	0.6	-	- 0.1	-	-	10.3						
Notes	TO DO				===								3



	*	-	*	1	←	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR!	SBL	SBT	SBR
Lane Configurations		4			44			4			4	
Volume (vph)	7	663	12	1	380	2	1	0	2	2	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1753	0	0	1 817	0	0	1937	0	0	1551	0
Flt Permitted								0.982			0.995	
Satd. Flow (perm)	0	1753	0	0	1 817	0	0	1937	0	0	1551	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.38	0.38	0.38	0.61	0.61	0.61
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	703	0	0	407	0	0	8	0	0	28	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary, Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 50.8%

Analysis Period (min) 15

Int Delay, s/veh 0.	5													
Movement	EBL	EBT	EBR		WBL	WBT	WBR		NBL.	NBT	NBR	SBL	SBJ	SBF
Vol, veh/h	7	663	12		1	380	2		1	0	2	2	0	15
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized			None		-	- 100	None		-	-	None	-	-	None
Storage Length		-	-				-					_		
Veh in Median Storage, #	-	0			-	0	-		_	0	_		0	
Grade, %	_	0				0	-			0			0	
Peak Hour Factor	97	97	97		94	94	94		38	38	38	61	61	61
Heavy Vehicles, %	0	1	0		0	1	0		0	0	0	0	0	0
Mvmt Flow	7	684	12		1	404	2		3	0	5	3	0	25
Majail Mass	Molarit	_			to ford's				Vinor1			Minor2	-	4
Major/Minor	Majorf	^	0	I.	/lajor2	^		[4440	000			405
Conflicting Flow All	40 6	0	0		696	0	0		1124	1113	690	1114	1117	405
Stage 1		-	36		-	-	-		704	704	-	407	407	
Stage 2	4.4	-	*		4.4		•		420	409	-	707	710	
Critical Hdwy	4.1	_	-		4.1	-	-		7.1	6.5	6.2	7.1	6.5	6.2
Critical Howy Stg 1	**	-	-		7	-			6.1	5.5 5.5	-	6.1	5.5	1
Critical Hdwy Stg 2	2.2	_	-		2.0	-	-		6.1		2.2	6.1	5.5	9.0
Follow-up Hdwy		-	=		2.2	7			3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1164	-	-		909		-		184	210	449	187	209	650
Stage 1	-	-	-			•	-		431	443	-	625	601	
Stage 2	-	-	-				-		615	600	-	429	440	
Platoon blocked, %	4404	-	-		000	-	-		470	000	440	400	007	050
Mov Cap-1 Maneuver	1164	-			909	•	-		176	208	449	183	207	650
Mov Cap-2 Maneuver	-	-	•		•	P.	-		176	208	-	183	207	•
Stage 1	-	-	-		-	-	-		427	439	-	619	600	
Stage 2	-	-	-		•	•	-		591	599	•	420	436	١
Approach	EB			1	WB.	Y			NB.	100		SB		- r 4
HCM Control Delay, s	0.1				0				17.5			12.6		
HCM LOS									C			В		
Minor Lane/Major Mymt	NBLn1	EBL	EBT	EBR	WBL.	WET	WBR	SELn1		20			330	44
Capacity (veh/h)	296			-	909			500						
HCM Lane V/C Ratio		0.006	_		0.001			0.056						
HCM Control Delay (s)	17.5	8.1	0	-	9	0	_							
HCM Lane LOS	C	A	A	_	A	A		B						
HCM 95th %tile Q(veh)	0.1	0	n .		Ô		*	0.2						

	•	→	*	1	-	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	6	678	5	1	707	0	0	0	2	6	1	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1754	0	0	1819	0	0	1863	0	0	1575	0
FIt Permitted											0.990	
Satd. Flow (perm)	0	1754	0	0	1 819	0	0	1863	0	0	1575	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.38	0.38	0.38	0.61	0.61	0.61
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	710	0	0	753	0	0	5	0	0	50	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	4	4					E	_	7			- T 1

Area Type:

Other

Control Type: Unsignatized

Intersection Capacity Utilization 54.5%

Analysis Period (min) 15

Intersection .							,					4	- TO 2
Int Delay, s/veh	0.8												
Movement	Ē8L	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	678	5	1	707	0		0	0	2	6	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None			-	None	-	-	None
Storage Length		-	_	-		-			-	•			
Veh in Median Storage, #	-	0	-	-	0	-		-	0	_	-	0	
Grade, %	-	0	-	-	0	-		-	0	-	-	0	
Peak Hour Factor	97	97	97	94	94	94		38	38	38	61	61	61
Heavy Vehicles, %	0	1	0	0	1	0		0	0	0	0	0	(
Mvmt Flow	6	699	5	1	752	0		0	0	5	10	2	38
Mafor/Ninge		NET .		Major2	-	2-13	A	and the same			Miles		
Conflicting Flow All	752	0	0	704	0	0		1488	1468	702	1471	1470	752
Stage 1	-	-		-	_	-		714	714	-	754	754	
Stage 2	-		-	-		-		774	754	-	717	716	
Critical Hdwy	4.1		-	4.1	-	-		7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1			-	_	-	-		6.1	5.5	-	6.1	5.5	
Critical Hdwy Stg 2	_		_	_		-		6.1	5.5	_	6.1	5.5	
Follow-up Hdwy	2.2		-	2.2	-40			3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	867		-	903		_		103	129	442	106	129	413
Stage 1		•	-	-				425	438	-	404	420	
Stage 2	_	-	_	-	_			394	420	-	424	437	
Platoon blocked, %		-	**										
Mov Cap-1 Maneuver	867		_	903		-		92	127	442	104	127	413
Mov Cap-2 Maneuver			_		-6	-		92	127	-	104	127	
Stage 1			_	-		_		420	433	_	400	419	
Stage 2		-		-		-		356	419	-	414	432	
Approach	EB			WB				NB	1-1-		SB		
HCM Control Delay, s	0.1			0				13.2			23.2		
HCM LOS	0.1			Ů				В			C		
Minor Lane/Major Mymt	NBLn1i	EBL	EBT	EBR WBL	WBT	WBR	SBLn1	203			427	39.5	
Capacity (veh/h)	442	867	-	- 903			247						
HCM Lane V/C Ratio	0.012		-	- 0.001			0.199						
HCM Control Delay (s)	13.2	9.2	0	- 9	0		23.2						
HCM Lane LOS	В	A	A	- A	A		C						
HCM 95th %tile Q(veh)	0	0	- 0	- 0			0.7						

	٠	-	*	1	-	*	1	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	16	652	10	1	594	1	3	1	4	3	1	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1768	0	0	1837	0	0	19 5 8	0	0	1565	0
Flt Permitted		0.999						0.982			0.993	
Satd. Flow (perm)	0	1768	0	0	1837	0	0	1958	0	0	1565	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.67	0.67	0.67	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	737	0	0	641	0	0	11	0	0	28	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 57.2%

Analysis Period (min) 15

Intersection			-		'tr		7					To N	2017 7
Int Delay, s/veh 0.	.7												
Movement	EBL	EBT	EBR	WBL	Wet	WBR	Į.	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	16	652	10	1	594	1		3	1	4	3	1	16
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	C
Sign Control	Free	Free	Free	Free	Free	Free	5	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		-	None	-	-	None		-	-	None	-	-	None
Storage Length		-		-	-	-		-	-	-	*	-	
Veh in Median Storage, #	-	0	-	-	0	-		-	0	-	44	0	
Grade, %	-	0		-	0	-		-	0	-		0	
Peak Hour Factor	92	92	92	93	93	93		67	67	67	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0		0	0	0	0	0	0
Mvmt Flow	17	709	11	1	639	1		4	1	6	4	1	23
Major/Minor -	Majori			Major2			Mir	1011	8		Minor2'		E91
Conflicting Flow All	640	0	0	720	0	0		402	1391	714	1394	1395	639
Stage 1	040	-	-	720	-	-		749	749	- 117	641	641	
Stage 2	_	_		**				653	642		753	754	
Critical Hdwy	4.1			4.1		_		7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	4.1	_	_	7.1				6.1	5.5	0.2	6.1	5.5	0.2
Critical Hdwy Stg 2	_			-	_			6.1	5.5	_	6.1	5.5	
Follow-up Hdwy	2.2			2.2				3.5	4	3.3	3.5	4	3.3
	954	-	-	891	•	-		119	143	435	120	143	480
Pot Cap-1 Maneuver	904	-	-	091	•	•		407	422		466	473	400
Stage 1	•	-	-	-	-	•		460	472	*	405	420	
Stage 2	-	-	-	•	•	-		400	4/2	-	405	420	
Platoon blocked, %	054	-	-	004	-	-		440	400	405	445	400	400
Mov Cap-1 Maneuver	954	-	-	891	-	-		110	138	435	115	138	480
Mov Cap-2 Maneuver	-	-	-	-	-	-		110	138	-	115	138	
Stage 1	-	-	-	-	-	-		395	409	-	452	472	
Stage 2	-	-	-	***	-	-		436	471	-	386	407	•
Approach	EB			WB				NB	1		SB	1-1	31
HCM Control Delay, s	0.2			0				26			18.2		
HCM LOS								D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR. WBL	WBT	WBR	SBLn1					- He	高多
Capacity (veh/h)	183	954		- 891	-		300						
HCM Lane V/C Ratio		0.018	-	- 0.001	+		0.094						
HCM Control Delay (s)	26	8.8	0	- 9	0		18.2						
HCM Lane LOS	D	A	A	- A	Ā		C						
HCM 95th %tile Q(veh)	0.2	0.1		- 0	* 1		0.3						

	1	→	*	1	-	*	4	†	1	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	7	720	9	0	406	2	0	0	1	2	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1753	0	0	1817	0	0	1863	0	0	1551	0
Flt Permitted											0.995	
Satd. Flow (perm)	0	1753	0	0	1817	0	0	1863	0	0	1551	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.38	0.38	0.38	0.61	0.61	0.61
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	758	0	0	434	0	0	3	0	0	2 8	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary								el.			2	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.0%

Analysis Period (min) 15

Intersection :	_	. ·				P								16
Int Delay, s/veh	0.4													
Movement	EBL	EBT	EBR	V	NBL	WBT	WBR	Jul -	NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	7	720	9		0	406	2		0	0	1	2	0	15
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	C
Sign Control	Free	Free	Free	F	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None		-	-	None		-	-	None	-	-	None
Storage Length		-	-			-	-		-	-	•	-		
Veh in Median Storage, #	_	0	-		-	0	-		-	0	-	-	0	
Grade, %	-	0	-		-	0	-		-	0	-	-	0	
Peak Hour Factor	97	97	97		94	94	94		38	38	38	61	61	61
Heavy Vehicles, %	0	1	0		0	1	0		0	0	0	0	0	0
Mvmt Flow	7	742	9		0	432	2		0	0	3	3	0	25
Major/Minor	Majorf		*	Ma	ijor2		***	, N	linord		RI .	← Minor2		T [*]
Conflicting Flow All	434	0	0		752	0	0		1206	1195	747	1196	1199	433
Stage 1	-	-	-			-	-		761	761		433	433	
Stage 2	-	-	100			-			445	434	-	763	766	
Critical Hdwy	4.1	-	_		4.1	+	-		7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1		*	-		-	-			6.1	5.5		6.1	5.5	
Critical Hdwy Stg 2	-	-	-		-	-	-		6.1	5.5		6.1	5.5	
Follow-up Hdwy	2.2	+	-		2.2				3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1136	-	-		867	-	-		162	188	416	164	187	627
Stage 1	-	-	-		-		-		401	417		605	585	
Stage 2	-	-	-		-	-	-		596	585	-	400	415	
Platoon blocked, %		-	-			-	-							
Mov Cap-1 Maneuver	1136	-	-		867	-	-		154	186	416	162	185	627
Mov Cap-2 Maneuver			-		-	-	-		154	186	-	162	185	-
Stage 1	-	-	-			-	-		397	412	-	598	585	
Stage 2	-	•	-		-	-	-		573	585	-	393	410	
Approach	÷ EB	5	' '		WB_	भा	4 70		NB	1/2 1		SB	3 - 3	710
HCM Control Delay, s	0.1	,			0				13.7			13.2		
HCM LOS	4.1				Ĭ				В			В		
Minor Lane/Major Mvmt	NBLn1	EBL	FRT	-EBR V	WBL	WAT	WAR	SBLITT	Are a		23 3		200	ŢŢ
Capacity (veh/h)	416				867	-	A 1 1/4/1/2	469						49.2
HCM Lane V/C Ratio		0.006			201			0.059						
HCM Control Delay (s)	13.7	8.2	0	-	0	-		13.2						
HCM Lane LOS	13.7 B	0.Z	A		A			13.2 B						
				-										
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2						

	*	-	*	•	←	*	4	†	~	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		43			4			4			4	
Volume (vph)	6	755	9	4	769	0	9	0	5	6	1	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1753	0	0	1819	0	0	1989	0	0	1575	0
Flt Permitted								0.969			0.990	
Satd. Flow (perm)	0	1753	0	0	1819	0	0	1989	0	0	1575	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.38	0.38	0.38	0.61	0.61	0.61
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	793	0	0	822	0	0	37	0	0	50	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary		december of	÷ + = E	7 27	, L.		7 _					

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.4%

Analysis Period (min) 15

Intersection					0 160	S 15							81
Int Delay, s/veh 2	.2												
Movement	ÉBL	EBT	EBR	WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	6	755	9	4	769	0		9	0	5	6	1	23
Conflicting Peds, #/hr	0	0	0	0	0	0		0	0	0	0	0	C
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	_	None	-	-	None		-		None		-	None
Storage Length		-		-	-	-				-	-	-	
Veh in Median Storage, #		0		-	0	_		-	0	_		0	
Grade, %		0		-	0	-			0	_	_	0	
Peak Hour Factor	97	97	97	94	94	94		38	38	38	61	61	61
Heavy Vehicles, %	0	1	0	0	1	0		0	0	0	0	0	C
Mvmt Flow	6	778	9	4	818	0		24	0	13	10	2	38
Chair ware Thirteen	i dan wasen			1878-257			150	10 EN ST		-, -, -, -,	The IDD was interested in the	_	
A CONTROL OF	13000		2	Wind				E T	4035		A Note		7
Conflicting Flow All	818	0	0	788	0	0	,	1641	1622	783	1629	1627	818
Stage 1	-	-	*	-19	-	-		795	795	-	827	827	
Stage 2	-	-	*	-	-	-		846	827	-	802	800	•
Critical Hdwy	4.1	*		4.1	-	•		7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-		6.1	5.5	-	6.1	5.5	
Critical Hdwy Stg 2	-	+	-		•	-		6.1	5.5	-	6.1	5.5	
Follow-up Hdwy	2.2	-		2.2	-	-		3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	819	Α.	-	840	-	-		81	104	397	82	103	379
Stage 1		-	-	-	-	-		384	402	-	369	389	
Stage 2	-	-	-	-	-	19-		360	389	-	381	400	
Platoon blocked, %		-	-		-	-							
Mov Cap-1 Maneuver	819	-	-	840	_	_		71	102	397	78	101	379
Mov Cap-2 Maneuver	-	_		-				71	102		78	101	
Stage 1		-		-	-	-		379	397		364	385	
Stage 2	-	-			•	•.		320	385		364	395	
Carron conners and the	leta:			Veray			· · · · ·	i Vita		,		S	
APROPAGE AND		<u>: 1 E</u>		1/1/25		.,,	<u> </u>		<u> </u>			_::_::::	
HCM Control Delay, s	0.1			0				60.6			28.3		
HCM LOS								F			D		
Jihoaleneldejoakrin	(Ma) et al.	Fig. 1	TO EAST	ads Will	''\\'\'		331p()		, i , , ,				
Capacity (veh/h)	100	819		- 840	_	_	203			e e e e e e e e e e e e			
HCM Lane V/C Ratio		0.008		- 0.005									
HCM Control Delay (s)	60.6	9.4	0	- 9.3	0	-	28.3						
HCM Lane LOS	50.6	3.4 A	A	- A	A		D						
HCM 95th %tile Q(veh)	1.5	Ô		- 0		-	0.9						
LICIAI SOUL WING C(LAGIL)	1.0	U	•	- 0		-	6.0						

	•	→	*	•	-	*	•	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Volume (vph)	16	734	17	4	661	1	23	1	21	3	1	16
Ideal Flow (vphpi)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1766	0	0	1837	0	0	1967	0	0	1565	0
Flt Permitted		0.999						0.975			0.993	
Satd. Flow (perm)	0	1766	0	0	1837	0	0	1967	0	0	1 5 65	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.67	0.67	0.67	0.71	0.71	0.71
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	833	0	0	716	0	0	66	0	0	28	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary
Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.1%

Analysis Period (min) 15

Intersection ·	-				- 17	120		17	1	15	707		PX
Int Delay, s/veh	2.9												
Movement	EBL	EBT	EBR	WBL	. WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	16	734	17		661	1		23	1	21	3	1	16
Conflicting Peds, #/hr	0	0	0	(0	0		0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None		-	None		-	-	None	-	-	None
Storage Length		-	←			-			-	-	-	-	
Veh in Median Storage, #	-	0	-		. 0	_			0	-	-	0	
Grade, %		0	-		. 0	-			0	-	-	0	
Peak Hour Factor	92	92	92	93	93	93		67	67	67	71	71	71
Heavy Vehicles, %	0	0	0	(0		0	0	0	0	0	0
Mvmt Flow	17	798	18	4	711	1		34	1	31	4	1	23
Major/Minor	Majort			Major		d	ı,	viinos13	2	ń	Minor2		
Conflicting Flow All	712	0	0	816		0		1574	1562	807	1578	1571	711
Stage 1	-	_	**			_		842	842	-	720	720	
Stage 2	-		-			-		732	720	-	858	851	
Critical Hdwy	4.1		-	4.1	-	-		7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-		_			-		6.1	5.5	_	6.1	5.5	
Critical Hdwy Stg 2			-			**		6.1	5.5		6.1	5.5	
Follow-up Hdwy	2.2		-	2.2	,			3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	897			820				90	113	385	90	112	
Stage 1	-		_	-				362	383	-	422	435	
Stage 2		_	-					416	435		354	379	
Platoon blocked, %		_			-	-			100		001	0,0	
Mov Cap-1 Maneuver	897		_	820) -			82	108	385	79	107	436
Mov Cap-2 Maneuver	007		_	020	_	-		82	108	-	79	107	700
Stage 1						_		349	370		407	432	
Stage 2	*	-	-			-		390	432		313	366	
Approach.	EB.	۲.		WE	Į)		- [NB.	7		The SB	TT 3	शिक्षान
HCM Control Delay, s	0.2			0.1				58.3	-		22.1	1	
HCM LOS	0.2			0.				F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR WBI	WBT	WBR	SBLn1				25112		83
Capacity (veh/h)	131	897	+	- 820	} _	-	238						
HCM Lane V/C Ratio	0.513			- 0.00		-	0.118						
HCM Control Delay (s)	58.3	9.1	0	- 9.4	0		22.1						
HCM Lane LOS	F	A	A	- /			C						
HCM 95th %tile Q(veh)	2.4	0.1		* (49	0.4						

	*	-	*	1	←	*	1	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WET	WBR	NBL	NBT.	NBR	SBL	SBT	SBR
Lane Configurations		43			43			4			4	
Volume (vph)	14	699	9	0	405	5	0	0	1	10	0	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	175 1	0	0	1815	0	0	1863	0	0	1552	0
Flt Permitted		0.999									0.985	
Satd. Flow (perm)	0	175 1	0	0	1815	0	0	1863	0	0	1552	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.38	0.38	0.38	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	744	0	0	436	0	0	3	0	0	36	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary	97.	- 12-		M	(11/23	4 .	3	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.9%

ICU Level of Service B

Analysis Period (min) 15

Intersection						-5-	-3	-						
Int Delay, s/veh 0	.7													
Movement	" EBL	EBT	EBR		WBL	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	14	699	9		0	405	5		0	0	1	10	0	23
Conflicting Peds, #/hr	0	0	0		0	0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free		Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None		-	-	None		-	-	None	_		None
Storage Length		-			-	-	-		-	-	-	-	-	
Veh in Median Storage, #		0	-		-	0	_		-	0	_	-	0	
Grade, %		0			-	0	-			0	-	-	0	
Peak Hour Factor	97	97	97		94	94	94		38	38	38	92	92	92
Heavy Vehicles, %	0	1	0		0	1	0		0	0	0	2	2	
Mvmt Flow	14	721	9		0	431	5		0	0	3	11	0	
Major/Minor	Major1			М	lajor2			٨	Ainor1			Minor2		
Conflicting Flow All	436	0	0		730	0	0	- 10	1200	1190	725	1189	1193	434
Stage 1	700	-	-		7 00	-	-		754	754	720	434	434	
Stage 2									446	436		755	759	
Critical Hdwy	4.1	_	-		4.1		•		7.1	6.5	6.2	7.12	6.52	
•	4.1	-	-		4.1	•			6.1	5.5	0.2	6.12	5.52	
Critical Howy Stg 1	•	-	-		-	•	•		6.1	5.5	•	6.12	5.52	
Critical Hdwy Stg 2	2.2	•	-		2.2	-	-		3.5	3.5	3.3	3.518	4.018	
Follow-up Hdwy		-	•			-	-			189				
Pot Cap-1 Maneuver	1134	-	-		883	•	-		163		428	165	187	622
Stage 1	-	•	*		•	•	-		404	420	•	600	581	
Stage 2	-	-	-		•	•	-		595	583	-	401	415	
Platoon blocked, %	4404	•	~		000	*	-		454	405	400	404	400	000
Mov Cap-1 Maneuver	1134	-	*		883	•	•		154	185	428	161	183	
Mov Cap-2 Maneuver		-	-			•			154	185	-	161	183	
Stage 1	-	-	-		-	•	-		396	411	-	587	581	
Stage 2	•	-	-		=	ø	٠		571	583	-	390	406	
Approach	EB	b		3 3	WB				NB			SB		
HCM Control Delay, s	0.2				0				13.5			17.1		
HCM LOS									В			С		
Minor Lane/Major Mvm(* *	NBLn1	EBL	EBT	EBR	WBL.	WBT	WBR.	SBLn1	e- ,	-				
Capacity (veh/h)	428	1134			883			333						
HCM Lane V/C Ratio		0.013		-			*	0.108						
HCM Control Delay (s)	13.5	8.2	0		0			17.1						
HCM Lane LOS	В	A	A		Ă			C						
HCM 95th %tile Q(veh)	0	0	, ,		0			0.4						

	*	-	*	•	-	1	4	†	-	-	↓	1
Lane Group	EBE	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			4			4			4	
Volume (vph)	54	739	9	4	727	27	9	0	5	28	0	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1750	0	0	1810	0	0	1989	0	0	1564	0
FIt Permitted		0.997						0.969			0.981	
Satd. Flow (perm)	0	1750	0	0	1810	0	0	1989	0	0	1564	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.38	0.38	0.38	0.92	0.92	0.92
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	827	0	0	806	0	0	37	0	0	78	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 89.3%

Analysis Period (min) 15

Conflicting Peds, #/hr 0 0 0 0 0 0 Sign Control Free	NBL NBT NBR SBL SBT 9 0 5 28 0 0 0 0 0 0 Stop Stop Stop Stop - - None - -	SBF 44
Vol, veh/h 54 739 9 4 727 27 Conflicting Peds, #/hr 0 0 0 0 0 0 0 Sign Control Free Free </th <th>9 0 5 28 0 0 0 0 0 0 0 Stop Stop Stop Stop Stop None</th> <th>44</th>	9 0 5 28 0 0 0 0 0 0 0 Stop Stop Stop Stop Stop None	44
Vol, veh/h 54 739 9 4 727 27 Conflicting Peds, #/hr 0 - None - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 0 1 0 0 1 0 0 1 </th <th>0 0 0 0 0 0 Stop Stop Stop Stop None</th> <th></th>	0 0 0 0 0 0 Stop Stop Stop Stop None	
Sign Control Free 2 0 -	Stop Stop Stop Stop Stop - None	-
Sign Control Free 2 0 -	None	(
RT Channelized - None - None Storage Length	None	Stop
Storage Length - - - - - - - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - 0 - - - 0 - - - 0 - - - 0 - - - 0 - - - 0 - - - 0 - - - 0 -		None
Veh in Median Storage, # - 0 - - 0 - Grade, % - 0 - - 0 - Peak Hour Factor 97 97 97 94 94 94 Heavy Vehicles, % 0 1 0 0 1 0 Mvmt Flow 56 762 9 4 773 29 Major2 Conflicting Flow All 802 0 0 771 0 0 Stage 1 - - - - - - Stage 2 - - - - - - Critical Hdwy 4.1 - - 4.1 - -		
Grade, % - 0 - - 0 - Peak Hour Factor 97 97 97 94 94 94 Heavy Vehicles, % 0 1 0 0 1 0 Mvmt Flow 56 762 9 4 773 29 Major/Miner Mejor1 Major2 Major2 Conflicting Flow All 802 0 0 771 0 0 Stage 1 - - - - - - Stage 2 - - - - - - Critical Hdwy 4.1 - 4.1 - - -	- 0 0	
Peak Hour Factor 97 97 97 94 94 94 Heavy Vehicles, % 0 1 0 0 1 0 Mvmt Flow 56 762 9 4 773 29 Major/Minor Mejor1 Major2 Conflicting Flow All 802 0 0 771 0 0 Stage 1 - - - - - - Stage 2 - - - - - - - Critical Hdwy 4.1 - 4.1 - - - -	- 0 0	
Heavy Vehicles, % 0 1 0 0 1 0 Mvmt Flow 56 762 9 4 773 29 Major/Minor Major2 Conflicting Flow All 802 0 0 771 0 0 Stage 1 - - - - - - Stage 2 - - - - - - Critical Hdwy 4.1 - 4.1 - -	38 38 38 92 92	92
Mount Flow 56 762 9 4 773 29 Major/Minor Major / Ma	0 0 0 2 2	2
Conflicting Flow All 802 0 0 771 0 0 Stage 1 -	24 0 13 30 0	48
Conflicting Flow All 802 0 0 771 0 0 Stage 1 -		
Stage 1 - - - - - - Stage 2 - - - - - - Critical Hdwy 4.1 - - 4.1 - -	Minor2 Minor2	
Stage 2 - - - - - - Critical Hdwy 4.1 - - 4.1 - -	1698 1689 766 1680 1678	788
Critical Hdwy 4.1 4.1	878 878 - 796 796	
	820 811 - 884 882	
Critical Hdwy Sto 1	7.1 6.5 6.2 7.12 6.52	6.22
Onacur non y Oly 1	6.1 5.5 - 6.12 5.52	
Critical Hdwy Stg 2	6.1 5.5 - 6.12 5.52	
Follow-up Hdwy 2.2 2.2	3.5 4 3.3 3.518 4.018	3.318
Pot Cap-1 Maneuver 830 853	74 94 406 75 95	391
Stage 1	345 368 - 380 399	
Stage 2	372 396 - 340 364	
Platoon blocked, %	0.0	
Mov Cap-1 Maneuver 830 853	59 82 406 66 83	391
Mov Cap-2 Maneuver	59 82 - 66 83	
Stage 1	304 325 - 335 395	
Stage 2	324 392 - 290 321	
Glage 2	524 552 - 250 521	
Approach EB WB	NB SB	
HCM Control Delay, s 0.6 0	76.4 64.1	
HCM LOS	F F	
Minor Lene/Major Mymt NBLn1 EBL EBT EBR WBL WBT WBR SE	SLn1 · · ·	6
	134	
HCM Lane V/C Ratio 0.433 0.067 0.005 0.		
	584	
HCM Lane LOS F A A - A A -		
HCM 95th %tile Q(veh) 1.8 0.2 0	64.1	
THORN SOME OR ASHIT THE THE THE THE THE THE THE THE THE TH		

	*	→	*	1	-	*	4	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			43-			43-			4	
Volume (vph)	66	714	17	4	645	33	23	1	21	35	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	16	12	12	10	12
Satd. Flow (prot)	0	1761	0	0	1826	0	0	1967	0	0	1564	0
Flt Permitted		0.996						0.975			0.981	
Satd. Flow (perm)	0	1761	0	0	1826	0	0	1967	0	0	1564	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		252			140			205			293	
Travel Time (s)		5.7			3.2			4.7			6.7	
Peak Hour Factor	0.92	0.92	0.92	0.93	0.93	0.93	0.67	0.67	0.67	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	866	0	0	733	0	0	66	0	0	98	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary.
Area Type:

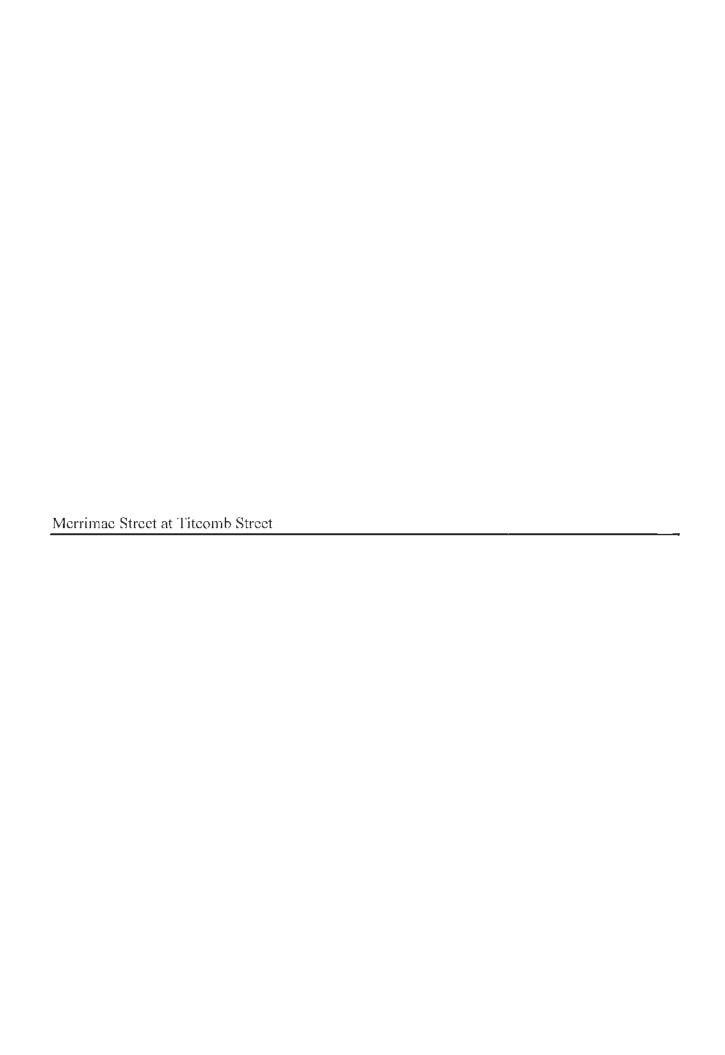
Other

Control Type: Unsignalized

Intersection Capacity Utilization 94.5%

Analysis Period (min) 15

Intersection												-	
Int Delay, s/veh 9	.2												
Movement	EBL	EBT	E8R	WBI	WBT	WBR		NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	66	714	17	-		33		23	1	21	35	0	5
Conflicting Peds, #/hr	0	0	0	(0	0		0	0	0	0	0	(
Sign Control	Free	Free	Free	Free	Free	Free		Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized		_	None			None		-		None	-	-	None
Storage Length	_	_	+			_		_		-	_	_	
Veh in Median Storage, #	_	0	_		. 0			_	0	-	_	0	
Grade, %	_	0			. 0			_	0	_	_	0	
Peak Hour Factor	92	92	92	93		93		67	67	67	92	92	
Heavy Vehicles, %	0	0	0	(0		0	0	0	2	2	
Mvmt Flow	72	776	18			35		34	1	31	38	0	
WWITHER	12	110	10		004	33		54	'	51	30	U	O(
Major/Minor	Major1			Major	2	1	1	Minor1	23		Minor2		
Conflicting Flow All	729	0	0	798		0		1679	1667	785	1665	1658	71
Stage 1		-				_		929	929	_	720	720	
Stage 2	_	-	-			-		750	738		945	938	
Critical Hdwy	4.1	_		4.1	_	_		7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	_	-				-		6.1	5.5		6.12	5.52	
Critical Hdwy Stg 2		-	_			_		6.1	5.5		6.12	5.52	
Follow-up Hdwy	2.2	-		2.2		-		3.5	4	3.3	3.518	4.018	
Pot Cap-1 Maneuver	884	_		838				76	97	396	77	98	433
Stage 1	-			000				324	349	300	419	432	
Stage 2		_	_			_		407	427	_	314	343	
Platoon blocked, %								407	421	_	314	J 4 J	
Mov Cap-1 Maneuver	884	*.	-	835		•		58	82	396	62	83	433
	004	-	-	030	, -	_			82	390	62		
Mov Cap-2 Maneuver	-	-	-		• •	*		58		-		83	
Stage 1	-	-	-	-		-		277	298	-	358	429	
Stage 2	-	*	-		•	*		348	424	•	246	293	
Approach	EB			WE		38.		NB		10350	SB	E	200
HCM Control Delay, s	0.8			0.1				100.8			88.7		
HCM LOS	0.0			0.				F			F		
Address of the Control of the Contro	NIP!	E01	pro pro-com	EDD W.	§ a about	14100	2D) - 1						
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR WBI		WBR	SBLn1	- 1	2	-			-
Capacity (veh/h)	97	884		- 83		-	130						
HCM Lane V/C Ratio	0.692		-	- 0.005			0.753						
HCM Control Delay (s)	100.8	9.4	0	- 9.3	0	_	88.7						
HCM Lane LOS	F	Α	A	- A	A		F						
HCM 95th %tile Q(veh)	3.5	0.3	-	- () -	-	4.4						



5: Titcomb Strreet & Merrimac Street

	-	*	1	•	4	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1>			स	M		
Volume (vph)	626	49	14	374	9	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1739	0	0	1753	1634	0	
Flt Permitted				0.998	0.964		
Satd. Flow (perm)	1739	0	0	1753	1634	0	
Link Speed (mph)	30			30	30		
Link Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.94	0.94	0.92	0.92	0.60	0.60	
Heavy Vehicles (%)	1%	0%	0%	1%	11%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	718	0	0	422	20	0	
Sign Control	Free			Free	Stop		
Intersection Summary				· • •			· •

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 45.9%

Analysis Period (min) 15

Intersection						- 12 JES	于"也_		
Int Delay, s/veh 0	.5								
Movement	EE	T EBR		WBL	WBT	NB		NBR	
Vol, veh/h	62	6 49	1	14	374		9	3	
Conflicting Peds, #/hr		0 0	1	0	0		0	0	
Sign Control	Fre	e Free		Free	Free	Sto	p	Stop	
RT Channelized		- None		-	None		_	None	
Storage Length							0	-	
Veh in Median Storage, #		0 -			0		0	-	
Grade, %		0 -			0		0	-	
Peak Hour Factor		4 94		92	92	6		60	
Heavy Vehicles, %		1 0		0	1	1		0	
Mvmt Flow	66			15	407	1:		5	
Major/Minor	Majo			Major2		Minor			
Conflicting Flow All		0 0		718	0	112		692	
Stage 1					*	69.		-	
Stage 2		70" -0		-	-	43		-	
Critical Hdwy				4.1	**	6.5		6.2	
Critical Hdwy Stg 1		te		**	**	5.5	1	-	
Critical Hdwy Stg 2				*	+	5.5	1	-	
Follow-up Hdwy				2.2	-	3.59	9	3.3	
Pot Cap-1 Maneuver				892	-	21	7	447	
Stage 1					-	48	1	-	
Stage 2				-	-	63.	2	-	
Platoon blocked, %					-				
Mov Cap-1 Maneuver				892	-	21	2	447	
Mov Cap-2 Maneuver				-		21		-	
Stage 1					-	48			
Stage 2				-	•	61		-	
Angenach		В		WB		N	9		-
Approach									
HCM Control Delay, s		0		0.3		21.			
HCM LOS						(0		
Minor Lane/Major Mymt	NBLn1 EE	T EBF	WBL	WBT		, t *	. E		 1 4
Capacity (veh/h)	244		892	-					
HCM Lane V/C Ratio	0.082		0.017						
HCM Control Delay (s)	21.1	ъ 1	9.1	0					
HCM Lane LOS	C		A	A					
HCM 95th %tile Q(veh)	0.3		0.1						

	-	*	1	-	•	/	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	7			4	sha		
Volume (vph)	641	46	9	691	16	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1757	0	0	1772	1690	0	
Flt Permitted				0.999	0.967		
Satd. Flow (perm)	1757	0	0	1772	1690	0	
Link Speed (mph)	30			30	30		
Link Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.97	0.97	0.88	0.88	0.72	0.72	
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	708	0	0	795	32	0	
Sign Control	Free			Free	Stop		
Intersection Summary						-	뮵

Intersections Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.6%

Analysis Period (min) 15

Intersection								550		-
).7									
Movement	t	BT	EBR		WBL	WBT	NBL	NBR		
Vol, veh/h		641	46		9	691	16	7		_
· · · · · · · · · · · · · · · · · · ·		041	0		0	0	0	0		
Conflicting Peds, #/hr	-		Free			Free				
Sign Control	Г	ree			Free		Stop	Stop		
RT Channelized		-	None		-	None	-	None		
Storage Length		-	-			-	0	-		
Veh in Median Storage, #		0	~		-	0	0	-		
Grade, %		0	-		*	0	0	-		
Peak Hour Factor		97	97		88	88	72	72		
Heavy Vehicles, %		0	0		0	0	6	0		
Mvmt Flow	•	661	47		10	785	22	10		
Major/Minor	Maj	or1			Aajor2	-	Minort	3803	1	
Conflicting Flow All		0	0		708	0	1491	685		
Stage 1		-	-		-	-	685	-		
Stage 2		~					806			
Critical Hdwy		_	_		4.1	_	6.46	6.2		
Critical Hdwy Stg 1			-			_	5.46			
Critical Hdwy Stg 2			-				5.46	-		
Follow-up Hdwy			_		2.2		3.554	3.3		
Pot Cap-1 Maneuver			-		900	_	133	452		
Stage 1					300		493	102		
Stage 2							433			
Platoon blocked, %							400			
Mov Cap-1 Maneuver		_			900	_	130	452		
Mov Cap-1 Maneuver		•			300		130	402		
		-	-		-		493	-		
Stage 1		-	-		-	-				
Stage 2		•	her		94	*	424	•		
Approach		EB	4		WB.		, NBCAL		(v=	महापूर्व
HCM Control Delay, s		0			0.1		31.8			
HCM LOS							D			
Minor Lane/Major Mymt	NBLn1 E	BT	EBR	WBL	WET		1			4
Capacity (veh/h)	166		FDIX	900	771201					
HCM Lane V/C Ratio	0.192	-		0.011	-					
HCM Control Delay (s)	31.8	-		9	0					
HCM Lane LOS	D	-	-	A	Α					
HCM 95th %tile Q(veh)	0.7	-	-	0	-					

	-	-	€	←	4	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1>			4	she		
Volume (vph)	630	25	17	580	18	9	
Ideal Flow (vphpl)	1900	1900	1900	190 0	1900	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1764	0	0	1772	1689	0	
FIt Permitted				0.999	0.968		
Satd. Flow (perm)	1764	0	0	1772	1689	0	
Link Speed (mph)	30			30	30		
Link Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.95	0.95	0.90	0.90	0.56	0.56	
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	689	0	0	663	48	0	
Sign Control	Free			Free	Stop		
Intersection Summary			•				* *

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.2%

Analysis Period (min) 15

Intersection	-3						-	
Int Delay, s/veh 1.	1							
Movement	EB	T EBR	WBL	WBT	NBL	NBR		
Vol, veh/h	63		17		18	9		
Conflicting Peds, #/hr		0 0	C		0	0		
Sign Control	Fre		Free		Stop	Stop		
RT Channelized		- None	,			None		
Storage Length		- *		-	0	*		
Veh in Median Storage, #		0 -		0	0			
Grade, %		0 -		Ö	ő			
Peak Hour Factor	9		90		56	56		
Heavy Vehicles, %		0 0	0		6	0		
Mymt Flow	66		19		32	16		
VIVITIL I IOVV	00	0 20	18	044	32	10		
Major/Minor _	Major	1	Major2)	Minord			
Conflicting Flow All		0 0	689		1358	676		
Stage 1			300		676	-		
Stage 2					682			
Critical Hdwy			4.1		6.46	6.2		
Critical Hdwy Stg 1					5.46	0.2		
Critical Hdwy Stg 2					5.46	_		
Follow-up Hdwy			2.2		3.554	3.3		
Pot Cap-1 Maneuver			915		161	457		
Stage 1			310		498	431		
			•	•	495	•		
Stage 2			•		490			
Platoon blocked, %			045	**	450	457		
Mov Cap-1 Maneuver			915	-	156	457		
Mov Cap-2 Maneuver		+ +	•	•	156	-		
Stage 1				•	498			
Stage 2		• •	•		479			
Approach	E	В	WB		NB			2000
HCM Control Delay, s		0	0.3		28.6			
HCM LOS		U	0.3		20.0 D			
Minor Lane/Major Mymt	NBEht EB	T, EBR	WBL WET	,	, R	Wen I	7 pm	
Capacity (veh/h)	200		915 -					
HCM Lane V/C Ratio	0,241		0.021					
HCM Control Delay (s)	28.6		9 0	ı				
HCM Lane LOS	D		A A					
HCM 95th %tile Q(veh)	0.9		0.1					

	-	*	1	+	1	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1.			4	A		
Volume (vph)	660	74	25	393	16	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1733	0	0	1752	1635	0	
Flt Permitted				0.997	0.967		
Satd. Flow (perm)	1733	0	0	1752	1635	0	
Link Speed (mph)	30			30	30		
Link Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.94	0.94	0.92	0.92	0.60	0.60	
Heavy Vehicles (%)	1%	0%	0%	1%	11%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	781	0	0	454	40	0	
Sign Control	Free			Free	Stop		
Intersection Summary	*		200	4		-	

Other

Control Type: Unsignalized

Intersection Capacity Utilization 51.2%

Analysis Period (min) 15

ntersection	T (1 1			y 25 %		1
nt Delay, s/veh	1						
Movement	EBÎ	EBR	WBL	WBT	NB)_	NBR	
Vol, veh/h	660		25	393	16	8	
Conflicting Peds, #/hr	(0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized		- None	+	None		None	
Storage Length					0	-	
/eh in Median Storage, #	() -	_	0	0	-	
Grade, %	Ò		_	0	0		
Peak Hour Factor	94		92	92	60	60	
Heavy Vehicles, %	1		0	1	11	0	
Mymt Flow	702		27	427	27	13	
VIVIII I I I I I I I I I I I I I I I I	7 02	. 13	21	421	21	10	
Major/Minor	Major		Major2		Minor1	The same	
Conflicting Flow All	(781	0	1223	741	
Stage 1				_	741	-	
Stage 2					482		
Critical Hdwy			4.1		6.51	6.2	
Critical Hdwy Stg 1					5.51	0.2	
Critical Hdwy Stg 2					5.51		
Follow-up Hdwy			2.2	_	3.599	3.3	
Pot Cap-1 Maneuver		-	845	_	190	420	
Stage 1			043	•	456	420	
		- 1	-	-		-	
Stage 2		_	-	-	603	-	
Platoon blocked, %	•	-	0.45	•	400	400	
Nov Cap-1 Maneuver			845	*	182	420	
Nov Cap-2 Maneuver		-	-	-	182	*	
Stage 1			-	-	456		
Stage 2			•	•	578	•	
pproach	EE		WB		NB		
HCM Control Delay, s	(0.6		24.5		
HCM LOS			0.0		C C		
illinor Lane/Major Mymt* .	NBLni' EBI	EBR	WBL. WBT		da da	4	
Capacity (veh/h)			845 -				
ICM Lane V/C Ratio	A AND		0.032 ~				
ICM Control Delay (s)		te Me	9.4 0				
iCM Lane LOS			A A				
TOTAL PRINCIPO	9		- A				

	-	*	1	-	1		
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1>			4	A		
Volume (vph)	695	72	19	733	39	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1750	0	0	1772	1686	0	
Flt Permitted				0.999	0.971		
Satd. Flow (perm)	1750	0	0	1772	1686	0	
Link Speed (mph)	30			30	30		
Link Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.97	0.97	0.88	0.88	0.72	0.72	
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	790	0	0	855	89	0	
Sign Control	Free			Free	Stop		
Intersection Summary					# : =	1	,

Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.2%

Analysis Period (min) 15

Intersection	13			1 t		e 70	1				
Int Delay, s/veh 3.	2										
Mavement		EBT.	EBR	V)	VBL.	WBT	NBL	1	NBR		
Vol, veh/h		695	72		19	733	39	1	25		
Conflicting Peds, #/hr		0	0		0	0	0		0		
Sign Control		Free	Free	F	ree	Free	Stop		Stop		
RT Channelized		1100	None			None	Otop		one		
Storage Length			110110		_	110110	0		-		
Veh in Median Storage, #		0				0	0				
Grade, %		0	_			0	0				
Peak Hour Factor		97	97		88	88	72		72		
		0	0		0	0	6		0		
Heavy Vehicles, % Mvmt Flow		716	74		22	833	54		35		
INFALLIT LIOM		/ 10	74		22	033	54		30		
Major/Minor	M	lajor1.		Mäj	or2		Minor1	333			
Conflicting Flow All		0	0		791	0	1630		754		
Stage 1		_	←		-		754		-		
Stage 2		-	•		-		876				
Critical Hdwy			_		4.1		6.46		6.2		
Critical Hdwy Stg 1							5.46				
Critical Hdwy Stg 2			-				5.46				
Follow-up Hdwy			_		2.2		3.554		3.3		
Pot Cap-1 Maneuver			-		838		109		412		
Stage 1		-	_		-		458		_		
Stage 2			_		-	_	401				
Platoon blocked, %			_				401				
Mov Cap-1 Maneuver			_	,	838		104		412		
Mov Cap-2 Maneuver			_	· ·	000		104		712		
Stage 1						_	458				
Stage 2			-				381				
Stage 2		•	-		•	•	301		•		
Approach		EB		-34	WB	2.9	NB				
HCM Control Delay, s		0			0.2		61.3				
HCM LOS							F				
Minor Lane/Major Mymt	NBLn1	EBT	EBR	WBL W	/BT			8.35		100	
Capacity (veh/h)	147		-	838	_						
HCM Lane V/C Ratio	0.605		-	0.026							
HCM Control Delay (s)	61.3			9.4	0						
HCM Lane LOS	F	-		A	A						
HCM 95th %tile Q(veh)	3.2			0.1							

	-	*	•	-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1>			सी	A		
Volume (vph)	683	52	28	628	37	27	
Ideal Flow (vphpl)	1900	1900	1900	190 0	190 0	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1756	0	0	1770	1683	0	
Flt Permitted				0.998	0.972		
Satd. Flow (perm)	1756	0	0	1770	1683	0	
Link Speed (mph)	30			30	30		
Link Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.95	0.95	0.90	0.90	0.56	0.56	
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	774	0	0	729	114	0	
Sign Control	Free			Free	Stop		
Intersection Summary					£77		En

Other

Control Type: Unsignalized Intersection Capacity Utilization 66.2%

Analysis Period (min) 15

Int Delay, s/veh 4	.3							
Movement	EBT	EBR	WBL	WBT	NBL	NBR		. 12
Vol, veh/h	683	52	28	628	37	27		
	003	0	0	020	0	0		
Conflicting Peds, #/hr Sign Control	Free		Free	Free	Stop	Stop		
RT Channelized	Fiee	None		None	Stop	None		
	10-	None		None	0	None		
Storage Length	0	-	-	-	0	•		
Veh in Median Storage, #	0	-	-	0	0	-		
Grade, %	0	-	-	0	0	-		
Peak Hour Factor	95	95	90	90	56	56		
Heavy Vehicles, %	0		0	0	6	0		
Mvmt Flow	719	55	31	698	66	48		
Major/Minor	Majort		Major2		Minori		· . F	4
Conflicting Flow All	.0	0	774	0	1506	746		
Stage 1	-	-	_	_	746	-		
Stage 2					760	_		
Critical Hdwy			4.1		6.46	6.2		
Critical Hdwy Stg 1		-	to-		5.46	-		
Critical Hdwy Stg 2		~		-	5.46	-		
Follow-up Hdwy	to the	**	2.2		3.554	3.3		
Pot Cap-1 Maneuver	-	_	851	-	130	417		
Stage 1		_		-	462	-		
Stage 2					455			
Platoon blocked, %								
Mov Cap-1 Maneuver		_	851		122	417		
Mov Cap-2 Maneuver	_	_	-		122	-		
Stage 1	_		_	-	462	_		
Stage 2	-	-	-	-	428	•		
Approach	EB		WB		NB			
	0		0.4		58.4			
HCM Control Delay, s HCM LOS	0		0.4		50.4 F			
Minor Cane/Major Mymt	NBLn1 LEST	ERR.	WBL WET	-d- 11 = 11		APT & Sec	W. W.	
Capacity (veh/h)	174 -	LEN	851 -		+-	THE WAY	d 1- 2	
HCM Lane V/C Ratio	0.657 -	-	0.037 -					
HCM Control Delay (s)	58.4		9.4 0					
HCM Lane LOS	50.4 -		9.4 0 A A					
HCM 95th %tile Q(veh)	3.8 -		0.1 -					

5: Titcomb Strreet & Merrimac Street

	→	*	•	-	•	1		
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	7+			सी	A			
Volume (vph)	647	74	25	395	16	8		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	12	12	10	12	12		
Satd. Flow (prot)	1733	0	0	1752	1635	0		
FIt Permitted				0.997	0.967			
Satd, Flow (perm)	1733	0	0	1752	1635	0		
ink Speed (mph)	30			30	30			
ink Distance (ft)	140			278	178			
Fravel Time (s)	3.2			6.3	4.0			
Peak Hour Factor	0.94	0.94	0.92	0.92	0.60	0.60		
Heavy Vehicles (%)	1%	0%	0%	1%	11%	0%		
Shared Lane Traffic (%)								
ane Group Flow (vph)	767	0	0	456	40	0		
Sign Control	Free			Free	Stop			
nlergection Summary				11	die The		the second	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 51.3%

Analysis Period (min) 15

Intersection		Pq	M.A.	~	- 1/1	-	
	1						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Vol, veh/h	647	74	25	395	16	8	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-		-		0		
Veh in Median Storage, #	0			0	0		
Grade, %	0	-	_	0	0		
Peak Hour Factor	94	94	92	92	60	60	
Heavy Vehicles, %	1	0	0	1	11	0	
Mymt Flow	688	79	27	429	27	13	
WITH TOW	000	, ,	2.	120	2.	10	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0.	0	767	0	1212	728	
Stage 1	-		-		728	-	
Stage 2	-		-	-	484	-	
Critical Hdwy	-	-	4.1	-	6.51	6.2	
Critical Hdwy Stg 1				dir-	5.51		
Critical Howy Stg 2	_	_	+	_	5.51	_	
Follow-up Hdwy		**	2.2	40	3.599	3.3	
Pot Cap-1 Maneuver			856	_	193	427	
Stage 1					462	-	
Stage 2					602		
Platoon blocked, %							
Mov Cap-1 Maneuver		_	856		185	427	
Mov Cap-2 Maneuver			-	_	185		
Stage 1					462		
Stage 2				_	577		
Olago Z					011		
10 9 10 2 2011	(Eg)	- 1			<u> </u>		
HCM Control Delay, s	0		0.6		24.1		
HCM LOS					C		
Minor Lane/Major Mvmt	NBLn1 EBT	EBRI	WBL WBT	, - -	į k	-	
Capacity (veh/h)	228 -	-	856 -				
HCM Lane V/C Ratio	0.175	-	0.032 -				
HCM Control Delay (s)	24.1 -	-	9.3 0				
HCM Lane LOS	С -	-	A A				
HCM 95th %tile Q(veh)	0.6 -		0.1 -				

5: Titcomb Strreet & Merrimac Street

	-	*	1	◆-	1	1	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	4			4	A		
Volume (vph)	701	72	19	718	39	25	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	12	12	10	12	12	
Satd. Flow (prot)	1750	0	0	1772	1686	0	
FIt Permitted				0.999	0.971		
Satd. Flow (perm)	1750	0	0	1772	1686	0	
Link Speed (mph)	30			30	30		
_ink Distance (ft)	140			278	178		
Travel Time (s)	3.2			6.3	4.0		
Peak Hour Factor	0.97	0.97	0.88	0.88	0.72	0.72	
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	797	0	0	83 8	89	0	
Sign Control	Free			Fr e e	Stop		
Intersection Summary					-F		
Aron Tuno:	Othor						

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 63.4%

Analysis Period (min) 15

ntersection								3	73	
nt Delay, s/veh 3.	2									
Movement .		EBT	EBR	W	Ri I	WBT	NBL	NBR		
Vol, veh/h		701	72	_	19	718	39	25		
Conflicting Peds, #/hr		0	0		0	0	0	0		
Sign Control		Free	Free	Fr		Free	Stop	Stop		
RT Channelized	'	-	None			Vone	- Otop	None		
Storage Length			-		_	-	0	110110		
/eh in Median Storage, #		0				0	0			
Grade, %		0			-	0	0	_		
Peak Hour Factor		97	97		88	88	72	72		
Heavy Vehicles, %		0	0		0	0	6	0		
Mymt Flow		723	74		22	816	54	35		
VIVIII I IOW		120	/-		22	010	34	55		
Major/Minor	* Má	jort		Majo	r2		Minor1	ī		
Conflicting Flow All		0	0		97	0	1619	760		**
Stage 1			-		_		760			
Stage 2		-					859			
Critical Hdwy				4	l.1		6.46	6.2		
Critical Hdwy Stg 1		-	-		_	-	5.46	_		
Critical Hdwy Stg 2		-	-		-	-	5.46	-		
Follow-up Hdwy		-	-	2	2.2		3.554	3.3		
Pot Cap-1 Maneuver		-	_		34	-	111	409		
Stage 1				·	-	_	455			
Stage 2		_	-		_	_	408	_		
Platoon blocked, %						-	100			
Mov Cap-1 Maneuver				8	34		106	409		
Mov Cap-2 Maneuver		*			-	-	106	100		
Stage 1		-			_		455	_		
Stage 2		-					388			
							442			
pproach .		EB.		. V	VB.		NB	w 1	¥ ¥ 4	*
HCM Control Delay, s		0		().2		59.7			
HCM LOS							F			
dinor Lane/Major Mymt	NBLnie	EBT	EBR	WBL W	3T ,			100	250.00	1 -
Capacity (veh/h)	149			834	*			3 5		
ICM Lane V/C Ratio	0.597	7		0.026						
HCM Control Delay (s)	59.7	_	_	9.4	0					
HCM Lane LOS	F			A	A					
IOITI LONG LOO		_	_	0.1						

	-	1	1	4-	1	-		
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	1			स	A			
Volume (vph)	695	52	28	644	37	27		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	12	12	10	12	12		
Satd. Flow (prot)	1757	0	0	1770	1683	0		
Flt Permitted				0.998	0.972			
Satd. Flow (perm)	1757	0	0	1770	1683	0		
Link Speed (mph)	30			30	30			
Link Distance (ft)	140			278	178			
Travel Time (s)	3.2			6.3	4.0			
Peak Hour Factor	0.95	0.95	0.90	0.90	0.56	0.56		
Heavy Vehicles (%)	0%	0%	0%	0%	6%	0%		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	787	0	0	747	114	0		
Sign Control	Free			Free	Stop			
Intersection Summary					-		*)	T TO STATE

Other

Control Type: Unsignalized

Intersection Capacity Utilization 67.0%

Analysis Period (min) 15

Intersection									
Int Delay, s/veh 4.	.6								
Movement	EBT	EBR	٧	VBL.	WBT	NBLL	NBRO	.W	
Vol, veh/h	695			28	644	37	27		
Conflicting Peds, #/hr	0			0	0	0	0		
Sign Control	Free		F	ree	Free	Stop	Stop		
RT Channelized	_	None		-	None	-	None		
Storage Length	_	-				0			
Veh in Median Storage, #	0	-		-	0	0			
Grade, %	0				0	0	_		
Peak Hour Factor	95			90	90	56	56		
Heavy Vehicles, %	0			0	0	6	0		
Mymt Flow	732			31	716	6 6	48		
IVIVITIL FIOW	132	55		JI	710	00	40		
Major/Minor	Major1		Mai	jor2	1030	Minor1			- 3
Conflicting Flow All	0			786	0	1537	759		
Stage 1		-		-		759			
Stage 2				_		778			
Critical Hdwy	_			4.1		6.46	6.2		
Critical Hdwy Stg 1				7.1		5.46	6		
Critical Hdwy Stg 2					_	5.46	_		
Follow-up Hdwy				2.2		3.554	3.3		
		•		842	-	125	410		
Pot Cap-1 Maneuver	-	-		042	-	455	410		
Stage 1	•	-		-	•		•		
Stage 2	-	-		-	•	446	•		
Platoon blocked, %	•			0.40					
Mov Cap-1 Maneuver	_	in.		842		117	410		
Mov Cap-2 Maneuver	•	-		-	-	117	-		
Stage 1	-	_		-	-	455	-		
Stage 2	•	-		-		419	-		
Anaroach	EB			WB		NB			
Approach				_					
HCM Control Delay, s	0			0.4		63.6			
HCM LOS						F			
Minor Lane/Major Mymt	NBLint EBT	EBR	WBL V	VBT		Art .	£1.	4 3.	7
Capacity (veh/h)	167 -		842		_ 1		ALC: TOTAL		
HCM Lane V/C Ratio	0.684 -		0.037						
HCM Control Delay (s)	63.6		9.4	0					
HCM Lane LOS	63.0 -		3.4 A	A					
	•	-							
HCM 95th %tile Q(veh)	4 -		0.1	-					



	1	-	-	*	1	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	7		A		
Volume (vph)	23	612	411	6	0	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1815	1815	0	1698	0	
Flt Permitted		0.998					
Satd. Flow (perm)	0	1815	1815	0	1698	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.94	0.94	1.00	0.89	0.44	0.44	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	675	418	0	16	0	
Sign Control		Free	Free		Stop		
Intersection Summary						:X	

Other

Control Type: Unsignalized

Intersection Capacity Utilization 60.8%

ICU Level of Service B

Analysis Period (min) 15

0.2										
0.3										
EBL	EBT	₽		.MB	T V	VBR	SBL	SBR		
23	612			41	1	6	0	7		
0	0				0	0	0	0		
Free	Free			Fre	e F	ree	Stop	Stop		
-	None				- N	lone	-	None		
-	-				-	-	0			
***	0				0	4		_		
_						_		-		
94						89		44		
				41	1					
	001						Ü	10		
Major1		-,	, ,	Major	2		Minor2	-		
	0		- 			0		414		
710								717		
4.1	•				•	-		6.2		
4.1	-				-	-		0.2		
-	-				-	-		-		
- 0.0	-				-	-		- 0.0		
	-				-	-				
1152	-				No.	-		643		
-	-				-	~		-		
-	-				-	-	496	-		
	-				-	-				
1152					•	-		643		
-	-				-	-		-		
-	-				-	-	671	-		
÷					44	•	480	-		
ER.		,		- 1AV	P.		CR			1
			-		-					
0.3					U					
							В			
EBL	EBT	WBT V	VBR S	BLn1						
			_							
A	A	_	-	D						
	23 0 Free - - 94 0 24 Major1 418 - 4.1 - 2.2 1152 - 1152	EBL EBT 23 612 0 0 Free Free - None - 0 - 0 94 94 0 1 24 651 Major1 418 0	23 612 0 0 Free Free - None - 0 - 0 94 94 0 1 24 651 Major1 418 0	EBL EBT WBT WBR S 1152	EBL EBT WBT WBR SBLn1 EBL EBT WBT WBR SBLn1 1152 - 643 0.021 - 0.025 8.2 0 - 10.7	EBL EBT WBT WBR SBLn1 1152 643 0.021 0.025 8.2 0 - 10.7	EBL EBT WBT WBR 23 612	BBL EBT WBT WBR SBL	FBL FBT FBT WBT WBR SBL SBR	EBL EBT WBT WBR SBL SBR SBR

	•	-	-	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	3.0
Lane Configurations		4	7>		A		
Volume (vph)	4	629	704	3	2	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1837	1817	0	1662	0	
Flt Permitted					0.997		
Satd. Flow (perm)	0	1837	1817	0	1662	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.87	0.87	0.92	0.92	0.50	0.50	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	728	768	0	68	0	
Sign Control		Free	Free		Stop		
Intersection Summary							
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utilizati	ion 47.2%			IC	CU Level c	of Service	Α
Analysis Period (min) 15							

intersection.							77 }	A-		~ 9
Int Delay, s/veh	0.8									
Movement.	EBL	EBT			WET	WBR	SBL	SBR		
Vol, veh/h	4	629			704	3	2	32		
Conflicting Peds, #/hr	0	0			0	0	0	0		
Sign Control	Free	Free			Free	Free	Stop	Stop		
RT Channelized		None			+	None	-	None		
Storage Length	-					-	0			
Veh in Median Storage, #		0			0	to	0			
Grade, %		0			0	-	0			
Peak Hour Factor	87	87			92	92	50	50		
Heavy Vehicles, %	0	0			1	0	0	3		
Mvmt Flow	5	723			765	3	4	64		
WWW.CTION	ŭ	720			, 00			01		
Major/Minor	Major1				Major2		Minor2.		44	£
Conflicting Flow All	768	0				0	1499	767		
Stage 1	-	-			+		767	-		
Stage 2	_	-				•	732	-		
Critical Hdwy	4.1	_			-	_	6.4	6.23		
Critical Hdwy Stg 1	_	-					5.4			
Critical Hdwy Stg 2	_	_			-	_	5.4			
Follow-up Hdwy	2.2	_			-		3.5	3.327		
Pot Cap-1 Maneuver	855					-	136	401		
Stage 1	-						462	101		
Stage 2	_	_			_		480			
Platoon blocked, %					_		400			
Mov Cap-1 Maneuver	855				_		135	401		
Mov Cap-1 Maneuver	000						135	701		
	•					_	462	-		
Stage 1	-	-			*	•	475	•		
Stage 2	•	•			-	•	4/0	•		
Approach -	EB				WB.		· SB»	be how		
HCM Control Delay, s	0.1				0		17.4		7	2.441
HCM LOS	0.1				Ů		C			
Middle for the factor of the f		ी <u>विका</u> री	Antal a			<u> </u>		<u> </u>		_
Capacity (veh/h)	855	~	-	- 359						
HCM Lane V/C Ratio	0.005	-	-	- 0.189						
HCM Control Delay (s)	9.2	0	-	- 17.4						
HCM Lane LOS	A	Α	-	- C						
HCM 95th %tile Q(veh)	0	-	-	- 0.7	•					

	*	-	-	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	1		A		
Volume (vph)	7	645	602	0	1	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1835	1837	0	1670	0	
Flt Permitted		0.999			0.995		
Satd. Flow (perm)	0	1835	1837	0	1670	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.96	0.96	0.90	0.90	0.45	0.45	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	679	669	0	20	0	
Sign Control		Free	Free		Stop		
Intersection Summary			€		<u>\</u>	T_	+, '_ 4,
Area Type: Control Type: Unsignalized Intersection Capacity Utiliza Analysis Period (min) 15	Other ation 49.5%			К	CU Level o	of Service A	

Intersection					-5								332
Int Delay, s/veh 0.	3												
Movement	EBL	EBT				WBT	WBR		SBL	SB	R_		
Vol, veh/h	7	645				602	0		1		8	-	
Conflicting Peds, #/hr	0	0				0	0		0		0		
Sign Control	Free	Free				Free	Free		Stop	Sto	p		
RT Channelized	_	None				_	None			Non			
Storage Length		-				-			0		+		
Veh in Median Storage, #	-	0				0	~		0		-		
Grade, %		0				0			0				
Peak Hour Factor	96	96				90	90		45	4	5		
Heavy Vehicles, %	0	0				0	0		0		3		
Mymt Flow	7	672				669	0		2	- 1	8		
WWWIIIETTOW	,	012				000	U				0		
Major/Minor	Major1		3	W=	A	Najor2		A	Ainor2		0-0		1
Conflicting Flow All	669	0					0		1355	66	9		
Stage 1	_	_				**	-		669				
Stage 2	_					_			686				
Critical Hdwy	4.1	_				_	_		6.4	6.2	13		
Critical Hdwy Stg 1	7.1								5.4	0.2			
Critical Hdwy Stg 2									5.4				
Follow-up Hdwy	2.2					_			3.5	3.32			
	931	-				•	•		166	45			
Pot Cap-1 Maneuver	931	-				-			513	40	00		
Stage 1	•	-				-	-		504		-		
Stage 2	-	-				-	-		504		-		
Platoon blocked, %	004	-				-	-		404	4.6			
Mov Cap-1 Maneuver	931	-				**	-		164	45	b		
Mov Cap-2 Maneuver	-	-				-	*		164		4		
Stage 1	-	-				-	-		513		*		
Stage 2	-	-				-	-		498		-0		
Approach	, E8	- v .	N-2-			WB	r	15	* SB	7	\$		a garage
HCM Control Delay, s	0.1					0			15				18-5
HCM LOS	0.1					U			C				
.,													
Minor Lane/Major Mymt	EBL	EBT 1	WBTN	WBR !	SBLn1						Ant	- 1	
Capacity (veh/h)	931	-	-	-	381								
HCM Lane V/C Ratio	0.008	-	-		0.052								
HCM Control Delay (s)	8.9	0			15								
HCM Lane LOS	A	A			C								
HCM 95th %tife Q(veh)	Ô	7	+		0.2								

	*	→	-	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	4		sh.		
Volume (vph)	23	649	443	6	0	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1815	1815	0	1698	0	
Flt Permitted		0.998					
Satd. Flow (perm)	0	1815	1815	0	1698	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.94	0.94	1.00	0.89	0.44	0.44	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	714	450	0	16	0	
Sign Control		Free	Free		Stop		
Intersection Summary		F	,	F 30	、河流	* 4	3 1 1 2 7

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 62.8%

Analysis Period (min) 15

Intersection_			7	x	, r				1 1/2 1/2 1/	متنع مالًا
nt Delay, s/veh	0.3				_					
Movement	EBL	ÉBŢ			WBI	WBR	SBL	SBI	₹ <u> </u>	- Table
Vol, veh/h	23	649			443	6	0		7	
Conflicting Peds, #/hr	0	0			0	0	0		0	
Sign Control	Free	Free			Free	Free	Stop	Sto		
RT Channelized	-	None			_	None	-	Non		
Storage Length		-				-	0		•	
Veh in Median Storage, #	_	0			0	_	Ő		_	
Grade, %	_	0			0		0			
Peak Hour Factor	94	94			100	89	44	4	1	
	0	1			100	0	0		0	
Heavy Vehicles, %					443	7		1		
Mvmt Flow	24	690			443	1	0		0	
Major/Minor	Major1	1595		-	Major2		Minor2	NE SE	3,539,33	
Conflicting Flow All	450	0			-	0	1185	44	6	
Stage 1	-	-			-	_	446		_	
Stage 2						_	739			
Critical Hdwy	4.1	_			-		6.4	6.	2	
Critical Hdwy Stg 1	T. 1						5.4	0.		
Critical Hdwy Stg 2						•	5.4			
	2.2	-				-		3.	2	
Follow-up Hdwy		No.			-	_	3.5			
Pot Cap-1 Maneuver	1121	-				-	211	61	/	
Stage 1	-	-				-	649		-	
Stage 2		-			-	-	476		•	
Platoon blocked, %		-			•	*				
Mov Cap-1 Maneuver	1121	-				-	204	61	7	
Mov Cap-2 Maneuver	-	-					204		•	
Stage 1	*	-			*	**	649		•	
Stage 2	-	-			-1	*	459		-	
Approach	EB				WB	4	SB	100		
10.2			15							
HCM Control Delay, s	0.3				0		11			
HCM LOS							В			
Aliro Sandidae Alviria	- (18)	122	Weight L	N138(83)	(j취:	· .	13.75			
Capacity (veh/h)	1121				17					- :
HCM Lane V/C Ratio	0.022	-		- 0.0						
HCM Control Delay (s)	8.3	0			11					
HCM Lane LOS										
	A	Α	-	-	В					
HCM 95th %tile Q(veh)	0.1	-	4	- ().1					

	1	-	←	1	1	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	7+		A		
Volume (vph)	4	700	751	3	2	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1837	1819	0	1662	0	
Flt Permitted					0.997		
Satd. Flow (perm)	0	1837	1819	0	1662	0	
ink Speed (mph)		30	30		30		
ink Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.87	0.87	0.92	0.92	0.50	0.50	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	3%	
Shared Lane Traffic (%)							
ane Group Flow (vph)	0	810	819	0	68	0	
Sign Control		Free	Free		Stop		
intersection Summary							

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 50.0%

Analysis Period (min) 15

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int Delay, s/veh 0.	8									
Movement	EBL	EBT			WBT	WBR	SBL	. S8	R	
Vol, veh/h	4	700			751	3	2	2 3	2	
Conflicting Peds, #/hr	0	0			0	0	C)	0	
Sign Control	Free	Free			Free	Free	Stop	Sto	р	
RT Channelized	-	None			_	None		- Non		
Storage Length	-	_			-	-	C)	-	
Veh in Median Storage, #	-	0			0	-	C)	-	
Grade, %	-	0			0	-	(-	
Peak Hour Factor	87	87			92	92	50		0	
Heavy Vehicles, %	0	0			1	0	(3	
Mvmt Flow	5	805			816	3	4		4	
Malas (Militar	Majort				Major2		Minor2			
Major/Minor	Major1	^			Majorz	^			0	
Conflicting Flow All	820	0			3 -	0	1632		ğ	
Stage 1	-	-			-	-	818		-	
Stage 2		-			-	-	814		-	
Critical Hdwy	4.1	-			-	-	6.4		3	
Critical Hdwy Stg 1	**	44			-	*	5.4		-	
Critical Hdwy Stg 2		-					5.4		-	
Follow-up Hdwy	2.2	-			-	-	3.5			
Pot Cap-1 Maneuver	818				-	→	113		4	
Stage 1	-	+			-		437		-	
Stage 2	-	-			-	-	439)	-	
Platoon blocked, %		-			-	-				
Mov Cap-1 Maneuver	818	-			-	-	112		4	
Mov Cap-2 Maneuver	-	-			-	-	112			
Stage 1	-	-				-	437	,	-	
Stage 2	•	•			46	*	434		•	
Approach	EB				WB	1	SE	1		
HCM Control Delay, s	0.1				0		18.8			
HCM LOS	0.1				ŭ		C			
ઇમિલ જ્યામાં કહુલ <u>પૈ</u> તાના	= = = = = = = = = = = = = = = = = = = =	<u>(2)2)</u>		()21:533 (d				·		4 1/4.
Capacity (veh/h)	818	-	-	- 329						
HCM Lane V/C Ratio	0.006	-	-	- 0.207						
HCM Control Delay (s)	9.4	0		- 18.8						
HCM Lane LOS	A			- (
HCM 95th %tile Q(veh)		, .		-						

	•	-	-	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	7>		sha		
Volume (vph)	7	717	658	0	1	8	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1837	1837	0	1670	0	
FIt Permitted					0.995		
Satd. Flow (perm)	0	1837	1837	0	1670	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.96	0.96	0.90	0.90	0.45	0.45	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	754	731	0	2 0	0	
Sign Control		Free	Free		Stop		
Intersection Summary						1 1	•

Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 53.3%

Analysis Period (min) 15

Intersection	0.3						7			
Int Delay, s/veh	1.3									
Mövément	EBL	EBT			WBT	WBR	SBL	SBR		103
Vol, veh/h	7	717			658	0	1	8		
Conflicting Peds, #/hr	0	0			0	0	0	0		
Sign Control	Free	Free			Free	Free	Stop	Stop		
RT Channelized		None			-	None	-	None		
Storage Length		-					0			
Veh in Median Storage, #		0			0	-	0	-		
Grade, %	-	0			0	-	0	-		
Peak Hour Factor	96	96			90	90	45	45		
Heavy Vehicles, %	0	0			0	0	0	3		
Mvmt Flow	7	747			731	0	2	18		
Major/Minor	Major1				Major2		∠ Minor2		= <u>{</u>	of the Real
Conflicting Flow All	731	0			Inicipals:	0	1492			a greene
Stage 1	731	0			_		731	751		
Stage 2	_					-	761			
Critical Hdwy	4.1	-				-	6.4	6.23		
Critical Hdwy Stg 1	4.1	_					5.4			
Critical Hdwy Stg 2		_			_	_	5.4			
Follow-up Hdwy	2.2	_					3.5			
Pot Cap-1 Maneuver	883	_			_	_	137	420		
Stage 1	000	_				_	480			
Stage 2	_						465			
Platoon blocked, %		_			_	_	400	_		
Mov Cap-1 Maneuver	883						135	420		
Mov Cap-1 Maneuver	-	_				-	135			
Stage 1		_			_	_	480			
Stage 2					_	_	458			
Stage 2							400			
[h] 1 0 E 61		<u></u>			(1775)		7a 0			
HCM Control Delay, s	0.1				0		16.2			
HCM LOS							С			
Minor Lane/Major Mymt	EBL	EBT	WBT	WBR SBL	3	1	- w	y . ,	12.73	7
Capacity (veh/h)	883	700	-	- 340	-					
HCM Lane V/C Ratio	0.008	-	-	- 0.059						
HCM Control Delay (s)	9.1	0	-	- 16.2						
HCM Lane LOS	A	A		- (
HCM 95th %tile Q(veh)	0	-		- 0.2						

6: Merrimac Street & Brown's Wharf

	1	-	-	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	7		A		
Volume (vph)	0	659	446	16	17	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1818	1810	0	1787	0	
Flt Permitted					0.965		
Satd. Flow (perm)	0	1818	1810	0	1787	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.94	0.94	1.00	0.89	0.92	0.92	
Heavy Vehicles (%)	0%	1%	1%	0%	2%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	701	464	0	25	0	
Sign Control		Free	Free		Stop		
Intersection Summary					_	4	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 44.7%

Analysis Period (min) 15

nt Delay, s/veh ().4										
ne Bolay, or von	J. 1										
Viovement	EBL	EBT		+	- WET	WER	SBL	SBI	3	. 35	-
Vol, veh/h	0	659			446	16	17		6		
Conflicting Peds, #/hr	0	0			0	0	0		0		
Sign Control	Free	Free			Free	Free	Stop	Sto	р		
RT Channelized	-	None			-	None	-	Non	e		
Storage Length		-				-	0				
Veh in Median Storage, #		0			0	-	0		*		
Grade, %	-	0			0	-	0		_		
Peak Hour Factor	94	94			100	89	92	9	2		
Heavy Vehicles, %	0	1			1	0	2		2		
Mvmt Flow	0	701			4 4 6	18	18		7		
	14414				4 8 466 -						
Major/Minor	Major1			è	Major2		-Minor2				
Conflicting Flow All	464	0			-	0	1156	45	5		
Stage 1	-	-			-	-	455		-		
Stage 2		-				-	701		-		
Critical Hdwy	4.1	-			-	-	6.42		2		
Critical Hdwy Stg 1	-	-			-	-	5.42		-		
Critical Hdwy Stg 2	-	-			-	-	5.42		-		
Follow-up Hdwy	2.2	-			-	-	3.518	3.31	8		
Pot Cap-1 Maneuver	1108	-			-	-	217	60	5		
Stage 1		-					639		-		
Stage 2	-	-			-	-	492		-		
Platoon blocked, %		-			-	-					
Mov Cap-1 Maneuver	1108					•	217	60	5		
Mov Cap-2 Maneuver	-	-			-	-	217		-		
Stage 1	-	-			-		639		_		
Stage 2	-					- •	492		-		
Approach	EB			-	WB		SB				
HCM Control Delay, s	0				0		20.2				
HCM LOS	U				U		20.2 C				
Minor Lane/Major Mymt		_EBT_	WB	VBRISB		2 =	AT THE	- ,	-	1 ,	
Capacity (veh/h)	1108	-	-		261						
HCM Lane V/C Ratio		-	*	- 0.0	096						
HCM Control Delay (s)	0	-	-	- 2	0.2						
HCM Lane LOS	Α	-	-		C						
HCM 95th %tile Q(veh)	0	-	-	*	0.3						

6: Merrimac Street & Brown's Wharf

	*		-	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	1		A		
Volume (vph)	0	710	762	38	26	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1837	1808	0	1802	0	
Flt Permitted					0.962		
Satd. Flow (perm)	0	1837	1808	0	1802	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.87	0.87	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	1%	0%	2%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	816	869	0	35	0	
Sign Control		Free	Free		Stop		
Intersection Summary						F ,	, 4 , -

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.4%

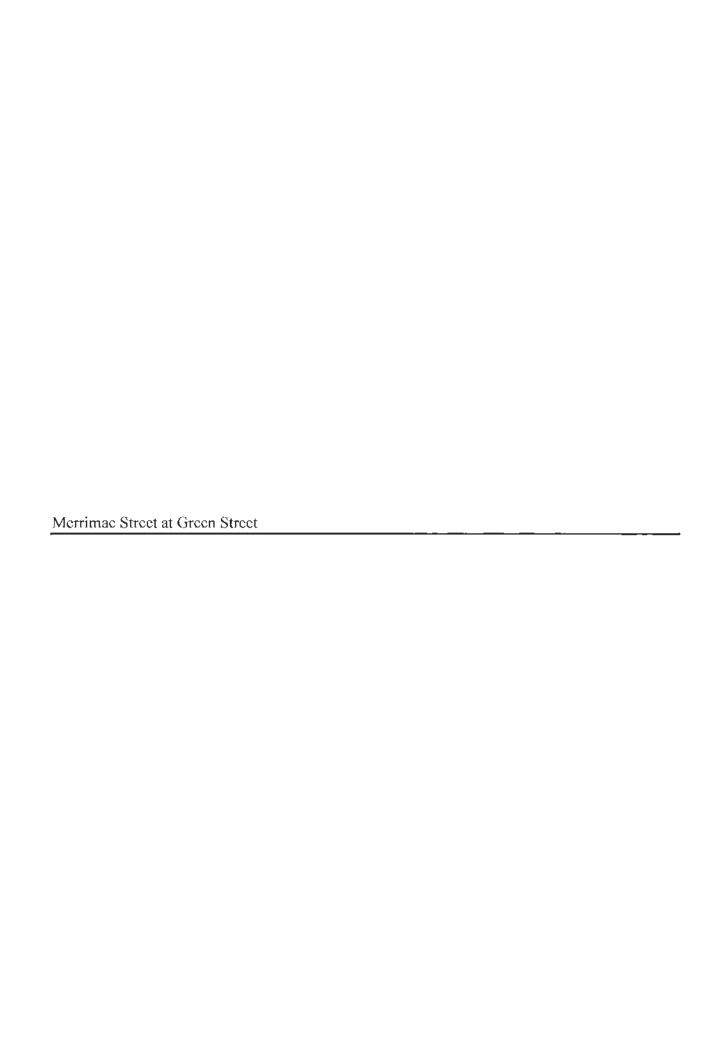
Analysis Period (min) 15

Intersection	- 15 - 1							=			. 3.			
nt Delay, s/veh).9													
Movement	EBL	EBT				WBT	WBR		SBL		SBR			独
Vol, veh/h	0	710				762	38		26		6			
Conflicting Peds, #/hr	0	0				0	0		0		0			
Sign Control	Free	Free				Free	Free		Stop		Stop			
RT Channelized		None				_	None		-		None			
Storage Length						-			0		-			
Veh in Median Storage, #	_	0				0	_		0		_			
Grade, %	_	0				0	-		0		_			
Peak Hour Factor	87	87				92	92		92		92			
Heavy Vehicles, %	0	0				1	0		2		2			
Mvmt Flow	0	816				828	41		28		7			
d arr & statistics .	8 W 115 L St.					ive in			202					
Major/Minor	Majort				W	ajor2			Minor2					<u>*</u>
Conflicting Flow All	870	0				-	0		1665		849			
Stage 1	-	-				-	-		849		-			
Stage 2	-	-				-	-		816		-			
Critical Hdwy	4.1	-				-	-		6.42		6.22			
Critical Hdwy Stg 1	-	-				-	-		5.42		-			
Critical Hdwy Stg 2	-	-				-	-		5.42		-			
Follow-up Hdwy	2.2	-				-	-		3.518		3.318			
Pot Cap-1 Maneuver	783	-				-	**		106		361			
Stage 1		-				-			419		-			
Stage 2	-	_				-	-		4 3 5					
Platoon blocked, %														
Mov Cap-1 Maneuver	783	-				-	-		106		3 61			
Mov Cap-2 Maneuver	_					-	-		106		_			
Stage 1						-			419		-			
Stage 2	-	-				-	-		435		-			
Approach	EB					WB			SB			300	-	
HCM Control Delay, s	0					0			45.9					
HCM LOS	U					U			40.5 E					
· 种型。外——前上十二年———	产者	'eng' (Na Primer III	ilia de	407	7					*	0.	CONTRACTOR	rcv.
Minor Cane/Major Mymt	EBL	EQ1	WBT \			1				<u> </u>		مسجها الخياد	L. P. S. A.	W. **
Capacity (veh/h)	783	-	-	-	122									
HCM Lane V/C Ratio		-	-		.285									
HCM Control Delay (s)	0	-	-		45.9									
HCM Lane LOS	A	-	-	•	Ε									
HCM 95th %tile Q(veh)	0	-	-	-	1.1									

	•	-	-	*	1	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	1>		A		
Volume (vph)	0	736	673	52	35	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	13	12	
Satd. Flow (prot)	0	1837	1818	0	1800	0	
Flt Permitted					0.962		
Satd. Flow (perm)	0	1837	1818	0	1800	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		278	62		220		
Travel Time (s)		6.3	1.4		5.0		
Peak Hour Factor	0.96	0.96	0.90	0.90	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	2%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	767	806	0	48	0	
Sign Control		Free	Free		Stop		
Intersection Summary						म एक द	7.1
Area Type:	Other						
Control Type: Unsignalized							
Intersection Capacity Utiliza				10	CU Level	of Service	A A

Analysis Period (min) 15

Intersection						1				-5.3		
Int Delay, s/veh	1.2											
Movement	EBL	EBT		•	W	/BT	WBR	S	3L	SBR		
Vol, veh/h	0	736				673	52		35	9		
Conflicting Peds, #/hr	0	0				0	0		0	0		
Sign Control	Free	Free			F	ree	Free	Ste	op	Stop		
RT Channelized	_	None				_	None			None		
Storage Length									0			
Veh in Median Storage, #		0				0			0	_		
Grade, %		0				0	-		0			
Peak Hour Factor	96	96				90	90		92	92		
Heavy Vehicles, %	0	0				0	0		2	2		
Mymt Flow	0	767			-	748	58		38	10		
WINTER IOW	0	101				7-70	30		50	10		
Major/Minor	Major1				Mäi	or2		Mino	12			A.
Conflicting Flow All	806	0				-	0	154		777		
Stage 1						-		7	7 7			
Stage 2						-			67	-		
Critical Hdwy	4.1					-	-	6.4		6.22		
Critical Hdwy Stg 1							-	5.4		-		
Critical Hdwy Stg 2		_				-	-	5.4				
Follow-up Hdwy	2.2					_		3.5		3.318		
Pot Cap-1 Maneuver	8 28	-							26	397		
Stage 1	020	-							53	001		
Stage 2							-		58			
Platoon blocked, %							_	71	50			
Mov Cap-1 Maneuver	828					_	_	41	26	397		
Mov Cap-1 Maneuver	020	-					•		26	391		
	•	-				•	•		53	•		
Stage 1	•	-				•	*		5 8	•		
Stage 2	•	•				•	•	4	00	•		
Approach	EB		33		- 1	WB		9	SB		-	
HCM Control Delay, s	0					0		41				
HCM LOS						-			E			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR S	Rint			-				
		CDI	TIDE	WOW 2		- 2				25-7-		
Capacity (veh/h)	828		-	-	146							
HCM Lane V/C Ratio	•		-		0.328							
HCM Control Delay (s)	0	-	-	-	41.2							
HCM Lane LOS	A	•	-	-	E							
HCM 95th %tile Q(veh)	0	-	-	-	1.3							



	-	*	1	•	4	*			
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	1			1	7	*			
Volume (vph)	612	0	0	346	71	173			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	11	12	12	11	12	12			
Satd. Flow (prot)	1837	0	0	1837	1805	1615			
Flt Permitted					0.950				
Satd. Flow (perm)	1837	0	0	1837	1805	1615			
Link Speed (mph)	30			30	30				
Link Distance (ft)	50			70	128				
Travel Time (s)	1.1			1.6	2.9				
Peak Hour Factor	0.91	0.91	0.91	0.91	0.78	0.78			
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	673	0	0	380	91	222			
Sign Control	Free			Free	Stop				
Intersection Summary	4				4		4 3	. 4-mg	
Area Type:	Other								
Control Type: Unsignalized									
Intersection Capacity Utiliza	ation 49.6%			IC	CU Level of	of Service A			
Analysis Period (min) 15									

Intersection							
Int Delay, s/veh	5						
Movement	E	ST EBR	WE	BL WBT	N	BL NBR	
Vol, veh/h		12 0		0 346		71 173	
Conflicting Peds, #/hr		0 0		0 0		0 0	
Sign Control	Fr	ee Free	Fre	ee Free	St	top Stop	
RT Channelized		- None		- None		- None	
Storage Length						0 0	
Veh in Median Storage, #		0 -		- 0		0 -	
Grade, %		0 -		- 0		0 -	
Peak Hour Factor		91 91	9	91 91		78 78	
Heavy Vehicles, %		0 1		1 0		0 0	
Mymt Flow	6	73 0		0 380		91 222	
VIVIIIE I IOW	0	, 0		0 000		222	
Major/Minor	Majo	ir1	Maio	25 A	E Mini	arii —	
Conflicting Flow All	1112	0 0		73 0		53 673	
Stage 1						73 -	
Stage 2						80 -	
Critical Hdwy			4.	11 -		6.4 6.2	
Critical Hdwy Stg 1			**			5.4 -	
Critical Hdwy Stg 2						5.4	
Follow-up Hdwy			2.20)9 -		3.5 3.3	
Pot Cap-1 Maneuver				23 -		53 459	
Stage 1			34			11 +	
Stage 2				•		96 -	
Platoon blocked, %				~	O		
			01	70	•	150	
Mov Cap-1 Maneuver			9,	23 -		53 459	
Mov Cap-2 Maneuver						53 -	
Stage 1						-	
Stage 2					6	96 -	
(1002)							*
HCM Control Delay, s		0		0		22	
HCM LOS						С	
Vinor Lane/Major Mymt	NBLn1 NBL		EBR. WE	L_WBT	v v		
Capacity (veh/h)	253 4	59 -	- 92	23 -			
HCM Lane V/C Ratio	0.36 0.4	83 -					
HCM Control Delay (s)		20 -	2	0 -			
HCM Lane LOS	D	C -	-	A -			
HCM 95th %tile Q(veh)		2.6 -		0 -			

	-	*	1	-	1	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1			↑	ሻ	7	
Volume (vph)	631	0	0	562	145	149	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	1837	0	0	1818	1787	1615	
Flt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1818	1787	1615	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.95	0.95	0.88	0.88	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	664	0	0	639	161	166	
Sign Control	Free			Free	Stop		

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 49.1%

Analysis Period (min) 15

intersection			•					D. BY	
Int Delay, s/veh 11.	3								
Movement	E	T EBR	W	/BL 1	WBT`	NBL.	NBR	1.	
Vol, veh/h	63	31 0		0	562	145	149		
Conflicting Peds, #/hr		0 0		0	0	0	0		
Sign Control	Fre	e Free	F	ree	Free	Stop	Stop		
RT Channelized		- None			Vone	·-	None		
Storage Length				-	-	0	0		
Veh in Median Storage, #		0 -		-	0	0	-		
Grade, %		0 -		-	0	0	-		
Peak Hour Factor	9	95 95		88	88	90	90		
Heavy Vehicles, %		0 0		0	1	1	0		
Mvmt Flow	66	64 0		0	639	161	166		
Major/Minor	Majo	r1.	Maj	or2		Minor1			
Conflicting Flow All		0 0		664	0	1303	664		
Stage 1			`	_	-	664	-		
Stage 2						639	-		
Critical Hdwy				4.1		6.41	6.2		
Critical Hdwy Stg 1				-		5.41	-		
Critical Hdwy Stg 2				_		5.41	-		
Follow-up Hdwy				2.2	-	3.509	3.3		
Pot Cap-1 Maneuver				935	+	178	464		
Stage 1				-		514			
Stage 2						528	-		
Platoon blocked, %						020			
Mov Cap-1 Maneuver			Ç	935		178	464		
Mov Cap-2 Maneuver			·			178			
Stage 1				_	_	514	_		
Stage 2				-	-	528	-		
্রাল্ডার্ডার্ডার -									_
HCM Control Delay, s		0		0		56.5	- ' - ' - ' - ' - ' - ' - ' - ' - ' - '	- 15	· — — ·
HCM LOS		O		0		F			
Minor Láne/Major Mymt	NBLn1 NBL	2 EBT	EBŘ W	/BL: \	WBT			. 7	
Capacity (veh/h)		64 -		935					
HCM Lane V/C Ratio	0.905 0.38		_	-	w				
HCM Control Delay (s)		17 -	_	0	+				
HCM Lane LOS		C -	4	A					
HCM 95th %tile Q(veh)		.6 -		Ô	_				

	-	*	1	-	1	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1			1	7	74	
Volume (vph)	646	0	0	498	104	193	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	1837	0	0	1837	1787	1599	
FIt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1837	1787	1599	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.91	0.91	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	710	0	0	541	113	210	
Sign Control	Free			Free	Stop		
Intersection Summary							_ 1

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.6%

Analysis Period (min) 15

ICU Level of Service A

Intersection	3-5-3			-			
	.2						
Movement	EBT	EBR	WBL	WBT	NBL.	NBR	
Vol, veh/h	646	0	0	498	104	193	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized		None		None	-	None	
Storage Length		-	-	-	0	0	
/eh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	91	91	92	92	92	92	
Heavy Vehicles, %	0	0	0	0	1	1	
Mvmt Flow	710	0	0	541	113	210	
Major/Minor	Major1		Major2		Minorit		* 11
Conflicting Flow All	0	0	710	. 0	1251	710	~~~ \$?
Stage 1	-	-	-	-	710	-	*
Stage 2		-	-		541	+	
Critical Hdwy	-	40-	4.1	-	6.41	6.21	
Critical Hdwy Stg 1	-				5.41	-	
Critical Hdwy Stg 2		_	-		5.41		
Follow-up Hdwy		-	2.2		3.509	3.309	
Pot Cap-1 Maneuver			899	-	191	435	
Stage 1					489		
Stage 2		-			585		
Platoon blocked, %		_		-			
Mov Cap-1 Maneuver		_	899	-	191	435	
Mov Cap-2 Maneuver		_		-	191		
Stage 1		-	-	-	489		
Stage 2		-	÷	-	585	•	
1110,607-101	[ES]		<u> </u>				
HCM Control Delay, s	0		0		30.3	<u> </u>	
HCM LOS	•				D		
Minor Eane/Major Mymt	NBLn1 NBLn2	EBT	EBR' WBC	WBT-			And the second
Capacity (veh/h)	191 435		- 899	-			
HCM Lane V/C Ratio	0.592 0.482	-		-			
HCM Control Delay (s)	48 20.7		- 0	-			
HCM Lane LOS	E C		- A				
HCM 95th %tile Q(veh)	3.3 2.6		- 0				

	-	*	1	-	4	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1			↑	*	7	
Volume (vph)	649	0	0	374	76	177	
Ideal Flow (vphpl)	1900	1900	1900	1900	19 0 0	19 0 0	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	1837	0	0	1837	1805	1615	
Flt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1837	1805	1615	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.78	0.78	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	713	0	0	411	97	227	
Sign Control	Free			Free	Stop		
Intersection Summary							

Other

Control Type: Unsignalized

Intersection Capacity Utilization 51.8%

Analysis Period (min) 15

ICU Level of Service A

Intersection		-,	-2 5	33			
Int Delay, s/veh 5.	6						
	ror	ĖŠB	10/00/	S'a lieuw	8491	NOD	7
Movement	EBT	EBR	WBL	WBT	1 NBL	NBR	
Vol, veh/h	649	0	0	374	76	177	
Conflicting Peds, #/hr	_ 0	_ 0	_ 0	_ 0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	0	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-		0	0	-	
Peak Hour Factor	91	91	91	91	78	78	
Heavy Vehicles, %	0	1	1	0	0	0	
Mvmt Flow	713	0	0	4 1 1	97	227	
Major/Minor	Major1		Major2		Minor1		25,33
Conflicting Flow All	0	0	713	0	1124	713	
Stage 1	_	_	-	-	713	_	
Stage 2			*		411		
Critical Hdwy			4.11		6.4	6.2	
Critical Hdwy Stg 1					5.4	-	
Critical Hdwy Stg 2	_				5.4		
Follow-up Hdwy			2.209	-	3.5	3.3	
Pot Cap-1 Maneuver	_	-	892		229	435	
	-	-	092		489	433	
Stage 1	-	-	-	-	674	•	
Stage 2	-	-	-	•	0/4	_	
Platoon blocked, %	-	-	000	-	222	405	
Mov Cap-1 Maneuver	-	-	8 9 2	-	229	435	
Mov Cap-2 Maneuver	-	-		*	229	4	
Stage 1	-	-	-	-	489	-	
Stage 2		-		•	674	7	
MD OF Th			· WE		\\[\bar{\bar{\bar{\bar{\bar{\bar{\bar{	14 1 14 1 14	
		<u></u>					
HCM Control Delay, s	0		0		25		
HCM LOS					D		
ได้แล้ว 24 ราชหมายาสตั้งหญา	表情可知的情况			Video V	the state of the s		
Capacity (veh/h)	229 435		- 892		<u>——Viller of States (1981)</u>	مفه مداف علاضت-ب	ereaction, we give a
HCM Lane V/C Ratio	0.425 0.522	_	- 002	-			
	31.9 22	-					
HCM Control Delay (s)		-					
HCM Lane LOS	D C	-	- A	•			
HCM 95th %tile Q(veh)	2 2.9		- 0	-			

	-	*	1	←	4	-
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1			1	7	14
Volume (vph)	702	0	0	599	155	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	11	12	12
Satd. Flow (prot)	1837	0	0	1818	1787	1615
Flt Permitted					0.950	
Satd. Flow (perm)	1837	0	0	1818	1787	1615
Link Speed (mph)	30			30	30	
Link Distance (ft)	50			70	128	
Travel Time (s)	1.1			1.6	2.9	
Peak Hour Factor	0.95	0.95	0.88	0.88	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	739	0	0	681	172	171

Free

Intersection Summary

Sign Control

Area Type:

Other

Free

Control Type: Unsignalized

Intersection Capacity Utilization 53.1%

Analysis Period (min) 15

ICU Level of Service A

Stop

Intersection							
nt Delay, s/veh	19						
Movement .	EBT,	EBR	WBL	WBT	NBL.	NBR	
Vol, veh/h	702	0	0	599	155	154	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None		None	-	None	
Storage Length		-		-	0	0	
Veh in Median Storage, #	0	_	-	0	0		
Grade, %	0			0	0		
Peak Hour Factor	95	95	88	88	90	90	
Heavy Vehicles, %	0	0	0	1	1	0	
Mymt Flow	739	0	0	681	172	171	
AIVITET 1044	100	O	U	001	172	171	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	739	0	1420	739	
Stage 1	_	_	-	-	739	da	
Stage 2	-				681	-	
Critical Hdwy	-	-	4.1	-	6.41	6.2	
Critical Hdwy Stg 1			_		5,41	-	
Critical Hdwy Stg 2	-	_	_		5.41	-	
Follow-up Hdwy	+	_	2.2	-	3.509	3.3	
Pot Cap-1 Maneuver			876		~ 151	421	
Stage 1		-			474		
Stage 2	_				504	-	
Platoon blocked, %	_	-					
Mov Cap-1 Maneuver		_	876		~ 151	421	
Mov Cap-2 Maneuver			010		~ 151	721	
Stage 1					474		
				_	504	_	
Stage 2	•	-	•	•	304	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0		97.7		
HCM LOS					F		
all 18 to the second at the arms and	**************************************	البخيزتم	PRA CONT	West	4		
Minor Lane/Major Mvmt	NBLn1 NBLn2	EBT	EBR WBL	Wet			a - Fin
Capacity (veh/h)	151 421		- 876	•			
HCM Lane V/C Ratio	1.141 0.406	-					
HCM Control Delay (s)	175.5 19.3	•	- 0	-			
HCM Lane LOS	F C	-	- A	-			
HCM 95th %tile Q(veh)	9.5 1.9	-	- 0	-			
Votes				- 3			

	-	7	1	-	•	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1			1	7	7	
Volume (vph)	718	0	0	546	112	205	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	1837	0	0	1837	1787	1599	
Flt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1837	1787	1599	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.91	0.91	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	789	0	0	593	122	223	
Sign Control	Free			Free	Stop		
Intersection Summary		200			1		- The Maria

Other

Control Type: Unsignalized

Intersection Capacity Utilization 57.1%

Analysis Period (min) 15

ICU Level of Service B

Intersection	-						
Int Delay, s/veh 8.	8						
B 6 4 4 8	FOT	EDD	'h a Jirist	ha series	AIDI	NDD'	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	-
Vol, veh/h	718	0	0	546	112	205	
Conflicting Peds, #/hr	_ 0	0	0	_ 0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	•	-	0	0	
Veh in Median Storage, #	0	-	•	0	0	-	
Grade, %	0	-		0	0	-	
Peak Hour Factor	91	91	92	92	92	92	
Heavy Vehicles, %	0	0	0	0	1	1	
Mvmt Flow	7 8 9	0	0	593	122	223	
Major/Minor	Majord -		Major2	3	Minorf	20.3	, 1
Conflicting Flow All	0	0	789	0	1382	789	
Stage 1	0	-	700	_	789	705	
Stage 2					593		
Critical Hdwy	-	-	4.1	-	6.41	6.21	
Critical Hdwy Stg 1	•	•	79.1	•	5.41	0.21	
	-	•	•	-	5.41	-	
Critical Hdwy Stg 2	_	_	2.2	_		2 200	
Follow-up Hdwy	•			•	3.509	3.309	
Pot Cap-1 Maneuver		-	840	-	159	392	
Stage 1	49	*	-	•	449	-	
Stage 2	4	-	-	-	554	-	
Platoon blocked, %	-	•	5.40	,m	450	000	
Mov Cap-1 Maneuver	•	-	8 40	-	159	392	
Mov Cap-2 Maneuver	-	-		-	159	-	
Stage 1	-	-	-	-	449	-	
Stage 2	•	-	•	-	554	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0		44		
HCM LOS					E		
Militery wanted Marie	<u>ૡૢ૽</u> ૺૼૼૼૺૺ૱૱ઌઌૺ૱ૢઌઌૢ૾ૺ		वंशस्य भीतः ।	William .			
Capacity (veh/h)	159 392	-	- 840				
HCM Lane V/C Ratio	0.766 0.568						
HCM Control Delay (s)	77.8 25.6		- 0				
HCM Lane LOS	F D		- A				
HCM 95th %tile Q(veh)	4.8 3.4		- 0				

7: Green Street & Merrimac Street

	-	*	1	←	1		
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	1			1	7	7	
Volume (vph)	676	0	0	382	81	177	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	1837	0	0	1837	1805	1615	
Flt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1837	1805	1615	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.78	0.78	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	743	0	0	420	104	227	
Sign Control	Free			Free	Stop		
Intersection Summary	<u> 1 -</u>	<u> 45.</u>	1	42.			

Area Type:

Other

Control Type: Unsignalized Intersection Capacity Utilization 53.2%

ICU Level of Service A

ntersection * 1	*	*1 - <u>x</u>		7.4	Z ·		
nt Delay, s/veh	6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
/ol, veh/h	676	0	0	382	81	177	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	_	None	_	None .	
Storage Length			-		0	0	
/eh in Median Storage, #	0	_		0	0	_	
Grade, %	0			Ö	0		
Peak Hour Factor	91	91	91	91	78	78	
Heavy Vehicles, %	0	1	1	0	Ő	0	
Nymt Flow	743	0	0	420	104	227	
VIVIIIC I IOVV	143	U	U	440	104	221	
Mäjor/Minoj?T	"Major1		Major2		my 4 Minori		
Conflicting Flow All	0	0	743	0	1163	743	
Stage 1	-		-		743	-	
Stage 2		_	-	-	420		
Critical Hdwy	-	-	4.11	**	6.4	6.2	
Critical Howy Stg 1	da	_	_	-	5.4		
Critical Hdwy Stg 2					5.4	-	
Follow-up Hdwy			2.209		3.5	3.3	
Pot Cap-1 Maneuver	_		869		217	418	
Stage 1		-	000		474	-	
Stage 2		_			667		
Platoon blocked, %			_		007		
	-	_	869	_	217	418	
Mov Cap-1 Maneuver	-	•	009	•	217	410	
Mov Cap-2 Maneuver	•	•	-	-		•	
Stage 1		-	-	-	474	-	
Stage 2		•		-	667	•	
Approach	EB		WB		NB	100000	
HCM Control Delay, s	0		0		27.3		
ICM LOS			Ţ.		D		
Minor Lane/Major Mvmt	NBLn1 NBLn2	EBT	EBR WBL	WBT	200		
Capacity (veh/h)	217 418	-	- 869	- 2			
ICM Lane V/C Ratio	0,479 0,543	-					
HCM Control Delay (s)	35.9 23.4	-	- 0	-			
HCM Lane LOS	E C	- 4	- A				

7: Green Street & Merrimac Street

	-	*	1	4-	1	1	
Lane Group	EBT	E8R	WBL	WBT	NBL	NBR	
Lane Configurations	†			↑	7	7	
Volume (vph)	736	0	0	631	169	154	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	18 3 7	0	0	1818	1787	1615	
Flt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1818	1787	1615	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.95	0.95	0.88	0.88	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	775	0	0	717	188	171	
Sign Control	Free			Free	Stop		
Intersection Summary							. 7

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.9%

Analysis Period (min) 15

ICU Level of Service A

Interest of Intere	<u> </u>	<u>.2.</u>		: +. ⁻			· · · · · · · · · · · · · · · · · · ·
nt Delay, s/ven	29						
/lovement	EBT	EBR	WBL	WBT	NBL	NBR	
/ol, veh/h	736	0	0	631	169	154	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-		-	0	0	
/eh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-		0	0		
Peak Hour Factor	95	95	88	88	90	90	
leavy Vehicles, %	0	0	0	1	1	0	
/lvmt Flow	775	0	0	717	188	171	
d action to discourse	Materia		3 (-2-5)		fi filtres and		
Aajor/Minor .	Major1	^	Major2	^	Minort	776	
Conflicting Flow All	0	0	775	0	1492	775	
Stage 1	-	-	*	-	775	_	
Stage 2	-	**	- 44	-	717	-	
Critical Hdwy	-	→	4.1	-	6.41	6.2	
Critical Howy Stg 1	•	-	•	-	5.41	-	
Critical Hdwy Stg 2		*	-	•	5.41		
Follow-up Hdwy	-	-	2.2	-	3.509	3.3	
Pot Cap-1 Maneuver	-	-	850	-	~ 137	401	
Stage 1	-	-	_	-	456	-	
Stage 2	-	-	•	-	485	=	
Platoon blocked, %	-	-		-			
Mov Cap-1 Maneuver	-	-	850	-	~ 137	401	
Nov Cap-2 Maneuver	-	-	•	-	~ 137		
Stage 1	-	-	-	-	456	-	
Stage 2			-	-	485	-	
Approach	EB		WB		NB		
ICM Control Delay, s	0		0		149.4		
ICM LOS	Ü				F		
Contract to the second	NIDI - 4 NIDI - D	Pri pro var	EDD HE	14/50			
Minor Lane/Major Mvmt	NBLn1 NBLn2	EBT	EBR WBL	WBT			
Capacity (veh/h)	137 401	-	- 850	•			
ICM Lane V/C Ratio	1.371 0.427	-		-			
ICM Control Delay (s)	266.9 20.5	-	- 0	-			
ICM Lane LOS	F C	*	- A	-			
ICM 95th %tile Q(veh)	12.1 2.1	-	- 0	*			
lotes	23.23.3			7,35			

	-	*	1	-	•	-	
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	†			†	7	7	
Volume (vph)	772	0	0	590	135	205	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	12	12	11	12	12	
Satd. Flow (prot)	1837	0	0	1837	1787	1599	
Flt Permitted					0.950		
Satd. Flow (perm)	1837	0	0	1837	1787	1599	
Link Speed (mph)	30			30	30		
Link Distance (ft)	50			70	128		
Travel Time (s)	1.1			1.6	2.9		
Peak Hour Factor	0.91	0.91	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	848	0	0	641	147	223	
Sign Control	Free			Free	Stop		
Intersection Summary				•		*	

Other

Control Type: Unsignalized

Intersection Capacity Utilization 60.0%

Analysis Period (min) 15

ICU Level of Service B

Intersection								
Int Delay, s/veh 16.	2							
Movement.	EBT	EBR	WBL	WBT-	, NBL	NBR		
Vol, veh/h	772	0	0	590	135	205		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Free	Free	Free	Free	Stop	Stop		
RT Channelized		None	-	None	-	None		
Storage Length	-	-	ab	-	0	0		
Veh in Median Storage, #	0	-	-	0	0	-		
Grade, %	0	-	-	0	0	-		
Peak Hour Factor	91	91	92	92	92	92		
Heavy Vehicles, %	0	0	0	0	1	1		
Mvmt Flow	848	0	0	641	147	223		
Malas William	Malayt		MajavO		Minnel			
Major/Minor	Major1	^	Major2		Minor1	040		
Conflicting Flow All	0	0	848	0	1489	848		
Stage 1	•		-		848	*		
Stage 2		-	-	-	641	7		
Critical Hdwy	-	-	4.1	-	6.41	6.21		
Critical Hdwy Stg 1	*		60-	+	5.41	•		
Critical Hdwy Stg 2	-	-	-	-	5.41			
Follow-up Hdwy	₩.	-	2.2	=	3.509	3.309		
Pot Cap-1 Maneuver	-	-	798	-	~ 137	363		
Stage 1	•	-	-	-	422	-		
Stage 2	•	-		-	527	-		
Platoon blocked, %	-			-				
Mov Cap-1 Maneuver	-	-	798	-	~ 137	363		
Mov Cap-2 Maneuver		-	-	-	- 137	-		
Stage 1	-	-	-	-	422	-		
Stage 2	•	-	•	-	527	-		
Approach	EB		WB		NB		2000	
HCM Control Delay, s	0		0		81.7			
HCM LOS	· ·		J		F			
\$ C N	Cityle - A second of	- FAT	END who	ta (limenta)	WPI POR A	-		the Name
Minor Lane/Major Mymt	NBLn1 NBLn2	EBT.	EBR WBL		The state of the s	downly the anne	d	11.2
Capacity (veh/h)	137 363		- 798	-				
HCM Lane V/C Ratio	1.071 0.614	-		-				
HCM Control Delay (s)	160.9 29.5		- 0	-				
HCM Lane LOS	F D	-	- A	-				
HCM 95th %tile Q(veh)	8.1 3.9		- 0	•				
Notes		eeds 30						

	•	→	*	•	←	*	1	†	-	-		1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		7		7		4	
Volume (vph)	34	642	0	0	365	17	81	0	177	18	0	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	14	12
Satd. Flow (prot)	0	1833	0	0	1826	0	1805	0	1615	0	1802	0
Flt Permitted		0.966					0.950				0.975	
Satd. Flow (perm)	0	1774	0	0	1826	0	1805	0	1615	0	1802	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					3				227		120	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			675			128			108	
Travel Time (s)		1.4			15.3			2.9			2.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.78	0.78	0.78	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	5%
Shared Lane Traffic (%)	0 70	0 / 0		0.0	0 70	0.70	0,0	0.70	0,0	• 10	0,0	0,0
Lane Group Flow (vph)	0	742	0	0	420	0	104	0	227	0	43	0
Turn Type	Perm	NA		Ū	NA	Ū	Prot	Ū	Perm	Split	NA	J
Protected Phases	. 01111	4			8		5			6	6	
Permitted Phases	4								5	Ū		
Detector Phase	4	4			8		5		5	6	6	
Switch Phase					Ū					Ū	·	
Minimum Initial (s)	4.0	4.0			4.0		4.0		4.0	4.0	4.0	
Minimum Split (s)	21.0	21.0			21.0		18.0		18.0	13.0	13.0	
Total Split (s)	53.0	53.0			53.0		18.0		18.0	13.0	13.0	
Total Split (%)	53.0%	53.0%			53.0%		18.0%		18.0%	13.0%	13.0%	
Maximum Green (s)	48.0	48.0			48.0		13.0		13.0	8.0	8.0	
Yellow Time (s)	4.0	4.0			4.0		4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	110	-1.0			-1.0		-1.0		-1.0	1.0	-1.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0		4.0	
Lead/Lag		1.0			1.0		Lead		Lead	Lag	Lag	
Lead-Lag Optimize?							Yes		Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0	3.0	3.0	
Recall Mode	Min	Min			Min		None		None	None	None	
Walk Time (s)	141111	141111					110110		110110	110110	110110	
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		38.0			38.0		11.7		11.7		7.7	
Actuated g/C Ratio		0.55			0.55		0.17		0.17		0.11	
v/c Ratio		0.77			0.42		0.35		0.49		0.14	
Control Delay		23.4			14.3		37.4		10.1		1.0	
Queue Delay		0.0			0.0		0.0		0.0		0.0	
Total Delay		23.4			14.3		37.4		10.1		1.0	
LOS		23.4 C			14.3 B		37.4 D		10.1 B		Α	
Approach Delay		23.4			14.3		U		В		1.0	
Approach LOS		23.4 C			14.3 B						Α	
Queue Length 50th (ft)		206			87		36		0		0	
Queue Length 95th (ft)		#650			259		99		39		0	
Internal Link Dist (ft)		#650 1			595		33	48	39		28	
ווויבווושו דיווע הופר (וני)		1			595			40			20	

Lane Group	ø9		el Tarifulado	
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	9			
Permitted Phases	ŭ			
Detector Phase				
Switch Phase				
	4.0			
Minimum Initial (s)	4.0			
Minimum Split (s)	16.0			
Total Split (s)	16.0			
Total Split (%)	16%			
Maximum Green (s)	12.0			
Yellow Time (s)	3.5			
All-Red Time (s)	0.5			
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0			
Recall Mode	None			
Walk Time (s)	5.0			
Flash Dont Walk (s)	11.0			
Pedestrian Calls (#/hr)	20			
Act Effct Green (s)	20			
• •				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				

	*	-	*	1	←	*	4	†	~	-	↓	1
Lane Group	EBL	EBT	EBR.	WBL	WBT	WBR	NBL	NBT	NBR.	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		1322			1362		427		555		376	
Starvation Cap Reductn		0			0		0		0		0	
Spillback Cap Reductn		0			0		0		0		0	
Storage Cap Reductn		0			0		0		0		0	
Reduced v/c Ratio		0.56			0 .31		0.24		0.41		0.11	
Intersection Summary		<u>~</u>									#	M .

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 69.7

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77 Intersection Signal Delay: 19.3 Intersection Capacity Utilization 74.6%

Intersection LOS: B
ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 7: Green Street & Merrimac Street



	*	-	*	•	-	*	4	†	-	-		4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ሻ		1		43+	
Volume (vph)	70	666	0	0	574	36	169	0	154	57	0	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	14	12
Satd. Flow (prot)	0	1827	0	0	1805	0	1787	0	1615	0	1844	0
Flt Permitted		0.739					0.950				0.976	
Satd. Flow (perm)	0	1357	0	0	1805	0	1787	0	1615	0	1844	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					4				171		100	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			675			128			156	
Travel Time (s)		1.4			15.3			2.9			3.5	
Peak Hour Factor	0.95	0.95	0.95	0.88	0.88	0.88	0.90	0.90	0.90	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	1%	2%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	775	0	0	693	0	188	0	171	0	142	0
Turn Type	Perm	NA			NA		Prot		Prot	Split	NA	
Protected Phases		4			8		5		5	6	6	
Permitted Phases	4											
Detector Phase	4	4			8		5		5	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0			4.0		4.0		4.0	4.0	4.0	
Minimum Split (s)	21.0	21.0			21.0		11.0		11.0	11.0	11.0	
Total Split (s)	68.0	68.0			68.0		25.0		25.0	11.0	11.0	
Total Split (%)	56.7%	56.7%			56.7%		20.8%		20.8%	9.2%	9.2%	
Maximum Green (s)	63.0	63.0			63.0		20.0		20.0	6.0	6.0	
Yellow Time (s)	4.0	4.0			4.0		4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0		-1.0		-1.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0		4.0	
Lead/Lag							Lead		Lead	Lag	Lag	
Lead-Lag Optimize?							Yes		Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0	3.0	3.0	
Recall Mode	None	None			None		None		None	None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		64.6			64.6		16.3		16.3		7.0	
Actuated g/C Ratio		0.62			0.62		0.16		0.16		0.07	
v/c Ratio		0.91			0.61		0.67		0.43		0.65	
Control Delay		36.3			16.9		54.3		9.9		32.7	
Queue Delay		0.0			0.8		0.0		0.0		0.0	
Total Delay		36.3			17.6		54.3		9.9		32.7	
LOS		D			В		D		Α		С	
Approach Delay		36.3			17.6						32.7	
Approach LOS		D			В						С	
Queue Length 50th (ft)		372			230		112		0		26	
Queue Length 95th (ft)		#950			554		223		62		80	
Internal Link Dist (ft)		1			59 5			48			76	

Lane Group	ø9	1000	Will-Resident	BAC TOE	-14 S. 147 A. S. S. S.	VIDE AREA
Lane Configurations						
Volume (vph)						
Ideal Flow (vphpl)						
Lane Width (ft)						
Satd. Flow (prot)						
FIt Permitted						
Satd. Flow (perm)						
Right Turn on Red						
Satd. Flow (RTOR)						
Link Speed (mph)						
Link Distance (ft)						
Travel Time (s)						
Peak Hour Factor						
Heavy Vehicles (%)						
Shared Lane Traffic (%)						
Lane Group Flow (vph)						
Turn Type						
Protected Phases	9					
	3					
Permitted Phases						
Detector Phase						
Switch Phase						
Minimum Initial (s)	4.0					
Minimum Split (s)	16.0					
Total Split (s)	16.0					
Total Split (%)	13%					
Maximum Green (s)	12.0					
Yellow Time (s)	3.5					
All-Red Time (s)	0.5					
Lost Time Adjust (s)						
Total Lost Time (s)						
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					
Recall Mode						
	None					
Walk Time (s)	5.0					
Flash Dont Walk (s)	11.0					
Pedestrian Calls (#/hr)	10					
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						
Approach Delay						
Approach LOS						
Queue Length 50th (ft)						
Queue Length 95th (ft)						
Internal Link Dist (ft)						

	٠	-	*	•	-	•	1	†	-	-	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	_NBR*	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)		847			1129		366		467		219	
Starvation Cap Reductn		0			180		0		0		0	
Spillback Cap Reductn		0			0		0		0		0	
Storage Cap Reductn		0			0		0		0		0	
Reduced v/c Ratio		0.91			0.73		0.51		0.37		0.65	
Intersection Summary						,		_	- 11	ı		

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 103.4

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91 Intersection Signal Delay: 28.9 Intersection Capacity Utilization 97.3%

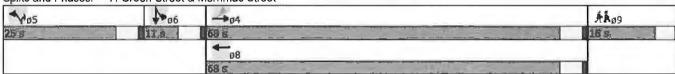
Intersection LOS: C
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 7: Green Street & Merrimac Street



	1	-	-	1	-	1	4	1	-	1	+	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		7		7		4	
Volume (vph)	84	688	0	0	507	56	135	0	205	93	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	12	12	12	14	12
Satd. Flow (prot)	0	1827	0	0	1813	0	1787	0	1599	0	1852	0
Flt Permitted		0.748					0.950				0.974	
Satd. Flow (perm)	0	1374	0	.0	1813	0	1787	0	1599	0	1852	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8				223		100	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			675			128			78	
Travel Time (s)		1.4			15,3			2.9			1.8	
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92	0.85	0.85	0.85
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	848	0	0	612	0	147	0	223	0	202	0
Turn Type	Perm	NA			NA		Prot		Prot	Split	NA	
Protected Phases		4			8		5		5	6	6	
Permitted Phases	4								5			
Detector Phase	4	4			8		5		5	6	6	
Switch Phase		·					_			-		
Minimum Initial (s)	4.0	4.0			4.0		4.0		4.0	4.0	4.0	
Minimum Split (s)	21.0	21.0			21.0		16.0		16.0	13.0	13.0	
Total Split (s)	72.0	72.0			72.0		19.0		19.0	13.0	13.0	
Total Split (%)	60.0%	60.0%			60.0%		15.8%		15.8%	10.8%	10.8%	
Maximum Green (s)	67.0	67.0			67.0		14.0		14.0	8.0	8.0	
Yellow Time (s)	4.0	4.0			4.0		4.0		4.0	4.0	4.0	
All-Red Time (s)	1.0	1.0			1.0		1.0		1.0	1.0	1.0	
Lost Time Adjust (s)		-1.0			-1.0		-1.0		-1.0		-1.0	
Total Lost Time (s)		4.0			4.0		4.0		4.0		4.0	
Lead/Lag		.,,					Lead		Lead	Lag	Lag	
Lead-Lag Optimize?							Yes		Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0	3.0	3.0	
Recall Mode	Min	Min			Min		None		None	None	None	
Walk Time (s)					******		110110		110110	110/10	110110	
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		68.7			68.7		13.5		13.5		9.0	
Actuated g/C Ratio		0.62			0.62		0.12		0.12		0.08	
v/c Ratio		0.99			0.54		0.67		0.57		0.83	
Control Delay		52.6			16.1		64.1		12.7		54.7	
Queue Delay		0.0			0.7		0.0		0.0		0.0	
Total Delay		52.6			16.8		64.1		12.7		54.7	
LOS		52.0 D			В		E		12.1 B		04.7 D	
Approach Delay		52.6			16.8				Ь		54.7	
Approach LOS		52.6 D			10.0 B						54.7 D	
		460					92		0		67	
Queue Length 50th (ft)					189							
Queue Length 95th (ft) Internal Link Dist (ft)		#103 1			437 595		#202	48	75		#197 1	
internal Link Dist (It)					330			40			1	

Larie Group	ø9	7	11 11 11 11 11 11	 4/%-
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Peak Hour Factor				
Heavy Vehicles (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type	0			
Protected Phases	9			
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	4.0			
Minimum Split (s)	16.0			
Total Split (s)	16.0			
Total Split (%)	13%			
Maximum Green (s)	12.0			
Yellow Time (s)	3.5			
All-Red Time (s)	0.5			
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0			
Recall Mode	None			
Walk Time (s)	5.0			
Flash Dont Walk (s)	11.0			
Pedestrian Calls (#/hr)	20			
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				

7: Green Street & Merrimac Street

*	-	*	-	4-	*	1	†	-	1	↓	1
EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR:	SBL	SBT	SBR
	854			1130		245		411		244	
	0			233		0		0		0	
	0			0		0		0		0	
	0			0		0		0		0	
	0.99			0.68		0.60		0.54		0.83	
	EBL	854 0 0	854 0 0 0	854 0 0 0	854 1130 0 233 0 0 0 0	854 1130 0 233 0 0 0 0	854 1130 245 0 233 0 0 0 0 0 0	854 1130 245 0 233 0 0 0 0 0 0	854 1130 245 411 0 233 0 0 0 0 0 0 0 0 0 0	854 1130 245 411 0 233 0 0 0 0 0 0 0 0 0	854 1130 245 411 244 0 233 0 0 0 0 0 0 0 0 0 0 0 0

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 110.4

Natural Cycle: 120

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.99 Intersection Signal Delay: 38.5 Intersection Capacity Utilization 97.6%

Intersection LOS: D
ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 7: Green Street & Merrimac Street

1 95	106	-04	AA ø9
19-5	ica	72.8	168
		4-08	
		728	



	*	-	-	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		सी	7.		A		
Volume (vph)	54	731	324	17	20	22	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1814	1807	0	1795	0	
Flt Permitted		0.997			0.977		
Satd. Flow (perm)	0	1814	1807	0	1795	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.81	0.81	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	5%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	862	375	0	52	0	
Sign Control		Free	Free		Stop		
Intersection Summary			T.J.	,	- 1		· · · · · · · · · · · · · · · · · · ·

Control Type: Unsignalized

Intersection Capacity Utilization 72.9%

Other

ICU Level of Service C

Intersection Int Delay, s/veh 1	.2									
Movement	EBL	EBT		WBT	WBR	SBL	SBR			
Vol, veh/h	54	731		324	17	20	22			
Conflicting Peds, #/hr	0	0		0	0	0	0			
Sign Control	Free	Free		Free	Free	Stop	Stop			
RT Channelized	-	None		-	None	·-	None .			
Storage Length					-	0	-			
/eh in Median Storage, #	-	0		0	-	0	-			
Grade, %		0		0		0	-			
Peak Hour Factor	91	91		91	91	81	81			
Heavy Vehicles, %	0	1		1	0	0	5			
Mvmt Flow	59	803		356	19	25	27			
Major/Minor	Major1			Major2		Minor2				
Conflicting Flow All	375	0		-	0	1287	365			
Stage 1		44-		as.	-	365	-			
Stage 2					-	922	-			
Critical Hdwy	4.1	-			-	6.4	6.25			
Critical Hdwy Stg 1	-	-		-	-	5.4	-			
Critical Hdwy Stg 2	-	-		+	-	5.4	-			
Follow-up Hdwy	2.2	-		-	-	3.5	3.345			
Pot Ca p-1 Maneuver	1195			-	-	183	673			
Stage 1	æ,	-		-	-	707	_			
Stage 2	-	40		-	-	391	-			
Platoon blocked, %				-	-					
Mov Cap-1 Maneuver	1195	-			-	167	673			
Mov Cap-2 Maneuver	-	-		-		167	-			
Stage 1	-	-		-	-	707	-			
Stage 2		*		-		356				
- successor at	Ta s			1% 37				,		
			<u> </u>	Yes Y		<u></u>	<u>, </u>	<u>'</u>		2
-ICM Control Delay, s	0.6			0		21				
HCM LOS						С				
Minor Lane/Major Mymt	EBL	EBT	WBT. WBR.SBL	ni			4		+	T-
Capacity (veh/h)	1195			76		-				
ICM Lane V/C Ratio	0.05	-	0.1							
HCM Control Delay (s)	8.2	0		21						
ICM Lane LOS	A	A		C						
HCM 95th %tile Q(veh)	0.2	-).7						

	•	-	-	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		स	7>		sha		
Volume (vph)	63	717	515	11	42	47	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1829	1813	0	1839	0	
Flt Permitted		0.996			0.977		
Satd. Flow (perm)	0	1829	1813	0	1839	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.95	0.95	0.88	0.88	0.86	0.86	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	821	597	0	104	0	
Sign Control		Free	Free		Stop		
Intersection Summary			-				

Other

Control Type: Unsignalized Intersection Capacity Utilization 84.2%

ICU Level of Service E

Intersection				0.00								
Int Delay, s/veh	3											
Movement	EBL.	EBT	-			WBT	WBR	SB	Ŀ	SBR		
Vol, veh/h	63	717				515	11	4		47		
Conflicting Peds, #/hr	0	0				0	0		0	0		
Sign Control	Free	Free				Free	Free	Sto		Stop		
RT Channelized	-	None				-	None			None		
Storage Length	_					-	-		0	-		
Veh in Median Storage, #		0				0	-		0			
Grade, %		0				0	-		0			
Peak Hour Factor	95	95				88	88	8		86		
Heavy Vehicles, %	0	0				1	0		0	0		
Mvmt Flow	66	755				585	12	4		55		
Major/Minor	Major1				0.4	ajor2		Minor	2			
		n			TV5	ajuiz	0	147		591		
Conflicting Flow All	598	0				-	Ų			291		
Stage 1						-	-	59 88				
Stage 2	4.4					-				60		
Critical Hdwy	4.1	_				•	+	6.		6.2		
Critical Hdwy Stg 1	-	-				-	49	5.		•		
Critical Hdwy Stg 2	-	-				-	-	5.		-		
Follow-up Hdwy	2.2	~				-	-	3.		3.3		
Pot Cap-1 Maneuver	989	-				•	-	14		511		
Stage 1	*	-				-	-	55		•		
Stage 2	-	-				-	-	40	6	•		
Platoon blocked, %		-				-	-					
Mov Cap-1 Maneuver	989	-				-	-	12		511		
Mov Cap-2 Maneuver	-	-				-	-	12		•		
Stage 1	-	-				-	-	55		-		
Stage 2	ē	·				- 3-		35	9	-		
Approach	ËB			-		WB.	, .	- <u>_</u> £ŝ	B=' .	1-1	5	
HCM Control Delay, s	0.7					0		38.	6			
HCM LOS	4.1								Ē			
Minor Lane/Major Mymt	EBL	EBT	WRT	WBR	SBLpfi							-
Capacity (veh/h)	989	-	1101	115(1)	207			-				
HCM Lane V/C Ratio	0.067			-	0.5							
		-	•	-	38.6							
HCM Control Delay (s)	8.9	0	-									
HCM Lane LOS	A	Ą	-	-	E							
HCM 95th %tile Q(veh)	0.2	*	-		2.5							

8: Merrimac Street & Driveway

	•	-	4	*	-	4	
ane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	1>		A		
Volume (vph)	123	716	448	24	60	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
ane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1824	1824	0	1852	0	
Flt Permitted		0.993			0.973		
Satd. Flow (perm)	0	1824	1824	0	1852	0	
ink Speed (mph)		30	30		30		
ink Distance (ft)		7 0	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.91	0.91	0.92	0.92	0.85	0.85	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	
Shared Lane Traffic (%)							
ane Group Flow (vph)	0	922	513	0	130	0	
Sign Control		Free	Free		Stop		
Section of a Million and							

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 85.9%

Analysis Period (min) 15

ICU Level of Service E

Intersection 7% 474	7 T					À	ly Fr	- p			4
	.2										
Movement-	EBL	EBT			WBT	WBR	48	BL.	SBR		
Vol, veh/h	123	716			448	24		60	50		
Conflicting Peds, #/hr	0	0			0	0		0	0		
Sign Control	Free	Free			Free	Free	S	top	Stop		
RT Channelized		None			-	None			None		
Storage Length	-	_				_		0	-		
Veh in Median Storage, #	_	0			0	-		0	der		
Grade, %		0			0	-		0	-		
Peak Hour Factor	91	91			92	92		85	85		
Heavy Vehicles, %	0	0			0	0		0	0		
Mvmt Flow	135	787			487	26		71	59		
A Later (Viliper	Nata-A				Medical		r Min	or2=_	18-		
Major/Minor	Major1				Major2				500		
Conflicting Flow All	513	0			•	0		557	500		
Stage 1	-	*			-	-		500	-		
Stage 2	- 4.4	-			•	-)57	-		
Critical Hdwy	4.1	-			-	-		6.4	6.2		
Critical Hdwy Stg 1		-			-	-		5.4			
Critical Hdwy Stg 2		-			-	-		5.4	-		
Follow-up Hdwy	2.2	-			•	-		3.5	3.3		
Pot Cap-1 Maneuver	1063	.=			-	-		125	575		
Stage 1	-	-			-	-		613	-		
Stage 2	•	*				•		337	-		
Platoon blocked, %	4000	-			•	-			575		
Mov Cap-1 Maneuver	1063	-			-	-		97	575		
Mov Cap-2 Maneuver	-	•			-	-		97	-		
Stage 1	-	-			*	*		313			
Stage 2		-				-		261	•		
1. No. 6 1 0 € 6 4 1	100 E	. :			(V) [3]	7		(a) (a) (b) (b) (b)		** ***	_
HCM Control Delay, s	1.3	· • ·			0	<u></u> _		0.2			
HCM LOS							Ŭ	F			
					.,		· <u></u>				
Model Least de Section de					1						
Capacity (veh/h)	1063	*	4	- 1	56						
HCM Lane V/C Ratio	0.127		-		83						
HCM Control Delay (s)	8.9	0	-	- 90	1.2						
HCM Lane LOS	A	A	-	-	F						
HCM 95th %tile Q(veh)	0.4		-	- 5	,5						

	*		•	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	7+		A		
Volume (vph)	45	781	357	17	18	17	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1814	1808	0	1802	0	
Flt Permitted		0.997			0.975		
Satd. Flow (perm)	0	1814	1808	0	18 0 2	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.81	0.81	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	5%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	907	411	0	43	0	
Sign Control		Free	Free		Stop		
Intersection Summary				1422 5		,	the same of the sa

Other

Control Type: Unsignalized

Intersection Capacity Utilization 76.7%

ICU Level of Service D

Intersection /					, , 4	• 1	· Alley	(#) X		
Int Delay, s/veh	1									
Movement	EBL.	EBT			WBT	WBR	SBÈ	SBR		2.3
Vol, veh/h	45	781			357	17	18	17		
Conflicting Peds, #/hr	0	0			0	0	0	0		
Sign Control	Free	Free			Free	Free	Stop	Stop		
RT Channelized	-	None			-	None	`-	None		
Storage Length		-			-		0			
Veh in Median Storage, #	_	0			0		0	-		
Grade, %	-	0			0		0			
Peak Hour Factor	91	91			91	91	81	81		
Heavy Vehicles, %	0	1			1	0	0	5		
Mymt Flow	49	8 5 8			3 92	19	22	21		
William Com	-10	000			002	10				
Majòr/Minor	1 Major1			1	Major2		Minor2.ft	ده چه چمنون		
Conflicting Flow All	411	0			-	0	1359	402		
Stage 1	+	+			-	-	402	-		
Stage 2		-			-		957			
Critical Hdwy	4.1	_					6.4	6.25		
Critical Hdwy Stg 1	-						5.4	•		
Critical Hdwy Stg 2					_	_	5.4			
Follow-up Hdwy	2.2				_		3.5	3.345		
Pot Cap-1 Maneuver	1159	_					165	642		
Stage 1	1100				-		680	072		
Stage 2	_						376	-		
Platoon blocked, %		_			-	-	3/0	_		
	1159	46				•	152	642		
Mov Cap-1 Maneuver	1139	-			-	•	152	042		
Mov Cap-2 Maneuver	-	-			_	-	680	•		
Stage 1	M-	-			-	-		44		
Stage 2		•			•	•	346	•		
Approach	EB	. 1			*WB	P . 44	· SES	- W Y		
HCM Control Delay, s	0.4				0		23.1			
HCM LOS							C			
Nings leaders and Mysic	: :[4 :3[:]	9 5 (\$46) 5	[][[]][]	neir Spur	g :	· [1. 7 174]			April 1	
Capacity (veh/h)	1159	_		- 24			<u></u>			
HCM Lane V/C Ratio	0.043	be-		- 0.17						
HCM Control Delay (s)	8.2	0	-	- 23.						
HCM Lane LOS	A.A	A			Ċ					
HCM 95th %tile Q(veh)	0.1			- 0.						
LICHA SOUL ABOVE OF ACIL)	0.1	•		- V.	U					

	۶	-	-	*	-	4	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	4		A		
Volume (vph)	93	763	542	36	57	57	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1827	1805	0	1844	0	
Fit Permitted		0.995			0.976		
Satd. Flow (perm)	0	1827	1805	0	1844	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.95	0.95	0.88	0.88	0.86	0.86	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	901	657	0	132	0	
Sign Control		Free	Free		Stop		
Intersection Summary,	9 11		1				* <u>#</u> #

Other

Control Type: Unsignalized

Intersection Capacity Utilization 92.7%

Analysis Period (min) 15

ICU Level of Service F

Infersection	3,120	~~								
	.3									
Movement	EBL.	EBT			WBT	WBR		SBL	SBR	
Vol, veh/h	93	763			542	36		57	57	
Conflicting Peds, #/hr	0	0			0			0	0	
Sign Control	Free	Free			Free			Stop	Stop	
RT Channelized		None			-	None		-	None	
Storage Length		-			_	-		0	. 10	
Veh in Median Storage, #		0			0			0		
Grade, %		Õ			0	_		0	_	
Peak Hour Factor	95	95			88	88	3	86	86	
Heavy Vehicles, %	0	0			1			0	0	
Mvmt Flow	98	803			616	41		66	66	
i a i a i da i a a a a a a a a a a a a a	i kalindi				Malan	,		Pendil		-
Major/Minor	Majort.	^		f	Major2			Minor2	000	
Conflicting Flow All	657	0				0)	1635	636	
Stage 1	-	-			-		•	636	-	
Stage 2	- 44	-			•	*	•	999		
Critical Hdwy	4.1	-			-	-	•	6.4	6.2	
Critical Hdwy Stg 1		-					•	5.4		
Critical Hdwy Stg 2	-	-			-		•	5.4	-	
Follow-up Hdwy	2.2	-			•	•		3.5	3.3	
Pot Cap-1 Maneuver	940	-						112	481	
Stage 1	•	•			-			531	*	
Stage 2	-	-			•	•	•	359	*	
Platoon blocked, %		-			-	•				
Mov Cap-1 Maneuver	940	-			-			91	481	
Mov Cap-2 Maneuver	-	-			-	4	•	91	•	
Stage 1	-	~			-		•	531	-	
Stage 2	•	•			₩	-	4	292	٠	
Approach	ËB	- Chile	_==	- AT-	WB	7		SB		7
HCM Control Delay, s	1				0			98.9	-	
HCM LOS								F		
Minor Lane/Major Mvmt	EBL	ÉBT	WBT"	WBR SE	Ļň(233	****	±		+
Capacity (veh/h)	940	-		-	153					
HCM Lane V/C Ratio	0.104	-		- 0.						
HCM Control Delay (s)	9.3	0			98.9					
HCM Lane LOS	A	A		-	F					
HCM 95th %tile Q(veh)	0.3				5.9					

	•	-	-	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		र्स	7>		A		
Volume (vph)	167	753	463	56	93	79	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1820	1809	0	1852	0	
Flt Permitted		0.991			0.974		
Satd. Flow (perm)	0	1820	1809	0	185 2	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		7 0	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.91	0.91	0.92	0.92	0.85	0.85	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	1011	564	0	202	0	
Sign Control		Free	Free		Stop		
Intersection Summary						330	

into account cui

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 96.6%

Analysis Period (min) 15

ICU Level of Service F

Intersection			**						To I say a
Int Delay, s/veh 5	56.2								
Movement	EBL	EBT		WBT	WB	R	SBL	'SBR	
Vol, veh/h	167	753		463			93	79	
Conflicting Peds, #/hr	0	0		C		0	0	0	
Sign Control	Free	Free		Free	Fre	е	Stop	Stop	
RT Channelized	-	None			Non	е	-	None	
Storage Length	10-	-					0	-	
Veh in Median Storage, #		0		C		-	0	-	
Grade, %	-	0		C		-	0	_	
Peak Hour Factor	91	91		92	9	2	85	85	
Heavy Vehicles, %	0	0		0		0	0	0	
Mvmt Flow	184	827		503			109	93	
Major/Minor	Major1	,		Majora			Minor2		
Conflicting Flow All	564	0		IVIEGO: C		0	1729	534	
Stage 1	304	U				U	534	JJ-4	
Stage 2	_	_					1195	-	
Critical Hdwy	4.1	_				_	6.4	6.2	
Critical Hdwy Stg 1	4.1	-		-		_	5.4	0.2	
Critical Hdwy Stg 2						_	5.4	_	
Follow-up Hdwy	2.2	•					3.5	3.3	
Pot Cap-1 Maneuver	1018					_	~ 98	550	
	1010	_					592	550	
Stage 1 Stage 2	-	-		•		-	290	-	
Platoon blocked, %	•	•		•		-	290	_	
	1018	-		•	•	-	~ 65	550	
Mov Cap-1 Maneuver	1010	•			•	-	~ 65	550	
Mov Cap-2 Maneuver	-	-		,	•	-		*	
Stage 1	-	-				-	592 193	-	
Stage 2		*			•	•	193	•	
Approach	EB			WE			SB		A STATE OF THE STA
HCM Control Delay, s	1.7			()		\$ 485.1		
HCM LOS							F		
Andres Care Taskine	(Red)E-	1987	भूद्धिः ।श्रा	irigistati	G. _{N.}				
Capacity (veh/h)	1018			- 109					
HCM Lane V/C Ratio	0.18		-	- 1.856					
HCM Control Delay (s)	9.3	0		-\$ 485.1					
HCM Lane LOS	A	A	-	- F					
HCM 95th %tile Q(veh)	0.7	-		- 16.3					
Maria de la companya	011								
Notes	180	200		CAR		(C.)			THE REAL PROPERTY.
~: Volume exceeds capac	city \$: De	elay exce	eds 300s	+: Computation	n Not	Defi	ned *: All ma	ajor volume in	platoon

	•	-	-	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		सी	4		À		
Volume (vph)	45	810	365	17	18	17	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1814	1808	0	1802	0	
Flt Permitted		0.997			0.975		
Satd. Flow (perm)	0	1814	1808	0	1802	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.81	0.81	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	5%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	939	420	0	43	0	
Sign Control		Free	Free		Stop		
Intersection Summary						,	
, ,	Other						
Control Type: Unsignalized Intersection Capacity Utiliza Analysis Period (min) 15	ation 78.7%			10	CU Level o	of Service D	

1										
EBI.	ERT			WRT	WRE		SBL	SBR		
							0			
							Stop			
-				_			-			
-	-			-			0			
_	0			0	,			_		
_								_		
91					91			81		
	•									
70	000			701	10	,	22	21		
Water.				Malaria			Minorit			
	0	i		wajorz:				440		
420				-	(1		410		
NA	-			40-		•				
*	*			-		*				
4.1	*			44				6.25		
-	-			-	- '	-		•		
-				-		•		-		
				-		-				
1150	-			-		-		635		
-	-			-			674	-	,	
-	-			-		_	363	-		
	-									
1150	-			-		-	143	635	i	
-	-			-		-	143	-		
-	-			-		_	674			
-	-			ja.		-	333	-		
EB) f	333		WB			SB			
0.4				0			24.3			
							С			
EBL	EBT	WBT.	WER SELn1					*		-
	-	-								
		-								
		_								
0.1	- "		- 0.7							
	### ##################################	## FBL EST 45 810 0 0 Free Free - None - 0 - 0 91 91 0 1 49 890 ### ### ### ### 420 0 4.1	## ## ## ## ## ## ## ## ## ## ## ## ##	## FBI EBT WBT WBR SBLn1 1150 - 229 0.043 - 0189 8.3 0 - 24.3 A A - C	EBL EBT WBT WBR SBLn1 4 EBL EBT WBT WBR SBLn1 4 EBL EBT WBT WBR SBLn1 4 LEBT WBT WBR SBLn1 4 LEBT WBT WBR SBLn1 4 LEBT WB SBLn1 4 LEBT WBT WBR SBLn1 4 LEBT WB SBLn1 4 LEBT SBL SBL SBLn1 4 LEBT SBL	### ### ##############################	### BIL EBT WBT WBR 45 810	BBL EBT WBT WBR SBL	## Company Com	EBL EST WBT WBR SBL SBR

	*	-	←	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	7		A		
Volume (vph)	93	797	574	36	57	57	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1827	1805	0	1844	0	
Flt Permitted		0.995			0.976		
Satd. Flow (perm)	0	1827	1805	0	1844	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.95	0.95	0.88	0.88	0.86	0.86	
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	937	693	0	132	0	
Sign Control		Free	Free		Stop		
Intersection Summary					- 99	. 3 7	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 96.1%

Analysis Period (min) 15

2							=======================================		- 10 - 1 - 14B	ملكوات
EBL	EBT			WBT	WBR.	SBL	SBF			
93	797			574	36	57	57	•		
0	0			0	0	0	()		
Free	Free			Free	Free	Stop	Stop)		
-	None				None	_		;		
-	-				-	0				
-	0			0	-					
_				0	-					
95					88			3		
				1						
98	839			652	41					
Majort				Major2		Minor2	i.	la.	4111	
693	0				0	1708	673	3		
-	_			-	-	673				
	-				-	1035				
4.1	_			-	-			2		
-					-					
	_			_	_					
2.2	_			_	-			3		
	_			-	_					
-	_			-	_					
	-				_					
	-					0.10				
912						81	450)		
012	-				-			_		
_	_									
						2.0				
EB			7=1.7.2	WB		* S3	(-	1 "	
1				0						
EBL	EBT	WBT	WBR SBLn1	1	-337	obec 4	1	5	~	· ·
912	-	-	- 138	3						
	0									
	93 0 Free - - - 95 0 98 Major1 693 - - - - - - - - 95 0 98 1 - - - - - - - - - - - - - - - - - -	93 797 0 0 Free Free - None - 0 - 0 95 95 0 0 98 839 Major1 693 0 4.1 2.2 - 912 912 912 912 912 912 912 912 912 912 912 912 914 0 A A	93	93	93	93 797 574 36 0 0 0 0 0 Free Free Free Free Free Free - None - None - None - None - 0 0 0 0 0 0 0 95 95 88 88 0 0 0 1 0 98 839 652 41 Major1 Major2 693 0 - 0 4.1 4.1 2.2 912 912 1 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	93 797 574 36 57 0 0 0 0 0 0 0 0 Free Free Free Free Free Stop - None - None - None - 0 0 0 - 0 - 0 0 0 - 0 95 95 88 88 88 86 0 0 0 1 0 0 0 98 839 652 41 66 Major1 Major2 Minor2 693 0 - 0 1708 673 673 674 544 644	93 797	93 797 574 36 57 57 0 0 0 0 0 0 0 0 0 Free Free Free Free Free Stop Stop - None - None - None - O 0 0 - O - O O 0 0 - O O 0 0 - O O 0 0 - O O 0 0 0 0 0 0 0 95 95 88 88 86 86 0 0 0 1 0 0 0 0 0 98 839 652 41 66 66 Major1 Major2 Minor2 - O 0 0 98 839 652 41 66 66 Major1 - O 1708 673 - O 1	93 797 574 36 57 57 0 0 0 0 0 0 0 0 Free Free Free Free Stop Stop - None - None - None - O 0 0 - O O 0 0 - O O 0 0 - O O 0 0 - O O 0 0 - O O 0 0 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 0 - O 0 0 - O 0 0 0 - O 0 - O 0 0 - O 0

	•	-	-	*	-	1	
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	7		A		
Volume (vph)	167	807	507	56	93	79	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	11	11	12	14	12	
Satd. Flow (prot)	0	1820	1813	0	1852	0	
Flt Permitted		0.991			0.974		
Satd. Flow (perm)	0	1820	1813	0	1852	0	
Link Speed (mph)		30	30		30		
Link Distance (ft)		70	605		127		
Travel Time (s)		1.6	13.8		2.9		
Peak Hour Factor	0.91	0.91	0.92	0.92	0.85	0.85	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	1071	612	0	202	0	
Sign Control		Free	Free		Stop		
Intersection Summary							

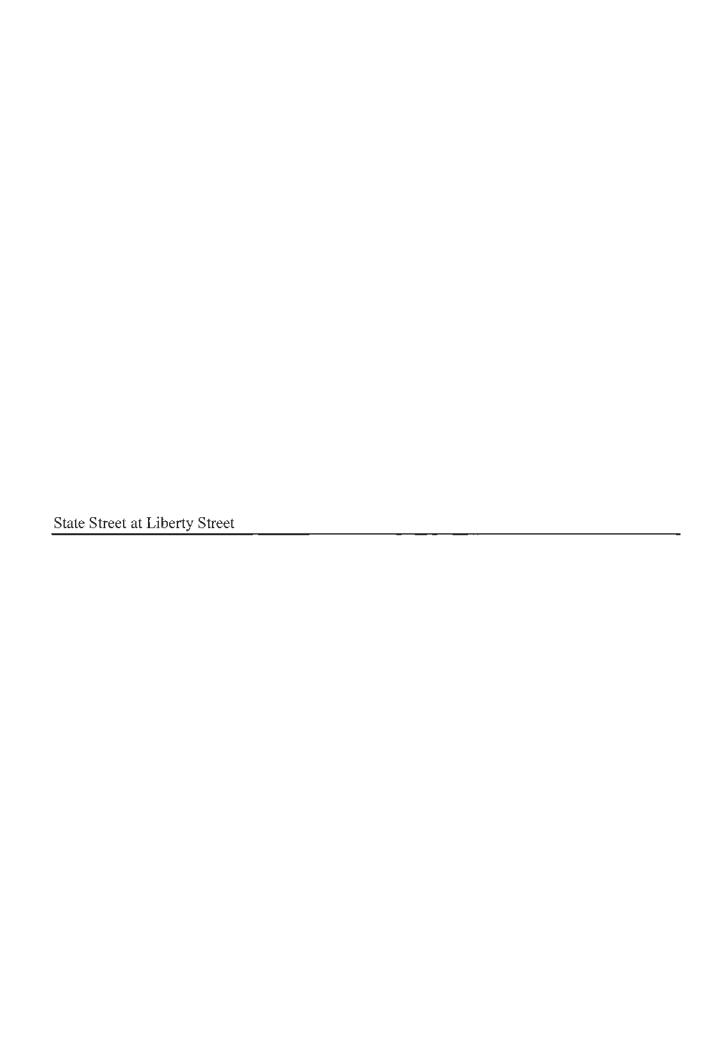
Other

Control Type: Unsignalized

Intersection Capacity Utilization 101.8%

ICU Level of Service G

Intersection	<i>প</i> ন্তা	1 1 1				75	Y 1 2 0 -		**************************************
nt Delay, s/veh 7	3								
Movement	EBL.	EBI		WBT	WBR	SBL	SER	3	ı
Vol, veh/h	167	807		507	56	93	79		
Conflicting Peds, #/hr	0	0		0	0	0	0		
Sign Control	Free	Free		Free	Free	Stop	Stop		
RT Channelized	-	None		-	None	-	None		
Storage Length				-	_	0			
Veh in Median Storage, #	-	0		0	_	0			
Grade, %		0		0		0			
Peak Hour Factor	91	91		92	92	85	85		
Heavy Vehicles, %	0	0		0		0	0		
Mvmt Flow	184	887		551	61	109	93		
Major/Minor	Major1			Major2		Minor2			
Conflicting Flow All	612	0		majorz	0	1836	582		
Stage 1	012	U			v	582	302		
Stage 2	_	_		•	-	1254	-		
Critical Hdwy	4.1					6.4	6.2		
Critical Hdwy Stg 1	4, 1			-	-	5.4	0.2		
	-	-		•	•		•		
Critical Hdwy Stg 2				_	-	5.4	-		
Follow-up Hdwy	2.2	-		•	-	3.5	3.3		
Pot Cap-1 Maneuver	977				-	~ 84	517		
Stage 1	-	-			-	563	*		
Stage 2		-			-	271			
Platoon blocked, %	677	-		-	-	50	647		
Mov Cap-1 Maneuver	977	-		*	-	~ 53	517		
Mov Cap-2 Maneuver	-	-		-		~ 53	-		
Stage 1	-					563	•		
Stage 2	-	-			76	170	•		
Approach	EB			WB		SB			
HCM Control Delay, s	1.6			0		\$ 671.4			
HCM LOS						F			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR SBLn1		11		203	
Capacity (veh/h)	977	_	_	- 90					
ICM Lane V/C Ratio	0.188	_		- 2.248					
HCM Control Delay (s)	9.5	0		-\$ 671.4					
HCM Lane LOS	Α.	A		Ψ (7 1.4 F					
HCM 95th %tile Q(veh)	0.7	-		- 18.2					
Notes					The E				
~: Volume exceeds capacity	\$: De	elay exc	eeds 3	00s +: Computation	n Not D	efined *: All m	najor volume i	in platoon	



	1	*	†		-	↓	
Fig. Com	1/1/25	1022		\ <u>[</u>]	§1	20 0 () 0 0 ()	
Lane Configurations	Ĭή					44	
Volume (vph)	91	0	0	0	0	398	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3539	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3539	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	108	0	0	0	0	433	
Sign Control	Stop		Free			Free	
Intersection Summary			-			1	,

Other

Control Type: Unsignalized

Intersection Capacity Utilization 22.7%

ICU Level of Service A

Intersection	- 37	383				1-					
Int Delay, s/veh	0										
Movement	WBL		WBR	N	IBT	NBR-	SBL	SBT	533		
Vol, veh/h	91		0		0	0	0	398			
Conflicting Peds, #/hr	0		0		0	0	0	0			
Sign Control	Stop		Stop	F	ree	Free	Free	Free			
RT Channelized	-		None		_	None	-	None			
Storage Length	0				-			_			
Veh in Median Storage, #	0		-		0		-	0			
Grade, %	0				0	-	→	0			
Peak Hour Factor	84		84		92	92	92	92			
Heavy Vehicles, %	0		0		0	0	0	2			
Mvmt Flow	108		Ö		0	0	0	433			
WWIIICT IOW	100		·		Ü	Ü	· ·	100			
Major/Minor_	Minor1						Major2			₩	7,
Conflicting Flow All	216		0				0	0			
Stage 1	0						-	0			
Stage 2	216										
Critical Hdwy	7.5		-				-	_			
	7.5		_				_	-			
Critical Hdwy Stg 1	C F		*				-	-			
Critical Hdwy Stg 2	6.5		-				-	-			
Follow-up Hdwy	3.5		-				-	-			
Pot Cap-1 Maneuver	727		-				-	-			
Stage 1			-				-	-			
Stage 2	772		-					-			
Platoon blocked, %											
Mov Cap-1 Maneuver	727		-				-	-			
Mov Cap-2 Maneuver	727		-					-			
Stage 1	-		-				qt.	→			
Stage 2	772		-				•	н			
Approach	MB,		-	,	7	18.	SB'	1	-1	7.	- 41L
HCM Control Delay, s	- ViD			•		11	0		, A-	-	· · · · · · · · · · · · · · · · · · ·
HCM LOS							U				
HOM FOR	•										
Minor Lane/Major Mymt	WBLn1	SBL	SBT	د اعت	- 1×1-	<u> </u>		- 1 - 	Talle 4	B - 70	-
Capacity (veh/h)	-		-								
HCM Lane V/C Ratio			-								
HCM Control Delay (s)		0	-								
HCM Lane LOS	-	A	-								
HCM 95th %tile Q(veh)	4										
FIGHT OUR MILE MITTERS	-	_	_								

	1	*	†	~	1	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	7					† †	
Volume (vph)	57	0	0	0	0	363	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3574	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3574	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.83	0.83	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	68	0	0	0	0	437	
Sign Control	Stop		Free			Free	
Intersection Summary		*					· Kinder

Other

Control Type: Unsignalized Intersection Capacity Utilization 20.0%

ICU Level of Service A

Intersection					. 1	E	Į.	M. P			
Int Delay, s/veh	0										
Movement	WBL		WBR		NBT	NBE	3	SBL	SBT		- 20
Vol, veh/h	57		0		0		0	0	363		
Conflicting Peds, #/hr	0		0		0		0	0	0		
Sign Control	Stop		Stop		Free	Fre	е	Free	Free		
RT Channelized	-		None		-	None	е	-	None		
Storage Length	0		-		-		-	4	-		
Veh in Median Storage, #	0		-		0		→	44	0		
Grade, %	0		-		0		**		0		
Peak Hour Factor	84		84		92	9:	2	83	83		
Heavy Vehicles, %	0		0		0		0	0	1		
Mvmt Flow	68		0		0		0	0	437		
Major/Minor	Minor1							Major2		52.3	
Conflicting Flow All	219		0					0	0		
Stage 1	0		+								
Stage 2	219		4					-	-		
Critical Hdwy	7.5		_					-	-		
Critical Hdwy Stg 1			-					-	-		
Critical Hdwy Stg 2	6.5								-		
Follow-up Hdwy	3.5										
Pot Cap-1 Maneuver	724							-	-		
Stage 1	-		-					-	-		
Stage 2	769		-					-	-		
Platoon blocked, %											
Mov Cap-1 Maneuver	724		-					-	*		
Mov Cap-2 Maneuver	724		-					•	-		
Stage 1	-		-					-	4		
Stage 2	769		~					•	•		
Approach	WB		=		2-1-1		. 3	SB			
HCM Control Delay, s								0			
HCM LOS											
Minor Láne/Major Mymt	WBLh1	SBL	SBT	1		Þ		"	303	411	x 1237
Capacity (veh/h)	-		-								
HCM Lane V/C Ratio	-	-	-								
HCM Control Delay (s)	-	0	-								
HCM Lane LOS		A									
HCM 95th %tile Q(veh)		_	pa.								

	1	*	†	-	-	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	7					44	
Volume (vph)	91	0	0	0	0	34 6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3539	
FIt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3539	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	103	0	0	0	0	384	
Sign Control	Stop		Free			Free	
Intersection Summary							

Area Type: Other

Control Type: Unsignalized Intersection Capacity Utilization 21.3% Analysis Period (min) 15

Intersection			200	4 9	-		1
nt Delay, s/veh	0						
Movement	WBL	WBR	NBT	NBR	SBL:	SBT	
Vol, veh/h	91	0	0	0	0	346	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	_	None	
Storage Length	0					-	
Veh in Median Storage, #	0	_	0			0	
Grade, %	0	_	0			0	
Peak Hour Factor	88	88	92	92	90	90	
Heavy Vehicles, %	0	0	0	0	0	2	
Mymt Flow	103	0	0	0	0	384	
William I I I I	100		· ·	Ü	ŭ	001	
Major/Minor_	Minor1				_ Major2		* T
Conflicting Flow All	192	0			0	0	
Stage 1	0	-			-	-	
Stage 2	192				-	-	
Critical Hdwy	7.5	-			-	-	
Critical Hdwy Stg 1	-	-			-	-	
Critical Hdwy Stg 2	6.5	-			-	-	
Follow-up Hdwy	3.5	_				-	
Pot Cap-1 Maneuver	756	-			-	-	
Stage 1		-					
Stage 2	797	-			-	-	
Platoon blocked, %						_	
Mov Cap-1 Maneuver	756	_			-	_	
Mov Cap-2 Maneuver	756	_				-	
Stage 1	_					-	
Stage 2	797					-	
olago z	, , ,						
Approach	WB				SB		
HCM Control Delay, s					0		
HCM LOS	-						
Minor Lane/Major Mymt	WBLn1	SBL SBT	* ATE 1.4	- 1.	bern ;	-	1. T.
Capacity (veh/h)	-						
HCM Lane V/C Ratio							
HCM Control Delay (s)	-	0 -					
HCM Lane LOS		Α -					
HCM 95th %tile Q(veh)							

	1	*	†	-	-	Į.	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	7					^	
Volume (vph)	98	0	0	0	0	427	
Ideal Flow (vphpl)	190 0	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	353 9	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	353 9	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	117	0	0	0	0	464	
Sign Control	Stop		Free			Free	
Intersection Summary		1 JA .					

Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 23.9%

ICU Level of Service A

ntersection · · · · · · · ·	1			. ;4	₽			
nt Delay, s/veh	0							
Movement.	WBL	WBR.	NBŤ	NBR:	ŠBL	SBT		
/ol, veh/h	98	0	0	0	0	427		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	None	-	None		None		
Storage Length	0							
Veh in Median Storage, #	0	-	0	_	**	0		
Grade, %	Ö		0			0		
Peak Hour Factor	84	84	92	92	92	92		
Heavy Vehicles, %	0	0	0	0	0	2		
Mvmt Flow	117	0	0	0	0	464		
AIVITIL FIOW	117	U	Ü	U	U	707		
Major/Minor .	Minort				Major 2			
Conflicting Flow All	232	0			0	0		
Stage 1	0	_			-			
Stage 2	232							
Critical Hdwy	7.5							
Critical Hdwy Stg 1		_						
Critical Hdwy Stg 2	6.5	_						
Follow-up Hdwy	3.5							
Pot Cap-1 Maneuver	709	_						
	109							
Stage 1	756				-	-		
Stage 2	700				-	•		
Platoon blocked, %	700					•		
Mov Cap-1 Maneuver	709	-			~	-		
Mov Cap-2 Maneuver	709	-			**	*		
Stage 1	-	-			-	-		
Stage 2	756	-				-		
Approach -	· WB.	- r			. "KSB/	74,	7	
ICM Control Delay, s					0			
HCM LOS					· ·			
TOW LOG	•							
Mindr Lane/Major Mvmt	WBLOT	SBL SBTa	4 + A + A + A + A	# T	TOTAL .	24	126	r '
Capacity (veh/h)	-							
HCM Lane V/C Ratio	-							
HCM Control Delay (s)		0 -						
HCM Lane LOS		Å -						
TALL PRINCEPA		11						

	-	*	†	-	1	ļ	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	ሻ					44	
Volume (vph)	61	0	0	0	0	393	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3574	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3574	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.83	0.83	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	73	0	0	0	0	473	
Sign Control	Stop		Free			Free	
Intersection Summary	- 11	₹ ,	-				F. 4

Area Type: Other

Control Type: Unsignalized Intersection Capacity Utilization 20.9%

Analysis Period (min) 15

Intersection											
Int Delay, s/veh	0										
Marramont	WBL		WBR.	AI	BT	NBR	SBL	SBT			
Movement- Vol, veh/h	61		O O		0	0	0	393			
Conflicting Peds, #/hr	0		0		0	0	0	0			
Sign Control	Stop		Stop	Е.	ee	Free	Free	Free			
RT Channelized	Slop			П	ee	None		None			
	0		None		-	None	-	None			
Storage Length	0		-		0	-	-	-			
Veh in Median Storage, #	0		-		0	-	-	0			
Grade, %	0		0.4		0	-	-	0			
Peak Hour Factor	84		84		92	92	83	83			
Heavy Vehicles, %	0		0		0	0	0	1			
Mvmt Flow	73		0		0	0	0	473			
Major/Minos ,	* Minor1	-	-				- Majora		***		
Conflicting Flow All	237		0			_	0	0			
Stage 1	0		-				0	-			
Stage 2	237							_			
Critical Hdwy	7.5							_			
	7.5		•				-				
Critical Hdwy Stg 1	C E		-				*	*			
Critical Hdwy Stg 2	6.5		-				•	-			
Follow-up Hdwy	3.5		-				-	-			
Pot Cap-1 Maneuver	703		-				-	-			
Stage 1			-				-	-			
Stage 2	751		-				-	-			
Platoon blocked, %								-			
Mov Cap-1 Maneuver	703		-				-	-			
Mov Cap-2 Maneuver	703		-				-	-			
Stage 1	-		-				-	-			
Stage 2	751		-46				•				
I have some a second of the second of	1/215	/		7	_		10 2			****	
HCM Control Delay, s	(EEASI)		<u> </u>	<u> </u>		, · · · -	0				. <u>1</u> 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
HCM LOS							U				
HUM LOS	•										
Minor Lane/Major Mymt.	WBLn1	SBL	SBT			337	रस के र	T 1	8 - +	-	4
Capacity (veh/h)	-	_					,		-		
HCM Lane V/C Ratio											
HCM Control Delay (s)		0									
HCM Lane LOS		A									
	-	А	-								
HCM 95th %tile Q(veh)	-	-	-								

	1	*	†	-	-	ļ	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	7					^	
Volume (vph)	98	0	0	0	0	378	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3539	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3539	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	111	0	0	0	0	420	
Sign Control	Stop		Free			Free	
Intersection Summary	- 38						

Other Control Type: Unsignalized

Intersection Capacity Utilization 22.5%

Analysis Period (min) 15

Intersection						3333					35
Int Delay, s/veh	0										
Movement_	WBL		WBR	NBT	NBR	/SBL	SBT				/D:-
Vol, veh/h	98		0	0	0	0	378				
Conflicting Peds, #/hr	0		0	0	0	0	0				
Sign Control	Stop		Stop	Free	Free	Free	Free				
RT Channelized	-		None		None	-	None				
Storage Length	0		-	-	-	+	-				
Veh in Median Storage, #	0			0	-	-	0				
Grade, %	0		-	0			0				
Peak Hour Factor	88		8 8	92	92	90	90				
Heavy Vehicles, %	0		0	0	0	0	2				
Mvmt Flow	111		0	0	0	0	420				
Major/Minor	Minort			} 	. 3	Major2		3			,
Conflicting Flow All	210		0	4.4	ر معاو سو	0	0			- APR	
Stage 1	0		V			0	U				
	210		_				-				
Stage 2 Critical Hdwy	7.5		•			-	•				
	7.5		-			-	-				
Critical Hdwy Stg 1	C =		•			-	-				
Critical Hdwy Stg 2	6.5		•			-	-				
Follow-up Hdwy	3.5		-			-	-				
Pot Cap-1 Maneuver	734		-			*	-				
Stage 1	-		-			•	•				
Stage 2	778		-			-	-				
Platoon blocked, %							-				
Mov Cap-1 Maneuver	734		-			-	-				
Mov Cap-2 Maneuver	734		-			-	*				
Stage 1	-		-			-	-				
Stage 2	778		•			•	-				
Approach	WB		ab	0.500	- 8	SB	d.			- 115	
HCM Control Delay, s						0					
HCM LOS	-										
Minor Lane/Major Mymt	/WBLn1	SBL	SBT	in its	,	e wy ke	£13.		w4 3%	· · · PA	T. A.
Capacity (veh/h)	-		-								
HCM Lane V/C Ratio		-	-								
HCM Control Delay (s)		0	-								
HCM Lane LOS		Ă									
HCM 95th %tile Q(veh)	_		-								

	1	*	†	1	1	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	7					^	
Volume (vph)	98	0	0	0	0	434	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3539	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3539	
ink Speed (mph)	30		30			30	
ink Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	
Shared Lane Traffic (%)							
ane Group Flow (vph)	117	0	0	0	0	472	
Sign Control	Stop		Free			Free	
Intersection Summary		4 4					

Other

Control Type: Unsignalized

Intersection Capacity Utilization 24.1%

ICU Level of Service A

Intersection	, on	-3100 CE	5				E. Same	Spill to
Int Delay, s/veh	0							
Movement	WBL	WBR	NBT	NBR	SBL	SBT		333
Vol, veh/h	98	0	0	0	0	434		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized	-	None		None	-	None		
Storage Length	0			-	-	-		
Veh in Median Storage, #	0		0	_		0		
Grade, %	0	-	0	-	-	0		
Peak Hour Factor	84	84	92	92	92	92		
Heavy Vehicles, %	0	0	0	0	0	2		
Mvmt Flow	117	0	0	0	0	472		
Major/Minor	Minort	,			Major2			و السبع
Conflicting Flow All	236	0			0	0		
Stage 1	0	-				40		
Stage 2	236	-						
Critical Hdwy	7.5	-				•		
Critical Hdwy Stg 1	-	-			-			
Critical Hdwy Stg 2	6.5				-	-		
Follow-up Hdwy	3.5				-	-		
Pot Cap-1 Maneuver	704	-				-		
Stage 1					-	-		
Stage 2	752	-			-	-		
Platoon blocked, %						•		
Mov Cap-1 Maneuver	704	-			-	-		
Mov Cap-2 Maneuver	704	-				•		
Stage 1	_	-				40		
Stage 2	752	-				•		
Approach : C	" ' ' WB. "			· car	SB		* ; *	1
HCM Control Delay, s					0			
HCM LOS								
Mire vereingstätom.	沙 维码的	বিল- বিশ্ব						
Capacity (veh/h)	•							
HCM Lane V/C Ratio								
HCM Control Delay (s)		0 -						
HCM Lane LOS		Α -						
HCM 95th %tile Q(veh)		71						

	•	*	†	-	-	+	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	7					^	
Volume (vph)	61	0	0	0	0	404	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3574	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3574	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.83	0.83	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	73	0	0	0	0	487	
Sign Control	Stop		Free			Free	
Intersection Summary			3.5				· F A

Other

Control Type: Unsignalized

Intersection Capacity Utilization 21.2%

ICU Level of Service A

Intersection			356							
Int Delay, s/veh	0									
Movement	WBL		WBR	NBT	NBR	SBL	SBT			No.
Vol, veh/h	61		0	0		0	404			
Conflicting Peds, #/hr	0		0	0	0	0	0			
Sign Control	Stop		Stop	Free	Free	Free	Free			
RT Channelized	-		None	-	None	**	None			
Storage Length	0		-				-			
Veh in Median Storage, #	0		-	0	•	-	0			
Grade, %	0			0	44	**	0			
Peak Hour Factor	84		84	92		83	83			
Heavy Vehicles, %	0		0	0		0	1			
Mvmt Flow	73		0	0	0	0	487			
Major/Minor	Minor1					Major2				
Conflicting Flow All	243		0			0	0			
Stage 1	0		_							
Stage 2	243		-							
Critical Hdwy	7.5						-			
Critical Hdwy Stg 1			_							
Critical Howy Stg 2	6.5					-				
Follow-up Hdwy	3.5					-				
Pot Cap-1 Maneuver	696		-				-			
Stage 1			-							
Stage 2	745		-							
Platoon blocked, %	,									
Mov Cap-1 Maneuver	696		-			-	-			
Mov Cap-2 Maneuver	696									
Stage 1										
Stage 2	745						•			
Approach	WB.		1	1		* SB		74	S * Mi	n ex
HCM Control Delay, s						0			E HAP	
HCM LOS	•									
Minor Lane/Major Myrnt	WBLn1	SBL	SET	tyl F		3	7		7	定法
Capacity (veh/h)			-							
HCM Lane V/C Ratio			-							
HCM Control Delay (s)		0	-							
HCM Lane LOS		A	-							
HCM 95th %tile Q(veh)										

	1	*	†	-	-	1	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	ሻ					ተተ	
Volume (vph)	98.	0	0	0	0	397	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	1805	0	0	0	0	3539	
Flt Permitted	0.950						
Satd. Flow (perm)	1805	0	0	0	0	3539	
Link Speed (mph)	30		30			30	
Link Distance (ft)	115		188			167	
Travel Time (s)	2.6		4.3			3.8	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	111	0	0	0	0	441	
Sign Control	Stop		Free			Free	
Intersection Summary			31	-			£

Other

Area Type: Control Type: Unsignalized

Intersection Capacity Utilization 23.1%

ICU Level of Service A

Intersection	الم ما				_	*		6 . "	,	*	40
Int Delay, s/veh	0										
Movement	WBE		WBR	1	IBT	NBR	SBL	SBT	-388		- 31
Vol, veh/h	98		0		0	0	0	397			
Conflicting Peds, #/hr	0		0		0	0	0	0			
Sign Control	Stop		Stop	F	ree	Free	Free	Free			
RT Channelized	-		None			None	-	None			
Storage Length	0					_	-				
/eh in Median Storage, #	0		-		0	-	-	0			
Grade, %	0		_		0			0			
Peak Hour Factor	88		88		92	92	90	90			
Heavy Vehicles, %	0		0		0	0	0	2			
Mvmt Flow	111		0		0	0	0	441			
Major/Minor	Minort						Major2	21	,	,	. 3
Conflicting Flow All	221		0				0	0			
Stage 1	0		-								
Stage 2	221										
Critical Hdwy	7.5										
Critical Hdwy Stg 1	1.0										
Critical Hdwy Stg 2	6.5										
Follow-up Hdwy	3.5							_			
Pot Cap-1 Maneuver	721							_			
Stage 1	721						_				
Stage 2	767		-								
Platoon blocked, %	101		-					-			
	721							-46			
Mov Cap-1 Maneuver	721		-				*	•			
Mov Cap-2 Maneuver			-				-	-			
Stage 1	707		**					-			
Stage 2	767		•				-	٠			
Approach	WB						SB		10,000		
HCM Control Delay, s							0				
HCM LOS	•										
Minor Lane/Major Mymt	·WBCnF	, SBL	SBT		4	4	ge E		. 41		. Ash
Capacity (veh/h)	-										
HCM Lane V/C Ratio											
HCM Control Delay (s)		0									
HCM Lane LOS		A									
		7.4									



10: Winter Street & Route 1 SB On-Ramp

	1	*	†	-	-	ļ	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		74				र्स	
Volume (vph)	0	0	0	0	104	115	
Ideal Flow (vphpl)	1900	19 0 0	1900	1900	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	1770	
Flt Permitted						0.977	
Satd. Flow (perm)	0	1900	0	0	0	1770	
Link Speed (mph)	30		30			30	
Link Distance (ft)	64		115			225	
Travel Time (s)	1.5		2.6			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.86	0.86	
Heavy Vehicles (%)	0%	0%	0%	0%	7%	3%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	0	0	0	0	255	
Sign Control	Stop		Free			Free	
Intersection Summary_						71	x x
Area Type:	Other						

Control Type: Unsignalized

Intersection Capacity Utilization 15.1%

Analysis Period (min) 15

Intersection	-63			11			
nt Delay, s/veh	0						
Movement	WBL.	WBR	NBT	NBR	SBL	SBT	
Vol, veh/h	0	0	0	O O	104	115	
Conflicting Peds, #/hr	0.	0	0	0	0	0	
	-					Free	
Sign Control	Stop	Stop	Free	Free	Free		
RT Channelized	•	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0		0	-	-	0	
Grade, %	0		0	-	-	0	
Peak Hour Factor	92	92	92	92	86	86	
Heavy Vehicles, %	0	0	0	0	7	3	
Mvmt Flow	0	0	0	0	121	134	
Major/Minor	Minor1				Major2		
Conflicting Flow All	376	0			0	0	
Stage 1	0	U				v	
Stage 2	376						
Critical Hdwy		-			•	•	
	7.1				*	*	
Critical Hdwy Stg 1	0.4	-			•	-	
Critical Hdwy Stg 2	6.1	+			-	-	
Follow-up Hdwy	3.5	•				-	
Pot Cap-1 Maneuver	585	-			-	-	
Stage 1		-			-	-	
Stage 2	649	-			-	-	
Platoon blocked, %						-	
Mov Cap-1 Maneuver	585	-			-	-	
Mov Cap-2 Maneuver	585	-			-	-	
Stage 1	-	-			-	-	
Stage 2	649	-			-	•	
No some state	· (\$1)						
A Section Control Color			<u> </u>	<u> </u>		: :	
HCM Control Delay, s	0						
HCM LOS	Α						
Micoria asiMarahisa	· }[2]a.61	্বহু সংগ্ৰ					
Capacity (veh/h)	-			::			
ICM Lane V/C Ratio							
HCM Control Delay (s)	0						
HCM Lane LOS	A						
HCM 95th %tile Q(veh)	I -	** **					

10: Winter Street & Route 1 SB On-Ramp

	•	4	†	-	-	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7				र्स	
Volume (vph)	0	0	0	0	159	112	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	1827	
Fit Permitted						0.971	
Satd. Flow (perm)	0	1900	0	0	0	1827	
Link Speed (mph)	30		30			30	
Link Distance (ft)	64		115			225	
Travel Time (s)	1.5		2.6			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.81	0.81	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	0	0	0	0	334	
Sign Control	Stop		Free			Free	
Intersection Summary				-			₹ ·

Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 18.0%

ICU Level of Service A

Intersection					-	1.4	THE SE	# +	*
Int Delay, s/veh	0								
Movement	WBL	V	VBR.	NBT	NBR	SBI	SBT	-	
Vol, veh/h	0		0	0	0	159	112		
Conflicting Peds, #/hr	0		0	0	0	0	0		
Sign Control	Stop	,	Stop	Free	Free	Free	Free		
RT Channelized			lone	_	None	→	None		
Storage Length			0		_	-			
Veh in Median Storage, #	0			0	-	_	0		
Grade, %	0		-	0		_	0		
Peak Hour Factor	92		92	92	92	81	81		
Heavy Vehicles, %	0		0	0	0	1	1		
Mymt Flow	0		0	0	0	196	138		
WINTELLION	0		U	· ·	O	100	100		
Major/Minor	Minor1			- 3-3		Major2			
Conflicting Flow All	531		0			0	0		
Stage 1	0					-			
Stage 2	531		-			-			
Critical Hdwy	7.1					-			
Critical Hdwy Stg 1	-		-			-			
Critical Hdwy Stg 2	6.1					-			
Follow-up Hdwy	3.5					-			
Pot Cap-1 Maneuver	462								
Stage 1	102								
Stage 2	536		_			-	_		
Platoon blocked, %	000		-						
Mov Cap-1 Maneuver	462						_		
Mov Cap-1 Maneuver	462		-			_			
			-			-	•		
Stage 1	500		•			•	*		
Stage 2	536		•				~		
Approach	WB					SB			97.35
HCM Control Delay, s	0								
HCM LOS	Ă								
110111 200	,,								
Minor Lane/Major Mvmt	WBLn1	SBL	SBT						
Capacity (veh/h)	_	-							
HCM Lane V/C Ratio			-						
HCM Control Delay (s)	0								
HCM Lane LOS	A		-						
HCM 95th %file Q(veh)	.,								

10: Winter Street & Route 1 SB On-Ramp

	1	*	†	-	-	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7				र्स	
Volume (vph)	0	0	0	0	121	146	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	1840	
Flt Permitted						0.978	
Satd. Flow (perm)	0	1900	0	0	0	1840	
Link Speed (mph)	30		30			30	
Link Distance (ft)	64		115			225	
Travel Time (s)	1.5		2.6			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	0	0	0	0	296	
Sign Control	Stop		Free			Free	
Intersection Summary				4			·

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 17.7%

ICU Level of Service A

Intersection		_ <u>_ 1</u> 5 _ 1					r	*	الد مال
nt Delay, s/veh	0								
Vovement	WBL	488	BR:	NBT	NBR	SBL	SBT		
		en		0	0	121	146	·	
Vol, veh/h	0		0	0	0	0	0		
Conflicting Peds, #/hr	0	C	0						
Sign Control	Stop		top	Free	Free	Free	Free		
RT Channelized	•	No		-	None	-	None		
Storage Length	•		0	-	-	-	-		
/eh in Median Storage, #	0		-	0	-	-	0		
Grade, %	0		-	0	-	-	0		
Peak Hour Factor	92		92	92	92	90	90		
Heavy Vehicles, %	0		0	0	0	1	1		
Mvmt Flow	0		0	0	0	134	162		
Major/Minor	· Minori	ما ي			E 17 3	Majorž			
Conflicting Flow All	431		0			0	0		
Stage 1	0					-			
Stage 2	431						4		
Critical Hdwy	7.1		**			_	_		
Critical Hdwy Stg 1			_			-			
Critical Hdwy Stg 2	6.1						_		
Follow-up Hdwy	3.5						_		
Pot Cap-1 Maneuver	538						_		
	330					-	-		
Stage 1	607		•			-	•		
Stage 2	607		•			-	-		
Platoon blocked, %	F00						.=		
Mov Cap-1 Maneuver	538		-			-	•		
Mov Cap-2 Maneuver	538		-				-		
Stage 1	-		-			-	-		
Stage 2	607		a.			-	•		
Approach	WB					SB			
HCM Control Delay, s	0								
HCM LOS	A								
Minor Lane/Major Mvmt	WBLn1	SBL S	BT	2.00				363	
Capacity (veh/h)	-		•						
HCM Lane V/C Ratio	-	-							
HCM Control Delay (s)	0	•	-						
HCM Lane LOS	Α	-	-						
HCM 95th %tile Q(veh)	-	-	-						

	1	*	†	-	-	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7				4	
Volume (vph)	0	0	0	0	112	123	
deal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	1770	
It Permitted						0.977	
atd. Flow (perm)	0	1900	0	0	0	1770	
ink Speed (mph)	30		30			30	
ink Distance (ft)	64		115			225	
ravel Time (s)	1.5		2.6			5.1	
eak Hour Factor	0.92	0.92	0.92	0.92	0.86	0.86	
eavy Vehicles (%)	0%	0%	0%	0%	7%	3%	
hared Lane Traffic (%)							
ane Group Flow (vph)	0	0	0	0	0	273	
Sign Control	Stop		Free			Free	
Intersection Summary		-3%			4 1		

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 16.0%

Analysis Period (min) 15

Int Delay, s/veh Movement Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, % Mvmt Flow	WBL 0 0 0 Stop - 0 0 92 0 0 0	WBR 0 0 Stop None 0 - - 92 0	NBT 0 0 Free 0 0 92 0	NBR 0 0 Free None - - 92 0 0	SBL 112 0 Free - - - 86 7 130	\$BT 123 0 Free None - 0 0 86 3		
Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 Stop - 0 0 92 0 0	0 0 Stop None 0 - - 92	0 Free - 0 0 92 0	0 0 Free None - - 92 0	112 0 Free - - - - 86 7	123 0 Free None 0 0 86 3		
Vol, veh/h Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 Stop - 0 0 92 0 0	0 0 Stop None 0 - - 92	0 Free - 0 0 92 0	0 0 Free None - - 92 0	112 0 Free - - - - 86 7	123 0 Free None 0 0 86 3		
Conflicting Peds, #/hr Sign Control RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 Stop - 0 0 92 0 0	O Stop None 0 - - 92	0 Free - 0 0 92 0	0 Free None - - 92 0	0 Free - - - - 86 7	0 Free None - 0 0 86 3		
Sign Control RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 0 92 0 0	None 0 - - 92 0	0 0 92 0	None - - 92 0	Free 86 7	Free None 0 0 86 3		
RT Channelized Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 0 92 0 0	None 0 - - 92 0	0 0 92 0	None - - 92 0	- - - 86 7	None 0 0 86 3		
Storage Length Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 92 0 0	.0 - 92 0	0 92 0	- - 92 0	7	0 0 86 3		
Veh in Median Storage, # Grade, % Peak Hour Factor Heavy Vehicles, %	0 92 0 0	92	0 92 0	92 0	7	0 86 3		
Grade, % Peak Hour Factor Heavy Vehicles, %	0 92 0 0	0	0 92 0	92 0	7	0 86 3		
Peak Hour Factor Heavy Vehicles, %	92 0 0 Minort*	0	92 0	0	7	86 3		
Heavy Vehicles, %	0 0 Mihort	0	0	0	7	3		
	0 Mihôrt							
William Com	Mihôrt		Ů	v		143		
					100	170		
Major/Minor					Major2.		- 1	
Conflicting Flow All	403	0			0	0		
Stage 1	0				-	-		
Stage 2	403				-	4		
Critical Howy	7.1				-	-		
Critical Hdwy Stg 1	-					_		
Critical Hdwy Stg 2	6.1	**			_	~		
Follow-up Hdwy	3.5	_						
Pot Cap-1 Maneuver	562	_						
Stage 1	002					_		
Stage 2	628							
Platoon blocked, %	020							
Mov Cap-1 Maneuver	562							
Mov Cap-2 Maneuver	562					-		
	JUZ	•			•	•		
Stage 1	600				-	•		
Stage 2	628	•			-	-		
Approach	WB				SB	146	-	
HCM Control Delay, s	0							
HCM LOS	A							
Minor Lane/Major Mymt	WBLA1'	SBL_SBT **.	1	R. ·		4	25.3	4 /6
Capacity (veh/h)								
HCM Lane V/C Ratio								
HCM Control Delay (s)	0							
HCM Lane LOS	A							
HCM 95th %tile Q(veh)	_							

	1		†	-	1	1
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		7				र्स
Volume (vph)	0	0	0	0	172	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1900	0	0	0	1829
FIt Permitted						0.972
Satd. Flow (perm)	0	1900	0	0	0	1829
Link Speed (mph)	30		30			30
Link Distance (ft)	64		115			225
Travel Time (s)	1.5		2.6			5.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	364
Sign Control	Stop		Free			Free
Intersection Summary				,		

Control Type: Unsignalized Intersection Capacity Utilization 19.3%

Analysis Period (min) 15

Intersection		1	1		7			L -2		*
Int Delay, s/veh	0									
Movement,	Wal		WBR	NBT	NBR	SBL	SBT			
Vol, veh/h	0		0	0	0	172	123			
Conflicting Peds, #/hr	0		0	0	0	0	0			
Sign Control	Stop		Stop	Free	Free	Free	Free			
RT Channelized	-		None		None	-	None			
Storage Length			0	_		-	+			
Veh in Median Storage, #	0		-	0			0			
Grade, %	0			0			0			
Peak Hour Factor	92		92	92	92	81	81			
Heavy Vehicles, %	0		0	0	0	1	1			
Mymt Flow	0		0	0	0	212	152			
IVIVITIC I TOVV	· ·		U	U	U	212	102			
Major/Minor	Minor	• •				Major2		The state of		
Conflicting Flow All	577		0			0	0			
Stage 1	0					-				
Stage 2	577		-			-	-			
Critical Hdwy	7.1		*			-	-			
Critical Hdwy Stg 1										
Critical Hdwy Stg 2	6.1									
Follow-up Hdwy	3.5									
Pot Cap-1 Maneuver	431									
Stage 1						46				
Stage 2	506					_	_			
Platoon blocked, %	000						_			
Mov Cap-1 Maneuver	431									
Mov Cap-1 Maneuver	431		-							
	431		•			-	•			
Stage 1	EDG		-			•	•			
Stage 2	506		•			•	٠			
Approach	WB	811				SB				
HCM Control Delay, s	0									
HCM LOS	A									
	,.									
Minor Lane/Major Mymt	WBLn1	'SBL	SBT				3		á	<u>#</u>
Capacity (veh/h)	-	-	-							
HCM Lane V/C Ratio	-	-	-							
HCM Control Delay (s)	0	-	-							
HCM Lane LOS	A									

	•	*	†	-	-	1	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		14				सी	
Volume (vph)	0	0	0	0	134	161	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	1840	
Flt Permitted						0.978	
Satd. Flow (perm)	0	1900	0	0	0	1840	
Link Speed (mph)	30		30			30	
Link Distance (ft)	64		115			225	
Travel Time (s)	1.5		2.6			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	0	0	0	0	328	
Sign Control	Stop		Free			Free	
Intersection Summary				53			"佐屋"

Area Type: Other

Control Type: Unsignalized Intersection Capacity Utilization 19.2%

Analysis Period (min) 15

Intersection									
nt Delay, s/veh	0								
Movement	WBL	Wi	BR	NBT	NBR	SBL	SBT		
Vol, veh/h	0		0	0	0	134	161		
Conflicting Peds, #/hr	0		0	0	0	0	0		
Sign Control	Stop	St	top	Free	Free	Free	Free		
RT Channelized	-	No			None		None		
Storage Length			0	-	-		-		
Veh in Median Storage, #	0		_	0	-		0		
Grade, %	0			0			0		
Peak Hour Factor	92		92	92	92	90	90		
Heavy Vehicles, %	0		0	0	0	1	1		
Mvmt Flow	0		0	0	0	149	179		
Major/Minor	Minor1		4			Majorž		A GL	·
Conflicting Flow All	477		0			0	0		
Stage 1	0		-						
Stage 2	477					-			
Critical Hdwy	7.1		-						
Critical Hdwy Stg 1	_						46		
Critical Hdwy Stg 2	6.1					-	_		
Follow-up Hdwy	3.5		in .			_			
Pot Cap-1 Maneuver	502						_		
Stage 1	-								
Stage 2	573		_			_			
Platoon blocked, %	310								
Mov Cap-1 Maneuver	502		**						
Mov Cap-2 Maneuver	502					_			
	302		-			•	•		
Stage 1 Stage 2	573					•			
Slaye 2	5/3		-			•	-4		
Approach	WB					SB	5.5		
HCM Control Delay, s	0								
HCM LOS	A								
Minor Lane/Major Mvmt	WBLn1	SBL S	BT	- 34-		3 3			-
Capacity (veh/h)		-	-						
HCM Lane V/C Ratio		-	7						
HCM Control Delay (s)	0	-							
HCM Lane LOS	Α	-	•						
HCM 95th %tile Q(veh)	Adm	de-	46-						

	1		†	-	1	Ţ
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		۲				4
Volume (vph)	0	0	0	0	135	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1900	0	0	0	1764
Flt Permitted						0.975
Satd. Flow (perm)	0	1900	0	0	0	1764
Link Speed (mph)	30		30			30
Link Distance (ft)	64		115			225
Travel Time (s)	1.5		2.6			5.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.86	0.86
Heavy Vehicles (%)	0%	0%	0%	0%	7%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	307
Sign Control	Stop		Free			Free
Intersection Summary	1					

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 17.6%

ICU Level of Service A

Analysis Period (min) 15

Intersection								
Int Delay, s/veh	0							
Moyement	WBL	WBR	NBT	NBR	SBL	SBT		
Vol, veh/h	0	0	0	0	135	129		
Conflicting Peds, #/hr	0	0	0	0	0	0		
Sign Control	Stop	Stop	Free	Free	Free	Free		
RT Channelized		None	-	None	-	None		
Storage Length		0		-		-		
Veh in Median Storage, #	0	-	0	-	-	0		
Grade, %	0	-	0	-	-	0		
Peak Hour Factor	92	92	92	92	86	86		
Heavy Vehicles, %	0	0	0	0	7	3		
Mvmt Flow	0	0	0	0	157	150		
Major/Minor	Minor1 -		Δ.		.Major2			4
Conflicting Flow All	464	0			0	0		
Stage 1	0	-			-	-		
Stage 2	464	-			-	-		
Critical Hdwy	7.1	+			-	-		
Critical Hdwy Stg 1		-			-			
Critical Hdwy Stg 2	6.1	_			_	-		
Follow-up Hdwy	3.5	-				_		
Pot Cap-1 Maneuver	512					•		
Stage 1		-			-			
Stage 2	582	-						
Platoon blocked, %						-		
Mov Cap-1 Maneuver	512				-			
Mov Cap-2 Maneuver	512	-			-	-		
Stage 1	-	-			-	-		
Stage 2	582	•			-	•		
Approach	*		. * *		· SB	~44-	7-7	Ú
HCM Control Delay, s	0							
HCM LOS	Α							
Minor Lane/Major Mymt	WBLn1	SBL, SBT						1.4
Capacity (veh/h)	-							
HCM Lane V/C Ratio								
HCM Control Delay (s)	0							
HCM Lane LOS	A							
HCM 95th %tile Q(veh)	-							

10: Winter Street & Route 1 SB On-Ramp

	1	*	†	-	1	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7				र्स	
Volume (vph)	0	0	0	0	183	130	
Ideal Flow (vphpl)	1900	1900	1900	190 0	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	182 9	
Flt Permitted						0.972	
Satd. Flow (perm)	0	1900	0	0	0	1829	
Link Speed (mph)	30		30			30	
Link Distance (ft)	64		115			225	
Travel Time (s)	1.5		2.6			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.81	0.81	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	0	0	0	0	386	
Sign Control	Stop		Free			Free	
Intersection Summary					4	•	t a so that
Area Type:	Other						

Area Type:
Control Type: Unsignalized

Intersection Capacity Utilization 20.3%

Analysis Period (min) 15

			և	A			1		TA.	- 4
0										
WBL.	1	NBR		NET	NBR	SBL	SBT			*
0		0		0	0	183	130			
0		0		0	0	0	0			
Stop		Stop		Free	Free	Free	Free			
_				_	None	_	None			
-		0		-	-					
0		_		0	-	_	0			
		-			-					
		92			92	81				
0		0		0	0	226	160			
Minort		Ĺ			-{	Major2	1111	4 - A -		
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		_				_				
7.1										
6.1		_					_			
		-				•	-			
400		•				-	•			
404		-					•			
404		*				~	•			
400							-			
		-				-	-			
408		-					*			
404		*				•				
484		•				•	•			
WB				3 3		SB	V-1-5			
0										
Α										
WBLn1	SBL	SBT	5 3		0.90		r		700	
	-									
_	_									
Ω										
71	_	-								
	Minor1 612 0 612 7.1 - 6.1 3.5 408 - 484 408 408 408 408 0	Minor1 612 0 612 7.1 6.1 3.5 408 484 408 484 WB 0 A	WBL WBR 0 0 0 Stop 0 Stop - None - 0 0 0 - 0 0 0 - 0 92 92 92 0 0 0 0 0 0 0 Minor1	WBL WBR 0 0 0 0 0 0 Stop Stop - None - 0 0 0 - 0 0 - 0 92 92 0 0 0 0 0 0 Minor1 612 0 0 0 - 612 - 7.1	WBL WBR NBT 0 0 0 0 0 0 0 Stop Stop Free - None - 0 0 - 0 0 - 0 0 - 0 92 92 92 92 0 0 0 0 0 0 0 0 0 Minor1 612 0 0 - 612 - 7.1 6.1 - 3.5 - 408 - 484	WBL WBR NBT NBR 0 0 0 0 0 0 0 0 0 0 0 0 - None - None - None - 0 0 0 - 0 0 0 - 0 0 0 0	WBL WBR NBT NBR SBL 0 0 0 0 183 0 0 0 0 0 0 Stop Stop Free Free Free Free Free Free Free Free Free Free Pree <	WBL WBR NBT NBR SB SBT	WBL WBR NET NBR SB) SBT	WBL WBR NBT NBR SBL SBT

	•	*	†	-	-	↓	
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations		7				4	
Volume (vph)	0	0	0	0	153	173	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Satd. Flow (prot)	0	1900	0	0	0	1838	
Flt Permitted						0.977	
Satd. Flow (perm)	0	1900	0	0	0	1838	
Link Speed (mph)	30		30			30	
Link Distance (ft)	64		115			225	
Travel Time (s)	1.5		2.6			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.90	0.90	
Heavy Vehicles (%)	0%	0%	0%	0%	1%	1%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	0	0	0	0	0	362	
Sign Control	Stop		Free			Free	
Intersection Summary					TRA	7 24	5° 4

Area Type: Other Control Type: Unsignalized

Intersection Capacity Utilization 20.9%

Analysis Period (min) 15

Intersection		·)=)	150 × ×	4					and the	4	100
Int Delay, s/veh	0										
Movement	WBL	WBR		NBT	NBR	SBL	SBT		== ===		
Vol, veh/h	0	0		0	0	153	173				
Conflicting Peds, #/hr	0	0		0	0	0	0				
Sign Control	Stop	Stop		Free	Free	Free	Free				
RT Channelized	-	None		_	None		None				
Storage Length	-	0		-		-	-				
Veh in Median Storage, #	0	-		0	-		0				
Grade, %	0	-		0			0				
Peak Hour Factor	92	92		92	92	90	90				
Heavy Vehicles, %	0	0		0	0	1	1				
Mvmt Flow	0	0		0	0	170	192				
Major/Minor	Minorf	-1	The state of the s	me , 1		Major2	۴.	,	· 如 · ·		do de
Conflicting Flow All	532	0				0	0				
Stage 1	0	-				=	-				
Stage 2	532	-				-	-				
Critical Hdwy	7.1	-					-				
Critical Hdwy Stg 1	-	-				-	-				
Critical Hdwy Stg 2	6.1	79					-				
Follow-up Hdwy	3.5					-	_				
Pot Cap-1 Maneuver	461	-									
Stage 1		-				-	-				
Stage 2	535	-				44	_				
Platoon blocked, %							-				
Mov Cap-1 Maneuver	461	-					-				
Mov Cap-2 Maneuver	461	-				-	-				
Stage 1	_	-				-	-				
Stage 2	535	-				-	-				
Approach	WB	- 1		TI		SB	_ & _		7-61 1	I,	17
HCM Control Delay, s	0					3.12.					
HCM LOS	Α										
Moort energe et Minn	William)				*		· · · · · · · · · · · · · · · · · · ·				
Capacity (veh/h)		-									
HCM Lane V/C Ratio											
HCM Control Delay (s)	0										
HCM Lane LOS	A										
HCM 95th %tile Q(veh)	-										



	*	→	*	•	-	*	4	†	-	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	1				7		↑				
Volume (vph)	98	0	0	0	0	4	0	101	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1811	1900	0	0	0	1863	0	2132	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1811	1900	0	0	0	1863	0	2132	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.77	0.77	0.77	0.50	0.50	0.50	0.90	0.90	0.90	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	0	0	0	0	8	0	112	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary -		4					# 6			T		4

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 24.1%

Analysis Penod (min) 15

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	98	0	0	0	0	4	0	101	0	0	0	C
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	(
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-		-	0	-	-	-	-	-	
Veh in Median Storage, #		0	_	-	0	-	-	0	-	-	0	
Grade, %		0	44	-	0	-	-	0	-		0	
Peak Hour Factor	77	77	77	50	50	50	90	90	90	92	92	92
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	2	2	2
Mvmt Flow	127	0	0	0	0	8	0	112	0	0	0	C
Major/Minor	Minor2			Minor1			Major1	-		27.23		
	112	112	0	112	112	112	0	0	0			
Conflicting Flow All	0	0		112		112	0	U	U			
Stage 1	112	112	*	0		-	-	-	-			
Stage 2			-				-	-	*			
Critical Hdwy	6.43	6.5	-	6.4		6.2		-	-			
Critical Hdwy Stg 1	- - -		-	5.4	5.5	-	-	-	-			
Critical Hdwy Stg 2	5.43	5.5	-	-	-	0.0	-	-	-			
Follow-up Hdwy	3.527	4	-	3.5		3.3	*	-	-			
Pot Cap-1 Maneuver	882	782	-	890		947	-	-	-			
Stage 1	-	•	at a	918	807	•	-	-	-			
Stage 2	910	807	-	-	-	•	-	-	-			
Platoon blocked, %									-			
Mov Cap-1 Maneuver	882	0	**	890		947		•	-			
Mov Cap-2 Maneuver	882	0	**	890		-	-	-	-			
Stage 1	-	0	-	918	0	-	-	-	-			
Stage 2	910	0	-	***	0	-	-	-	-			
<u> </u>				10/2/2		_		·.		~ `		_
HCM Control Delay, s	9.8			8.8			0					
HCM LOS	Α			A								
Minor Eane/Major Mymt.	NBL	NBT	NBR	EBLni EBLnž	WBLn1	4			3.3			N.
Capacity (veh/h)	111-4	-		882 -	947							
HCM Lane V/C Ratio	_	_	_		0.008							
HCM Control Delay (s)	0			9.8 0								
HCM Lane LOS	A	•	-	A A								
HCM 95th %tile Q(veh)	A	-	-	0.5								
LIOIN SOM WHE MILEM		-		0.0	U							

	*	-	*	•	←	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	^				74		1				
Volume (vph)	112	0	0	0	0	7	0	170	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Link Speed (mph)		30			30			3 0			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.89	0.89	0.89	0.58	0.58	0.58	0.89	0.89	0.89	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	0	0	0	0	12	0	191	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary			115-0	(-1	FFG .	 -Ah						

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 28.5%

Analysis Period (min) 15

2016 Existing Wkdy PM Peak 11: Route 1 NB Off-Ramp/Pleasant Street & Summer Street

intersection ~	the of the	中人	L						2.3			.NG
Int Delay, s/veh 4.	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	112	0	0	0	0	7	0	170	0	0	0	(
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	(
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	_	-	None	-	-	None			None	_		None
Storage Length	0	-	-	-	_	0		_		-	-	
Veh in Median Storage, #	-	0			0	-	_	0			0	
Grade, %		0			0	-		0		-	0	
Peak Hour Factor	89	89	89	58		58	89	89	89	92	92	92
Heavy Vehicles, %	0	0	0	0		0	0	0	0	2	2	2
Mvmt Flow	126	0	Ŏ	0		12	0	191	0	0	0	Ċ
Major/Minor	_Mnor2_			Minor1			Major1					
Conflicting Flow All	191	191	0		191	191	0	0	0			
Stage 1	0	0	-	191	191	101	-	-	-			
Stage 2	191	191		0								
Critical Hdwy	6.4	6.5	-	6.4		6.2	_	_	•			
Critical Hdwy Stg 1		0.0		5.4	5.5	0.2		-				
	5.4	5.5		0.4	0.0	-	_	46				
Critical Hdwy Stg 2	3.5	3.5	-	3.5		3.3	_	-	-			
Follow-up Hdwy			-				-	-	-4			
Pot Cap-1 Maneuver	803	708	-	803		856		-	•			
Stage 1	0.40	740	-	846	746	-	-	-	*			
Stage 2	846	746	-		-	-	-	-	•			
Platoon blocked, %		_				050		-	•			
Mov Cap-1 Maneuver	803	0	-	803		856	-	-	-			
Mov Cap-2 Maneuver	803	0	-	803		-	-	-	•			
Stage 1	-	0	-	846		**	-	-	•			
Stage 2	846	0	-	-	0		-	-	•			
Approach.	1 111	1	*	WB		-	. NB	- ',	4 _{fr}		<u> </u> 4.	
HCM Control Delay, s	10.3			9.3			0					
HCM LOS	В			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1 EBLn2	WBLn1			2		83		
Capacity (veh/h)	-			803 -	856							
HCM Lane V/C Ratio	-	-	41		0.014							
HCM Control Delay (s)	0	-		10.3 0								
HCM Lane LOS	A	_	_	B A								
HOM LONG LOO	-71	_	_	0.6	0							

	•	-	*	•	-	*	4	†	-	-	1	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1				7*		1				
Volume (vph)	118	0	0	0	0	5	0	189	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	19 0 0	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.89	0.89	0.89	0.42	0.42	0.42	0.84	0.84	0.84	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	0	0	0	0	12	0	225	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary						4.		_			-	

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 29.8%

Analysis Period (min) 15

Intersection												
Int Delay, s/veh 4	.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	118	0	0	0	0	5	0	189	0	0	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	(
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	_	-	None		-	None	-	-	None	-	-	None
Storage Length	0	-		-	-	0	•	-			-	
Veh in Median Storage, #	-	0	-		0	_	-	0	-	-	0	
Grade, %	-	0	-	-	0	_	_	0	-	-	0	
Peak Hour Factor	89	89	89	42	42	42	84	84	84	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	2
Mvmt Flow	133	0	0	0	0	12	0	225	0	0	0	(
in Sin + O − Amiliani +	6.41 (65)			Maar bar			41.97.91					
Major/Minor	Minor2			Minori	•		Major1				,	
Conflicting Flow All	22 5	225	0	225	225	225	0	0	0			
Stage 1	0	0		225	225	-	-		-			
Stage 2	225	225	-	0	0	-	-	*	-			
Critical Hdwy	6.4	6.5		6.4	6.5	6.2	-	-	-			
Critical Hdwy Stg 1	-	-		5.4	5.5	-	-	-	-			
Critical Hdwy Stg 2	5.4	5 .5	-	-	-	-	-	-	-			
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	-		-			
Pot Cap-1 Maneuver	768	678		768	678	819	-	-	-			
Stage 1		-		817	721	-	-	**	-			
Stage 2	817	721	-	_	-	-	44	-	-			
Platoon blocked, %												
Mov Cap-1 Maneuver	768	0	-	768	0	819	-	707	-			
Mov Cap-2 Maneuver	768	0		768	0	90	*	*	_			
Stage 1	-	0		817	0	+	_	-	_			
Stage 2	817	0	•		0		-	-	٠			
Approach	EB			WB			NB					
	10.7	-		9.5								
HCM Control Delay, s							0					
HCM LOS	В			A								
Minor Lane/Major Mymt	NBL	NBT	NBRE	3Ln1 EBLn2	NBLn1	. 2	AS 623 64		r1t.	N,		٠
Capacity (veh/h)	-	-		768 -	819							
HCM Lane V/C Ratio	-	-	- 0	.173 -	0.015							
HCM Control Delay (s)	0	_	-	10.7 0	9.5							
HCM Lane LOS	A		-	B A	A							
HCM 95th %tile Q(veh)				0.6 -	0							

	۶	→	-	•	-	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	٦	1				1		1				
Volume (vph)	105	0	0	0	0	4	0	109	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1811	1900	0	0	0	1863	0	2132	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1811	1900	0	0	0	1863	0	2132	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.77	0.77	0.77	0.50	0.50	0.50	0.90	0.90	0.90	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	0	0	0	0	8	0	121	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary
Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 24.9%

Analysis Period (min) 15

Intersection _	-	L	•	1 / 100	₫Ñ.	de	*			-		t
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR.	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	105	0	0	0	0	4	0	109	0	0	0	C
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	C
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	_	None .	-		None	-	-	None	-	_	None
Storage Length	0	-	_	-		0	4	-				
Veh in Median Storage, #	-	0	-	-	0	-	_	0	-	-	0	
Grade, %		0		_	0	-	-	0		-	0	
Peak Hour Factor	77	77	77	50	50	50	90	90	90	92	92	92
Heavy Vehicles, %	3	0	0	0	0	0	0	1	0	2	2	2
Mvmt Flow	136	0	0	0	0	8	0	121	0	0	0	C
Major/Minor	Minor2			Minorda	_ @]		Majori			-		
Conflicting Flow All	121	121	0	121	121	121	0	0	0			
Stage 1	0	0	-	121	121	121	-	-	-			
Stage 2	121	121		0	0		_		_			
Critical Hdwy	6.43	6.5	_	6.4	6.5	6.2						
Critical Hdwy Stg 1	0.40	0.5		5.4	5.5	0.2			- [
Critical Hdwy Stg 2	5.43	5.5		-	0.0	_	_	_				
Follow-up Hdwy	3.527	4		3.5	4	3.3						
Pot Cap-1 Maneuver	872	773		879	773	936	-		-			
Stage 1		113	•	909	800	930	-	•				
Stage 2	902	800	-	505		-	•	-	_			
•	902	000	-	_	-	-	+	-	-			
Platoon blocked, %	872	0		070	0	936		4	*			
Mov Cap-1 Maneuver		0	-	879	0	936	-	•	-			
Mov Cap-2 Maneuver	872	0	•	879	0	-	-	-	•			
Stage 1	-	0	•	909	0	-	-	*	•			
Stage 2	902	0	•	te	0	*	-	*	*			
Approach	EB	500	- 3	WB			NB					
HCM Control Delay, s	9.9			8.9			0					
HCM LOS	Α			Α								
Minor Lane/Major Mvmt	NBL	NBT	NBR E	BLn1 EBLn2	WBLn1				5000	5.55		
Capacity (veh/h)	4	_		872	222							
HCM Lane V/C Ratio					0.009							
HCM Control Delay (s)	0			9.9 0								
HCM Lane LOS	A	-		A A								
HCM 95th %life Q(veh)				0.6	0							

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	↑				74		1				
Volume (vph)	124	0	0	0	0	8	0	186	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0,89	0.89	0.89	0.58	0.58	0.58	0.89	0.89	0.89	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	0	0	0	0	14	0	209	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
htersection Summary:	ì	_		•	1		,	_				т

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 30.0%

Analysis Period (min) 15

Intersection								-				
Int Delay, s/veh 4	.4											
Movement	EBL	EBT	EBR	MBL	WBT	WBR	NBL	NBT	NBR	\$BL	SBT	*SBF
Vol, veh/h	124	0	0	0	0	8	0	186	0	0	0	(
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	(
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	+	None	-		None	-	-	None	_		None
Storage Length	0	-		-	-	0	_	-	-			
Veh in Median Storage, #	*	0			0	_		0	_	-	0	
Grade, %		0	_	_	0	-		0	_	-	0	
Peak Hour Factor	89	89	89	58	58	58	89	89	89	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	
Mvmt Flow	139	0	0	0	0	14	0	209	0	0	0	(
NATION CO.	Mario			N. Consort			United					
Major/Minor	Minor2			Minor1			Major1					-
Conflicting Flow All	209	209	0	209	209	209	0	0	0			
Stage 1	0	0	-	209	209	-	-	-	-			
Stage 2	209	209	-	0	0	-	-	-	-			
Critical Hdwy	6.4	6.5	-	6.4	6.5	6.2	-	*	-			
Critical Hdwy Stg 1	-	-	-	5.4	5 .5	-	-	-	-			
Critical Hdwy Stg 2	5.4	5.5	-	-	-	-	-	-	-			
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	-	-	-			
Pot Cap-1 Maneuver	784	692	-	784	692	836	-	544	-			
Stage 1		-	-	831	733	-		4	_			
Stage 2	831	733		_	-	-	-	-	-			
Platoon blocked, %								-	-			
Mov Cap-1 Maneuver	784	0		784	0	836			-			
Mov Cap-2 Maneuver	784	0	-	784	0	-	-	-	-			
Stage 1		0	-	831	0	-	_		-			
Stage 2	831	0			0		-	•	•			
1000esei	(ed e)) (ed e)			\\\(\lambda(\beta)	, 7	1 4	Ma	, S 57				_
HCM Control Delay, s	10,6			9.4			0		بأخفاف أنا			
HCM LOS	B			Α			O					
Minor Lane/Major Mymt	NBL	NBT	NBR	EBIM EBIM2	_				any	-	86	1
Capacity (veh/h)				784 -	8 3 6							
HCM Lane V/C Ratio	w.	-	-	0.178 -	0.016							
HCM Control Delay (s)	0	~	++-	10.6 0	9.4							
HCM Lane LOS	A	-	-	B A	A							
HCM 95th %tile Q(veh)	_		-	0.6 -	0.1							

	1	\rightarrow	*	1	←		1	†	-	1	Ţ	1
Lane Group			112	Mit	Min.						<u> </u>	2 0 2
Lane Configurations	ħ	↑				7"		↑				
Volume (vph)	132	0	0	0	0	5	0	209	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.89	0.89	0.89	0.42	0.42	0.42	0.84	0.84	0.84	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	148	0	0	0	0	12	0	249	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary		-3	J	4 9	U.S.S.	W MET	R	And.	«			

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 31.6%

Analysis Period (min) 15

Intersection						-						
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	132	0	0	0	0	5	0	209	0	0	0	(
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	(
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	· -	-	None	_	_	None	-		None
Storage Length	0	-		-	-	0	-	-	-	-		
Veh in Median Storage, #		0			0		-	0	-		0	
Grade, %		0		_	0	-	-	0			-0	
Peak Hour Factor	89	89	89	42	42	42	84	84	84	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	2	2	
Mvmt Flow	148	0	0	0	0	12	0	249	0	0	0	(
Major/Minor	Minor2			Minorf	-		Major1			***	00.	-
	249	249	0	249	249	249	0	0	0	±	F	
Conflicting Flow All	249	249		249	249		U	-	U			
Stage 1		249	-	249		-	-					
Stage 2	249	6.5	•	6.4	0 6.5	00			*			
Critical Hdwy	6.4	0,0				6.2	_	-	-			
Critical Hdwy Stg 1				5.4	5.5	**	*	+	*			
Critical Hdwy Stg 2	5.4	5.5	-	2.5	-	2.2	-	•	-			
Follow-up Hdwy	3.5	4	-	3.5	4	3.3	•	-	-			
Pot Cap-1 Maneuver	744	657	-	744	657	795		-	-			
Stage 1	707	704	-	797	704	-	-	-	-			
Stage 2	797	704		-	-	-	-	-	-			
Platoon blocked, %								-	-			
Mov Cap-1 Maneuver	744	0	-	744	0	795		-	-			
Mov Cap-2 Maneuver	744	0	-	744	0	-	•	-	-			
Stage 1	-	0	-	797	0	-	-	-	-			
Stage 2	797	0	40	-	0	-	•	-	•			
Approach	EB	- 5		WB			- NB	33		-27		
HCM Control Delay, s	11			9.6			0					
HCM LOS	В			A								
Minor Lane/Major Mvmt	NBL	NBT	NAR	eblyi eblyz	NEI 61		11	T		A MARIE	7.10.	3.
Capacity (veh/h)	1100	a mariji.	niert)	744 -		Г		42	- police	» 4 , ~~		
HCM Lane V/C Ratio	_		i		0.015							
HCM Control Delay (s)	0			11 0	9.6							
HCM Lane LOS	A.	•		B A	9.0 A							
		•	-	0.7 -	0							
HCM 95th %tile Q(veh)	-	-	•	U./ -	U							

	*	→	*	1	-	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	1				7		1				
Volume (vph)	111	0	0	0	0	4	0	112	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1811	1900	0	0	0	1863	0	2132	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1811	1900	0	0	0	1863	0	2132	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.77	0.77	0.77	0.50	0.50	0.50	0.90	0.90	0.90	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	1%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	0	0	0	0	8	0	124	0	0	0	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 25.4%

Analysis Period (min) 15

2023 Build Wkdy AM Peak 11: Route 1 NB Off-Ramp/Pleasant Street & Summer Street

Int Delay, s/veh 5										九		
	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBF
Vol, veh/h	111	0	0	C		4	0	112	0	0	0	(
Conflicting Peds, #/hr	0	0	0	C		0	0	0	0	0	0	C
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized			None			None		_	None			None
Storage Length	0		_			0				-		
Veh in Median Storage, #		0	_		0	_		0	_		0	
Grade, %	_	0			0	_		0			0	
Peak Hour Factor	77	77	77	50		50	90	90	90	92	92	92
Heavy Vehicles, %	3	0	0	C		0	0	1	0	2	2	2
Mymt Flow	144	0	0	C		8	0	124	0	0	0	0
WIVIII FIOW	144	U	U		U	O	U	124	U	U	U	
Majo#Minor-	-Minor2			Miner		-	Majort.			كبالع	V.	_3
Conflicting Flow All	124	124	0	124	124	124	0	0	0			
Stage 1	0	0	-	124		_	-	-	-			
Stage 2	124	124	-			_	_		-			
Critical Hdwy	6.43	6.5		6.4		6.2	_					
Critical Hdwy Stg 1	-	-	_	5.4		•	_	-	-			
Critical Hdwy Stg 2	5.43	5.5				_	_	_	_			
Follow-up Hdwy	3.527	4	_	3.5		3.3						
Pot Cap-1 Maneuver	869	770	_	876		932						
Stage 1	003	110	-	907		332						
	899	797	-	307	191	•	_		•			
Stage 2	099	191	-		_	_	-	-	-			
Platoon blocked, %	000	0		070	0	022		-	•			
Mov Cap-1 Maneuver	869	0	MD.	876		932	-	-	-			
Mov Cap-2 Maneuver	869	0	-	876		-	-	-	-			
Stage 1	-	0	-	907		-	-	-	-			
Stage 2	899	0	-		0	-	-	-	-			
Abbroach 7	iv EB		1°	- WE	n	• =	NB	2	8- 4	· 701	20	录 4
HCM Control Delay, s	10			8.9			0		-			
HCM LOS	В			Δ.			· ·					
TION LOS	Ĺ,											
Mine English thing		1/186	1 1 2 2 1	igan (Gajury	(VE)Edi							
Capacity (veh/h)	-	-	-	869	932							
HCM Lane V/C Ratio		-	-	A 144	0.009							
HCM Control Delay (s)	0	_	_	10 0								
HCM Lane LOS	A	_		B A	_							
HCM 95th %tile Q(veh)	-			0.6	-							

	*	→	*	•	-	*	4	†	-	-	1	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	1				7		1				
Volume (vph)	150	0	0	0	0	8	0	195	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
FIt Permitted	0.950											
Satd. Flow (perm)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.89	0.89	0.89	0.58	0.58	0.58	0.89	0.89	0.89	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16 9	0	0	0	0	14	0	219	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary								1.		á		3"

Area Type:

Other

Control Type: Unsignalized

Intersection Capacity Utilization 31.9%

Analysis Period (min) 15

2023 Build Wkdy PM Peak 11: Route 1 NB Off-Ramp/Pleasant Street & Summer Street

.9 EBL 150	EST										
150	EBT										
		EBR	WBE	WEF	IWER.	NBL		aner .	7 - 8:1	- ((3:3)	39
	0	0	0	0	8	0	195	0	0	0	C
0	0	0	0	0	0	0	0	0	0	0	C
Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
-	-	None	-	-	None	-	-	None	-	-	None
0	-	-	-	-	0	-	-	-	-	-	
	0	-	-	0	-	-	0	-	-	0	
-	0	-	-	0	-	-	0	4		0	
89	89	89	58	58	58	89	89	89	92	92	92
0	0	0	0	0	0	0	0	0	2	2	2
169	0	0	0	0	14	0	219	0	0	0	C
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		-	822		-	+	•	-			
822	0	-		0	-	*	*	4			
EB			WB			NB		-	2 3 3	30	
10.9			9.4			0					
В			Α								
NBI	NAT	NBR F	B[h1.FB] n2	NBL n1	7	7		لات عال	1 7	<i>A</i> -	- 5
		1 4 3 4 1 1									-
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0											
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	*	→	*	•	-	*	1	†	-	1	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	1				7		^				
Volume (vph)	155	0	0	0	0	5	0	222	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	16	12	16	12	12	12	12
Satd. Flow (prot)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Flt Permitted	0.950											
Satd. Flow (perm)	1865	1900	0	0	0	1863	0	2153	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		62			61			278			164	
Travel Time (s)		1.4			1.4			6.3			3.7	
Peak Hour Factor	0.89	0.89	0.89	0.42	0.42	0.42	0.84	0.84	0.84	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	174	0	0	0	0	12	0	264	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary 7	[go	E 7,				*		2 E		1 25 4	1, 4	

Area Type:

Control Type: Unsignalized

Intersection Capacity Utilization 33.6%

Other

Analysis Period (min) 15

NBL 0 0 Free	0 Free - - 0 0	0 0 Free None	SE Fre	0 0	0 0
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	0	0	0	0	0