

October __, 2017

HAND DELIVERED

David R. Consigli, Chairman
Zoning Board of Appeals
Town of Milford
52 Main Street
Milford MA 01757

RE: Comprehensive Permit Application
Property located at 462 – 466 East Main Street, Milford, Massachusetts
Assessor's Map 30. Parcel 0 - 34.

Dear Chairman Consigli:

This document comprises an application, pursuant to G. L. c. 40B, §§ 20-23 (the “Act”), and the regulations promulgated thereunder with regard to a Comprehensive Permit to authorize the construction of three hundred (300) dwelling units in two buildings on land comprising approximately 116 acres located at 462 - 466 East Main Street, Milford, Massachusetts. The parcel is in the Business Park district (the “Property” or the “Site”).

1.0 Applicant

The within application is filed by E M Street LLC (the “Applicant”), a Massachusetts limited liability corporation, with a principal address of 171 Locke Drive Marlboro MA 01752. A copy of the Applicant's Certificate of Organization as filed with the Massachusetts Secretary of State's Office and is attached hereto in “Section 1”.

The Applicant and related principals have been material in the development of several multifamily real estate developments throughout the region. A list of past projects is attached hereto in **“Section 2”**.

The Applicant respectfully requests that all notices from the Board in connection with this Application be sent to Mark Bobrowski and Paul Haverty, Blatman, Bobrowski & Haverty, LLC 9 Damonmill Sq., Concord, MA 01742, or electronically to mark@bbhlaw.net and Paul@bbhlaw.net.

2.0 Project Subsidy

The Applicant has received a Project Eligibility Letter from the Department of Housing and Community Development (“DHCD”) pursuant to the Housing Stabilization Fund (“HSF”) Program. A copy of the **Project Eligibility Letter (PEL) is attached hereto in “Section 3”**. The first page of the PEL indicates Mass Housing ID # 825. Subsequently in the body of the PEL the project is referred to as #842. 842 is the correct ID #. The Project Eligibility Letter issued by DHCD satisfies the jurisdictional subsidy requirements established under the Act and the regulations promulgated thereunder.

The Project Eligibility Letter issued by DHCD contains the findings required by 760 CMR 56.04(4), including the finding that the Applicant controls the Site pursuant to 760 CMR 56.04(4) (g). Pursuant to 760 CMR 56.04(6), the determinations made by the Subsidizing Agency (in this instance DHCD) are conclusive, and any challenge to such determination may be made “solely upon the grounds that there has been a substantial change affecting the project eligibility requirements set forth at 760 CMR 56.04(1).”

The Applicant has notified the Subsidizing Agency of the submittal of this application. A copy of the notice to **DHCD is attached hereto in “Section 4”**.

3.0 Site Control

The Applicant controls the Property within the meaning of the Act. The Property is controlled by the Applicant and the Developer. A copy of the property trust and deed is attached hereto in “Section 5.

4.0 The Property

The property consists of 1 parcel. The parcel is identified as 462 – 464 East Main Street. The Property is illustrated on a set of plans by Beals & Thomas Inc. (the “Site Development Plans”), the plans are attached hereto in “Section 6”. Such plans fulfill the requirements of 760 CMR 56.05(2) (a), preliminary site development plans. Additionally, context photographs of the surrounding area are attached hereto in “Section 7”. Such material, along with the existing conditions narrative contained herein, fulfills the requirement for an existing conditions summary contained in 760 CMR 56.05(2)(b).

The entirety of the Property is located along East Main Street (State Road Route 16). This proximity to Route 16 and Fortune Boulevard will avail project resident’s significant access to existing vehicular transportation roads east, west and south. Additionally the project’s location proximate to many recreation, cultural and restaurant and social venues will help stimulate economic development and other mixed-use type projects and activities.

The character of the neighborhood is a well-travelled state road corridor populated by a mix of residential and industrial uses. These uses include older, midcentury and newer homes, restaurants and other cultural, retail and service uses. The predominant feature of the immediate neighborhood is State Route 16 / East Main Street which serves more than 13,800 Average Daily Vehicle Trips (adt). A Transportation Impact and Access Study, as performed in cooperation with the Town and MassDOT and is attached at Section 8.

5.0 Project Description

Design features and floor plans and exterior elevations for the proposed structures are shown on a set of plans, prepared by Doreve Nicholaeff / Bennett Sullivan Architects and attached hereto in “Section 7” (the “Architectural Plans”) (collectively, the Site Development Plans and the Architectural Plans are referred to as the “Project Plans” all which are attached hereto in “Section 7”). The Architectural Plans submitted herewith fulfill the requirement for submitting preliminary, scaled architectural plans as

reflected in 760 CMR 56.05(2)(c). The Project plans are filed with this application and are made a part hereof by reference. Under the Act, plans filed with a Comprehensive Permit application may be preliminary plans, and the Applicant reserves the right to revise the Project Plans prior to final approval of the Project.

In comparison Robsham Village's five story building design is contextually appropriate when compared to Milford's Zoning Bylaw Section 2.5, which allows structures up to 5 stories or 60 feet in height. Building envelope material shall be compatible with the adjacent neighborhood.

The Robsham Village buildings are a series of elements comprising two structures. The structures will contain 300 dwelling units of which 75 will be affordable to households under 80% of the area median income (AMI) and 225 will be available to households at market rates.

The project will be designed to provide significant landscaping. A tabulation of proposed buildings type, size and ground coverage is attached hereto in "Section 9". The attached tabulation satisfies the requirements of 760 CMR 56.05(2) (d).

6.0 Existing Site and Surrounding Site Area Conditions (See 760 CMR 56.05(2)(b))

The subject property is located on the north side of East Main Street with approximately 750 feet of frontage. The property is located within the Business Park (BP) district as depicted on the Town of Milford's Zoning Map. The property consists a total of 116 ± acres (5,052,960 ± square feet) of which approximately 31± acres are wetlands. The upland areas are located towards the middle and rear portions of the site while the wetlands diagonally traverse the front and around the center. There are 8 vernal pools which qualify under Natural Heritage and Endangered Species Program (NHESP) Priority Habitat and Estimated Habitat located on-site and additional vernal pool located immediately adjacent to the site. The vernal pools are located within isolated or bordering vegetated wetlands and will remain undisturbed under proposed conditions. The civil and architectural design has made a significant effort to avoid and protect these vernal pools. There is an unnamed stream that flows northeasterly through the site west of the proposed development. The development will meet the necessary performance standards.

To secure a Ground Water Discharge Permit and construct a Private Wastewater Treatment Facility we have conducted significant soil testing which has been witnessed by the Department of Environmental Protection Central Region (DEP CERO). This work has been performed at the site in the last several months. **See GWD application under separate cover.** While there is municipal sanitary sewer service in Milford, there are several complication with Milford's wastewater system and a lack of municipal sewer in the vicinity of the site. As a result of the increased cost and complexity associated with a connection to the municipal sewer system, the applicant has chosen to advance a private wastewater treatment facility for onsite sewer treatment requirements. There are sufficient soils present and satisfactory to support the necessary subsurface sewage disposal, and for the additional purpose of storm water infiltration requirements of the program.

A key attributes of this proposed site is the reuse and improvement of the existing conditions. These improvements are expressed by improved storm water polishing, greater and more controlled infiltration, enhanced access to the upland areas proximate to the site.

8.0 Proposed Landscaping/Buffers

The landscape plan is found in Section 7. The Landscape plan features a design of natural clustering and a single entrance opposite Whispering Pine to help improve safety and turning efficiency for residents, guests and service providers. The landscaping is meant to supplement the natural site landscaping and buffer the site's visibility from the proximate neighborhoods.

9.0 Project Impacts

A. Municipal Services

1. Water Supply

The Project will work in concert with and be serviced by Milford's Water Company water supply. Robsham Village's 500 bedrooms are estimated to require 25,000 gallons per day. The new construction best management practices will significantly inure to Milford's Water Management Act Permit. The Milford Water Company has the capability of supplying the desired water demand for the proposed project. The water distribution infrastructure in Route 16 is aged and would benefit from replacement.

The Milford Water Company has previously upgraded the water pipe in Route 16 from the 495 overpass to Zain Circle. The Applicant commits to make the necessary water pipe upgrades in Route 16 from Fortune Boulevard to the 495 overpass and from Zain Circle to Whispering Pine to ensure necessary water volume and pressure.

2. Wastewater

Robsham Village will design and build a new private wastewater treatment facility. This will be a significant improvement in comparison to the existing municipal sewer system, with its associated I & I issues. It is anticipated to treat approximately 25,000 gallons per day (GPD) of average flow to tertiary treatment standards. The system will also be capable of treating to a peak rate of 55,000 GPD, which corresponds to the Title 5 (septic system) design flow rate.

3. Storm water

Under the post development conditions, storm water runoff from the large development area (building, parking, walkways) will flow into a storm water collection system that will convey flow to three stormwater basins located around the development pad. The stormwater will be treated and peak flows will be attenuated.

Peak rates of runoff will be treated as calculated using the TR-20 methodology developed by the NRCS. There will be an increase in runoff rates due to the additional impervious area proposed on the site. This increase is attenuated by the proposed surface stormwater basins, utilizing volume storage and discharge controls. These measures will both detain and infiltrate runoff, mitigating increased rates of runoff for the 2, 10, and 100 year storms events to the receiving wetlands. The storm water management system for the Project is designed in conformance with the Massachusetts Department of Environmental Protection's Storm water Management Standards. No adverse impact on the municipal storm water drainage system will be generated by the Project, as the Project will not increase the rate of storm water discharging to wetlands.

4. Public Safety

The buildings will be code compliant and state of the art. Public safety is a function of adequate access to and from the Site. Public safety vehicle access to and from the site will be via East Main Street, a public way. Police and Fire apparatus will have sufficient perimeter and vertical access to the buildings. The Project will have no adverse impact upon public safety.

5. Utilities

Utilities, including natural gas, electric and cable television, will be extended onto the Site from East Main Street, as shown on the Site Development Plans. No adverse impacts relative to public services or utilities to abutting properties or to the Town is anticipated.

B. Construction Impacts

Anticipated impacts of the Project associated with the construction process include erosion and sedimentation, noise, dust and debris control. Although these impacts will be temporary in nature, mitigation controls will be in place. Such controls include the following:

- i. Construction sequencing, best management practices for erosion control, equipment and vehicle management, material storage and use, waste disposal and spill prevention and response.
- ii. A daily inspection of the site conditions, as needed, to control dust during construction and to provide dust management through misting or sprinkling, as needed.

C. Historical and Archeological Impacts

As it relates to this site and its elements the Applicant has reviewed the site with Massachusetts Historical Commission staff, a search has been made of the Commonwealth of Massachusetts's MACRIS (Massachusetts Cultural Resource Information System) web site, and a search has been made of the Town of Milford's Buildings Inventory. While there are areas of interest adjacent to the site, there are no elements that qualify as historical relevant or substantial on this site.

D. Environmental Impacts

The Applicant does not expect the Project to result in any adverse environmental impacts to the Site. As noted above, the Applicant will take appropriate mitigation measures to address potential impacts, as needed.

E. Traffic Impacts

As discussed in the detailed traffic impact assessment (TIAS) prepared for this application, the proposed development is anticipated to generate minimal traffic impacts to the surrounding roadway system. The Property is located on Route 16 / East Main Street a major roadway in the Town and the region. The traffic generated by the newly constructed dwelling units will have nominal impact on East Main Street. See Vehicle Trip Generation Estimates attached hereto in “Section 8”.

10.0 Request for Zoning Waivers

The subject property is zoned “Business Park”. Certain elements of the proposed development do not comply with the current underlying zoning. Consequently, waivers are required to enable multi-family residential at the proposed density to be constructed. Other waivers to the Town of Milford’s Zoning Bylaws and other local land use regulations are specifically detailed in this application. If any specific exceptions have not been listed in this application, the applicant, upon notification of such an oversight, shall promptly amend the list of waivers included herein. The List of Waivers are attached hereto in “Section 10.”

11.0 G. L. c. 40B and Local Housing Needs

The Act, provides in relevant part that all communities are required to have a minimum of ten percent (10%) of their housing stock dedicated to low and moderate income housing. See G. L. c. 40B, § 20, and 760 CMR 56.03(3) (a). Based upon most recent applicable data available, the stock of housing utilized in Milford for low to moderate income purposes is 6.3 % which is below the 10% requirement. See DHCD Subsidized Housing Inventory as of December 5, 2014, attached hereto in “Section 11”. With the

Town being below the required 10% threshold, there exists a legal presumption that there is a regional housing need which outweighs local concerns. In such case, the municipality must approve the Comprehensive Permit or approve it with conditions.

The Applicant proposes and agrees that seventy five (75) of the total number of units in the Project will be dedicated as affordable units to persons earning not more than eighty percent (80%) of the area median income.

The project will also provide much needed fully-wheel chair accessible and adaptable units to the Milford housing inventory.

The affordable units will be made available on a lottery basis, on terms acceptable to the Subsidizing Agency, in accordance with applicable fair housing law.

12.0 Filing with Other Boards

In addition to this filing the Applicant will submit a Notice of Intent to the Conservation Commission and GWD/ PWTF information to the Board of Health.

13.0 Additional Information

The Applicant reserves the right to provide, and anticipates providing, additional information to the Board of Appeals during the course of the hearing process.

14.0 Phasing

The Applicant does not currently plan to phase the Project. The Applicant reserves the right to propose phasing, if necessary.

15.0 Finding of Fact

The applicant respectfully requests the Board of Appeals, after complying with the procedural requirements as provided by law, to issue to the applicant a Comprehensive Permit for the development.

1. E M Street LLC an organization within the meaning of General Laws, Chapter 40B, is eligible to receive a subsidy under a state or federal affordable housing program after a Comprehensive Permit has been granted.
2. The applicant has shown evidence of its site control to qualify it as a recipient of a Comprehensive Permit for this site.

3. DHCD, as the Program Administrator of the New England Fund Program, will be the subsidizing agency within the meaning of the regulations of 40B (760 CMR 56.04) and within the meaning of the procedural regulations of the Housing Appeals Committee (760 CMR 56.07).
4. The number of low or moderate income housing units in the town of Milford constitutes less than ten percent (10%) as reported in the latest decennial census of the town and reported by the Department of Housing & Community Development.
5. The development as proposed in the application is consistent with local needs within the meaning of General Laws, Chapter 40B, Section 20.

The applicant respectfully requests the Board of Appeals after complying with the procedural requirements as provided by law, issue to the applicant a Comprehensive Permit for the development.

16.0 Summary

The within Application proposes an attractive, well-designed affordable housing development that will address a long-standing and serious shortage of affordable and elderly housing. The Site design and existing conditions afford ample area to accommodate the proposed development. Moreover, the Project has been designed to minimize and mitigate potential impacts to municipal systems and services.

The Applicant respectfully submits the Project will meet a severe regional and local need for affordable rental housing while also addressing the health, safety, and environmental concerns of Milford residents.

Respectfully submitted,

E M Street LLC

Steven N. Zieff

Eden Management Inc.



Corporations Division

Business Entity Summary

ID Number: 271321714

[Request certificate](#)

[New search](#)

Summary for: EM STREET MILFORD, LLC

The exact name of the Domestic Limited Liability Company (LLC): EM STREET MILFORD, LLC

Entity type: Domestic Limited Liability Company (LLC)

Identification Number: 271321714

Old ID Number: 000993866

Date of Organization in Massachusetts:
01-15-2009

Last date certain:

The location or address where the records are maintained (A PO box is not a valid location or address):

Address: 171 LOCKE DRIVE

City or town, State, Zip code, MARLBOROUGH, MA 01752 USA

Country:

The name and address of the Resident Agent:

Name: JOHN W. DOWNS

Address: 171 LOCKE DR.

City or town, State, Zip code, MARLBORO, MA 01752 USA

Country:

The name and business address of each Manager:

Title	Individual name	Address

In addition to the manager(s), the name and business address of the person(s) authorized to execute documents to be filed with the Corporations Division:

Title	Individual name	Address
SOC SIGNATORY	JOHN W. DOWNS	171 LOCKE DR. MARLBORO, MA 01752 USA

The name and business address of the person(s) authorized to execute, acknowledge, deliver, and record any recordable instrument purporting to affect an interest in real property:

Title	Individual name	Address
REAL PROPERTY	JOHN W. DOWNS	171 LOCKE DR. MARLBORO, MA 01752 USA

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consent	Confidential Data	Merger Allowed	Manufacturing

View filings for this business entity:

ALL FILINGS

Annual Report

Annual Report - Professional

Articles of Entity Conversion

Certificate of Amendment

Certificate of Cancellation

View filings

Comments or notes associated with this business entity:

[New search](#)

Selected Projects

Communities / Municipality

55 Hope Street, Brooklyn – 92 dwelling conversion of industrial use.

680 South Avenue, Weston – 16 dwelling conversion of religious use.

Longview Place, Waltham – 348 dwelling revitalization of health care site.

Cronin's Landing, Waltham – 281 dwelling / 25,500 sf retail revitalization of abandoned urban core.

Boott Mills West, Lowell – 58 dwelling loft style conversion of National Historic Designation mill property.

Avalon Bear Hill, Waltham – 324 dwelling multifamily zoning conversion.

Forest Park of Auburn, Auburn – 87 dwelling revitalization of failed initiative.

The Village at Pillsbury Pond, Georgetown – 32 dwelling residential use.

The Village at Vinnin Square, Salem – 516 dwelling / 123 Bed / 35,000 sf PUD.

John W. Weeks House, Newton – 67 dwelling conversion of academic use.

Riverside Towers, Medford – 200 dwelling conversion of industrial use.

Environments / Municipality

Children's Hospital Boston, Waltham – Revitalization of 220 bed acute care hospital.

Beit Olam Cemetery I & II, Wayland – creation and execution.

Wayland Weston Rowing Association Boat House, Wayland – creation and execution.

Wayland Public Safety Building, Wayland – creation and execution.

Temple Shir Tikva I & II, Wayland - creation and execution.

S.S. Pierce, Coolidge Corner – design build historic rehabilitation.

Hillside Dormitories, Bentley College, Waltham – design build new construction.

Infrastructure / Municipality

Legacy Farms, Hopkinton – heavy, wet and dry infrastructure.

Moody Street Redevelopment, Waltham – heavy, wet and dry infrastructure.

Hope Avenue Redevelopment District, Waltham – heavy wet and dry infrastructure.

Loring Avenue Improvement District, Salem – wet infrastructure.



Massachusetts Housing Finance Agency
One Beacon Street, Boston, MA 02108

TEL: 617.854.1000 | FAX: 617.854.1091
VP: 866.758.1435 | www.masshousing.com

August 15, 2016

Steven N. Zieff
Eden Management Inc.
80 Hope Avenue, Suite 512
Waltham, MA 02453

**Re: Robsham Village
Project Eligibility/Site Approval
MassHousing ID No. 825**

Dear Mr. Zieff:

This letter is in response to your application as "Applicant" for a determination of Project Eligibility (Site Approval) pursuant to Massachusetts General Laws Chapter 40B ("Chapter 40B"), 760 CMR 56.00 (the "Regulations") and the Comprehensive Permit Guidelines issued by the Department of Housing and Community Development ("DHCD") (the "Guidelines" and, collectively with Chapter 40B and the Regulations, the "Comprehensive Permit Rules"), under the New England Fund ("NEF") Program ("the Program") of the Federal Home Loan Bank of Boston ("FHLBB").

Eden Management Inc. has submitted an application with MassHousing pursuant to Chapter 40B. You have proposed to build 300 units of rental housing (the "Project") on approximately 119.9 acres of land located on Route 16/East Main Street (the "Site") in Milford (the "Municipality"). In accordance with the Comprehensive Permit Rules, this letter is intended to be a written determination of Project Eligibility ("Site Approval") by MassHousing acting as Subsidizing Agency under the Guidelines, including Part V thereof, "Housing Programs In Which Funding Is Provided By Other Than A State Agency."

MassHousing has performed an on-site inspection of the Site, which local boards and officials were invited to attend, and has reviewed the pertinent information for the Project submitted by the Applicant, the Municipality and others in accordance with the Comprehensive Permit Rules.

Municipal Comments

The Municipality was given a thirty (30) day period, in which to review the Site Approval application and submit comments to MassHousing. At the request of the Municipality this period was extended by 30 additional days. Richard A. Villani, Milford Town Administrator, submitted a letter written on behalf of the Board of Selectmen, (received by MassHousing on August 3, 2016) summarizing comments from municipal officials, staff, and members of the public.

Municipal comments identified the following major specific area of concern:

- Municipal officials expressed concern that existing Town infrastructure was insufficient to serve a Project of this size at the proposed location. They stated that the Project could not be served by the Town's sewer system without significant upgrades to the East Main Street Pump Station. Similarly, the Milford Water Company advised that required fire flows and pressure could not be provided to the Project without replacement of the existing water main on East Main Street.
- Milford Public Safety officials suggested that a multi-family project of this size would result in a dramatic increase in demand for service, and would require additional staff and resources.
- Town comments included concerns about Project impacts on the already high levels of traffic volume on Route 16, and associated reductions in level of service and increased risks for area drivers and pedestrians. In particular, the Town Engineer noted that the sight lines from the proposed Project entrance onto Route 16 were insufficient and advised that a line-of-sight easement over adjacent property would be necessary.
- The Town expressed concern with the Project's environmental impacts. The Town Engineer noted that the Site features multiple certified vernal pools, endangered species habitat, and large wetland areas, and warned that extensive grading and earth work required to construct the project could alter drainage patterns, resulting in potential damage to on and off-site natural resources.
- Public Safety Officials expressed concern that as currently designed, the Site Plan did not provide adequate access to project buildings, and, in particular, the proposed subsurface parking areas. They further noted the lack of a secondary or emergency access in and out of the Site, and associated public safety risks for project residents.
- Municipal officials expressed the opinion that the Project was inconsistent with Town planning goals, noting that its location within an area zoned Business Development would eliminate the opportunity for the potential economic benefit associated with commercial development. They further noted that the Project's remote location at the Milford/Holliston line had only limited access to public transit, and was not within walking distance to shops and services.
- The Town Engineer expressed concern that the size, height and style of the Project were out of context with surrounding building typology, characterized by traditional, single-family homes. This concern was reiterated by MassHousing's Design and Technical staff (D&T) in their review of the Project.
- The Town Planner expressed concerns about the project's financial feasibility, and suggested that the necessary infrastructure upgrades, extensive site grading, and wetlands replication required to construct the Project were not adequately reflected in the pro-forma.

Comments Outside of the Findings

While Comprehensive Permit Rules require MassHousing, acting as Subsidizing Agency under the Guidelines, to “accept written comments from Local Boards and other interested parties” and to “consider any such comments prior to issuing a determination of Project Eligibility,” they also limit MassHousing to specific findings outlined in 760 CMR 56.04(1) and (4). The following comments submitted to MassHousing identified issues that are not within the scope of our review:

- The Superintendent of the Milford Public Schools expressed concern about the Project’s potential impacts on school population, and advised further study prior to approval.

MassHousing Determination

MassHousing staff has determined that the Project appears generally eligible under the requirements of the Program, subject to final review of eligibility and to Final Approval. As a result of our review, we have made the findings as required pursuant to 760 CMR 56.04(1) and (4). Each such finding, with supporting reasoning, is set forth in further detail on Attachment 1 hereto.

Based on MassHousing’s site and design review, and in light of feedback received from the Municipality, the following issues should be addressed prior to the submittal of your application for a Comprehensive Permit from the Milford Zoning Board of Appeals (ZBA), and you should be prepared to explore them more fully in the local hearing process:

1. Development of this Site will require compliance with all state and federal environmental laws, regulations and standards applicable to existing conditions and to the proposed use related to building construction, stormwater management, and wastewater collection and treatment. The Applicant should expect that the Municipality will require evidence of such compliance prior to the issuance of a building permit for the Project.
2. The Applicant should be prepared to provide detailed information relative to the proposed water and sewer expansion, identify potential impacts to existing service and capacity, and discuss appropriate mitigation.
3. The Applicant should be prepared to provide sufficient data to assess potential traffic impacts on area roadways and intersections, and to discuss appropriate mitigation. In particular, the Applicant should be prepared to address Municipal concerns relative to Project impacts on existing high levels of traffic volume.
4. The Applicant should be prepared to address Town concerns relative to the adequacy of sight distances at the proposed intersection of the site drive with Route 16.
5. The Applicant should provide a detailed stormwater management plan identifying erosion and sedimentation control and stormwater management measures to be implemented during and after construction.

6. The Applicant should be prepared to respond to concerns about Project impacts to on-site natural resources, including vernal pools, wetlands and wildlife, and to provide appropriate mitigation.
7. The Applicant should be prepared to verify that the site plan is fully compliant with public safety standards relative to the provision of unimpeded access for emergency vehicles both in and out of the Site, as well as along internal routes of circulation.
8. The Applicant should work with the Municipality to address concerns relative to the height, bulk, mass and design of proposed Project buildings. In particular, the Applicant should explore possible modifications to building elevations, including the incorporation of materials and design details intended to enhance the Project's compatibility within the surrounding neighborhood context.
9. In light of the number of two and three bedroom units, the site plan should include dedicated play space for young children. The Applicant should also provide information relative to snow storage, mail delivery, and trash pick-up.

This Site Approval is expressly limited to the development of no more than 300 rental units under the terms of the Program, of which not less than 25% (77) of such units shall be restricted as affordable for low or moderate income persons or families as required under the terms of the Guidelines. It is not a commitment or guarantee of NEF financing and does not constitute a site plan or building design approval. Should you consider, prior to obtaining a comprehensive permit, the use of any other housing subsidy program, the construction of additional units or a reduction in the size of the Site, you may be required to submit a new Site Approval application for review by MassHousing. Should you consider a change in tenure type or a change in building type or height, you may be required to submit a new site approval application for review by MassHousing.

For guidance on the comprehensive permit review process, you are advised to consult the Guidelines. Further, we urge you to review carefully with legal counsel the M.G.L. c.40B Comprehensive Permit Regulations at 760 CMR 56.00.

This approval will be effective for a period of two years from the date of this letter. Should the Applicant not apply for a comprehensive permit within this period this letter shall be considered to be expired and no longer in effect unless MassHousing extends the effective period of this letter in writing. In addition, the Applicant is required to notify MassHousing of the following: (1) the Applicant applies to the local ZBA for a Comprehensive Permit, (2) the ZBA issues a decision and (3) any appeals are filed.

Should a comprehensive permit be issued, please note that prior to (i) commencement of construction of the Project or (ii) issuance of a building permit, the Applicant is required to submit to MassHousing a request for Final Approval of the Project (as it may have been amended) in accordance with the Comprehensive Permit Rules (see especially 760 CMR 56.04(07) and the Guidelines including, without limitation, Part III thereof concerning Affirmative Fair Housing Marketing and Resident Selection). Final Approval will not be issued

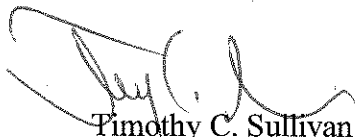
Robsham Village
MassHousing #842

Affirmative Fair Housing Marketing and Resident Selection). Final Approval will not be issued unless MassHousing is able to make the same findings at the time of issuing Final Approval as required at Site Approval.

Please note that MassHousing may not issue Final Approval if the Comprehensive Permit contains any conditions that are inconsistent with the regulatory requirements of the New England Fund Program of the FHLBB, for which MassHousing serves as Subsidizing Agency, as reflected in the applicable regulatory documents. In the interest of providing for an efficient review process and in order to avoid the potential lapse of certain appeal rights, the Applicant may wish to submit a "final draft" of the Comprehensive Permit to MassHousing for review. Applicants who avail themselves of this opportunity may avoid significant procedural delays that can result from the need to seek modification of the Comprehensive Permit after its initial issuance.

If you have any questions concerning this letter, please contact Katy Lacy at (617) 854-1098

Sincerely,



Timothy C. Sullivan
Executive Director

cc: Ms. Chrystal Kornegay, Undersecretary, DHCD
William D. Buckley, Chairman, Board of Selectmen
David R. Consigli, Chairman, Zoning Board of Appeals
Larry L. Dunkin, Town Planner
Richard A. Villani, Town Administrator

Attachment 1

760 CMR 56.04 Project Eligibility: Other Responsibilities of Subsidizing Agency
Section (4) Findings and Determinations

Robsham Village, Milford, MA MH # 842

After the close of a 30-day review period and extension, if any, MassHousing hereby makes the following findings, based upon its review of the application, and taking into account information received during the site visit and from written comments:

(a) that the proposed Project appears generally eligible under the requirements of the housing subsidy program, subject to final approval under 760 CMR 56.04(7);

The Project is eligible under the NEF housing subsidy program and at least 25% of the units will be available to households earning at or below 80% of the Area Median Income (AMI), adjusted for household size, as published by the U.S. Department of Housing and Urban Development ("HUD"). The most recent HUD income limits indicate that 80% of the current median income for a four-person household in Milford is \$65,700.

Proposed affordable rent levels of \$1094 for a studio apartment, \$1172 for a one-bedroom unit, \$1373 for a two-bedroom unit and \$1573 for a three-bedroom unit accurately reflect current affordable rent levels for the Worcester HMFA under the NEF Program, plus utility allowances of \$126, \$135, \$195, and \$239 for the studio, one, two- and three-bedroom units, respectively.

A letter of interest was provided by Rockland Trust, a member bank of the Federal Home Loan Bank of Boston.

(b) that the site of the proposed Project is generally appropriate for residential development, taking into consideration information provided by the Municipality or other parties regarding municipal actions previously taken to meet affordable housing needs, such as inclusionary zoning, multifamily districts adopted under c.40A, and overlay districts adopted under c.40R, (such finding, with supporting reasoning, to be set forth in reasonable detail);

Based on MassHousing staff's site inspection, internal discussions, and a thorough review of the application, MassHousing finds that the Site is suitable for residential use and development and that such use would be compatible with surrounding uses.

The Site has good access to I-495 and Route 16, which is a primary route in the area. It is also close (less than one mile) to the recently redeveloped Fortune Boulevard/Quarry Drive industrial-office park (located at the intersection of 495 and Route 16), which offers a wide variety of goods, services, and places of employment. Milford does not have a DHCD Certified Housing Production Plan. According to DHCD's Chapter 40B Subsidized Housing Inventory (SHI), updated through June 9, 2016, Milford has 714 Subsidized Housing Inventory (SHI) units (6.27 % of its housing inventory), which is 423 SHI units shy of the 10% SHI threshold.

U.S. Census data from the 2010-2014 American Community Survey (ACS) further supports the need to increase the supply of affordable housing in Milford. According to the ACS, of the 10,706 households in the Town of Milford, approximately 67.6% earned less than 80% of the 2016 AMI (\$111,300); 45.7% earned less than 60% AMI; and 38.1% earned less than 50% AMI.

(c) that the conceptual project design is generally appropriate for the site on which it is located, taking into consideration factors that may include proposed use, conceptual site plan and building massing, topography, environmental resources, and integration into existing development patterns (such finding, with supporting reasoning, to be set forth in reasonable detail)

- **Relationship to Adjacent Building Typology (Including building massing, site arrangement, and architectural details):**

Nearby building typology is characterized by traditional, wood-frame, single-family houses with peaked roofs and traditional residential features including porches, dormers and multi-paned windows. The two, modern, five-story buildings proposed for Robsham Village represent a significant departure from nearby building typology, with flat roofs, cast-in place composite decking, vertical, full-story windows, and pre-cast concrete and wood toned siding. The contrast in style between old and new is mitigated by the Project's physical separation from Main Street and abutting properties, and its campus-like setting screened by vegetation on all sides.

- **Relationship to adjacent streets/Integration into existing development pattern**

The proposed Project entrance is located directly across East Main Street from Whispering Pine Drive, creating a four-way, stop-controlled intersection. Sight lines appear to be sufficient in all directions.

The surrounding area on East Main Street is sparsely developed, characterized by modest, single-family homes set back from the road on traditional, rectangular house lots. Small subdivision roadways characterized by a similar residential development pattern branch off of East Main Street at regular intervals nearby. The proposed, campus-style development, set far back from Main Street and separated by dense stands of existing vegetation, is physically and visually separated from the surrounding neighborhood.

- **Density**

The Developer intends to build 300 homes on 116.9 acres (86 buildable acres). The resulting density is 3.7 units per buildable acre, which is low for multi-family housing in any context.

- **Conceptual Site Plan**

The Site Plan concentrates development in the central, upland core of the property, separated both physically and visually from the surrounding neighborhood. Proposed site grading and clearing will result in the creation of a roughly circular, open, central plateau. A two-lane site drive leads approximately 1000' into the Site from East Main Street, terminating in a circular drive providing drop-off access to the two, multi-story buildings on either side. The majority of the parking will be located under the two buildings,

allowing for large lawn areas on all side of the buildings. The overall effect is of a residential campus.

Environmental Resources

The Site includes heavily vegetated wetland areas on all sides, along with a series of small vernal pools. Project buildings will be located on an upland plateau roughly in the center of the property, approximately 1000 feet west of the entrance on East Main Street. A second potentially buildable area of upland further to the west will be left unbuilt. The main entry drive leading into the Site from East Main Street includes two wetland crossings, which are replicated in three smaller areas nearby. The heavily vegetated wetlands surrounding the developed central core of the property effectively screen the Project from view from East Main Street and abutting areas to the north, west and south.

Topography

The Site is characterized by varying topography with wetland areas at lower elevations alternating with pockets of upland marked by periodic rock outcrops. Areas with the steepest slopes (10-15%) are located on the western portion of the Site, which will remain undeveloped.

Proposed grading will require a fairly significant amount of cut and fill, but generally follows existing site topography, resulting in the creation of a gently sloping site drive leading approximately 1000' into the Site from East Main Street to a level central plateau where the two Project buildings will be located. More steeply sloped embankment areas slope down around the perimeter of the central developed area, allowing drainage to flow towards the surrounding wetland areas.

(d) that the proposed Project appears financially feasible within the housing market in which it will be situated (based on comparable rentals or sales figures);

The Applicant proposes 300 rental apartments to be financed under the NEF Program. There will be 223 market-rate units with proposed average rent levels of \$1,536 for the studio apartments, \$1,622-\$1,971 for the one bedroom units; \$2,489-\$2,645 for the two-bedroom units; and \$2,821 for the three-bedroom units.

MassHousing's Appraisal and Marketing Department (A&M) performed a preliminary analysis of Project feasibility based on the area's market conditions and comparable rents. In summary, A&M found that the area's conventional apartment market has been very stable, with increasing occupancy rates. A&M noted that the developer's proposed market rents appear to fall partially within the range of adjusted comparable market rents for the one- and three-bedroom units but are above comparable rents for the studio and two-bedroom units.

A&M noted that while the site is in a community of higher income and home values, the proposal does not appear to include many of the amenities found at higher- end comparable properties. They also noted however, the very limited supply of newer rental apartments in Milford. A&M recommends that a full market study be conducted prior to Final Approval in order to determine the depth of the market for rental housing in this location at that time.

(e) that an initial pro forma has been reviewed, including a land valuation determination consistent with the Department's Guidelines, and the Project appears financially feasible and consistent with the Department's Guidelines for Cost Examination and Limitations on Profits and Distributions (if applicable) on the basis of estimated development costs;

MassHousing has commissioned an as "As-Is" appraisal which indicates a land valuation of \$4,700,000. A preliminary review of the Project pro-forma indicates that the per-unit construction costs are well within the normal range for similar multi-family developments in a suburban/small city context. Based on a proposed investment of \$18,447,561 in private equity, the application pro forma appears to be financially feasible and within the limitations on profits and distributions.

(f) that the Applicant is a public agency, a non-profit organization, or a Limited Dividend Organization, and it meets the general eligibility standards of the housing program; and

The Applicant must be organized as a Limited Dividend Organization. MassHousing sees no reason this requirement could not be met given information reviewed to date. The Applicant meets the general eligibility standards of the NEF housing subsidy program and has executed an Acknowledgment of Obligations to restrict their profits in accordance with the applicable limited dividend provisions.

(g) that the Applicant controls the site, based on evidence that the Applicant or a related entity owns the site, or holds an option or contract to acquire such interest in the site, or has such other interest in the site as is deemed by the Subsidizing Agency to be sufficient to control the site.

The Applicant controls the entire by virtue of a Quitclaim Deed dated January 23, 2009 recorded at the Worcester District Registry of Deeds recorded at Book 43719, page 205.



September __, 2017

Ms. Chrystal Kornegay
Undersecretary
Massachusetts DHCD
100 Cambridge Street
Suite 300
Boston MA 02114

Re Mass Housing Id # 842

Dear Undersecretary Kornegay

Please be advised that the above project, as identified by Project Eligibility Letter #842, has been submitted to the Milford Zoning Board of Appeals in the form of a Comprehensive permit.

Please do not hesitate to contact us should you have any questions.

Respectfully submitted,

Steven N. Zieff



2009 00007431

TRUSTEE'S CERTIFICATE

Bk: 43719 Pg: 203

Page: 1 of 2 01/27/2009 11:06 AM WD

I, Joyce L. Robsham, the Trustee of THE FIFTH TRUST, do hereby certify as of January 23, 2009, as follows:

1. That I am the sole Trustee of the THE FIFTH TRUST, under a Declaration of Trust dated September 13, 1963 and recorded with the Middlesex South Registry of Deeds (the "Middlesex Registry") at Book 10358, Page 469, and with the Worcester District Registry of Deeds (the "Worcester Registry") at Book 21977, Page 115, as amended by that certain Amendment to Declaration of Trust dated October 17, 1995 and filed with the Secretary of State of the Commonwealth of Massachusetts, as affected by that Resignation of Trustees to The Fifth Trust recorded with the Worcester Registry at Book 21845, Page 70 (collectively, the "Trust");

2. That said Trust is in full force and effect and has not been amended, modified or revoked in any respect;

3. That I, as Trustee of said Trust, am authorized, empowered and directed by all of the beneficiaries of said Trust, to convey all of the real property owned by the Trust, subject to and together with all rights, privileges and easements appurtenant to the Trust's interests therein, if any (the "Trust Property"), to EM Street Milford, LLC, for nominal consideration and upon such other terms and conditions as I, as Trustee, deem to be best or desirable;

4. Further, that under Sections 14 and 19(b) of the Trust, and pursuant to the direction of all beneficiaries of the Trust, Joyce L. Robsham, as Trustee, is authorized, empowered and directed in the Trust's name and behalf to sign, seal, execute, acknowledge and deliver a deed conveying the Trust Property to EM Street Milford, LLC, and any and all other instruments which she, as Trustee, deems necessary or incidental to the effectuation of the conveyance of the Trust Property as aforesaid; and

5. No beneficiary of the Trust is a minor, or incompetent, or a corporation selling all or substantially all of its Massachusetts assets, or a personal representative of an estate subject to estate tax liens.

[Signature contained on following page]

Mark Lochiatto, Esq.
Goodwin Procter LLP
53 State Street
Boston, MA 02109

57A

5

Executed as of the date first set forth above.

Joyce L. Robsham

Joyce L. Robsham, as Trustee of
THE FIFTH TRUST, and not individually

COMMONWEALTH OF MASSACHUSETTS

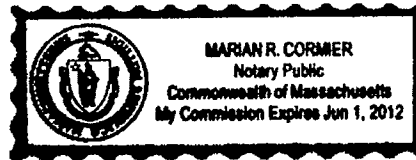
County of Middlesex, ss.

On this 23rd day of January, 2009, before me, the undersigned notary public, personally appeared Joyce L. Robsham, proved to me through satisfactory evidence of identification, which were [driver's license] or [based on the undersigned's personal knowledge of the identity of the principal], to be the person whose name is signed on the preceding document, and acknowledged to me that she signed it voluntarily for its stated purpose, as Trustee of THE FIFTH TRUST.

Marian R. Cormier

(Official Signature and Seal of Notary)

My Commission Expires:



seal

57B



Bk: 43719 Pg: 205

Page: 1 of 5 01/27/2009 11:06 AM WD

After recording return to:

Mark Lochiatto, Esq.
 Goodwin Procter LLP
 Exchange Place
 Boston MA 02109

QUITCLAIM DEED

Joyce L. Robsham, as Trustee of THE FIFTH TRUST, a Massachusetts trust under the Declaration of Trust dated September 13, 1963 and recorded with the Worcester District Registry of Deeds in Book 21977, Page 115, and with the Middlesex South District Registry of Deeds in Book 10358, Page 469 ("Grantor"), for and in consideration of less than One Hundred and No/100 Dollars (\$100.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, grants to EM Street Milford, LLC, a Massachusetts limited liability company with a mailing address of c/o Jack Downs, of Elder, Gaffey & Paine, PC, 171 Locke Drive, Marlboro, MA 01752 ("Grantee"), with **QUITCLAIM COVENANTS**, the real property located on East Main Street, Milford, Worcester County, Massachusetts, being more particularly described on Exhibit A attached hereto and incorporated herein by this reference (the "Property").

This deed and the conveyance hereinabove set forth is executed by Grantor and accepted by Grantee subject to the matters described in Exhibit B attached hereto and incorporated herein by this reference.

The Property is conveyed with the benefit of and subject to all easements, restrictions, agreements and other matters of record, insofar as now in force and applicable, and further subject to real estate taxes for the current fiscal period not yet due and payable, which the Grantee, by its acceptance hereof, hereby agrees to assume and pay.

Meaning and intending to convey and hereby conveying the remaining portion of the property held by the Grantor that is described in the deed dated July 3, 1964, recorded in the Worcester District Registry of Deeds in Book 4492, Page 19, and in the Middlesex South District Registry of Deeds in Book 10608, Page 171. The consideration for this deed being less than \$100.00, no documentary stamps need be affixed.

[Signature on following page]

Property Address: Off East Main Street,
 Milford, Massachusetts

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IN WITNESS WHEREOF, Grantor has executed this Deed as of the 23rd day of January, 2009.

THE FIFTH TRUST

By: Joyce L Robsham
Name: Joyce L. Robsham
Title: Trustee, and not individually

COMMONWEALTH OF MASSACHUSETTS

County of Middlesex

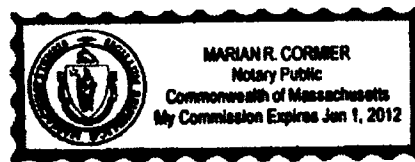
January 23, 2009

On this day, before me, the undersigned notary public, personally appeared Joyce L. Robsham, the Trustee of THE FIFTH TRUST as aforesaid, proved to me through satisfactory evidence of identification, which was [driver's license] or [based on the undersigned's personal knowledge of the identity of the principal], to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose as Trustee for THE FIFTH TRUST, a Massachusetts trust.

Marian R Cormier

Notary Public

My Commission Expires:



pt

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EXHIBIT ALegal Description

The land in Milford, Worcester County, Massachusetts and in Holliston, Middlesex County, Massachusetts, and bounded and described as follows:

A certain parcel of vacant land situated in said Milford and Holliston on the Westerly side of East Main Street, generally known as the Holliston Road, bounded and described as follows:

Beginning at the Southeasterly corner of the granted premises on the Westerly side of East Main Street at a wall at the land now or formerly of Frank S. Lobisser and Gladys M. Lobisser; thence running

NORTHERLY:	by the Westerly side of said street to a wall at land now or formerly of one Scales; thence
WESTERLY:	by last mentioned land as the wall now stands to an angle in the wall; thence
NORTHERLY:	by the wall and land of said Scales and land now or formerly of one Bragg to an angle in the wall; thence
EASTERLY:	by said Bragg land to an angle in the wall to the Westerly side of Adams Street; thence
NORTHERLY:	by the line of Adams Street to a wall at land now or formerly of one Mainini; thence
WESTERLY:	
NORTHERLY and	
EASTERLY:	by last mentioned land and by a stone wall to the Westerly side of said Adams Street; thence
NORTHERLY:	by the line of said Adams Street to the wall on the Southerly side of a private way at land now or formerly of one Fairbanks; thence
WESTERLY:	by last mentioned land to an angle in the wall at land now or formerly of one Davoran; thence
SOUTHERLY:	
and WESTERLY:	by land now or formerly of Davoran to land now or formerly of The Dodds Granite Company, Inc.; thence
SOUTHERLY:	by land of The Dodds Granite Company, Inc. and crossing the New England Power Construction Company to a corner at other land of The Dodds Granite Company, Inc., it being the Southwesterly corner of the granted premises; thence
EASTERLY:	by land of The Dodds Granite Company, Inc. to land now or formerly of one Duntley; thence
NORTHERLY:	by land now or formerly of said Duntley to a corner of a wall at a beech tree; thence
EASTERLY:	by land now or formerly of said Duntley to a wall at other land now or formerly of Frank S. Lobisser and Gladys M. Lobisser; thence

NORTHERLY: by the wall and other land now or formerly of Frank S. Lobisser, et ux, to a corner of a wall; thence
EASTERLY: by a wall and land now or formerly of Frank S. Lobisser, et ux to East Main Street and the point of beginning.

M There is excepted from the above described premises the property described in the following three (3) deeds recorded in the Middlesex South District Registry of Deeds:

1. Quitclaim Deed dated April 26, 2002, recorded in Book 35402, Page 104;
2. Confirmatory Quitclaim Deed dated September 4, 2002, recorded in Book 36499, Page 464; and
3. Quitclaim Deed dated September 10, 2002, recorded in Book 39826, Page 413

MDSX SOUTH
PLAN 425 OF 2002
MDSX SOUTH
PLAN 1017
OF 2002

and further excepting the property described in the following six (6) deeds recorded in the Worcester District Registry of Deeds:

1. Quitclaim Deed dated April 25, 1957, recorded in Book 3856, Page 582; ✓
2. Quitclaim Deed dated August 2, 1963, recorded in Book 4392, Page 167; ✓
3. Quitclaim Deed dated October 20, 1999, recorded in Book 21977, Page 125; ✓
4. Quitclaim Deed dated October 20, 1999, recorded in Book 21977, Page 129; ✓
5. Quitclaim Deed dated January 9, 2001, recorded in Book 23416, Page 23; and ✓
6. Quitclaim Deed dated January 9, 2001, recorded in Book 23474, Page 327 ✓

and further excepting Lot 8 as shown on a plan entitled "Plan of Land in Milford, Mass., Owner P. Cappellucci & Sons, Inc.", which plan is dated March 1, 1956, by Kenneth B. Oates Co., and is recorded at the Worcester District Registry of Deeds in Plan Book 214, Page 124, and Lots 16, 17, 18, 19, 20, 30, 31, 48, 49, 58 and 59 as shown on a plan entitled "Wildwood in Milford, Mass., Owned by P. Cappellucci and Sons, Inc.", which plan is dated August 2, 1956, by Kenneth B. Oates Co., and is recorded at the Worcester District Registry of Deeds in Plan Book 219, Page 124. ✓

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EXHIBIT B

Permitted Exceptions

1. Real estate taxes, a lien not yet due and payable and all general and special assessments.
2. Local, state and federal laws, ordinances or governmental regulations, including, but not limited to, building and zoning laws, ordinances and regulations, now or hereafter in effect relating to the Property.
3. Order of Conditions recorded at the Worcester District Registry of Deeds in Book 23176, Page 281, as affected by Certificates of Compliance, recorded at the Worcester District Registry of Deeds in: Book 25270, Page 079; Book 25872, Page 313; and Book 29159, Page 173.

2 DOGWOOD LANE
MAP 17 BLK 147 ALL S3A
FLY S3

1-4 DOGWOOD LANE
MAP 17 BLK 147

4 DOGWOOD LANE
MAP 17 BLK 147 LOT S3A

ALL S3A, S3B, S3C, S3D, S3E, S3F, S3G, S3H, S3I, S3J, S3K, S3L, S3M, S3N, S3O, S3P, S3Q, S3R, S3S, S3T, S3U, S3V, S3W, S3X, S3Y, S3Z

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7.0 SITE CONTEXT PHOTOS



Photo 1. East Main Street west of 495 looking easterly



Photo 2. Holliston line at East Main Street looking west.



Photo 3. Site Interior looking east toward Wildwood Road



Photo 4. Opposite project site, south side of East Main Street.



Photo 5. West of project site on East Main Street looking west.



Photo 6. At Whispering Lane looking northwest toward project site.



Photo 7. At Whispering Lane looking northeasterly.



Photo 8. East of project site on East Main Street looking westerly.



Photo 9. On Whispering Pine Drive looking southerly.



Photo 10. Site interior



Photo 11. Site interior



Photo 11. Site interior

8.0 PHOTO LOCATION MAP

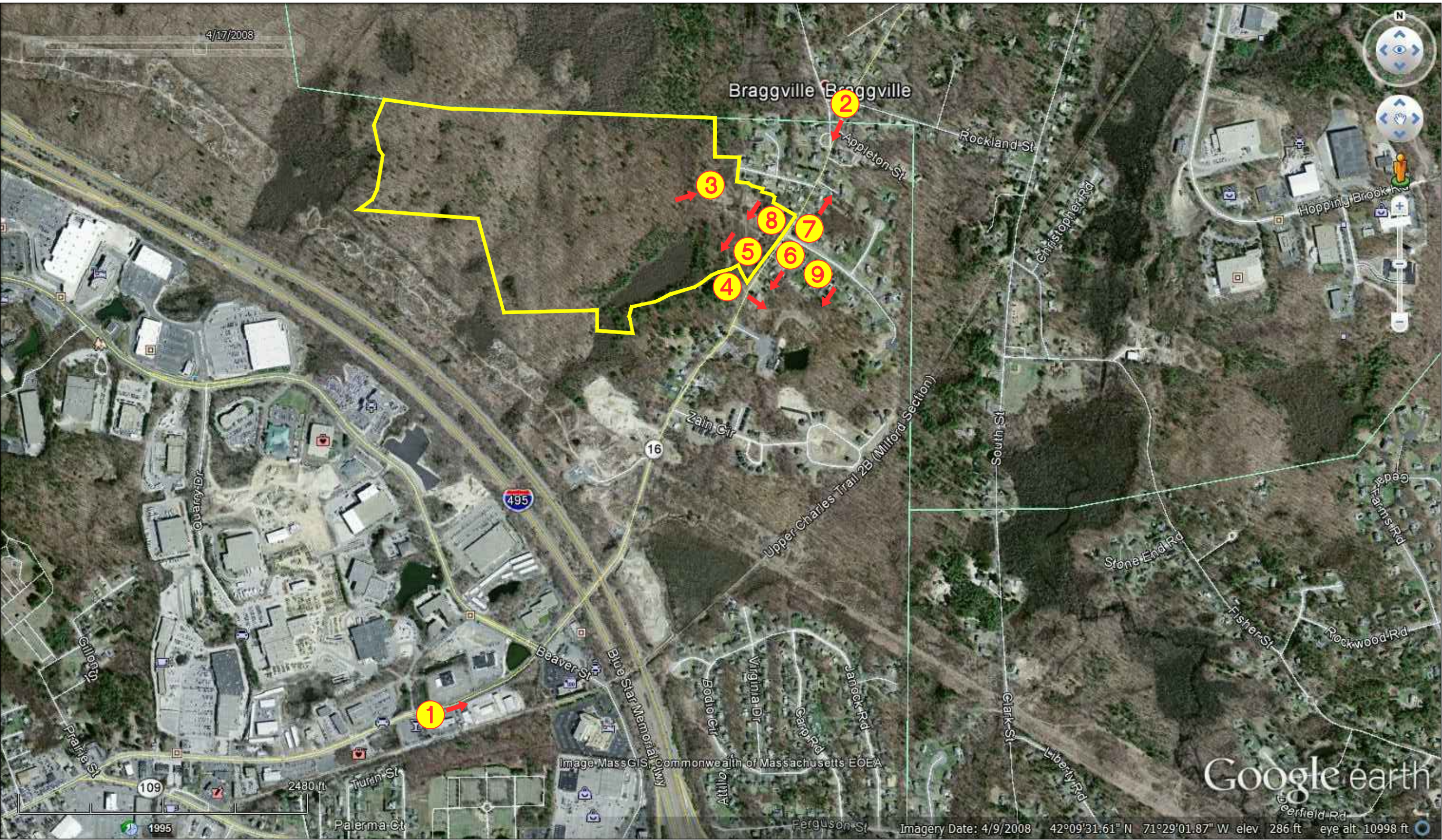


PHOTO LOCATION MAP
ROBHAM VILLAGE
462-466 EAST MAIN STREET
MILFORD, MASSACHUSETTS 01757
(MIDDLESEX COUNTY)

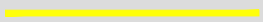
Scale: Not To Scale
Date: 05/05/2015
B+T Drawing No. 270600P005A-001
B+T Project No. 2706.00

PREPARED FOR:
EDEN
MANAGEMENT, INC.
80 HOPE AVENUE
SUITE 512
WALTHAM, MASSACHUSETTS 02453



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ALL RIGHTS RESERVED

LEGEND:



APPROXIMATE LOCUS



PHOTO LOCATIONS



PHOTO DIRECTION

Robsham Village

Proposed Residential Development Milford, Massachusetts

PREPARED FOR

Eden Management, Inc.
80 Hope Avenue, Suite 512
Waltham, MA 02453

PREPARED BY



101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

July 14, 2017

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Summary

VHB, on behalf of Eden Management, Inc. (the “Proponent”), has prepared this traffic impact and access study (the “Study”) to evaluate the impacts of a proposed 300-unit multi-family residential rental development (the “Project”) to be located at 462 – 466 East Main Street (Route 16) in Milford (the “Site”). Access for the Site is proposed via a new curb cut onto Route 16, a state highway under the jurisdiction of the Massachusetts Department of Transportation (MassDOT), directly across from Whispering Pine Drive, to form a two-way stop sign-controlled intersection.

The Study area reviewed as part of this evaluation was developed with input from both the Town of Milford as well as MassDOT-District 3 office. The Study includes an assessment of the current and future traffic conditions within the Study area. The current conditions review included an assessment of the roadway geometry, traffic controls, daily and peak hour traffic flow, assessment of sight lines and review of traffic safety data. Two future conditions were reviewed; future conditions without the proposed development and future conditions with the development. Additionally, the potential for an as-of-right one million square foot office development on the Site was also reviewed to compare the trip generation potential of an office use with that of the proposed residential development. The future conditions analysis included consideration of other planned/approved development projects that could affect traffic flow within the Study area, planned roadway improvement projects in the area, and estimation of Site generated traffic and analysis of impacts with and without the Project.

The proposed residential development is estimated to generate approximately 970 trips (entering + exiting) on an average weekday, with 150 trips (30 entering/120 exiting) during the weekday morning peak hour and 185 trips (120 entering/65 exiting) during the weekday evening peak hour. In comparison, an as-of-right office use would generate 3,780 daily vehicle trips, including approximately 1,200 peak hour vehicle trips (entering + exiting) during the weekday morning and evening peak hours.

Based on detailed capacity analyses, it was determined that the proposed residential development would not have a significant impact on traffic operations within the study area. The Proponent is committed to funding the design and construction of the following improvements, subject to review and approval by MassDOT, the following enhancements that would help further minimize the effect of Site generated traffic on area roadways:

- › Construct an eastbound left turn lane on Route 16 to accommodate vehicles waiting to turn left into the Site, without impeding through traffic flow;
- › Construct a flared approach to the Site driveway on Route 16 westbound for the traffic to decelerate as vehicles turn right into the Site;
- › Improve sight lines through selective vegetation clearing and trimming on either side of the proposed Site driveway;

- › Construct separate left and right turn lanes on the stop-sign controlled Site driveway to ensure that waiting left turning vehicles minimally impact the predominantly right turning traffic exiting the Site; and,
- › If supported by the Metrowest Regional Transit Authority (MWRTA) and the Massachusetts Department of Transportation (MassDOT), construct public bus stops on either side of Route 16 near the Site driveway; the bus stop on the far side of Route 16 from the Site would require the installation of a pedestrian crosswalk across Route 16.

1

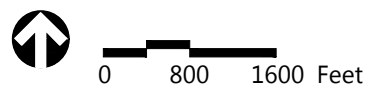
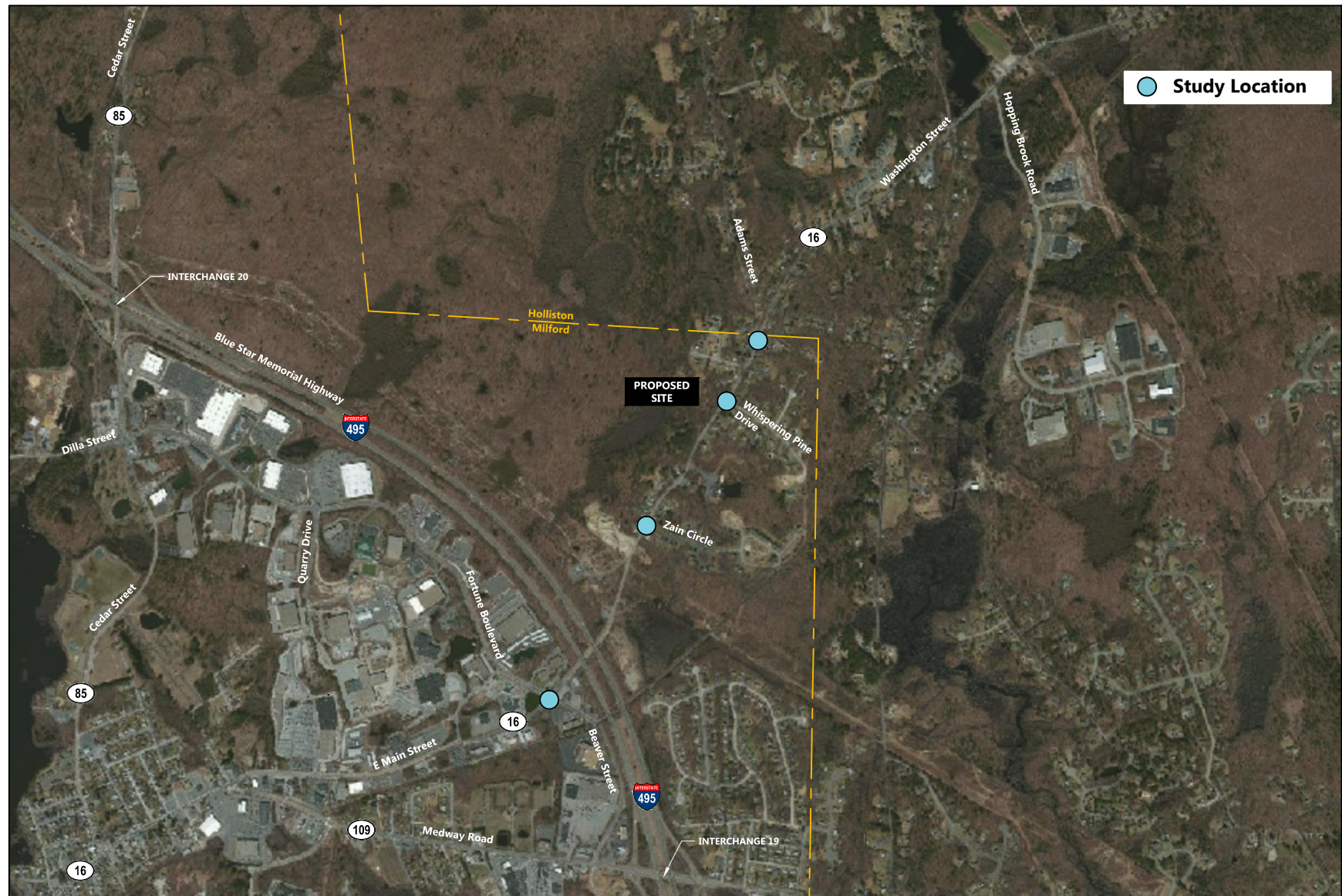
Introduction

Vanasse Hangen Brustlin, Inc. (VHB), on behalf of Eden Management, Inc. (the “Proponent”), has prepared a traffic impact and access study (the “Study”) for a proposed multi-family rental residential development (the “Project”) to be located off East Main Street (Route 16) in Milford, Massachusetts. As shown in the Site plans, the Project consists of constructing 300 residential units, surface and structured parking and associated landscape, utility and access improvements to support the proposed use.

The Study quantifies existing and projected future traffic conditions with and without the Project. Based on the analysis of the future traffic conditions, the Study includes recommendations for potential improvements at locations impacted by the Project to ensure safe and efficient access to the Site.

Site Location

Figure 1 shows a site location map. The Site is located at 462 – 466 East Main Street (Route 16) in Milford. The Site is a vacant wooded area bordered by East Main Street to the east, the Holliston town line to the north, wooded area to the west and Interstate 495 (I-495) to the south. Access to the Site is proposed off East Main Street (Route 16), generally across from an existing roadway called Whispering Pine Drive.



Project Location and
Study Area Intersections
Proposed Residential Development
Milford, Massachusetts

Figure 1

Study Methodology

In conformance with the MassDOT guidelines for traffic impact assessment, the Study was conducted in three stages. The first stage involved an assessment of existing traffic conditions in the study area and included an inventory of roadway geometry, observations of traffic flow, and collection of daily and peak period traffic counts. In the second stage, future traffic conditions without and with the Project were estimated 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 analysis consistent with MassDOT's Guidelines for traffic impact assessment. The traffic analysis identified existing and projected future roadway capacity deficiencies. The third stage of the Study evaluated measures to address traffic operational issues identified in the second stage of the Study.

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Existing Conditions

Evaluation of the traffic impacts associated with the Project requires a thorough understanding of the existing conditions in the study area including, roadway geometry, traffic controls, daily and peak hour traffic flow, and traffic safety data. Each of these elements is described in detail below.

Study Area

A study area was selected for analysis based on discussions with Planning, Engineering and Police Departments at the Town of Milford. VHB also contacted MassDOT-Planning in Boston to confirm that a separate scoping review process is not required prior to preparing the Study. Finally, MassDOT-District 3 staff was contacted to confirm the study area locations selected with input from the Town and to identify other planned MassDOT projects in the area that should be considered in the future conditions analysis. Taking into consideration the input from the Town and MassDOT staff, as well as based on an understanding of the area roadway network, the expected transportation characteristics of the Project, a study area was identified for the Project.

Specifically, the Study includes the following locations and their approach roadways. The study area locations are identified in Figure 1.

- › Route 16 at Fortune Boulevard & Beaver Street
- › Route 16 at Zain Circle
- › Route 16 at Whispering Pine Drive & Proposed Site Driveway
- › Route 16 at Adams Street

The existing conditions analysis consisted of an inventory of the traffic control, roadway, driveway and intersection geometry in the study area, the collection of daily and peak hour traffic volumes, and a review of recent crash history.

Roadway Geometry

Descriptions of the study area roadways and intersections are included below. Figure 2 shows lane configuration and traffic control at the study intersections.

Roadways

East Main Street (Route 16)

East Main Street, which is designated as State Route 16, is classified as an urban principal arterial roadway and is under the jurisdiction of MassDOT throughout the study area. Route 16 serves as the principal east-west route within the Town and generally runs in an east/west direction through the study area. Route 16 provides a connection to the neighboring communities of Hopedale and Holliston. Within the study area, East Main Street is generally a two-lane roadway, with a single travel lane in each direction; however, the roadway widens out to four-lanes just east of the signalized intersection of Fortune Boulevard, and returns to a two-lane cross-section approximately 800-feet west of Fortune Boulevard. The widening on the east and west sides of the intersection is intended to accommodate additional turn/travel lanes and for queue management at the traffic signal.

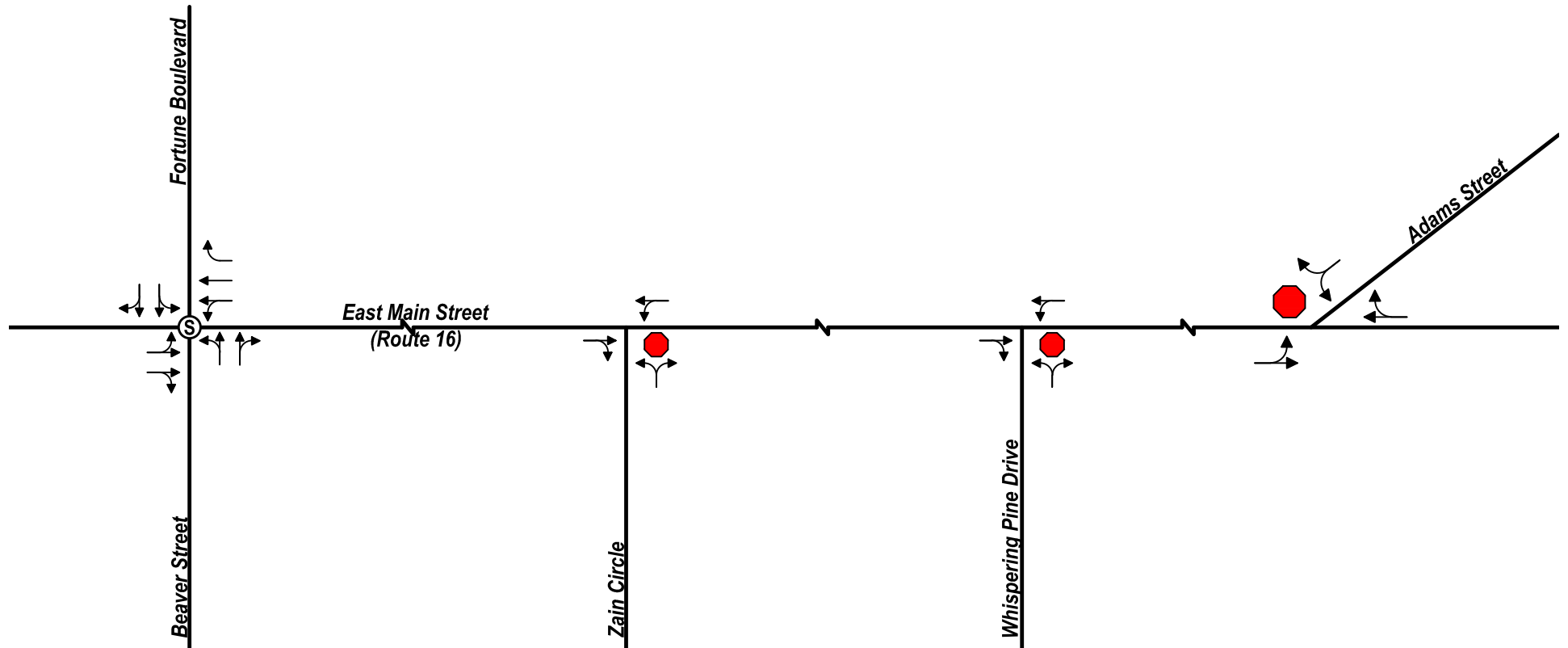
The existing pavement cross-section on East Main Street near the Site is approximately 30-feet, with 14 to 15-foot travel lanes in each direction. There is a one-foot marked shoulder in the eastbound direction and no shoulder in the westbound direction. Land use along the section of East Main Street near the Site is predominantly residential. A sand and gravel facility is located generally to the southwest of the Site. Land use is predominantly commercial properties west of I-495. The posted speed limit on Route 16 eastbound is 45 miles per hour (mph). Posted speed limit signs were not visible in the westbound direction.

Intersections

East Main Street (Route 16) at Fortune Boulevard & Beaver Street

East Main Street is intersected from the north by Fortune Boulevard and from the south by Beaver Street to form a four-way, fully actuated, signalized intersection. The East Main Street eastbound approach consists of two general purpose travel lanes, while the westbound approach consists of a shared left-turn/through lane, a through lane and a 90-foot long designated right-turn lane. The northbound Beaver Street

- Ⓢ Signalized Intersection
- ⬡ Stop Controlled Approach



Not to Scale



Study Area Intersections
Lane Geometry and Traffic Control
Proposed Residential Development
Milford, Massachusetts

Figure 2

approach consists of two general purpose lanes, while the southbound Fortune Boulevard approach consists of an approximately 260-foot long designated left-turn lane and a shared through/right-turn lane. The Fortune Boulevard left-turn movement operates under protected/permissive signal phasing, with an overlapping westbound right-turn phase.

East Main Street (Route 16) at Zain Circle

Zain Circle intersects East Main Street from the south to form a three-way, 'T'-type unsignalized intersection. The Zain Circle approach provides one 12-foot shared left- and right-turning lane and is under STOP sign control. East Main Street consists of single shared through and turn lanes in each direction.

East Main Street (Route 16) at Whispering Pine Drive

Whispering Pine Drive intersects East Main Street from the south to form a three-way, 'T'-type unsignalized intersection. The Whispering Pine Drive approach provides one 12-foot shared left- and right-turning lane and is under STOP sign control. East Main Street consists of single shared through and turn lanes in each direction. As noted earlier, the proposed Site driveway from the north will align with Whispering Pine Drive to form a four-way intersection.

East Main Street (Route 16) at Adams Street

Adams Street intersects East Main Street from the north at an approximately 60-degree skew to form a three-way, 'Y'-type unsignalized intersection. Adams Street provides one shared left- and right-turning lane and is under STOP sign control. East Main Street consists of single shared through and turn lanes in each direction.

Traffic Volumes

Traffic volumes for the study area roadways and intersections were recorded in February 2017. Peak hour turning movement and classification (TMC) counts were collected at all study area intersections, except Zain Circle, on Thursday, February 16, 2017 from 7:00 to 9:00 AM and 4:00 to 6:00 PM, which are consistent with the commuter peak hours that are typically analyzed for residential projects. Data for the intersection of East Main Street and Zain Circle was collected on Tuesday, February 28, 2017.

In addition, automatic traffic recorder (ATR) counts were conducted for a period of 72 hours along East Main Street, east of Zain Circle, between February 28th and March 2nd. The ATR count is summarized in Table 1.

Table 1 Existing Daily Traffic Volumes

Location	Daily ^a	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
	Weekday	Volume ^b	K Factor ^c	Dir. Dist. ^d	Volume ^b	K Factor ^c	Dir. Dist. ^d
East Main Street	13,800	1,090	8%	59% EB	1,205	9%	60% WB

Source: Based on automatic traffic recorder (ATR) counts conducted on East Main Street west of Whispering Pine Drive between February 28, 2017 and March 1, 2017

a Average daily traffic (ADT) volume expressed in vehicles per day

b Peak period traffic volumes expressed in vehicles per hour

c Percent of daily traffic that occurs during the peak period

d Directional distribution of peak period traffic

Note: Peak hours do not necessarily coincide with the peak hours of the individual intersection turning movement counts

The ATR counts indicate that on a typical weekday, approximately 13,800 vehicles per day (vpd) travel along Route 16, west of Whispering Pine Drive. Commuter peak hours represent approximately 8 to 9 percent of the daily traffic along Route 16. The distribution of traffic volumes along Route 16 reflect that of a commuter roadway, with a majority of traffic traveling east during the morning peak hour and approximately the same percentage traveling west in the evening.

Seasonal Adjustment

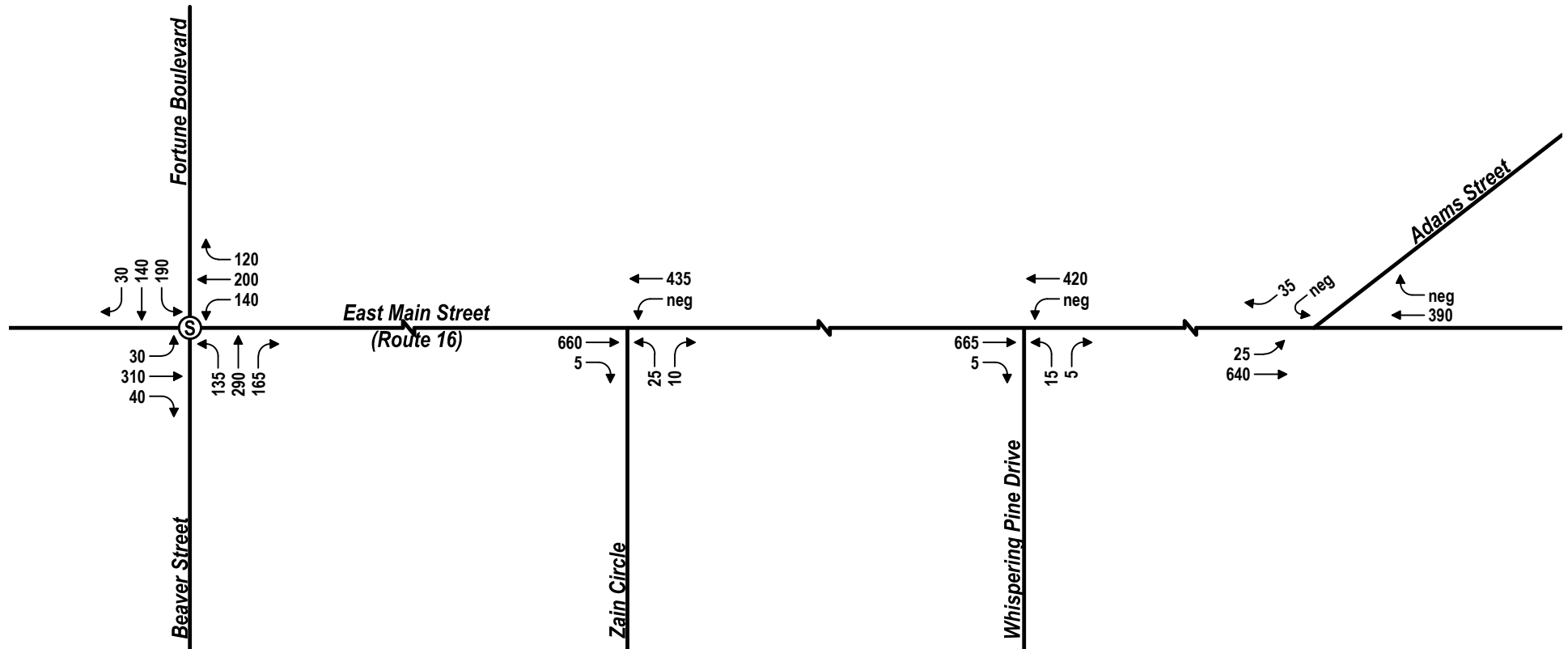
The traffic data collected for this Project was obtained during the month of February. To quantify the seasonal variation of traffic volumes in the area, historic traffic data available from MassDOT was reviewed. According to published MassDOT seasonal factors, February traffic counts are lower than average month conditions by one percent. To account for the seasonal variation, all traffic volumes were adjusted upwards by one-percent to reflect average month conditions. Where appropriate, traffic volumes were balanced between the intersections. The resulting 2017 Existing traffic volume networks for the weekday morning and weekday evening peak hours are presented in Figures 3 and 4.

Crash History

To identify crash trends in the study area, the most current crash data was obtained for the study area intersections from MassDOT for a five-year period (2010 through 2014). A summary of the data is presented in Table 2. In addition, the latest five years of data was also requested from the Milford Police Department. The data obtained from MassDOT will be compared to the data from the Police Department when it is available.

A review of the crash data in Table 2 indicates that over the five years of reported data, a total of 63 crashes occurred at the intersection of Route 16 with Fortune Boulevard and Beaver Street. Per MassDOT, the MassDOT District 3 average crash rate is 0.90 for signalized intersections. The crash rates represent the number of reported crashes for every million vehicles that pass through an intersection. The calculated intersection crash rate at this location is 1.33, which is above the District average for similar intersections. The majority of crashes at this location were of the

Ⓢ Signalized Intersection
neg = Negligible

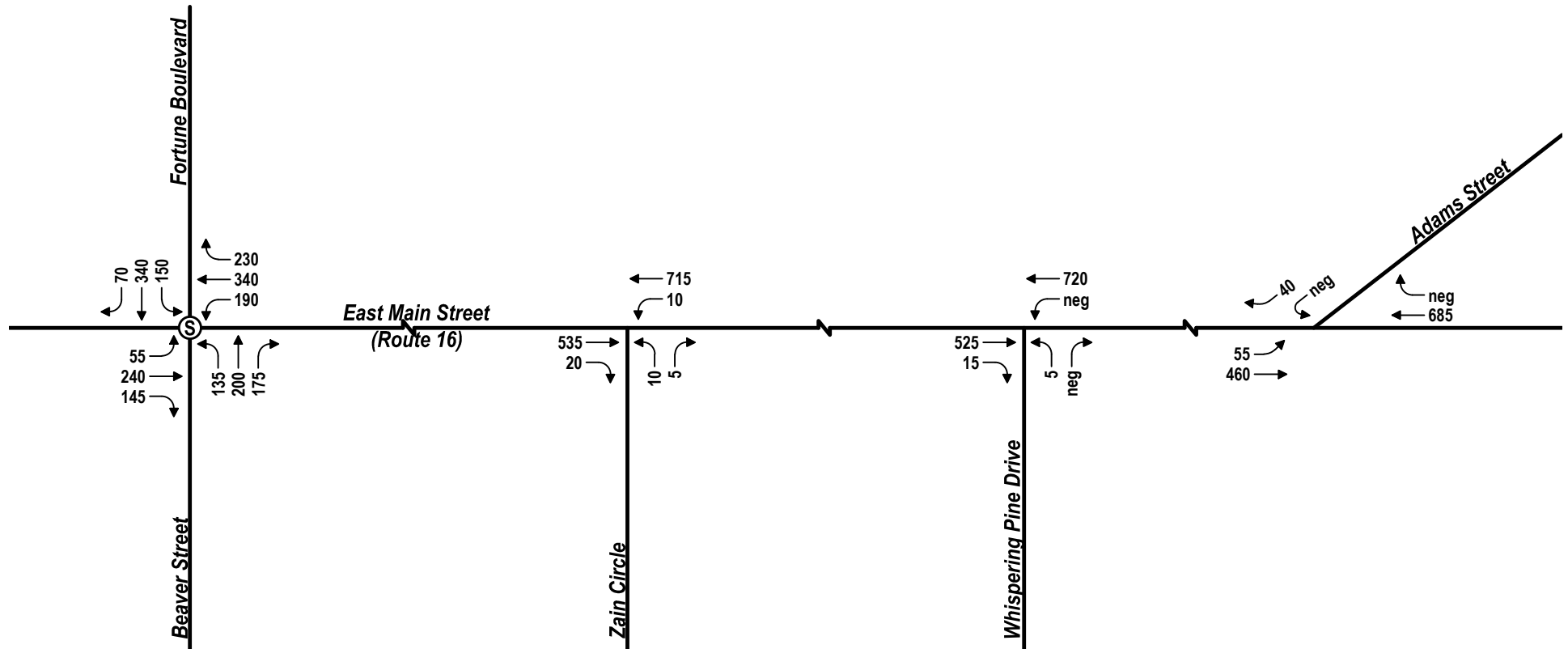


Not to Scale



Figure 3
2017 Existing Conditions
Weekday Morning Peak Hour Traffic Volumes
Proposed Residential Development
Milford, Massachusetts

Ⓢ Signalized Intersection
neg = Negligible



Not to Scale



Figure 4
2017 Existing Conditions
Weekday Evening Peak Hour Traffic Volumes
Proposed Residential Development
Milford, Massachusetts

angle variety, which is not typical for a signalized intersection. This is likely attributable to the high percentage of turning vehicles at this intersection. As discussed later in this report, this intersection is the subject on an on-going MassDOT improvement project. A Road Safety Audit (RSA) was conducted by MassDOT for the location as part of their design project. The RSA report identifies potential safety enhancements that would be considered by MassDOT during the design of the intersection improvements.

Over the same time period as the intersection analysis, an additional 22 crashes occurred along Route 16 between the I-495 overpass and Adams Street. For this area, a segment crash rate was calculated. The average crash rate for an urban principal arterial is 3.33 crashes per million vehicle miles travelled. The calculated crash rate for this segment of Route 16 is 1.12, which is less than the statewide average for similar roadways.

Table 2 Crash Analysis

	E. Main St. & Fortune Blvd./Beaver St.	Route 16 (I-495 to Adams Street)
Year		
2010	8	3
2011	19	3
2012	16	6
2013	8	3
2014	12	7
Total	63	22
Collision Type		
Angle	26	5
Head-on	3	0
Rear-end	18	6
Sideswipe, opposite direction	2	3
Sideswipe, same direction	7	0
Single vehicle crash	6	8
Unknown	1	0
Total	63	22
Crash Severity		
Fatal injury	0	0
Non-fatal injury	14	6
Property damage only (none injured)	48	15
Not Reported	1	1
Total	63	22
Time of Day		
Weekday, 7:00 AM - 9:00 AM	6	0
Weekday, 4:00 PM - 6:00 PM	9	5
Saturday, 11:00 AM - 2:00 PM	6	1
Weekday, other time	25	12
Weekend, other time	17	4
Total	63	22
Pavement Conditions		
Dry	47	18
Wet	13	3
Snow	2	1
Slush	1	0
Other	0	0
Total	63	22
Non Motorist (Bike, Pedestrian)	1	0

Public Transportation

As part of the Study, VHB reviewed currently available public transportation options for residents of Milford. The following is a summary of the available services.

- › There are three MBTA commuter rail stations within a radius of approximately 10-miles from the Site, with the closest station located approximately nine miles to the north, in Southborough.
- › The MWRTA runs two bus routes in Milford. Bus Route 6, which runs along the Site frontage, runs between the MWRTA depot and Milford Town Hall. The MWRTA depot in Framingham provides connections to multiple other MWRTA lines in the metrowest/I-495 area. Bus Route 6 also provides a connection to the Framingham commuter rail station on Waverly Street (Route 135).
- › To the south, bus Route 6 also provides a connection to bus Route 14 which provides local service around Downtown Milford and various other town municipal and institutional services/destinations.

3

Future Conditions

Traffic volumes in the study area were projected to the year 2024, which reflects a seven-year traffic-planning horizon. Independent of the Project, volumes on the roadway network under year 2024 No-Build conditions were assumed to include existing traffic and new traffic resulting from background traffic growth. Under the Build condition, traffic that would be generated by the Project were estimated and added to reflect the year 2024 Build conditions.

Background Traffic Growth

Traffic growth on area roadways is a function of the expected land development, economic activity, and changes in demographics. Several methods can be used to estimate this growth. A procedure frequently employed is to estimate an annual percentage increase and apply that increase to study area traffic volumes. An alternative procedure is to identify estimated traffic generated by planned new major developments that would be expected to impact the project study area roadways. For the purpose of this assessment, both methods were utilized.

Historic Traffic Growth

To determine an applicable annual growth rate, a review of previous studies conducted for projects in the vicinity of the Site were reviewed. Based on this review, and to maintain consistency with the prior studies, an annual growth rate of one percent was used for the future conditions traffic analyses.

Site-specific Growth

In addition to accounting for background growth, the traffic associated with other planned and/or approved developments near the Site were considered. Based on information available from other recent studies and discussions with Town Planning Department, the following projects that could generate additional traffic through the study area were included:

- › A **Concrete Batch Plant** is currently under construction off East Main Street, just east of I-495.
- › **120 to 128 Medway Street** involves the redevelopment of an existing retail plaza that previously housed K-Mart, World Fitness and Bugaboo Creek Steakhouse.
- › **Route 85 Gas Station** involves the construction of a proposed gas station with convenience store and drive-thru coffee shop at 111 Cedar Street (Route 85). This development is currently under review by the Planning Board.
- › **Restaurant Depot**, a warehouse retail use, is proposed on Cedar Street, generally to the west of the Site. This development will be located in the northeast quadrant of the I-495/Route 85 interchange, and part of the Stone Ridge office park site.

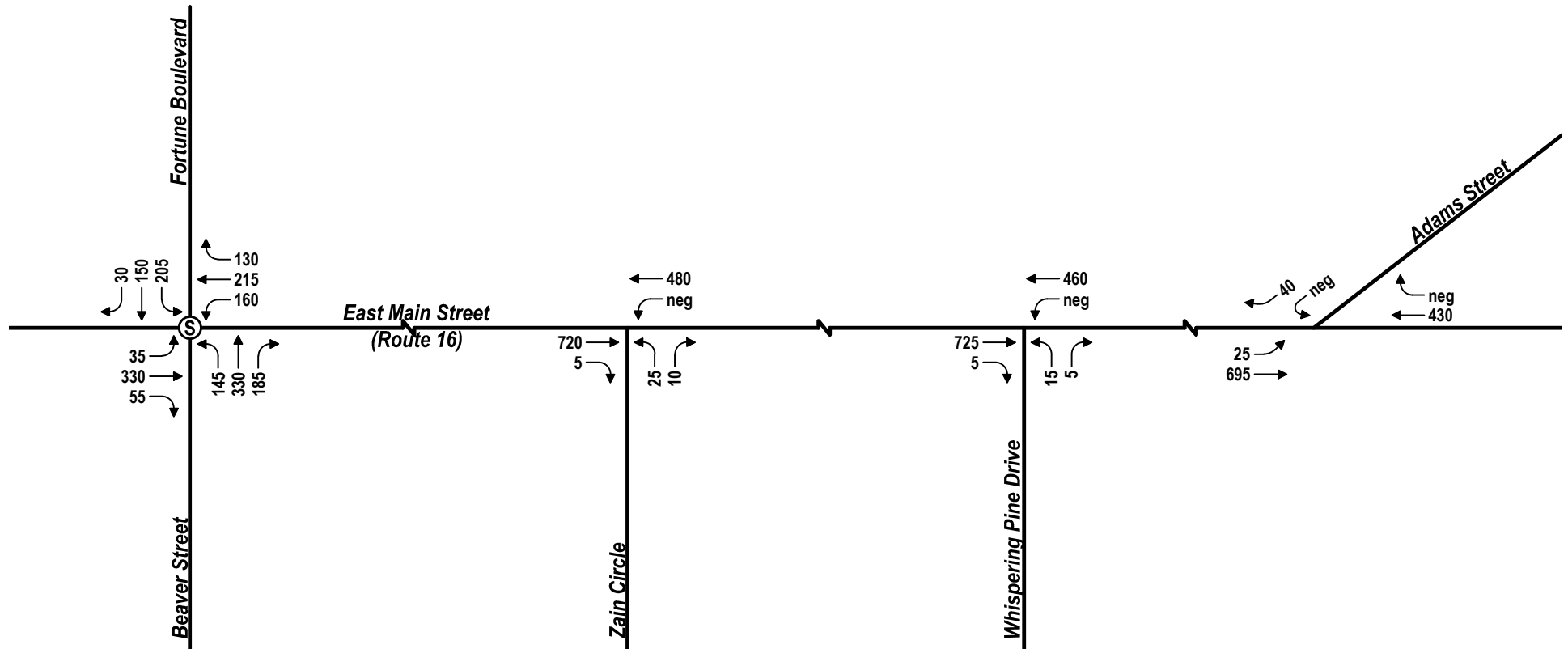
Traffic estimates for the above developments were obtained from record traffic studies filed for the projects with the Town of Milford and added to the future No-Build condition traffic networks. The resulting 2024 No-Build traffic volume networks for the weekday morning and weekday evening peak hours are presented in Figures 5 and 6.

Planned Transportation Projects in the Area

Planned roadway improvements in the area that may affect future traffic operations were taken into consideration. Specifically, MassDOT and the Town indicated that Route 16 between Route 109 and Beaver Street will be reconstructed by MassDOT in the future (MassDOT Project #608045). The Project is currently at the preliminary design stage. The designer for the project indicated that 25% design plans will be ready in summer 2017. A Road Safety Audit was completed by MassDOT in March 2017 as part of their roadway design project.

While the MassDOT project is expected to result in the reconstruction of the signalized intersection of Route 16 with Fortune Boulevard and Beaver Street, currently there is no available information on the scope of the proposed improvements. Therefore, no geometric changes were assumed for the intersection in the future conditions analysis. Since an intersection upgrade is generally accompanied by the replacement of existing outdated traffic signal equipment and traffic signal timing are adjusted to account for current traffic volumes, all future

Ⓢ Signalized Intersection
neg = Negligible



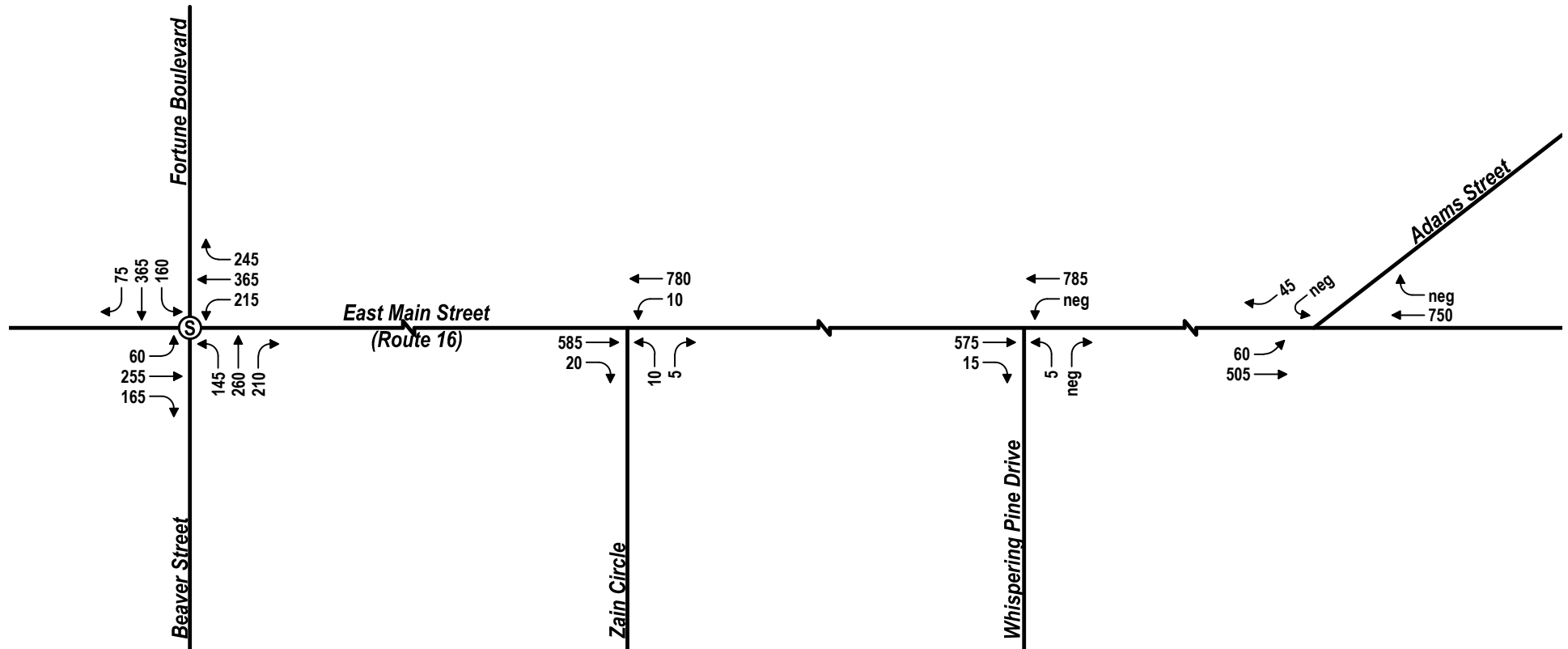
Not to Scale



2024 No-Build Conditions
Weekday Morning Peak Hour Traffic Volumes
Proposed Residential Development
Milford, Massachusetts

Figure 5

Ⓢ Signalized Intersection
neg = Negligible



Not to Scale



2024 No-Build Conditions
Weekday Evening Peak Hour Traffic Volumes
Proposed Residential Development
Milford, Massachusetts

Figure 6

analysis conditions included in this Study assumed traffic signal timing optimization as part of the MassDOT project.

Project-generated Traffic Volumes

Design year 2024 Build traffic volumes for study area roadways were determined by estimating Project-generated traffic volumes and distributing these volumes over the study area roadways. The estimated Project-generated volumes were added to the 2024 No-Build traffic volumes to develop the year 2024 Build traffic volume networks. The following sections describe the procedures used to develop the Build condition traffic volume networks.

Trip Generation

The rate at which any development generates traffic is dependent upon a number of factors such as size, location, and nature of the use. To estimate the trip-generating characteristics for a project, traffic projections are typically derived from trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation*¹ manual.

The Project involves the construction of a 300-unit multi-family rental residential development. To estimate the traffic generation for the Project, ITE Land Use Code (LUC) 220 (Apartment) was used in the analysis using number of units as the independent variable. The trip estimates are included in Table 3.

In addition to the trip estimates for the proposed residential development, Table 3 also includes an estimate of the trip generation for a potential as-right office development that could be constructed on the Site. A conceptual layout of such an office development is included in the Appendix.

Table 3 Trip Generation Summary

Time Period	Proposed Residential Development ¹	As-of-Right Office Development ²
Weekday Daily ³	970	3,780
Weekday Morning Peak Hour ⁴		
In	30	1,065
Out	<u>120</u>	<u>145</u>
Total	150	1,210
Weekday Evening Peak Hour ⁴		
In	120	205
Out	<u>65</u>	<u>995</u>
Total	185	1,200

¹ Based on ITE LUC 220 (Apartment) for 300 Dwelling Units

¹ Trip Generation Handbook; 9th Edition Institute of Transportation Engineers; Washington, DC; 2009.

2 Based on ITE LUC 710 (General Office Building) for up to 1 million square feet

3 Vehicles per day

4 Vehicles per hour

As shown in Table 3, the Project is expected to generate approximately 970 trips on an average weekday, with 150 trips (30 entering/120 exiting) during the weekday morning peak hour and 185 trips (120 entering/65 exiting) during the weekday evening peak hour. These are relatively low Site generated traffic volumes in the context of the area roadway traffic volumes and, more importantly, only a fraction of the trip generation for an as-of-right office development on the Site.

Trip Distribution

The directional distribution of the vehicular traffic approaching and departing the Site is a function of the land use, population densities, the location of employment, existing travel patterns, and the efficiency of the existing roadway system. The trip distribution for the Project was developed based on U.S. Census Journey-to-Work data for the Town of Milford. Table 4 summarizes the calculations and graphically depicted in Figure 7.

Table 4 Trip Distribution Summary

By way of	Direction (To/From)	Automobile Trips
Route 16	East	20%
	West	40%
Fortune Boulevard	North	30%
Beaver Street	South	10%

Source: Based on 2010 U.S. Census Journey-to-Work data.

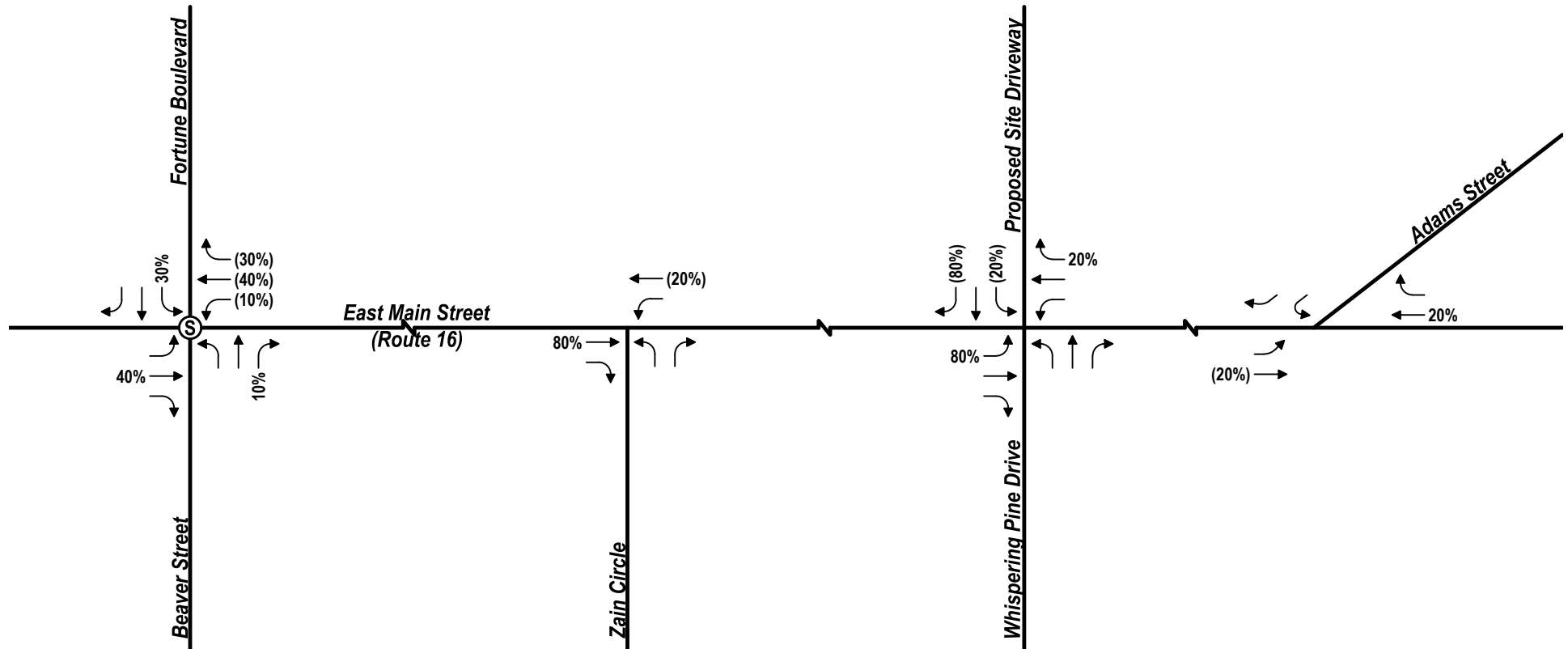
To develop the 2024 Build conditions peak hour traffic volume, Project generated traffic volumes were assigned to the roadway network based on the trip distribution patterns shown in Table 4 and added to the 2024 No Build conditions peak hour traffic volumes. The 2024 Build conditions traffic volume networks are shown in Figures 8 and 9.

Ⓢ Signalized Intersection

neg = Negligible

xx% = Entering Trips

(xx%) = Exiting Trips



Not to Scale

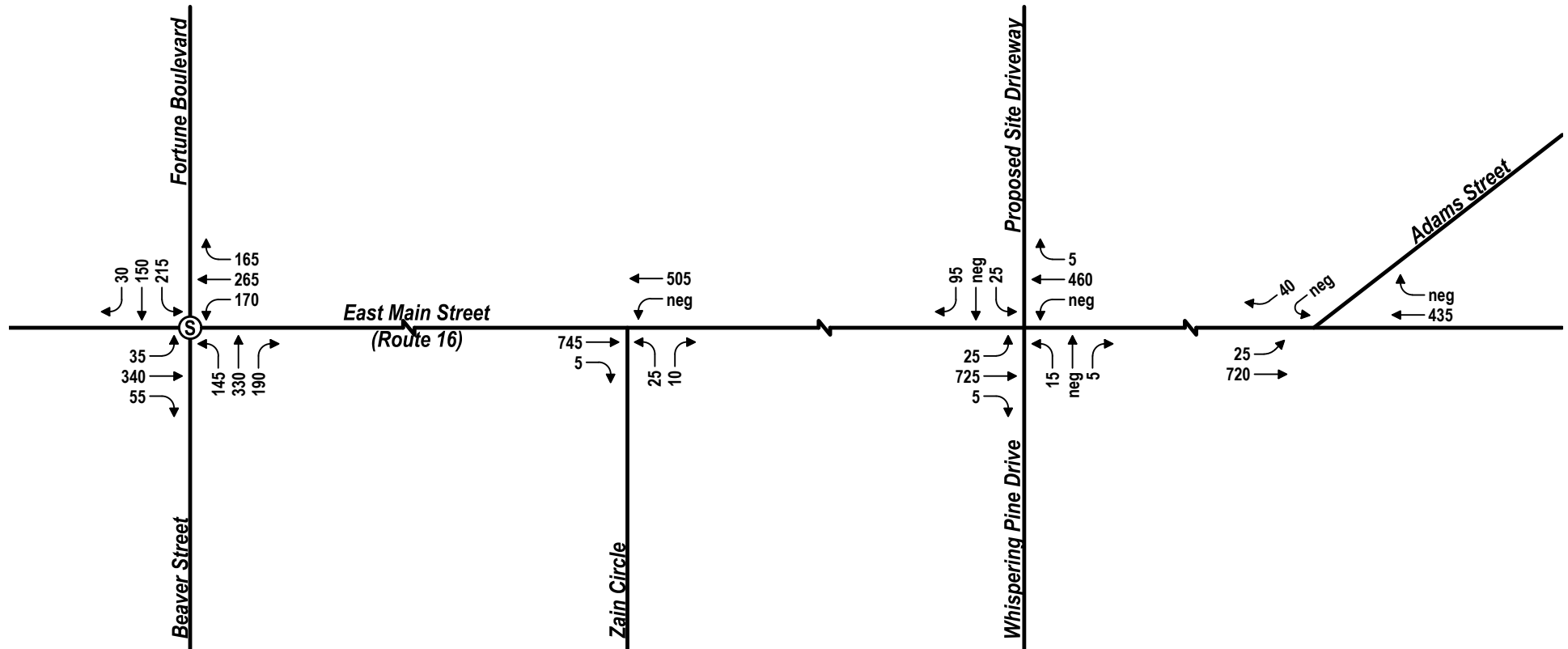


Trip Distribution

Figure 7

Proposed Residential Development
Milford, Massachusetts

Ⓢ Signalized Intersection
neg = Negligible

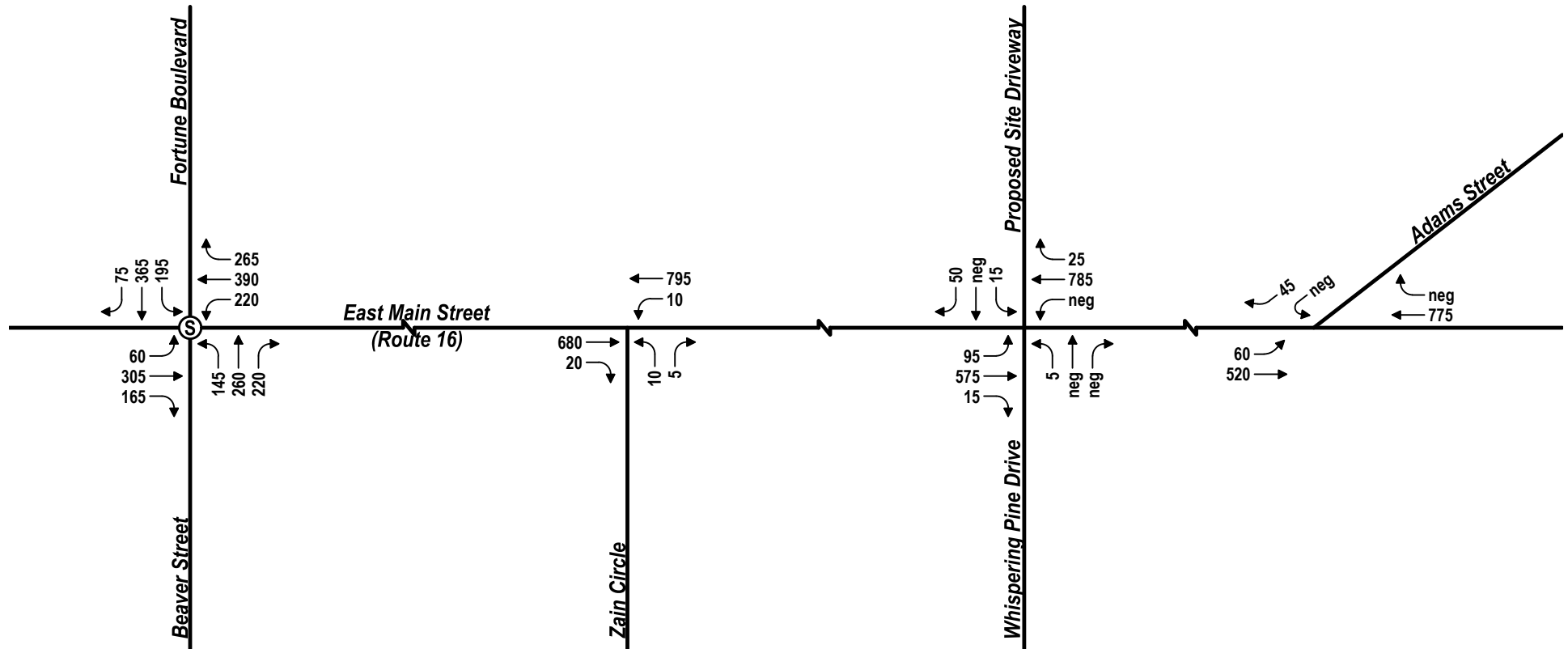


Not to Scale



Figure 8
2024 Build Conditions
Weekday Morning Peak Hour Traffic Volumes
Proposed Residential Development
Milford, Massachusetts

Ⓢ Signalized Intersection
neg = Negligible



Not to Scale



Figure 9
2024 Build Conditions
Weekday Evening Peak Hour Traffic Volumes
Proposed Residential Development
Milford, Massachusetts

Traffic Volumes Increases

Table 5 provides a comparison of No-Build and Build condition peak hour traffic volume changes within the study area as a result of the Project.

Table 5 Peak Period Traffic Volume Increases

Location	Peak Hour	No-Build	Build	Increase
Route 16, east of Adams St	AM	1,125	1,155	30
	PM	1,255	1,295	40
Route 16, west of Beaver St	AM	810	870	60
	PM	1,065	1,140	75
Fortune Blvd, north of Route 16	AM	880	925	45
	PM	1,165	1,220	55
Beaver St, south of Route 16	AM	1,025	1,040	15
	PM	1,360	1,375	15

As shown in Table 5, the Project is estimated to add relatively low traffic volumes to the roadway segments entering and exiting the Study area included in this review.

Site Access

The proposed Site driveway will be located across from Whispering Pine Drive. As shown in the Site Layout plan, the driveway will be median-divided, with designated right- and left turn lanes exiting the Site. A sidewalk is proposed on the north side of East Main Street, along the entire frontage of the Site (approximately 750 feet long), as well as along the west side of the Site Drive. In addition, bus pull-offs are proposed on both sides of East Main Street on the west side of the driveway to accommodate MBTA bus stops.

Sight Distance Analysis

Sight distance analyses, in conformance with guidelines of the American Association of State Highway and Transportation Officials (AASHTO)² was performed at the intersection of the proposed Site driveway and Route 16.

Stopping Sight Distance (SSD) is the distance required for a vehicle approaching an intersection to perceive, react and come to a complete stop before colliding with an object in the road, in this case the exiting vehicle the Site. In this respect, SSD can be considered as the minimum visibility criterion for the safe operation of an unsignalized intersection.

ISD is based on the time required for perception, reaction and completion of the desired critical exiting maneuver (in this case, a left turn) once the driver on a minor

² A Policy on the Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials; Washington, D.C.; 2001.

street approach (i.e., Site driveway) decides to execute the maneuver. For the subject intersection, calculation for the critical ISD includes the time to (1) turn left and (2) accelerate to the operating speed on Route 16 without causing approaching vehicles on the roadway to unduly reduce their speed. In this context, ISD can be considered as a desirable visibility criterion for the safe operation of an unsignalized intersection.

An additional criterion that is used especially in areas with sight line constraints in proximity to driveways, is the use of “minimum ISD”. This essentially involves the comparison of the available ISD to the SSD measurement to ensure that if the available ISD is not sufficient to cause approaching vehicles on the main road to only reduce their speed (as in the case of desirable ISD), that it is at least adequate for the approaching vehicle to come to a stop at the driveway, if necessary.

To calculate the SSD and ISD at the Site driveway intersection, VHB used the observed 85th percentile speeds of approximately 42 mph in the eastbound and 39mph in the westbound directions on Route 16. Table 6 summarizes the sight distance analysis.

Table 6 Sight Distance Analysis Summary

Intersection	<u>Stopping Sight Distance</u>			<u>Intersection Sight Distance</u>		
	Traveling	Required ^a	Measured	Looking	Required ^a	Measured ^b
Route 16 at Proposed Site Driveway	Eastbound on Route 16	325'	>700'	Looking Right from Site Driveway	465'	682'
	Westbound on Route 16	290'	>700'	Looking Left from Site Driveway	465'	560'

Source: Based on guidelines established in A Policy on the Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials [AASHTO], 2004.

a Required sight distance in feet, calculated based on observed 85th percentile speed of approximately 42 miles per hour in the eastbound and 39mph in the westbound directions on Route 16.

b ISD measurement is approximate, estimated based on reviewing aerial images and record plans when existing vegetation along the site frontage is cleared. The 560' sight line looking left out of the Site traverses the adjacent property.

As summarized in Table 6, adequate SSD, which represents the minimum required, is available on both Route 16 approaches. Currently, the available sight lines to and from the proposed Site driveway are obstructed by vegetation along the Site frontage. As part of the Project, the vegetation will be cleared to provide adequate sight distance. After clearing of the vegetation, it is estimated that adequate Intersection Sight Distance (ISD) will be available looking in both directions. As noted in the footnote 'b' of Table 6, the ISD line looking to the left of the Site driveway traverses the adjacent property. While this sight line is available currently, VHB also calculated the available ISD should the sight line be restricted to not

traverse an adjacent property. The review indicated that even if the sight line looking left were to be restricted to not extend into the adjacent property, the measured ISD will be approximately equal to the required SSD. i.e., it is adequate for the approaching vehicle to see an vehicle exiting the Site and come to a stop at the driveway, if necessary.

A graphical representation of the available sight lines for vehicles exiting and approaching the proposed Site driveway when the existing vegetation along the Site frontage is cleared is included in the Appendix.

Signal Warrant Analysis

A traffic signal Warrant analysis was conducted to determine if the projected traffic volumes for the proposed residential use would exceed the thresholds for the installation of a traffic signal at the Site driveway's intersection with Route 16.

The Manual on Uniform Traffic Control Devices³ (MUTCD) is the established standard for Warrant analyses. The Warrants consider the roadway geometry, traffic volume entering the intersection, and speeds. Specifically, the traffic projections were evaluated for following three volume-based Warrants.

- › **Warrant 1 (Eight Hour Vehicular Volume)** – Warrant 1 is based on any eight hours of a day where the traffic entering the intersection reaches a threshold that warrants considering signal control.
- › **Warrant 2 (Four Hour Vehicular Volume)** – Warrant 2 is for any four hours of a day.
- › **Warrant 3 (Peak Hour)** – Warrant 3 is for the peak hour of any given day.

The traffic signal Warrant analysis worksheet included in the Appendix indicates that the eight-hour and four-hour volume based warrants are not satisfied at the intersection of Route 16 and Site driveway/Whispering Pine Drive. The peak hour warrant is marginally satisfied during the weekday morning peak hour when residents are leaving the Site for work.

It is noted that the MUTCD lists specific warrants for the consideration of installation of a traffic signal at an intersection but also notes that, "the satisfaction of a traffic signal warrant or warrants shall not, in itself, require the installation of a traffic control signal." The traffic signal warrant analysis provides guidance as to locations where signals would not be appropriate and locations where they could be considered further.

Based on a review of the traffic volumes, orientation/directionality of the Site traffic, field observations and the findings of the Warrant analysis and other operational data generated as part of this Study, it was determined that traffic signal control is not appropriate at the Site driveway intersection on Route 16.

³ Manual on Uniform Traffic Control Devices, Federal Highway Administration, Washington DC

Left-Turn Lane Warrant Analysis

A left-turn lane warrant analysis was completed for the unsignalized intersection of Route 16/Site driveway based on the guidelines published by the National Cooperative Highway Research Program⁴ to determine if a left-turn lane is justified on eastbound Route 16 based on the combination of the estimated turning Site traffic volumes and oncoming through traffic volumes on Route 16 at the intersection.

The left-turn lane warrant analysis indicates that a left-turn lane is justified at this location based on the projected 2024 Build condition traffic volumes. The left-turn lane warrant analyses worksheets are included in the Appendix.

⁴ NCHRP Web-Only Document 193: Development of Left-Turn Lane Warrants for Unsignalized Intersections, National Cooperative Highway Research Program Transportation Research Board, November 2010

4

Traffic Operations Analysis

Measuring existing traffic volumes and projecting future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, roadway capacity analyses were conducted with respect to Existing and projected No-Build and Build traffic volumes. Capacity analyses provide an indication of how well the roadway facilities serve the traffic demands placed upon them. Roadway operating conditions are classified by calculated levels of service.

Level-of-Service Criteria

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure of a number of factors including roadway geometrics, speed, travel delay and freedom to maneuver. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level-of-service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing congested operating conditions.

Level-of-service designation is reported differently for signalized and unsignalized intersections. For signalized intersections, the analysis considers the operation of each lane or lane group entering the intersection and the LOS designation is for overall conditions at the intersection. For unsignalized intersections, the analysis assumes that traffic on the mainline is not affected by traffic on side streets. The LOS is only determined for left-turns from the main street and all movements from the

minor street. The evaluation criteria used to analyze intersections is based on the *Highway Capacity Manual* (HCM).⁵

Signalized Intersection Capacity Analysis

Capacity analyses conducted for the signalized intersections are summarized in Table 7. The capacity analyses were conducted for the Existing, No Build and Build conditions.

Table 7 Signalized Intersection Capacity Analysis

Location / Movement	2017 Existing Conditions					2024 No-Build Conditions *					2024 Build Conditions *				
	v/c ^a	Del ^b	LOS ^c	50 Q ^d	95 Q ^e	v/c	Del	LOS	50 Q	95 Q	v/c	Del	LOS	50 Q	95 Q
Beaver Street/Fortune Boulevard at East Main Street (Route 16)															
<i>Weekday Morning</i>															
EB L/T/R	0.60	28	C	92	128	0.61	28	C	95	140	0.56	26	C	98	142
WB L/T	0.87dl	37	D	90	130	0.93dl	38	D	94	143	0.89dl	28	C	113	167
WB R	0.19	3	A	0	21	0.19	2	A	0	24	0.22	2	A	0	25
NB L/T/R	0.65	23	C	121	209	0.69	24	C	133	#270	0.74	28	C	146	#298
SB L	0.51	12	B	42	88	0.53	13	B	44	98	0.58	16	B	52	117
SB T/R	0.20	9	A	37	79	0.20	9	A	38	86	0.21	13	B	42	97
Overall	0.77	23	C			0.78	24	C			0.81	25	C		
<i>Weekday Evening</i>															
EB L/T/R	0.58	21	C	92	131	0.57	20	C	92	141	0.61	22	C	115	170
WB L/T	0.92dl	41	D	162	215	0.96dl	42	D	168	240	1.02dl	45	D	183	#286
WB R	0.30	2	A	0	24	0.29	2	A	0	29	0.30	2	A	4	34
NB L/T/R	0.71	29	C	124	#226	0.80	33	C	154	#301	0.85	39	D	173	#304
SB L	0.44	16	B	49	94	0.48	18	B	50	99	0.60	22	C	70	120
SB T/R	0.55	19	B	168	283	0.56	19	B	176	307	0.58	21	C	195	307
Overall	0.88	25	C			0.88	26	C			0.91	29	C		

a Volume to capacity ratio

b Average total delay, in seconds per vehicle

c Level-of-service

d 50th percentile queue, in feet

e 95th percentile queue, in feet

95th percentile volume exceeds capacity, queue may be longer

dl De facto left lane

* Assumes that the MassDOT roadway improvement project optimizes the traffic signal timings at the intersection in the future

A review of the analysis summarized in Table 7 indicates that the signalized intersection of Route 16 and Fortune Boulevard/Beaver Street currently operate at LOS C and it is expected to continue operating at LOS C under all future conditions, with minimal changes in the Measures of Effectiveness (MOEs) due to the Project.

Unsignalized Intersection Capacity Analysis

The analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters, such as high critical gaps. Actual field observations indicate that drivers on minor streets generally accept smaller gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software. Consequently, the analysis results tend to

⁵ Highway Capacity Manual; Transportation Research Board; Washington D.C.; 2003.

overstate the actual delays experienced in the field. For this reason, the results of the unsignalized intersection analyses should be considered highly conservative. Table 8 presents a summary of the capacity analyses for the unsignalized intersections in the study area.

Table 8 Unsignalized Intersection Capacity Analysis

Location / Movement	2017 Existing Conditions					2024 No-Build Conditions					2024 Build Conditions				
	D ^a	v/c ^b	Del ^c	LOS ^d	95 Q ^e	D	v/c	Del	LOS	95 Q	D	v/c	Del	LOS	95 Q
East Main Street (Route 16)/Washington Street (Route 16) at Adams Street															
<i>Weekday Morning</i>															
EB L	25	0.03	8	A	3	25	0.03	8	A	3	25	0.03	8	A	3
SB L/R	35	0.06	11	B	5	40	0.07	12	B	5	40	0.08	12	B	5
<i>Weekday Evening</i>															
EB L	55	0.07	10	A	5	60	0.08	10	A	8	60	0.08	10	A	8
SB L/R	40	0.11	15	C	10	45	0.13	16	C	13	45	0.14	17	C	13
East Main Street (Route 16) at Whispering Pine Drive															
<i>Weekday Morning</i>															
EB L	-	-	-	-	-	-	-	-	-	-	25	0.03	1	A	2
WB L	1	0.00	9	A	0	1	0.00	10	A	0	1	0.00	10	A	0
NB L/R	15	0.11	24	C	10	20	0.11	25	C	10	20	0.20	48	E	18
SB L/T	-	-	-	-	-	-	-	-	-	-	25	0.22	43	E	20
SB R	-	-	-	-	-	-	-	-	-	-	65	0.18	13	B	16
<i>Weekday Evening</i>															
EB L	-	-	-	-	-	-	-	-	-	-	95	0.13	2	A	12
WB L	1	0.00	9	A	0	1	0.00	9	A	0	1	0.00	9	A	0
NB L/R	6	0.04	28	D	3	6	0.04	30	D	3	6	0.10	75	F	8
SB L/T	-	-	-	-	-	-	-	-	-	-	15	0.25	79	F	22
SB R	-	-	-	-	-	-	-	-	-	-	50	0.15	17	C	13
East Main Street (Route 16) at Zain Circle															
<i>Weekday Morning</i>															
WB L	2	0.00	9	A	0	2	0.00	9	A	0	2	0.00	9	A	0
NB L/R	35	0.15	22	C	13	35	0.18	26	D	15	35	0.20	28	D	18
<i>Weekday Evening</i>															
WB L	10	0.01	9	A	0	10	0.01	9	A	0	10	0.01	9	A	0
NB L/R	15	0.08	24	C	5	15	0.10	28	D	8	15	0.11	33	D	10

- a Demand
b Volume to capacity ratio
c Average total delay, in seconds per vehicle
d Level-of-service
e 95th percentile queue, in feet

The analysis summary in Table 8 indicates that the only location with notable changes in the calculated results from the No-Build to the Build condition is at the intersection of Route 16 and the Site driveway/Whispering Pine Drive. The analytical methodologies used for the estimation of delays for a three-way intersection vs. a four-way intersection, with conservative assumptions for vehicle gaps as indicated previously, indicate that Whispering Pine Drive would experience longer delays under the Build condition than under the No-Build condition.

To determine if the number of vehicular gaps available on Route 16 in the area would be adequate to support the estimated volume of Site generated traffic as well as the

other unsignalized curb cuts in the area, a gap study was conducted on Route 16 as outlined in the next section.

Gap Analysis

A gap analysis was conducted along Route 16 between the intersections of Zain Circle and Whispering Pine Drive for a 24-hour period. This was done to identify the number of gaps in the Route 16 traffic stream that are available for vehicles exiting the minor streets. The gap data is summarized in Table 9. The gap study worksheets are included in the Appendix.

As was noted previously, the analytical methodologies typically used for the analysis of unsignalized intersections use conservative analysis parameters such as high critical gaps⁶. Actual field observations indicate that drivers on minor streets generally accept smaller gaps in traffic than those used in the analysis procedures and therefore experience less delay than reported by the analysis software.

As identified in the model, the base critical gap for the left turn vehicles from the minor street is 7.1 seconds. As indicated in Table 9, 134 usable gaps (gaps longer than 7 seconds) were identified during the weekday morning peak hour while 117 were observed during the weekday evening peak hour. Based on the currently observed gaps in the traffic stream on Route 16, it is estimated that approximately 272 left turning vehicles from a stop-controlled approach during the morning peak hour and 305 during the evening peak hour can be accommodated. Under the 2024 Build conditions the total number of vehicles expected to make a left-turn from a stop-controlled approaches are much lower than the observed gap availability. This indicates that, adequate opportunities exist for vehicles on side-street approaches, such as Zain Circle, Whispering Pine Drive and the Site driveway approaches to turn left and enter the through traffic on Route 16 without causing undue delays to the prevailing traffic flow.

⁶ 'critical gap' is defined as the minimum time, in seconds, between successive major-stream vehicles, in which a minor-street vehicle can make a maneuver.

Table 9 Gap Study Analysis (Estimate of Number of Vehicles that can Turn Left)

Gap Length (Seconds)	Time Period				Observed Gaps Over 7 Seconds *	Gap Acceptance **	Calculated Number of Vehicles ***
	7:15 AM	7:30 AM	7:45 AM	8:00 AM	A	B	C
1-5	210	210	251	238	0	0	0
5-7	24	17	21	21	0	0	0
7-9	11	9	12	9	41	1	41
9-11	11	6	5	6	28	1	28
11-13	7	5	2	0	14	2	28
13-15	0	6	2	5	13	2	26
15-17	2	2	0	4	8	3	24
17-19	1	4	5	3	13	3	39
19-21	2	4	0	0	6	4	24
21-23	1	1	0	1	3	5	15
23-25	0	1	2	0	3	5	15
25-27	0	0	1	1	2	6	12
27-29	0	0	0	2	2	6	12
>29	1	1	0	0	1	8	8
Total	269	266	301	290	134	-	272
(Seconds)	4:30 PM	4:45 PM	5:00 PM	5:15 PM	A	B	C
1-5	250	215	246	256	0	0	0
5-7	33	24	30	25	0	0	0
7-9	10	10	11	9	43	1	43
9-11	3	3	4	9	30	1	30
11-13	4	4	4	7	13	2	26
13-15	3	5	5	0	16	2	32
15-17	3	3	1	1	8	3	24
17-19	1	2	1	0	16	3	48
19-21	1	3	4	1	6	4	24
21-23	0	1	1	1	2	5	10
23-25	0	0	0	0	4	5	20
25-27	0	0	0	0	2	6	12
27-29	0	0	0	1	2	6	12
>29	0	1	0	0	3	8	24
Total	308	271	307	310	117	-	305

* Number of observed gaps longer than 7 seconds minimum for a left turn vehicle to complete its movement.

** Gap acceptance based on 7.1 sec minimum acceptable gap and 3.5 sec follow up time.

*** Actual number of vehicles which can turn left during the available and observed gaps.

Note: $C = A * B$

5

Conclusions

This Study has evaluated the existing traffic operations and safety conditions of the roadways near the Project, analyzed the impact of background traffic growth and estimated the impacts of the Project.

The Project is expected to generate approximately 150 (30 entering/120 exiting) new vehicle trips during the weekday morning peak hour and 185 (120 entering/65 exiting) new trips during the weekday evening peak hour. The analysis indicates that the increase in traffic associated with the Project on the study area roadways is expected to be nominal at various locations on the area roadways. In comparison, an as-of-right one million square foot office development on the Site would generate approximately 1,200 vehicle trips per hour during the weekday morning and evening peak hours.

Detailed analyses indicate that the study area intersections currently operate at an acceptable level of service and can be expected to continue to do so in the future with the addition of the Site generated traffic for the proposed residential use. The estimated minor increases in future delay are primarily due to anticipated increases in through traffic on Route 16, independent of the Project. To further limit the impacts of the Project, the Proponent is committed to funding the design and construction of the following improvements.

- › Construct an eastbound left turn lane on Route 16 to accommodate vehicles waiting to turn left into the Site, without impeding through traffic flow;
- › Construct a flared approach to the Site driveway on Route 16 westbound for the traffic to decelerate as vehicles turn right into the Site;

- › Improve sight lines through selective vegetation clearing and trimming on either side of the proposed Site driveway;
- › Construct separate left and right turn lanes on the stop-sign controlled Site driveway to ensure that waiting left turning vehicles minimally impact the predominantly right turning traffic exiting the Site; and,
- › If supported by the Metrowest Regional Transit Authority (MWRTA) and the Massachusetts Department of Transportation (MassDOT), construct public bus stops on either side of Route 16 near the Site driveway; the bus stop on the far side of Route 16 from the Site would require the installation of a pedestrian crosswalk across Route 16.

Appendix

- › Traffic Counts
- › Crash Data
- › Background Traffic
- › Trip Generation
- › Sight Distance Graphic
- › Capacity Analysis

Traffic Counts

- › Automatic Traffic Recorder (ATR) Counts
- › Turning Movement Counts (TMCs)
- › Gap Data



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
SB

175481 A Class
Site Code: 13810.00

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/28/1														
7	0	21	5	0	0	0	0	0	0	0	0	0	0	26
01:00	0	8	0	0	0	0	0	0	0	0	0	0	0	8
02:00	0	5	4	0	1	0	0	0	0	0	0	0	0	10
03:00	0	10	6	0	0	0	0	0	2	0	0	0	0	18
04:00	0	20	4	0	0	1	0	0	0	0	0	0	0	25
05:00	3	58	12	0	1	1	0	0	0	0	0	0	0	75
06:00	2	169	33	1	7	0	0	0	4	0	0	0	0	216
07:00	13	335	45	4	7	4	0	0	2	0	0	0	0	410
08:00	13	385	45	3	6	4	0	0	3	0	0	0	0	459
09:00	7	302	47	3	17	7	0	3	8	0	0	0	0	394
10:00	8	301	55	1	17	8	0	1	6	0	0	0	0	397
11:00	7	303	50	2	4	6	0	3	5	0	0	0	0	380
12 PM	12	386	64	2	13	4	0	3	2	0	0	0	0	486
13:00	5	306	62	2	9	4	0	5	5	0	0	0	0	398
14:00	8	389	62	5	8	5	1	3	6	0	0	0	0	487
15:00	9	498	103	6	7	3	0	3	6	0	0	0	0	635
16:00	9	566	72	2	10	0	0	2	4	0	0	0	0	665
17:00	10	596	78	2	5	1	0	0	0	0	0	0	0	692
18:00	6	394	60	1	4	2	0	1	0	0	0	0	0	468
19:00	4	267	23	0	1	0	0	0	2	0	0	0	0	297
20:00	1	168	17	0	2	0	0	0	1	0	0	0	0	189
21:00	1	131	13	0	0	0	0	0	0	0	0	0	0	145
22:00	1	72	6	0	1	1	0	1	0	0	0	0	0	82
23:00	0	49	7	0	1	0	0	0	0	0	0	0	0	57
Percent	1.7%	81.8%	12.4%	0.5%	1.7%	0.7%	0.0%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	08:00	10:00	07:00	09:00	10:00		09:00	09:00					08:00
Vol.	13	385	55	4	17	8		3	8					459
PM Peak	12:00	17:00	15:00	15:00	12:00	14:00	14:00	13:00	14:00					17:00
Vol.	12	596	103	6	13	5	1	5	6					692



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D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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03/01/1														
7	1	28	2	0	0	0	0	0	0	0	0	0	0	31
01:00	0	10	1	0	0	0	0	0	0	0	0	0	0	11
02:00	0	5	4	0	0	0	0	0	0	0	0	0	0	9
03:00	0	6	3	0	0	0	0	0	1	0	0	0	0	10
04:00	0	19	4	0	0	0	0	0	0	0	0	0	0	23
05:00	4	45	14	0	2	2	0	0	1	0	0	0	0	68
06:00	6	144	30	0	5	2	0	3	3	0	0	0	0	193
07:00	8	314	53	7	13	5	0	1	3	0	0	0	0	404
08:00	9	364	31	3	5	8	1	0	4	0	0	0	0	425
09:00	11	282	36	2	12	7	0	5	3	0	0	0	0	358
10:00	1	263	56	5	3	5	0	4	6	0	0	0	0	343
11:00	9	318	44	2	10	8	0	2	6	0	0	0	0	399
12 PM	10	379	87	4	4	4	2	3	7	0	0	0	0	500
13:00	7	321	57	5	8	5	0	2	7	0	0	0	0	412
14:00	5	371	59	3	14	5	0	4	8	0	0	0	0	469
15:00	9	498	75	7	15	1	0	1	8	0	0	0	0	614
16:00	10	598	95	2	7	4	0	1	2	0	0	0	0	719
17:00	13	601	86	0	8	3	0	5	2	0	0	0	0	718
18:00	13	465	52	2	4	2	0	1	3	0	0	0	0	542
19:00	2	244	26	0	3	0	0	0	1	0	0	0	0	276
20:00	4	194	21	0	2	0	0	0	2	0	0	0	0	223
21:00	2	150	12	0	1	0	0	0	0	0	0	0	0	165
22:00	0	82	13	0	0	0	0	0	0	0	0	0	0	95
23:00	1	46	2	0	1	0	0	0	1	0	0	0	0	51
Percent	1.8%	81.4%	12.2%	0.6%	1.7%	0.9%	0.0%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	08:00	10:00	07:00	07:00	08:00	08:00	09:00	10:00					08:00
Vol.	11	364	56	7	13	8	1	5	6					425
PM Peak	17:00	17:00	16:00	15:00	15:00	13:00	12:00	17:00	14:00					16:00
Vol.	13	601	95	7	15	5	2	5	8					719



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D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
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Client: VHB/ M. Daranleau
NB

175481 A Class
Site Code: 13810.00

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02/28/1														
7	0	17	1	0	0	0	0	0	0	0	0	0	0	18
01:00	0	7	2	0	1	1	0	0	0	0	0	0	0	11
02:00	0	11	4	0	0	0	0	0	0	0	0	0	0	15
03:00	0	10	3	0	2	0	0	0	0	0	0	0	0	15
04:00	0	26	11	1	1	0	0	0	0	0	0	0	0	39
05:00	1	186	53	2	6	1	0	1	1	0	0	0	0	251
06:00	1	451	167	2	16	5	0	1	5	1	0	0	0	649
07:00	11	544	89	8	7	7	2	0	8	0	0	0	0	676
08:00	4	397	92	3	10	13	1	1	6	0	0	0	0	527
09:00	3	260	55	6	13	6	0	1	7	0	0	0	0	351
10:00	8	263	50	3	11	6	0	6	2	0	0	0	0	349
11:00	4	280	53	1	11	4	0	2	10	0	0	0	0	365
12 PM	8	315	53	1	7	4	0	2	5	0	0	0	0	395
13:00	3	300	44	2	10	6	0	0	5	0	0	0	0	370
14:00	4	291	54	3	10	1	1	6	5	0	0	0	0	375
15:00	6	319	54	2	10	1	0	0	0	0	0	0	0	392
16:00	9	374	46	0	4	2	0	0	1	0	0	0	0	436
17:00	10	412	46	1	3	3	0	0	2	0	0	0	0	477
18:00	3	332	36	1	7	0	0	0	0	0	0	0	0	379
19:00	4	197	27	0	4	1	0	0	0	0	0	0	0	233
20:00	1	154	16	1	2	0	0	0	0	0	0	0	0	174
21:00	0	124	7	0	2	1	0	1	0	0	0	0	0	135
22:00	1	69	5	0	3	0	0	0	0	0	0	0	0	78
23:00	0	42	5	0	0	0	0	0	0	0	0	0	0	47
Percent	1.2%	79.6%	14.4%	0.5%	2.1%	0.9%	0.1%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	06:00	07:00	06:00	08:00	07:00	10:00	11:00	06:00				07:00
Vol.	11	544	167	8	16	13	2	6	10	1				676
PM Peak	17:00	17:00	14:00	14:00	13:00	13:00	14:00	14:00	12:00					17:00
Vol.	10	412	54	3	10	6	1	6	5					477



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
NB

175481 A Class
Site Code: 13810.00

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03/01/1														
7	0	12	2	0	0	0	0	0	0	0	0	0	0	14
01:00	0	15	3	0	0	0	0	0	0	0	0	0	0	18
02:00	0	5	4	0	0	0	0	0	0	0	0	0	0	9
03:00	0	10	3	0	0	0	0	0	0	0	0	0	0	13
04:00	0	28	12	1	2	0	1	0	0	0	0	0	0	44
05:00	1	179	48	0	5	3	0	1	2	0	0	0	0	239
06:00	8	409	159	3	14	3	1	0	5	0	0	0	0	602
07:00	8	556	79	7	11	3	2	0	1	0	0	0	0	667
08:00	7	399	68	1	3	5	1	3	4	0	0	0	0	491
09:00	3	266	57	0	6	2	2	2	3	0	0	0	0	341
10:00	6	279	49	8	17	8	0	2	10	0	0	0	0	379
11:00	5	271	57	3	10	3	3	3	8	0	0	0	0	363
12 PM	5	312	54	4	12	3	1	2	6	0	0	0	0	399
13:00	6	295	58	3	9	2	2	1	3	0	0	0	0	379
14:00	6	295	50	3	6	0	0	3	6	1	0	0	0	370
15:00	7	330	36	3	10	3	0	2	3	0	0	0	0	394
16:00	15	339	53	1	7	0	0	1	2	0	0	0	0	418
17:00	7	439	46	0	4	1	0	1	0	0	0	0	0	498
18:00	6	322	36	0	3	3	0	0	0	0	0	0	0	370
19:00	1	257	36	0	6	0	0	1	3	0	0	0	0	304
20:00	0	202	14	1	3	0	0	0	1	0	0	0	0	221
21:00	2	115	6	0	2	0	0	0	0	0	0	0	0	125
22:00	1	50	6	0	3	1	0	0	0	0	0	0	0	61
23:00	0	32	2	0	0	0	0	0	1	0	0	0	0	35
Percent	1.4%	80.2%	13.9%	0.6%	2.0%	0.6%	0.2%	0.3%	0.9%	0.0%	0.0%	0.0%	0.0%	
AM Peak	06:00	07:00	06:00	10:00	10:00	10:00	11:00	08:00	10:00					07:00
Vol.	8	556	159	8	17	8	3	3	10					667
PM Peak	16:00	17:00	13:00	12:00	12:00	12:00	13:00	14:00	12:00	14:00				17:00
Vol.	15	439	58	4	12	3	2	3	6	1				498



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
SB

175481 A Gap
Site Code: 13810.00

Start Time	1 4	5 6	7 8	9 10	11 12	13 14	15 16	17 18	19 20	21 22	23 24	25 26	27 28	29 999
02/28/17	8	1	0	1	0	0	0	0	1	0	0	0	0	15
01:00	1	1	0	0	0	0	0	0	0	0	0	0	0	6
02:00	1	0	0	0	0	0	0	0	0	0	2	0	0	7
03:00	1	0	1	0	0	0	0	0	0	0	0	0	0	16
04:00	1	0	0	0	0	1	0	0	1	2	0	0	0	20
05:00	13	3	3	0	2	1	0	6	0	1	3	0	1	42
06:00	87	12	16	5	5	13	8	4	7	2	6	4	3	44
07:00	215	41	26	24	21	12	12	9	11	4	5	2	3	25
08:00	260	33	36	21	23	15	5	18	7	4	4	7	2	24
09:00	214	26	26	16	17	17	9	8	8	9	5	7	4	28
10:00	199	39	31	19	13	16	18	6	6	7	9	7	4	23
11:00	202	29	23	20	10	20	11	9	6	4	7	2	6	31
12 PM	285	36	38	16	21	20	6	16	12	5	6	2	0	23
13:00	213	35	21	21	17	8	8	13	11	8	7	6	3	27
14:00	292	46	32	20	9	13	17	9	9	2	8	8	2	20
15:00	435	58	30	27	22	8	9	5	8	8	4	2	6	13
16:00	444	67	46	27	15	8	13	11	11	1	10	5	2	5
17:00	469	64	46	31	20	15	7	7	5	9	3	5	3	8
18:00	271	46	18	22	15	26	7	8	8	9	6	5	6	21
19:00	148	14	21	11	14	6	11	7	9	6	4	4	4	38
20:00	71	10	7	10	7	7	8	10	2	4	3	2	1	47
21:00	44	11	7	6	5	1	4	7	7	6	2	3	0	42
22:00	26	6	2	2	2	0	2	1	0	0	2	0	3	36
23:00	11	1	2	0	0	1	1	1	1	1	2	0	1	35
Total	3911	579	432	299	238	208	156	155	130	92	98	71	54	596



Statistics	Number of Gaps > 55 Secs. :	0
	Percent of Gaps > 55 Secs. :	0.0%



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
NB

175481 A Gap
Site Code: 13810.00

Start Time	1 4	5 6	7 8	9 10	11 12	13 14	15 16	17 18	19 20	21 22	23 24	25 26	27 28	29 999
02/28/17	2	1	0	0	0	0	0	0	0	0	0	0	0	15
01:00	2	1	0	1	0	0	0	0	0	0	0	0	0	7
02:00	0	0	0	0	0	0	0	0	1	0	0	0	0	14
03:00	0	2	0	1	0	0	0	0	0	0	0	0	0	12
04:00	5	0	0	1	3	1	1	0	0	0	0	0	0	28
05:00	103	23	16	12	10	10	8	3	5	7	4	8	2	40
06:00	440	55	39	28	21	10	9	12	4	4	7	5	3	12
07:00	497	49	29	23	20	6	4	5	8	9	4	4	1	17
08:00	323	49	40	20	15	12	11	10	11	5	4	4	4	19
09:00	162	33	24	22	15	12	9	10	4	4	14	7	9	26
10:00	165	26	27	19	15	17	11	7	8	8	7	4	9	26
11:00	164	37	27	21	18	11	17	10	7	8	9	4	6	26
12 PM	189	22	33	32	20	17	15	8	11	14	6	9	2	17
13:00	174	25	26	20	13	20	10	17	12	12	10	5	2	24
14:00	187	40	21	21	13	8	11	7	4	10	9	6	11	27
15:00	197	33	24	18	17	16	20	5	7	14	8	5	2	26
16:00	221	51	27	16	16	18	13	17	14	11	7	5	5	15
17:00	265	42	32	23	17	24	9	11	8	11	9	2	8	16
18:00	193	31	22	20	12	17	13	14	9	6	6	5	5	26
19:00	98	15	8	9	11	11	8	6	2	6	7	5	3	44
20:00	46	11	9	16	6	8	9	7	3	2	4	5	7	41
21:00	31	8	9	7	5	6	4	5	3	2	3	5	7	40
22:00	11	2	7	1	1	1	5	0	2	2	3	1	0	42
23:00	3	1	1	0	0	1	1	1	0	0	3	2	0	34
Total	3478	557	421	331	248	226	188	155	123	135	124	91	86	594



Statistics	Number of Gaps > 55 Secs. :	0
	Percent of Gaps > 55 Secs. :	0.0%



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
COMBINED

175481 A Gap
Site Code: 13810.00

Start Time	1 4	5 6	7 8	9 10	11 12	13 14	15 16	17 18	19 20	21 22	23 24	25 26	27 28	29 999
02/28/17	9	3	0	1	1	0	0	0	1	0	0	0	1	28
01:00	3	1	1	1	0	0	0	0	0	0	0	0	0	13
02:00	1	0	0	0	1	0	0	0	1	0	2	0	0	20
03:00	3	2	0	1	0	0	0	0	2	1	0	0	0	24
04:00	7	1	1	3	5	2	2	1	0	1	2	0	3	36
05:00	139	34	19	14	19	21	9	7	7	8	6	3	5	35
06:00	612	84	60	32	21	13	8	10	1	4	2	3	3	12
07:00	865	79	49	27	22	10	4	13	7	2	3	3	0	2
08:00	745	73	54	36	17	14	10	14	5	2	4	2	3	7
09:00	487	80	52	34	23	16	15	10	12	4	3	4	3	2
10:00	478	81	48	36	24	18	18	9	6	5	9	3	2	9
11:00	479	80	50	33	23	26	9	13	4	8	5	1	6	8
12 PM	614	81	55	39	28	26	7	8	9	6	4	1	2	1
13:00	501	75	45	43	24	18	16	13	12	5	8	4	0	4
14:00	600	80	58	34	16	19	13	8	11	3	4	8	4	4
15:00	787	78	59	29	24	14	9	7	4	6	2	2	1	5
16:00	869	110	42	21	13	13	11	8	6	4	2	0	1	1
17:00	931	105	49	30	22	9	6	2	7	4	3	0	1	0
18:00	597	74	58	31	22	22	12	10	9	7	0	2	0	3
19:00	311	41	37	20	16	21	17	14	11	11	5	8	2	16
20:00	169	30	28	18	15	14	22	7	6	7	9	3	8	27
21:00	108	23	22	16	11	13	12	11	7	8	6	5	0	38
22:00	51	12	9	4	4	6	7	2	0	5	4	3	3	50
23:00	20	7	1	2	1	4	5	3	2	4	3	6	0	46
Total	9386	1234	797	505	352	299	212	170	130	105	86	61	48	391



Statistics	Number of Gaps > 55 Secs. :	0
	Percent of Gaps > 55 Secs. :	0.0%



PRECISION
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INDUSTRIES, LLC

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E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
SB

175481 A Speed
Site Code: 13810.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
02/28/ 17	0	0	0	2	7	10	6	0	1	0	0	0	0	26	41	37
01:00	0	1	0	1	1	1	3	1	0	0	0	0	0	8	43	36
02:00	0	0	0	0	0	5	1	3	1	0	0	0	0	10	48	42
03:00	0	0	0	0	6	6	4	2	0	0	0	0	0	18	43	38
04:00	0	0	0	2	2	6	13	1	1	0	0	0	0	25	43	39
05:00	1	0	1	1	6	37	28	1	0	0	0	0	0	75	42	38
06:00	1	0	0	5	27	116	64	1	0	0	0	0	2	216	41	38
07:00	16	1	6	16	66	213	86	5	0	1	0	0	0	410	40	36
08:00	9	2	2	5	71	263	99	8	0	0	0	0	0	459	40	37
09:00	5	1	0	14	84	216	69	4	0	1	0	0	0	394	40	36
10:00	4	1	1	10	62	224	89	6	0	0	0	0	0	397	40	37
11:00	5	0	2	2	74	225	66	6	0	0	0	0	0	380	40	37
12 PM	8	1	1	12	96	271	89	7	0	0	0	0	1	486	40	36
13:00	4	0	2	15	100	215	57	4	0	0	0	0	1	398	39	36
14:00	4	1	2	15	125	257	78	4	1	0	0	0	0	487	39	36
15:00	6	3	11	45	205	279	85	1	0	0	0	0	0	635	38	35
16:00	5	0	0	9	165	392	92	2	0	0	0	0	0	665	38	36
17:00	4	0	1	17	175	409	81	4	0	0	0	1	0	692	38	36
18:00	2	0	0	9	159	262	36	0	0	0	0	0	0	468	38	35
19:00	0	0	0	3	68	179	46	1	0	0	0	0	0	297	39	37
20:00	0	0	0	3	31	119	34	2	0	0	0	0	0	189	40	37
21:00	1	0	0	0	14	90	37	3	0	0	0	0	0	145	41	38
22:00	0	0	0	2	15	46	17	2	0	0	0	0	0	82	40	37
23:00	0	0	0	1	6	27	20	3	0	0	0	0	0	57	42	39
Total	75	11	29	189	1565	3868	1200	71	4	2	0	1	4	7019		
%	1.1%	0.2%	0.4%	2.7%	22.3%	55.1%	17.1%	1.0%	0.1%	0.0%	0.0%	0.0%	0.1%			
AM Peak	07:00	08:00	07:00	07:00	09:00	08:00	08:00	08:00	00:00	07:00			06:00	08:00		
Vol.	16	2	6	16	84	263	99	8	1	1			2	459		
PM Peak	12:00	15:00	15:00	15:00	15:00	17:00	16:00	12:00	14:00			17:00	12:00	17:00		
Vol.	8	3	11	45	205	409	92	7	1			1	1	692		

Stats

15th Percentile : 31 MPH
50th Percentile : 36 MPH
85th Percentile : 39 MPH
95th Percentile : 42 MPH

Mean Speed(Average) : 36 MPH
10 MPH Pace Speed : 30-39 MPH
Number in Pace : 5433
Percent in Pace : 77.4%
Number of Vehicles > 35 MPH : 4376
Percent of Vehicles > 35 MPH : 62.4%



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
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E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
SB

175481 A Speed
Site Code: 13810.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
03/01/ 17	1	0	0	0	4	11	12	3	0	0	0	0	0	31	43	38
01:00	0	0	0	0	2	5	4	0	0	0	0	0	0	11	41	38
02:00	0	0	0	0	3	5	0	1	0	0	0	0	0	9	38	36
03:00	0	0	0	0	3	6	1	0	0	0	0	0	0	10	38	36
04:00	0	0	1	1	1	7	9	4	0	0	0	0	0	23	44	39
05:00	2	0	1	0	11	32	22	0	0	0	0	0	0	68	41	37
06:00	1	0	0	3	32	106	47	4	0	0	0	0	0	193	41	37
07:00	8	1	4	21	87	222	58	3	0	0	0	0	0	404	39	35
08:00	3	2	3	9	77	251	73	5	2	0	0	0	0	425	40	37
09:00	8	0	2	9	96	197	44	2	0	0	0	0	0	358	38	35
10:00	0	0	0	8	88	191	51	4	1	0	0	0	0	343	39	36
11:00	6	0	3	3	67	251	68	1	0	0	0	0	0	399	39	36
12 PM	5	0	1	9	106	270	103	6	0	0	0	0	0	500	40	37
13:00	4	0	1	2	80	229	95	1	0	0	0	0	0	412	40	37
14:00	2	0	3	12	144	254	51	2	1	0	0	0	0	469	38	36
15:00	6	1	13	27	180	320	66	1	0	0	0	0	0	614	38	35
16:00	8	0	12	19	224	364	91	1	0	0	0	0	0	719	38	35
17:00	12	2	6	21	189	426	60	1	0	0	0	1	0	718	38	35
18:00	9	3	5	20	192	273	36	4	0	0	0	0	0	542	38	35
19:00	2	0	0	3	71	151	45	3	1	0	0	0	0	276	39	36
20:00	3	0	0	1	54	133	30	1	1	0	0	0	0	223	38	36
21:00	1	1	0	1	24	110	26	2	0	0	0	0	0	165	39	37
22:00	0	0	0	0	27	53	13	1	0	1	0	0	0	95	39	37
23:00	0	0	0	0	16	22	11	2	0	0	0	0	0	51	41	37
Total	81	10	55	169	1778	3889	1016	52	6	1	0	1	0	7058		
%	1.1%	0.1%	0.8%	2.4%	25.2%	55.1%	14.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	08:00	07:00	07:00	09:00	08:00	08:00	08:00	08:00					08:00		
Vol.	8	2	4	21	96	251	73	5	2					425		
PM Peak	17:00	18:00	15:00	15:00	16:00	17:00	12:00	12:00	14:00	22:00		17:00		16:00		
Vol.	12	3	13	27	224	426	103	6	1	1		1		719		

Stats

15th Percentile :	31 MPH
50th Percentile :	35 MPH
85th Percentile :	39 MPH
95th Percentile :	42 MPH
Mean Speed(Average) :	36 MPH
10 MPH Pace Speed :	30-39 MPH
Number in Pace :	5667
Percent in Pace :	80.3%
Number of Vehicles > 35 MPH :	4187
Percent of Vehicles > 35 MPH :	59.3%



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
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E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau
NB

175481 A Speed
Site Code: 13810.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
02/28/ 17	0	0	0	0	1	9	7	1	0	0	0	0	0	18	42	39
01:00	0	0	0	0	5	5	1	0	0	0	0	0	0	11	38	35
02:00	0	0	0	0	2	3	6	3	0	0	1	0	0	15	46	42
03:00	0	0	0	0	0	7	6	2	0	0	0	0	0	15	43	40
04:00	0	0	0	0	1	19	12	6	1	0	0	0	0	39	44	40
05:00	0	0	0	1	6	95	119	27	3	0	0	0	0	251	43	40
06:00	2	0	0	0	54	264	277	48	4	0	0	0	0	649	43	39
07:00	12	14	32	45	85	278	192	17	1	0	0	0	0	676	41	36
08:00	3	0	0	15	77	218	189	23	2	0	0	0	0	527	42	38
09:00	0	1	0	6	38	142	136	26	1	0	1	0	0	351	43	39
10:00	2	0	0	2	38	148	135	22	1	1	0	0	0	349	42	39
11:00	2	2	0	0	33	172	130	24	2	0	0	0	0	365	42	39
12 PM	3	1	1	1	39	174	155	18	2	0	0	0	1	395	42	39
13:00	3	0	0	6	35	164	144	15	3	0	0	0	0	370	42	39
14:00	1	4	12	17	38	154	126	23	0	0	0	0	0	375	42	38
15:00	8	1	7	23	52	168	109	22	2	0	0	0	0	392	42	37
16:00	5	1	0	13	50	191	161	13	2	0	0	0	0	436	42	38
17:00	3	1	3	15	99	224	121	9	2	0	0	0	0	477	41	37
18:00	2	1	4	19	50	211	82	8	1	0	0	0	1	379	41	37
19:00	2	0	1	6	24	94	90	15	1	0	0	0	0	233	42	39
20:00	1	1	2	1	19	78	59	12	1	0	0	0	0	174	42	38
21:00	0	0	0	0	7	63	45	17	3	0	0	0	0	135	43	40
22:00	1	0	0	1	3	31	25	13	4	0	0	0	0	78	46	40
23:00	0	0	0	0	6	15	20	5	0	0	0	1	0	47	43	40
Total	50	27	62	171	762	2927	2347	369	36	1	2	1	2	6757		
%	0.7%	0.4%	0.9%	2.5%	11.3%	43.3%	34.7%	5.5%	0.5%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	07:00	07:00	07:00	06:00	06:00	06:00	10:00	02:00			07:00		
Vol.	12	14	32	45	85	278	277	48	4	1	1			676		
PM Peak	15:00	14:00	14:00	15:00	17:00	17:00	16:00	14:00	22:00			23:00	12:00	17:00		
Vol.	8	4	12	23	99	224	161	23	4			1	1	477		

Stats

15th Percentile :	33 MPH
50th Percentile :	37 MPH
85th Percentile :	42 MPH
95th Percentile :	44 MPH
Mean Speed(Average) :	38 MPH
10 MPH Pace Speed :	35-44 MPH
Number in Pace :	5274
Percent in Pace :	78.1%
Number of Vehicles > 35 MPH :	5100
Percent of Vehicles > 35 MPH :	75.5%



PRECISION
D A T A
INDUSTRIES, LLC

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E. Main Street (Route 16)
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City, State: Milford, MA
Client: VHB/ M. Daranleau
NB

175481 A Speed
Site Code: 13810.00

Start Time	1 14	15 19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69	70 9999	Total	85th % ile	Ave Speed
03/01/ 17	0	0	0	0	1	5	5	3	0	0	0	0	0	14	45	41
01:00	0	0	0	0	2	9	5	2	0	0	0	0	0	18	43	39
02:00	0	0	0	0	2	4	3	0	0	0	0	0	0	9	41	38
03:00	0	0	0	0	0	6	7	0	0	0	0	0	0	13	42	40
04:00	0	0	0	1	5	16	10	11	1	0	0	0	0	44	46	40
05:00	1	1	0	2	19	90	87	35	4	0	0	0	0	239	44	40
06:00	0	1	0	5	48	283	238	27	0	0	0	0	0	602	42	39
07:00	17	20	32	32	84	282	180	20	0	0	0	0	0	667	41	35
08:00	4	0	1	8	32	208	193	42	3	0	0	0	0	491	43	39
09:00	1	1	1	10	57	167	96	7	1	0	0	0	0	341	41	37
10:00	3	1	0	7	59	171	120	17	1	0	0	0	0	379	42	38
11:00	1	0	0	3	58	160	124	17	0	0	0	0	0	363	42	38
12 PM	2	1	0	4	43	164	160	25	0	0	0	0	0	399	42	39
13:00	1	1	0	4	46	185	126	16	0	0	0	0	0	379	42	38
14:00	1	2	4	12	90	168	82	10	1	0	0	0	0	370	41	37
15:00	12	5	13	31	71	174	79	9	0	0	0	0	0	394	40	35
16:00	6	5	6	18	79	201	90	12	0	1	0	0	0	418	41	36
17:00	1	3	3	22	117	257	89	5	0	0	0	0	1	498	40	36
18:00	3	0	1	12	65	180	102	7	0	0	0	0	0	370	41	37
19:00	1	0	0	1	37	155	95	14	1	0	0	0	0	304	42	38
20:00	1	2	0	1	51	95	68	3	0	0	0	0	0	221	41	37
21:00	1	0	0	5	17	54	37	10	1	0	0	0	0	125	42	38
22:00	0	0	4	0	1	20	29	5	2	0	0	0	0	61	43	40
23:00	0	0	0	1	5	18	7	4	0	0	0	0	0	35	43	38
Total	56	43	65	179	989	3072	2032	301	15	1	0	0	1	6754		
%	0.8%	0.6%	1.0%	2.7%	14.6%	45.5%	30.1%	4.5%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	07:00	07:00	07:00	07:00	07:00	06:00	06:00	08:00	05:00					07:00		
Vol.	17	20	32	32	84	283	238	42	4					667		
PM Peak	15:00	15:00	15:00	15:00	17:00	17:00	12:00	12:00	22:00	16:00			17:00	17:00		
Vol.	12	5	13	31	117	257	160	25	2	1			1	498		

Stats

15th Percentile : 32 MPH
50th Percentile : 37 MPH
85th Percentile : 42 MPH
95th Percentile : 43 MPH

Mean Speed(Average) : 37 MPH
10 MPH Pace Speed : 35-44 MPH
Number in Pace : 5104
Percent in Pace : 75.6%
Number of Vehicles > 35 MPH : 4808
Percent of Vehicles > 35 MPH : 71.2%



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau

175481 A Volume
Site Code: 13810.00

Start	SB		NB		Combin		2/28/201	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	7	Tue
12:00	5	134	9	98	14	232		
12:15	6	109	0	91	6	200		
12:30	7	127	6	107	13	234		
12:45	8	116	3	99	11	215	44	881
01:00	3	102	2	83	5	185		
01:15	2	84	4	94	6	178		
01:30	1	107	1	97	2	204		
01:45	2	105	4	96	6	201	19	768
02:00	4	124	3	72	7	196		
02:15	5	118	2	100	7	218		
02:30	1	126	7	99	8	225		
02:45	0	119	3	104	3	223	25	862
03:00	7	124	2	91	9	215		
03:15	2	157	1	105	3	262		
03:30	3	180	6	115	9	295		
03:45	6	174	6	81	12	255	33	1027
04:00	2	165	7	94	9	259		
04:15	2	154	5	109	7	263		
04:30	7	172	19	136	26	308		
04:45	14	174	8	97	22	271	64	1101
05:00	6	185	31	122	37	307		
05:15	20	195	34	115	54	310		
05:30	22	162	88	120	110	282		
05:45	27	150	98	120	125	270	326	1169
06:00	37	137	137	120	174	257		
06:15	38	115	180	106	218	221		
06:30	54	117	165	73	219	190		
06:45	87	99	167	80	254	179	865	847
07:00	79	98	171	71	250	169		
07:15	94	81	175	69	269	150		
07:30	120	60	146	51	266	111		
07:45	117	58	184	42	301	100	1086	530
08:00	129	50	161	53	290	103		
08:15	109	49	146	51	255	100		
08:30	111	49	125	38	236	87		
08:45	110	41	95	32	205	73	986	363
09:00	97	45	107	45	204	90		
09:15	103	38	82	28	185	66		
09:30	96	26	79	40	175	66		
09:45	98	36	83	22	181	58	745	280
10:00	99	27	91	35	190	62		
10:15	77	24	92	18	169	42		
10:30	114	21	81	16	195	37		
10:45	107	10	85	9	192	19	746	160
11:00	105	14	86	7	191	21		
11:15	94	18	97	11	191	29		
11:30	80	14	96	18	176	32		
11:45	101	11	86	11	187	22	745	104
Total	2418	4601	3266	3491	5684	8092		
Percent	42.5%	56.9%	57.5%	43.1%				
Day Total		7019		6757		13776		
Peak	07:30	-	04:30	-	06:15	-	07:15	-
Vol.	475	-	726	-	683	-	477	-
P.H.F.	0.921	-	0.931	-	0.949	-	0.977	-



PRECISION
D A T A
INDUSTRIES, LLC

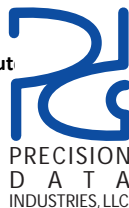
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

E. Main Street (Route 16)
south of Whispering Pine Drive
City, State: Milford, MA
Client: VHB/ M. Daranleau

175481 A Volume
Site Code: 13810.00

Start	SB		NB		Combin		3/1/2017	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	Wed	
12:00	11	142	7	96	18	238		
12:15	9	128	2	97	11	225		
12:30	6	110	3	102	9	212		
12:45	5	120	2	104	7	224	899	
01:00	4	105	5	110	9	215		
01:15	3	110	9	82	12	192		
01:30	2	93	2	93	4	186		
01:45	2	104	2	94	4	198	791	
02:00	1	108	1	98	2	206		
02:15	4	103	1	105	5	208		
02:30	1	139	2	78	3	217		
02:45	3	119	5	89	8	208	839	
03:00	3	117	1	111	4	228		
03:15	2	134	1	86	3	220		
03:30	2	187	4	91	6	278		
03:45	3	176	7	106	10	282	1008	
04:00	3	196	7	96	10	292		
04:15	2	180	11	106	13	286		
04:30	8	179	12	104	20	283		
04:45	10	164	14	112	24	276	1137	
05:00	6	203	22	144	28	347		
05:15	15	174	51	133	66	307		
05:30	18	174	72	114	90	288		
05:45	29	167	94	107	123	274	1216	
06:00	34	128	142	100	176	228		
06:15	45	150	162	98	207	248		
06:30	42	128	168	93	210	221		
06:45	72	136	130	79	202	215	912	
07:00	77	77	161	81	238	158		
07:15	93	74	180	81	273	155		
07:30	106	61	148	79	254	140		
07:45	128	64	178	63	306	127	580	
08:00	111	61	113	64	224	125		
08:15	113	58	141	64	254	122		
08:30	108	60	131	59	239	119		
08:45	93	44	106	34	199	78	444	
09:00	100	67	86	34	186	101		
09:15	85	36	81	38	166	74		
09:30	87	30	77	27	164	57		
09:45	86	32	97	26	183	58	290	
10:00	85	36	96	20	181	56		
10:15	76	22	97	17	173	39		
10:30	88	20	100	12	188	32		
10:45	94	17	86	12	180	29	156	
11:00	106	16	78	8	184	24		
11:15	114	12	89	10	203	22		
11:30	73	16	93	9	166	25		
11:45	106	7	103	8	209	15	86	
Total	2274	4784	3180	3574	5454	8358		
Percent	41.7%	57.2%	58.3%	42.8%				
Day Total		7058		6754		13812		
Peak	07:45	-	03:30	-	07:00	-	04:45	-
Vol.	460	-	739	-	667	-	1218	-
P.H.F.	0.898	-	0.943	-	0.926	-	0.878	-

PDI File #: **175481 A**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **W: Adams Street**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles

	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	61	0	61	171	2	0	173	15	0	0	15	249
7:15 AM	0	80	0	80	165	6	0	171	9	0	0	9	260
7:30 AM	0	103	0	103	163	6	0	169	10	0	0	10	282
7:45 AM	0	102	0	102	177	6	0	183	4	0	0	4	289
Total	0	346	0	346	676	20	0	696	38	0	0	38	1080
8:00 AM	0	101	0	101	131	6	0	137	10	0	0	10	248
8:15 AM	0	83	0	83	126	2	0	128	12	0	0	12	223
8:30 AM	0	84	0	84	127	3	0	130	10	0	0	10	224
8:45 AM	0	99	0	99	110	5	0	115	8	0	0	8	222
Total	0	367	0	367	494	16	0	510	40	0	0	40	917
Grand Total	0	713	0	713	1170	36	0	1206	78	0	0	78	1997
Approach %	0.0	100.0	0.0		97.0	3.0	0.0		100.0	0.0	0.0		
Total %	0.0	35.7	0.0	35.7	58.6	1.8	0.0	60.4	3.9	0.0	0.0	3.9	
Exiting Leg Total				1170				791				36	1997
Cars	0	662	0	662	1114	34	0	1148	75	0	0	75	1885
% Cars	0.0	92.8	0.0	92.8	95.2	94.4	0.0	95.2	96.2	0.0	0.0	96.2	94.4
Exiting Leg Total				1114				737				34	1885
Heavy Vehicles	0	51	0	51	56	2	0	58	3	0	0	3	112
% Heavy Vehicles	0.0	7.2	0.0	7.2	4.8	5.6	0.0	4.8	3.8	0.0	0.0	3.8	5.6
Exiting Leg Total				56				54				2	112

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

7:00 AM	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	61	0	61	171	2	0	173	15	0	0	15	249
7:15 AM	0	80	0	80	165	6	0	171	9	0	0	9	260
7:30 AM	0	103	0	103	163	6	0	169	10	0	0	10	282
7:45 AM	0	102	0	102	177	6	0	183	4	0	0	4	289
Total Volume	0	346	0	346	676	20	0	696	38	0	0	38	1080
% Approach Total	0.0	100.0	0.0		97.1	2.9	0.0		100.0	0.0	0.0		
PHF	0.000	0.840	0.000	0.840	0.955	0.833	0.000	0.951	0.633	0.000	0.000	0.633	0.934
Cars	0	327	0	327	647	19	0	666	35	0	0	35	1028
Cars %	0.0	94.5	0.0	94.5	95.7	95.0	0.0	95.7	92.1	0.0	0.0	92.1	95.2
Heavy Vehicles	0	19	0	19	29	1	0	30	3	0	0	3	52
Heavy Vehicles %	0.0	5.5	0.0	5.5	4.3	5.0	0.0	4.3	7.9	0.0	0.0	7.9	4.8
Cars Enter Leg	0	327	0	327	647	19	0	666	35	0	0	35	1028
Heavy Enter Leg	0	19	0	19	29	1	0	30	3	0	0	3	52
Total Entering Leg	0	346	0	346	676	20	0	696	38	0	0	38	1080
Cars Exiting Leg				647				362				19	1028
Heavy Exit Leg				29				22				1	52
Total Exiting Leg				676				384				20	1080

PDI File #: **175481 A**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **W: Adams Street**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	56	0	56	160	2	0	162	14	0	0	14	232
7:15 AM	0	78	0	78	162	5	0	167	9	0	0	9	254
7:30 AM	0	99	0	99	153	6	0	159	9	0	0	9	267
7:45 AM	0	94	0	94	172	6	0	178	3	0	0	3	275
Total	0	327	0	327	647	19	0	666	35	0	0	35	1028
8:00 AM	0	86	0	86	122	5	0	127	10	0	0	10	223
8:15 AM	0	80	0	80	123	2	0	125	12	0	0	12	217
8:30 AM	0	79	0	79	121	3	0	124	10	0	0	10	213
8:45 AM	0	90	0	90	101	5	0	106	8	0	0	8	204
Total	0	335	0	335	467	15	0	482	40	0	0	40	857
Grand Total	0	662	0	662	1114	34	0	1148	75	0	0	75	1885
Approach %	0.0	100.0	0.0		97.0	3.0	0.0		100.0	0.0	0.0		
Total %	0.0	35.1	0.0	35.1	59.1	1.8	0.0	60.9	4.0	0.0	0.0	4.0	
Exiting Leg Total	1114				737				34				1885

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

7:00 AM	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	56	0	56	160	2	0	162	14	0	0	14	232
7:15 AM	0	78	0	78	162	5	0	167	9	0	0	9	254
7:30 AM	0	99	0	99	153	6	0	159	9	0	0	9	267
7:45 AM	0	94	0	94	172	6	0	178	3	0	0	3	275
Total Volume	0	327	0	327	647	19	0	666	35	0	0	35	1028
% Approach Total	0.0	100.0	0.0		97.1	2.9	0.0		100.0	0.0	0.0		
PHF	0.000	0.826	0.000	0.826	0.940	0.792	0.000	0.935	0.625	0.000	0.000	0.625	0.935
Entering Leg	0	327	0	327	647	19	0	666	35	0	0	35	1028
Exiting Leg				647				362				19	1028
Total				974				1028				54	2056

PDI File #: **175481 A**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **W: Adams Street**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles

	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:00 AM	0	5	0	5	11	0	0	11	1	0	0	1	17
7:15 AM	0	2	0	2	3	1	0	4	0	0	0	0	6
7:30 AM	0	4	0	4	10	0	0	10	1	0	0	1	15
7:45 AM	0	8	0	8	5	0	0	5	1	0	0	1	14
Total	0	19	0	19	29	1	0	30	3	0	0	3	52
8:00 AM	0	15	0	15	9	1	0	10	0	0	0	0	25
8:15 AM	0	3	0	3	3	0	0	3	0	0	0	0	6
8:30 AM	0	5	0	5	6	0	0	6	0	0	0	0	11
8:45 AM	0	9	0	9	9	0	0	9	0	0	0	0	18
Total	0	32	0	32	27	1	0	28	0	0	0	0	60
Grand Total	0	51	0	51	56	2	0	58	3	0	0	3	112
Approach %	0.0	100.0	0.0		96.6	3.4	0.0		100.0	0.0	0.0		
Total %	0.0	45.5	0.0	45.5	50.0	1.8	0.0	51.8	2.7	0.0	0.0	2.7	
Exiting Leg Total	56				54				2				112

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

7:15 AM	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
7:15 AM	0	2	0	2	3	1	0	4	0	0	0	0	6
7:30 AM	0	4	0	4	10	0	0	10	1	0	0	1	15
7:45 AM	0	8	0	8	5	0	0	5	1	0	0	1	14
8:00 AM	0	15	0	15	9	1	0	10	0	0	0	0	25
Total Volume	0	29	0	29	27	2	0	29	2	0	0	2	60
% Approach Total	0.0	100.0	0.0		93.1	6.9	0.0		100.0	0.0	0.0		
PHF	0.000	0.483	0.000	0.483	0.675	0.500	0.000	0.725	0.500	0.000	0.000	0.500	0.600
Entering Leg	0	29	0	29	27	2	0	29	2	0	0	2	60
Exiting Leg				27				31				2	60
Total				56				60				4	120

PDI File #: **175481 A**Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**Location: **W: Adams Street**City, State: **Milford, MA**Client: **VHB/ M. Duranleau**Site Code: **13810.00**Count Date: **Thursday, February 16, 2017**Start Time: **7:00 AM**End Time: **9:00 AM**

Class:

PRECISION
D A T A
INDUSTRIES, LLC46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com**Bicycles (on Roadway and Crosswalks)**

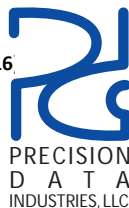
	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						

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

7:00 AM	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0
Exiting Leg	0						0						0						0
Total	0						0						0						

PDI File #: **175481 A**Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**Location: **W: Adams Street**City, State: **Milford, MA**Client: **VHB/ M. Duranleau**Site Code: **13810.00**Count Date: **Thursday, February 16, 2017**Start Time: **7:00 AM**End Time: **9:00 AM**

Class:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Exiting Leg Total	0						0						0						0

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

7:00 AM	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **175481 AA**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **W: Adams Street**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles

	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	171	0	171	94	7	0	101	7	0	0	7	279
4:15 PM	0	162	0	162	83	15	1	99	11	0	0	11	272
4:30 PM	0	177	0	177	89	16	0	105	14	0	0	14	296
4:45 PM	0	159	0	159	121	11	0	132	8	0	0	8	299
Total	0	669	0	669	387	49	1	437	40	0	0	40	1146
5:00 PM	0	172	0	172	122	9	0	131	8	0	0	8	311
5:15 PM	0	170	0	170	123	18	0	141	9	0	0	9	320
5:30 PM	0	176	0	176	105	13	0	118	11	0	0	11	305
5:45 PM	0	148	0	148	109	12	0	121	8	0	0	8	277
Total	0	666	0	666	459	52	0	511	36	0	0	36	1213
Grand Total	0	1335	0	1335	846	101	1	948	76	0	0	76	2359
Approach %	0.0	100.0	0.0		89.2	10.7	0.1		100.0	0.0	0.0		
Total %	0.0	56.6	0.0	56.6	35.9	4.3	0.0	40.2	3.2	0.0	0.0	3.2	
Exiting Leg Total				846				1412				101	2359
Cars	0	1306	0	1306	830	101	1	932	75	0	0	75	2313
% Cars	0.0	97.8	0.0	97.8	98.1	100.0	100.0	98.3	98.7	0.0	0.0	98.7	98.1
Exiting Leg Total				830				1382				101	2313
Heavy Vehicles	0	29	0	29	16	0	0	16	1	0	0	1	46
% Heavy Vehicles	0.0	2.2	0.0	2.2	1.9	0.0	0.0	1.7	1.3	0.0	0.0	1.3	1.9
Exiting Leg Total				16				30				0	46

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

4:45 PM	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:45 PM	0	159	0	159	121	11	0	132	8	0	0	8	299
5:00 PM	0	172	0	172	122	9	0	131	8	0	0	8	311
5:15 PM	0	170	0	170	123	18	0	141	9	0	0	9	320
5:30 PM	0	176	0	176	105	13	0	118	11	0	0	11	305
Total Volume	0	677	0	677	471	51	0	522	36	0	0	36	1235
% Approach Total	0.0	100.0	0.0		90.2	9.8	0.0		100.0	0.0	0.0		
PHF	0.000	0.962	0.000	0.962	0.957	0.708	0.000	0.926	0.818	0.000	0.000	0.818	0.965
Cars	0	665	0	665	463	51	0	514	36	0	0	36	1215
Cars %	0.0	98.2	0.0	98.2	98.3	100.0	0.0	98.5	100.0	0.0	0.0	100.0	98.4
Heavy Vehicles	0	12	0	12	8	0	0	8	0	0	0	0	20
Heavy Vehicles %	0.0	1.8	0.0	1.8	1.7	0.0	0.0	1.5	0.0	0.0	0.0	0.0	1.6
Cars Enter Leg	0	665	0	665	463	51	0	514	36	0	0	36	1215
Heavy Enter Leg	0	12	0	12	8	0	0	8	0	0	0	0	20
Total Entering Leg	0	677	0	677	471	51	0	522	36	0	0	36	1235
Cars Exiting Leg				463				701				51	1215
Heavy Exit Leg				8				12				0	20
Total Exiting Leg				471				713				51	1235

PDI File #: **175481 AA**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **W: Adams Street**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:

**Cars**

	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	164	0	164	91	7	0	98	7	0	0	7	269
4:15 PM	0	156	0	156	82	15	1	98	11	0	0	11	265
4:30 PM	0	174	0	174	89	16	0	105	13	0	0	13	292
4:45 PM	0	156	0	156	118	11	0	129	8	0	0	8	293
Total	0	650	0	650	380	49	1	430	39	0	0	39	1119
5:00 PM	0	170	0	170	121	9	0	130	8	0	0	8	308
5:15 PM	0	166	0	166	122	18	0	140	9	0	0	9	315
5:30 PM	0	173	0	173	102	13	0	115	11	0	0	11	299
5:45 PM	0	147	0	147	105	12	0	117	8	0	0	8	272
Total	0	656	0	656	450	52	0	502	36	0	0	36	1194
Grand Total	0	1306	0	1306	830	101	1	932	75	0	0	75	2313
Approach %	0.0	100.0	0.0		89.1	10.8	0.1		100.0	0.0	0.0		
Total %	0.0	56.5	0.0	56.5	35.9	4.4	0.0	40.3	3.2	0.0	0.0	3.2	
Exiting Leg Total	830				1382				101				2313

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

4:45 PM	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:45 PM	0	156	0	156	118	11	0	129	8	0	0	8	293
5:00 PM	0	170	0	170	121	9	0	130	8	0	0	8	308
5:15 PM	0	166	0	166	122	18	0	140	9	0	0	9	315
5:30 PM	0	173	0	173	102	13	0	115	11	0	0	11	299
Total Volume	0	665	0	665	463	51	0	514	36	0	0	36	1215
% Approach Total	0.0	100.0	0.0		90.1	9.9	0.0		100.0	0.0	0.0		
PHF	0.000	0.961	0.000	0.961	0.949	0.708	0.000	0.918	0.818	0.000	0.000	0.818	0.964
Entering Leg	0	665	0	665	463	51	0	514	36	0	0	36	1215
Exiting Leg				463				701				51	1215
Total				1128				1215				87	2430

PDI File #: **175481 AA**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **W: Adams Street**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



Heavy Vehicles

	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	7	0	7	3	0	0	3	0	0	0	0	10
4:15 PM	0	6	0	6	1	0	0	1	0	0	0	0	7
4:30 PM	0	3	0	3	0	0	0	0	1	0	0	1	4
4:45 PM	0	3	0	3	3	0	0	3	0	0	0	0	6
Total	0	19	0	19	7	0	0	7	1	0	0	1	27
5:00 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
5:15 PM	0	4	0	4	1	0	0	1	0	0	0	0	5
5:30 PM	0	3	0	3	3	0	0	3	0	0	0	0	6
5:45 PM	0	1	0	1	4	0	0	4	0	0	0	0	5
Total	0	10	0	10	9	0	0	9	0	0	0	0	19
Grand Total	0	29	0	29	16	0	0	16	1	0	0	1	46
Approach %	0.0	100.0	0.0		100.0	0.0	0.0		100.0	0.0	0.0		
Total %	0.0	63.0	0.0	63.0	34.8	0.0	0.0	34.8	2.2	0.0	0.0	2.2	
Exiting Leg Total	16				30				0				46

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

4:00 PM	East Main Street (Route 16)				East Main Street (Route 16)				Adams Street				Total
	North				South				West				
	Right	Thru	U-Turn	Total	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	
4:00 PM	0	7	0	7	3	0	0	3	0	0	0	0	10
4:15 PM	0	6	0	6	1	0	0	1	0	0	0	0	7
4:30 PM	0	3	0	3	0	0	0	0	1	0	0	1	4
4:45 PM	0	3	0	3	3	0	0	3	0	0	0	0	6
Total Volume	0	19	0	19	7	0	0	7	1	0	0	1	27
% Approach Total	0.0	100.0	0.0		100.0	0.0	0.0		100.0	0.0	0.0		
PHF	0.000	0.679	0.000	0.679	0.583	0.000	0.000	0.583	0.250	0.000	0.000	0.250	0.675
Entering Leg	0	19	0	19	7	0	0	7	1	0	0	1	27
Exiting Leg				7				20				0	27
Total				26				27				1	54

PDI File #: 175481 AA

Location: N: East Main Street (Route 16) S: East Main Street (Route 16)

Location: W: Adams Street

City, State: Milford, MA

Client: VHB/ M. Duranleau

Site Code: 13810.00

Count Date: Thursday, February 16, 2017

Start Time: 4:00 PM

End Time: 6:00 PM

Class:

PRECISION
D A T A
INDUSTRIES, LLC46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

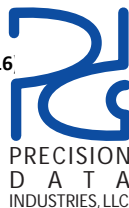
	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0

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

4:00 PM	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0
Exiting Leg	0						0						0						0
Total	0						0						0						

PDI File #: **175481 AA**Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**Location: **W: Adams Street**City, State: **Milford, MA**Client: **VHB/ M. Duranleau**Site Code: **13810.00**Count Date: **Thursday, February 16, 2017**Start Time: **4:00 PM**End Time: **6:00 PM**

Class:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

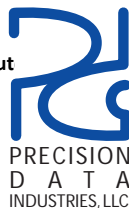
Pedestrians

	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exiting Leg Total	0						0						0						

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

4:00 PM	East Main Street (Route 16)						East Main Street (Route 16)						Adams Street						Total
	North						South						West						
	Right	Thru	U-Turn	CW-EB	CW-WB	Total	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **175481 B**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles

	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	72	1	0	73	1	1	0	2	1	167	0	168	243
7:15 AM	91	0	0	91	1	5	0	6	1	171	0	172	269
7:30 AM	113	0	0	113	1	4	0	5	0	163	0	163	281
7:45 AM	101	0	0	101	0	3	0	3	3	191	0	194	298
Total	377	1	0	378	3	13	0	16	5	692	0	697	1091
8:00 AM	110	1	0	111	1	1	0	2	1	132	0	133	246
8:15 AM	99	0	0	99	0	3	0	3	1	134	0	135	237
8:30 AM	95	0	0	95	0	0	0	0	0	131	0	131	226
8:45 AM	114	0	0	114	1	2	0	3	0	111	0	111	228
Total	418	1	0	419	2	6	0	8	2	508	0	510	937
Grand Total	795	2	0	797	5	19	0	24	7	1200	0	1207	2028
Approach %	99.7	0.3	0.0		20.8	79.2	0.0		0.6	99.4	0.0		
Total %	39.2	0.1	0.0	39.3	0.2	0.9	0.0	1.2	0.3	59.2	0.0	59.5	
Exiting Leg Total	1205				9				814				2028
Cars	743	1	0	744	4	17	0	21	5	1146	0	1151	1916
% Cars	93.5	50.0	0.0	93.4	80.0	89.5	0.0	87.5	71.4	95.5	0.0	95.4	94.5
Exiting Leg Total	1150				6				760				1916
Heavy Vehicles	52	1	0	53	1	2	0	3	2	54	0	56	112
% Heavy Vehicles	6.5	50.0	0.0	6.6	20.0	10.5	0.0	12.5	28.6	4.5	0.0	4.6	5.5
Exiting Leg Total	55				3				54				112

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

7:15 AM	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	91	0	0	91	1	5	0	6	1	171	0	172	269
7:30 AM	113	0	0	113	1	4	0	5	0	163	0	163	281
7:45 AM	101	0	0	101	0	3	0	3	3	191	0	194	298
8:00 AM	110	1	0	111	1	1	0	2	1	132	0	133	246
Total Volume	415	1	0	416	3	13	0	16	5	657	0	662	1094
% Approach Total	99.8	0.2	0.0		18.8	81.3	0.0		0.8	99.2	0.0		
PHF	0.918	0.250	0.000	0.920	0.750	0.650	0.000	0.667	0.417	0.860	0.000	0.853	0.918
Cars	385	1	0	386	3	12	0	15	4	629	0	633	1034
Cars %	92.8	100.0	0.0	92.8	100.0	92.3	0.0	93.8	80.0	95.7	0.0	95.6	94.5
Heavy Vehicles	30	0	0	30	0	1	0	1	1	28	0	29	60
Heavy Vehicles %	7.2	0.0	0.0	7.2	0.0	7.7	0.0	6.3	20.0	4.3	0.0	4.4	5.5
Cars Enter Leg	385	1	0	386	3	12	0	15	4	629	0	633	1034
Heavy Enter Leg	30	0	0	30	0	1	0	1	1	28	0	29	60
Total Entering Leg	415	1	0	416	3	13	0	16	5	657	0	662	1094
Cars Exiting Leg				632				5				397	1034
Heavy Exit Leg				28				1				31	60
Total Exiting Leg				660				6				428	1094

PDI File #: **175481 B**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Cars

	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	67	0	0	67	0	0	0	0	0	157	0	157	224
7:15 AM	89	0	0	89	1	5	0	6	1	167	0	168	263
7:30 AM	107	0	0	107	1	4	0	5	0	150	0	150	262
7:45 AM	92	0	0	92	0	2	0	2	2	185	0	187	281
Total	355	0	0	355	2	11	0	13	3	659	0	662	1030
8:00 AM	97	1	0	98	1	1	0	2	1	127	0	128	228
8:15 AM	96	0	0	96	0	3	0	3	1	130	0	131	230
8:30 AM	89	0	0	89	0	0	0	0	0	126	0	126	215
8:45 AM	106	0	0	106	1	2	0	3	0	104	0	104	213
Total	388	1	0	389	2	6	0	8	2	487	0	489	886
Grand Total	743	1	0	744	4	17	0	21	5	1146	0	1151	1916
Approach %	99.9	0.1	0.0		19.0	81.0	0.0		0.4	99.6	0.0		
Total %	38.8	0.1	0.0	38.8	0.2	0.9	0.0	1.1	0.3	59.8	0.0	60.1	
Exiting Leg Total	1150				6				760				1916

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

7:15 AM	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	89	0	0	89	1	5	0	6	1	167	0	168	263
7:30 AM	107	0	0	107	1	4	0	5	0	150	0	150	262
7:45 AM	92	0	0	92	0	2	0	2	2	185	0	187	281
8:00 AM	97	1	0	98	1	1	0	2	1	127	0	128	228
Total Volume	385	1	0	386	3	12	0	15	4	629	0	633	1034
% Approach Total	99.7	0.3	0.0		20.0	80.0	0.0		0.6	99.4	0.0		
PHF	0.900	0.250	0.000	0.902	0.750	0.600	0.000	0.625	0.500	0.850	0.000	0.846	0.920
Entering Leg	385	1	0	386	3	12	0	15	4	629	0	633	1034
Exiting Leg				632				5				397	1034
Total	1018				20				1030				2068

PDI File #: **175481 B**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles

	East Main Street (Route 16)					Whispering Pines Road					East Main Street (Route 16)					Total
	North					East					South					
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total		Right	Thru	U-Turn	Total		
7:00 AM	5	1	0	6		1	1	0	2		1	10	0	11		19
7:15 AM	2	0	0	2		0	0	0	0		0	4	0	4		6
7:30 AM	6	0	0	6		0	0	0	0		0	13	0	13		19
7:45 AM	9	0	0	9		0	1	0	1		1	6	0	7		17
Total	22	1	0	23		1	2	0	3		2	33	0	35		61
8:00 AM	13	0	0	13		0	0	0	0		0	5	0	5		18
8:15 AM	3	0	0	3		0	0	0	0		0	4	0	4		7
8:30 AM	6	0	0	6		0	0	0	0		0	5	0	5		11
8:45 AM	8	0	0	8		0	0	0	0		0	7	0	7		15
Total	30	0	0	30		0	0	0	0		0	21	0	21		51
Grand Total	52	1	0	53		1	2	0	3		2	54	0	56		112
Approach %	98.1	1.9	0.0			33.3	66.7	0.0			3.6	96.4	0.0			
Total %	46.4	0.9	0.0	47.3		0.9	1.8	0.0	2.7		1.8	48.2	0.0	50.0		
Exiting Leg Total	55					3					54					112

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

7:00 AM	East Main Street (Route 16)					Whispering Pines Road				East Main Street (Route 16)				Total
	North					East				South				
	Thru	Left	U-Turn	Total		Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	1	0	6		1	1	0	2	1	10	0	11	19
7:15 AM	2	0	0	2		0	0	0	0	0	4	0	4	6
7:30 AM	6	0	0	6		0	0	0	0	0	13	0	13	19
7:45 AM	9	0	0	9		0	1	0	1	1	6	0	7	17
Total Volume	22	1	0	23		1	2	0	3	2	33	0	35	61
% Approach Total	95.7	4.3	0.0			33.3	66.7	0.0		5.7	94.3	0.0		
PHF	0.611	0.250	0.000	0.639		0.250	0.500	0.000	0.375	0.500	0.635	0.000	0.673	0.803
Entering Leg	22	1	0	23		1	2	0	3	2	33	0	35	61
Exiting Leg				34					3				24	61
Total				57					6				59	122

PDI File #: **175481 B**Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**Location: **E: Whispering Pines Road**City, State: **Milford, MA**Client: **VHB/ M. Duranleau**Site Code: **13810.00**Count Date: **Thursday, February 16, 2017**Start Time: **7:00 AM**End Time: **9:00 AM**

Class:



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

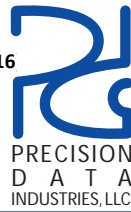
	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0						0						0						0

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

7:00 AM	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **175481 B**Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**Location: **E: Whispering Pines Road**City, State: **Milford, MA**Client: **VHB/ M. Duranleau**Site Code: **13810.00**Count Date: **Thursday, February 16, 2017**Start Time: **7:00 AM**End Time: **9:00 AM**

Class:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

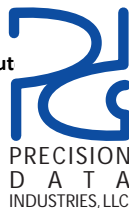
Pedestrians

	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exiting Leg Total	0						0						0						0

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

7:00 AM	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **175481 BB**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles

	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total	
	North				East				South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	184	0	0	184	1	0	0	1	0	100	0	100	285	
4:15 PM	176	1	0	177	0	1	0	1	2	102	0	104	282	
4:30 PM	190	0	0	190	0	1	0	1	4	107	0	111	302	
4:45 PM	167	1	0	168	0	1	0	1	5	139	0	144	313	
Total	717	2	0	719	1	3	0	4	11	448	0	459	1182	
5:00 PM	181	0	0	181	1	0	0	1	2	129	0	131	313	
5:15 PM	177	0	0	177	0	1	0	1	2	143	0	145	323	
5:30 PM	187	0	0	187	0	0	0	0	6	122	0	128	315	
5:45 PM	159	0	0	159	1	3	0	4	2	120	0	122	285	
Total	704	0	0	704	2	4	0	6	12	514	0	526	1236	
Grand Total	1421	2	0	1423	3	7	0	10	23	962	0	985	2418	
Approach %	99.9	0.1	0.0		30.0	70.0	0.0		2.3	97.7	0.0			
Total %	58.8	0.1	0.0	58.9	0.1	0.3	0.0	0.4	1.0	39.8	0.0	40.7		
Exiting Leg Total	965				25				1428				2418	
Cars	1396	2	0	1398	3	7	0	10	23	945	0	968	2376	
% Cars	98.2	100.0	0.0	98.2	100.0	100.0	0.0	100.0	100.0	98.2	0.0	98.3	98.3	
Exiting Leg Total	948				25				1403				2376	
Heavy Vehicles	25	0	0	25	0	0	0	0	0	17	0	17	42	
% Heavy Vehicles	1.8	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8	0.0	1.7	1.7	
Exiting Leg Total	17				0				25				42	

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

4:45 PM	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	167	1	0	168	0	1	0	1	5	139	0	144	313
5:00 PM	181	0	0	181	1	0	0	1	2	129	0	131	313
5:15 PM	177	0	0	177	0	1	0	1	2	143	0	145	323
5:30 PM	187	0	0	187	0	0	0	0	6	122	0	128	315
Total Volume	712	1	0	713	1	2	0	3	15	533	0	548	1264
% Approach Total	99.9	0.1	0.0		33.3	66.7	0.0		2.7	97.3	0.0		
PHF	0.952	0.250	0.000	0.953	0.250	0.500	0.000	0.750	0.625	0.932	0.000	0.945	0.978
Cars	704	1	0	705	1	2	0	3	15	525	0	540	1248
Cars %	98.9	100.0	0.0	98.9	100.0	100.0	0.0	100.0	100.0	98.5	0.0	98.5	98.7
Heavy Vehicles	8	0	0	8	0	0	0	0	0	8	0	8	16
Heavy Vehicles %	1.1	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.5	1.3
Cars Enter Leg	704	1	0	705	1	2	0	3	15	525	0	540	1248
Heavy Enter Leg	8	0	0	8	0	0	0	0	0	8	0	8	16
Total Entering Leg	712	1	0	713	1	2	0	3	15	533	0	548	1264
Cars Exiting Leg				526				16				706	1248
Heavy Exit Leg				8				0				8	16
Total Exiting Leg				534				16				714	1264

PDI File #: **175481 BB**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



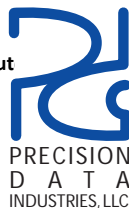
Cars

	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	178	0	0	178	1	0	0	1	0	98	0	98	277
4:15 PM	170	1	0	171	0	1	0	1	2	99	0	101	273
4:30 PM	186	0	0	186	0	1	0	1	4	107	0	111	298
4:45 PM	166	1	0	167	0	1	0	1	5	136	0	141	309
Total	700	2	0	702	1	3	0	4	11	440	0	451	1157
5:00 PM	179	0	0	179	1	0	0	1	2	128	0	130	310
5:15 PM	174	0	0	174	0	1	0	1	2	142	0	144	319
5:30 PM	185	0	0	185	0	0	0	0	6	119	0	125	310
5:45 PM	158	0	0	158	1	3	0	4	2	116	0	118	280
Total	696	0	0	696	2	4	0	6	12	505	0	517	1219
Grand Total	1396	2	0	1398	3	7	0	10	23	945	0	968	2376
Approach %	99.9	0.1	0.0		30.0	70.0	0.0		2.4	97.6	0.0		
Total %	58.8	0.1	0.0	58.8	0.1	0.3	0.0	0.4	1.0	39.8	0.0	40.7	
Exiting Leg Total	948				25				1403				2376

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

4:45 PM	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:45 PM	166	1	0	167	0	1	0	1	5	136	0	141	309
5:00 PM	179	0	0	179	1	0	0	1	2	128	0	130	310
5:15 PM	174	0	0	174	0	1	0	1	2	142	0	144	319
5:30 PM	185	0	0	185	0	0	0	0	6	119	0	125	310
Total Volume	704	1	0	705	1	2	0	3	15	525	0	540	1248
% Approach Total	99.9	0.1	0.0		33.3	66.7	0.0		2.8	97.2	0.0		
PHF	0.951	0.250	0.000	0.953	0.250	0.500	0.000	0.750	0.625	0.924	0.000	0.938	0.978
Entering Leg	704	1	0	705	1	2	0	3	15	525	0	540	1248
Exiting Leg				526				16				706	1248
Total				1231				19				1246	2496

PDI File #: **175481 BB**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

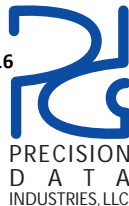
Heavy Vehicles

Time	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total
	North				East				South				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	6	0	0	6	0	0	0	0	0	2	0	2	8
4:15 PM	6	0	0	6	0	0	0	0	0	3	0	3	9
4:30 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
4:45 PM	1	0	0	1	0	0	0	0	0	3	0	3	4
Total	17	0	0	17	0	0	0	0	0	8	0	8	25
5:00 PM	2	0	0	2	0	0	0	0	0	1	0	1	3
5:15 PM	3	0	0	3	0	0	0	0	0	1	0	1	4
5:30 PM	2	0	0	2	0	0	0	0	0	3	0	3	5
5:45 PM	1	0	0	1	0	0	0	0	0	4	0	4	5
Total	8	0	0	8	0	0	0	0	0	9	0	9	17
Grand Total	25	0	0	25	0	0	0	0	0	17	0	17	42
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	59.5	0.0	0.0	59.5	0.0	0.0	0.0	0.0	0.0	40.5	0.0	40.5	
Exiting Leg Total	17				0				25				42

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

4:00 PM	East Main Street (Route 16)				Whispering Pines Road				East Main Street (Route 16)				Total	
	North				East				South					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
4:00 PM	6	0	0	6	0	0	0	0	0	2	0	2	8	
4:15 PM	6	0	0	6	0	0	0	0	0	3	0	3	9	
4:30 PM	4	0	0	4	0	0	0	0	0	0	0	0	4	
4:45 PM	1	0	0	1	0	0	0	0	0	3	0	3	4	
Total Volume	17	0	0	17	0	0	0	0	0	8	0	8	25	
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0			0.0	100.0	0.0		
PHF	0.708	0.000	0.000	0.708	0.000	0.000	0.000	0.000		0.000	0.667	0.000	0.667	0.694
Entering Leg	17	0	0	17	0	0	0	0		0	8	0	8	25
Exiting Leg				8				0					17	25
Total				25				0					25	50

PDI File #: **175481 BB**
 Location: **N: East Main Street (Route 1A)**
 Location: **E: Whispering Pines Road**
 City, State: **Milford, MA**
 Client: **VHB / M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2018**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

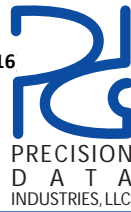
	East Main Street (Route 16)							Whispering Pines Road							East Main Street (Route 16)							Total
	North							East							South							
	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	U-Turn	CW-WB	CW-EB	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	0							0							0							

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

4:00 PM	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg						0						0						0	0
Total						0						0							0

PDI File #: **175481 BB**Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**Location: **E: Whispering Pines Road**City, State: **Milford, MA**Client: **VHB/ M. Duranleau**Site Code: **13810.00**Count Date: **Thursday, February 16, 2017**Start Time: **4:00 PM**End Time: **6:00 PM**

Class:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

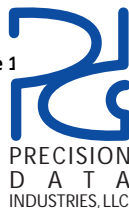
Pedestrians

	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Exiting Leg Total	0						0						0						0

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

4:00 PM	East Main Street (Route 16)						Whispering Pines Road						East Main Street (Route 16)						Total
	North						East						South						
	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	U-Turn	CW-WB	CW-EB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0						0						0						0
Total	0						0						0						0

PDI File #: **175481 C**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 1**
 Location: **E: Beaver Street W: Fortune Boulevard**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleu**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

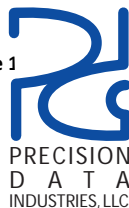
Cars and Heavy Vehicles

	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	20	34	18	0	72	35	47	29	0	111	17	86	5	0	108	0	31	50	0	81	372
7:15 AM	32	38	33	0	103	44	55	28	0	127	12	69	7	0	88	5	30	55	0	90	408
7:30 AM	30	51	39	0	120	39	62	36	0	137	7	78	6	0	91	7	36	38	0	81	429
7:45 AM	24	70	33	0	127	46	90	44	0	180	10	93	7	0	110	7	38	55	0	100	517
Total	106	193	123	0	422	164	254	137	0	555	46	326	25	0	397	19	135	198	0	352	1726
8:00 AM	32	40	36	0	108	33	81	27	0	141	11	67	9	0	87	11	33	39	0	83	419
8:15 AM	33	53	33	0	119	26	58	32	0	116	19	72	9	0	100	13	38	40	0	91	426
8:30 AM	36	42	24	0	102	32	86	26	0	144	17	65	4	0	86	14	42	42	0	98	430
8:45 AM	41	50	30	0	121	32	69	30	0	131	16	41	13	0	70	14	32	38	0	84	406
Total	142	185	123	0	450	123	294	115	0	532	63	245	35	0	343	52	145	159	0	356	1681
Grand Total	248	378	246	0	872	287	548	252	0	1087	109	571	60	0	740	71	280	357	0	708	3407
Approach %	28.4	43.3	28.2	0.0		26.4	50.4	23.2	0.0		14.7	77.2	8.1	0.0		10.0	39.5	50.4	0.0		
Total %	7.3	11.1	7.2	0.0	25.6	8.4	16.1	7.4	0.0	31.9	3.2	16.8	1.8	0.0	21.7	2.1	8.2	10.5	0.0	20.8	
Exiting Leg Total	1215					635					701					856					3407
Cars	229	357	223	0	809	257	526	241	0	1024	101	549	58	0	708	64	250	338	0	652	3193
% Cars	92.3	94.4	90.7	0.0	92.8	89.5	96.0	95.6	0.0	94.2	92.7	96.1	96.7	0.0	95.7	90.1	89.3	94.7	0.0	92.1	93.7
Exiting Leg Total	1144					574					662					813					3193
Heavy Vehicles	19	21	23	0	63	30	22	11	0	63	8	22	2	0	32	7	30	19	0	56	214
% Heavy Vehicles	7.7	5.6	9.3	0.0	7.2	10.5	4.0	4.4	0.0	5.8	7.3	3.9	3.3	0.0	4.3	9.9	10.7	5.3	0.0	7.9	6.3
Exiting Leg Total	71					61					39					43					214

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

7:45 AM	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	24	70	33	0	127	46	90	44	0	180	10	93	7	0	110	7	38	55	0	100	517
8:00 AM	32	40	36	0	108	33	81	27	0	141	11	67	9	0	87	11	33	39	0	83	419
8:15 AM	33	53	33	0	119	26	58	32	0	116	19	72	9	0	100	13	38	40	0	91	426
8:30 AM	36	42	24	0	102	32	86	26	0	144	17	65	4	0	86	14	42	42	0	98	430
Total Volume	125	205	126	0	456	137	315	129	0	581	57	297	29	0	383	45	151	176	0	372	1792
% Approach Total	27.4	45.0	27.6	0.0		23.6	54.2	22.2	0.0		14.9	77.5	7.6	0.0		12.1	40.6	47.3	0.0		
PHF	0.868	0.732	0.875	0.000	0.898	0.745	0.875	0.733	0.000	0.807	0.750	0.798	0.806	0.000	0.870	0.804	0.899	0.800	0.000	0.930	0.867
Cars	113	195	113	0	421	120	306	123	0	549	55	289	28	0	372	41	133	169	0	343	1685
Cars %	90.4	95.1	89.7	0.0	92.3	87.6	97.1	95.3	0.0	94.5	96.5	97.3	96.6	0.0	97.1	91.1	88.1	96.0	0.0	92.2	94.0
Heavy Vehicles	12	10	13	0	35	17	9	6	0	32	2	8	1	0	11	4	18	7	0	29	107
Heavy Vehicles %	9.6	4.9	10.3	0.0	7.7	12.4	2.9	4.7	0.0	5.5	3.5	2.7	3.4	0.0	2.9	8.9	11.9	4.0	0.0	7.8	6.0
Cars Enter Leg	113	195	113	0	421	120	306	123	0	549	55	289	28	0	372	41	133	169	0	343	1685
Heavy Enter Leg	12	10	13	0	35	17	9	6	0	32	2	8	1	0	11	4	18	7	0	29	107
Total Entering Leg	125	205	126	0	456	137	315	129	0	581	57	297	29	0	383	45	151	176	0	372	1792
Cars Exiting Leg	578					301					359					447					1685
Heavy Exit Leg	32					33					20					22					107
Total Exiting Leg	610					334					379					469					1792

PDI File #: **175481 C**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 1**
 Location: **E: Beaver Street W: Fortune Boulevard**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleu**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	17	30	16	0	63	33	43	27	0	103	14	80	5	0	99	0	29	44	0	73	338
7:15 AM	32	38	30	0	100	41	52	28	0	121	12	68	7	0	87	5	26	54	0	85	393
7:30 AM	28	48	37	0	113	34	60	34	0	128	6	73	6	0	85	5	31	34	0	70	396
7:45 AM	17	66	32	0	115	39	86	42	0	167	10	93	7	0	110	7	32	53	0	92	484
Total	94	182	115	0	391	147	241	131	0	519	42	314	25	0	381	17	118	185	0	320	1611
8:00 AM	29	35	26	0	90	26	78	26	0	130	10	64	9	0	83	7	29	38	0	74	377
8:15 AM	32	52	32	0	116	26	58	30	0	114	19	70	8	0	97	13	32	38	0	83	410
8:30 AM	35	42	23	0	100	29	84	25	0	138	16	62	4	0	82	14	40	40	0	94	414
8:45 AM	39	46	27	0	112	29	65	29	0	123	14	39	12	0	65	13	31	37	0	81	381
Total	135	175	108	0	418	110	285	110	0	505	59	235	33	0	327	47	132	153	0	332	1582
Grand Total	229	357	223	0	809	257	526	241	0	1024	101	549	58	0	708	64	250	338	0	652	3193
Approach %	28.3	44.1	27.6	0.0		25.1	51.4	23.5	0.0		14.3	77.5	8.2	0.0		9.8	38.3	51.8	0.0		
Total %	7.2	11.2	7.0	0.0	25.3	8.0	16.5	7.5	0.0	32.1	3.2	17.2	1.8	0.0	22.2	2.0	7.8	10.6	0.0	20.4	
Exiting Leg Total	1144					574					662					813					3193

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

7:45 AM	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:45 AM	17	66	32	0	115	39	86	42	0	167	10	93	7	0	110	7	32	53	0	92	484
8:00 AM	29	35	26	0	90	26	78	26	0	130	10	64	9	0	83	7	29	38	0	74	377
8:15 AM	32	52	32	0	116	26	58	30	0	114	19	70	8	0	97	13	32	38	0	83	410
8:30 AM	35	42	23	0	100	29	84	25	0	138	16	62	4	0	82	14	40	40	0	94	414
Total Volume	113	195	113	0	421	120	306	123	0	549	55	289	28	0	372	41	133	169	0	343	1685
% Approach Total	26.8	46.3	26.8	0.0		21.9	55.7	22.4	0.0		14.8	77.7	7.5	0.0		12.0	38.8	49.3	0.0		
PHF	0.807	0.739	0.883	0.000	0.907	0.769	0.890	0.732	0.000	0.822	0.724	0.777	0.778	0.000	0.845	0.732	0.831	0.797	0.000	0.912	0.870
Entering Leg	113	195	113	0	421	120	306	123	0	549	55	289	28	0	372	41	133	169	0	343	1685
Exiting Leg	578					301					359					447					1685
Total	999					850					731					790					3370

PDI File #: **175481 C**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 1**
 Location: **E: Beaver Street W: Fortune Boulevard**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleu**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



Heavy Vehicles

	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	3	4	2	0	9	2	4	2	0	8	3	6	0	0	9	0	2	6	0	8	34
7:15 AM	0	0	3	0	3	3	3	0	0	6	0	1	0	0	1	0	4	1	0	5	15
7:30 AM	2	3	2	0	7	5	2	2	0	9	1	5	0	0	6	2	5	4	0	11	33
7:45 AM	7	4	1	0	12	7	4	2	0	13	0	0	0	0	0	0	6	2	0	8	33
Total	12	11	8	0	31	17	13	6	0	36	4	12	0	0	16	2	17	13	0	32	115
8:00 AM	3	5	10	0	18	7	3	1	0	11	1	3	0	0	4	4	4	1	0	9	42
8:15 AM	1	1	1	0	3	0	0	2	0	2	0	2	1	0	3	0	6	2	0	8	16
8:30 AM	1	0	1	0	2	3	2	1	0	6	1	3	0	0	4	0	2	2	0	4	16
8:45 AM	2	4	3	0	9	3	4	1	0	8	2	2	1	0	5	1	1	1	0	3	25
Total	7	10	15	0	32	13	9	5	0	27	4	10	2	0	16	5	13	6	0	24	99
Grand Total	19	21	23	0	63	30	22	11	0	63	8	22	2	0	32	7	30	19	0	56	214
Approach %	30.2	33.3	36.5	0.0		47.6	34.9	17.5	0.0		25.0	68.8	6.3	0.0		12.5	53.6	33.9	0.0		
Total %	8.9	9.8	10.7	0.0	29.4	14.0	10.3	5.1	0.0	29.4	3.7	10.3	0.9	0.0	15.0	3.3	14.0	8.9	0.0	26.2	
Exiting Leg Total	71					61					39					43					214

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

7:30 AM	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	2	3	2	0	7	5	2	2	0	9	1	5	0	0	6	2	5	4	0	11	33
7:45 AM	7	4	1	0	12	7	4	2	0	13	0	0	0	0	0	0	6	2	0	8	33
8:00 AM	3	5	10	0	18	7	3	1	0	11	1	3	0	0	4	4	4	1	0	9	42
8:15 AM	1	1	1	0	3	0	0	2	0	2	0	2	1	0	3	0	6	2	0	8	16
Total Volume	13	13	14	0	40	19	9	7	0	35	2	10	1	0	13	6	21	9	0	36	124
% Approach Total	32.5	32.5	35.0	0.0		54.3	25.7	20.0	0.0		15.4	76.9	7.7	0.0		16.7	58.3	25.0	0.0		
PHF	0.464	0.650	0.350	0.000	0.556	0.679	0.563	0.875	0.000	0.673	0.500	0.500	0.250	0.000	0.542	0.375	0.875	0.563	0.000	0.818	0.738
Entering Leg	13	13	14	0	40	19	9	7	0	35	2	10	1	0	13	6	21	9	0	36	124
Exiting Leg	38					37					26					23					124
Total	78					72					39					59					248

PDI File #: **175481 C**

Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**

Location: **E: Beaver Street W: Fortune Boulevard**

City, State: **Milford, MA**

Client: **VHB/ M. Duranleu**

Site Code: **13810.00**

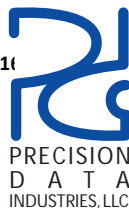
Count Date: **Thursday, February 16, 2017**

Start Time: **7:00 AM**

End Time: **9:00 AM**

Class:

46 Morton Street
Office: 508-686-1111
Email: info@vhab.com



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

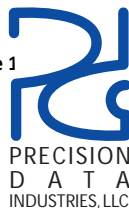
Pedestrians

	East Main Street (Route 16)							Beaver Street							East Main Street (Route 16)							Fortune Boulevard							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Exiting Leg Total	0							0							0							0							

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

7:00 AM	East Main Street (Route 16)							Beaver Street							East Main Street (Route 16)							Fortune Boulevard							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exiting Leg	0							0							0							0							0
Total	0							0							0							0							

PDI File #: **175481 CC**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 1**
 Location: **E: Beaver Street W: Fortune Boulevard**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleu**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

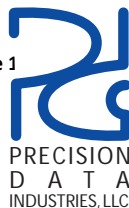
Cars and Heavy Vehicles

	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	47	76	56	0	179	30	44	42	0	116	35	41	11	0	87	20	46	31	0	97	479
4:15 PM	64	71	46	0	181	40	51	25	0	116	26	51	6	0	83	18	67	30	0	115	495
4:30 PM	63	93	52	0	208	45	43	34	0	122	37	46	9	0	92	25	79	26	0	130	552
4:45 PM	53	85	48	0	186	46	45	41	0	132	34	67	14	0	115	13	59	35	0	107	540
Total	227	325	202	0	754	161	183	142	0	486	132	205	40	0	377	76	251	122	0	449	2066
5:00 PM	58	71	46	0	175	37	47	28	0	112	44	63	16	0	123	16	125	44	0	185	595
5:15 PM	52	87	43	0	182	43	62	33	0	138	27	61	16	0	104	16	74	42	0	132	556
5:30 PM	71	79	51	0	201	41	41	32	0	114	32	68	13	0	113	24	75	39	0	138	566
5:45 PM	39	91	45	0	175	43	39	38	0	120	25	48	10	0	83	19	51	30	0	100	478
Total	220	328	185	0	733	164	189	131	0	484	128	240	55	0	423	75	325	155	0	555	2195
Grand Total	447	653	387	0	1487	325	372	273	0	970	260	445	95	0	800	151	576	277	0	1004	4261
Approach %	30.1	43.9	26.0	0.0		33.5	38.4	28.1	0.0		32.5	55.6	11.9	0.0		15.0	57.4	27.6	0.0		
Total %	10.5	15.3	9.1	0.0	34.9	7.6	8.7	6.4	0.0	22.8	6.1	10.4	2.2	0.0	18.8	3.5	13.5	6.5	0.0	23.6	
Exiting Leg Total	1047					1223					1077					914					4261
Cars	441	642	372	0	1455	314	361	271	0	946	255	444	91	0	790	148	563	273	0	984	4175
% Cars	98.7	98.3	96.1	0.0	97.8	96.6	97.0	99.3	0.0	97.5	98.1	99.8	95.8	0.0	98.8	98.0	97.7	98.6	0.0	98.0	98.0
Exiting Leg Total	1031					1190					1061					893					4175
Heavy Vehicles	6	11	15	0	32	11	11	2	0	24	5	1	4	0	10	3	13	4	0	20	86
% Heavy Vehicles	1.3	1.7	3.9	0.0	2.2	3.4	3.0	0.7	0.0	2.5	1.9	0.2	4.2	0.0	1.3	2.0	2.3	1.4	0.0	2.0	2.0
Exiting Leg Total	16					33					16					21					86

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

4:45 PM	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	53	85	48	0	186	46	45	41	0	132	34	67	14	0	115	13	59	35	0	107	540
5:00 PM	58	71	46	0	175	37	47	28	0	112	44	63	16	0	123	16	125	44	0	185	595
5:15 PM	52	87	43	0	182	43	62	33	0	138	27	61	16	0	104	16	74	42	0	132	556
5:30 PM	71	79	51	0	201	41	41	32	0	114	32	68	13	0	113	24	75	39	0	138	566
Total Volume	234	322	188	0	744	167	195	134	0	496	137	259	59	0	455	69	333	160	0	562	2257
% Approach Total	31.5	43.3	25.3	0.0		33.7	39.3	27.0	0.0		30.1	56.9	13.0	0.0		12.3	59.3	28.5	0.0		
PHF	0.824	0.925	0.922	0.000	0.925	0.908	0.786	0.817	0.000	0.899	0.778	0.952	0.922	0.000	0.925	0.719	0.666	0.909	0.000	0.759	0.948
Cars	231	317	183	0	731	162	189	132	0	483	134	258	59	0	451	67	327	158	0	552	2217
Cars %	98.7	98.4	97.3	0.0	98.3	97.0	96.9	98.5	0.0	97.4	97.8	99.6	100.0	0.0	99.1	97.1	98.2	98.8	0.0	98.2	98.2
Heavy Vehicles	3	5	5	0	13	5	6	2	0	13	3	1	0	0	4	2	6	2	0	10	40
Heavy Vehicles %	1.3	1.6	2.7	0.0	1.7	3.0	3.1	1.5	0.0	2.6	2.2	0.4	0.0	0.0	0.9	2.9	1.8	1.3	0.0	1.8	1.8
Cars Enter Leg	231	317	183	0	731	162	189	132	0	483	134	258	59	0	451	67	327	158	0	552	2217
Heavy Enter Leg	3	5	5	0	13	5	6	2	0	13	3	1	0	0	4	2	6	2	0	10	40
Total Entering Leg	234	322	188	0	744	167	195	134	0	496	137	259	59	0	455	69	333	160	0	562	2257
Cars Exiting Leg	578					644					516					479					2217
Heavy Exit Leg	8					14					9					9					40
Total Exiting Leg	586					658					525					488					2257

PDI File #: **175481 CC**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 1**
 Location: **E: Beaver Street W: Fortune Boulevard**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleu**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

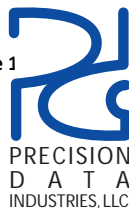
Cars

	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	46	74	52	0	172	30	42	42	0	114	35	41	11	0	87	20	44	29	0	93	466
4:15 PM	63	69	43	0	175	38	50	25	0	113	24	51	5	0	80	17	66	30	0	113	481
4:30 PM	62	93	49	0	204	44	41	34	0	119	37	46	6	0	89	25	75	26	0	126	538
4:45 PM	53	83	48	0	184	45	45	41	0	131	34	66	14	0	114	12	59	35	0	106	535
Total	224	319	192	0	735	157	178	142	0	477	130	204	36	0	370	74	244	120	0	438	2020
5:00 PM	58	71	42	0	171	36	45	27	0	108	43	63	16	0	122	15	122	44	0	181	582
5:15 PM	51	84	43	0	178	42	58	32	0	132	26	61	16	0	103	16	72	40	0	128	541
5:30 PM	69	79	50	0	198	39	41	32	0	112	31	68	13	0	112	24	74	39	0	137	559
5:45 PM	39	89	45	0	173	40	39	38	0	117	25	48	10	0	83	19	51	30	0	100	473
Total	217	323	180	0	720	157	183	129	0	469	125	240	55	0	420	74	319	153	0	546	2155
Grand Total	441	642	372	0	1455	314	361	271	0	946	255	444	91	0	790	148	563	273	0	984	4175
Approach %	30.3	44.1	25.6	0.0		33.2	38.2	28.6	0.0		32.3	56.2	11.5	0.0		15.0	57.2	27.7	0.0		
Total %	10.6	15.4	8.9	0.0	34.9	7.5	8.6	6.5	0.0	22.7	6.1	10.6	2.2	0.0	18.9	3.5	13.5	6.5	0.0	23.6	
Exiting Leg Total	1031					1190					1061					893					4175

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

4:45 PM	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:45 PM	53	83	48	0	184	45	45	41	0	131	34	66	14	0	114	12	59	35	0	106	535
5:00 PM	58	71	42	0	171	36	45	27	0	108	43	63	16	0	122	15	122	44	0	181	582
5:15 PM	51	84	43	0	178	42	58	32	0	132	26	61	16	0	103	16	72	40	0	128	541
5:30 PM	69	79	50	0	198	39	41	32	0	112	31	68	13	0	112	24	74	39	0	137	559
Total Volume	231	317	183	0	731	162	189	132	0	483	134	258	59	0	451	67	327	158	0	552	2217
% Approach Total	31.6	43.4	25.0	0.0		33.5	39.1	27.3	0.0		29.7	57.2	13.1	0.0		12.1	59.2	28.6	0.0		
PHF	0.837	0.943	0.915	0.000	0.923	0.900	0.815	0.805	0.000	0.915	0.779	0.949	0.922	0.000	0.924	0.698	0.670	0.898	0.000	0.762	0.952
Entering Leg	231	317	183	0	731	162	189	132	0	483	134	258	59	0	451	67	327	158	0	552	2217
Exiting Leg	578					644					516					479					2217
Total	1309					1127					967					1031					4434

PDI File #: **175481 CC**
 Location: **N: East Main Street (Route 16) S: East Main Street (Route 1**
 Location: **E: Beaver Street W: Fortune Boulevard**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleu**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Heavy Vehicles

	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total	
	North					East					South					West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	1	2	4	0	7	0	2	0	0	2	0	0	0	0	0	0	2	2	0	0	4	13
4:15 PM	1	2	3	0	6	2	1	0	0	3	2	0	1	0	3	1	1	0	0	2	14	
4:30 PM	1	0	3	0	4	1	2	0	0	3	0	0	3	0	3	0	4	0	0	4	14	
4:45 PM	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	1	0	0	0	1	5	
Total	3	6	10	0	19	4	5	0	0	9	2	1	4	0	7	2	7	2	0	11	46	
5:00 PM	0	0	4	0	4	1	2	1	0	4	1	0	0	0	1	1	3	0	0	4	13	
5:15 PM	1	3	0	0	4	1	4	1	0	6	1	0	0	0	1	0	2	2	0	4	15	
5:30 PM	2	0	1	0	3	2	0	0	0	2	1	0	0	0	1	0	1	0	0	1	7	
5:45 PM	0	2	0	0	2	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	5	
Total	3	5	5	0	13	7	6	2	0	15	3	0	0	0	3	1	6	2	0	9	40	
Grand Total	6	11	15	0	32	11	11	2	0	24	5	1	4	0	10	3	13	4	0	20	86	
Approach %	18.8	34.4	46.9	0.0		45.8	45.8	8.3	0.0		50.0	10.0	40.0	0.0		15.0	65.0	20.0	0.0			
Total %	7.0	12.8	17.4	0.0	37.2	12.8	12.8	2.3	0.0	27.9	5.8	1.2	4.7	0.0	11.6	3.5	15.1	4.7	0.0	23.3		
Exiting Leg Total	16					33					16					21					86	

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

4:30 PM	East Main Street (Route 16)					Beaver Street					East Main Street (Route 16)					Fortune Boulevard					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	1	0	3	0	4	1	2	0	0	3	0	0	3	0	3	0	4	0	0	4	14
4:45 PM	0	2	0	0	2	1	0	0	0	1	0	1	0	0	1	1	0	0	0	1	5
5:00 PM	0	0	4	0	4	1	2	1	0	4	1	0	0	0	1	1	3	0	0	4	13
5:15 PM	1	3	0	0	4	1	4	1	0	6	1	0	0	0	1	0	2	2	0	4	15
Total Volume	2	5	7	0	14	4	8	2	0	14	2	1	3	0	6	2	9	2	0	13	47
% Approach Total	14.3	35.7	50.0	0.0		28.6	57.1	14.3	0.0		33.3	16.7	50.0	0.0		15.4	69.2	15.4	0.0		
PHF	0.500	0.417	0.438	0.000	0.875	1.000	0.500	0.500	0.000	0.583	0.500	0.250	0.250	0.000	0.500	0.500	0.563	0.250	0.000	0.813	0.783
Entering Leg	2	5	7	0	14	4	8	2	0	14	2	1	3	0	6	2	9	2	0	13	47
Exiting Leg	7					18					9					13					47
Total	21					32					15					26					94

PDI File #: **175481 CC**

Location: **N: East Main Street (Route 16) S: East Main Street (Route 16)**

Location: **E: Beaver Street W: Fortune Boulevard**

City, State: **Milford, MA**

Client: **VHB/ M. Duranleu**

Site Code: **13810.00**

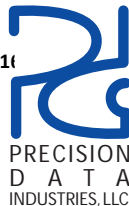
Count Date: **Thursday, February 16, 2017**

Start Time: **4:00 PM**

End Time: **6:00 PM**

Class:

46 Morton Street
Office: 508-686-1111
Email: info@vhab.com



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	East Main Street (Route 16)							Beaver Street							East Main Street (Route 16)							Fortune Boulevard							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Exiting Leg Total	0							0							0							0							

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

[illegible]

PDI File #: **175481 D**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



PRECISION
 D A T A
 INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

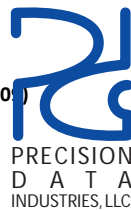
Cars and Heavy Vehicles

	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	13	0	58	0	71	100	165	0	0	265	46	6	8	0	60	0	90	6	0	96	492
7:15 AM	20	0	83	0	103	108	181	0	0	289	40	20	13	0	73	0	80	6	0	86	551
7:30 AM	27	0	61	0	88	128	195	0	0	323	47	21	10	0	78	0	90	9	0	99	588
7:45 AM	24	0	54	0	78	154	228	0	0	382	73	33	7	0	113	0	81	10	0	91	664
Total	84	0	256	0	340	490	769	0	0	1259	206	80	38	0	324	0	341	31	0	372	2295
8:00 AM	17	0	78	0	95	102	250	0	0	352	53	17	6	0	76	0	75	8	0	83	606
8:15 AM	23	0	64	0	87	114	225	0	0	339	41	25	12	0	78	0	76	9	0	85	589
8:30 AM	24	0	60	0	84	123	234	0	0	357	26	20	9	0	55	0	69	9	0	78	574
8:45 AM	26	0	57	0	83	108	202	0	0	310	26	27	7	0	60	0	52	12	0	64	517
Total	90	0	259	0	349	447	911	0	0	1358	146	89	34	0	269	0	272	38	0	310	2286
Grand Total	174	0	515	0	689	937	1680	0	0	2617	352	169	72	0	593	0	613	69	0	682	4581
Approach %	25.3	0.0	74.7	0.0		35.8	64.2	0.0	0.0		59.4	28.5	12.1	0.0		0.0	89.9	10.1	0.0		
Total %	3.8	0.0	11.2	0.0	15.0	20.5	36.7	0.0	0.0	57.1	7.7	3.7	1.6	0.0	12.9	0.0	13.4	1.5	0.0	14.9	
Exiting Leg Total	1175					1480					0					1926					4581
Cars	168	0	455	0	623	885	1649	0	0	2534	335	164	72	0	571	0	582	63	0	645	4373
% Cars	96.6	0.0	88.3	0.0	90.4	94.5	98.2	0.0	0.0	96.8	95.2	97.0	100.0	0.0	96.3	0.0	94.9	91.3	0.0	94.6	95.5
Exiting Leg Total	1112					1372					0					1889					4373
Heavy Vehicles	6	0	60	0	66	52	31	0	0	83	17	5	0	0	22	0	31	6	0	37	208
% Heavy Vehicles	3.4	0.0	11.7	0.0	9.6	5.5	1.8	0.0	0.0	3.2	4.8	3.0	0.0	0.0	3.7	0.0	5.1	8.7	0.0	5.4	4.5
Exiting Leg Total	63					108					0					37					208

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

7:30 AM	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	27	0	61	0	88	128	195	0	0	323	47	21	10	0	78	0	90	9	0	99	588
7:45 AM	24	0	54	0	78	154	228	0	0	382	73	33	7	0	113	0	81	10	0	91	664
8:00 AM	17	0	78	0	95	102	250	0	0	352	53	17	6	0	76	0	75	8	0	83	606
8:15 AM	23	0	64	0	87	114	225	0	0	339	41	25	12	0	78	0	76	9	0	85	589
Total Volume	91	0	257	0	348	498	898	0	0	1396	214	96	35	0	345	0	322	36	0	358	2447
% Approach Total	26.1	0.0	73.9	0.0		35.7	64.3	0.0	0.0		62.0	27.8	10.1	0.0		0.0	89.9	10.1	0.0		
PHF	0.843	0.000	0.824	0.000	0.916	0.808	0.898	0.000	0.000	0.914	0.733	0.727	0.729	0.000	0.763	0.000	0.894	0.900	0.000	0.904	0.921
Cars	86	0	222	0	308	475	885	0	0	1360	204	94	35	0	333	0	307	33	0	340	2341
Cars %	94.5	0.0	86.4	0.0	88.5	95.4	98.6	0.0	0.0	97.4	95.3	97.9	100.0	0.0	96.5	0.0	95.3	91.7	0.0	95.0	95.7
Heavy Vehicles	5	0	35	0	40	23	13	0	0	36	10	2	0	0	12	0	15	3	0	18	106
Heavy Vehicles %	5.5	0.0	13.6	0.0	11.5	4.6	1.4	0.0	0.0	2.6	4.7	2.1	0.0	0.0	3.5	0.0	4.7	8.3	0.0	5.0	4.3
Cars Enter Leg	86	0	222	0	308	475	885	0	0	1360	204	94	35	0	333	0	307	33	0	340	2341
Heavy Enter Leg	5	0	35	0	40	23	13	0	0	36	10	2	0	0	12	0	15	3	0	18	106
Total Entering Leg	91	0	257	0	348	498	898	0	0	1396	214	96	35	0	345	0	322	36	0	358	2447
Cars Exiting Leg	602					733					0					1006					2341
Heavy Exit Leg	28					60					0					18					106
Total Exiting Leg	630					793					0					1024					2447

PDI File #: **175481 D**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

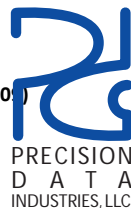
Cars

	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	13	0	50	0	63	93	159	0	0	252	42	5	8	0	55	0	83	4	0	87	457
7:15 AM	19	0	75	0	94	102	175	0	0	277	38	19	13	0	70	0	78	6	0	84	525
7:30 AM	26	0	53	0	79	121	190	0	0	311	42	20	10	0	72	0	86	9	0	95	557
7:45 AM	22	0	48	0	70	147	224	0	0	371	72	33	7	0	112	0	77	7	0	84	637
Total	80	0	226	0	306	463	748	0	0	1211	194	77	38	0	309	0	324	26	0	350	2176
8:00 AM	17	0	65	0	82	96	248	0	0	344	50	16	6	0	72	0	70	8	0	78	576
8:15 AM	21	0	56	0	77	111	223	0	0	334	40	25	12	0	77	0	74	9	0	83	571
8:30 AM	24	0	58	0	82	115	231	0	0	346	25	20	9	0	54	0	64	9	0	73	555
8:45 AM	26	0	50	0	76	100	199	0	0	299	26	26	7	0	59	0	50	11	0	61	495
Total	88	0	229	0	317	422	901	0	0	1323	141	87	34	0	262	0	258	37	0	295	2197
Grand Total	168	0	455	0	623	885	1649	0	0	2534	335	164	72	0	571	0	582	63	0	645	4373
Approach %	27.0	0.0	73.0	0.0		34.9	65.1	0.0	0.0		58.7	28.7	12.6	0.0		0.0	90.2	9.8	0.0		
Total %	3.8	0.0	10.4	0.0	14.2	20.2	37.7	0.0	0.0	57.9	7.7	3.8	1.6	0.0	13.1	0.0	13.3	1.4	0.0	14.7	
Exiting Leg Total	1112					1372					0					1889					4373

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

7:30 AM	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	26	0	53	0	79	121	190	0	0	311	42	20	10	0	72	0	86	9	0	95	557
7:45 AM	22	0	48	0	70	147	224	0	0	371	72	33	7	0	112	0	77	7	0	84	637
8:00 AM	17	0	65	0	82	96	248	0	0	344	50	16	6	0	72	0	70	8	0	78	576
8:15 AM	21	0	56	0	77	111	223	0	0	334	40	25	12	0	77	0	74	9	0	83	571
Total Volume	86	0	222	0	308	475	885	0	0	1360	204	94	35	0	333	0	307	33	0	340	2341
% Approach Total	27.9	0.0	72.1	0.0		34.9	65.1	0.0	0.0		61.3	28.2	10.5	0.0		0.0	90.3	9.7	0.0		
PHF	0.827	0.000	0.854	0.000	0.939	0.808	0.892	0.000	0.000	0.916	0.708	0.712	0.729	0.000	0.743	0.000	0.892	0.917	0.000	0.895	0.919
Entering Leg	86	0	222	0	308	475	885	0	0	1360	204	94	35	0	333	0	307	33	0	340	2341
Exiting Leg	602					733					0					1006					2341
Total	910					2093					333					1346					4682

PDI File #: **175481 D**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Heavy Vehicles

	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	8	0	8	7	6	0	0	13	4	1	0	0	5	0	7	2	0	9	35
7:15 AM	1	0	8	0	9	6	6	0	0	12	2	1	0	0	3	0	2	0	0	2	26
7:30 AM	1	0	8	0	9	7	5	0	0	12	5	1	0	0	6	0	4	0	0	4	31
7:45 AM	2	0	6	0	8	7	4	0	0	11	1	0	0	0	1	0	4	3	0	7	27
Total	4	0	30	0	34	27	21	0	0	48	12	3	0	0	15	0	17	5	0	22	119
8:00 AM	0	0	13	0	13	6	2	0	0	8	3	1	0	0	4	0	5	0	0	5	30
8:15 AM	2	0	8	0	10	3	2	0	0	5	1	0	0	0	1	0	2	0	0	2	18
8:30 AM	0	0	2	0	2	8	3	0	0	11	1	0	0	0	1	0	5	0	0	5	19
8:45 AM	0	0	7	0	7	8	3	0	0	11	0	1	0	0	1	0	2	1	0	3	22
Total	2	0	30	0	32	25	10	0	0	35	5	2	0	0	7	0	14	1	0	15	89
Grand Total	6	0	60	0	66	52	31	0	0	83	17	5	0	0	22	0	31	6	0	37	208
Approach %	9.1	0.0	90.9	0.0		62.7	37.3	0.0	0.0		77.3	22.7	0.0	0.0		0.0	83.8	16.2	0.0		
Total %	2.9	0.0	28.8	0.0	31.7	25.0	14.9	0.0	0.0	39.9	8.2	2.4	0.0	0.0	10.6	0.0	14.9	2.9	0.0	17.8	
Exiting Leg Total	63					108					0					37					208

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

7:00 AM	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	8	0	8	7	6	0	0	13	4	1	0	0	5	0	7	2	0	9	35
7:15 AM	1	0	8	0	9	6	6	0	0	12	2	1	0	0	3	0	2	0	0	2	26
7:30 AM	1	0	8	0	9	7	5	0	0	12	5	1	0	0	6	0	4	0	0	4	31
7:45 AM	2	0	6	0	8	7	4	0	0	11	1	0	0	0	1	0	4	3	0	7	27
Total Volume	4	0	30	0	34	27	21	0	0	48	12	3	0	0	15	0	17	5	0	22	119
% Approach Total	11.8	0.0	88.2	0.0		56.3	43.8	0.0	0.0		80.0	20.0	0.0	0.0		0.0	77.3	22.7	0.0		
PHF	0.500	0.000	0.938	0.000	0.944	0.964	0.875	0.000	0.000	0.923	0.600	0.750	0.000	0.000	0.625	0.000	0.607	0.417	0.000	0.611	0.850
Entering Leg	4	0	30	0	34	27	21	0	0	48	12	3	0	0	15	0	17	5	0	22	119
Exiting Leg					35					59					0					25	119
Total					69					107					15					47	238

PDI File #: **175481 D**

Location: **N: Beaver Street S: Beaver Street**

Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**

City, State: **Milford, MA**

Client: **VHB/ M. Duranleau**

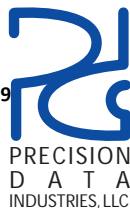
Site Code: **13810.00**

Count Date: **Thursday, February 16, 2017**

Start Time: **7:00 AM**

End Time: **9:00 AM**

46 Morton
Office: 508
Email:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

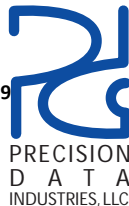
	Beaver Street								Medway Road (Route 109)								Beaver Street								Medway Road (Route 109)								Total
	North								East								South								West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total		Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total		Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total		Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Exiting Leg Total	1								0								0								0								1

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

7:00 AM	Beaver Street							Medway Road (Route 109)							Beaver Street							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total Volume	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000
Entering Leg	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Exiting Leg							1							0						0						0		1	0
Total							1							1						0						0		2	0

PDI File #: **175481 D**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:

 46 Morton
 Office: 508
 Email:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Beaver Street								Medway Road (Route 109)								Beaver Street								Medway Road (Route 109)								Total
	North								East								South								West								
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1				
Approach %	0.0	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Total %	0.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Exiting Leg Total	1								0								0								0								1

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

7:00 AM	Beaver Street							Medway Road (Route 109)							Beaver Street							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.250
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							1							0							0						0		1
Total							2							0							0						0		2

PDI File #: **175481 DD**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



**PRECISION
D A T A
INDUSTRIES, LLC**

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

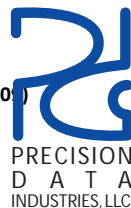
Cars and Heavy Vehicles

	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	40	0	95	0	135	95	129	0	0	224	126	14	2	0	142	0	114	15	0	129	630
4:15 PM	26	0	123	0	149	84	149	0	0	233	70	14	15	0	99	0	123	19	0	142	623
4:30 PM	33	0	135	0	168	84	148	0	0	232	126	21	10	0	157	0	144	21	0	165	722
4:45 PM	44	0	109	0	153	111	150	0	0	261	117	20	8	0	145	0	129	19	0	148	707
Total	143	0	462	0	605	374	576	0	0	950	439	69	35	0	543	0	510	74	0	584	2682
5:00 PM	41	0	184	0	225	88	136	0	0	224	105	34	11	0	150	0	175	4	0	179	778
5:15 PM	42	0	132	0	174	83	152	0	0	235	124	24	10	0	158	0	146	19	0	165	732
5:30 PM	45	0	127	0	172	88	140	0	0	228	87	16	4	0	107	0	120	14	0	134	641
5:45 PM	32	0	86	0	118	89	123	0	0	212	62	17	8	0	87	0	117	12	0	129	546
Total	160	0	529	0	689	348	551	0	0	899	378	91	33	0	502	0	558	49	0	607	2697
Grand Total	303	0	991	0	1294	722	1127	0	0	1849	817	160	68	0	1045	0	1068	123	0	1191	5379
Approach %	23.4	0.0	76.6	0.0		39.0	61.0	0.0	0.0		78.2	15.3	6.5	0.0		0.0	89.7	10.3	0.0		
Total %	5.6	0.0	18.4	0.0	24.1	13.4	21.0	0.0	0.0	34.4	15.2	3.0	1.3	0.0	19.4	0.0	19.9	2.3	0.0	22.1	
Exiting Leg Total	1005					2876					0					1498					5379
Cars	300	0	959	0	1259	706	1093	0	0	1799	808	154	67	0	1029	0	1054	120	0	1174	5261
% Cars	99.0	0.0	96.8	0.0	97.3	97.8	97.0	0.0	0.0	97.3	98.9	96.3	98.5	0.0	98.5	0.0	98.7	97.6	0.0	98.6	97.8
Exiting Leg Total	980					2821					0					1460					5261
Heavy Vehicles	3	0	32	0	35	16	34	0	0	50	9	6	1	0	16	0	14	3	0	17	118
% Heavy Vehicles	1.0	0.0	3.2	0.0	2.7	2.2	3.0	0.0	0.0	2.7	1.1	3.8	1.5	0.0	1.5	0.0	1.3	2.4	0.0	1.4	2.2
Exiting Leg Total	25					55					0					38					118

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

4:30 PM	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	33	0	135	0	168	84	148	0	0	232	126	21	10	0	157	0	144	21	0	165	722
4:45 PM	44	0	109	0	153	111	150	0	0	261	117	20	8	0	145	0	129	19	0	148	707
5:00 PM	41	0	184	0	225	88	136	0	0	224	105	34	11	0	150	0	175	4	0	179	778
5:15 PM	42	0	132	0	174	83	152	0	0	235	124	24	10	0	158	0	146	19	0	165	732
Total Volume	160	0	560	0	720	366	586	0	0	952	472	99	39	0	610	0	594	63	0	657	2939
% Approach Total	22.2	0.0	77.8	0.0		38.4	61.6	0.0	0.0		77.4	16.2	6.4	0.0		0.0	90.4	9.6	0.0		
PHF	0.909	0.000	0.761	0.000	0.800	0.824	0.964	0.000	0.000	0.912	0.937	0.728	0.886	0.000	0.965	0.000	0.849	0.750	0.000	0.918	0.944
Cars	159	0	542	0	701	357	569	0	0	926	467	96	38	0	601	0	589	61	0	650	2878
Cars %	99.4	0.0	96.8	0.0	97.4	97.5	97.1	0.0	0.0	97.3	98.9	97.0	97.4	0.0	98.5	0.0	99.2	96.8	0.0	98.9	97.9
Heavy Vehicles	1	0	18	0	19	9	17	0	0	26	5	3	1	0	9	0	5	2	0	7	61
Heavy Vehicles %	0.6	0.0	3.2	0.0	2.6	2.5	2.9	0.0	0.0	2.7	1.1	3.0	2.6	0.0	1.5	0.0	0.8	3.2	0.0	1.1	2.1
Cars Enter Leg	159	0	542	0	701	357	569	0	0	926	467	96	38	0	601	0	589	61	0	650	2878
Heavy Enter Leg	1	0	18	0	19	9	17	0	0	26	5	3	1	0	9	0	5	2	0	7	61
Total Entering Leg	160	0	560	0	720	366	586	0	0	952	472	99	39	0	610	0	594	63	0	657	2939
Cars Exiting Leg					514					1598					0					766	2878
Heavy Exit Leg					14					28					0					19	61
Total Exiting Leg					528					1626					0					785	2939

PDI File #: **175481 DD**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

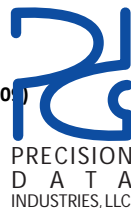
Cars

	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	38	0	86	0	124	93	124	0	0	217	126	14	2	0	142	0	111	15	0	126	609
4:15 PM	26	0	120	0	146	84	143	0	0	227	67	11	15	0	93	0	121	18	0	139	605
4:30 PM	33	0	128	0	161	82	144	0	0	226	124	21	10	0	155	0	144	21	0	165	707
4:45 PM	43	0	108	0	151	110	142	0	0	252	116	19	8	0	143	0	129	19	0	148	694
Total	140	0	442	0	582	369	553	0	0	922	433	65	35	0	533	0	505	73	0	578	2615
5:00 PM	41	0	179	0	220	85	132	0	0	217	104	34	10	0	148	0	173	3	0	176	761
5:15 PM	42	0	127	0	169	80	151	0	0	231	123	22	10	0	155	0	143	18	0	161	716
5:30 PM	45	0	125	0	170	86	137	0	0	223	86	16	4	0	106	0	117	14	0	131	630
5:45 PM	32	0	86	0	118	86	120	0	0	206	62	17	8	0	87	0	116	12	0	128	539
Total	160	0	517	0	677	337	540	0	0	877	375	89	32	0	496	0	549	47	0	596	2646
Grand Total	300	0	959	0	1259	706	1093	0	0	1799	808	154	67	0	1029	0	1054	120	0	1174	5261
Approach %	23.8	0.0	76.2	0.0		39.2	60.8	0.0	0.0		78.5	15.0	6.5	0.0		0.0	89.8	10.2	0.0		
Total %	5.7	0.0	18.2	0.0	23.9	13.4	20.8	0.0	0.0	34.2	15.4	2.9	1.3	0.0	19.6	0.0	20.0	2.3	0.0	22.3	
Exiting Leg Total	980					2821					0					1460					5261

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

4:30 PM	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	33	0	128	0	161	82	144	0	0	226	124	21	10	0	155	0	144	21	0	165	707
4:45 PM	43	0	108	0	151	110	142	0	0	252	116	19	8	0	143	0	129	19	0	148	694
5:00 PM	41	0	179	0	220	85	132	0	0	217	104	34	10	0	148	0	173	3	0	176	761
5:15 PM	42	0	127	0	169	80	151	0	0	231	123	22	10	0	155	0	143	18	0	161	716
Total Volume	159	0	542	0	701	357	569	0	0	926	467	96	38	0	601	0	589	61	0	650	2878
% Approach Total	22.7	0.0	77.3	0.0		38.6	61.4	0.0	0.0		77.7	16.0	6.3	0.0		0.0	90.6	9.4	0.0		
PHF	0.924	0.000	0.757	0.000	0.797	0.811	0.942	0.000	0.000	0.919	0.942	0.706	0.950	0.000	0.969	0.000	0.851	0.726	0.000	0.923	0.945
Entering Leg	159	0	542	0	701	357	569	0	0	926	467	96	38	0	601	0	589	61	0	650	2878
Exiting Leg	514					1598					0					766					2878
Total	1215					2524					601					1416					5756

PDI File #: **175481 DD**
 Location: **N: Beaver Street S: Beaver Street**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Heavy Vehicles

	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total	
	North					East					South					West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	2	0	9	0	11	2	5	0	0	7	0	0	0	0	0	0	3	0	0	0	3	21
4:15 PM	0	0	3	0	3	0	6	0	0	6	3	3	0	0	6	0	2	1	0	3	18	
4:30 PM	0	0	7	0	7	2	4	0	0	6	2	0	0	0	2	0	0	0	0	0	15	
4:45 PM	1	0	1	0	2	1	8	0	0	9	1	1	0	0	2	0	0	0	0	0	13	
Total	3	0	20	0	23	5	23	0	0	28	6	4	0	0	10	0	5	1	0	6	67	
5:00 PM	0	0	5	0	5	3	4	0	0	7	1	0	1	0	2	0	2	1	0	3	17	
5:15 PM	0	0	5	0	5	3	1	0	0	4	1	2	0	0	3	0	3	1	0	4	16	
5:30 PM	0	0	2	0	2	2	3	0	0	5	1	0	0	0	1	0	3	0	0	3	11	
5:45 PM	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	1	0	0	1	7	
Total	0	0	12	0	12	11	11	0	0	22	3	2	1	0	6	0	9	2	0	11	51	
Grand Total	3	0	32	0	35	16	34	0	0	50	9	6	1	0	16	0	14	3	0	17	118	
Approach %	8.6	0.0	91.4	0.0		32.0	68.0	0.0	0.0		56.3	37.5	6.3	0.0		0.0	82.4	17.6	0.0			
Total %	2.5	0.0	27.1	0.0	29.7	13.6	28.8	0.0	0.0	42.4	7.6	5.1	0.8	0.0	13.6	0.0	11.9	2.5	0.0	14.4		
Exiting Leg Total	25					55					0					38					118	

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

4:00 PM	Beaver Street					Medway Road (Route 109)					Beaver Street					Medway Road (Route 109)					Total	
	North					East					South					West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	2	0	9	0	11	2	5	0	0	7	0	0	0	0	0	0	3	0	0	0	3	21
4:15 PM	0	0	3	0	3	0	6	0	0	6	3	3	0	0	6	0	2	1	0	3	18	
4:30 PM	0	0	7	0	7	2	4	0	0	6	2	0	0	0	2	0	0	0	0	0	15	
4:45 PM	1	0	1	0	2	1	8	0	0	9	1	1	0	0	2	0	0	0	0	0	13	
Total Volume	3	0	20	0	23	5	23	0	0	28	6	4	0	0	10	0	5	1	0	6	67	
% Approach Total	13.0	0.0	87.0	0.0		17.9	82.1	0.0	0.0		60.0	40.0	0.0	0.0		0.0	83.3	16.7	0.0			
PHF	0.375	0.000	0.556	0.000	0.523	0.625	0.719	0.000	0.000	0.778	0.500	0.333	0.000	0.000	0.417	0.000	0.417	0.250	0.000	0.500	0.798	
Entering Leg	3	0	20	0	23	5	23	0	0	28	6	4	0	0	10	0	5	1	0	6	67	
Exiting Leg	10					31					0					26					67	
Total	33					59					10					32					134	

PDI File #: **175481 DD**

Location: **N: Beaver Street S: Beaver Street**

Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**

City, State: **Milford, MA**

Client: **VHB/ M. Duranleau**

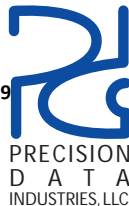
Site Code: **13810.00**

Count Date: **Thursday, February 16, 2017**

Start Time: **4:00 PM**

End Time: **6:00 PM**

46 Morton
Office: 508
Email:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	Beaver Street							Medway Road (Route 109)							Beaver Street							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Exiting Leg Total	0							0							0							0							

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

[illegible]

PDI File #: **175481 E**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



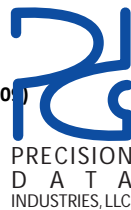
Cars and Heavy Vehicles

	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	81	0	51	0	132	0	169	15	1	185	0	0	0	0	0	94	94	0	0	188	505
7:15 AM	104	0	73	0	177	0	188	17	0	205	0	0	0	0	0	100	102	0	0	202	584
7:30 AM	97	0	77	0	174	0	229	23	0	252	0	0	0	0	0	100	98	0	0	198	624
7:45 AM	113	0	72	0	185	0	291	32	0	323	0	0	0	0	0	113	95	0	0	208	716
Total	395	0	273	0	668	0	877	87	1	965	0	0	0	0	0	407	389	0	0	796	2429
8:00 AM	96	0	72	0	168	0	234	22	1	257	0	0	0	0	0	100	103	0	0	203	628
8:15 AM	92	0	49	0	141	0	234	21	0	255	0	0	0	0	0	81	99	0	0	180	576
8:30 AM	96	0	44	0	140	0	259	21	0	280	0	0	0	0	0	76	71	0	0	147	567
8:45 AM	102	0	61	0	163	0	209	18	0	227	0	0	0	0	0	62	80	0	0	142	532
Total	386	0	226	0	612	0	936	82	1	1019	0	0	0	0	0	319	353	0	0	672	2303
Grand Total	781	0	499	0	1280	0	1813	169	2	1984	0	0	0	0	0	726	742	0	0	1468	4732
Approach %	61.0	0.0	39.0	0.0		0.0	91.4	8.5	0.1		0.0	0.0	0.0	0.0		49.5	50.5	0.0	0.0		
Total %	16.5	0.0	10.5	0.0	27.0	0.0	38.3	3.6	0.0	41.9	0.0	0.0	0.0	0.0	0.0	15.3	15.7	0.0	0.0	31.0	
Exiting Leg Total	0					1243					895					2594					4732
Cars	754	0	471	0	1225	0	1756	157	2	1915	0	0	0	0	0	677	684	0	0	1361	4501
% Cars	96.5	0.0	94.4	0.0	95.7	0.0	96.9	92.9	100.0	96.5	0.0	0.0	0.0	0.0	0.0	93.3	92.2	0.0	0.0	92.7	95.1
Exiting Leg Total	0					1157					834					2510					4501
Heavy Vehicles	27	0	28	0	55	0	57	12	0	69	0	0	0	0	0	49	58	0	0	107	231
% Heavy Vehicles	3.5	0.0	5.6	0.0	4.3	0.0	3.1	7.1	0.0	3.5	0.0	0.0	0.0	0.0	0.0	6.7	7.8	0.0	0.0	7.3	4.9
Exiting Leg Total	0					86					61					84					231

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

7:15 AM	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	104	0	73	0	177	0	188	17	0	205	0	0	0	0	0	100	102	0	0	202	584
7:30 AM	97	0	77	0	174	0	229	23	0	252	0	0	0	0	0	100	98	0	0	198	624
7:45 AM	113	0	72	0	185	0	291	32	0	323	0	0	0	0	0	113	95	0	0	208	716
8:00 AM	96	0	72	0	168	0	234	22	1	257	0	0	0	0	0	100	103	0	0	203	628
Total Volume	410	0	294	0	704	0	942	94	1	1037	0	0	0	0	0	413	398	0	0	811	2552
% Approach Total	58.2	0.0	41.8	0.0		0.0	90.8	9.1	0.1		0.0	0.0	0.0	0.0		50.9	49.1	0.0	0.0		
PHF	0.907	0.000	0.955	0.000	0.951	0.000	0.809	0.734	0.250	0.803	0.000	0.000	0.000	0.000	0.000	0.914	0.966	0.000	0.000	0.975	0.891
Cars	393	0	275	0	668	0	915	88	1	1004	0	0	0	0	0	387	365	0	0	752	2424
Cars %	95.9	0.0	93.5	0.0	94.9	0.0	97.1	93.6	100.0	96.8	0.0	0.0	0.0	0.0	0.0	93.7	91.7	0.0	0.0	92.7	95.0
Heavy Vehicles	17	0	19	0	36	0	27	6	0	33	0	0	0	0	0	26	33	0	0	59	128
Heavy Vehicles %	4.1	0.0	6.5	0.0	5.1	0.0	2.9	6.4	0.0	3.2	0.0	0.0	0.0	0.0	0.0	6.3	8.3	0.0	0.0	7.3	5.0
Cars Enter Leg	393	0	275	0	668	0	915	88	1	1004	0	0	0	0	0	387	365	0	0	752	2424
Heavy Enter Leg	17	0	19	0	36	0	27	6	0	33	0	0	0	0	0	26	33	0	0	59	128
Total Entering Leg	410	0	294	0	704	0	942	94	1	1037	0	0	0	0	0	413	398	0	0	811	2552
Cars Exiting Leg	0					641					475					1308					2424
Heavy Exit Leg	0					52					32					44					128
Total Exiting Leg	0					693					507					1352					2552

PDI File #: **175481 E**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

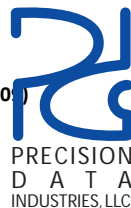
Cars

	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	77	0	50	0	127	0	161	13	1	175	0	0	0	0	0	88	82	0	0	170	472
7:15 AM	98	0	69	0	167	0	181	16	0	197	0	0	0	0	0	95	95	0	0	190	554
7:30 AM	93	0	73	0	166	0	221	21	0	242	0	0	0	0	0	92	88	0	0	180	588
7:45 AM	109	0	66	0	175	0	282	30	0	312	0	0	0	0	0	107	91	0	0	198	685
Total	377	0	258	0	635	0	845	80	1	926	0	0	0	0	0	382	356	0	0	738	2299
8:00 AM	93	0	67	0	160	0	231	21	1	253	0	0	0	0	0	93	91	0	0	184	597
8:15 AM	91	0	48	0	139	0	230	21	0	251	0	0	0	0	0	70	97	0	0	167	557
8:30 AM	94	0	40	0	134	0	251	18	0	269	0	0	0	0	0	72	67	0	0	139	542
8:45 AM	99	0	58	0	157	0	199	17	0	216	0	0	0	0	0	60	73	0	0	133	506
Total	377	0	213	0	590	0	911	77	1	989	0	0	0	0	0	295	328	0	0	623	2202
Grand Total	754	0	471	0	1225	0	1756	157	2	1915	0	0	0	0	0	677	684	0	0	1361	4501
Approach %	61.6	0.0	38.4	0.0		0.0	91.7	8.2	0.1		0.0	0.0	0.0	0.0		49.7	50.3	0.0	0.0		
Total %	16.8	0.0	10.5	0.0	27.2	0.0	39.0	3.5	0.0	42.5	0.0	0.0	0.0	0.0	0.0	15.0	15.2	0.0	0.0	30.2	
Exiting Leg Total	0					1157					834					2510					4501

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

7:30 AM	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:30 AM	93	0	73	0	166	0	221	21	0	242	0	0	0	0	0	92	88	0	0	180	588
7:45 AM	109	0	66	0	175	0	282	30	0	312	0	0	0	0	0	107	91	0	0	198	685
8:00 AM	93	0	67	0	160	0	231	21	1	253	0	0	0	0	0	93	91	0	0	184	597
8:15 AM	91	0	48	0	139	0	230	21	0	251	0	0	0	0	0	70	97	0	0	167	557
Total Volume	386	0	254	0	640	0	964	93	1	1058	0	0	0	0	0	362	367	0	0	729	2427
% Approach Total	60.3	0.0	39.7	0.0		0.0	91.1	8.8	0.1		0.0	0.0	0.0	0.0		49.7	50.3	0.0	0.0		
PHF	0.885	0.000	0.870	0.000	0.914	0.000	0.855	0.775	0.250	0.848	0.000	0.000	0.000	0.000	0.000	0.846	0.946	0.000	0.000	0.920	0.886
Entering Leg	386	0	254	0	640	0	964	93	1	1058	0	0	0	0	0	362	367	0	0	729	2427
Exiting Leg	0					622					455					1350					2427
Total	640					1680					455					2079					4854

PDI File #: **175481 E**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

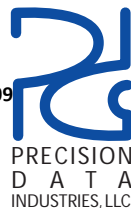
Heavy Vehicles

	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	4	0	1	0	5	0	8	2	0	10	0	0	0	0	0	6	12	0	0	18	33
7:15 AM	6	0	4	0	10	0	7	1	0	8	0	0	0	0	0	5	7	0	0	12	30
7:30 AM	4	0	4	0	8	0	8	2	0	10	0	0	0	0	0	8	10	0	0	18	36
7:45 AM	4	0	6	0	10	0	9	2	0	11	0	0	0	0	0	6	4	0	0	10	31
Total	18	0	15	0	33	0	32	7	0	39	0	0	0	0	0	25	33	0	0	58	130
8:00 AM	3	0	5	0	8	0	3	1	0	4	0	0	0	0	0	7	12	0	0	19	31
8:15 AM	1	0	1	0	2	0	4	0	0	4	0	0	0	0	0	11	2	0	0	13	19
8:30 AM	2	0	4	0	6	0	8	3	0	11	0	0	0	0	0	4	4	0	0	8	25
8:45 AM	3	0	3	0	6	0	10	1	0	11	0	0	0	0	0	2	7	0	0	9	26
Total	9	0	13	0	22	0	25	5	0	30	0	0	0	0	0	24	25	0	0	49	101
Grand Total	27	0	28	0	55	0	57	12	0	69	0	0	0	0	0	49	58	0	0	107	231
Approach %	49.1	0.0	50.9	0.0		0.0	82.6	17.4	0.0		0.0	0.0	0.0	0.0		45.8	54.2	0.0	0.0		
Total %	11.7	0.0	12.1	0.0	23.8	0.0	24.7	5.2	0.0	29.9	0.0	0.0	0.0	0.0	0.0	21.2	25.1	0.0	0.0	46.3	
Exiting Leg Total	0					86					61					84					231

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

7:00 AM	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	4	0	1	0	5	0	8	2	0	10	0	0	0	0	0	6	12	0	0	18	33
7:15 AM	6	0	4	0	10	0	7	1	0	8	0	0	0	0	0	5	7	0	0	12	30
7:30 AM	4	0	4	0	8	0	8	2	0	10	0	0	0	0	0	8	10	0	0	18	36
7:45 AM	4	0	6	0	10	0	9	2	0	11	0	0	0	0	0	6	4	0	0	10	31
Total Volume	18	0	15	0	33	0	32	7	0	39	0	0	0	0	0	25	33	0	0	58	130
% Approach Total	54.5	0.0	45.5	0.0		0.0	82.1	17.9	0.0		0.0	0.0	0.0	0.0		43.1	56.9	0.0	0.0		
PHF	0.750	0.000	0.625	0.000	0.825	0.000	0.889	0.875	0.000	0.886	0.000	0.000	0.000	0.000	0.000	0.781	0.688	0.000	0.000	0.806	0.903
Entering Leg	18	0	15	0	33	0	32	7	0	39	0	0	0	0	0	25	33	0	0	58	130
Exiting Leg					0					48					32					50	130
Total					33					87					32					108	260

PDI File #: **175481 E**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

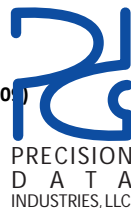
Pedestrians

	I-495 SB Offramp							Medway Road (Route 109)							I-495 SB Onramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Approach %	0.0	0.0	0.0	0.0	0.0	100.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.00	0.00	0.00	0.00	0.00	100.00	100.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Exiting Leg Total	1							0							0							0							1

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

7:00 AM	I-495 SB Offramp							Medway Road (Route 109)							I-495 SB Onramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	
Entering Leg	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Exiting Leg							1							0							0						0	1	
Total							2							0							0						0	2	

PDI File #: **175481 EE**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

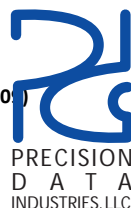
Cars and Heavy Vehicles

	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	46	0	77	0	123	0	177	34	1	212	0	0	0	0	0	187	152	0	0	339	674
4:15 PM	53	0	113	0	166	0	189	29	0	218	0	0	0	0	0	189	130	0	0	319	703
4:30 PM	40	0	86	0	126	0	183	23	2	208	0	0	0	0	0	205	198	0	0	403	737
4:45 PM	62	0	128	0	190	0	200	32	1	233	0	0	0	0	0	172	176	0	0	348	771
Total	201	0	404	0	605	0	749	118	4	871	0	0	0	0	0	753	656	0	0	1409	2885
5:00 PM	43	0	99	0	142	0	179	41	0	220	0	0	0	0	0	244	221	0	0	465	827
5:15 PM	47	0	119	0	166	0	203	27	0	230	0	0	0	0	0	208	203	0	0	411	807
5:30 PM	55	0	113	0	168	0	164	27	0	191	0	0	0	1	1	162	165	0	0	327	687
5:45 PM	49	0	119	0	168	0	165	23	0	188	0	0	0	0	0	133	140	0	0	273	629
Total	194	0	450	0	644	0	711	118	0	829	0	0	0	1	1	747	729	0	0	1476	2950
Grand Total	395	0	854	0	1249	0	1460	236	4	1700	0	0	0	1	1	1500	1385	0	0	2885	5835
Approach %	31.6	0.0	68.4	0.0		0.0	85.9	13.9	0.2		0.0	0.0	0.0	100.0		52.0	48.0	0.0	0.0		
Total %	6.8	0.0	14.6	0.0	21.4	0.0	25.0	4.0	0.1	29.1	0.0	0.0	0.0	0.0	0.0	25.7	23.7	0.0	0.0	49.4	
Exiting Leg Total	0					2243					1737					1855					5835
Cars	383	0	843	0	1226	0	1424	231	4	1659	0	0	0	1	1	1460	1370	0	0	2830	5716
% Cars	97.0	0.0	98.7	0.0	98.2	0.0	97.5	97.9	100.0	97.6	0.0	0.0	0.0	100.0	100.0	97.3	98.9	0.0	0.0	98.1	98.0
Exiting Leg Total	0					2217					1692					1807					5716
Heavy Vehicles	12	0	11	0	23	0	36	5	0	41	0	0	0	0	0	40	15	0	0	55	119
% Heavy Vehicles	3.0	0.0	1.3	0.0	1.8	0.0	2.5	2.1	0.0	2.4	0.0	0.0	0.0	0.0	0.0	2.7	1.1	0.0	0.0	1.9	2.0
Exiting Leg Total	0					26					45					48					119

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

4:30 PM	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	40	0	86	0	126	0	183	23	2	208	0	0	0	0	0	205	198	0	0	403	737
4:45 PM	62	0	128	0	190	0	200	32	1	233	0	0	0	0	0	172	176	0	0	348	771
5:00 PM	43	0	99	0	142	0	179	41	0	220	0	0	0	0	0	244	221	0	0	465	827
5:15 PM	47	0	119	0	166	0	203	27	0	230	0	0	0	0	0	208	203	0	0	411	807
Total Volume	192	0	432	0	624	0	765	123	3	891	0	0	0	0	0	829	798	0	0	1627	3142
% Approach Total	30.8	0.0	69.2	0.0		0.0	85.9	13.8	0.3		0.0	0.0	0.0	0.0		51.0	49.0	0.0	0.0		
PHF	0.774	0.000	0.844	0.000	0.821	0.000	0.942	0.750	0.375	0.956	0.000	0.000	0.000	0.000	0.000	0.849	0.903	0.000	0.000	0.875	0.950
Cars	188	0	426	0	614	0	745	121	3	869	0	0	0	0	0	805	792	0	0	1597	3080
Cars %	97.9	0.0	98.6	0.0	98.4	0.0	97.4	98.4	100.0	97.5	0.0	0.0	0.0	0.0	0.0	97.1	99.2	0.0	0.0	98.2	98.0
Heavy Vehicles	4	0	6	0	10	0	20	2	0	22	0	0	0	0	0	24	6	0	0	30	62
Heavy Vehicles %	2.1	0.0	1.4	0.0	1.6	0.0	2.6	1.6	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.9	0.8	0.0	0.0	1.8	2.0
Cars Enter Leg	188	0	426	0	614	0	745	121	3	869	0	0	0	0	0	805	792	0	0	1597	3080
Heavy Enter Leg	4	0	6	0	10	0	20	2	0	22	0	0	0	0	0	24	6	0	0	30	62
Total Entering Leg	192	0	432	0	624	0	765	123	3	891	0	0	0	0	0	829	798	0	0	1627	3142
Cars Exiting Leg	0					1221					926					933					3080
Heavy Exit Leg	0					12					26					24					62
Total Exiting Leg	0					1233					952					957					3142

PDI File #: **175481 EE**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

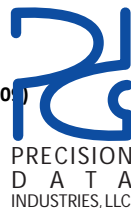
Cars

	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	46	0	75	0	121	0	171	32	1	204	0	0	0	0	0	179	148	0	0	327	652
4:15 PM	52	0	110	0	162	0	183	29	0	212	0	0	0	0	0	185	127	0	0	312	686
4:30 PM	39	0	84	0	123	0	178	22	2	202	0	0	0	0	0	197	196	0	0	393	718
4:45 PM	62	0	125	0	187	0	191	31	1	223	0	0	0	0	0	170	176	0	0	346	756
Total	199	0	394	0	593	0	723	114	4	841	0	0	0	0	0	731	647	0	0	1378	2812
5:00 PM	41	0	99	0	140	0	176	41	0	217	0	0	0	0	0	238	217	0	0	455	812
5:15 PM	46	0	118	0	164	0	200	27	0	227	0	0	0	0	0	200	203	0	0	403	794
5:30 PM	52	0	113	0	165	0	162	26	0	188	0	0	0	1	1	159	163	0	0	322	676
5:45 PM	45	0	119	0	164	0	163	23	0	186	0	0	0	0	0	132	140	0	0	272	622
Total	184	0	449	0	633	0	701	117	0	818	0	0	0	1	1	729	723	0	0	1452	2904
Grand Total	383	0	843	0	1226	0	1424	231	4	1659	0	0	0	1	1	1460	1370	0	0	2830	5716
Approach %	31.2	0.0	68.8	0.0		0.0	85.8	13.9	0.2		0.0	0.0	0.0	100.0		51.6	48.4	0.0	0.0		
Total %	6.7	0.0	14.7	0.0	21.4	0.0	24.9	4.0	0.1	29.0	0.0	0.0	0.0	0.0	0.0	25.5	24.0	0.0	0.0	49.5	
Exiting Leg Total	0					2217					1692					1807					5716

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

4:30 PM	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	39	0	84	0	123	0	178	22	2	202	0	0	0	0	0	197	196	0	0	393	718
4:45 PM	62	0	125	0	187	0	191	31	1	223	0	0	0	0	0	170	176	0	0	346	756
5:00 PM	41	0	99	0	140	0	176	41	0	217	0	0	0	0	0	238	217	0	0	455	812
5:15 PM	46	0	118	0	164	0	200	27	0	227	0	0	0	0	0	200	203	0	0	403	794
Total Volume	188	0	426	0	614	0	745	121	3	869	0	0	0	0	0	805	792	0	0	1597	3080
% Approach Total	30.6	0.0	69.4	0.0		0.0	85.7	13.9	0.3		0.0	0.0	0.0	0.0		50.4	49.6	0.0	0.0		
PHF	0.758	0.000	0.852	0.000	0.821	0.000	0.931	0.738	0.375	0.957	0.000	0.000	0.000	0.000	0.000	0.846	0.912	0.000	0.000	0.877	0.948
Entering Leg	188	0	426	0	614	0	745	121	3	869	0	0	0	0	0	805	792	0	0	1597	3080
Exiting Leg	0					1221					926					933					3080
Total	614					2090					926					2530					6160

PDI File #: **175481 EE**
 Location: **N: I-495 SB Offramp S: I-495 SB Onramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Heavy Vehicles

	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	2	0	2	0	6	2	0	8	0	0	0	0	0	8	4	0	0	12	22
4:15 PM	1	0	3	0	4	0	6	0	0	6	0	0	0	0	0	4	3	0	0	7	17
4:30 PM	1	0	2	0	3	0	5	1	0	6	0	0	0	0	0	8	2	0	0	10	19
4:45 PM	0	0	3	0	3	0	9	1	0	10	0	0	0	0	0	2	0	0	0	2	15
Total	2	0	10	0	12	0	26	4	0	30	0	0	0	0	0	22	9	0	0	31	73
5:00 PM	2	0	0	0	2	0	3	0	0	3	0	0	0	0	0	6	4	0	0	10	15
5:15 PM	1	0	1	0	2	0	3	0	0	3	0	0	0	0	0	8	0	0	0	8	13
5:30 PM	3	0	0	0	3	0	2	1	0	3	0	0	0	0	0	3	2	0	0	5	11
5:45 PM	4	0	0	0	4	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	7
Total	10	0	1	0	11	0	10	1	0	11	0	0	0	0	0	18	6	0	0	24	46
Grand Total	12	0	11	0	23	0	36	5	0	41	0	0	0	0	0	40	15	0	0	55	119
Approach %	52.2	0.0	47.8	0.0		0.0	87.8	12.2	0.0		0.0	0.0	0.0	0.0		72.7	27.3	0.0	0.0		
Total %	10.1	0.0	9.2	0.0	19.3	0.0	30.3	4.2	0.0	34.5	0.0	0.0	0.0	0.0	0.0	33.6	12.6	0.0	0.0	46.2	
Exiting Leg Total	0					26					45					48					119

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

4:00 PM	I-495 SB Offramp					Medway Road (Route 109)					I-495 SB Onramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	2	0	2	0	6	2	0	8	0	0	0	0	0	8	4	0	0	12	22
4:15 PM	1	0	3	0	4	0	6	0	0	6	0	0	0	0	0	4	3	0	0	7	17
4:30 PM	1	0	2	0	3	0	5	1	0	6	0	0	0	0	0	8	2	0	0	10	19
4:45 PM	0	0	3	0	3	0	9	1	0	10	0	0	0	0	0	2	0	0	0	2	15
Total Volume	2	0	10	0	12	0	26	4	0	30	0	0	0	0	0	22	9	0	0	31	73
% Approach Total	16.7	0.0	83.3	0.0		0.0	86.7	13.3	0.0		0.0	0.0	0.0	0.0		71.0	29.0	0.0	0.0		
PHF	0.500	0.000	0.833	0.000	0.750	0.000	0.722	0.500	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.688	0.563	0.000	0.000	0.646	0.830
Entering Leg	2	0	10	0	12	0	26	4	0	30	0	0	0	0	0	22	9	0	0	31	73
Exiting Leg	0					19					26					28					73
Total	12					49					26					59					146

PDI File #: **175481 EE**

Location: **N: I-495 SB Offramp S: I-495 SB Onramp**

Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**

City, State: **Milford, MA**

Client: **VHB/ M. Duranleau**

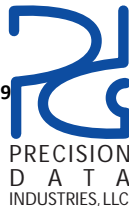
Site Code: **13810.00**

Count Date: **Thursday, February 16, 2017**

Start Time: **4:00 PM**

End Time: **6:00 PM**

46 Morton
Office: 508
Email:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	I-495 SB Offramp							Medway Road (Route 109)							I-495 SB Onramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							

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

4:00 PM	I-495 SB Offramp							Medway Road (Route 109)							I-495 SB Onramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg							0							0							0						0	0	
Total							0							0							0						0		

PDI File #: **175481 EE**

Location: **N: I-495 SB Offramp S: I-495 SB Onramp**

Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**

City, State: **Milford, MA**

Client: **VHB/ M. Duranleau**

Site Code: **13810.00**

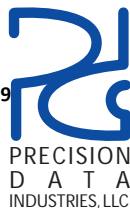
Count Date: **Thursday, February 16, 2017**

Start Time: **4:00 PM**

End Time: **6:00 PM**

Class:

46 Morton
Office: 508
Email:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Pedestrians

	I-495 SB Offramp							Medway Road (Route 109)							I-495 SB Onramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
Total %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Exiting Leg Total	0							0							0							0							

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

4:00 PM	I-495 SB Offramp							Medway Road (Route 109)							I-495 SB Onramp							Medway Road (Route 109)							
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg							0							0							0					0		0	
Total	0							0							0							0							

PDI File #: **175481 F**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

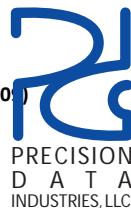
Cars and Heavy Vehicles

	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	138	73	0	0	211	30	0	116	0	146	0	124	28	0	152	509
7:15 AM	0	0	0	0	0	147	72	0	0	219	34	0	136	0	170	0	138	37	0	175	564
7:30 AM	0	0	0	0	0	168	88	0	0	256	36	0	159	0	195	0	147	38	0	185	636
7:45 AM	0	0	0	0	0	143	126	0	0	269	36	0	201	0	237	0	153	15	0	168	674
Total	0	0	0	0	0	596	359	0	0	955	136	0	612	0	748	0	562	118	0	680	2383
8:00 AM	0	0	0	0	0	105	113	0	0	218	25	0	142	0	167	0	136	29	0	165	550
8:15 AM	0	0	0	0	0	109	112	0	1	222	29	0	147	0	176	0	109	38	0	147	545
8:30 AM	0	0	0	0	0	107	109	0	0	216	37	0	157	0	194	0	94	24	0	118	528
8:45 AM	0	0	0	0	0	88	98	0	0	186	24	0	135	0	159	0	110	28	0	138	483
Total	0	0	0	0	0	409	432	0	1	842	115	0	581	0	696	0	449	119	0	568	2106
Grand Total	0	0	0	0	0	1005	791	0	1	1797	251	0	1193	0	1444	0	1011	237	0	1248	4489
Approach %	0.0	0.0	0.0	0.0		55.9	44.0	0.0	0.1		17.4	0.0	82.6	0.0		0.0	81.0	19.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	22.4	17.6	0.0	0.0	40.0	5.6	0.0	26.6	0.0	32.2	0.0	22.5	5.3	0.0	27.8	
Exiting Leg Total	1242					1263					0					1984					4489
Cars	0	0	0	0	0	981	759	0	1	1741	231	0	1150	0	1381	0	959	205	0	1164	4286
% Cars	0.0	0.0	0.0	0.0	0.0	97.6	96.0	0.0	100.0	96.9	92.0	0.0	96.4	0.0	95.6	0.0	94.9	86.5	0.0	93.3	95.5
Exiting Leg Total	1186					1191					0					1909					4286
Heavy Vehicles	0	0	0	0	0	24	32	0	0	56	20	0	43	0	63	0	52	32	0	84	203
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	2.4	4.0	0.0	0.0	3.1	8.0	0.0	3.6	0.0	4.4	0.0	5.1	13.5	0.0	6.7	4.5
Exiting Leg Total	56					72					0					75					203

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

7:15 AM	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	147	72	0	0	219	34	0	136	0	170	0	138	37	0	175	564
7:30 AM	0	0	0	0	0	168	88	0	0	256	36	0	159	0	195	0	147	38	0	185	636
7:45 AM	0	0	0	0	0	143	126	0	0	269	36	0	201	0	237	0	153	15	0	168	674
8:00 AM	0	0	0	0	0	105	113	0	0	218	25	0	142	0	167	0	136	29	0	165	550
Total Volume	0	0	0	0	0	563	399	0	0	962	131	0	638	0	769	0	574	119	0	693	2424
% Approach Total	0.0	0.0	0.0	0.0		58.5	41.5	0.0	0.0		17.0	0.0	83.0	0.0		0.0	82.8	17.2	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.838	0.792	0.000	0.000	0.894	0.910	0.000	0.794	0.000	0.811	0.000	0.938	0.783	0.000	0.936	0.899
Cars	0	0	0	0	0	554	381	0	0	935	120	0	617	0	737	0	543	101	0	644	2316
Cars %	0.0	0.0	0.0	0.0	0.0	98.4	95.5	0.0	0.0	97.2	91.6	0.0	96.7	0.0	95.8	0.0	94.6	84.9	0.0	92.9	95.5
Heavy Vehicles	0	0	0	0	0	9	18	0	0	27	11	0	21	0	32	0	31	18	0	49	108
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	1.6	4.5	0.0	0.0	2.8	8.4	0.0	3.3	0.0	4.2	0.0	5.4	15.1	0.0	7.1	4.5
Cars Enter Leg	0	0	0	0	0	554	381	0	0	935	120	0	617	0	737	0	543	101	0	644	2316
Heavy Enter Leg	0	0	0	0	0	9	18	0	0	27	11	0	21	0	32	0	31	18	0	49	108
Total Entering Leg	0	0	0	0	0	563	399	0	0	962	131	0	638	0	769	0	574	119	0	693	2424
Cars Exiting Leg	655					663					0					998					2316
Heavy Exit Leg	27					42					0					39					108
Total Exiting Leg	682					705					0					1037					2424

PDI File #: **175481 F**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
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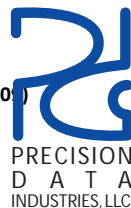
Cars

	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	131	70	0	0	201	30	0	109	0	139	0	117	22	0	139	479
7:15 AM	0	0	0	0	0	147	69	0	0	216	31	0	130	0	161	0	131	34	0	165	542
7:30 AM	0	0	0	0	0	165	83	0	0	248	33	0	153	0	186	0	139	32	0	171	605
7:45 AM	0	0	0	0	0	139	118	0	0	257	33	0	195	0	228	0	146	12	0	158	643
Total	0	0	0	0	0	582	340	0	0	922	127	0	587	0	714	0	533	100	0	633	2269
8:00 AM	0	0	0	0	0	103	111	0	0	214	23	0	139	0	162	0	127	23	0	150	526
8:15 AM	0	0	0	0	0	109	111	0	1	221	26	0	144	0	170	0	106	37	0	143	534
8:30 AM	0	0	0	0	0	106	103	0	0	209	33	0	152	0	185	0	88	23	0	111	505
8:45 AM	0	0	0	0	0	81	94	0	0	175	22	0	128	0	150	0	105	22	0	127	452
Total	0	0	0	0	0	399	419	0	1	819	104	0	563	0	667	0	426	105	0	531	2017
Grand Total	0	0	0	0	0	981	759	0	1	1741	231	0	1150	0	1381	0	959	205	0	1164	4286
Approach %	0.0	0.0	0.0	0.0		56.3	43.6	0.0	0.1		16.7	0.0	83.3	0.0		0.0	82.4	17.6	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	22.9	17.7	0.0	0.0	40.6	5.4	0.0	26.8	0.0	32.2	0.0	22.4	4.8	0.0	27.2	
Exiting Leg Total	1186					1191					0					1909					4286

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

7:15 AM	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:15 AM	0	0	0	0	0	147	69	0	0	216	31	0	130	0	161	0	131	34	0	165	542
7:30 AM	0	0	0	0	0	165	83	0	0	248	33	0	153	0	186	0	139	32	0	171	605
7:45 AM	0	0	0	0	0	139	118	0	0	257	33	0	195	0	228	0	146	12	0	158	643
8:00 AM	0	0	0	0	0	103	111	0	0	214	23	0	139	0	162	0	127	23	0	150	526
Total Volume	0	0	0	0	0	554	381	0	0	935	120	0	617	0	737	0	543	101	0	644	2316
% Approach Total	0.0	0.0	0.0	0.0		59.3	40.7	0.0	0.0		16.3	0.0	83.7	0.0		0.0	84.3	15.7	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.839	0.807	0.000	0.000	0.910	0.909	0.000	0.791	0.000	0.808	0.000	0.930	0.743	0.000	0.942	0.900
Entering Leg	0	0	0	0	0	554	381	0	0	935	120	0	617	0	737	0	543	101	0	644	2316
Exiting Leg	655					663					0					998					2316
Total	655					1598					737					1642					4632

PDI File #: **175481 F**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Heavy Vehicles

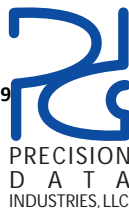
	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	7	3	0	0	10	0	0	7	0	7	0	7	6	0	13	30
7:15 AM	0	0	0	0	0	0	3	0	0	3	3	0	6	0	9	0	7	3	0	10	22
7:30 AM	0	0	0	0	0	3	5	0	0	8	3	0	6	0	9	0	8	6	0	14	31
7:45 AM	0	0	0	0	0	4	8	0	0	12	3	0	6	0	9	0	7	3	0	10	31
Total	0	0	0	0	0	14	19	0	0	33	9	0	25	0	34	0	29	18	0	47	114
8:00 AM	0	0	0	0	0	2	2	0	0	4	2	0	3	0	5	0	9	6	0	15	24
8:15 AM	0	0	0	0	0	0	1	0	0	1	3	0	3	0	6	0	3	1	0	4	11
8:30 AM	0	0	0	0	0	1	6	0	0	7	4	0	5	0	9	0	6	1	0	7	23
8:45 AM	0	0	0	0	0	7	4	0	0	11	2	0	7	0	9	0	5	6	0	11	31
Total	0	0	0	0	0	10	13	0	0	23	11	0	18	0	29	0	23	14	0	37	89
Grand Total	0	0	0	0	0	24	32	0	0	56	20	0	43	0	63	0	52	32	0	84	203
Approach %	0.0	0.0	0.0	0.0		42.9	57.1	0.0	0.0		31.7	0.0	68.3	0.0		0.0	61.9	38.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	11.8	15.8	0.0	0.0	27.6	9.9	0.0	21.2	0.0	31.0	0.0	25.6	15.8	0.0	41.4	
Exiting Leg Total	56					72					0					75					203

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

7:00 AM	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
7:00 AM	0	0	0	0	0	7	3	0	0	10	0	0	7	0	7	0	7	6	0	13	30
7:15 AM	0	0	0	0	0	0	3	0	0	3	3	0	6	0	9	0	7	3	0	10	22
7:30 AM	0	0	0	0	0	3	5	0	0	8	3	0	6	0	9	0	8	6	0	14	31
7:45 AM	0	0	0	0	0	4	8	0	0	12	3	0	6	0	9	0	7	3	0	10	31
Total Volume	0	0	0	0	0	14	19	0	0	33	9	0	25	0	34	0	29	18	0	47	114
% Approach Total	0.0	0.0	0.0	0.0		42.4	57.6	0.0	0.0		26.5	0.0	73.5	0.0		0.0	61.7	38.3	0.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.594	0.000	0.000	0.688	0.750	0.000	0.893	0.000	0.944	0.000	0.906	0.750	0.000	0.839	0.919
Entering Leg	0	0	0	0	0	14	19	0	0	33	9	0	25	0	34	0	29	18	0	47	114
Exiting Leg					32					38				0						44	114
Total					32					71				34						91	228

PDI File #: **175481 F**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **7:00 AM**
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46 Morton
 Office: 508
 Email:



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Bicycles (on Roadway and Crosswalks)

	I-495 NB Onramp							Medway Road (Route 109)							I-495 NB Offramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total	0							0							0							0							

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

7:00 AM	I-495 NB Onramp							Medway Road (Route 109)							I-495 NB Offramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Exiting Leg							0							0							0					0		0	
Total							0							0							0					0			

PDI File #: 175481 F

Location: N: I-495 NB Onramp S: I-495 NB Offramp

Location: E: Medway Road (Route 109) W: Medway Road (Route 109)

City, State: Milford, MA

Client: VHB/ M. Duranleau

Site Code: 13810.00

Count Date: Thursday, February 16, 2017

Start Time: 7:00 AM

End Time: 9:00 AM

Class:

PRECISION
DATA
INDUSTRIES, LLC46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

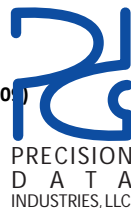
Pedestrians

	I-495 NB Onramp							Medway Road (Route 109)							I-495 NB Offramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Total %	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Exiting Leg Total	1							0							0							0							1

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

7:00 AM	I-495 NB Onramp							Medway Road (Route 109)							I-495 NB Offramp							Medway Road (Route 109)							Total
	North							East							South							West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.250	0.250		0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.250
Entering Leg	0	0	0	0	0	0	1		0	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0	0	0	1
Exiting Leg							1								0							0					0		1
Total							2							0							0						0		2

PDI File #: **175481 FF**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

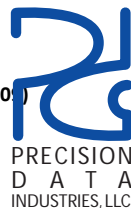
Cars and Heavy Vehicles

	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	94	118	0	0	212	25	0	88	0	113	0	148	79	0	227	552
4:15 PM	0	0	0	0	0	52	132	0	0	184	24	0	90	0	114	0	185	61	0	246	544
4:30 PM	0	0	0	0	0	84	102	0	0	186	27	0	100	0	127	0	189	97	0	286	599
4:45 PM	0	0	0	0	0	68	126	0	0	194	29	0	110	0	139	0	215	95	1	311	644
Total	0	0	0	0	0	298	478	0	0	776	105	0	388	0	493	0	737	332	1	1070	2339
5:00 PM	0	0	0	0	0	87	121	0	0	208	21	0	90	0	111	0	205	104	1	310	629
5:15 PM	0	0	0	0	0	88	114	0	0	202	30	0	113	0	143	0	222	103	1	326	671
5:30 PM	0	0	0	0	0	74	102	0	0	176	21	0	87	0	108	0	210	72	1	283	567
5:45 PM	0	0	0	0	0	63	95	0	0	158	32	0	89	0	121	0	200	60	1	261	540
Total	0	0	0	0	0	312	432	0	0	744	104	0	379	0	483	0	837	339	4	1180	2407
Grand Total	0	0	0	0	0	610	910	0	0	1520	209	0	767	0	976	0	1574	671	5	2250	4746
Approach %	0.0	0.0	0.0	0.0		40.1	59.9	0.0	0.0		21.4	0.0	78.6	0.0		0.0	70.0	29.8	0.2		
Total %	0.0	0.0	0.0	0.0	0.0	12.9	19.2	0.0	0.0	32.0	4.4	0.0	16.2	0.0	20.6	0.0	33.2	14.1	0.1	47.4	
Exiting Leg Total	1281					1783					0					1682					4746
Cars	0	0	0	0	0	599	899	0	0	1498	202	0	737	0	939	0	1560	658	5	2223	4660
% Cars	0.0	0.0	0.0	0.0	0.0	98.2	98.8	0.0	0.0	98.6	96.7	0.0	96.1	0.0	96.2	0.0	99.1	98.1	100.0	98.8	98.2
Exiting Leg Total	1257					1762					0					1641					4660
Heavy Vehicles	0	0	0	0	0	11	11	0	0	22	7	0	30	0	37	0	14	13	0	27	86
% Heavy Vehicles	0.0	0.0	0.0	0.0	0.0	1.8	1.2	0.0	0.0	1.4	3.3	0.0	3.9	0.0	3.8	0.0	0.9	1.9	0.0	1.2	1.8
Exiting Leg Total	24					21					0					41					86

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

4:30 PM	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	0	0	0	0	0	84	102	0	0	186	27	0	100	0	127	0	189	97	0	286	599
4:45 PM	0	0	0	0	0	68	126	0	0	194	29	0	110	0	139	0	215	95	1	311	644
5:00 PM	0	0	0	0	0	87	121	0	0	208	21	0	90	0	111	0	205	104	1	310	629
5:15 PM	0	0	0	0	0	88	114	0	0	202	30	0	113	0	143	0	222	103	1	326	671
Total Volume	0	0	0	0	0	327	463	0	0	790	107	0	413	0	520	0	831	399	3	1233	2543
% Approach Total	0.0	0.0	0.0	0.0		41.4	58.6	0.0	0.0		20.6	0.0	79.4	0.0		0.0	67.4	32.4	0.2		
PHF	0.000	0.000	0.000	0.000	0.000	0.929	0.919	0.000	0.000	0.950	0.892	0.000	0.914	0.000	0.909	0.000	0.936	0.959	0.750	0.946	0.947
Cars	0	0	0	0	0	318	457	0	0	775	103	0	396	0	499	0	825	395	3	1223	2497
Cars %	0.0	0.0	0.0	0.0	0.0	97.2	98.7	0.0	0.0	98.1	96.3	0.0	95.9	0.0	96.0	0.0	99.3	99.0	100.0	99.2	98.2
Heavy Vehicles	0	0	0	0	0	9	6	0	0	15	4	0	17	0	21	0	6	4	0	10	46
Heavy Vehicles %	0.0	0.0	0.0	0.0	0.0	2.8	1.3	0.0	0.0	1.9	3.7	0.0	4.1	0.0	4.0	0.0	0.7	1.0	0.0	0.8	1.8
Cars Enter Leg	0	0	0	0	0	318	457	0	0	775	103	0	396	0	499	0	825	395	3	1223	2497
Heavy Enter Leg	0	0	0	0	0	9	6	0	0	15	4	0	17	0	21	0	6	4	0	10	46
Total Entering Leg	0	0	0	0	0	327	463	0	0	790	107	0	413	0	520	0	831	399	3	1233	2543
Cars Exiting Leg	713					928					0					856					2497
Heavy Exit Leg	13					10					0					23					46
Total Exiting Leg	726					938					0					879					2543

PDI File #: **175481 FF**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	92	117	0	0	209	24	0	82	0	106	0	144	75	0	219	534
4:15 PM	0	0	0	0	0	52	130	0	0	182	23	0	86	0	109	0	181	59	0	240	531
4:30 PM	0	0	0	0	0	80	101	0	0	181	25	0	96	0	121	0	187	96	0	283	585
4:45 PM	0	0	0	0	0	64	122	0	0	186	28	0	103	0	131	0	212	95	1	308	625
Total	0	0	0	0	0	288	470	0	0	758	100	0	367	0	467	0	724	325	1	1050	2275
5:00 PM	0	0	0	0	0	87	121	0	0	208	20	0	86	0	106	0	205	101	1	307	621
5:15 PM	0	0	0	0	0	87	113	0	0	200	30	0	111	0	141	0	221	103	1	325	666
5:30 PM	0	0	0	0	0	74	101	0	0	175	20	0	85	0	105	0	210	69	1	280	560
5:45 PM	0	0	0	0	0	63	94	0	0	157	32	0	88	0	120	0	200	60	1	261	538
Total	0	0	0	0	0	311	429	0	0	740	102	0	370	0	472	0	836	333	4	1173	2385
Grand Total	0	0	0	0	0	599	899	0	0	1498	202	0	737	0	939	0	1560	658	5	2223	4660
Approach %	0.0	0.0	0.0	0.0		40.0	60.0	0.0	0.0		21.5	0.0	78.5	0.0		0.0	70.2	29.6	0.2		
Total %	0.0	0.0	0.0	0.0	0.0	12.9	19.3	0.0	0.0	32.1	4.3	0.0	15.8	0.0	20.2	0.0	33.5	14.1	0.1	47.7	
Exiting Leg Total	1257					1762					0					1641					4660

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

4:30 PM	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:30 PM	0	0	0	0	0	80	101	0	0	181	25	0	96	0	121	0	187	96	0	283	585
4:45 PM	0	0	0	0	0	64	122	0	0	186	28	0	103	0	131	0	212	95	1	308	625
5:00 PM	0	0	0	0	0	87	121	0	0	208	20	0	86	0	106	0	205	101	1	307	621
5:15 PM	0	0	0	0	0	87	113	0	0	200	30	0	111	0	141	0	221	103	1	325	666
Total Volume	0	0	0	0	0	318	457	0	0	775	103	0	396	0	499	0	825	395	3	1223	2497
% Approach Total	0.0	0.0	0.0	0.0		41.0	59.0	0.0	0.0		20.6	0.0	79.4	0.0		0.0	67.5	32.3	0.2		
PHF	0.000	0.000	0.000	0.000	0.000	0.914	0.936	0.000	0.000	0.931	0.858	0.000	0.892	0.000	0.885	0.000	0.933	0.959	0.750	0.941	0.937
Entering Leg	0	0	0	0	0	318	457	0	0	775	103	0	396	0	499	0	825	395	3	1223	2497
Exiting Leg	713					928					0					856					2497
Total	713					1703					499					2079					4994

PDI File #: **175481 FF**
 Location: **N: I-495 NB Onramp S: I-495 NB Offramp**
 Location: **E: Medway Road (Route 109) W: Medway Road (Route 109)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Thursday, February 16, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



PRECISION
 DATA
 INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Heavy Vehicles

	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total
	North					East					South					West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	
4:00 PM	0	0	0	0	0	2	1	0	0	3	1	0	6	0	7	0	4	4	0	8	18
4:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	4	0	5	0	4	2	0	6	13
4:30 PM	0	0	0	0	0	4	1	0	0	5	2	0	4	0	6	0	2	1	0	3	14
4:45 PM	0	0	0	0	0	4	4	0	0	8	1	0	7	0	8	0	3	0	0	3	19
Total	0	0	0	0	0	10	8	0	0	18	5	0	21	0	26	0	13	7	0	20	64
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	5	0	0	3	0	3	8
5:15 PM	0	0	0	0	0	1	1	0	0	2	0	0	2	0	2	0	1	0	0	1	5
5:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	2	0	3	0	0	3	0	3	7
5:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Total	0	0	0	0	0	1	3	0	0	4	2	0	9	0	11	0	1	6	0	7	22
Grand Total	0	0	0	0	0	11	11	0	0	22	7	0	30	0	37	0	14	13	0	27	86
Approach %	0.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		18.9	0.0	81.1	0.0		0.0	51.9	48.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	12.8	12.8	0.0	0.0	25.6	8.1	0.0	34.9	0.0	43.0	0.0	16.3	15.1	0.0	31.4	
Exiting Leg Total	24					21					0					41					86

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

4:00 PM	I-495 NB Onramp					Medway Road (Route 109)					I-495 NB Offramp					Medway Road (Route 109)					Total	
	North					East					South					West						
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total		
4:00 PM	0	0	0	0	0	2	1	0	0	3	1	0	6	0	7	0	4	4	0	0	8	18
4:15 PM	0	0	0	0	0	0	2	0	0	2	1	0	4	0	5	0	4	2	0	0	6	13
4:30 PM	0	0	0	0	0	4	1	0	0	5	2	0	4	0	6	0	2	1	0	0	3	14
4:45 PM	0	0	0	0	0	4	4	0	0	8	1	0	7	0	8	0	3	0	0	0	3	19
Total Volume	0	0	0	0	0	10	8	0	0	18	5	0	21	0	26	0	13	7	0	0	20	64
% Approach Total	0.0	0.0	0.0	0.0		55.6	44.4	0.0	0.0		19.2	0.0	80.8	0.0		0.0	65.0	35.0	0.0			
PHF	0.000	0.000	0.000	0.000	0.000	0.625	0.500	0.000	0.000	0.563	0.625	0.000	0.750	0.000	0.813	0.000	0.813	0.438	0.000	0.625	0.842	
Entering Leg	0	0	0	0	0	10	8	0	0	18	5	0	21	0	26	0	13	7	0	0	20	64
Exiting Leg	17					18					0					29					64	
Total	17					36					26					49					128	

PDI File #: **175481 G**
 Location: **S: Zane Circle**
 Location: **E: 0 W: East Main Street (Route 16)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Tuesday, February 28, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles

	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total	
	East				South				West					
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total		
7:00 AM	74	0	0	74	3	4	0	7	0	176	0	176	257	
7:15 AM	96	0	0	96	0	5	0	5	1	169	0	170	271	
7:30 AM	122	0	0	122	2	3	0	5	1	158	0	159	286	
7:45 AM	133	1	0	134	3	6	0	9	1	188	0	189	332	
Total	425	1	0	426	8	18	0	26	3	691	0	694	1146	
8:00 AM	127	1	0	128	4	9	0	13	2	162	0	164	305	
8:15 AM	112	0	0	112	2	6	0	8	1	148	0	149	269	
8:30 AM	108	2	0	110	0	7	0	7	4	133	0	137	254	
8:45 AM	112	0	0	112	0	4	0	4	1	98	0	99	215	
Total	459	3	0	462	6	26	0	32	8	541	0	549	1043	
Grand Total	884	4	0	888	14	44	0	58	11	1232	0	1243	2189	
Approach %	99.5	0.5	0.0		24.1	75.9	0.0		0.9	99.1	0.0			
Total %	40.4	0.2	0.0	40.6	0.6	2.0	0.0	2.6	0.5	56.3	0.0	56.8		
Exiting Leg Total	1246				15				928				2189	
Cars	839	4	0	843	14	43	0	57	10	1159	0	1169	2069	
% Cars	94.9	100.0	0.0	94.9	100.0	97.7	0.0	98.3	90.9	94.1	0.0	94.0	94.5	
Exiting Leg Total	1173				14				882				2069	
Heavy Vehicles	45	0	0	45	0	1	0	1	1	73	0	74	120	
% Heavy Vehicles	5.1	0.0	0.0	5.1	0.0	2.3	0.0	1.7	9.1	5.9	0.0	6.0	5.5	
Exiting Leg Total	73				1				46				120	

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

7:15 AM	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:15 AM	96	0	0	96	0	5	0	5	1	169	0	170	271
7:30 AM	122	0	0	122	2	3	0	5	1	158	0	159	286
7:45 AM	133	1	0	134	3	6	0	9	1	188	0	189	332
8:00 AM	127	1	0	128	4	9	0	13	2	162	0	164	305
Total Volume	478	2	0	480	9	23	0	32	5	677	0	682	1194
% Approach Total	99.6	0.4	0.0		28.1	71.9	0.0		0.7	99.3	0.0		
PHF	0.898	0.500	0.000	0.896	0.563	0.639	0.000	0.615	0.625	0.900	0.000	0.902	0.899
Cars	450	2	0	452	9	22	0	31	4	642	0	646	1129
Cars %	94.1	100.0	0.0	94.2	100.0	95.7	0.0	96.9	80.0	94.8	0.0	94.7	94.6
Heavy Vehicles	28	0	0	28	0	1	0	1	1	35	0	36	65
Heavy Vehicles %	5.9	0.0	0.0	5.8	0.0	4.3	0.0	3.1	20.0	5.2	0.0	5.3	5.4
Cars Enter Leg	450	2	0	452	9	22	0	31	4	642	0	646	1129
Heavy Enter Leg	28	0	0	28	0	1	0	1	1	35	0	36	65
Total Entering Leg	478	2	0	480	9	23	0	32	5	677	0	682	1194
Cars Exiting Leg				651				6				472	1129
Heavy Exit Leg				35				1				29	65
Total Exiting Leg				686				7				501	1194

PDI File #: **175481 G**
 Location: **S: Zane Circle**
 Location: **E: 0 W: East Main Street (Route 16)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Tuesday, February 28, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	69	0	0	69	3	4	0	7	0	166	0	166	242
7:15 AM	86	0	0	86	0	5	0	5	1	161	0	162	253
7:30 AM	118	0	0	118	2	3	0	5	1	152	0	153	276
7:45 AM	126	1	0	127	3	6	0	9	0	176	0	176	312
Total	399	1	0	400	8	18	0	26	2	655	0	657	1083
8:00 AM	120	1	0	121	4	8	0	12	2	153	0	155	288
8:15 AM	109	0	0	109	2	6	0	8	1	137	0	138	255
8:30 AM	101	2	0	103	0	7	0	7	4	125	0	129	239
8:45 AM	110	0	0	110	0	4	0	4	1	89	0	90	204
Total	440	3	0	443	6	25	0	31	8	504	0	512	986
Grand Total	839	4	0	843	14	43	0	57	10	1159	0	1169	2069
Approach %	99.5	0.5	0.0		24.6	75.4	0.0		0.9	99.1	0.0		
Total %	40.6	0.2	0.0	40.7	0.7	2.1	0.0	2.8	0.5	56.0	0.0	56.5	
Exiting Leg Total	1173				14				882				2069

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

7:30 AM	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:30 AM	118	0	0	118	2	3	0	5	1	152	0	153	276
7:45 AM	126	1	0	127	3	6	0	9	0	176	0	176	312
8:00 AM	120	1	0	121	4	8	0	12	2	153	0	155	288
8:15 AM	109	0	0	109	2	6	0	8	1	137	0	138	255
Total Volume	473	2	0	475	11	23	0	34	4	618	0	622	1131
% Approach Total	99.6	0.4	0.0		32.4	67.6	0.0		0.6	99.4	0.0		
PHF	0.938	0.500	0.000	0.935	0.688	0.719	0.000	0.708	0.500	0.878	0.000	0.884	0.906
Entering Leg	473	2	0	475	11	23	0	34	4	618	0	622	1131
Exiting Leg				629				6				496	1131
Total				1104				40				1118	2262

PDI File #: **175481 G**
 Location: **S: Zane Circle**
 Location: **E: 0 W: East Main Street (Route 16)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Tuesday, February 28, 2017**
 Start Time: **7:00 AM**
 End Time: **9:00 AM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
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Heavy Vehicles

	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:00 AM	5	0	0	5	0	0	0	0	0	10	0	10	15
7:15 AM	10	0	0	10	0	0	0	0	0	8	0	8	18
7:30 AM	4	0	0	4	0	0	0	0	0	6	0	6	10
7:45 AM	7	0	0	7	0	0	0	0	1	12	0	13	20
Total	26	0	0	26	0	0	0	0	1	36	0	37	63
8:00 AM	7	0	0	7	0	1	0	1	0	9	0	9	17
8:15 AM	3	0	0	3	0	0	0	0	0	11	0	11	14
8:30 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
8:45 AM	2	0	0	2	0	0	0	0	0	9	0	9	11
Total	19	0	0	19	0	1	0	1	0	37	0	37	57
Grand Total	45	0	0	45	0	1	0	1	1	73	0	74	120
Approach %	100.0	0.0	0.0		0.0	100.0	0.0		1.4	98.6	0.0		
Total %	37.5	0.0	0.0	37.5	0.0	0.8	0.0	0.8	0.8	60.8	0.0	61.7	
Exiting Leg Total	73				1				46				120

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

7:45 AM	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
7:45 AM	7	0	0	7	0	0	0	0	1	12	0	13	20
8:00 AM	7	0	0	7	0	1	0	1	0	9	0	9	17
8:15 AM	3	0	0	3	0	0	0	0	0	11	0	11	14
8:30 AM	7	0	0	7	0	0	0	0	0	8	0	8	15
Total Volume	24	0	0	24	0	1	0	1	1	40	0	41	66
% Approach Total	100.0	0.0	0.0		0.0	100.0	0.0		2.4	97.6	0.0		
PHF	0.857	0.000	0.000	0.857	0.000	0.250	0.000	0.250	0.250	0.833	0.000	0.788	0.825
Entering Leg	24	0	0	24	0	1	0	1	1	40	0	41	66
Exiting Leg				40				1				25	66
Total				64				2				66	132

PDI File #: **175481 GG**
 Location: **S: Zane Circle**
 Location: **E: 0 W: East Main Street (Route 16)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Tuesday, February 28, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars and Heavy Vehicles

	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	165	0	0	165	0	5	0	5	4	94	0	98	268
4:15 PM	158	0	0	158	1	3	0	4	6	112	0	118	280
4:30 PM	186	1	0	187	1	2	0	3	3	135	0	138	328
4:45 PM	170	3	0	173	1	3	0	4	4	101	0	105	282
Total	679	4	0	683	3	13	0	16	17	442	0	459	1158
5:00 PM	182	1	0	183	3	3	0	6	2	130	0	132	321
5:15 PM	200	5	0	205	0	2	0	2	9	120	0	129	336
5:30 PM	163	2	0	165	1	4	0	5	4	124	0	128	298
5:45 PM	151	3	0	154	1	3	0	4	3	127	0	130	288
Total	696	11	0	707	5	12	0	17	18	501	0	519	1243
Grand Total	1375	15	0	1390	8	25	0	33	35	943	0	978	2401
Approach %	98.9	1.1	0.0		24.2	75.8	0.0		3.6	96.4	0.0		
Total %	57.3	0.6	0.0	57.9	0.3	1.0	0.0	1.4	1.5	39.3	0.0	40.7	
Exiting Leg Total				951				50				1400	2401
Cars	1345	15	0	1360	8	25	0	33	35	927	0	962	2355
% Cars	97.8	100.0	0.0	97.8	100.0	100.0	0.0	100.0	100.0	98.3	0.0	98.4	98.1
Exiting Leg Total				935				50				1370	2355
Heavy Vehicles	30	0	0	30	0	0	0	0	0	16	0	16	46
% Heavy Vehicles	2.2	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.6	1.9
Exiting Leg Total				16				0				30	46

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

4:30 PM	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	186	1	0	187	1	2	0	3	3	135	0	138	328
4:45 PM	170	3	0	173	1	3	0	4	4	101	0	105	282
5:00 PM	182	1	0	183	3	3	0	6	2	130	0	132	321
5:15 PM	200	5	0	205	0	2	0	2	9	120	0	129	336
Total Volume	738	10	0	748	5	10	0	15	18	486	0	504	1267
% Approach Total	98.7	1.3	0.0		33.3	66.7	0.0		3.6	96.4	0.0		
PHF	0.923	0.500	0.000	0.912	0.417	0.833	0.000	0.625	0.500	0.900	0.000	0.913	0.943
Cars	721	10	0	731	5	10	0	15	18	478	0	496	1242
Cars %	97.7	100.0	0.0	97.7	100.0	100.0	0.0	100.0	100.0	98.4	0.0	98.4	98.0
Heavy Vehicles	17	0	0	17	0	0	0	0	0	8	0	8	25
Heavy Vehicles %	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	2.0
Cars Enter Leg	721	10	0	731	5	10	0	15	18	478	0	496	1242
Heavy Enter Leg	17	0	0	17	0	0	0	0	0	8	0	8	25
Total Entering Leg	738	10	0	748	5	10	0	15	18	486	0	504	1267
Cars Exiting Leg				483				28				731	1242
Heavy Exit Leg				8				0				17	25
Total Exiting Leg				491				28				748	1267

PDI File #: **175481 GG**
 Location: **S: Zane Circle**
 Location: **E: 0 W: East Main Street (Route 16)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Tuesday, February 28, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
 Office: 508-875-0100 Fax: 508-875-0118
 Email: datarequests@pdillc.com

Cars

	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	159	0	0	159	0	5	0	5	4	93	0	97	261
4:15 PM	154	0	0	154	1	3	0	4	6	112	0	118	276
4:30 PM	182	1	0	183	1	2	0	3	3	133	0	136	322
4:45 PM	166	3	0	169	1	3	0	4	4	101	0	105	278
Total	661	4	0	665	3	13	0	16	17	439	0	456	1137
5:00 PM	177	1	0	178	3	3	0	6	2	126	0	128	312
5:15 PM	196	5	0	201	0	2	0	2	9	118	0	127	330
5:30 PM	163	2	0	165	1	4	0	5	4	122	0	126	296
5:45 PM	148	3	0	151	1	3	0	4	3	122	0	125	280
Total	684	11	0	695	5	12	0	17	18	488	0	506	1218
Grand Total	1345	15	0	1360	8	25	0	33	35	927	0	962	2355
Approach %	98.9	1.1	0.0		24.2	75.8	0.0		3.6	96.4	0.0		
Total %	57.1	0.6	0.0	57.7	0.3	1.1	0.0	1.4	1.5	39.4	0.0	40.8	
Exiting Leg Total	935				50				1370				2355

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

4:30 PM	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	182	1	0	183	1	2	0	3	3	133	0	136	322
4:45 PM	166	3	0	169	1	3	0	4	4	101	0	105	278
5:00 PM	177	1	0	178	3	3	0	6	2	126	0	128	312
5:15 PM	196	5	0	201	0	2	0	2	9	118	0	127	330
Total Volume	721	10	0	731	5	10	0	15	18	478	0	496	1242
% Approach Total	98.6	1.4	0.0		33.3	66.7	0.0		3.6	96.4	0.0		
PHF	0.920	0.500	0.000	0.909	0.417	0.833	0.000	0.625	0.500	0.898	0.000	0.912	0.941
Entering Leg	721	10	0	731	5	10	0	15	18	478	0	496	1242
Exiting Leg				483				28				731	1242
Total				1214				43				1227	2484

PDI File #: **175481 GG**
 Location: **S: Zane Circle**
 Location: **E: 0 W: East Main Street (Route 16)**
 City, State: **Milford, MA**
 Client: **VHB/ M. Duranleau**
 Site Code: **13810.00**
 Count Date: **Tuesday, February 28, 2017**
 Start Time: **4:00 PM**
 End Time: **6:00 PM**
 Class:



46 Morton Street, Framingham, MA 01702
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Heavy Vehicles

	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:00 PM	6	0	0	6	0	0	0	0	0	1	0	1	7
4:15 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
4:30 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
4:45 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
Total	18	0	0	18	0	0	0	0	0	3	0	3	21
5:00 PM	5	0	0	5	0	0	0	0	0	4	0	4	9
5:15 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	2
5:45 PM	3	0	0	3	0	0	0	0	0	5	0	5	8
Total	12	0	0	12	0	0	0	0	0	13	0	13	25
Grand Total	30	0	0	30	0	0	0	0	0	16	0	16	46
Approach %	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
Total %	65.2	0.0	0.0	65.2	0.0	0.0	0.0	0.0	0.0	34.8	0.0	34.8	
Exiting Leg Total	16				0				30				46

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

4:30 PM	East Main Street (Route16)				Zane Circle				East Main Street (Route 16)				Total
	East				South				West				
	Thru	Left	U-Turn	Total	Right	Left	U-Turn	Total	Right	Thru	U-Turn	Total	
4:30 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
4:45 PM	4	0	0	4	0	0	0	0	0	0	0	0	4
5:00 PM	5	0	0	5	0	0	0	0	0	4	0	4	9
5:15 PM	4	0	0	4	0	0	0	0	0	2	0	2	6
Total Volume	17	0	0	17	0	0	0	0	0	8	0	8	25
% Approach Total	100.0	0.0	0.0		0.0	0.0	0.0		0.0	100.0	0.0		
PHF	0.850	0.000	0.000	0.850	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.694
Entering Leg	17	0	0	17	0	0	0	0	0	8	0	8	25
Exiting Leg				8				0				17	25
Total				25				0				25	50



46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Study Name 175481 G Gap
Start Date 02/28/2017
Start Time 7:00 AM

Eastbound Left from Major

	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.00+	Critical Gaps (4.1 sec)	Follow-up Gaps (2.2 sec)	Total Gaps
7:00 AM	14	5	4	3	2	0	3	3	2	0	3	1	1	7	34	268	302
7:15 AM	15	9	8	8	2	4	5	4	1	2	2	2	1	6	53	234	287
7:30 AM	28	9	6	6	5	3	2	2	3	0	1	2	0	5	44	220	264
7:45 AM	26	14	7	10	3	2	2	2	2	1	2	1	1	6	53	207	260
8:00 AM	37	7	3	4	5	4	2	3	2	0	4	2	2	5	43	214	257
8:15 AM	24	15	7	5	6	2	4	0	2	1	2	1	2	7	54	226	280
8:30 AM	20	9	13	1	5	3	4	1	2	2	3	1	1	5	49	220	269
8:45 AM	24	8	11	8	1	3	1	4	3	1	0	0	0	10	49	233	282
4:00 PM	46	18	9	3	6	2	4	4	2	3	0	3	0	2	55	161	216
4:15 PM	45	18	5	6	4	4	2	3	2	2	1	1	2	3	51	179	230
4:30 PM	49	18	8	2	6	4	6	7	2	0	0	0	1	2	56	151	207
4:45 PM	51	17	10	8	5	3	0	3	3	0	0	1	1	3	54	150	204
5:00 PM	35	20	11	6	8	4	2	2	2	2	2	1	1	1	60	144	204
5:15 PM	64	10	10	7	5	1	2	3	0	5	0	0	0	3	46	135	181
5:30 PM	42	20	4	7	5	3	3	3	3	2	2	0	1	3	55	168	223
5:45 PM	27	11	8	10	9	4	1	0	3	0	1	3	0	5	53	179	232



PRECISION
D A T A
INDUSTRIES, LLC

46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 508-875-0118
Email: datarequests@pdillc.com

Study Name 175481 G Gap
Start Date 02/28/2017
Start Time 7:00 AM

Westbound Left from Major

	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.00+	Critical Gaps (4.1 sec)	Follow-up Gaps (2.2 sec)	Total Gaps
7:00 AM	60	20	11	3	5	4	1	2	3	2	1	1	0	3	54	146	200
7:15 AM	56	12	10	6	6	2	1	2	2	1	2	0	1	5	49	164	213
7:30 AM	52	14	6	2	1	5	5	1	2	2	1	2	2	4	45	183	228
7:45 AM	62	16	6	3	2	3	7	2	1	3	1	0	0	3	46	144	190
8:00 AM	47	12	12	4	4	3	5	4	2	1	1	0	0	4	52	166	218
8:15 AM	45	14	15	7	7	3	6	5	1	1	0	1	0	2	62	158	220
8:30 AM	35	15	6	8	4	4	2	5	2	1	0	2	2	4	55	187	242
8:45 AM	26	13	7	5	5	6	4	0	2	0	2	2	1	6	51	225	276
4:00 PM	21	13	14	3	6	4	3	3	3	1	3	1	2	5	60	216	276
4:15 PM	33	15	13	4	3	5	2	4	3	4	2	1	2	2	60	192	252
4:30 PM	45	20	5	7	5	2	3	5	3	2	1	1	1	3	56	177	233
4:45 PM	27	12	8	5	11	4	1	3	6	1	2	1	1	3	58	213	271
5:00 PM	28	17	7	9	7	3	4	4	0	3	0	0	1	5	60	184	244
5:15 PM	33	16	11	9	2	3	2	3	5	1	1	3	1	2	59	181	240
5:30 PM	34	20	8	10	4	2	3	3	2	1	1	4	0	4	62	189	251
5:45 PM	32	12	15	13	4	2	3	3	1	4	2	0	2	1	62	161	223



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Study Name 175481 G Gap
Start Date 02/28/2017
Start Time 7:00 AM

Southbound Right from Minor

	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.00+	Critical Gaps (6.2 sec)	Follow-up Gaps (3.3 sec)	Total Gaps
7:00 AM	14	5	4	3	2	0	3	3	2	0	3	1	1	7	28	156	184
7:15 AM	15	9	8	8	2	4	5	4	1	2	2	2	1	6	43	124	167
7:30 AM	28	9	6	6	5	3	2	2	3	0	1	2	0	5	34	120	154
7:45 AM	26	14	7	10	3	2	2	2	2	1	2	1	1	6	38	107	145
8:00 AM	37	7	3	4	5	4	2	3	2	0	4	2	2	5	35	117	152
8:15 AM	24	15	7	5	6	2	4	0	2	1	2	1	2	7	38	121	159
8:30 AM	20	9	13	1	5	3	4	1	2	2	3	1	1	5	38	117	155
8:45 AM	24	8	11	8	1	3	1	4	3	1	0	0	0	10	41	120	161
4:00 PM	46	18	9	3	6	2	4	4	2	3	0	3	0	2	37	79	116
4:15 PM	45	18	5	6	4	4	2	3	2	2	1	1	2	3	34	90	124
4:30 PM	49	18	8	2	6	4	6	7	2	0	0	0	1	2	37	74	111
4:45 PM	51	17	10	8	5	3	0	3	3	0	0	1	1	3	36	74	110
5:00 PM	35	20	11	6	8	4	2	2	2	2	2	1	1	1	40	68	108
5:15 PM	64	10	10	7	5	1	2	3	0	5	0	0	0	3	35	66	101
5:30 PM	42	20	4	7	5	3	3	3	3	2	2	0	1	3	35	85	120
5:45 PM	27	11	8	10	9	4	1	0	3	0	1	3	0	5	44	81	125



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Northbound Right from Minor

	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.00+	Critical Gaps (6.2 sec)	Follow-up Gaps (3.3 sec)	Total Gaps
7:00 AM	60	20	11	3	5	4	1	2	3	2	1	1	0	3	35	70	105
7:15 AM	56	12	10	6	6	2	1	2	2	1	2	0	1	5	37	79	116
7:30 AM	52	14	6	2	1	5	5	1	2	2	1	2	2	4	30	96	126
7:45 AM	62	16	6	3	2	3	7	2	1	3	1	0	0	3	31	70	101
8:00 AM	47	12	12	4	4	3	5	4	2	1	1	0	0	4	37	81	118
8:15 AM	45	14	15	7	7	3	6	5	1	1	0	1	0	2	46	68	114
8:30 AM	35	15	6	8	4	4	2	5	2	1	0	2	2	4	40	92	132
8:45 AM	26	13	7	5	5	6	4	0	2	0	2	2	1	6	39	119	158
4:00 PM	21	13	14	3	6	4	3	3	3	1	3	1	2	5	45	112	157
4:15 PM	33	15	13	4	3	5	2	4	3	4	2	1	2	2	45	93	138
4:30 PM	45	20	5	7	5	2	3	5	3	2	1	1	1	3	38	89	127
4:45 PM	27	12	8	5	11	4	1	3	6	1	2	1	1	3	46	105	151
5:00 PM	28	17	7	9	7	3	4	4	0	3	0	0	1	5	43	89	132
5:15 PM	33	16	11	9	2	3	2	3	5	1	1	3	1	2	40	91	131
5:30 PM	34	20	8	10	4	2	3	3	2	1	1	4	0	4	41	96	137
5:45 PM	32	12	15	13	4	2	3	3	1	4	2	0	2	1	47	76	123



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Study Name 175481 G Gap
Start Date 02/28/2017
Start Time 7:00 AM

Through Traffic on Minor

	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.00+	Critical Gaps (6.5 sec)	Follow-up Gaps (4.0 sec)	Total Gaps
7:00 AM	77	22	13	5	2	4	1	1	2	0	1	1	0	0	24	22	46
7:15 AM	70	20	14	12	3	2	0	2	0	1	1	0	1	1	31	25	56
7:30 AM	64	16	8	10	6	1	6	0	0	1	1	0	1	0	32	30	62
7:45 AM	69	20	11	8	0	1	6	0	0	1	0	1	0	1	25	26	51
8:00 AM	70	17	12	7	4	6	1	2	1	0	1	0	0	0	30	20	50
8:15 AM	72	25	11	11	5	1	4	2	0	1	0	0	0	0	31	19	50
8:30 AM	56	25	12	9	6	2	5	3	0	1	0	0	0	0	36	25	61
8:45 AM	54	23	22	5	9	2	0	1	2	2	0	0	0	2	38	32	70
4:00 PM	75	26	14	5	7	2	1	2	1	2	0	0	0	0	31	20	51
4:15 PM	88	16	8	12	6	3	0	3	0	1	0	0	0	0	30	18	48
4:30 PM	82	22	13	3	7	1	3	1	1	0	0	0	0	0	27	16	43
4:45 PM	78	32	13	8	4	2	0	2	1	0	1	0	0	0	31	16	47
5:00 PM	59	35	13	5	6	2	3	0	0	0	0	0	0	0	25	11	36
5:15 PM	81	15	9	8	4	2	0	1	1	0	0	1	0	1	23	18	41
5:30 PM	85	29	9	7	3	2	2	0	2	0	0	0	0	1	23	20	43
5:45 PM	52	23	17	11	4	3	1	1	1	0	0	0	0	0	31	11	42



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Study Name 175481 G Gap
Start Date 02/28/2017
Start Time 7:00 AM

Left from Minor

	2.0 - 4.0	4.0 - 6.0	6.0 - 8.0	8.0 - 10.0	10.0 - 12.0	12.0 - 14.0	14.0 - 16.0	16.0 - 18.0	18.0 - 20.0	20.0 - 22.0	22.0 - 24.0	24.0 - 26.0	26.0 - 28.0	28.00+	Critical Gaps (7.1 sec)	Follow-up Gaps (3.5 sec)	Total Gaps
7:00 AM	77	22	13	5	2	4	1	1	2	0	1	1	0	0	21	24	45
7:15 AM	70	20	14	12	3	2	0	2	0	1	1	0	1	1	29	26	55
7:30 AM	64	16	8	10	6	1	6	0	0	1	1	0	1	0	30	31	61
7:45 AM	69	20	11	8	0	1	6	0	0	1	0	1	0	1	20	29	49
8:00 AM	70	17	12	7	4	6	1	2	1	0	1	0	0	0	27	22	49
8:15 AM	72	25	11	11	5	1	4	2	0	1	0	0	0	0	27	20	47
8:30 AM	56	25	12	9	6	2	5	3	0	1	0	0	0	0	30	30	60
8:45 AM	54	23	22	5	9	2	0	1	2	2	0	0	0	2	32	34	66
4:00 PM	75	26	14	5	7	2	1	2	1	2	0	0	0	0	26	21	47
4:15 PM	88	16	8	12	6	3	0	3	0	1	0	0	0	0	27	19	46
4:30 PM	82	22	13	3	7	1	3	1	1	0	0	0	0	0	21	16	37
4:45 PM	78	32	13	8	4	2	0	2	1	0	1	0	0	0	25	16	41
5:00 PM	59	35	13	5	6	2	3	0	0	0	0	0	0	0	20	11	31
5:15 PM	81	15	9	8	4	2	0	1	1	0	0	1	0	1	20	19	39
5:30 PM	85	29	9	7	3	2	2	0	2	0	0	0	0	1	22	21	43
5:45 PM	52	23	17	11	4	3	1	1	1	0	0	0	0	0	26	13	39

Crash Data

Crash Date	Crash Hour	Crash Severity	Manner of Collision	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Distance And Direction From Intersection	Near Intersection Roadway
9/28/13	01:00PM to 01:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		EAST MAIN STREET / ZAIN CIRCLE		
5/18/11	01:00PM to 01:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Cloudy		E MAIN ST / BEAVER ST		
6/29/11	01:00PM to 01:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear	451	E MAIN ST		
4/15/12	01:00PM to 01:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear		E MAIN ST / BEAVER ST		
10/1/12	01:00PM to 01:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear	448	E MAIN ST		
1/11/12	02:00PM to 02:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear	396	E MAIN ST		
3/17/12	02:00PM to 02:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear	449	E MAIN ST Rte 16 W		
10/31/10	03:00AM to 03:59AM	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear		BEAVER ST / E MAIN ST		
4/20/12	03:00PM to 03:59PM	Non-fatal injury	Angle	Dry	Daylight	Clear	380	E MAIN ST		
12/23/11	03:00PM to 03:59PM	Non-fatal injury	Rear-end	Dry	Daylight	Clear		BEAVER ST	100 feet S of	EAST MAIN STREET Rte 16
2/28/14	03:00PM to 03:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear	396	E MAIN ST		
6/30/11	03:00PM to 03:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear		E MAIN ST / BEAVER ST / FORTUNE BLVD		
2/17/12	03:00PM to 03:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear		E MAIN ST Rte 16 E / BEAVER ST		
5/24/14	03:00PM to 03:59PM	Property damage only (none injured)	Rear-to-rear	Dry	Daylight	Clear	396	E MAIN ST		
3/21/10	04:00AM to 04:59AM	Non-fatal injury	Single vehicle crash	Dry	Dark - roadway not lighted	Clear	396	EAST MAIN STREET		
7/13/12	04:00AM to 04:59AM	Property damage only (none injured)	Single vehicle crash	Dry	Dark - lighted roadway	Clear	452	E MAIN ST		
9/4/14	04:00PM to 04:59PM	Non-fatal injury	Rear-end	Dry	Daylight	Clear	482	E MAIN ST		
2/26/10	04:00PM to 04:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear	481	E MAIN ST		
5/3/12	04:00PM to 04:59PM	Property damage only (none injured)	Rear-end	Dry	Dusk	Clear	396	E MAIN ST		
1/13/14	04:00PM to 04:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear	396	E MAIN ST		
8/1/11	05:00PM to 05:59PM	Non-fatal injury	Angle	Dry	Daylight	Clear		E MAIN ST / BEAVER ST		
6/6/13	05:00PM to 05:59PM	Non-fatal injury	Rear-end	Dry	Daylight	Clear		E MAIN ST / ZAIN CIR		
12/16/11	05:00PM to 05:59PM	Property damage only (none injured)	Angle	Dry	Dark - lighted roadway	Clear	396	EAST MAIN STREET Rte 16	100 feet E of	BEAVER STREET
6/18/14	05:00PM to 05:59PM	Property damage only (none injured)	Sideswipe, same direction	Dry	Daylight	Clear	396	E MAIN ST		
11/9/12	05:00PM to 05:59PM	Property damage only (none injured)	Single vehicle crash	Dry	Dark - lighted roadway	Clear	445	EAST MAIN STREET		
7/5/14	06:00PM to 06:59PM	Non-fatal injury	Single vehicle crash	Dry	Daylight	Clear	396	EAST MAIN STREET		
12/28/12	06:00PM to 06:59PM	Property damage only (none injured)	Angle	Dry	Dark - lighted roadway	Cloudy		MAIN ST / BEAVER ST / FORTUNE BLVD		
7/21/14	06:00PM to 06:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		FORTUNE BOULEVARD / BEAVER STREET		
1/21/13	07:00AM to 07:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		E MAIN ST Rte 16 W / BEAVER ST		

Crash Date	Crash Hour	Crash Severity	Manner of Collision	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Distance And Direction From Intersection	Near Intersection Roadway
8/8/12	07:00PM to 07:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear	396	E MAIN ST		
10/15/14	07:00PM to 07:59PM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear	482	MAIN ST		
1/17/11	08:00AM to 08:59AM	Non-fatal injury	Head-on	Dry	Daylight	Clear		FORTUNE BLVD / E MAIN ST		
10/24/12	08:00AM to 08:59AM	Non-fatal injury	Head-on	Dry	Daylight	Cloudy		BEAVER ST / E MAIN ST		
2/11/10	08:00AM to 08:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		E MAIN ST Rte 16 / BEAVER ST		
7/11/12	08:00PM to 08:59PM	Non-fatal injury	Rear-end	Dry	Daylight	Clear	396	E MAIN ST		
1/22/13	09:00AM to 09:59AM	Non-fatal injury	Angle	Dry	Daylight	Clear		BEAVER ST / E MAIN ST Rte 16 E		
3/26/10	09:00AM to 09:59AM	Not Reported	Single vehicle crash	Dry	Daylight	Cloudy	452	E MAIN ST		
4/2/10	09:00AM to 09:59AM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear		E MAIN ST Rte 16 E / BEAVER ST		
12/20/11	09:00AM to 09:59AM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear		BEAVER ST / E MAIN ST		
12/21/14	09:00AM to 09:59AM	Property damage only (none injured)	Rear-end	Dry	Daylight	Cloudy		E MAIN ST / FORTUNE BLVD		
12/29/11	09:00AM to 09:59AM	Property damage only (none injured)	Sideswipe, same direction	Dry	Daylight	Clear		EAST MAIN STREET		FORTUNE BOULEVARD
3/1/14	09:00PM to 09:59PM	Non-fatal injury	Angle	Dry	Dark - lighted roadway	Clear		EAST MAIN STREET / FORTUNE BOULEVARD		
7/19/12	09:00PM to 09:59PM	Property damage only (none injured)	Angle	Dry	Dark - lighted roadway	Clear		E MAIN ST Rte 16 E / BEAVER ST / FORTUNE BLVD		
8/5/12	09:00PM to 09:59PM	Property damage only (none injured)	Sideswipe, opposite direction	Dry	Dark - lighted roadway	Cloudy/Clear		E MAIN ST Rte 16 E / ZAIN CIR		
3/20/14	09:00PM to 09:59PM	Property damage only (none injured)	Single vehicle crash	Dry	Dark - roadway not lighted	Clear	451	E MAIN ST		
5/14/10	10:00AM to 10:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Cloudy		FORTUNE BLVD / E MAIN ST		
11/18/13	10:00AM to 10:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		EAST MAIN STREET Rte 16 E / BEAVER STREET		
4/18/12	10:00AM to 10:59AM	Property damage only (none injured)	Single vehicle crash	Dry	Daylight	Clear	451	E MAIN ST		
12/26/11	10:00PM to 10:59PM	Property damage only (none injured)	Head-on	Dry	Dark - lighted roadway	Clear		E MAIN ST / FORTUNE BLVD		
6/19/10	11:00AM to 11:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		E MAIN ST / FORTUNE BLVD		
9/21/11	11:00AM to 11:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		E MAIN ST / BEAVER ST		
12/16/11	11:00AM to 11:59AM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		E MAIN ST / BEAVER ST		
12/5/10	11:00AM to 11:59AM	Property damage only (none injured)	Rear-end	Dry	Daylight	Cloudy	396	E MAIN ST		
6/3/12	11:00AM to 11:59AM	Property damage only (none injured)	Rear-end	Dry	Daylight	Clear		E MAIN ST Rte 16 E / FORTUNE BLVD		
4/22/11	11:00AM to 11:59AM	Property damage only (none injured)	Sideswipe, opposite direction	Dry	Daylight	Clear	465	E MAIN ST Rte 16 E		
11/2/11	11:00AM to 11:59AM	Property damage only (none injured)	Sideswipe, same direction	Dry	Daylight	Clear		FORTUNE BLVD / E MAIN ST Rte 16		
5/17/12	12:00AM to 12:59AM	Property damage only (none injured)	Single vehicle crash	Dry	Dark - roadway not lighted	Cloudy	392	E MAIN ST		
6/24/14	12:00AM to 12:59AM	Property damage only (none injured)	Single vehicle crash	Dry	Dark - lighted roadway	Clear	418	E MAIN ST		

Crash Date	Crash Hour	Crash Severity	Manner of Collision	Road Surface	Ambient Light	Weather Condition	Street Number	Roadway	Distance And Direction From Intersection	Near Intersection Roadway
8/24/11	12:00PM to 12:59PM	Non-fatal injury	Rear-end	Dry	Daylight	Clear	396	E MAIN ST		
6/11/14	12:00PM to 12:59PM	Non-fatal injury	Sideswipe, opposite direction	Dry	Daylight	Cloudy	446	E MAIN ST		
7/5/14	12:00PM to 12:59PM	Property damage only (none injured)	Angle	Dry	Daylight	Clear		EAST MAIN STREET / FORTUNE BOULEVARD		
2/13/11	12:00PM to 12:59PM	Property damage only (none injured)	Sideswipe, same direction	Dry	Daylight	Clear		EAST MAIN STREET Rte 16 E		BEAVER STREET
5/8/11	12:00PM to 12:59PM	Property damage only (none injured)	Sideswipe, same direction	Dry	Daylight	Clear	396	E MAIN ST		
10/11/13	12:00PM to 12:59PM	Property damage only (none injured)	Sideswipe, same direction	Dry	Daylight	Cloudy		E MAIN ST Rte 16 E / BEAVER ST		
11/26/14	02:00PM to 02:59PM	Property damage only (none injured)	Angle	Slush	Daylight	Cloudy/Snow		FORTUNE BLVD / E MAIN ST		
1/29/13	02:00AM to 02:59AM	Property damage only (none injured)	Angle	Snow	Dark - roadway not lighted	Sleet, hail (freezing rain or drizzle)		EAST MAIN STREET Rte 16 E		
2/10/13	07:00AM to 07:59AM	Property damage only (none injured)	Angle	Snow	Daylight	Clear	464	E MAIN ST Rte 16 W		
4/4/11	03:00PM to 03:59PM	Property damage only (none injured)	Rear-end	Wet	Daylight	Cloudy/Rain	396	E MAIN ST Rte 16 W		
4/15/14	03:00PM to 03:59PM	Property damage only (none injured)	Single vehicle crash	Wet	Daylight	Rain/Severe crosswinds	429	E MAIN ST Rte 16 E		
12/3/14	04:00PM to 04:59PM	Non-fatal injury	Rear-end	Wet	Dark - roadway not lighted	Cloudy/Rain	482	E MAIN ST		
11/14/11	04:00PM to 04:59PM	Property damage only (none injured)	Angle	Wet	Dark - lighted roadway	Clear		E MAIN ST / FORTUNE BLVD		
2/25/13	04:00PM to 04:59PM	Property damage only (none injured)	Sideswipe, opposite direction	Wet	Daylight	Clear		E MAIN ST / BEAVER ST		
6/6/10	05:00PM to 05:59PM	Non-fatal injury	Single vehicle crash	Wet	Daylight	Cloudy	421	EAST MAIN STREET		
5/22/12	05:00PM to 05:59PM	Property damage only (none injured)	Angle	Wet	Daylight	Rain	396	E MAIN ST		
3/12/14	05:00PM to 05:59PM	Property damage only (none injured)	Rear-end	Wet	Daylight	Rain		EAST MAIN STREET / FORTUNE BOULEVARD		
5/11/11	06:00AM to 06:59AM	Property damage only (none injured)	Rear-end	Wet	Daylight	Rain		FORTUNE BOULEVARD / EAST		
1/31/13	06:00AM to 06:59AM	Property damage only (none injured)	Sideswipe, opposite direction	Wet	Dawn	Rain		E MAIN ST / BEAVER ST		
12/17/12	06:00PM to 06:59PM	Property damage only (none injured)	Rear-end	Wet	Dark - lighted roadway	Rain	396	E MAIN ST		
12/23/11	06:00PM to 06:59PM	Property damage only (none injured)	Unknown	Wet	Dark - lighted roadway	Rain	396	E MAIN ST		
6/23/12	07:00AM to 07:59AM	Non-fatal injury	Angle	Wet	Dawn	Rain		E MAIN ST / BEAVER ST		
5/2/12	07:00AM to 07:59AM	Property damage only (none injured)	Single vehicle crash	Wet	Daylight	Cloudy		E MAIN ST	300 feet E of	FORTUNE BOULEVARD
9/21/14	08:00AM to 08:59AM	Non-fatal injury	Angle	Wet	Daylight	Clear	396	E MAIN ST		
6/13/13	09:00AM to 09:59AM	Property damage only (none injured)	Sideswipe, same direction	Wet	Daylight	Rain		EAST MAIN STREET Rte 16 W / FORTUNE BOULEVARD		

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Milford, MA COUNT DATE : 2017

DISTRICT : _____ UNSIGNALIZED : SIGNALIZED : 0.77

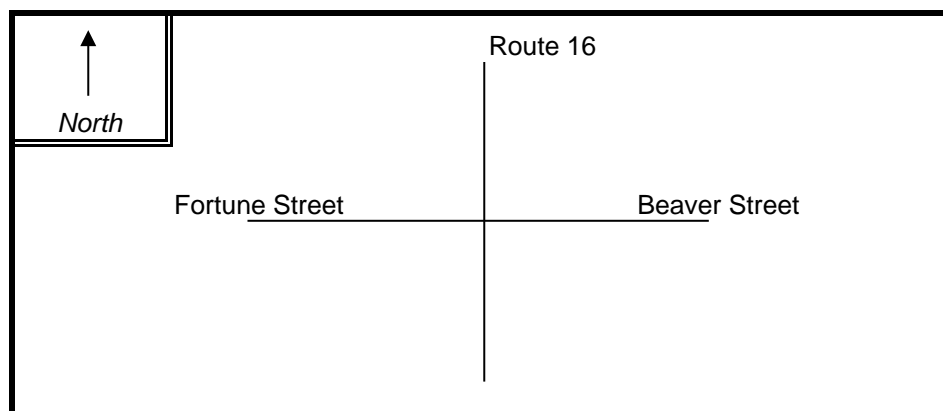
~ INTERSECTION DATA ~

MAJOR STREET : E. Main Street (Route 16)

MINOR STREET(S) : Fortune Blvd.

Beaver Blvd.

**INTERSECTION
DIAGRAM**
(Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB	
PEAK HOURLY VOLUMES (AM/PM) :	560	510	440	760	2,270

" K " FACTOR :

0.090

INTERSECTION ADT (V) = TOTAL DAILY APPROACH VOLUME :

25,222

TOTAL # OF CRASHES :

63

OF YEARS :

5

AVERAGE # OF CRASHES PER YEAR (A) :

12.60

CRASH RATE CALCULATION :

1.37

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

Comments : MassDOT Accident Data

Project Title & Date: E. Main Street (Route 16) 3/30/2017



SEGMENT CRASH RATE WORKSHEET

CITY/TOWN : Milford COUNT DATE : Feb-17

DISTRICT : 3

~ SEGMENT DATA ~

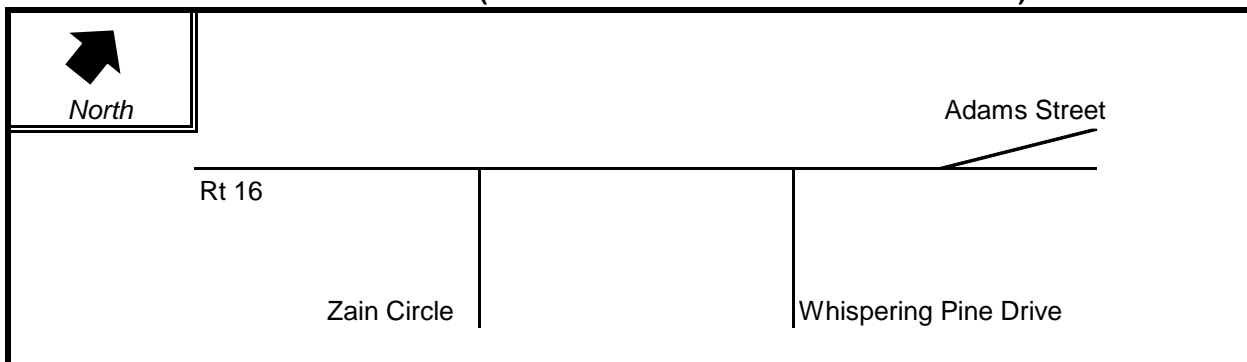
ROADWAY NAME: East Main Street (Route 16)

START POINT: I-495

END POINT: Adams Street

FUNCTIONAL CLASSIFICATION OF ROADWAY: Urban Principal Arterial

ROADWAY DIAGRAM (LABEL ROADWAY AND CROSS STREETS)



AVERAGE DAILY TRAFFIC

SEGMENT LENGTH IN MILES (L): **0.78**

AVERAGE DAILY TRAFFIC VOLUME (V): **13,776**

TOTAL # OF CRASHES: **22** # OF YEARS : **5** AVERAGE # OF CRASHES PER YEAR (A) : **4.40**

CRASH RATE
CALCULATION :

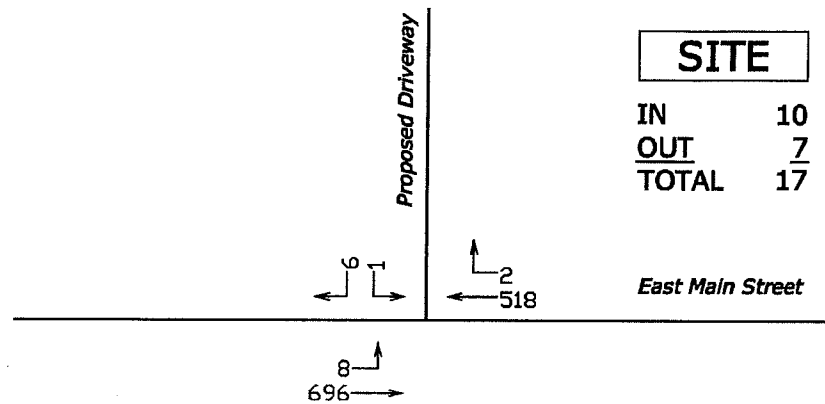
1.12

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

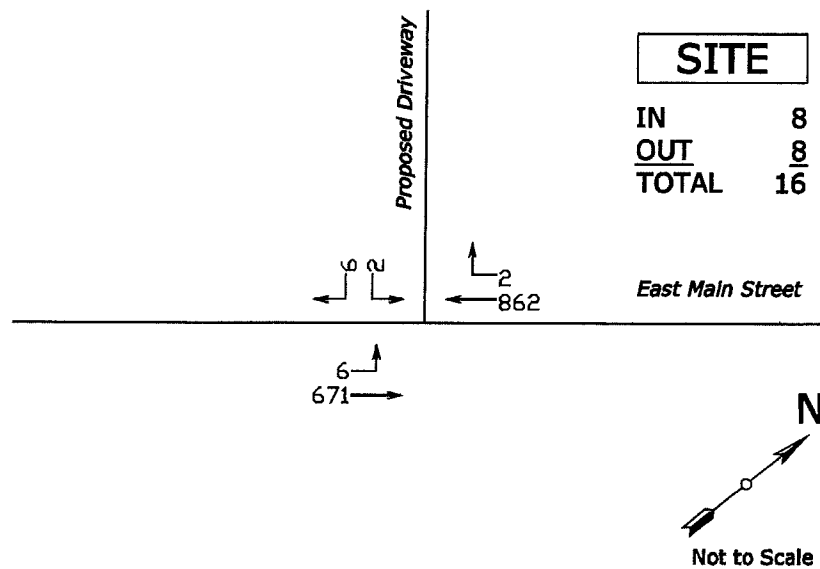
Comments : _____

Project Title & Date: _____

Background Traffic

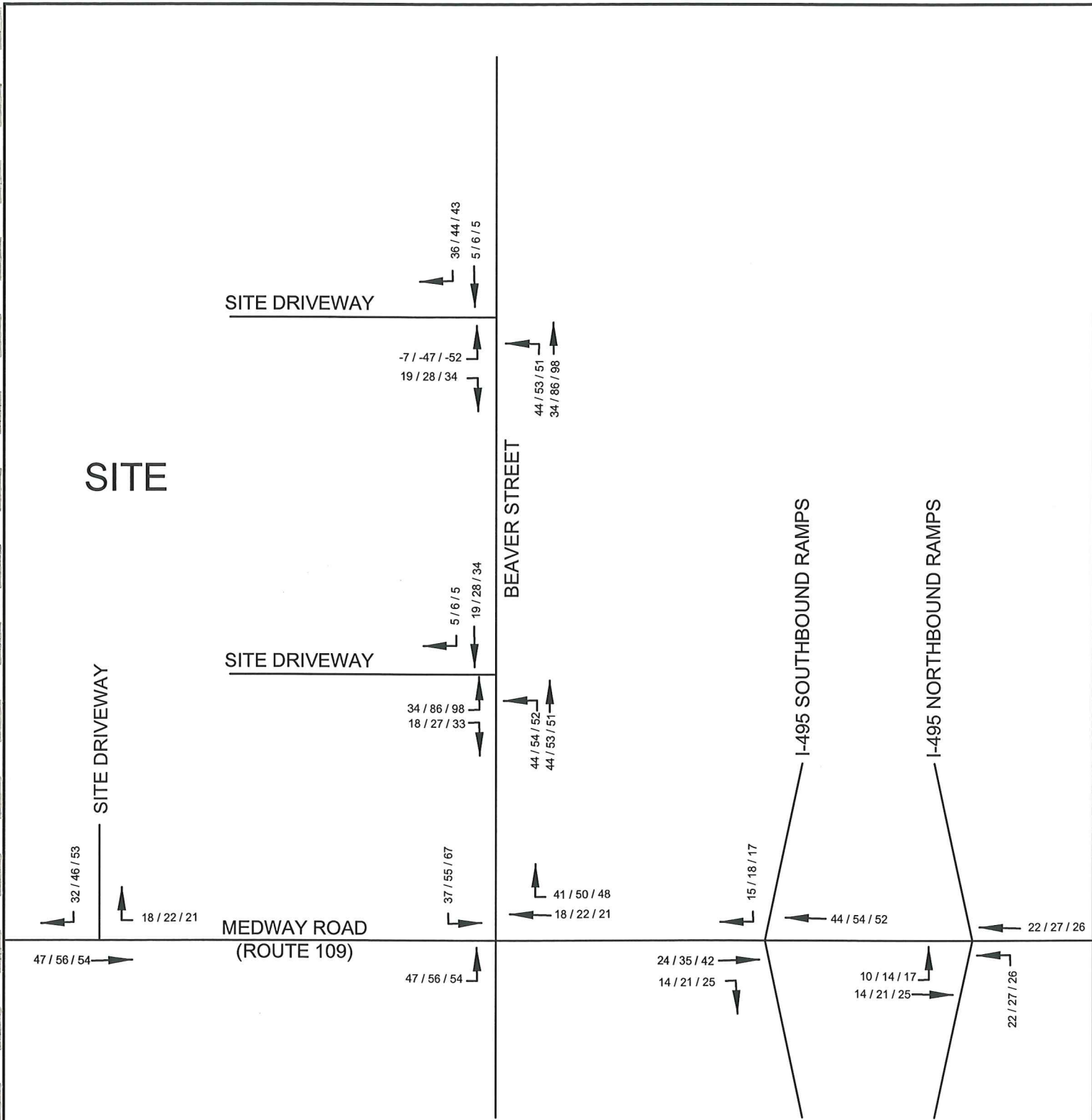





Weekday AM Street-Peak Hour



Weekday PM Composite-Peak Hour

Figure 2. 2023 build traffic volumes.



<p>PREPARED FOR:</p>  <p>RD MANAGEMENT LLC</p>	<p>120-128 Medway Road (Route 109) Proposed Shopping Center Expansion 2022 Build Net Project Generated Trips Weekday AM / Weekday PM / Saturday Midday</p>	 <p>NORTH</p>	<p>DATE: 12-29-2016</p> <p>SCALE: N.T.S</p> <p>PREPARED BY:</p>  <p>300 TRADE CENTER, SUITE 5500 WOBRUR, MASSACHUSETTS 01801 PHONE: 781.933.4800</p>	<p>Figure 3.4</p>
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Project:

Project #

Location:

Sheet of

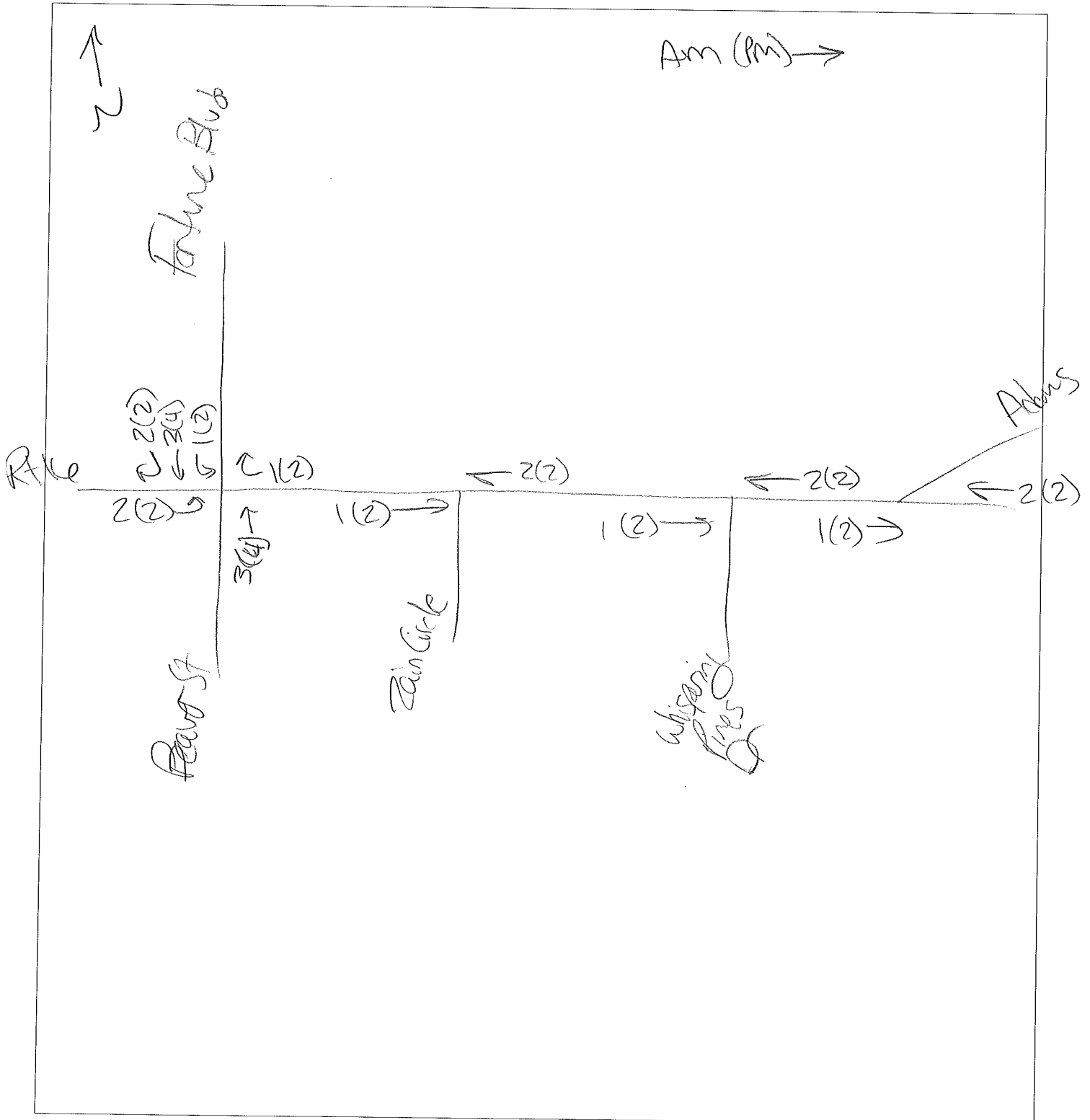
Calculated by:

Date:

Checked by:

Date:

Title Gas Station Background Trip Dist



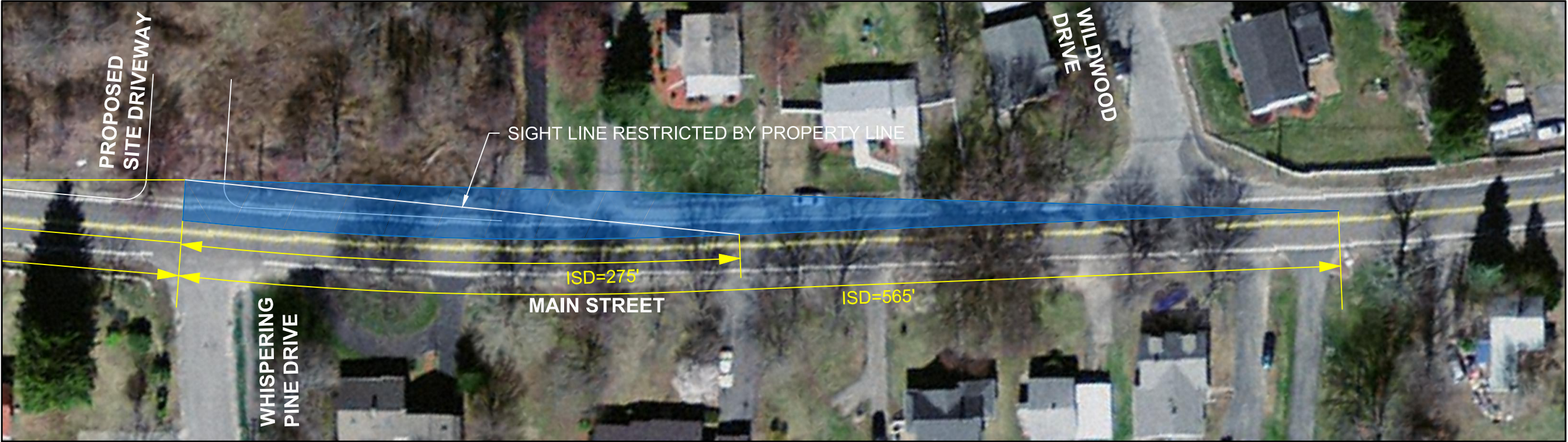
Trip Generation

Project Information


Project Name: Milford 40b
No: 13810
Date: 2/7/2017
City: Milford
State/Province: MA
Zip/Postal Code:
Country:
Client Name:
Analyst's Name: GJR
Edition: ITE-TGM 9th Edition

Land Use	Size	Weekday, Peak Hour of Adjacent Street Traffic, One		Weekday, Peak Hour of Adjacent Street Traffic, One	
		Hour Between 7 and 9 a.m.		Hour Between 4 and 6 p.m.	
		Entry	Exit	Entry	Exit
220 - Apartment	300 Dwelling Units	971	971	30	121
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		971	971	30	121
Total		971	971	30	121
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		0	0	0	0
Total Non-pass-by		971	971	30	121


Sight Distance Graphic



Legend

 SIGHT LINE TRIANGLE










- Notes**
1. THIS GRAPHIC DISPLAYS SIGHT LINES AVAILABLE UNDER EXISTING CONDITIONS.
 2. VEGETATION, FENCES, AND SIMILAR OBSTRUCTIONS WITHIN THE SIGHT LINE SHOULD BE LIMITED TO 3.5 FEET IN HEIGHT ABOVE THE ADJACENT PAVEMENT ELEVATION.




 **Intersection Sight Triangles**

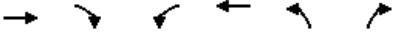



Proposed Residential Development
Milford, Massachusetts

Figure A-1

Capacity Analysis

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	665	5	1	420	15	5
Future Volume (vph)	665	5	1	420	15	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1825	0	0	1776	1667	0
Flt Permitted					0.964	
Satd. Flow (perm)	1825	0	0	1776	1667	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	572			527	655	
Travel Time (s)	13.0			12.0	14.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	7%	7%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	770	0	0	484	23	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 45.3%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	665	5	1	420	15	5
Future Vol, veh/h	665	5	1	420	15	5
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	87	87	87	87
Heavy Vehicles, %	4	4	7	7	6	6
Mvmt Flow	764	6	1	483	17	6
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	770	0	1252	767
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	485	-
Critical Hdwy	-	-	4.17	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.354
Pot Cap-1 Maneuver	-	-	823	-	187	396
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	823	-	187	396
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	610	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		23.7	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	215	-	-	823	-	
HCM Lane V/C Ratio	0.107	-	-	0.001	-	
HCM Control Delay (s)	23.7	-	-	9.4	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0	-	

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	660	5	2	435	25	10
Future Volume (vph)	660	5	2	435	25	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1861	0	0	1863	1764	0
Flt Permitted					0.966	
Satd. Flow (perm)	1861	0	0	1863	1764	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	431			549	749	
Travel Time (s)	9.8			12.5	17.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	707	0	0	465	38	0
Sign Control	Free			Free	Stop	

Intersection Summary









Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 45.0% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	660	5	2	435	25	10
Future Vol, veh/h	660	5	2	435	25	10
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	94	94	94	94
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	702	5	2	463	27	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	707	0	1172	705
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	467	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	891	-	215	440
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	891	-	214	440
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	633	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		21.8	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	251	-	-	891	-	
HCM Lane V/C Ratio	0.148	-	-	0.002	-	
HCM Control Delay (s)	21.8	-	-	9.1	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	310	40	140	200	120	135	290	165	190	140	30
Future Volume (vph)	30	310	40	140	200	120	135	290	165	190	140	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		180	0		175	260		0
Storage Lanes	0		0	0		2	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3435	0	0	3246	1482	0	3197	0	1656	1696	0
Flt Permitted		0.879			0.656			0.819		0.281		
Satd. Flow (perm)	0	3031	0	0	2173	1482	0	2647	0	490	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				140		59			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		856			1069			571			487	
Travel Time (s)		19.5			24.3			13.0			11.1	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	7%	7%	7%	9%	9%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	442	0	0	396	140	0	686	0	221	198	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	5.0	6.0	6.0		5.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0	18.0	13.0	13.0		18.0	13.0	
Total Split (s)	44.0	44.0		44.0	44.0	18.0	32.0	32.0		18.0	50.0	
Total Split (%)	46.8%	46.8%		46.8%	46.8%	19.1%	34.0%	34.0%		19.1%	53.2%	
Yellow Time (s)	5.0	5.0		5.0	5.0	3.0	5.0	5.0		3.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.0			7.0	5.0		7.0		5.0	7.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?						Yes	Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effect Green (s)		17.9			17.9	34.1		29.0		45.2	43.2	
Actuated g/C Ratio		0.24			0.24	0.45		0.39		0.60	0.58	
v/c Ratio		0.60			0.87dl	0.19		0.65		0.51	0.20	
Control Delay		27.9			37.0	2.5		22.6		12.1	8.6	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		27.9			37.0	2.5		22.6		12.1	8.6	
LOS		C			D	A		C		B	A	
Approach Delay		27.9			28.0			22.6			10.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		92			90	0		121		42	37	
Queue Length 95th (ft)		128			130	21		209		88	79	
Internal Link Dist (ft)		776			989			491			407	
Turn Bay Length (ft)						180				260		
Base Capacity (vph)		1507			1074	818		1057		497	981	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.29			0.37	0.17		0.65		0.44	0.20	

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 75.1

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 22.7

Intersection LOS: C

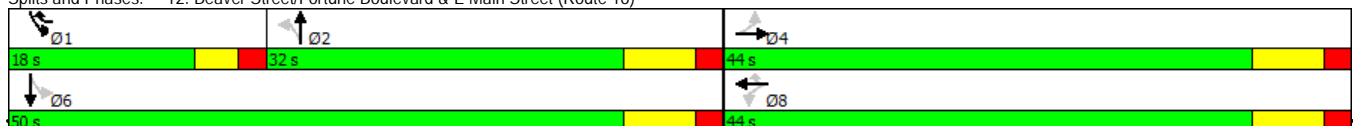
Intersection Capacity Utilization 71.4%

ICU Level of Service C

Analysis Period (min) 15

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Beaver Street/Fortune Boulevard & E Main Street (Route 16)

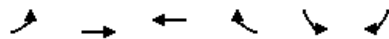


\\whb\proj\Wat-TS\13810.00 East Main St Milford\tech\Synchro\13810AMEX.syn

GJR

Lanes, Volumes, Timings

03/21/2017



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	640	390	0	0	35
Future Volume (vph)	25	640	390	0	0	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1823	1759	0	1550	0
Flt Permitted		0.998				
Satd. Flow (perm)	0	1823	1759	0	1550	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		234	974		505	
Travel Time (s)		5.3	22.1		11.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	4%	8%	8%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	730	429	0	38	0
Sign Control		Free	Free		Stop	

Intersection Summary




Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.9%










ICU Level of Service B

Analysis Period (min) 15










Intersection							
Int Delay, s/veh	0.5						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Vol, veh/h	25	640	390	0	0	35	
Future Vol, veh/h	25	640	390	0	0	35	
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	91	91	
Heavy Vehicles, %	4	4	8	8	6	6	
Mvmt Flow	27	703	429	0	0	38	
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	429	0	-	0	1187	429	
Stage 1	-	-	-	-	429	-	
Stage 2	-	-	-	-	758	-	
Critical Hdwy	4.14	-	-	-	6.46	6.26	
Critical Hdwy Stg 1	-	-	-	-	5.46	-	
Critical Hdwy Stg 2	-	-	-	-	5.46	-	
Follow-up Hdwy	2.236	-	-	-	3.554	3.354	
Pot Cap-1 Maneuver	1120	-	-	-	204	618	
Stage 1	-	-	-	-	648	-	
Stage 2	-	-	-	-	456	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1120	-	-	-	196	618	
Mov Cap-2 Maneuver	-	-	-	-	196	-	
Stage 1	-	-	-	-	648	-	
Stage 2	-	-	-	-	438	-	
Approach	EB		WB		SB		
HCM Control Delay, s	0.3		0		11.2		
HCM LOS					B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	1120	-	-	-	618		
HCM Lane V/C Ratio	0.025	-	-	-	0.062		
HCM Control Delay (s)	8.3	0	-	-	11.2		
HCM Lane LOS	A	A	-	-	B		
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2		

13810.00 :: East Main Street 40B
 9: Whispering Pine Drive & E Main Street (Route 16)

2017 Existing Conditions
 Timing Plan: Weekday Evening

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	525	15	1	720	5	1
Future Volume (vph)	525	15	1	720	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1820	0	0	1776	1686	0
Flt Permitted					0.959	
Satd. Flow (perm)	1820	0	0	1776	1686	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	572			527	655	
Travel Time (s)	13.0			12.0	14.9	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	7%	7%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	620	0	0	829	7	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 48.7%	ICU Level of Service A					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	525	15	1	720	5	1
Future Vol, veh/h	525	15	1	720	5	1
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	87	87	87	87
Heavy Vehicles, %	4	4	7	7	6	6
Mvmt Flow	603	17	1	828	6	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	621	0	1442	612
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	830	-
Critical Hdwy	-	-	4.17	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.354
Pot Cap-1 Maneuver	-	-	936	-	143	486
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	936	-	143	486
Mov Cap-2 Maneuver	-	-	-	-	143	-
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	420	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		28.2	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	162	-	-	936	-	
HCM Lane V/C Ratio	0.043	-	-	0.001	-	
HCM Control Delay (s)	28.2	-	-	8.9	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	535	20	10	715	10	5
Future Volume (vph)	535	20	10	715	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1853	0	0	1861	1760	0
Flt Permitted				0.999	0.967	
Satd. Flow (perm)	1853	0	0	1861	1760	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	431			549	749	
Travel Time (s)	9.8			12.5	17.0	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	590	0	0	772	16	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.6%			ICU Level of Service B		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	
Traffic Vol, veh/h	535	20	10	715	10	5
Future Vol, veh/h	535	20	10	715	10	5
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	94	94	94	94
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	569	21	11	761	11	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	590	0	1362	580
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	782	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	985	-	165	518
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	985	-	162	518
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	445	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		23.5	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	210	-	-	985	-	
HCM Lane V/C Ratio	0.076	-	-	0.011	-	
HCM Control Delay (s)	23.5	-	-	8.7	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	240	145	190	340	230	135	200	175	150	340	70
Future Volume (vph)	55	240	145	190	340	230	135	200	175	150	340	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		180	0		175	260		0
Storage Lanes	0		0	0		2	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3310	0	0	3252	1482	0	3160	0	1656	1698	0
Flt Permitted		0.734			0.637			0.720		0.303		
Satd. Flow (perm)	0	2444	0	0	2110	1482	0	2305	0	528	1698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		107				267		97			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		856			1069			571			487	
Travel Time (s)		19.5			24.3			13.0			11.1	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	7%	7%	7%	9%	9%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	512	0	0	616	267	0	593	0	174	476	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	5.0	6.0	6.0		5.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0	18.0	13.0	13.0		18.0	13.0	
Total Split (s)	44.0	44.0		44.0	44.0	18.0	32.0	32.0		18.0	50.0	
Total Split (%)	46.8%	46.8%		46.8%	46.8%	19.1%	34.0%	34.0%		19.1%	53.2%	
Yellow Time (s)	5.0	5.0		5.0	5.0	3.0	5.0	5.0		3.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.0			7.0	5.0		7.0		5.0	7.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?						Yes	Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effect Green (s)		28.7			28.7	45.1		28.9		45.3	43.3	
Actuated g/C Ratio		0.33			0.33	0.52		0.34		0.53	0.50	
v/c Ratio		0.58			0.92dl	0.30		0.71		0.44	0.55	
Control Delay		20.7			41.2	2.0		28.5		16.0	18.7	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		20.7			41.2	2.0		28.5		16.0	18.7	
LOS		C			D	A		C		B	B	
Approach Delay		20.7			29.3			28.5			18.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		92			162	0		124		49	168	
Queue Length 95th (ft)		131			215	24		#226		94	283	
Internal Link Dist (ft)		776			989			491			407	
Turn Bay Length (ft)						180				260		
Base Capacity (vph)		1117			912	956		838		449	860	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.46			0.68	0.28		0.71		0.39	0.55	

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 86.1

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 24.7

Intersection LOS: C

Intersection Capacity Utilization 88.3%

ICU Level of Service E

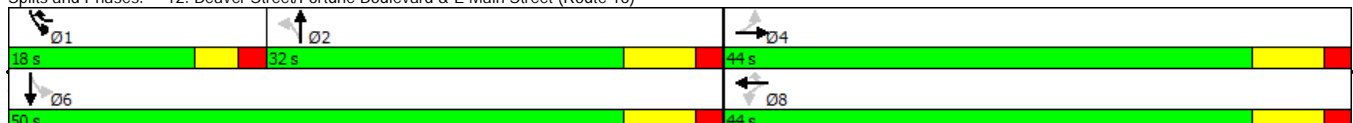
Analysis Period (min) 15

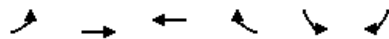
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Beaver Street/Fortune Boulevard & E Main Street (Route 16)





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	55	460	685	0	0	40
Future Volume (vph)	55	460	685	0	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1818	1759	0	1550	0
Flt Permitted		0.995				
Satd. Flow (perm)	0	1818	1759	0	1550	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		234	974		505	
Travel Time (s)		5.3	22.1		11.5	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	4%	8%	8%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	565	753	0	44	0
Sign Control		Free	Free		Stop	

Intersection Summary




Area Type: Other










Control Type: Unsignalized




Intersection Capacity Utilization 76.6%










ICU Level of Service D




Analysis Period (min) 15









Intersection							
Int Delay, s/veh	0.9						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Vol, veh/h	55	460	685	0	0	40	
Future Vol, veh/h	55	460	685	0	0	40	
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	91	91	
Heavy Vehicles, %	4	4	8	8	6	6	
Mvmt Flow	60	505	753	0	0	44	
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	753	0	-	0	1379	753	
Stage 1	-	-	-	-	753	-	
Stage 2	-	-	-	-	626	-	
Critical Hdwy	4.14	-	-	-	6.46	6.26	
Critical Hdwy Stg 1	-	-	-	-	5.46	-	
Critical Hdwy Stg 2	-	-	-	-	5.46	-	
Follow-up Hdwy	2.236	-	-	-	3.554	3.354	
Pot Cap-1 Maneuver	848	-	-	-	156	403	
Stage 1	-	-	-	-	458	-	
Stage 2	-	-	-	-	525	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	848	-	-	-	141	403	
Mov Cap-2 Maneuver	-	-	-	-	141	-	
Stage 1	-	-	-	-	458	-	
Stage 2	-	-	-	-	474	-	
Approach	EB		WB		SB		
HCM Control Delay, s	1		0		15		
HCM LOS					C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	848	-	-	-	403		
HCM Lane V/C Ratio	0.071	-	-	-	0.109		
HCM Control Delay (s)	9.6	0	-	-	15		
HCM Lane LOS	A	A	-	-	C		
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4		

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	725	5	1	460	15	5
Future Volume (vph)	725	5	1	460	15	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1825	0	0	1776	1671	0
Flt Permitted					0.963	
Satd. Flow (perm)	1825	0	0	1776	1671	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	572			527	655	
Travel Time (s)	13.0			12.0	14.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	7%	7%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	793	0	0	501	21	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.5%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	725	5	1	460	15	5
Future Vol, veh/h	725	5	1	460	15	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	7	7	6	6
Mvmt Flow	788	5	1	500	16	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	793	0	1293	791
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.17	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.354
Pot Cap-1 Maneuver	-	-	806	-	176	383
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	600	-
Platoon blocked, %	-	-	-	-		
Mov Cap-1 Maneuver	-	-	806	-	176	383
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	599	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		24.9	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	203	-	-	806	-	
HCM Lane V/C Ratio	0.107	-	-	0.001	-	
HCM Control Delay (s)	24.9	-	-	9.5	0	
HCM Lane LOS	C	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0	-	

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	720	5	2	480	25	10
Future Volume (vph)	720	5	2	480	25	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1861	0	0	1863	1764	0
Flt Permitted					0.966	
Satd. Flow (perm)	1861	0	0	1863	1764	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	431			549	749	
Travel Time (s)	9.8			12.5	17.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	788	0	0	524	38	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	48.2%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	720	5	2	480	25	10
Future Vol, veh/h	720	5	2	480	25	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	783	5	2	522	27	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	788	0	1311	785
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	831	-	177	396
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	831	-	176	396
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	595	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		26	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	209	-	-	831	-	
HCM Lane V/C Ratio	0.182	-	-	0.003	-	
HCM Control Delay (s)	26	-	-	9.3	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.6	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	330	55	160	215	130	145	330	185	205	150	30
Future Volume (vph)	35	330	55	160	215	130	145	330	185	205	150	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		180	0		175	260		0
Storage Lanes	0		0	0		2	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3421	0	0	3242	1482	0	3197	0	1656	1700	0
Flt Permitted		0.873			0.644			0.823		0.261		
Satd. Flow (perm)	0	2999	0	0	2133	1482	0	2660	0	455	1700	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21				141		59			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		856			1069			571			487	
Travel Time (s)		19.5			24.3			13.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	7%	7%	7%	9%	9%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	457	0	0	408	141	0	718	0	223	196	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	5.0	6.0	6.0		5.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0	18.0	13.0	13.0		18.0	13.0	
Total Split (s)	44.0	44.0		44.0	44.0	18.0	32.0	32.0		18.0	50.0	
Total Split (%)	46.8%	46.8%		46.8%	46.8%	19.1%	34.0%	34.0%		19.1%	53.2%	
Yellow Time (s)	5.0	5.0		5.0	5.0	3.0	5.0	5.0		3.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.0			7.0	5.0		7.0		5.0	7.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?						Yes	Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effect Green (s)		18.6			18.6	35.1		28.7		45.2	43.1	
Actuated g/C Ratio		0.25			0.25	0.46		0.38		0.60	0.57	
v/c Ratio		0.61			0.93dl	0.19		0.69		0.53	0.20	
Control Delay		27.5			37.6	2.4		24.4		13.1	9.0	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		27.5			37.6	2.4		24.4		13.1	9.0	
LOS		C			D	A		C		B	A	
Approach Delay		27.5			28.5			24.4			11.2	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		95			94	0		133		44	38	
Queue Length 95th (ft)		140			143	24		#270		98	86	
Internal Link Dist (ft)		776			989			491			407	
Turn Bay Length (ft)						180				260		
Base Capacity (vph)		1479			1044	825		1043		477	973	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.31			0.39	0.17		0.69		0.47	0.20	

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 75.8

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 23.5

Intersection LOS: C

Intersection Capacity Utilization 76.4%

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.










dl Defacto Left Lane. Recode with 1 though lane as a left lane.




Splits and Phases: 12: Beaver Street/Fortune Boulevard & E Main Street (Route 16)










		
18 s	32 s	44 s
		
50 s		44 s




						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	695	430	0	0	40
Future Volume (vph)	25	695	430	0	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1823	1759	0	1550	0
Flt Permitted		0.998				
Satd. Flow (perm)	0	1823	1759	0	1550	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		234	974		505	
Travel Time (s)		5.3	22.1		11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	8%	8%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	782	467	0	43	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 66.8%				ICU Level of Service C		
Analysis Period (min) 15						

Intersection							
Int Delay, s/veh	0.6						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Vol, veh/h	25	695	430	0	0	40	
Future Vol, veh/h	25	695	430	0	0	40	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	4	4	8	8	6	6	
Mvmt Flow	27	755	467	0	0	43	
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	467	0	-	0	1277	467	
Stage 1	-	-	-	-	467	-	
Stage 2	-	-	-	-	810	-	
Critical Hdwy	4.14	-	-	-	6.46	6.26	
Critical Hdwy Stg 1	-	-	-	-	5.46	-	
Critical Hdwy Stg 2	-	-	-	-	5.46	-	
Follow-up Hdwy	2.236	-	-	-	3.554	3.354	
Pot Cap-1 Maneuver	1084	-	-	-	180	588	
Stage 1	-	-	-	-	623	-	
Stage 2	-	-	-	-	431	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1084	-	-	-	172	588	
Mov Cap-2 Maneuver	-	-	-	-	172	-	
Stage 1	-	-	-	-	623	-	
Stage 2	-	-	-	-	412	-	
Approach	EB		WB		SB		
HCM Control Delay, s	0.3		0		11.6		
HCM LOS					B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	1084	-	-	-	588		
HCM Lane V/C Ratio	0.025	-	-	-	0.074		
HCM Control Delay (s)	8.4	0	-	-	11.6		
HCM Lane LOS	A	A	-	-	B		
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2		

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	575	15	1	785	5	1
Future Volume (vph)	575	15	1	785	5	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1821	0	0	1776	1681	0
Flt Permitted					0.960	
Satd. Flow (perm)	1821	0	0	1776	1681	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	572			527	655	
Travel Time (s)	13.0			12.0	14.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	7%	7%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	641	0	0	854	6	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	52.1%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	575	15	1	785	5	1
Future Vol, veh/h	575	15	1	785	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	7	7	6	6
Mvmt Flow	625	16	1	853	5	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	641	0	1488	633
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	855	-
Critical Hdwy	-	-	4.17	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.263	-	3.554	3.354
Pot Cap-1 Maneuver	-	-	920	-	134	473
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	410	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	920	-	134	473
Mov Cap-2 Maneuver	-	-	-	-	134	-
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	409	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		29.7	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	152	-	-	920	-	
HCM Lane V/C Ratio	0.043	-	-	0.001	-	
HCM Control Delay (s)	29.7	-	-	8.9	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	585	20	10	780	10	5
Future Volume (vph)	585	20	10	780	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1853	0	0	1861	1760	0
Flt Permitted				0.999	0.967	
Satd. Flow (perm)	1853	0	0	1861	1760	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	431			549	749	
Travel Time (s)	9.8			12.5	17.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	658	0	0	859	16	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 59.0%	ICU Level of Service B					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	585	20	10	780	10	5
Future Vol, veh/h	585	20	10	780	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	636	22	11	848	11	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	658	0	1517	647
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	870	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	930	-	133	475
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	413	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	930	-	130	475
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	404	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		28.1	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	172	-	-	930	-	
HCM Lane V/C Ratio	0.095	-	-	0.012	-	
HCM Control Delay (s)	28.1	-	-	8.9	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	255	165	215	365	245	145	260	210	160	365	75
Future Volume (vph)	60	255	165	215	365	245	145	260	210	160	365	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		180	0		175	260		0
Storage Lanes	0		0	0		2	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3303	0	0	3252	1482	0	3163	0	1656	1698	0
Flt Permitted		0.730			0.630			0.733		0.254		
Satd. Flow (perm)	0	2425	0	0	2087	1482	0	2347	0	443	1698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		119				266		96			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		856			1069			571			487	
Travel Time (s)		19.5			24.3			13.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	7%	7%	7%	9%	9%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	521	0	0	631	266	0	669	0	174	479	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	5.0	6.0	6.0		5.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0	18.0	13.0	13.0		18.0	13.0	
Total Split (s)	44.0	44.0		44.0	44.0	18.0	32.0	32.0		18.0	50.0	
Total Split (%)	46.8%	46.8%		46.8%	46.8%	19.1%	34.0%	34.0%		19.1%	53.2%	
Yellow Time (s)	5.0	5.0		5.0	5.0	3.0	5.0	5.0		3.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.0			7.0	5.0		7.0		5.0	7.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?						Yes	Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effect Green (s)		29.8			29.8	46.2		28.8		45.2	43.2	
Actuated g/C Ratio		0.34			0.34	0.53		0.33		0.52	0.50	
v/c Ratio		0.57			0.96dl	0.29		0.80		0.48	0.56	
Control Delay		20.0			42.0	1.9		33.4		17.5	19.4	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		20.0			42.0	1.9		33.4		17.5	19.4	
LOS		C			D	A		C		B	B	
Approach Delay		20.0			30.1			33.4			18.9	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		92			168	0		154		50	176	
Queue Length 95th (ft)		141			240	29		#301		99	307	
Internal Link Dist (ft)		776			989			491			407	
Turn Bay Length (ft)						180				260		
Base Capacity (vph)		1103			891	962		840		412	850	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.47			0.71	0.28		0.80		0.42	0.56	

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 87.1

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 26.3

Intersection LOS: C

Intersection Capacity Utilization 95.6%

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.

















dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Beaver Street/Fortune Boulevard & E Main Street (Route 16)

18 s	32 s							44 s			
50 s								44 s			

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	60	505	750	0	0	45
Future Volume (vph)	60	505	750	0	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1818	1759	0	1550	0
Flt Permitted		0.995				
Satd. Flow (perm)	0	1818	1759	0	1550	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		234	974		505	
Travel Time (s)		5.3	22.1		11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	8%	8%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	614	815	0	49	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	82.7%			ICU Level of Service E		
Analysis Period (min)	15					

Intersection							
Int Delay, s/veh	1						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations		4	1		2		
Traffic Vol, veh/h	60	505	750	0	0	45	
Future Vol, veh/h	60	505	750	0	0	45	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	4	4	8	8	6	6	
Mvmt Flow	65	549	815	0	0	49	
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	815	0	-	0	1494	815	
Stage 1	-	-	-	-	815	-	
Stage 2	-	-	-	-	679	-	
Critical Hdwy	4.14	-	-	-	6.46	6.26	
Critical Hdwy Stg 1	-	-	-	-	5.46	-	
Critical Hdwy Stg 2	-	-	-	-	5.46	-	
Follow-up Hdwy	2.236	-	-	-	3.554	3.354	
Pot Cap-1 Maneuver	804	-	-	-	133	371	
Stage 1	-	-	-	-	428	-	
Stage 2	-	-	-	-	496	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	804	-	-	-	118	371	
Mov Cap-2 Maneuver	-	-	-	-	118	-	
Stage 1	-	-	-	-	428	-	
Stage 2	-	-	-	-	438	-	
Approach	EB		WB		SB		
HCM Control Delay, s	1		0		16.2		
HCM LOS					C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	804	-	-	-	371		
HCM Lane V/C Ratio	0.081	-	-	-	0.132		
HCM Control Delay (s)	9.9	0	-	-	16.2		
HCM Lane LOS	A	A	-	-	C		
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5		

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	725	5	1	460	5	15	0	5	25	0	95
Future Volume (vph)	25	725	5	1	460	5	15	0	5	25	0	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1823	0	0	1775	0	0	1671	0	0	1647	0
Flt Permitted		0.998						0.963			0.990	
Satd. Flow (perm)	0	1823	0	0	1775	0	0	1671	0	0	1647	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		572			527			655			530	
Travel Time (s)		13.0			12.0			14.9			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	4%	7%	7%	2%	6%	2%	6%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	820	0	0	506	0	0	21	0	0	130	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 71.1%

ICU Level of Service C










Analysis Period (min) 15

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	725	5	1	460	5	15	0	5	25	0	95
Future Vol, veh/h	25	725	5	1	460	5	15	0	5	25	0	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	4	4	7	7	2	6	2	6	2	2	2
Mvmt Flow	27	788	5	1	500	5	16	0	5	27	0	103







Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	505	0	0	793	0	0	1402	1353	791	1353	1353	503
Stage 1	-	-	-	-	-	-	845	845	-	505	505	-
Stage 2	-	-	-	-	-	-	557	508	-	848	848	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.16	6.52	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.554	4.018	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	1060	-	-	806	-	-	115	150	383	127	150	569
Stage 1	-	-	-	-	-	-	352	379	-	549	540	-
Stage 2	-	-	-	-	-	-	508	539	-	356	378	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1060	-	-	806	-	-	91	143	383	121	143	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	143	-	121	143	-
Stage 1	-	-	-	-	-	-	336	362	-	524	539	-
Stage 2	-	-	-	-	-	-	415	538	-	335	361	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	44.7	23.7
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	112	1060	-	-	806	-	-	321
HCM Lane V/C Ratio	0.194	0.026	-	-	0.001	-	-	0.406
HCM Control Delay (s)	44.7	8.5	0	-	9.5	0	-	23.7
HCM Lane LOS	E	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	1.9

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	745	5	2	505	25	10
Future Volume (vph)	745	5	2	505	25	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1861	0	0	1863	1764	0
Flt Permitted					0.966	
Satd. Flow (perm)	1861	0	0	1863	1764	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	431			549	749	
Travel Time (s)	9.8			12.5	17.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	815	0	0	551	38	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.5%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	745	5	2	505	25	10
Future Vol, veh/h	745	5	2	505	25	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	810	5	2	549	27	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	815	0	1366	813
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	553	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	812	-	164	382
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	812	-	163	382
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	578	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		27.9	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	195	-	-	812	-	
HCM Lane V/C Ratio	0.195	-	-	0.003	-	
HCM Control Delay (s)	27.9	-	-	9.4	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.7	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	340	55	170	265	165	145	330	190	215	150	30
Future Volume (vph)	35	340	55	170	265	165	145	330	190	215	150	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		180	0		175	260		0
Storage Lanes	0		0	0		2	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3425	0	0	3249	1482	0	3193	0	1656	1700	0
Flt Permitted		0.868			0.647			0.824		0.244		
Satd. Flow (perm)	0	2984	0	0	2143	1482	0	2660	0	425	1700	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				179		62			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		856			1069			571			487	
Travel Time (s)		19.5			24.3			13.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	7%	7%	7%	9%	9%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	468	0	0	473	179	0	724	0	234	196	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	5.0	6.0	6.0		5.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0	18.0	13.0	13.0		18.0	13.0	
Total Split (s)	44.0	44.0		44.0	44.0	18.0	32.0	32.0		18.0	50.0	
Total Split (%)	46.8%	46.8%		46.8%	46.8%	19.1%	34.0%	34.0%		19.1%	53.2%	
Yellow Time (s)	5.0	5.0		5.0	5.0	3.0	5.0	5.0		3.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.0			7.0	5.0		7.0		5.0	7.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?						Yes	Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effct Green (s)		21.6			21.6	38.8		28.1		45.3	43.2	
Actuated g/c Ratio		0.27			0.27	0.49		0.36		0.57	0.55	
v/c Ratio		0.56			0.89dl	0.22		0.74		0.58	0.21	
Control Delay		25.9			37.9	2.2		27.9		15.9	10.4	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		25.9			37.9	2.2		27.9		15.9	10.4	
LOS		C			D	A		C		B	B	
Approach Delay		25.9			28.1			27.9			13.4	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)		98			113	0		146		52	42	
Queue Length 95th (ft)		142			167	25		#298		117	97	
Internal Link Dist (ft)		776			989			491			407	
Turn Bay Length (ft)						180				260		
Base Capacity (vph)		1417			1010	867		985		447	937	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.33			0.47	0.21		0.74		0.52	0.21	

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 78.9

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 24.8

Intersection LOS: C

Intersection Capacity Utilization 79.1%

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.

















dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Beaver Street/Fortune Boulevard & E Main Street (Route 16)

		
Ø1	Ø2	Ø4
18 s	32 s	44 s
		
Ø6		Ø8
50 s		44 s

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	720	435	0	0	40
Future Volume (vph)	25	720	435	0	0	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1823	1759	0	1550	0
Flt Permitted		0.998				
Satd. Flow (perm)	0	1823	1759	0	1550	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		234	974		505	
Travel Time (s)		5.3	22.1		11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	8%	8%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	810	473	0	43	0
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	68.1%			ICU Level of Service C		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	720	435	0	0	40
Future Vol, veh/h	25	720	435	0	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	8	8	6	6
Mvmt Flow	27	783	473	0	0	43
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	473	0	-	0	1310	473
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	837	-
Critical Hdwy	4.14	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.236	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1079	-	-	-	172	583
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	418	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1079	-	-	-	164	583
Mov Cap-2 Maneuver	-	-	-	-	164	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	400	-
Approach	EB		WB		SB	
HCM Control Delay, s	0.3		0		11.7	
HCM LOS					B	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1079	-	-	-	583	
HCM Lane V/C Ratio	0.025	-	-	-	0.075	
HCM Control Delay (s)	8.4	0	-	-	11.7	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	575	15	1	785	25	5	0	1	15	0	50
Future Volume (vph)	95	575	15	1	785	25	5	0	1	15	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1814	0	0	1771	0	0	1681	0	0	1651	0
Flt Permitted		0.993						0.960			0.989	
Satd. Flow (perm)	0	1814	0	0	1771	0	0	1681	0	0	1651	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		572			527			655			530	
Travel Time (s)		13.0			12.0			14.9			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	4%	7%	7%	2%	6%	2%	6%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	744	0	0	881	0	0	6	0	0	70	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 93.0%

ICU Level of Service F

Analysis Period (min) 15

9: Whispering Pine Drive/Site Driveway & E Main Street (Route 16)

Intersection










Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	95	575	15	1	785	25	5	0	1	15	0	50
Future Vol, veh/h	95	575	15	1	785	25	5	0	1	15	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	4	4	7	7	2	6	2	6	2	2	2
Mvmt Flow	103	625	16	1	853	27	5	0	1	16	0	54







Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	880	0	0	641	0	0	1736	1723	633	1709	1717	867
Stage 1	-	-	-	-	-	-	840	840	-	869	869	-
Stage 2	-	-	-	-	-	-	896	883	-	840	848	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.16	6.52	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.554	4.018	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	768	-	-	920	-	-	67	89	473	72	90	352
Stage 1	-	-	-	-	-	-	354	381	-	347	369	-
Stage 2	-	-	-	-	-	-	329	364	-	360	378	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	768	-	-	920	-	-	47	70	473	60	71	352
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	70	-	60	71	-
Stage 1	-	-	-	-	-	-	280	301	-	274	368	-
Stage 2	-	-	-	-	-	-	278	363	-	284	299	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	79.1	41.9
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	55	768	-	-	920	-	-	166
HCM Lane V/C Ratio	0.119	0.134	-	-	0.001	-	-	0.426
HCM Control Delay (s)	79.1	10.4	0	-	8.9	0	-	41.9
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.4	0.5	-	-	0	-	-	1.9

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	680	20	10	795	10	5
Future Volume (vph)	680	20	10	795	10	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1855	0	0	1861	1760	0
Flt Permitted				0.999	0.967	
Satd. Flow (perm)	1855	0	0	1861	1760	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	431			549	749	
Travel Time (s)	9.8			12.5	17.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	761	0	0	875	16	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization 59.8%	ICU Level of Service B					
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	
Traffic Vol, veh/h	680	20	10	795	10	5
Future Vol, veh/h	680	20	10	795	10	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	0	0
Mvmt Flow	739	22	11	864	11	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	761	0	1636	750
Stage 1	-	-	-	-	750	-
Stage 2	-	-	-	-	886	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	851	-	112	415
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	851	-	109	415
Mov Cap-2 Maneuver	-	-	-	-	109	-
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	396	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		32.9	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	145	-	-	851	-	
HCM Lane V/C Ratio	0.112	-	-	0.013	-	
HCM Control Delay (s)	32.9	-	-	9.3	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	305	165	220	390	265	145	260	220	195	365	75
Future Volume (vph)	60	305	165	220	390	265	145	260	220	195	365	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		180	0		175	260		0
Storage Lanes	0		0	0		2	0		1	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	3320	0	0	3252	1482	0	3160	0	1656	1698	0
Flt Permitted		0.735			0.611			0.736		0.233		
Satd. Flow (perm)	0	2455	0	0	2024	1482	0	2352	0	406	1698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		91				273		105			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		856			1069			571			487	
Travel Time (s)		19.5			24.3			13.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	7%	7%	7%	9%	9%	9%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	576	0	0	663	288	0	680	0	212	479	0
Turn Type	Perm	NA		Perm	NA	pm+ov	Perm	NA		pm+pt	NA	
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	1	2	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	5.0	6.0	6.0		5.0	6.0	
Minimum Split (s)	13.0	13.0		13.0	13.0	18.0	13.0	13.0		18.0	13.0	
Total Split (s)	44.0	44.0		44.0	44.0	18.0	32.0	32.0		18.0	50.0	
Total Split (%)	46.8%	46.8%		46.8%	46.8%	19.1%	34.0%	34.0%		19.1%	53.2%	
Yellow Time (s)	5.0	5.0		5.0	5.0	3.0	5.0	5.0		3.0	5.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		7.0			7.0	5.0		7.0		5.0	7.0	
Lead/Lag						Lead	Lag	Lag		Lead		
Lead-Lag Optimize?						Yes	Yes	Yes		Yes		
Recall Mode	None	None		None	None	None	Max	Max		None	Max	
Act Effct Green (s)		32.3			32.3	49.8		27.6		45.2	43.1	
Actuated g/C Ratio		0.36			0.36	0.56		0.31		0.51	0.48	
v/c Ratio		0.61			1.02dl	0.30		0.85		0.60	0.58	
Control Delay		22.3			44.9	2.2		38.5		21.5	20.6	
Queue Delay		0.0			0.0	0.0		0.0		0.0	0.0	
Total Delay		22.3			44.9	2.2		38.5		21.5	20.6	
LOS		C			D	A		D		C	C	
Approach Delay		22.3			31.9			38.5			20.9	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)		115			183	4		173		70	195	
Queue Length 95th (ft)		170			#286	34		#304		120	307	
Internal Link Dist (ft)		776			989			491			407	
Turn Bay Length (ft)						180				260		
Base Capacity (vph)		1071			839	980		798		387	826	
Starvation Cap Reductn		0			0	0		0		0	0	
Spillback Cap Reductn		0			0	0		0		0	0	
Storage Cap Reductn		0			0	0		0		0	0	
Reduced v/c Ratio		0.54			0.79	0.29		0.85		0.55	0.58	

Intersection Summary

Area Type: Other

Cycle Length: 94

Actuated Cycle Length: 89.5

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 28.9

Intersection LOS: C

Intersection Capacity Utilization 98.2%

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.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 12: Beaver Street/Fortune Boulevard & E Main Street (Route 16)

		
Ø1	Ø2	Ø4
18 s	32 s	44 s
		
Ø6		Ø8
50 s		44 s

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<div></div>	<div></div>		<div></div>	
Traffic Volume (vph)	60	520	775	0	0	45
Future Volume (vph)	60	520	775	0	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	1818	1759	0	1550	0
Flt Permitted		0.995				
Satd. Flow (perm)	0	1818	1759	0	1550	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		234	974		505	
Travel Time (s)		5.3	22.1		11.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	8%	8%	6%	6%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	630	842	0	49	0
Sign Control		Free	Free		Stop	

Intersection Summary




Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 84.8%




















ICU Level of Service E

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	520	775	0	0	45
Future Vol, veh/h	60	520	775	0	0	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	8	8	6	6
Mvmt Flow	65	565	842	0	0	49
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	842	0	-	0	1538	842
Stage 1	-	-	-	-	842	-
Stage 2	-	-	-	-	696	-
Critical Hdwy	4.14	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.236	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	785	-	-	-	125	358
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	487	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	785	-	-	-	110	358
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	428	-
Approach	EB		WB		SB	
HCM Control Delay, s	1		0		16.6	
HCM LOS					C	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	785	-	-	-	358	
HCM Lane V/C Ratio	0.083	-	-	-	0.137	
HCM Control Delay (s)	10	0	-	-	16.6	
HCM Lane LOS	B	A	-	-	C	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5	

13810.00 :: East Main Street 40B
 9: Whispering Pine Drive & E Main Street (Route 16)

2024 Build - Mitigation Conditions

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	725	5	1	460	5	15	0	5	25	0	95
Future Volume (vph)	25	725	5	1	460	5	15	0	5	25	0	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	0		50	0		0	0		0
Storage Lanes	1		0	0		1	0		0	0		1
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1770	1825	0	0	1776	1583	0	1671	0	0	1770	1583
Flt Permitted	0.950							0.963			0.950	
Satd. Flow (perm)	1770	1825	0	0	1776	1583	0	1671	0	0	1770	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		572			527			655			530	
Travel Time (s)		13.0			12.0			14.9			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	4%	7%	7%	2%	6%	2%	6%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	793	0	0	501	5	0	21	0	0	27	103
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized








Intersection Capacity Utilization 55.1%

ICU Level of Service B

Analysis Period (min) 15

13810.00 :: East Main Street 40B
 9: Whispering Pine Drive & E Main Street (Route 16)

2024 Build - Mitigation Conditions




















Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	725	5	1	460	5	15	0	5	25	0	95
Future Vol, veh/h	25	725	5	1	460	5	15	0	5	25	0	95
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	50	-	-	-	-	50	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	4	4	7	7	2	6	2	6	2	2	2
Mvmt Flow	27	788	5	1	500	5	16	0	5	27	0	103

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	500	0	0	793	0	0	1347	1347	791	1350	1350	500
Stage 1	-	-	-	-	-	-	845	845	-	502	502	-
Stage 2	-	-	-	-	-	-	502	502	-	848	848	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.16	6.52	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.554	4.018	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	1064	-	-	806	-	-	126	151	383	128	150	571
Stage 1	-	-	-	-	-	-	352	379	-	552	542	-
Stage 2	-	-	-	-	-	-	544	542	-	356	378	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1064	-	-	806	-	-	101	147	383	124	146	571
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	147	-	124	146	-
Stage 1	-	-	-	-	-	-	343	369	-	538	541	-
Stage 2	-	-	-	-	-	-	445	541	-	342	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	40.1	18.8
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	124	1064	-	-	806	-	-	124	571
HCM Lane V/C Ratio	0.175	0.026	-	-	0.001	-	-	0.219	0.181
HCM Control Delay (s)	40.1	8.5	-	-	9.5	0	-	42	12.7
HCM Lane LOS	E	A	-	-	A	A	-	E	B
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0	-	-	0.8	0.7

9: Whispering Pine Drive/Site Driveway & E Main Street (Route 16)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	575	15	1	785	25	5	0	1	15	0	50
Future Volume (vph)	95	575	15	1	785	25	5	0	1	15	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1770	1820	0	0	1776	1583	0	1681	0	0	1770	1583
Flt Permitted	0.950							0.960			0.950	
Satd. Flow (perm)	1770	1820	0	0	1776	1583	0	1681	0	0	1770	1583
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		572			527			655			530	
Travel Time (s)		13.0			12.0			14.9			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	4%	4%	7%	7%	2%	6%	2%	6%	2%	2%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	103	641	0	0	854	27	0	6	0	0	16	54
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 87.0%








ICU Level of Service E

Analysis Period (min) 15

9: Whispering Pine Drive/Site Driveway & E Main Street (Route 16)

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	95	575	15	1	785	25	5	0	1	15	0	50
Future Vol, veh/h	95	575	15	1	785	25	5	0	1	15	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	0	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	4	4	7	7	2	6	2	6	2	2	2
Mvmt Flow	103	625	16	1	853	27	5	0	1	16	0	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	853	0	0	641	0	0	1695	1695	633	1695	1703	853
Stage 1	-	-	-	-	-	-	840	840	-	855	855	-
Stage 2	-	-	-	-	-	-	855	855	-	840	848	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.16	6.52	6.26	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.554	4.018	3.354	3.518	4.018	3.318
Pot Cap-1 Maneuver	786	-	-	920	-	-	72	93	473	73	92	359
Stage 1	-	-	-	-	-	-	354	381	-	353	375	-
Stage 2	-	-	-	-	-	-	347	375	-	360	378	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	786	-	-	920	-	-	55	81	473	65	80	359
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	81	-	65	80	-
Stage 1	-	-	-	-	-	-	308	331	-	307	374	-
Stage 2	-	-	-	-	-	-	294	374	-	312	328	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	66.5	30.9
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	65	786	-	-	920	-	-	65	359
HCM Lane V/C Ratio	0.1	0.131	-	-	0.001	-	-	0.251	0.151
HCM Control Delay (s)	66.5	10.3	-	-	8.9	0	-	78	16.8
HCM Lane LOS	F	B	-	-	A	A	-	F	C
HCM 95th %tile Q(veh)	0.3	0.5	-	-	0	-	-	0.9	0.5

Per 56.05 2D Tabulation of proposed building by type, size (number of bedrooms, floor area) and ground coverage, and a summary showing percentage of the tract occupied by buildings, by parking and other paved vehicular areas, and by open area;

Line		SF	Acres	%
1	Total Site Area	5,089,806	116.85	100%
2	Building Footprint	97,000		1.91%
3	Parking and other paved vehicular areas	183,231		3.60%
4	Building Patio Areas	20,532		0.40%
5	Total Altered Land (includes areas 2 - 4 plus offgrading, basins, SAS)	640,000		12.57%
6	Total land left in existing state	4,449,806		87.43%
8	2 R2 Residential Apartment buildings sitting on S2 garages.			
9	1 Private Waste Water Treatment Plant in an accessory building.			
11	Square Footage			
12	Garage	93224		
13	1st Floor	93826		
14	2nd Floor	94484		
15	3rd Floor	94484		
16	4th Floor	94484		
17	5th Floor	88070		
18		558572		
20	Total Units	300		
21	Total Bedrooms	492		
23	Studios	16	5%	
24	1 Bedroom	122	41%	
25	2 Bedroom	132	44%	
26	3 Bedroom	30	10%	
27	Total	300	100%	

Development: Robsham Village

462-466 East Main Street, Milford, Massachusetts

EXHIBIT A – WAIVER LIST – APPROVAL DECISION

The applicant provides the following information to assist the permit granting authority in analyzing the project and assessing the likely impact on the community as defined in 760 CMR 56. The project meets the intent of each and every by-law, rule, and regulation in terms of interests sought to be protected thereunder. The applicant provides the following waiver language to allow the permit granting authority to easily adopt or modify as it deems appropriate.

The Board of Appeals authorizes the following waivers from the requirements of the Milford Zoning Bylaw and other local by-laws, rules, and regulations listed in this Exhibit A if and only if the Comprehensive Permit for the Project containing the Conditions identified in the attached Comprehensive Permit Application is finally issued and only to the extent necessary and sufficient to construct, occupy, and maintain the project in accordance with the Comprehensive Permit, the Conditions, and Plans and Specifications listed in the Comprehensive Permit Decision, and provided that the project is in fact constructed in accordance with the Comprehensive Permit, the Conditions, and the Plans and Specifications. Once the project has been fully constructed and certificates of occupancy have been issued, these Waivers, the Comprehensive Permit and the Conditions shall not authorize any further waiver of the Milford Zoning Bylaws or other local bylaws, rules, or regulations; any proposed further modification of the project or any unit within the project thereafter must conform to the Milford Zoning Bylaw and other local bylaws, rules, and regulations, subject to the regulations concerning modifications of comprehensive permits found at 760 CMR 56.05(11).

EXHIBIT A-1

TOWN OF MILFORD – ZONING BY-LAWS

In supplementation of the general information contained on page 1 of Exhibit A, the applicant believes the following waivers are required for issuance of the Comprehensive Permit and therefore requests the permit granting authority issue waivers relative to the following requirements:

Section Number	Title	Requirement, Waiver Requested
Section 1.4.2	PERMIT PROCEDURE	The zoning by-law requires all applications to be submitted to the Building Commissioner. The Zoning Board of Appeals shall act as the comprehensive permit permitting authority.
Section 1.5	ZONING COMPLIANCE	Section 1.5 requires the applicant to obtain a zoning certificate from the Building Commissioner. The Zoning Board of Appeals shall act as the comprehensive permit permitting authority.
Section 1.15.2	SITE PLAN	The zoning by-law requires construction of a new building to obtain site plan approval. The Zoning Board of Appeals shall act as the comprehensive permit permitting authority. The applicant requests the ZBA to waive the Site Plan Approval requirement.
Section 2.2.1; Section 2.3	USE REGULATION SCHEDULE	The zoning by-law prohibits multi-family use in the Business Park zoning district. The proposed project seeks authorization for the construction of three hundred (300) dwelling units in two structures. The applicant requests a waiver from this prohibited use.
Section 2.4.4.2	NUMBER OF BUILDINGS PER LOT	The zoning by-law permits any number of principal buildings on a single lot contingent that each building meets all requirements for the district. The proposed project consists of two buildings. The applicant requests a waiver from this requirement.
Section 2.5	INTENSITY OF USE SCHEDULE	The zoning by-law prohibits structures to be more than sixty (60) feet in height or five (5) stories, whichever is less. The proposed project has a roof elevation of three hundred and ninety-one and one half

Section Number	Title	Requirement, Waiver Requested
		(391.5) feet. The first-floor elevation is three hundred and thirty-nine (339) feet and the garage is at three hundred and twenty-eight (328) feet. The average finish grade adjacent to the building will be between the first floor and garage at an average three hundred and thirty-five (335) feet more or less, resulting in an average building height of fifty-six and one half (56.5) feet. The parking garage is more than five (5) stories. The Applicant requests waivers from this section as needed.
Section 3.4.1(a)	OFF-STREET PARKING REQUIREMENTS	The zoning by-law requires two spaces per dwelling unit. Applicant requests a waiver from the minimum parking spaces required by the by-laws.
Section 3.4.2	PARKING DESIGN	Applicant requests waiver to design the parking spaces as proposed by the project plans.
Section 3.4.4(d)	PARKING LANDSCAPING REQUIREMENTS	Applicant requests waiver to design the parking spaces as proposed by the project plans.
Section 3.4.4(d)(1)	LANDSCAPED BUFFER STRIPS	Applicant requests waiver to design the parking spaces as proposed by the project plans.
Section 3.7	EARTH REMOVAL REGULATIONS	The by-law prohibits and regulates the removal of earth. The applicant requests a waiver from these requirements to allow the removal of earth per the project plans. The Zoning Board of Appeals shall act as the comprehensive permit permitting authority.
Section 3.8	OBSTRUCTIONS IN REQUIRED YARDS	The zoning by-law require that all yards required by the by-law be provided as open, unobstructed space. The applicant requests a waiver from this requirement to allow the proposed project as proposed.
Section 3.9	SIGN REGULATIONS	The zoning by-law prohibits and regulates signs. The applicant requests a waiver from these requirements to allow signs as proposed in the project plans.
Section 3.16	INDIVIDUAL LOT DRAINAGE	Applicant seeks a waiver from this Chapter as the Zoning Board of Appeals is provided with the authority to issue all local approvals. The Project does meet the intent of the DEP Stormwater Handbook.

EXHIBIT A-2

MILFORD GENERAL BY-LAWS

In supplementation of the general information contained on page 1 of Exhibit A, the applicant believes the following waivers are required for issuance of the Comprehensive Permit and therefore requests the permit granting authority issue waivers relative to the following requirements:

Section Number	Title	Requirement, Waiver Requested
Article 8	PLANNING BOARD	Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals.
Article 12, Section 1	STREET AND SIDEWALKS	The by-law prohibits any person from breaking or digging up the ground in any street, sidewalk or public way in Milford without obtaining a written permit from the Highway Surveyor. Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals.
Article 37	CERTIFICATE OF REGISTRATION REQUIRED; POSTING	The by-law prohibits a person for renting any building without registering with the Board of Health. The Zoning Board of Appeals is provided with the authority to issue all local approvals. The Applicant will meet all Massachusetts State Sanitary and Building codes.

EXHIBIT A-3

ARTICLE 33
MILFORD WETLANDS ADMINISTRATION BY-LAW

In supplementation of the general information contained on page 1 of Exhibit A, the applicant believes the following waivers are required for issuance of the Comprehensive Permit and therefore requests the permit granting authority issue waivers relative to the following requirements:

Section Number	Title	Requirement, Waiver Requested
Article 33	WETLANDS ADMINISTRATION BYLAW	Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals. Applicant will Comply with the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 and 310 CMR 10.00 et. seq.
Section 2	PURPOSE	The purpose of the Milford Wetlands and Water Resources Protection Regulations is to provide a greater degree of protection of wetlands, buffer zones, and related water resources, than the protection of these resources areas provided under M.G.L. c. 131, § 40. Applicant requests a waiver from these requirements and states further that the Project will Comply with the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 and 310 CMR 10.00 et. seq.
Section 3	JURISDICTION	The Milford Wetland by-law provides the Conservation Commission with the jurisdiction to enforce the wetlands' by-laws. Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals.
Section 4	APPLICATIONS FOR PERMITS AND REQUESTS FOR DETERMINATION	Per the Milford regulations, a written application is required to be filed with the Conservation Commission. Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals. Applicant will Comply with the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 and 310 CMR 10.00 et. seq.

Section 5	NOTICE AND HEARINGS	Applicant requests waiver from public hearing to address local wetlands by-laws. Applicant with have a public hearing on State WPA.
Section 6	PERMITS, DETERMINATIONS, AND CONDITIONS	Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals.
Section 8	ENFORCEMENT	Section 8 provides the Conservation Commission with the authority to enter the property to enforce Article 33. The Zoning Board of Appeals is provided with the authority to issue all local approvals.
Section 9	BURDEN OF PROOF	The regulations place the burden on the applicant of proving by a preponderance of the credible evidence that the work proposed in the application with not have unacceptable significant effect upon the wetland values protect by this Article. The Applicant requests a waiver from this burden and further states that it will Comply with the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 and 310 CMR 10.00 et. seq.

EXHIBIT A-4

ARTICLE 36
MILFORD STORMWATER MANAGEMENT BY-LAW

In supplementation of the general information contained on page 1 of Exhibit A, the applicant believes the following waivers are required for issuance of the Comprehensive Permit and therefore requests the permit granting authority issue waivers relative to the following requirements:

Section Number	Title	Requirement, Waiver Requested
Article 36	PURPOSE AND AUTHORITY	Applicant seeks a waiver from this section as the Zoning Board of Appeals is provided with the authority to issue all local approvals. The Project does meet the intent of the DEP Stormwater Handbook.
Section 1.1	PURPOSE	The purpose of the Milford Stormwater management is to “protect and enhance the water quality” for the citizens of Milford. Applicant requests a waiver from these requirements and states further that the Project will Comply with the State and Federal regulations.
Section 1.2	ADMINISTRATION	The Milford Stormwater by-law shall be administered and enforced by the Town of Milford, acting by and through its Town Engineer, under the supervision of the Board of Selectman. The Zoning Board of Appeals is provided with the authority to issue all local approvals.
Section 3.1	APPLICABILITY	The by-law requires that prior to the issuance of any building permit a stormwater management permit must be approved by the Office of Planning and Engineering. The applicant requests a waiver from this requirement. The Zoning Board of Appeals is provided with the authority to issue all local approvals.

Section 4	COMPATIBILITY WITH OTHER PERMIT AND BY-LAW REQUIREMENTS	The by-law provides that if different from any other state or local regulations, then whichever provision are more restrictive shall take precedence. Applicant seeks a waiver from this Article as the Zoning Board of Appeals is provided with the authority to issue all local approvals. The Project does meet the intent of the DEP Stormwater Handbook.
Section 5	PERMIT REQUIRED / APPLICATION REQUIREMENTS	The by-law requires that prior to the issuance of any building permit a stormwater management permit must be approved by the Office of Planning and Engineering. The applicant requests a waiver from this requirement. Section 5.2-9 provides requirements for application for approval of a Stormwater Management Permit. The Zoning Board of Appeals is provided with the authority to issue all local approvals.
Section 9	MAINTENANCE	The Applicant requests a waiver from the requirements imposed by Section 9. The Project does meet the intent of the DEP Stormwater Handbook.
Section 10	DISCHARGE PROHIBITIONS	Applicant requests a waiver from Section 10. Applicant will meet all federal and state regulations.

EXHIBIT A-5

RULES AND REGULATIONS OF THE MILFORD SEWER DEPARTMENT

In supplementation of the general information contained on page 1 of Exhibit A, the applicant believes the following waivers are required for issuance of the Comprehensive Permit and therefore requests the permit granting authority issue waivers relative to the following requirements:

Section Number	Title	Requirement, Waiver Requested
Article 1	SCOPE	<p>The proposed project will be serviced with a private onsite wastewater treatment plant. The applicant will not be connecting into the municipal sewer system. Therefore, the sewer regulations do not apply.</p> <p>The project will comply with Title V standards.</p>

Methuen	18,268	1,938	1,649	9.0%
Middleborough	8,921	928	509	5.7%
Middlefield	230	4	4	1.7%
Middleton	3,011	173	151	5.0%
Milford	11,379	980	718	6.3%
Millbury	5,592	244	221	4.0%
Millis	3,148	184	121	3.8%
Millville	1,157	26	26	2.2%
Milton	9,641	733	477	4.9%
Monroe	64	0	0	0.0%
Monson	3,406	152	152	4.5%
Montague	3,926	423	391	10.0%
Monterey	465	0	0	0.0%
Montgomery	337	0	0	0.0%
Mount Washington	80	0	0	0.0%
Nahant	1,612	48	48	3.0%
Nantucket	4,896	179	121	2.5%
Natick	14,052	1,672	1,442	10.3%
Needham	11,047	969	838	7.6%
New Ashford	104	0	0	0.0%
New Bedford	42,816	5,155	5,124	12.0%
New Braintree	386	0	0	0.0%
New Marlborough	692	0	0	0.0%
New Salem	433	0	0	0.0%
Newbury	2,699	94	94	3.5%
Newburyport	8,015	720	606	7.6%
Newton	32,346	2,515	2,438	7.5%
Norfolk	3,112	144	111	3.6%
North Adams	6,681	886	880	13.2%
North Andover	10,902	1,393	932	8.5%
North Attleborough	11,553	308	296	2.6%
North Brookfield	2,014	142	142	7.1%
North Reading	5,597	645	533	9.5%
Northampton	12,604	1,586	1,521	12.1%
Northborough	5,297	718	605	11.4%
Northbridge	6,144	470	455	7.4%
Northfield	1,290	27	27	2.1%
Norton	6,707	898	588	8.8%
Norwell	3,652	426	271	7.4%
Norwood	12,441	992	980	7.9%
Oak Bluffs	2,138	158	146	6.8%
Oakham	702	0	0	0.0%
Orange	3,461	431	431	12.5%
Orleans	3,290	337	307	9.3%
Otis	763	0	0	0.0%
Oxford	5,520	404	404	7.3%
Palmer	5,495	329	284	5.2%