Town of Belmont
Planning Board

APPLICATION FOR A SPECIAL PERMIT

Date: April 5 2021

Planning Board
Homer Municipal Building
19 Moore Street
Belmont, MA 02478

To Whom It May Concern:

Pursuant to the provisions of Massachusetts General Laws, Chapter 40A, Section 9, as amended, and the Zoning By-Law of the Town of Belmont, I/we the undersigned, being the owner(s) of a certain parcel of land (with the buildings thereon) situated on 1010 Pleasant Street/Road, hereby apply to your Board for a **SPECIAL PERMIT** for the erection or alteration on said premises or the use thereof under the applicable Section of the Zoning By-Law of said Town for special permit to operate an Adult Use Marijuana Establishment pursuant to Section 6F.

on the ground that the same will be in harmony with the general purpose and intent of said Zoning By-Law.

Signature of Petitioner Joseph M. Noone

Print Name Joseph M. Noone, Attorney for Kelly and Steve Tomasello

Address 3 Brighton Street
Belmont, MA 02478

Daytime Telephone Number 617-489-5300

Calverde Naturals Applicant Statement

Calverde Naturals, LLC ("Calverde") seeks a Special Permit to operate an Adult Use Marijuana Establishment at 1010 Pleasant Street, Belmont, MA pursuant to Section 6F of the Belmont Zoning By-Law. Calverde also seeks 3 special permits associated with two mounted signs and one monument sign.

Calverde is owned and operated by Kelly Tomasello and Stephen Tomasello, who reside in Winchester, MA.

The site is located in the Business II District and the Adult Use Marijuana Establishment Overlay District, which permits such a use subject to the issuance of a Planning Board Special Permit. The proposed site is not located within 500 feet of any pre-existing K-12 schools. The southern portion of the site abuts the railroad.

Calverde is committed to operating a state-of-the-art facility that is secure, efficient, and fully compliant with all regulations set forth by the Cannabis Control Commission and Town of Belmont. As a local business with roots in the area, maintaining its reputation within the local civic, business, and philanthropic communities is extremely important. Calverde recognizes that the success of its business is contingent upon their ability to operate harmoniously with the Belmont community by keeping true to its word, actively seeking feedback, and incorporating best practices into their daily operations. Calverde is also proposing to operate a retail marijuana facility in Marlborough, MA.

Calverde is leasing approximately 4,094 square feet of retail space with 25 exclusive parking spaces at 1010 Pleasant Street from Belmont Crossroads Realty Trust. A portion of the parking area, the easterly edge of the parking lot on the east side of the property, is contained on the adjacent property, 1000 Pleasant Street, which is also owned by Belmont Crossroads Realty Trust. The exterior of the premises will be renovated in accordance with the plans submitted herewith. The renovation of the premises will greatly improve the appearance of the existing structure.

Calverde will create a safe and clean community environment for providing consistent, high quality cannabis to consumers who are 25 years of age or older. Calverde's mission will be accomplished through extensive employee training in all aspects of the marijuana retail business, selling a diverse mix of products, and taking a trend-forward approach to the merchandise offered for sale. Calverde will conduct operations by appointment only for at least its first month of operations. Customers will be required to make an appointment using Calverde's website or telephone number and indicate the means by which they seek to access the facility, which will ensure that Calverde can accommodate customers without causing unintended nuisance and excess site congestion. The manner in which the product will be sold is set forth in detail in Calverde's Dispensing Procedures, Plan for Restricting Access, and Prevention of Diversion, which are included as part of the submission documents.

The total public area of the premises is 1805 square feet and the non-public area is 2131 square feet. The premises are designed with an entry vestibule for the secure identification of patrons and to address potential safety concerns. The product will be securely stored in the storage section of the premises.

Calverde commissioned a traffic analysis by Vanasse & Associates. The traffic analysis demonstrates that Calverde's operations at 1010 Pleasant Street will not significantly impact the traffic conditions. The parking areas area designed to ensure convenient and safe ingress and egress from the site. The proposed site access with a curb cut width of 24 feet is consistent with the Massachusetts Department of Transportation design criteria for commercial driveways and provides adequate site distance for safe site access. Employee parking will be located within the southeast portion of the proposed parking field. Calverde expects approximately 7-8 employees working during each shift depending on days of the week and hours of the day. Calverde also expects a portion of their employees to rely on public transportation and bike.

Before finalizing the site plans, Calverde asked for a review to be conducted by both the Police and Fire departments. The respective initial reviews of the site plans by Chief MacIsaac and Captain Tobio indicated that both departments were satisfied with the site plans from each of their public safety standpoints.

In terms of security, the site features a drive-in loading bay for the delivery of product, which is the gold standard for security in the cannabis industry. Calverde will contract with a professional security and alarm company to design, implement, and monitor a comprehensive security plan to ensure that the facility is a safe and secure environment for employees and the local community. Calverde's state-of-the-art security system will consist of perimeter windows, as well as duress, panic, and holdup alarms connected to local law enforcement for efficient notification and response in the event of a security threat. The system will also include a failure notification system that will immediately alert the executive management team if a system failure occurs. A redundant alarm system will be installed to ensure that active alarms remain operational if the primary system is compromised. Interior and exterior HD video surveillance of all areas that contain marijuana, entrances, exits, and parking lots will be operational 24/7 and available to the Police Department. These surveillance cameras will remain operational even in the event of a power outage. The exterior of the dispensary and surrounding area will be sufficiently lit, and foliage will be minimized to ensure clear visibility of the area at all times.

Only Calverde's registered agents and other authorized visitors (e.g., contractors, vendors) will be allowed access to the facility. A visitor log will be maintained in perpetuity. All agents and visitors will be required to visibly display an ID badge, and Calverde will maintain a current list of individuals with access. Calverde will have security personnel on-site during business hours. On-site consumption of marijuana by Calverde's employees and visitors will be prohibited.

Calverde will renovate the exterior and interior of the leased premises in accordance with the attached plans. The renovation will improve the exterior appearance of the building, but still be compatible with other surrounding commercial properties. The exterior building will be upgraded to convert the space to produce an inviting retail experience. These upgrades include

painting the existing concrete block white, with wooden paneling installed near each entrance. A wooden trellis type awning will be created over the entrances. A portion of the exterior of the building is proposed to have a green wall, among other attractive design features. Calverde is also interested in commissioning a local artist to paint the existing garage door at the loading area. The exterior signage will consist of mounted signs on the side and front of the building and a monument sign positioned in a proposed landscape area up on Pleasant Street. There will be a loading area on the west side of the building that will permit secure delivery of the product inside the premises.

Calverde will professionally landscape the site with a total of 73 plantings. Calverde's landscape plan demonstrates the location of the site plantings. Ten trees will be planted throughout the site and there will be four planting beds. An 8-foot fence currently exists on the rear portion of the lot. Calverde is also proposing to include additional landscaping and fencing to delineate the Calverde parking lot with the existing parking lot at 1000 Pleasant Street. The exterior lighting will consist of upgrading the seven existing exterior lights and the installation of three lights in various locations in the parking area.

All recyclables and waste, including organic waste composed of or containing finished marijuana and marijuana products, will be stored, secured, and managed in accordance with applicable state and local statutes, ordinances, and regulations. Organic material, recyclable material, solid waste, and liquid waste containing marijuana or by-products of marijuana processing will be disposed of in compliance with all applicable state and federal requirements. An enclosed dumpster area is to be located on the southeast portion of the rear of the property. The dumpster area will be enclosed with six-foot white vinyl fence with evergreen trees planted on each of the sides.

On November 9, 2021, Calverde entered into a Host Community Agreement with the Select Board. Calverde has submitted its license application to the Cannabis Control Commission and received approval for a provisional license on February 11, 2021. Upon the granting of its special permit, Calverde will apply to the Health Department for a Sales Permit. The state license application documents will be available by link as these documents are very voluminous.

As part of the Host Community Agreement process, Calverde conducted two community outreach meetings on July 23, 2020 and September 17, 2020. The public overwhelmingly approved of Calverde's proposal at each of the meetings. On November 9, 2020, Calverde appeared before the Select Board to negotiate and finalize the Host Community Agreement, wherein Calverde will be paying to the Town 3% of its gross revenues in the form of a Community Impact Fee.

In conclusion, Calverde respectfully requests the Planning Board grant its application for a special permit and special permits for the 3 proposed signs. Calverde is prepared to work hard to provide to the Town of Belmont a retail marijuana establishment that is safe and clean to its clientele and the surrounding abutters. The Adult Use Marijuana Establishment Overlay District was approved by Town Meeting and Calverde through its application, and presentation has

demonstrated that the Planning Board is warranted in granting the Special Permit by satisfaction of the requirements of By-Law Section 6F(5).

Respectfully submitted,
Stephen and Kelly Tomasello

By their Attorneys
Avery Dooley & Noone, LLP

_____
Joseph M. Noone

LEASE

by and between

Belmont Crossroads Realty Trust, as Landlord

and

Calverde Naturals, LLC, as Tenant

for the land and building at

1010 Pleasant Street
Belmont, Massachusetts

LEASE

THIS LEASE ("Lease") is dated as of the 1st day of July, 2019 (the "Effective Date") and is entered into by and between Landlord and Tenant named below.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

ARTICLE 1.
DEFINITIONS AND EXHIBITS

1.1 Definitions. Whenever used herein, the following terms shall have the following meanings:

Term Commencement Date: As defined in Section 2.2 below.

Rent Commencement Date: As defined in Section 2.2(a) below.

Landlord: Belmont Crossroads Realty Trust, a Massachusetts realty trust.

Address of Landlord: 12 Brook Street
Fitchburg, MA 01420
Attn: Paul L. Tocci, Jr.

Tenant: Calverde Naturals, LLC, a Massachusetts limited liability company, or its nominee.

Address of Tenant: 10 Briarwood Lane
Winchester, MA 01890
Attn: Stephen P. Tomasello, Manager

Broker(s): Ingram Realty.

Term: Five (5) years, commencing on the Rent Commencement Date and expiring on the last day of the calendar month in which the fifth (5^{th}) anniversary of the Rent Commencement Date occurs (the "Expiration Date"), unless sooner terminated or extended as may be provided herein.

Option(s) to Extend Term: Three (3) options to extend the Term for Five (5) Lease Years per option, subject to the terms and conditions of Article 23 hereof.

1) Lease Year: Each period of twelve (12) full consecutive calendar months during the Term, with the first (1st) Lease Year commencing on the Rent

EXECUTED as an instrument under seal as of the date first set forth above.

LANDLORD:

Belmont Crossroads Realty Trust
a Massachusetts realty trust

By: _____
Name: Diane A. Torcì
Title: Trustee, duly authorized

TENANT:

Calverde Naturals, LLC
a Massachusetts limited liability company

By: _____
Name: Stephen Tomasello
Title: MANAGER, duly authorized

DISPENSING PROCEDURES

Access to Calverde Naturals, LLC 's ("Calverde") facility is limited to individuals 25 years of age and older (per Belmont's requirements). Upon a customer's entry into Calverde premises, a Calverde agent will immediately inspect the customer's proof of identification and determine the individual's age. An individual will not be admitted to the premises unless the retailer has verified that the individual is 25 years of age or older by an individual's proof of identification. At the door, a designated staff member will collect valid customer identification and confirm a minimum age of 25 years old, failing the confirmation of 25 years of age or older, an individual will be prohibited from entering the premises.

Once inside the retail area, customers will enter a queue to obtain individualized service where they may select any of the products available to them with the help of a Calverde agent.

Upon checkout, customers will be required to confirm their identities and age a second time. Check out also activates Metrc and Calverde's seed-to-sale tracking system that is compliant with 935 CMR 500.105(8) and does not allow for transactions in excess of daily sales limitations or potency level violations. Per M.G.L. c. 94G § 7, sales are limited to one ounce of marijuana flower or its combined dry weight equivalent in Marijuana concentrate or edible Marijuana Products to a retail customer per day. One ounce of Marijuana flower shall be equivalent to five grams of active tetrahydrocannabinol (THC) in Marijuana concentrate, including but not limited to Tinctures. One ounce of Marijuana flower shall be equivalent to five hundred milligrams of active tetrahydrocannabinol (THC) in edible Marijuana Products. Topicals and ointments shall not be subject to a limitation on daily sales. Calverde will not sell Marijuana or Marijuana Products in excess of the potency levels established by 935 CMR 500.150(4). All required taxes will be collected at the point of sale. Calverde will adopt separate accounting practices at the point-of-sale for Marijuana and Marijuana Product sales, and non-Marijuana sales. In accordance with 935 CMR 500.140(4)(d)-(e), Calverde will not sell marijuana products containing nicotine or alcohol if the sale of such alcohol would require licensure pursuant to M.G.L. c. 138.

Once a customer has selected a product for purchase, a Calverde agent will collect the chosen items from the designated product storage area. A Calverde agent will then scan each product barcode into the point of sale system. Calverde will only utilize a point-of-sale system approved by the Commission in consultation with the Department of Revenue and will not utilize software or other methods to manipulate or alter sales data. In the event of a flower sale, staff will weigh the chosen amount of flower and then place it in a tamper-resistant/child-resistant, resealable package that is compliant with 935 CMR 500.105(6). A Calverde agent will affix a label, as generated by the point of sale system, indicating the date, strain name, cannabinoid profile, and all applicable warnings detailed in 935 CMR 500.105.

In the event a Calverde agent determines an individual would place themselves or the public at risk, the agent will refuse to sell any marijuana products to the consumer. This includes, but is not limited to, a Consumer engaging in daily transactions that exceed the legal possession limits or that create a risk of diversion. Calverde will use the point of sale security system to accept payment and complete sales. The system can back up and securely cache each sale for inspection.

Calverde will not acquire or record a consumer's personal information, other than information typically required in a retail transaction, which can include identifying information to determine a consumer's age. Calverde will not record or retain any additional personal information from a consumer without the Consumer's voluntary written permission.

Pursuant to 935 CMR 500.140(5)(d), Calverde will conduct a monthly analysis of its equipment and sales data to determine that no software has been installed that could be utilized to manipulate or alter sales data and that no other methodology has been employed to manipulate or alter sales data. If any such malware is found, Calverde will immediately report the occurrence to the Commission and assist in any subsequent investigation into the matter. Calverde will maintain a record of the monthly analyses and will make it available for inspection by the Commission upon request. Further, Calverde will cooperate with the Commission and the Department of Revenue to ensure compliance with any and all taxes in accordance with the laws of the Commonwealth and 935 CMR 500.000.

Should Calverde elect to enter into Delivery Agreements with Delivery-Only Retailers for the purpose of transacting home deliveries to Consumers under 935 CMR 500.050(9), Calverde will establish a Pre-Verification process for Consumers who intend to place orders for delivery with the Calverde. To comply with the requirements of pre-verification, the Calverde shall require the Consumer to appear in-person at Calverde to present the Consumer's valid, unexpired government-issued photo identification and examine the identification and verify that the individual Consumer presenting the identification is the individual Consumer that matches the identification and that the individual Consumer is 25 years of age or older Calverde will collect and maintain relevant information about the individual Consumer, for the purpose of transacting a delivery and ensuring that the recipient of a delivery under 935 CMR 500.145: *Additional Operational Requirements for Delivery of Marijuana and Marijuana Products to Consumers* is legally allowed to receive Marijuana and Marijuana Products, including the individual's name, date of birth, address, telephone number, and email address. Any such information collected by Calverde shall be used solely for the purpose of transacting a delivery of Marijuana or Marijuana Products and shall be otherwise maintained confidentially.

Calverde places a premium on cleanliness, hygiene, and proper product storage to achieve and maintain successful operation of the business. In addition to regularly sanitizing surfaces with products kept separately and away from marijuana products, Calverde staff will ensure personal hygiene including washing hands throughout the day and before handling or dispensing any marijuana products. All products available for sale and consumption will be tested for impurities and subjected to Calverde's policies governing quality control per 935 CMR 500.105.

In compliance with 935 CMR 500.140(6), Calverde will make educational materials available to consumers (in adequate supply) in commonly spoken languages, which will include but not be limited to appropriate materials for the visually and hearing impaired designed to assist in the selection of marijuana and marijuana products. Calverde's educational materials will describe the varying types of products available at Calverde, as well as the types and methods of consumption. The materials will offer education on cannabis titration: the method of using the smallest amount of a given marijuana product necessary to bring about the desired effect.

Additional topics discussed in consumer materials will include potency; proper dosage; information to assist in the selection of marijuana; the delayed effects of edible marijuana products; and facts regarding substance abuse signs and symptoms and related treatment programs, marijuana tolerance, dependence, and withdrawal. Consumers will be provided a material that will enable them to track the strains used and the associated effects. Calverde agents will be available to discuss the associated effects of specific strains and products at the dispensary, by telephone and via email. The consumer education materials will include the following:

- A warning that marijuana has not been analyzed or approved by the FDA, that there is limited information on side effects, that there may be health risks associated with using marijuana, and that it should be kept away from children;
- A warning that when under the influence of marijuana, driving is prohibited by M.G.L. c. 90, § 24, and machinery should not be operated;
- A statement that consumers may not sell marijuana to any other individual; and
- Information regarding penalties for possession or distribution of marijuana in violation of Massachusetts law.

PLAN FOR RESTRICTING ACCESS

Calverde Naturals, LLC ("Calverde") will only be accessible to individuals, visitors, and agents who are 25 years of age or older with a verified and valid government-issued photo ID (per Belmont requirements). Upon entry into the premises of the marijuana establishment by an individual, visitor, or agent, a Calverde agent will immediately inspect the person's proof of identification and determine the person's age, in accordance with 935 CMR 500.140(2) and Belmont Board of Health Regulations.

In the event Calverde discovers any of its agents intentionally or negligently sold marijuana to an individual under the age of 25, the agent will be immediately terminated, and the Commission will be promptly notified, pursuant to 935 CMR 500.105(1)(m). Calverde will not hire any individuals who are under the age of 25 or who have been convicted of distribution of controlled substances to minors in the Commonwealth or a like violation of the laws in other jurisdictions, pursuant to 935 CMR 500.030(1) and Belmont Board of Health regulations.

Pursuant to 935 CMR 500.105(4), Calverde will not engage in any marketing, advertising or branding practices that are targeted to, deemed to appeal to or portray minors under the age of 21. Calverde will not engage in any advertising, marketing and branding by means of television, radio, internet, mobile applications, social media, or other electronic communication, billboard or other outdoor advertising, including sponsorship of charitable, sporting or similar events, unless at least 85% of the audience is reasonably expected to be 21 years of age or older as determined by reliable and current audience composition data. Calverde will not manufacture or sell any edible products that resemble a realistic or fictional human, animal or fruit, including artistic, caricature or cartoon renderings, pursuant to 935 CMR 500.150(1)(b). In accordance with 935 CMR 500.105(4)(a)(5), any marketing, advertising and branding materials for public viewing will include a warning stating, "**For use only by adults 21 years of age or older. Keep out of the reach of children. Marijuana can impair concentration, coordination and judgment. Do not operate a vehicle or machinery under the influence of marijuana. Please Consume Responsibly.**" Pursuant to 935 CMR 500.105(6)(b), Calverde packaging for any marijuana or marijuana products will not use bright colors, resemble existing branded products, feature cartoons or celebrities commonly used to market products to minors, feature images of minors or other words that refer to products commonly associated with minors or otherwise be attractive to minors. Calverde's website will require all online visitors to verify they are 21 years of age or older prior to accessing the website, in accordance with 935 CMR 500.105(4)(b)(13).

PREVENTION OF DIVERSION

Calverde Naturals, LLC 's ("Calverde") operating policies and procedures ensure prevention of diversion, theft, and illegal or unauthorized conduct pursuant to the Commission's Adult Use of Marijuana regulations codified in 935 CMR 500.000. Considerations regarding diversion prevention measures include, but are not limited to, marijuana establishment agent and consumer accountability, and identifying, recording, and reporting diversion, theft, or loss. Marijuana in the process of transport, analysis, or retail sale is to be stored and tracked in a manner that prevents diversion, theft, or loss.

More specifically, diversion measures include policies and procedures requiring that:

- Identification will be verified on the premises to ensure that only individuals 25 years or older are permitted in Calverde's adult-use marijuana establishment (per Belmont's requirements).
- Providing samples or giving away marijuana to consumers is prohibited (except in the case of co-located facilities where MTC applicants are providing reduced cost or free marijuana to patients with documented verified financial hardship).
- Employees are made aware of crime prevention techniques pursuant to 935 CMR 500.105(1)(b).
- Any marijuana establishment agent who has diverted marijuana will be immediately dismissed, which will be reported to law enforcement and to the Commission pursuant to 935 CMR 500.105(1)(m).
- All employees involved in the handling and sale of marijuana for adult use will complete a responsible vendor training program with a curriculum covering diversion prevention and prevention of sales to minors and will comply with all other marijuana establishment agent training requirements under 935 CMR 500.105(2).
- Display samples of each product offered for sale will be displayed in secure, locked cases, subject to the requirements of 935 CMR 500.110.
- Calverde will only engage in reasonable marketing, advertising, and branding practices that do not promote the diversion of marijuana and that comply with all other marketing and advertising requirements under 935 CMR 500.105(4).
- Warning statements required by the Commission's regulations will be affixed to all applicable products, and Calverde's labels will comply with all other labeling of marijuana and marijuana products requirements under 935 CMR 500.105(5).
- Tamper or child-resistant packaging will be used for applicable marijuana products, and Calverde's products will comply with all other packaging of marijuana and marijuana products requirements under 935 CMR 500.105(6).
- Calverde will maintain real-time inventory and will track and tag all marijuana seeds, clones, plants, and marijuana products, using Metrc as the seed-to-sale methodology in a form and manner to be approved by the Commission.
- Records will be kept for inventory, seed-to-sale tracking for all marijuana products, personnel (including documentation of the completion of required training), and waste disposal, and Calverde will comply with all other record keeping requirements under 935 CMR 500.105(9).
- Marijuana that is outdated, damaged, deteriorated, mislabeled, or contaminated, or whose containers or packaging have been opened or breached, will be stored in a separate area,

until such products are destroyed; and Calverde will comply with all other storage requirements under 935 CMR 500.105(11).

- Two or more marijuana establishment agents will witness and document how the marijuana waste is disposed or otherwise handled, and Calverde will comply with all other waste disposal requirements under 935 CMR 500.105(12).
- All transported marijuana products will be linked to Metrc; all vehicles transporting marijuana will be staffed with a minimum of two marijuana establishment agents; and any vehicle accidents, diversions, or other reportable incidents that occur during transport will be reported to the Commission and law enforcement within 24 hours. Calverde will comply with all other transportation requirements under 935 CMR 500.105(13).
- All security requirements under 935 CMR 500.110 will be followed, including:
    - Implementing sufficient safety measures to deter theft of marijuana and marijuana products and prevent unauthorized entrance into areas containing marijuana and marijuana products at Calverde's adult-use marijuana establishment location to protect the premises, employees, Calverde's agents, consumers, and the general public;
    - Adopting procedures to prevent loitering and to ensure that only individuals engaging in activity expressly or by necessary implication permitted by the Commission's regulations and its enabling statute are allowed to remain on the premises;
    - Storing all finished marijuana products in a secure, locked safe or vault in such a manner as to prevent diversion, theft, and loss;
    - Restricting access to employees, agents or volunteers specifically permitted by Calverde, agents of the Commission, state and local law enforcement and emergency personnel, and all other limited access areas requirements under 935 CMR 500.110(4);
    - Implementing an adequate security system to prevent and detect diversion, theft or loss of marijuana, notifying law enforcement and the Commission within 24 hours of a diversion, theft or loss of any marijuana product, and all other security and alarm requirements under 935 CMR 500.110(5); and
    - Obtaining, at Calverde's own expense, a security system audit by a vendor approved by the Commission, and all other security audits requirements under 935 CMR 500.110(10).
- All other additional operating requirements for retail sale under 935 CMR 500.140 will be followed, including:
    - Limiting sales to one ounce of marijuana or five grams of marijuana concentrate to a consumer per day;
    - Utilizing a point-of-sale (POS) system approved by the Commission, in consultation with the DOR, and in conjunction with Metrc;
    - Providing educational materials to consumers stating that they may not sell marijuana to any other individual and which include information regarding penalties for possession and distribution of marijuana in violation of Massachusetts law, as well as any other information required by the Commission.

SECURITY PLAN

General Security Overview

Calverde Naturals, LLC ("Calverde") will implement policies and procedures to maintain a secure facility and to prevent diversion or other loss of marijuana products in accordance with 935 CMR 500.110 as set out by the Cannabis Control Commission ("Commission"). These policies are intended to protect the general public, employees, visitors, and customers. Calverde will identify each individual seeking entrance into the marijuana establishment to ensure that only licensed and permitted marijuana establishment agents and such other individuals permitted by 935 CMR 500.000 are allowed access. These policies will also provide for the proper storage and disposal of marijuana products. Calverde will ensure that all excess marijuana is disposed of safely and will have in place the necessary storage areas and equipment for proper storage of marijuana, included established limited access areas. This equipment will include but is not limited to locked safes or vaults, keys, alarms, and cameras. In addition to these measures, Calverde will ensure that all marijuana products are kept out of plain sight of public places outside of the marijuana establishment. Calverde will also implement policies and procedures for situations following inadvertent diversion or loss of marijuana products. Calverde will work cohesively with law enforcement authorities and fire services and will share Calverde's security plans, policies, and procedures with those authorities.

Access to the Premises

Calverde will implement security protocols and procedures to limit access to the licensed premises to only individuals that have been positively identified as 25 years of age or older (per Belmont's requirements). Loitering will be strictly prohibited. Calverde will ensure that only individuals engaging in activity expressly or by necessary implication permitted by the Commission or applicable laws are allowed to remain on the premises. All entrances to the facility will be clearly marked and secured with commercial grade locks, alarms and remain under clear surveillance 24 hours a day, 7 days a week to prevent unauthorized access.

Limited Access Areas

Calverde will designate limited access areas by posting clearly visible signs, no smaller than 12" x 12" and which state: "Do Not Enter-Limited Access Area-Access Limited to Authorized Personnel Only" in lettering no smaller than one inch in height. Limited access areas will only be accessible to specifically authorized personnel limited to include only the minimum number of employees essential for efficient operation. Furthermore, limited access areas will be restricted to employees, agents or volunteers specifically permitted by the Marijuana Establishment, agents of the Commission, state and local law enforcement and emergency personnel. All limited access areas will be clearly described by the filing of a diagram of the premises reflecting entrances and exits, walls, partitions, retail, storage, and disposal areas.

Calverde will require all employees to wear employee identification badges at all times while inside the marijuana establishment.

Visitor Policy

All outside vendors, contractors and visitors will be logged in and out, and Calverde will maintain this log and make it available to the Commission for periodic inspection. Prior to

entering a limited access area, vendors, contractors and visitors will obtain a visitor badge and will be escorted at all times by a marijuana establishment agent authorized to enter the limited access area. Visitor badges will be visibly displayed at all times while the visitor is in any limited access area. Calverde will ensure that all visitor identification badges are collected before visitors leave the premises.

Security and Alarm Requirements

Calverde will ensure that all outdoor areas of the facility are properly secured against unauthorized access. Measures taken by Calverde will include clear signage designating the area as a limited access area, commercial-grade locks, security alarms, and video cameras. The security alarm system will be continuously monitored by a third party and will alert employees of Calverde within five minutes of a system failure (either by telephone, email, or text message). Calverde will install video cameras at all entrances and exits as well as in any parking lot. Calverde will ensure that all video surveillance footage is maintained in accordance with 935 CMR 500.110, can produce clear still photos with a date and time stamp embedded in all recordings, and can be stored in a standard format. 24-hour recordings from all video cameras will be made available for immediate viewing by the Commission. Recordings are retained for at least 90 calendar days or the duration of a request to preserve the recordings for a specified period of time made by the Commission (whichever is longer) and will not be destroyed or altered. Recordings are retained as long as necessary if Calverde is aware of a pending criminal, civil or administrative investigation or legal proceeding for which the recording may contain relevant information. Calverde will ensure that the security equipment is in good working order and will be inspected and tested at regular intervals, not to exceed 30 calendar days from the last test. On an annual basis, Calverde will obtain a security audit by a vendor approved by the Commission. The security audit report will be provided to the Commission within 30 days of conducting the audit.

The interior of the establishment shall have video cameras in all areas that contain marijuana and directed at all safes, vaults, and sales areas. All cameras shall be angled as to allow for the capture of clear and certain identification of any person entering or exiting the establishment. Calverde's facility will be equipped with a perimeter alarm on all building entry and exit points and perimeter windows. A duress, panic or hold up alarm connected directly to local public safety or law enforcement authorities will be installed in the vault and security surveillance area, at a minimum. Calverde's security and alarm system will remain operational during a power outage for a minimum of four hours and, if it appears likely that the outage will last for more than four hours, Calverde will take sufficient steps to ensure security on the premises in consultation with the Commission. Calverde will demonstrate to the Commission's satisfaction the safeguards that are in place to ensure continuous operation of a security system. All security system equipment and recordings will be maintained in a secure location to prevent theft, loss, destruction and alterations. Access to security system equipment and recordings will be limited to authorized agents requiring access in accordance with their operational responsibilities and those other individuals expressly allowed access pursuant to 935 CMR 500.000.

Waste Disposal

In accordance with Calverde's waste disposal policies and procedures, all waste will be disposed of in compliance with 935 CMR 500.105(12). Liquid waste containing marijuana or marijuana

byproducts will be disposed of in compliance with all applicable state and federal requirements, including but not limited to, for discharge of pollutants into surface water or groundwater or stored pending disposal in an industrial wastewater holding tank in accordance with 314 CMR 18.00: Industrial Wastewater Holding Tanks and Containers. Any Marijuana containing organic material (as defined in 310 CMR 16.02: Definitions) will be ground up and mixed with other organic material (as defined in 310 CMR 16.02: Definitions) at the facility such that the resulting mixture renders any Marijuana unusable for its original purpose. Once such Marijuana has been rendered unusable, the organic material may be composted or digested at an aerobic or anaerobic digester at an operation that is in compliance with the requirements of 310 CMR 16.00: Site Assignment Regulations for Solid Waste Facilities.

Solid waste containing marijuana will be ground up and mixed with solid wastes such that the resulting mixture renders the marijuana unusable for its original purposes. Once such marijuana waste has been rendered unusable, it will be brought to a solid waste transfer facility or a solid waste disposal facility that holds a valid permit issued by the Department of Environmental Protection or by the appropriate state agency in the state in which the facility is located. A minimum of two marijuana establishment agents will be present and properly document the disposal of marijuana waste in accordance with 935 CMR 500.105(12)(d).

Storage and Facility Security

All finished marijuana and marijuana products will be securely stored in a locked safe or vault accessible to a limited number of authorized individuals to prevent diversion, theft, or loss. Calverde's safes and vaults and any other equipment or areas used for the production, cultivation, harvesting, processing, or storage of marijuana and marijuana products will be securely locked. In accordance with Calverde's security policies and procedures, the safes, vaults and any other aforementioned areas or equipment will be securely locked using commercial grade equipment and protected from entry, except for the actual time required to remove or replace marijuana. Calverde will keep all locks and security equipment in good working order. Keys, if utilized by Calverde, will be prohibited from being left in locks and stored or placed in an area accessible to persons other than specifically authorized personnel. In addition, Calverde will maintain a list of individuals with access to keys and a policy for key issuance and lock replacement. Security measures will be strictly limited to specifically authorized marijuana establishment agents including accessibility of combination numbers, passcodes, electronic or biometric security systems.

The outside perimeter of the facility will be sufficiently lit to facilitate surveillance. All trees, bushes, and other foliage outside the establishment shall be maintained to prevent persons concealing themselves from sight. Calverde will keep all marijuana products out of plain site and not visible from a public place without the use of binoculars, optical aids or aircraft.

Emergency Policies and Incident Reporting

Calverde will develop emergency policies and procedures for securing all product following any instance of diversion, theft or loss of marijuana, and conduct an assessment to determine whether additional safeguards are necessary. All security policies and procedures will be shared with local law enforcement authorities and fire services and periodically if the plans or procedures are modified in a material way.

Calverde will immediately notify law enforcement authorities and the Commission of any security breach including, but not limited to, discovery of discrepancies identified during inventory, diversion or loss of any marijuana product, any criminal action involving or occurring on or in the Marijuana Establishment premises, any loss or unauthorized alteration of records related to marijuana, suspicious actions involving the sale, cultivation, distribution, processing or production of marijuana by any person, unauthorized destruction of marijuana, failure of an alarm system due to a loss of electrical power or mechanical malfunction that is expected to last more than eight hours, activation of an alarm system or other event that requires response by public safety personnel or security personnel, or any other breach of security. Notification will be immediate, and in no instances, more than 24 hours after the incident occurs. Calverde will provide written notice in the form of an incident report to the Commission within ten calendar days of any incident described in 935 CMR 500.110(9)(a). Calverde will maintain records and documentation of any reportable incident for not less than one year or the duration of an open investigation, whichever is longer, and made available to the Commission and Law Enforcement Authorities within their lawful jurisdiction on request.

Cash Handling and Transportation Requirements

If Calverde enters into a contract to deposit funds with a financial institution that conducts any transaction in cash, Calverde will establish and implement adequate security measures and procedures for safe cash handling and cash transportation to financial institutions or DOR facilities to prevent theft and loss, and to mitigate associated risks to the safety of employees, customers, and the general public. Adequate security measures will include:

1. An on-site secure locked safe or vault maintained in an area separate from retail sales areas used exclusively for the purpose of securing cash;
2. Video cameras directed to provide images of areas where cash is kept, handled and packaged for transport to financial institutions or DOR facilities, provided that the cameras may be motion-sensor activated cameras and provided, further, that all cameras be able to produce a clear, still image whether live or recorded;
3. A written process for securing cash and ensuring transfers of deposits to Calverde's financial institutions and DOR facilities on an incremental basis consistent with the requirements for deposit by the financial institution or DOR facilities; and
4. Use of an armored transport provider that is licensed pursuant to M.G.L. c. 147, § 25 (watch, guard or patrol agency) and has been approved by the financial institution or DOR facility.

Notwithstanding the requirement of 935 CMR 500.110(7)(a)(4), Calverde may request an alternative security provision under 935 CMR 500.110(2) for purposes of cash transportation to financial institutions and DOR facilities. Any approved alternative security provision will be included in the security plan shared with law enforcement in the municipality in which Calverde is licensed and periodically updated as required under 935 CMR 500.110(1)(q). To be determined to provide a sufficient alternative, any such alternative safeguard shall include, but may not be limited to:

1. Requiring the use of a locked bag for the transportation of cash from a Calverde facility to a financial institution or DOR facility;
2. Requiring any transportation of cash be conducted in an unmarked vehicle;

3. Requiring two registered Marijuana Establishment Agents employed by Calverde to be present in the vehicle at all times during transportation of deposits;
4. Requiring real-time GPS tracking of the vehicle at all times when transporting cash;
5. Requiring access to two-way communications between the transportation vehicle and Calverde;
6. Prohibiting the transportation of Marijuana or Marijuana Products at the same time that cash is being transported for deposit to a financial institution or DOR facility; and
7. Approval of the alternative safeguard by the financial institution or DOR facility.

All written safety and security measures developed under 935 CMR 500.105(7) will be treated as security planning documents, the public disclosure of which would jeopardize public safety.

<u>After-Hours Contact Information</u>
Kelly Tomasello
Kcronin611@gmail.com
617-281-0878

Steve Tomasello
stomasello@atlanticretail.com
617-797-2999

<u>Business Hours (Subject to Approval by the Special Permit Granting Authority)</u>
Monday: 8:00 a.m. – 8:00 p.m.
Tuesday: 8:00 a.m. – 8:00 p.m.
Wednesday: 8:00 a.m. – 8:00 p.m.
Thursday: 8:00 a.m. – 8:00 p.m.
Friday: 8:00 a.m. – 8:00 p.m.
Saturday: 8:00 a.m. – 8:00 p.m.
Sunday: 8:00 a.m. – 8:00 p.m.

QUALIFICATIONS AND TRAINING

Calverde Naturals, LLC ("Calverde") will ensure that all employees hired to work at a Calverde facility will be qualified to work as a marijuana establishment agent and properly trained to serve in their respective roles in a compliant manner.

Qualifications

A candidate for employment as a marijuana establishment agent must be 25 years of age or older (per Belmont's requirements). In addition, the candidate cannot have been convicted of a criminal offense in the Commonwealth involving the distribution of controlled substances to minors, or a like violation of the laws of another state, the United States, or foreign jurisdiction, or a military, territorial, or Native American tribal authority.

Calverde will also ensure that its employees are suitable for registration consistent with the provisions of 935 CMR 500.802. In the event that Calverde discovers any of its agents are not suitable for registration as a marijuana establishment agent, the agent's employment will be terminated, and Calverde will notify the Commission within one (1) business day that the agent is no longer associated with the establishment.

Training

As required by 935 CMR 500.105(2), and prior to performing job functions, each of Calverde's agents will successfully complete a comprehensive training program that is tailored to the roles and responsibilities of the agent's job function. Agent training will at least include the Responsible Vendor Training Program and eight (8) hours of on-going training annually.

All of Calverde's current Owners, managers, and employees that are involved in the handling and sale of marijuana at the time of licensure or renewal of licensure will have attended and successfully completed the mandatory Responsible Vendor Training Program operated by an education provider accredited by the Commission to provide the annual minimum of three (3) hours of required training to marijuana establishment agents to be designated a "Responsible Vendor". Once Calverde is designated a "Responsible Vendor", all new employees involved in the handling and sale of marijuana will successfully complete a Responsible Vendor Training Program within 90 days of the date they are hired. After initial successful completion of a Response Vendor Training Program, each Owner, manager, and employee involved in the handling and sale of marijuana will successfully complete the program once every year thereafter to maintain designation as a "Responsible Vendor".

Calverde will also encourage administrative employees who do not handle or sell marijuana to take the "Responsible Vendor" program on a voluntary basis to help ensure compliance. Calverde's records of Responsible Vendor Training Program compliance will be maintained for at least four (4) years and made available during normal business hours for inspection by the Commission and any other applicable licensing authority on request.

As part of the Responsible Vendor Training Program's agents will receive training on a variety of topics relevant to marijuana establishment operations, including but not limited to the following:

1. Marijuana's effect on the human body, including:
    - Scientifically based evidence on the physical and mental health effects based on the type of Marijuana Product;
    - The amount of time to feel impairment;
    - Visible signs of impairment; and
    - Recognizing signs of impairment
2. Diversion prevention and prevention of sales to minors, including best practices;
3. Compliance with all tracking requirements;
4. Acceptable forms of identification, including:
    - How to check identification;
    - Spotting false identification;
    - Patient registration cards formerly and validly issued by the DPH or currently and validly issued by the Commission; and
    - Common mistakes made in verification
5. Other key state laws and rules affecting Owners, managers, and employees, including:
    - Local and state licensing and enforcement;
    - Incident and notification requirements;
    - Administrative and criminal liability;
    - License sanctions;
    - Waste disposal;
    - Health and safety standards;
    - Patrons prohibited from bringing marijuana onto licensed premises;
    - Permitted hours of sale;
    - Conduct of establishment;
    - Permitting inspections by state and local licensing and enforcement authorities;
    - Licensee responsibilities for activities occurring within licensed premises;
    - Maintenance of records;
    - Privacy issues; and
    - Prohibited purchases and practices.

RECORDKEEPING PROCEDURES

General Overview

Calverde Naturals, LLC ("Calverde") has established policies regarding recordkeeping and record-retention in order to ensure the maintenance, safe keeping, and accessibility of critical documents. Electronic and wet signatures are accepted forms of execution of Calverde documents. Records will be stored at Calverde in a locked room designated for record retention. All written records will be available for inspection by the Commission upon request.

Recordkeeping

To ensure that Calverde is keeping and retaining all records as noted in this policy, reviewing Corporate Records, Business Records, and Personnel Records to ensure completeness, accuracy, and timeliness of such documents will occur as part of Calverde's quarter-end closing procedures. In addition, Calverde's operating procedures will be updated on an ongoing basis as needed and undergo a review by the executive management team on an annual basis.

- Corporate Records
  Corporate Records are defined as those records that require, at a minimum, annual reviews, updates, and renewals, including:
  - Insurance Coverage:
    - Directors & Officers Policy
    - Product Liability Policy
    - General Liability Policy
    - Umbrella Policy
    - Workers Compensation Policy
    - Employer Professional Liability Policy
  - Third-Party Laboratory Contracts
  - Commission Requirements:
    - Annual Agent Registration
    - Annual Marijuana Establishment Registration
  - Local Compliance:
    - Certificate of Occupancy
    - Special Permits
    - Variances
    - Site Plan Approvals
    - As-Built Drawings
  - Corporate Governance:
    - Annual Report
    - Secretary of Commonwealth Filings
- Business Records
  Business Records require ongoing maintenance and updates. These records can be electronic or hard copy (preferably electronic) and at minimum include:
  - Assets and liabilities;
  - Monetary transactions;
  - Books of accounts, which will include journals, ledgers, and supporting documents, agreements, checks, invoices, and vouchers;
  - Sales records including the quantity, form, and cost of marijuana products;

    - Salary and wages paid to each employee, or stipend, executive compensation, bonus, benefit, or item of value paid to any persons having direct or indirect control over the Calverde.
- Personnel Records

  At a minimum, Personnel Records will include:
    - Job descriptions for each agent and volunteer position, as well as organizational charts consistent with the job descriptions;
    - A personnel record for each marijuana establishment agent. Such records will be maintained for at least twelve (12) months after termination of the agent's affiliation with Calverde and will include, at a minimum, the following:
        - All materials submitted to the Commission pursuant to 935 CMR 500.030(2);
        - Documentation of verification of references;
        - The job description or employment contract that includes duties, authority, responsibilities, qualifications, and supervision;
        - Documentation of all required training, including training regarding privacy and confidentiality requirements, and the signed statement of the individual indicating the date, time, and place he or she received said training and the topics discussed, including the name and title of presenters;
        - Documentation of periodic performance evaluations; and
        - A record of any disciplinary action taken.
        - Notice of completed responsible vendor and eight-hour related duty training.
    - A staffing plan that will demonstrate accessible business hours and safe cultivation conditions;
    - Personnel policies and procedures; and
    - All background check reports obtained in accordance with 935 CMR 500.030: Registration of Marijuana Establishment Agents 803 CMR 2.00: Criminal Offender Record Information (CORI).
- Handling and Testing of Marijuana Records
    - Calverde will maintain the results of all testing for a minimum of one (1) year.
- Inventory Records
    - The record of each inventory will include, at a minimum, the date of the inventory, a summary of the inventory findings, and the names, signatures, and titles of the agents who conducted the inventory.
- Seed-to-Sale Tracking Records
    - Calverde will use Metrc as the seed-to-sale tracking software to maintain real-time inventory. The seed-to-sale tracking software inventory reporting will meet the requirements specified by the Commission and 935 CMR 500.105(8)(e), including, at a minimum, an inventory of marijuana plants; marijuana plant-seeds and clones in any phase of development such as propagation, vegetation, flowering; marijuana ready for dispensing; all marijuana products; and all damaged, defective, expired, or contaminated marijuana and marijuana products awaiting disposal.

- Sales Records for Marijuana Retailer
    - Calverde will maintain records that is has performed a monthly analysis of its equipment and sales data to determine that no software has been installed that could be utilized to manipulate or alter sales data and that no other methodology has been employed to manipulate the sales data and produce such records on request to the Commission.
- Incident Reporting Records
    - Within ten (10) calendar days, Calverde will provide notice to the Commission of any incident described in 935 CMR 500.110(9)(a), by submitting an incident report in the form and manner determined by the Commission which details the circumstances of the event, any corrective action taken, and confirmation that the appropriate law enforcement authorities were notified within twenty-four (24) hours of discovering the breach or incident .
    - All documentation related to an incident that is reportable pursuant to 935 CMR 500.110(9)(a) will be maintained by Calverde for no less than one year or the duration of an open investigation, whichever is longer, and made available to the Commission and law enforcement authorities within Calverde's jurisdiction on request.
- Visitor Records
    - A visitor sign-in and sign-out log will be maintained at the security office. The log will include the visitor's name, address, organization or firm, date, time in and out, and the name of the authorized agent who will be escorting the visitor.
- Waste Disposal Records
    - When marijuana or marijuana products are disposed of, Calverde will create and maintain an electronic record of the date, the type and quantity disposed of or handled, the manner of disposal or other handling, the location of disposal or other handling, and the names of the two Calverde agents present during the disposal or other handling, with their signatures. Calverde will keep disposal records for at least three (3) years. This period will automatically be extended for the duration of any enforcement action and may be extended by an order of the Commission.
- Security Records
    - A current list of authorized agents and service personnel that have access to the surveillance room will be available to the Commission upon request.
    - Recordings from all video cameras which shall be enabled to record twenty-four (24) hours each day shall be available for immediate viewing by the Commission on request for at least the preceding ninety (90) calendar days or the duration of a request to preserve the recordings for a specified period of time made by the Commission, whichever is longer.
    - Recordings shall not be destroyed or altered and shall be retained as long as necessary if Calverde is aware of pending criminal, civil or administrative investigation or legal proceeding for which the recording may contain relevant information.
- Transportation Records
    - Calverde will retain all transportation manifests for a minimum of one (1) year and make them available to the Commission upon request.

- Vehicle Records (as applicable)
    - Records that any and all of Calverde's vehicles are properly registered, inspected, and insured in the Commonwealth and shall be made available to the Commission on request.
- Agent Training Records
    - Documentation of all required training, including training regarding privacy and confidentiality requirements, and a signed statement of the individual indicating the date, time, and place he or she received the training, the topics discussed and the name and title of the presenter(s).
- Responsible Vendor Training
    - Calverde shall maintain records of Responsible Vendor Training Program compliance for four (4) years and make them available to inspection by the Commission and any other applicable licensing authority on request during normal business hours.
- Closure
    - In the event Calverde closes, all records will be kept for at least two (2) years at Calverde's expense in a form (electronic, hard copies, etc.) and location acceptable to the Commission. In addition, Calverde will communicate with the Commission during the closure process and accommodate any additional requests the Commission or other agencies may have.
- Written Operating Policies and Procedures

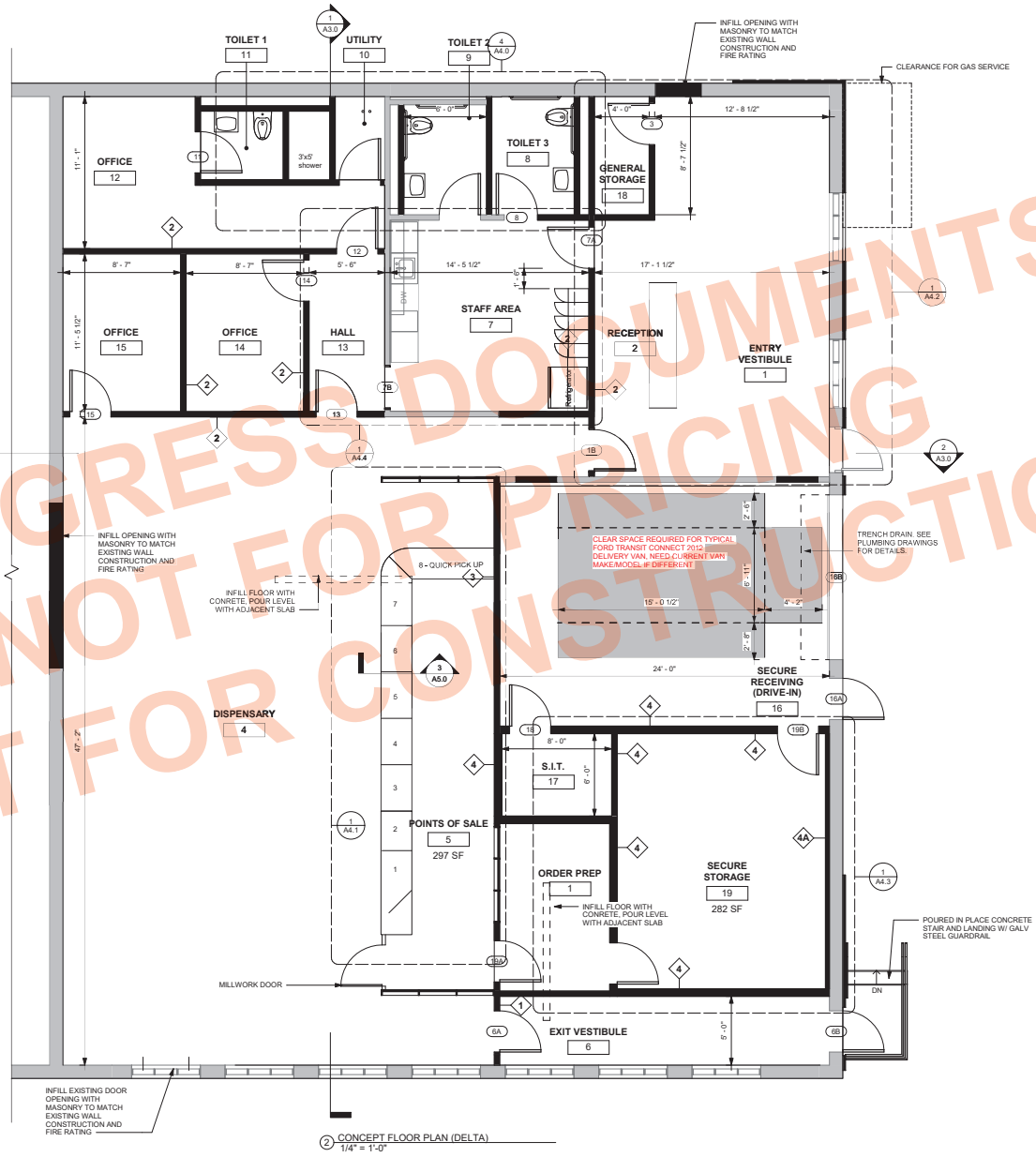
  Policies and Procedures related to Calverde's operations will be updated on an ongoing basis as needed and undergo a review by the executive management team on an annual basis. Policies and Procedures will include the following:
    - Security measures in compliance with 935 CMR 500.110;
    - Employee security policies, including personal safety and crime prevention techniques;
    - A description of Calverde's hours of operation and after-hours contact information, which will be provided to the Commission, made available to law enforcement officials upon request, and updated pursuant to 935 CMR 500.000.
    - Storage of marijuana in compliance with 935 CMR 500.105(11);
    - Description of the various strains of marijuana to be cultivated, processed or sold, as applicable, and the form(s) in which marijuana will be sold;
    - Price list for Marijuana and Marijuana Products, and alternate price lists for patients with documented Verified Financial Hardship as defined in 501.002: *Definitions*, as required by 935 CMR 501.100(1)(f);
    - Procedures to ensure accurate recordkeeping, including inventory protocols in compliance with 935 CMR 500.105(8) and (9);
    - Plans for quality control, including product testing for contaminants in compliance with 935 CMR 500.160;
    - A staffing plan and staffing records in compliance with 935 CMR 500.105(9)(d);
    - Emergency procedures, including a disaster plan with procedures to be followed in case of fire or other emergencies;
    - Alcohol, smoke, and drug-free workplace policies;
    - A plan describing how confidential information will be maintained;
    - Policy for the immediate dismissal of any dispensary agent who has:

        - Diverted marijuana, which will be reported to Law Enforcement Authorities and to the Commission;
        - Engaged in unsafe practices with regard to Calverde operations, which will be reported to the Commission; or
        - Been convicted or entered a guilty plea, plea of *nolo contendere*, or admission to sufficient facts of a felony drug offense involving distribution to a minor in the Commonwealth, or a like violation of the laws of another state, the United States or a foreign jurisdiction, or a military, territorial, or Native American tribal authority.
    - A list of all board of directors, members, and executives of Calverde, and members, if any, of the licensee must be made available upon request by any individual. This requirement may be fulfilled by placing this information on Calverde's website.
    - Policies and procedures for the handling of cash on Calverde premises including but not limited to storage, collection frequency and transport to financial institution(s), to be available upon inspection.
    - Policies and procedures to prevent the diversion of marijuana to individuals younger than 25 years old (per Belmont's requirements).
    - Policies and procedures for energy efficiency and conservation that will include:
        - Identification of potential energy use reduction opportunities (including but not limited to natural lighting, heat recovery ventilation and energy efficiency measures), and a plan for implementation of such opportunities;
        - Consideration of opportunities for renewable energy generation, including, where applicable, submission of building plans showing where energy generators could be placed on site, and an explanation of why the identified opportunities were not pursued, if applicable;
        - Strategies to reduce electric demand (such as lighting schedules, active load management and energy storage); and
        - Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25 § 21, or through municipal lighting plants.
    - Policies and procedures to promote workplace safety consistent with applicable standards set by the Occupational Safety and Health Administration, including plans to identify and address any biological, chemical or physical hazards. Such policies and procedures shall include, at a minimum, a hazard communication plan, personal protective equipment assessment, a fire protection plan, and an emergency action plan.
- <u>License Renewal Records</u>
    - Calverde shall keep and submit as a component of the renewal application documentation that the establishment requested from its Host Community the records of any cost to a city or town reasonably related to the operation of the establishment, which would include the city's or town's anticipated and actual expenses resulting from the operation of the establishment in its community. The applicant shall provide a copy of the electronic or written request, which should include the date of the request, and either the substantive response(s) received or an attestation that no response was received from the city or town. The request should state that, in accordance with M.G.L. c. 94G, § 3(d), any cost to a city or

town imposed by the operation of a Marijuana Establishment or MTC shall be documented and considered a public record as defined by M.G.L. c. 4, § 7, cl. 26.

Record-Retention

Calverde will meet Commission recordkeeping requirements and retain a copy of all records for two (2) years, unless otherwise specified in the regulations.



2 CONCEPT FLOOR PLAN (DELTA)
1/4" = 1'-0"

CAVENEY
architectural collaborative, inc.
128 WARREN ST ■ LOWELL, MA 01852
info@caveneyarch.com
978 - 770 - 0518

OWNER:
NAME
ADDRESS LINE 1
ADDRESS LINE 2
PHONE #
EMAIL

CONSULTANT #1:
COMPANY NAME
COMPANY ADDRESS LINE 1
COMPANY ADDRESS LINE 2
COMPANY PHONE #
COMPANY EMAIL

CONSULTANT #2:
COMPANY NAME
COMPANY ADDRESS LINE 1
COMPANY ADDRESS LINE 2
COMPANY PHONE #
COMPANY EMAIL

CONSULTANT #3:
COMPANY NAME
COMPANY ADDRESS LINE 1
COMPANY ADDRESS LINE 2
COMPANY PHONE #
COMPANY EMAIL

ETC

CAL VERDE BELMONT DISPENSARY
1010 PLEASANT STREET, BELMONT, MA

PRELIMINARY PRICING SET

PROJ. NO. 1909-02
DATE: JANUARY 22, 2021
DRAWN BY: J. MOBERG

REVISIONS		
NO.	DATE	NOTES

MAIN LEVEL FLOOR PLAN

A1.0

PROPOSED SITE PLAN DOCUMENTS

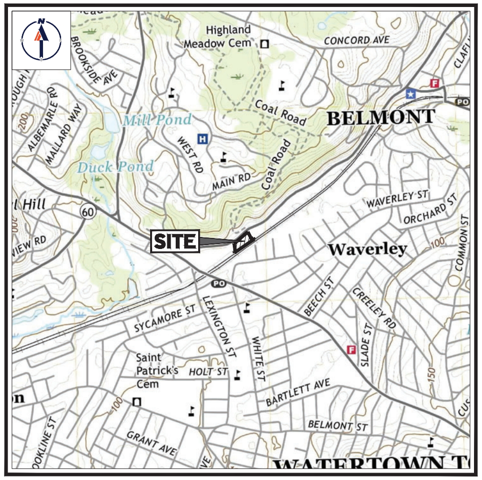
FOR

CAL VERDE NATURALS

PROPOSED

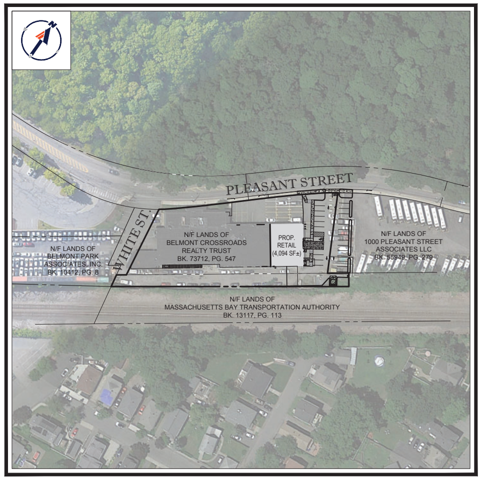
RETAIL DISPENSARY

LOCATION OF SITE:
1010 PLEASANT STREET, TOWN OF BELMONT
MIDDLESEX COUNTY, MASSACHUSETTS
MAP #32, LOT #1



USGS MAP

SCALE: 1" = 1,000'
SOURCE: LEXINGTON MASSACHUSETTS USGS QUADRANGLE



SITE MAP

SCALE: 1" = 100'
SOURCE: GOOGLE AERIAL

DRAWING SHEET INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
GENERAL NOTES SHEET	C-102
DEMOLITION PLAN	C-201
SITE LAYOUT PLAN	C-301
GRADING AND DRAINAGE PLAN	C-401
EROSION AND SEDIMENT CONTROL PLAN	C-601
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	C-602
LANDSCAPE PLAN	C-701
LANDSCAPE NOTES AND DETAILS	C-702
LIGHTING PLAN	C-703
DETAIL SHEET	C-901
BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY (BY OTHERS)	1

PREPARED BY

BOHLER //

BOHLER //
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PERMIT SET

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

CAL VERDE NATURALS

PROPOSED
RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY,
MASSACHUSETTS

BOHLER //
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

C-101

ORG. DATE - 03/30/2021

GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE NOTES AND SPECIFICATIONS CONTAINED HEREIN. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS.

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THIS SITE PLAN:
   - "BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY", PREPARED BY CONTROL POINT ASSOCIATES, INC., DATED 12/16/20.

   PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST VERIFY THAT HE/SHE HAS THE LATEST EDITION OF THE DOCUMENTS REFERENCED ABOVE. THIS IS CONTRACTOR'S RESPONSIBILITY.
2. ALL ACCESSIBLE (A/K/A ADA) PARKING SPACES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 et seq. AND 42 U.S.C. § 4151 et seq.) OR THE REQUIREMENTS OF THE JURISDICTION WHERE THE PROJECT IS TO BE CONSTRUCTED, AND ANY AND ALL AMENDMENTS TO BOTH WHICH ARE IN EFFECT WHEN THESE PLANS ARE COMPLETED.
3. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE COMMENTS TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND CONFIRMED THAT ALL NECESSARY OR REQUIRED PERMITS HAVE BEEN OBTAINED. CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
4. THE OWNER/CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
5. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT.
6. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH HEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN THE PLANS AND THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE ENGINEER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORTS AND PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.
7. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO BOHLER ENGINEERING BY THE OWNER AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS AND NOTIFY BOHLER ENGINEERING, IN WRITING, IMMEDIATELY IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
8. ALL DIMENSIONS SHOWN ON THE PLANS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE REDONE OR REPAIRED DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO CONTRACTOR GIVING ENGINEER WRITTEN NOTIFICATION OF SAME AND ENGINEER, THEREAFTER, PROVIDING CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
9. CONTRACTOR MUST REFER TO THE ARCHITECTURAL/BUILDING PLANS "OF RECORD" FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
10. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE ENTIRE SITE PLAN AND THE LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND SITE ENGINEER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST.
11. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL GOVERNMENTAL AUTHORITIES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER CONTRACTOR.
12. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES.
13. THE CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
14. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND SHALL BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND TO NOTIFY THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
15. ALL CONCRETE MUST BE AIR ENTRAINED AND HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
16. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
17. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY. THE ENGINEER OF RECORD HAS NOT BEEN RETAINED TO PERFORM OR BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF ENGINEER'S SERVICES AS RELATED TO THE PROJECT. THE ENGINEER OF RECORD IS NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES, AT ANY TIME.
18. ALL CONTRACTORS MUST CARRY THE SPECIFIED STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER ENGINEERING, AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSURED AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THIS HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH BOHLER ENGINEERING WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR ONE YEAR AFTER THE COMPLETION OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER ENGINEERING AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS, ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.
19. BOHLER ENGINEERING WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND/OR METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME HEREUNDER. BOHLER ENGINEERING'S SHOP DRAWING REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM MUST NOT INDICATE THAT BOHLER ENGINEERING HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER ENGINEERING WILL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT PROMPTLY AND IMMEDIATELY BROUGHT TO ITS ATTENTION, IN WRITING, BY THE CONTRACTOR. BOHLER ENGINEERING WILL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
20. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER ENGINEERING, NOR THE PRESENCE OF BOHLER ENGINEERING AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER ENGINEERING AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. BOHLER ENGINEERING SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND MUST BE NAMED AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE IN NOTE 19 FOR JOB SITE SAFETY.
21. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER FOR SUCH DEVIATIONS, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, IN ACCORDANCE WITH PARAGRAPH 19 HEREIN, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, PENALTIES AND THE LIKE RELATED TO SAME.
22. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE R.O.W. OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE.
23. ALL SIGNING AND PAVEMENT STRIPING MUST CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR LOCALLY APPROVED SUPPLEMENT.
24. ENGINEER IS NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS. IF CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS.
25. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN AND, FURTHER ENGINEER IS NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.
26. ALL DIMENSIONS MUST BE TO FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, UNLESS NOTED OTHERWISE.
27. ALL CONSTRUCTION AND MATERIALS MUST COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, ORDINANCES, RULES AND CODES, AND ALL APPLICABLE OSHA REQUIREMENTS.
28. CONTRACTOR AND OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.
29. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH EPA REQUIREMENTS FOR SITES WHERE ONE (1) ACRE OR MORE (UNLESS THE LOCAL JURISDICTION REQUIRES FEWER) IS DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE.
30. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED APPLICATION DOCUMENTS PREPARED BY THE SIGNATORY PROFESSIONAL ENGINEER, THE USE OF THE WORDS CERTIFY OR CERTIFICATION CONSTITUTES AN EXPRESSION OF "PROFESSIONAL OPINION" REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE UNDERSIGNED PROFESSIONAL'S KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESSED OR IMPLIED.

GENERAL GRADING & UTILITY PLAN NOTES

1. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE INDEPENDENTLY CONFIRMED WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS MUST BE INDEPENDENTLY CONFIRMED BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES MUST IMMEDIATELY BE REPORTED, IN WRITING, TO THE ENGINEER. CONSTRUCTION MUST COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION, AT NO COST TO THE OWNER. CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT AND/OR DISCREPANCY BETWEEN THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE OR APPLICABLE CODES, REGULATIONS, LAWS, RULES, STATUTES AND/OR ORDINANCES, IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD, IN WRITING, OF SAID CONFLICT AND/OR DISCREPANCY PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR'S FAILURE TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE CONTRACTOR'S FULL AND COMPLETE ACCEPTANCE OF ALL RESPONSIBILITY TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, STATUTES, ORDINANCES AND CODES AND, FURTHER, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SAME.
4. THE CONTRACTOR MUST LOCATE AND CLEARLY AND UNAMBIGUOUSLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE AND INACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
5. THE CONTRACTOR MUST FAMILIARIZE ITSELF WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
6. THE CONTRACTOR MUST INSTALL ALL STORM SEWER AND SANITARY SEWER COMPONENTS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.
7. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS/DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS WITH JURISDICTION AND/OR CONTROL OF THE SITE, AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE SITE PLANS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER, IN WRITING, AND PRIOR TO CONSTRUCTION, RESOLVE SAME.
8. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTOR'S PRICE FOR WATER SERVICE MUST INCLUDE ALL FEES, COSTS AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE FULL AND COMPLETE WORKING SERVICE. CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR TO COMMENCING CONSTRUCTION.
9. ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
10. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS MUST BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.
11. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND MUST BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST, AT A MINIMUM, COMPLY WITH THE STATE DOT REQUIREMENTS AND SPECIFICATIONS AND CONSULTANT SHALL HAVE NO LIABILITY OR RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION AND BACKFILL. FURTHER, CONTRACTOR IS FULLY RESPONSIBLE FOR EARTHWORK BALANCE.
12. THE CONTRACTOR MUST COMPLY, TO THE FULLEST EXTENT, WITH THE LATEST OSHA STANDARDS AND REGULATIONS, AND/OR ANY OTHER AGENCY WITH JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES AND CONSULTANT SHALL HAVE NO RESPONSIBILITY FOR OR AS RELATED FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES.
13. PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES, AND EXCEPT FOR EDGE OF BUTT JOINTS, MUST EXTEND TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
14. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
15. DURING THE INSTALLATION OF SANITARY SEWER, STORM SEWER, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE FROM THE INFORMATION CONTAINED IN THE UTILITY PLAN. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE DRAINAGE OR UTILITY PLAN, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER AT THE COMPLETION OF WORK.
16. WHEN THE SITE IMPROVEMENT PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL LINES, INCLUDING BUT NOT LIMITED TO STORM SEWER, SANITARY SEWER, UTILITIES, AND IRRIGATION LINE, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. CONTRACTOR MUST CAP ENDS AS APPROPRIATE, MARK LOCATIONS WITH A 2X4, AND MUST NOTE THE LOCATION OF ALL OF THE ABOVE ON A CLEAN COPY OF THE DRAINAGE OR UTILITY PLAN, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER UPON COMPLETION OF THE WORK.
17. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. CONTRACTOR MUST CONFIRM AND ENSURE 0.75% MINIMUM SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT (EXCEPT WHERE ADA REQUIREMENTS OR EXISTING TOPOGRAPHY LIMIT GRADES), TO PREVENT PONDING. CONTRACTOR MUST IMMEDIATELY IDENTIFY, IN WRITING TO THE ENGINEER, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER NOTIFICATION, MUST BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS THE DESIGN ENGINEER FOR ANY DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM SAME.
18. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MINIMUM OF 0.75% GUTTER GRADE ALONG CURB FACE. IT IS CONTRACTOR'S OBLIGATION TO ENSURE THAT DESIGN ENGINEER APPROVES FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION OF SAME.
19. IN THE EVENT OF DISCREPANCIES AND/OR CONFLICTS BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE AND CONTROL. CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER, IN WRITING, OF ANY DISCREPANCIES AND/OR CONFLICTS.
20. CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING ANY WORK.
21. WHERE RETAINING WALLS (WHETHER OR NOT THEY MEET THE JURISDICTIONAL DEFINITION) ARE IDENTIFIED ON PLANS, ELEVATIONS IDENTIFIED ARE FOR THE EXPOSED PORTION OF THE WALL. WALL FOOTINGS/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE SET/DETERMINED BY THE CONTRACTOR BASED ON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS.
22. STORM DRAINAGE PIPE:UNLESS INDICATED OTHERWISE, ALL STORM SEWER PIPE MUST BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH SILT TIGHT JOINTS. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS CALLED FOR ON THE PLANS, IT MUST CONFORM TO AASHTO M294 AND TYPE S (SMOOTH INTERIOR WITH ANGULAR CORRUGATIONS) WITH GASKET FOR SILT TIGHT JOINT. PVC PIPE FOR ROOF DRAIN CONNECTION MUST BE SDR 26 OR SCHEDULE 40 UNLESS INDICATED OTHERWISE.
23. UNLESS INDICATED OTHERWISE ON THE DRAWINGS, SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
    - FOR PIPES LESS THAN 12 FT. DEEP: POLYVINYL CHLORIDE (PVC) SDR 35 PER ASTM D3034
    - FOR PIPES MORE THAN 12 FT. DEEP: POLYVINYL CHLORIDE (PVC) SDR 26 PER ASTM D3034
    - FOR PIPE WITHIN 10 FT. OF BUILDING, PIPE MATERIAL SHALL COMPLY WITH APPLICABLE BUILDING AND PLUMBING CODES. CONTRACTOR TO VERIFY WITH LOCAL OFFICIALS.
25. STORM AND SANITARY SEWER PIPE LENGTHS INDICATED ARE NOMINAL AND MEASURED CENTER OF INLET AND/OR MANHOLES STRUCTURE TO CENTER OF STRUCTURE.
26. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON PRELIMINARY ARCHITECTURAL PLANS. CONTRACTOR IS RESPONSIBLE TO AND FOR VERIFYING LOCATIONS OF SAME BASED ON FINAL ARCHITECTURAL PLANS.
27. SEWERS CROSSING STREAMS AND/OR LOCATION WITHIN 10 FEET OF THE STREAM EMBANKMENT, OR WHERE SITE CONDITIONS SO INDICATE, MUST BE CONSTRUCTED OF STEEL, REINFORCED CONCRETE, DUCTILE IRON OR OTHER SUITABLE MATERIAL. SEWERS CONVEYING SANITARY FLOW COMBINED SANITARY AND STORMWATER FLOW OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE GOVERNMENT AGENCY WITH JURISDICTION OVER SAME.
    - WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER MUST BE PROVIDED.
28. WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER PURVEYOR. IN THE ABSENCE OF SUCH REQUIREMENTS, WATER MAIN PIPING MUST BE CEMENT-LINED DUCTILE IRON (DIP) MINIMUM CLASS 52 THICKNESS. ALL PIPE AND APPURTENANCES MUST COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.
29. CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SEWER, WATER AND STORM SYSTEMS, MUST BE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND/OR DOT DETAILS AS APPLICABLE. CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.
30. LOCATION OF PROPOSED UTILITY POLE RELOCATION IS AT THE SOLE DISCRETION OF UTILITY COMPANY.
31. CONSULTANT IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, SHALL HAVE NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.

GENERAL DEMOLITION NOTES

1. THIS PLAN REFERENCES DOCUMENTS AND INFORMATION BY:
   - "BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY", PREPARED BY CONTROL POINT ASSOCIATES, INC., DATED 12/16/20.
2. CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 et seq.), AS AMENDED AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
3. BOHLER ENGINEERING HAS NO CONTRACTUAL, LEGAL, OR OTHER RESPONSIBILITY FOR JOB SITE SAFETY OR JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME.
4. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION, ONLY, REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR MUST ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
5. CONTRACTOR MUST RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS, OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT, WITH BOHLER ENGINEERING, IN WRITING, AND RESPONDED TO BY BOHLER, IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
6. PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR/TO:

   A. OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION WORK.

   B. NOTIFYING, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION DISTRICT, 72 HOURS PRIOR TO THE START OF WORK.

   C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.

   D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARKOUT, IN ADVANCE OF ANY EXCAVATION.

   E. LOCATING AND PROTECTING ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES.

   F. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.

   G. ARRANGING FOR AND COORDINATING WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.

   H. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES. WORK REQUIRED TO BE DONE "OFF-PEAK" IS TO BE DONE AT NO ADDITIONAL COST TO THE OWNER.

   I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK AND IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF THE DISCOVERY OF SUCH MATERIALS.
7. THE FIRM OR ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
8. THE CONTRACTOR MUST PROVIDE ALL "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIR MUST INCLUDE THE RESTORATION OF ANY ITEMS REPAIRED TO THE PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR SHALL PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE.
9. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, AND/OR UNDER THE WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
10. CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS, AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT NEW IMPROVEMENTS AND PERFORMED IN COMPLIANCE WITH THE RECOMMENDATIONS AND GUIDANCE IN THE GEOTECHNICAL REPORT. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES, AND MUST BE DONE SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE.
11. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND ALL APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS MUST BE IN PLACE PRIOR TO CONTRACTOR STARTING AN EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
12. CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FHWA "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY.
13. CONTRACTOR MUST CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE RIGHT-OF-WAY.
14. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT WRITTEN PERMISSION OF THE OWNER AND ALL GOVERNMENTAL AGENCIES WITH JURISDICTION.
15. THE CONTRACTOR MUST USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, CONTRACTOR MUST CLEAN ALL ADJACENT STRUCTURES AND IMPROVEMENTS TO REMOVE ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
16. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
17. CONTRACTOR IS RESPONSIBLE FOR SITE JOB SAFETY, WHICH MUST INCLUDE, BUT NOT BE LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING AND OTHER APPROPRIATE SAFETY ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITY.
18. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION AS TO THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED TO ACCOMPLISH THAT WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
19. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES. THE CONTRACTOR MUST MAINTAIN RECORDS TO DEMONSTRATE PROPER DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
20. CONTRACTOR MUST MAINTAIN A RECORD SET OF PLANS UPON WHICH IS INDICATED THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER, AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK.

ADA INSTRUCTIONS TO CONTRACTOR:

CONTRACTORS MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA (ACCESSIBLE) ACCESSIBLE COMPONENTS AND ACCESS ROUTES FOR THE SITE. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH ALL APPLICABLE STATE AND LOCAL ACCESSIBILITY LAWS AND REGULATIONS AND THE CURRENT ADA AND/OR STATE ARCHITECTURAL ACCESS BOARD STANDARDS AND REGULATIONS' BARRIER FREE ACCESS AND ANY MODIFICATIONS, REVISIONS OR UPDATES TO SAME. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THESE ADA AND/OR ARCHITECTURAL ACCESS BOARD CODE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

- PARKING SPACES AND PARKING AISLES - SLOPE SHALL NOT EXCEED 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.
- CURB RAMPS - SLOPE MUST NOT EXCEED 1:12 (8.3%) FOR A MAXIMUM OF SIX (6) FEET.
- LANDINGS - MUST BE PROVIDED AT EACH END OF RAMPS, MUST PROVIDE POSITIVE DRAINAGE, AND MUST NOT EXCEED 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) IN ANY DIRECTION.
- PATH OF TRAVEL ALONG ACCESSIBLE ROUTE - MUST PROVIDE A 36-INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS CANNOT REDUCE THIS MINIMUM WIDTH). THE SLOPE MUST BE NO GREATER THAN 1:20 (5.0%) IN THE DIRECTION OF TRAVEL, AND MUST NOT EXCEED 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) IN CROSS SLOPE. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), ADA RAMP MUST BE ADHERED TO. A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM RISE OF 2.5 FEET, MUST BE PROVIDED. THE RAMP MUST HAVE ADA HAND RAILS AND "LEVEL" LANDINGS ON EACH END THAT ARE CROSS SLOPED NO MORE THAN 1:50 IN ANY DIRECTION (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE.
- DOORWAYS - MUST HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (1/4" PER FOOT OR NOMINALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO LESS THAN 60 INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE PERMITTED BY ADA STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2003 AND OTHER REFERENCED INCORPORATED BY CODE.)
- WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ADA COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, CONTRACTOR MUST VERIFY EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS, IN WRITING, BEFORE COMMENCEMENT OF WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ADA REQUIREMENTS.
- THE CONTRACTOR MUST VERIFY THE SLOPES OF CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE IS OBSERVED OR EXISTS, CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO POURING CONCRETE. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND REPLACE NON-CONFORMING CONCRETE.

IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TYPICAL ABBREVIATIONS

KEY	DESCRIPTION	KEY	DESCRIPTION
BC	BOTTOM CURB	PROP.	PROPOSED
TC	TOP CURB	TBR/R	TO BE REMOVED AND REPLACED
BOC	BACK OF CURB	TBR	TO BE REMOVED
BW	BOTTOM OF WALL GRADE	TPF	TREE PROTECTION FENCE
TW	TOP OF WALL	BLDG.	BUILDING
EXIST.	EXISTING	SF	SQUARE FEET
BM.	BENCHMARK	SMH	SEWER MANHOLE
EOP	EDGE OF PAVEMENT	DMH	DRAIN MANHOLE
℄	CENTERLINE	STM.	STORM
FF	FINISHED FLOOR	SAN.	SANITARY
V.I.F.	VERIFY IN FIELD	CONC.	CONCRETE
GC	GENERAL CONTRACTOR	ARCH.	ARCHITECTURAL
HP	HIGH POINT	DEP.	DEPRESSED
LP	LOW POINT	R	RADIUS
TYP.	TYPICAL	MIN.	MINIMUM
INT.	INTERSECTION	MAX.	MAXIMUM
PC.	POINT OF CURVATURE	No. / #	NUMBER
PT.	POINT OF TANGENCY	W.	WIDE
PI.	POINT OF INTERSECTION	DEC.	DECORATIVE
PVI.	POINT OF VERTICAL INTERSECTION	ELEV.	ELEVATION
STA.	STATION	UNG.	UNDERGROUND
GRT	GRATE	R.O.W.	RIGHT OF WAY
INV.	INVERT	LF	LINEAR FOOT
DIP	DUCTILE IRON PIPE	LOD	LIMIT OF DISTURBANCE
PVC	POLYVINYL CHLORIDE PIPE	LOW	LIMIT OF WORK
HDPE	HIGH DENSITY POLYETHYLENE PIPE	L.S.A.	LANDSCAPED AREA
RCP	REINFORCED CONCRETE PIPE	±	PLUS OR MINUS
S	SLOPE	°	DEGREE
ME	MEET EXISTING	Ø / DIA.	DIAMETER

TYPICAL LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	SETBACK	
	EASEMENT	
	CURB	
	STORM MANHOLE	
	SEWER MANHOLE	
	CATCH BASIN	
	WETLAND FLAG	
	WETLAND LINE	
54.83	SPOT ELEVATION	53.62
TC 54.58 G 53.78	TOP & BOTTOM OF CURB	
53	CONTOUR	50
	FLOW ARROW	
	PAINTED ARROW	
	RIDGE LINE	
G	GAS LINE	G
T	TELEPHONE LINE	T
E	ELECTRIC LINE	E
W	WATER LINE	W
OH	OVERHEAD WIRE	OH
	STORM PIPE	
	SANITARY LINE	S
	PARKING COUNT	4
	SIGN	
	LIGHT POLE	
	GUIDE RAIL	
	UTILITY POLE	

REFER TO SITE PLAN FOR ZONING ANALYSIS TABLE AND LAND USE/ ZONING INFORMATION & NOTES

REFER TO SOIL EROSION CONTROL NOTES & DETAILS SHEET FOR TYPICAL EROSION NOTES AND DETAILS

REFER TO LANDSCAPE NOTES & DETAILS SHEET FOR TYPICAL LANDSCAPE NOTES AND DETAILS

REFER TO LIGHTING PLAN FOR TYPICAL LIGHTING NOTES AND TABLES

BOHLER // ™

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

CAL VERDE NATURALS

PROPOSED RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY,
MASSACHUSETTS

BOHLER //
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

COMMONWEALTH OF MASSACHUSETTS
JOSHUA S. SWERLING
CIVIL
No. 41697
REGISTERED PROFESSIONAL ENGINEER

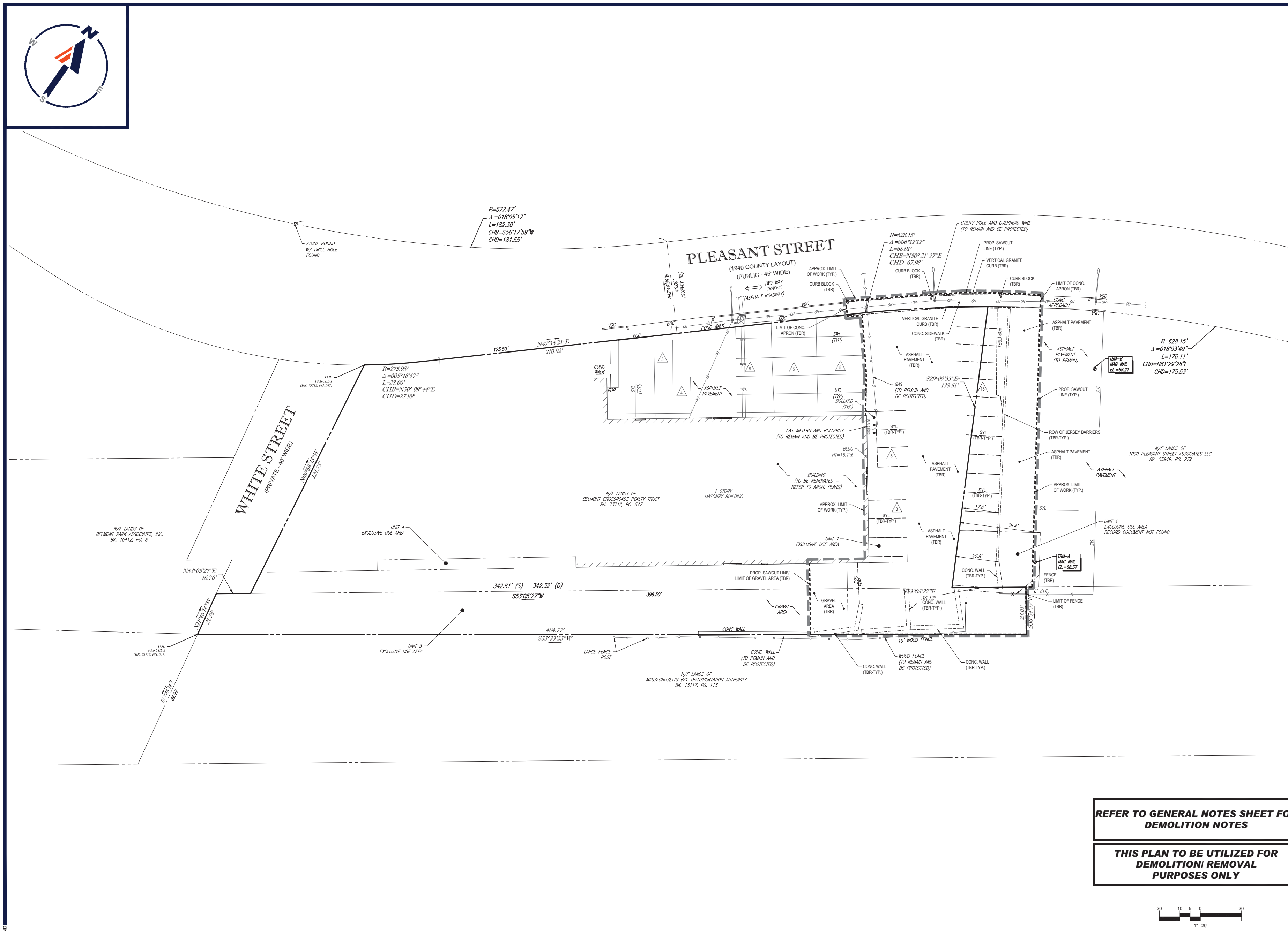
SHEET TITLE:

GENERAL NOTES SHEET

SHEET NUMBER:

C-102

ORG. DATE - 03/30/2021



REFER TO GENERAL NOTES SHEET FOR DEMOLITION NOTES

THIS PLAN TO BE UTILIZED FOR DEMOLITION/ REMOVAL PURPOSES ONLY

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SITE CIVIL AND CONSULTING ENGINEERING
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COMMONWEALTH OF MASSACHUSETTS — CIVIL No. 41697 — REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE:

DEMOLITION PLAN

SHEET NUMBER:

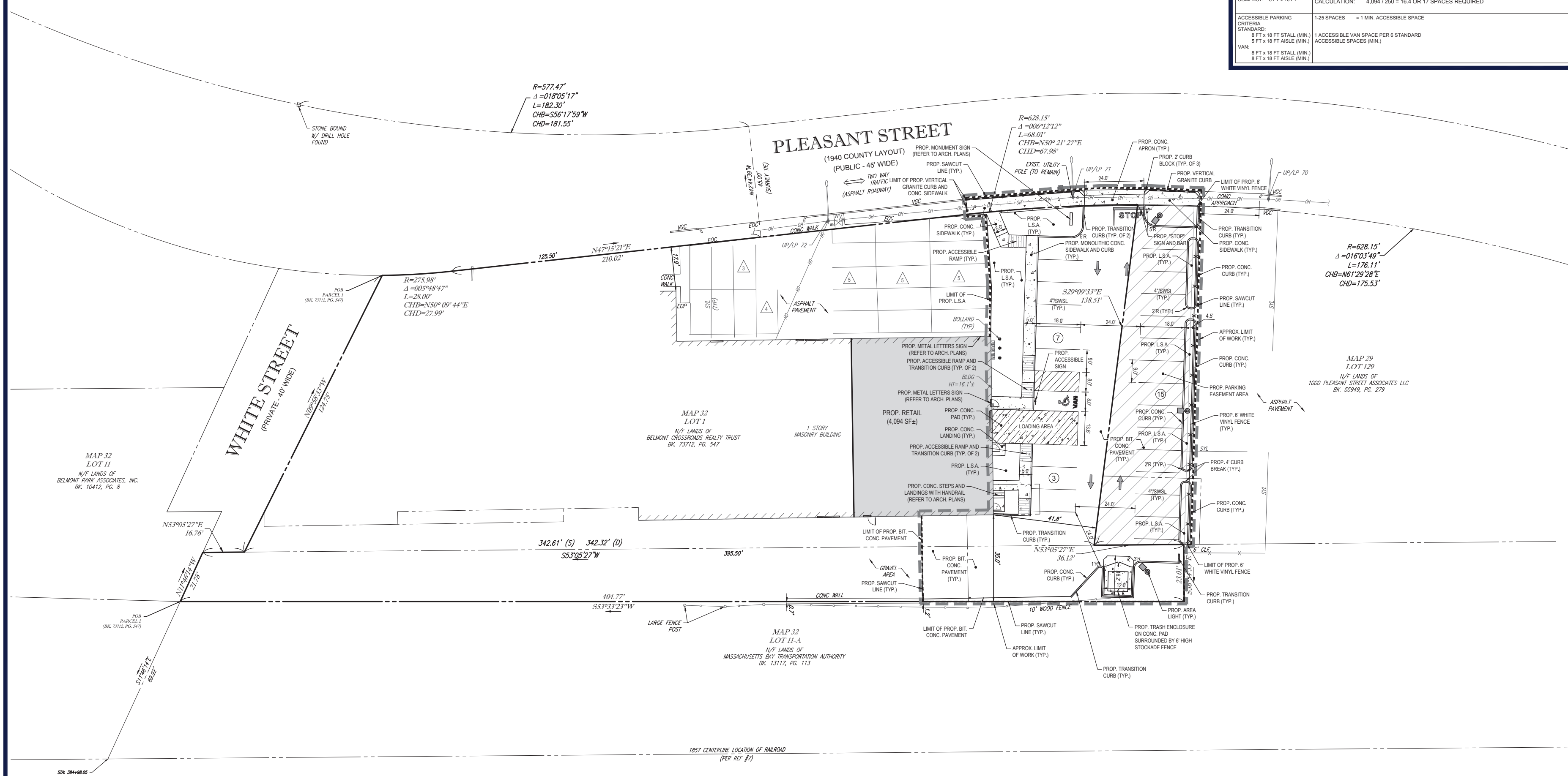
C-201

ORG. DATE - 03/30/2021

ZONING ANALYSIS TABLE

ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
ZONING DISTRICT	LOCAL BUSINESS II		
OVERLAY DISTRICT	S. PLEASANT ST,ADULT USE MARIJUANA,MEDICAL MARIJUANA		
REQUIRED PERMIT	PERMIT FROM SPECIAL PERMIT GRANTING AUTHORITY		
MIN. LOT AREA	N/S	39,910 SF	NO CHANGE
MIN. LOT FRONTAGE	20 FT	306.0 FT	NO CHANGE
MAX. BLDG F.A.R.	1.05	0.51	NO CHANGE
MIN. FRONT SETBACK	10 FT	7.1 FT (E)	NO CHANGE
MIN. SIDE SETBACK	0 FT	0 FT	NO CHANGE
MIN. REAR SETBACK	20 FT	10 FT (E)	NO CHANGE
MAX. BUILDING HEIGHT	32 FT / 2 STORIES	< 32 FT	NO CHANGE
MAX. LOT COVERAGE	35%	51% (E)	NO CHANGE
PARKING SPACES (1)	17	40	25
ACCESS. PARKING SPACES	1	0	1
PARKING STALL CRITERIA STANDARD: 9 FT x 18 FT COMPACT: 8 FT x 16 FT	USE/CATEGORY: RETAIL REQUIRED PARKING: 1 / 250 SF CALCULATION: 4,094 / 250 = 16.4 OR 17 SPACES REQUIRED		
ACCESSIBLE PARKING CRITERIA STANDARD: 8 FT x 18 FT STALL (MIN.) 5 FT x 18 FT AISLE (MIN.) VAN: 8 FT x 18 FT STALL (MIN.) 8 FT x 18 FT AISLE (MIN.)	1-25 SPACES = 1 MIN. ACCESSIBLE SPACE 1 ACCESSIBLE VAN SPACE PER 6 STANDARD ACCESSIBLE SPACES (MIN.)		

N/A - NOT APPLICABLE
N/S - NOT SPECIFIED
(V) - VARIANCE REQUESTED
(W) - WAIVER REQUESTED
(E) - EXIST. NON-CONFORMANCE
(1) - FOR THE 4,094 SF RETAIL DISPENSARY USE



THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL NOTES

20 10 5 0 20
1"= 20'

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PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

CAL VERDE NATURALS

PROPOSED RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY, MASSACHUSETTS

BOHLER
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

COMMONWEALTH OF MASSACHUSETTS
CIVIL
No. 41697
REGISTERED PROFESSIONAL ENGINEER

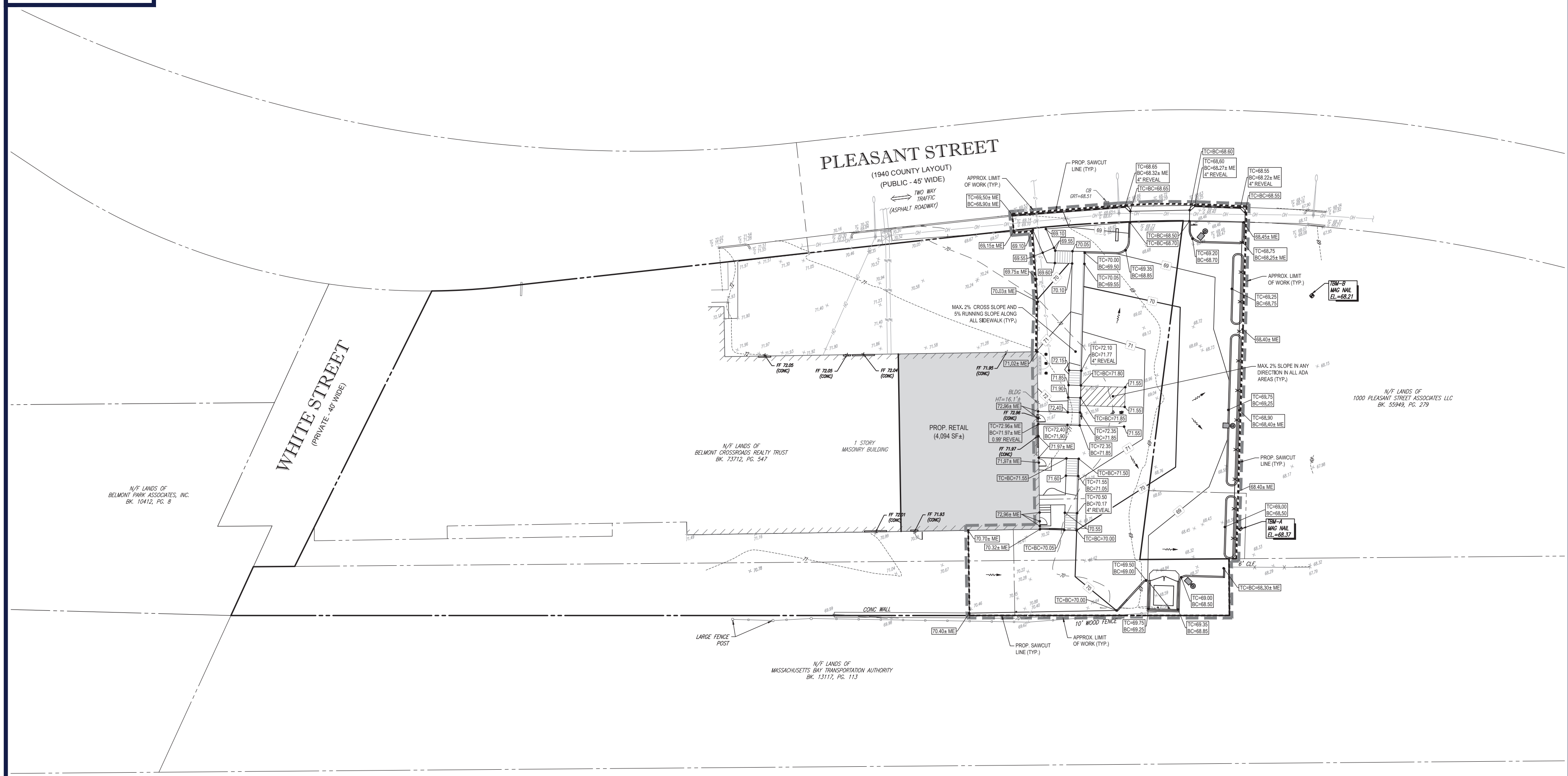
SHEET TITLE:

SITE LAYOUT PLAN

SHEET NUMBER:

C-301

ORG. DATE - 03/30/2021



THIS PLAN TO BE UTILIZED FOR SITE GRADING PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL GRADING & UTILITY NOTES

1"= 20'

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PROJECT:

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CIVIL
No. 41697
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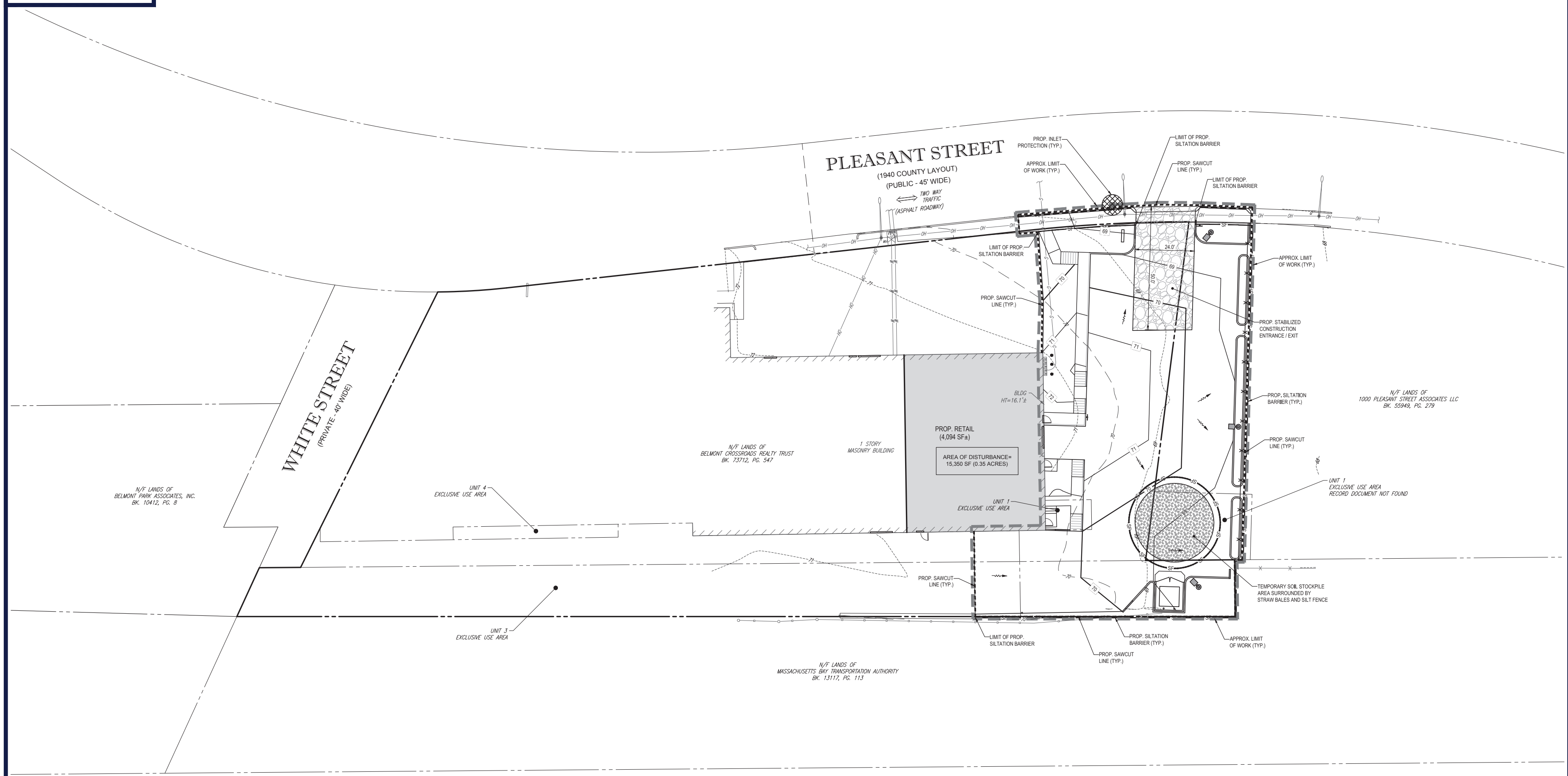
SHEET TITLE:

GRADING AND DRAINAGE PLAN

SHEET NUMBER:

C-401

ORG. DATE - 03/30/2021



THIS PLAN TO BE UTILIZED FOR SITE SOIL AND EROSION CONTROL PURPOSES ONLY

REFER TO SOIL EROSION CONTROL NOTES & DETAIL SHEET FOR EROSION NOTES AND DETAILS

1"= 20'

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www.BohlerEngineering.com

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JOSHUA SWERLING
CIVIL
No. 41697
REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE:

SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER:

C-601

ORG. DATE - 03/30/2021

EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1).
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
   - 10.1. SIX INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
   - 10.2. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER1,000 SF).
   - 10.3. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUE-GRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.
   - 10.4. STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
12. WETLANDS WILL BE PROTECTED W/ STRAW, COMPOST, AND/OR SILT FENCE BARRIERS INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED,

MULCH

LOCATION	MULCH	RATE (1000 SF)
PROTECT AREA	STRAW	100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS	185-275 POUNDS
	STRAW (ANCHORED)*	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

* A HYDRO-APPLICATION OF WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON STRAW MULCH FOR WIND CONTROL.

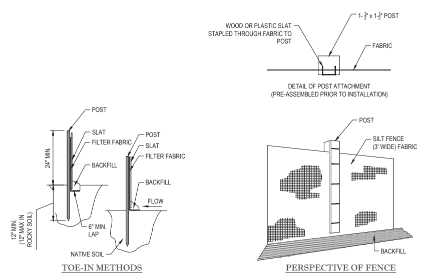
MULCH ANCHORING

ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

EROSION CONTROL NOTES DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
4. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200 - 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF STRAW OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
7. MULCHING REQUIREMENTS:
   - 7.1. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
   - 7.2. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
   - 7.3. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
8. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
9. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
10. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
11. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.

INSTALLATION:
1. EXCAVATE A 6"x 6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE.
2. UNROLL SILTATION FENCE AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH (NET SIDE AWAY FROM FLOW DIRECTION).
3. DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING FABRIC FLAP ON UNDISTURBED GROUND AND PILING & TAMP- ING FILL AT THE BASE.



TYP. SILTATION FENCE DETAIL

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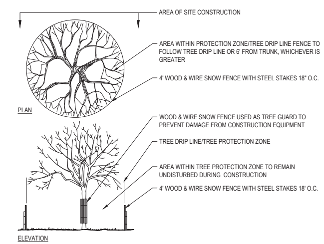
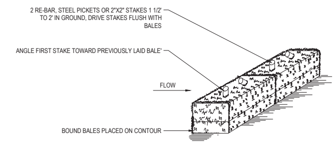


TREE PROTECTION DURING CONSTRUCTION

N.T.S.

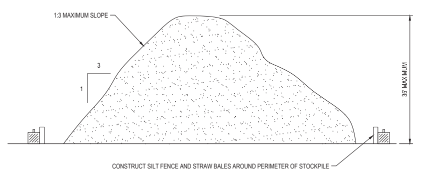


DRAINAGE AREA NO MORE THAN 1/4 AC. PER 100 FEET OF STRAW BALE DIKE FOR SLOPES LESS THAN 25%

NOTES:
1. BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE DETAIL

N.T.S.



TEMPORARY STOCKPILE DETAIL

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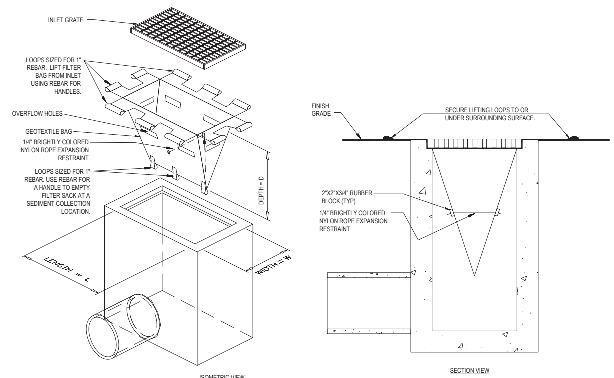

LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

1. REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
2. GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
3. PLACE AN OIL ADSORBENT PAD OR PILLOW OVER INLET GRATE WHEN OIL SPILLS ARE A CONCERN.
4. INSPECT PER REGULATORY REQUIREMENTS.
5. THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
6. THE DEPTH, "D", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES
7. THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

DO NOT USE IN PAVED AREAS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

TO BE USED IN EXISTING RIGHT OF WAY

FILTER SACKS (GRATED INLETS)

N.T.S.

N.T.S.

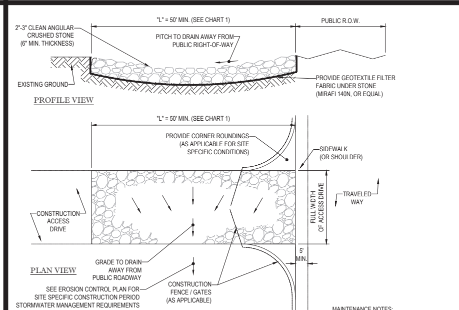

CHART 1

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200FT
>5%	ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE (1)	

(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

MAINTENANCE NOTES:
1. INSPECT STABILIZED CONSTRUCTION ENTRANCE / ANTI-TRACKING PAD AND SEDIMENT DISPOSAL AREA WEEKLY OR AFTER EVERY MAJOR RAIN STORM EVENT.
2. WASH WATER (IF USED) SHALL BE DIRECTED TOWARD A SEDIMENT TRAP, SUFFICIENTLY SIZED FOR SPECIFIC SITE CONDITIONS.
3. EXCESSIVELY MUD-CLOGGED STONE SHALL BE REMOVED AND REPLACED, AS NEEDED.

STABILIZED CONSTRUCTION EXIT

N.T.S.

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

-INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)

-INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)

-INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)

-DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)

-DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)

-CLEARING AND GRUBBING

-EARTHWORK AND EXCAVATION/FILLING AS NECESSARY

-STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING

-INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)

-CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS

-SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH

-FINAL GRADING OF ALL SLOPED AREAS

-PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED AS REQUIRED.

-PAVE PARKING LOT

-LANDSCAPING PER LANDSCAPING PLAN

-REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER.

CONSTRUCTION SEQUENCE

N.T.S.

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JOSHUA SWERLING
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SHEET TITLE:

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:

C-602

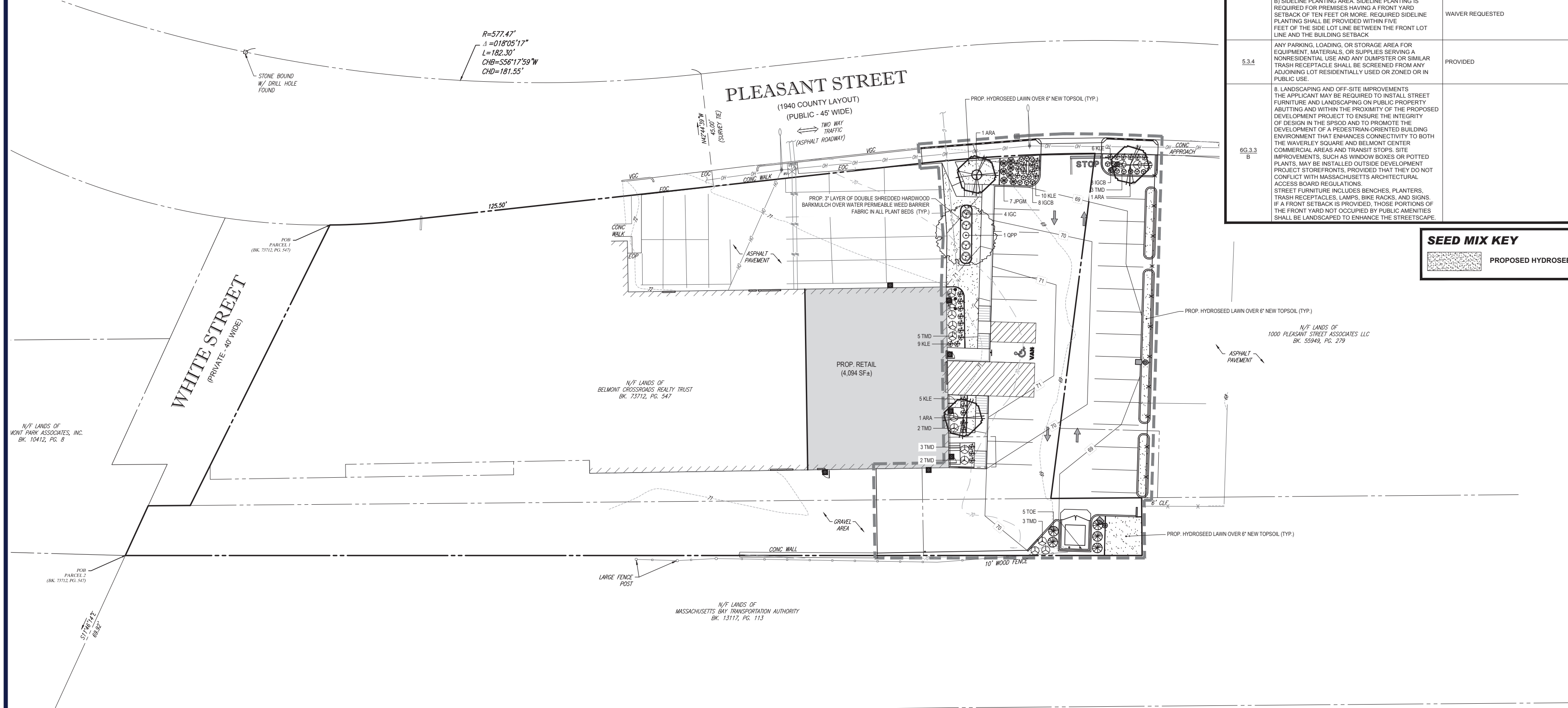
ORG. DATE - 03/30/2021

LANDSCAPE SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
SHADE TREES					
ARA	3	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG COLUMNAR RED MAPLE	2 1/2-3" CAL.	B+B
QPP	1	QUERCUS PALUSTRIS 'PINGREEN'	GREEN PILLAR PIN OAK	2 1/2-3" CAL.	B+B
SUBTOTAL:	4				
EVERGREEN TREES					
TOE	5	THUJA OCCIDENTALIS 'EMERALD'	EMERALD GREEN ARBORVITAE	5-6'	B+B
SUBTOTAL:	5				
EVERGREEN SHRUBS					
IGC	4	ILEX GLABRA 'COMPACTA'	DWARF INKBERRY HOLLY	36-40"	B+B
IGCB	16	ILEX GLABRA 'GEM BOX'	DWARF INKBERRY HOLLY	18-24"	CONTAINER
KLE	33	KALMIA LATIFOLIA 'ELF'	ELF MOUNTAIN LAUREL	18-24"	CONTAINER
TMD	15	TAXUS X MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	36-40"	B+B
SUBTOTAL:	68				
GROUND COVERS					
JPGM	7	JUNIPERUS PROCUMBENS 'GREEN MOUND'	GREEN MOUND JUNIPER	12-15" SPRD.	CONTAINER
SUBTOTAL:	7				

TOWN OF BELMONT LANDSCAPE REQUIREMENTS

SECTION	REQUIREMENTS	CALCULATIONS/PROPOSED
5.3.2	A) REQUIRED PLANTINGS SHALL INCLUDE BOTH TREES AND EVERGREEN SHRUBS, AND PREFERABLY WILL INCLUDE TREES EXISTING ON THE SITE. TO BE CREDITED TOWARDS MEETING THESE REQUIREMENTS:	PROVIDED
	- TREES MUST BE AT LEAST 2.5 INCHES CALIPER FOUR FEET ABOVE GRADE, BE OF A SPECIES COMMON IN THE AREA, AND BE ONES WHICH REACH AN ULTIMATE HEIGHT OF AT LEAST 30 FEET. - SHRUBS MUST BE OF AN EVERGREEN SPECIES COMMON IN THE AREA, AND BE AT LEAST 36 INCHES IN HEIGHT AT THE TIME OF BUILDING OCCUPANCY, AND REACH AN ULTIMATE HEIGHT OF AT LEAST FIVE FEET, EXCEPT HALF THOSE HEIGHTS FOR STREET PLANTING AREAS.	PROVIDED
	B) PLANTINGS SHALL BE PROVIDED AT THE RATE OF AT LEAST ONE TREE PER 40 LINEAR FEET OF PLANTING AREA LENGTH, AND AT LEAST ONE SHRUB PER THREE FEET. PLANTINGS PREFERABLY WILL BE GROUPED, NOT EVENLY SPACED, AND SHALL BE LOCATED OR TRIMMED TO AVOID BLOCKING EGRESS VISIBILITY.	TREES REQUIRED: 4 TREES PROVIDED: 4 CALCULATION: 161' / 40' = 4.025 OR 4 TREES SHRUBS REQUIRED: 54 SHRUBS PROVIDED: 54 CALCULATION: 161' / 3' = 53.7 OR 54 SHRUBS
5.3.3	A) STREET PLANTING AREA. STREET PLANTING IS REQUIRED FOR NONRESIDENTIAL PREMISES HAVING A FRONT YARD SETBACK OF TEN FEET OR MORE. REQUIRED STREET PLANTING SHALL BE PROVIDED WITHIN TEN FEET OF THE STREET PROPERTY LINE ALONG THE ENTIRE STREET FRONTAGE EXCEPT AT DRIVES.	PROVIDED
	B) SIDELINE PLANTING AREA. SIDELINE PLANTING IS REQUIRED FOR PREMISES HAVING A FRONT YARD SETBACK OF TEN FEET OR MORE. REQUIRED SIDELINE PLANTING SHALL BE PROVIDED WITHIN FIVE FEET OF THE SIDE LOT LINE BETWEEN THE FRONT LOT LINE AND THE BUILDING SETBACK	WAIVER REQUESTED
5.3.4	ANY PARKING, LOADING, OR STORAGE AREA FOR EQUIPMENT, MATERIALS, OR SUPPLIES SERVING A NONRESIDENTIAL USE AND ANY DUMPSTER OR SIMILAR TRASH RECEPTACLE SHALL BE SCREENED FROM ANY ADJOINING LOT RESIDENTIALLY USED OR ZONED OR IN PUBLIC USE.	PROVIDED
6G.3.3 B	8. LANDSCAPING AND OFF-SITE IMPROVEMENTS THE APPLICANT MAY BE REQUIRED TO INSTALL STREET FURNITURE AND LANDSCAPING ON PUBLIC PROPERTY ABUTTING AND WITHIN THE PROXIMITY OF THE PROPOSED DEVELOPMENT PROJECT TO ENSURE THE INTEGRITY OF DESIGN IN THE SPSOD AND TO PROMOTE THE DEVELOPMENT OF A PEDESTRIAN-ORIENTED BUILDING ENVIRONMENT THAT ENHANCES CONNECTIVITY TO BOTH THE WAVERLEY SQUARE AND BELMONT CENTER COMMERCIAL AREAS AND TRANSIT STOPS. SITE IMPROVEMENTS, SUCH AS WINDOW BOXES OR POTTED PLANTS, MAY BE INSTALLED OUTSIDE DEVELOPMENT PROJECT STOREFRONTS, PROVIDED THAT THEY DO NOT CONFLICT WITH MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS. STREET FURNITURE INCLUDES BENCHES, PLANTERS, TRASH RECEPTACLES, LAMPS, BIKE RACKS, AND SIGNS. IF A FRONT SETBACK IS PROVIDED, THOSE PORTIONS OF THE FRONT YARD NOT OCCUPIED BY PUBLIC AMENITIES SHALL BE LANDSCAPED TO ENHANCE THE STREETSCAPE.	



SEED MIX KEY

PROPOSED HYDROSEED

OWNER MAINTENANCE RESPONSIBILITIES

UPON OWNER'S (OR OWNER CONTRACTOR'S) COMPLETION OF LANDSCAPING WORK, THE OWNER IS FULLY RESPONSIBLE FOR ALL FUTURE MAINTENANCE, CARE, UPKEEP, WATERING, AND TRIMMING OF ALL INSTALLED VEGETATION, PLANTS, TREE, BUSHES, SHRUBS, GRASSES, GRASS, ORNAMENTAL PLANTS AND FLOWERS, FLOWERS, GROUND COVER, AND LANDSCAPING, INCLUDING ALL LANDSCAPE ISLANDS AND AREAS ADJACENT OR PART OF THE LANDSCAPED AREAS. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

- TREES ADJACENT TO WALKWAYS AND AREAS OF PEDESTRIAN TRAFFIC MUST BE MAINTAINED TO ASSURE THAT ANY BRANCHES MUST BE LIMBED UP TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PEDESTRIAN SURFACES) OR PRUNED BACK TO AVOID ANY INTERFERENCE WITH THE TYPICAL PATH OF TRAVEL.
- TREES WITHIN VEHICULAR SIGHT LINES, AS ILLUSTRATED ON THE LANDSCAPE PLAN, ARE TO BE TRIMMED TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PAVED, TRAVELED SURFACES), OR AS OTHERWISE INDICATED ON THE PLANS.
- VEGETATIVE GROUND COVER, SHRUBS AND ORNAMENTAL PLANTS AND GRASSES MUST BE TRIMMED SO THAT NO PORTION OF THE PLANT EXCEEDS 30 INCHES ABOVE GRADE (OF ALL PAVED, TRAVEL SURFACES) ALONG AND WITHIN THE SIGHT LINES OF PARKING LOTS AND INGRESS-EGRESS WAYS.
- FALLEN PLANT FLOWERS, FRUIT, SEEDS AND DEBRIS DROPPINGS ARE TO BE REMOVED IMMEDIATELY FROM VEHICULAR AND PEDESTRIAN TRAFFIC AREAS TO PREVENT TRIPPING, SLIPPING OR ANY OTHER HAZARDS.

THESE REQUIREMENTS DO NOT AFFECT THE PLANT LIFE GUARANTEES THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE.

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY

REFER LANDSCAPE NOTES & DETAILS SHEET FOR LANDSCAPE NOTES AND DETAILS

1"= 20'

BOHLER //

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PERMIT SET

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-LND-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

CAL VERDE NATURALS

PROPOSED
RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY,
MASSACHUSETTS

BOHLER //
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

MASSACHUSETTS
MATTHEW J. MRVA

SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

C-701

ORG. DATE - 03/30/2021

LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
   - 1.1. THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
2. MATERIALS
   - 2.1. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
   - 2.2. TOPSOIL - NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
   - 2.3. LAWN - ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN
     - 2.3.1. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
     - 2.3.2. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
   - 2.4. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES /DETAILS.
   - 2.5. FERTILIZER
     - 2.5.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
     - 2.5.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.
   - 2.6. PLANT MATERIAL
     - 2.6.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).
     - 2.6.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
     - 2.6.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION.
     - 2.6.4. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1¼", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
     - 2.6.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.
     - 2.6.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE.
     - 2.6.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
     - 2.6.8. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
3. GENERAL WORK PROCEDURES
   - 3.1. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.
   - 3.2. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
4. SITE PREPARATIONS
   - 4.1. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
   - 4.2. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
   - 4.3. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.
5. TREE PROTECTION
   - 5.1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
   - 5.2. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
   - 5.3. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
   - 5.4. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
6. SOIL MODIFICATIONS
   - 6.1. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.
   - 6.2. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.
   - 6.3. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.
     - 6.3.1. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5.
     - 6.3.2. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE.
     - 6.3.3. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
7. FINISHED GRADING
   - 7.1. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.
   - 7.2. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).
   - 7.3. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.
   - 7.4. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.
8. TOPSOILING
   - 8.1. CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.
   - 8.2. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
   - 8.3. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.
   - 8.4. ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
     - 8.4.1. 20 POUNDS 'GRO-POWER' OR APPROVED SOIL CONDITIONER/FERTILIZER
     - 8.4.2. 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
   - 8.5. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.
9. PLANTING
   - 9.1. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
   - 9.2. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
   - 9.3. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
   - 9.4. ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.
   - 9.5. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
   - 9.6. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
     - 9.6.1. PLANTS: MARCH 15 TO DECEMBER 15
     - 9.6.2. LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
     - 9.6.3. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
   - 9.7. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES
CARPINUS VARIETIES	PRUNUS VARIETIES
CRATAEGUS VARIETIES	PYRUS VARIETIES
KOELREUTERIA	QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES

   - 9.8. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
     - 9.8.1. 1 PART PEAT MOSS
     - 9.8.2. 1 PART COMPOSTED COW MANURE BY VOLUME
     - 9.8.3. 3 PARTS TOPSOIL BY VOLUME
     - 9.8.4. 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
       - 9.8.4.1. 2 TABLETS PER 1 GALLON PLANT
       - 9.8.4.2. 3 TABLETS PER 5 GALLON PLANT
       - 9.8.4.3. 4 TABLETS PER 15 GALLON PLANT
       - 9.8.4.4. LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK
   - 9.9. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
   - 9.10. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
   - 9.11. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
   - 9.12. GROUND COVER AREAS SHALL RECEIVE A ¼" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
   - 9.13. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
   - 9.14. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
   - 9.15. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.
10. TRANSPLANTING (WHEN REQUIRED)
   - 10.1. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
   - 10.2. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
   - 10.3. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
   - 10.4. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
   - 10.5. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.
   - 10.6. F TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
11. WATERING
   - 11.1. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
   - 11.2. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
   - 11.3. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.
12. GUARANTEE
   - 12.1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF 1 YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
   - 12.2. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.
   - 12.3. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.
   - 12.4. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
13. CLEANUP
   - 13.1. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.
   - 13.2. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
14. MAINTENANCE (ALTERNATIVE BID):
   - 14.1. A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD ENSURES TO THE OWNER/OPERATOR THAT THE NEWLY INSTALLED LANDSCAPING HAS BEEN MAINTAINED AS SPECIFIED ON THE APPROVED LANDSCAPE PLAN. ONCE THE INITIAL 90 DAY MAINTENANCE PERIOD HAS EXPIRED, THE OWNER/OPERATOR MAY REQUEST THAT BIDDERS SUBMIT AN ALTERNATE MAINTENANCE BID FOR A MONTHLY MAINTENANCE CONTRACT. THE ALTERNATE MAINTENANCE CONTRACT WILL ENCOMPASS ANY WORK THAT IS CONSIDERED APPROPRIATE TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNER/OPERATOR.

"NATIVE DETENTION AREA MIX" AS PREPARED BY:

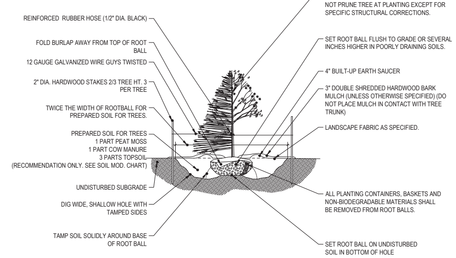
ERNST CONSERVATION SEEDS, INC.
8884 MERCER PIKE, MEADVILLE, PA 16335
PHONE: 800-873-3321 / 814-336-2404
EMAIL: SALES@ERNSTSEED.COM
WEBSITE: WWW.ERNSTSEED.COM

APPLICATION RATE: 1/2 LB. / 1000 SQ. FT. (20 LBS. / ACRE)

MIX COMPOSITION:
25.0% PANICUM VIRGATUM, 'SHELTER' (SWITCHGRASS, 'SHELTER')
24.0% PANICUM CLANDESTINUM, 'TIOGA' (DEERTONGUE, 'TIOGA')
22.0% CAREX VULPINOIDEA, PA ECOTYPE (FOX SEDGE, PA ECOTYPE)
21.0% ELYMUS VIRGINICUS, PA ECOTYPE (VIRGINIA WILDRYE, PA ECOTYPE)
6.0% AGROSTIS PERENNANS, ALBANY PINE BUSH-NY ECOTYPE (AUTUMN BENTGRASS, ALBANY PINE BUSH-NY ECOTYPE)
1.0% JUNCUS EFFUSUS (SOFT RUSH)
1.0% PANICUM RIGIDULUM, PA ECOTYPE (REDTOP PANICGRASS, PA ECOTYPE)

BASIN SEED MIX SPECIFICATIONS

NOTES:
1.) NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2.) REMOVE ALL NON-BIODEGRADABLE MATERIAL AND ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK 1/3 FROM ROOT BALL.
3.) PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4.) THOROUGHLY SOAK THE TREE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5.) THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE ROUGH TO AVOID MATTING OF SOIL LAYERS AS NEW SOIL IS ADDED. IT IS PREFERABLE TO TILL THE FIRST LIFT (2 TO 3 IN.) OF PLANTING SOIL INTO THE SUBSOIL.
6.) REFER TO THE CHART "GENERAL RANGE OF SOIL MODIFICATIONS & VOLUMES FOR VARIOUS SOIL CONDITIONS" TO DETERMINE MINIMUM WIDTH OF PREPARED SOIL.
7.) SUBSTITUTE ARBORVITAE STAKING SYSTEM WHEN SPECIFIED.



TREE PLANTING DETAIL

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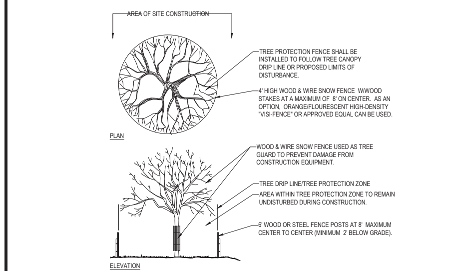
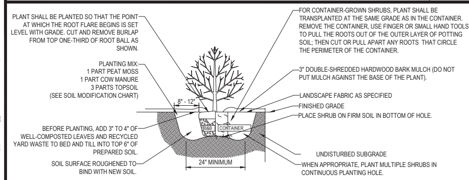


TREE PROTECTION DURING SITE CONSTRUCTION

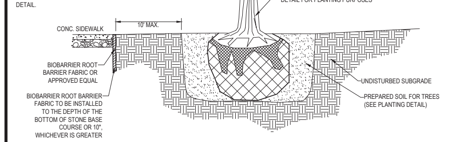
N.T.S.



SHRUB PLANTING DETAIL

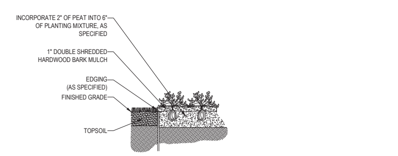
N.T.S.

NOTES:
1. ANY TREE INSTALLED WITHIN 10 FT. OF NEW CONCRETE SIDEWALKS SHOULD BE INSTALLED WITH BIOBARRIER ROOT BARRIER FABRIC AS SHOWN
2. TREES SHALL BE INSTALLED ACCORDING TO THE APPROPRIATE PLANTING DETAIL.



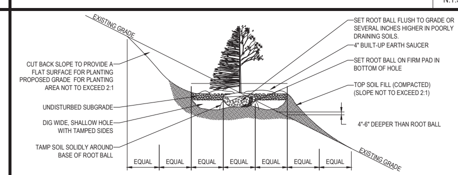
BIOBARRIER ROOT BARRIER DETAIL

N.T.S.



GROUNDCOVER PLANTING

N.T.S.



REFER TO TREE PLANTING DETAIL FOR GENERAL PLANTING SPECIFICATIONS

TREE PLANTING DETAIL - ON SLOPE

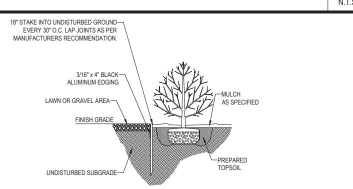
N.T.S.

1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATES:

• PERENNIAL RYEGRASS	1/2 LB/1000 SQ FT
• KENTUCKY BLUEGRASS	1 LB/1000 SQ FT
• RED FESCUE	1/2 LB/1000 SQ FT
• SPREADING FESCUE	1/2 LB/1000 SQ FT
• FERTILIZER (16.32.16)	2 LB/1000 SQ FT
• LIQUID LIME	1 GAL/800 GAL.
• TANK TACKIFIER	35 LB/800 GAL.
• TANK FIBER MULCH	30 LB/1000 SQ FT

4. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

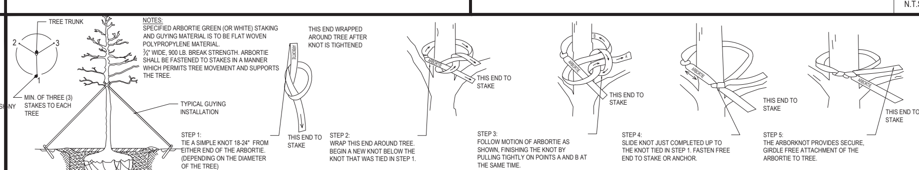
HYDROSEED SPECIFICATIONS



BLACK ALUMINUM EDGING

N.T.S.

NOTES:
SPECIFIED ARBORTIE GREEN (OR WHITE) STAKING AND GUYING MATERIAL IS TO BE FLAT WOVEN POLYPROPYLENE MATERIAL. ¾" WIDE, 900 LB. BREAK STRENGTH. ARBORTIE SHALL BE FASTENED TO STAKES IN A MANNER WHICH PERMITS TREE MOVEMENT AND SUPPORTS THE TREE.



STEP 1:
TIE A SIMPLE KNOT 18-24" FROM EITHER END OF THE ARBORTIE. (DEPENDING ON THE DIAMETER OF THE TREE)

STEP 2:
WRAP THIS END AROUND TREE. BEGIN A NEW KNOT BELOW THE KNOT THAT WAS TIED IN STEP 1.

STEP 3:
FOLLOW MOTION OF ARBORTIE AS SHOWN, FINISHING THE KNOT BY PULLING TIGHTLY ON POINTS A AND B AT THE SAME TIME.

STEP 4:
SLIDE KNOT JUST COMPLETED UP TO THE KNOT TIED IN STEP 1. FASTEN FREE END TO STAKE OR ANCHOR.

STEP 5:
THE ARBORKNOT PROVIDES SECURE, GIRDLE FREE ATTACHMENT OF THE ARBORTIE TO TREE.

ARBORTIE STAKING DETAIL

N.T.S.

BOHLER//

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-LND-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

FOR

CAL VERDE NATURALS

PROPOSED RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY,
MASSACHUSETTS

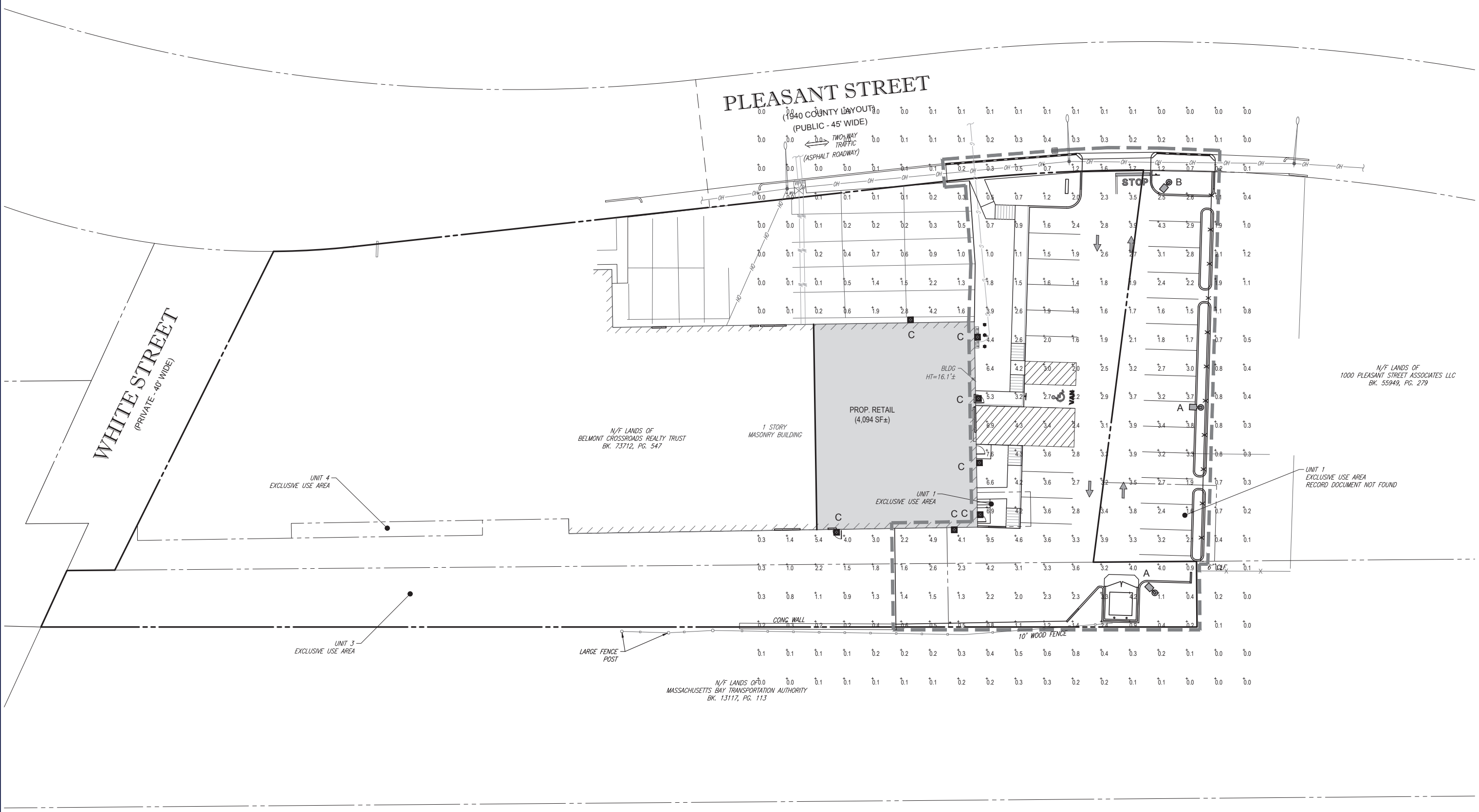
BOHLER//
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

COMMONWEALTH OF MASSACHUSETTS MATTHEW J. MRVA NO. 1217 REGISTERED LANDSCAPE ARCHITECT

SHEET TITLE:
LANDSCAPE NOTES AND DETAILS

SHEET NUMBER:
C-702

ORG. DATE - 03/30/2021



LIGHTING NOTES

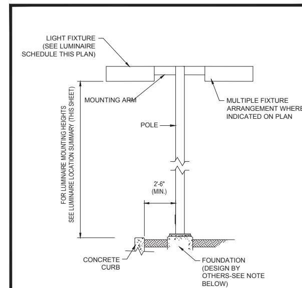
1. THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
2. THE LIGHT LOSS FACTORS USED IN THESE LIGHTING CALCULATIONS ARE 0.90 FOR ALL LED LUMINAIRES, 0.80 FOR ALL HIGH PRESSURE SODIUM LUMINAIRES OR 0.72 FOR ALL METAL HALIDE LUMINAIRES UNLESS OTHERWISE SPECIFIED. THESE FACTORS ARE INDICATIVE OF TYPICAL LIGHTING INDUSTRY MODELING STANDARDS.
3. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOTCANDLES.
4. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING (IF NECESSARY) AT LEAST ONCE EVERY SIX (6) MONTHS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRES, LAMPS AND LENSES TO FAIL PROPERLY TO FUNCTION.
5. WHERE APPLICABLE, THE EXISTING CONDITION LIGHT LEVELS ILLUSTRATED ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES, UNLESS ACTUAL FIELD MEASUREMENTS ARE TAKEN WITH A LIGHT METER AND ARE, CONSEQUENTLY, APPROXIMATIONS ONLY. DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC, ACTUAL LIGHT LEVELS MAY DIFFER. EXISTING LIGHT LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE.
6. THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. LIGHT POLE BASES ARE THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
7. CONTRACTOR MUST BRING TO DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
8. IT IS THE LIGHTING CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROJECT ARCHITECT OR OWNER REGARDING THE POWER SOURCE(S) FROM WITHIN THE BUILDING, AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT.
9. THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
10. THE CONTRACTOR MUST VERIFY THAT INSTALLATION OF LIGHTING FIXTURES COMPLIES WITH THE REQUIREMENTS FOR SEPARATION FROM OVERHEAD ELECTRICAL WIRES PER STATE REGULATIONS.
11. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.

NUMERIC SUMMARY

LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
AREA SUMMARY	ILLUMINANCE	FC	2.81	9.5	0.5	5.62	19.00

LUMINAIRE SCHEDULE

SYMBOL	QTY	ARRANGEMENT	LUMENS	LLF	DESCRIPTION
A	2	SINGLE	17230	0.90	LED AREA LIGHT FORWARD THROW WITH SHIELD MOUNTED @ 25'; XGBM-FT-LED-SS-NW-HSS
B	1	SINGLE	16390	0.90	LED AREA LIGHT TYPE III WITH SHIELD MOUNTED @ 25'; XGBM-3-LED-SS-NW-HSS
C	-	BUILDING	-	-	EXISTING BUILDING MOUNTED LIGHT



AREA LIGHT DETAIL N.T.S.

NOTE: THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A FOUNDATION DESIGN PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS AND SITE SPECIFIC SOIL PARAMETERS.

- SOME SITE CONDITIONS AND/OR LOCATIONS MAY REQUIRE VIBRATION DAMPENING MEASURES AS DETERMINED BY A STRUCTURAL ENGINEER.
- THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING TO THE POLE, ASIDE FROM THE LIGHT FIXTURES, INCLUDING BUT NOT LIMITED TO CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC. AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

20 10 5 0 20
1"= 20'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

— FOR —

CAL VERDE
NATURALS

PROPOSED
RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY,
MASSACHUSETTS

BOHLER
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com

COMMONWEALTH OF MASSACHUSETTS
JOSHUA SWERLING
CIVIL
No. 41697
REGISTERED PROFESSIONAL ENGINEER

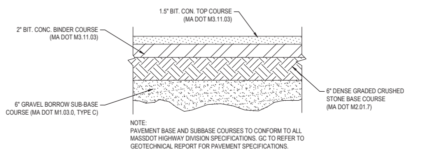
SHEET TITLE:

LIGHTING PLAN

SHEET NUMBER:

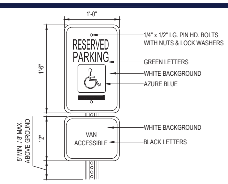
C-703

ORG. DATE - 03/30/2021



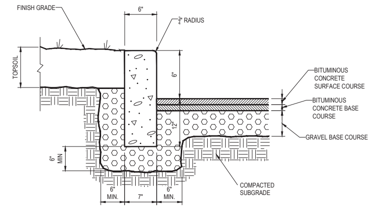
TYPICAL PAVEMENT SECTION

N.T.S.



ACCESSIBLE PARKING SIGN DETAIL

N.T.S.

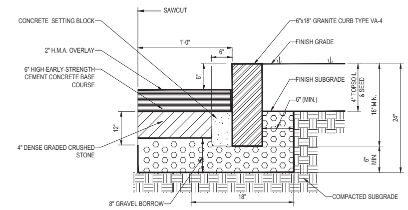


NOTE:

1. CURB SHALL CONSIST OF 4,000 PSI AIR ENTRAINED CONCRETE, EXPOSED EDGES TO HAVE RUBBED FINISH AND SURFACE SHALL BE TREATED WITH A CONCRETE PENETRANT/SEALER.
2. THE ENDS OF CURB SECTIONS SHALL BE CHAMFERED 1/4 INCH.
3. THE CORNERS OF CURB SECTIONS SHALL MATCH THE ADJACENT CURB IN SIZE, COLOR AND FINISH.
4. CURBS, CURB CORNERS OR EDGING SHALL BE FITTED TOGETHER AS CLOSELY AS POSSIBLE.
5. EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM OF TWENTY FEET (20') ON CENTER USING PREFORMED EXPANSION JOINT FILLER HAVING A THICKNESS OF 1/2 INCH.

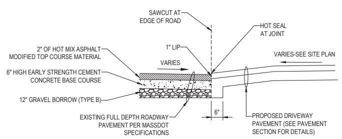
PRECAST CONCRETE CURB

N.T.S.



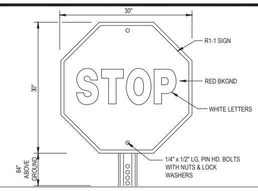
VERTICAL GRANITE CURB

N.T.S.



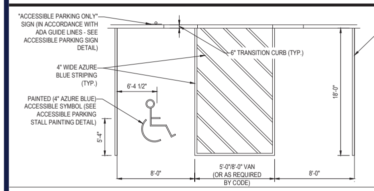
DRIVEWAY CONSTRUCTION

N.T.S.



'STOP' SIGN

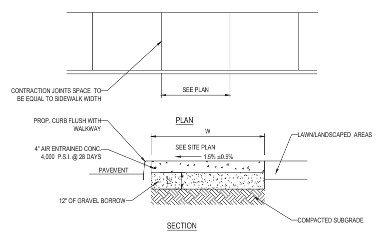
N.T.S.



NOTE: ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF CHLORINATED RUBBER PAINT APPLIED TO A DRY SURFACE WHEN THE TEMPERATURE IS GREATER THAN 40°F. PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS

ACCESSIBLE STALL MARKINGS & PARKING LOT STRIPING

N.T.S.

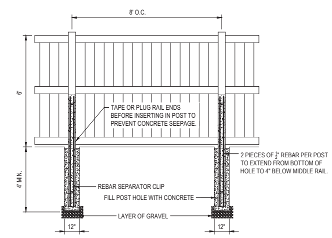


NOTE:

1. PROVIDE 1/2" PREMOLDED BITUMINOUS EXPANSION JOINT AT 20' O.C.
2. ALL JOINTS SEALED PER SPECIFICATIONS.

SIDEWALK DETAIL WITHIN ROW

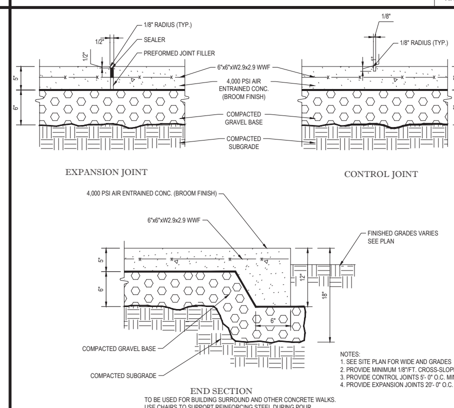
N.T.S.



NOTES:
FILL LINE & END POST WITH CONCRETE TO APPROX. 1" BELOW MIDDLE RAIL. FILL GATE POSTS WITH CONCRETE TO COVER GATE HARDWARE FASTENERS.

VINYL FENCE

N.T.S.

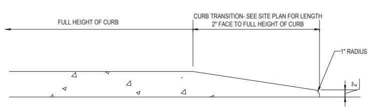


NOTES:

1. SEE SITE PLAN FOR WIDE AND GRADES
2. PROVIDE MINIMUM 1/8"/FT. CROSS-SLOPE
3. PROVIDE CONTROL JOINTS 5'- 0" O.C. MIN.
4. PROVIDE EXPANSION JOINTS 20'- 0" O.C. MIN.

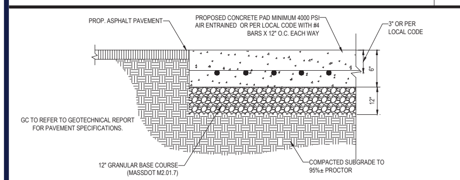
MONOLITHIC CONCRETE SIDEWALK

N.T.S.



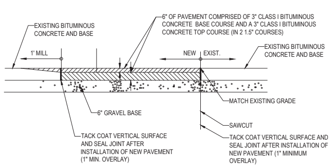
TRANSITION CURB

N.T.S.



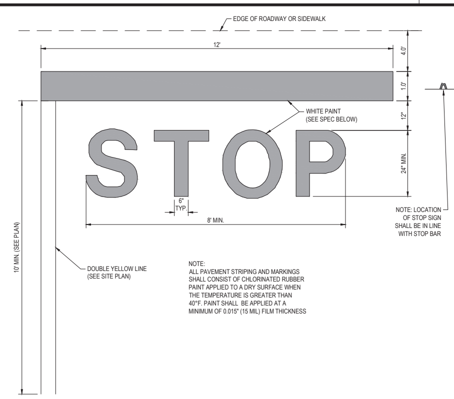
CONCRETE PAD

N.T.S.



ROADWAY PATCHING

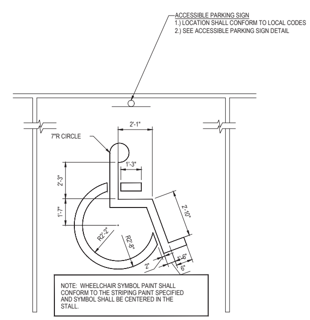
N.T.S.



NOTE:
ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF CHLORINATED RUBBER PAINT APPLIED TO A DRY SURFACE WHEN THE TEMPERATURE IS GREATER THAN 40°F. PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS

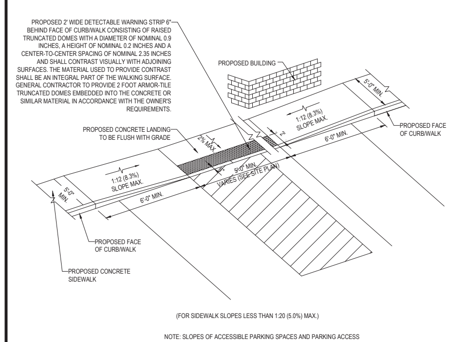
'STOP' BAR

N.T.S.



ACCESSIBLE PARKING STALL PAINTING

N.T.S.



NOTE: SLOPES OF ACCESSIBLE PARKING SPACES AND PARKING ACCESS AISLES SHALL NOT EXCEED 1:50 (2.0%) MAX. IN ANY DIRECTION.

SLOPED WALK DETAIL

N.T.S.

BOHLER//

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PERMIT SET

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.:	W201001
DRAWN BY:	CFD/NPD
CHECKED BY:	RMM
DATE:	03/30/2021
CAD I.D.:	W201001-CVL-0

PROJECT:

PROPOSED SITE PLAN DOCUMENTS

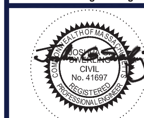
FOR

CAL VERDE NATURALS

PROPOSED RETAIL DISPENSARY

MAP #32, LOT #1
1010 PLEASANT STREET
TOWN OF BELMONT
MIDDLESEX COUNTY, MASSACHUSETTS

BOHLER//
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
Phone: (508) 480-9900
www.BohlerEngineering.com



SHEET TITLE:

DETAIL SHEET

SHEET NUMBER:

C-901

ORG. DATE - 03/30/2021

LEGEND

124 / 125	EXISTING CONTOUR
× 123.45	EXISTING SPOT ELEVATION
× TC 123.45	EXISTING TOP OF CURB ELEVATION
× G 122.95	EXISTING GUTTER ELEVATION
× FF 123.45	EXISTING FINISHED FLOOR ELEVATION
WV	WATER VALVE
GM	GAS METER
OH	OVERHEAD WIRES
G	APPROX. LOC. UNDERGROUND GAS LINE (PER REF #8)
W	APPROX. LOC. UNDERGROUND WATER LINE (PER REF #8)
UP #	UTILITY POLE
UPLP #	UTILITY POLE/LIGHT POLE
●	BOLLARD
10	PARKING SPACE COUNT
CLF	CHAIN LINK FENCE
EOC	EDGE OF CONCRETE
EOP	EDGE OF PAVEMENT
EOG	EDGE OF GRAVEL
(TYP)	TYPICAL
SWL	SOLID WHITE LINE
SYL	SOLID YELLOW LINE
HT	HEIGHT
BLDG	BUILDING
DHF	DRILL HOLE FOUND
INV	INVERT ELEVATION
GRT	GRATE ELEVATION
VGC	VERTICAL GRANITE CURB
EOS	EDGE OF SNOW
[X.X']	BUILDING DIMENSIONS AT GROUND LEVEL
1.0'	OFFSET OF STRUCTURE AT GROUND LEVEL RELATIVE TO PROPERTY LINE
(S)	SURVEY DIMENSION
(D)	DEED DIMENSION

REFERENCES:

1. THE TAX ASSESSOR'S MAP OF TOWN OF BELMONT, MIDDLESEX COUNTY, MAP 32.
2. MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS), PANEL 414 OF 656," MAP NUMBER 25017C0414E, EFFECTIVE DATE: JUNE 4, 2010.
3. MAP ENTITLED "CONDOMINIUM SITE PLAN OF 1010 PLEASANT STREET CONDOMINIUM IN BELMONT, MA", PREPARED BY: P.J.F. AND ASSOCIATES, DATED: NOVEMBER 11, 2019, RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN 950 OF 2019.
4. PLAN SET ENTITLED "PLAN OF A PORTION OF PLEASANT STREET BELMONT AS ORDERED BY THE COUNTY COMMISSIONERS" DATED: 1940, SHEETS 1 & 2 OF 4, RECORDED AS THE 1940 COUNTY LAYOUT OF PLEASANT STREET.
5. MAP ENTITLED "LAND IN BELMONT, MASS. BOSTON & MAINE RAILROAD TO GRAND ANSE PEAT MOSS COMPANY, LTD", PREPARED BY: SCHOFIELD BROTHERS, DATED: OCTOBER 1962, RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN 97 OF 1963 IN BOOK 10205, PAGE 330.
6. MAP ENTITLED "PLAN OF LAND IN BELMONT, MASS.", PREPARED BY: JOSEPH W. KALES, DATED: OCTOBER 9, 1950, RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN 824 OF 1954 IN BOOK 8262, PAGE 28.
7. MAP ENTITLED "LAND IN BELMONT, MASS. BOSTON & MAINE CORP. TO A.W. FARRELL, INC.", PREPARED BY: SCHOFIELD BROTHERS, DATED: FEBRUARY 1966, RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN 309 OF 1967 IN BOOK 11306, PAGE 236.
8. SKETCH OF UTILITY INFORMATION & WATER TIE CARDS PROVIDED BY THE TOWN OF BELMONT ENGINEERING DEPARTMENT.

LOCUS MAP
©2013 ESRI WORLD STREET MAPS
NOT TO SCALE

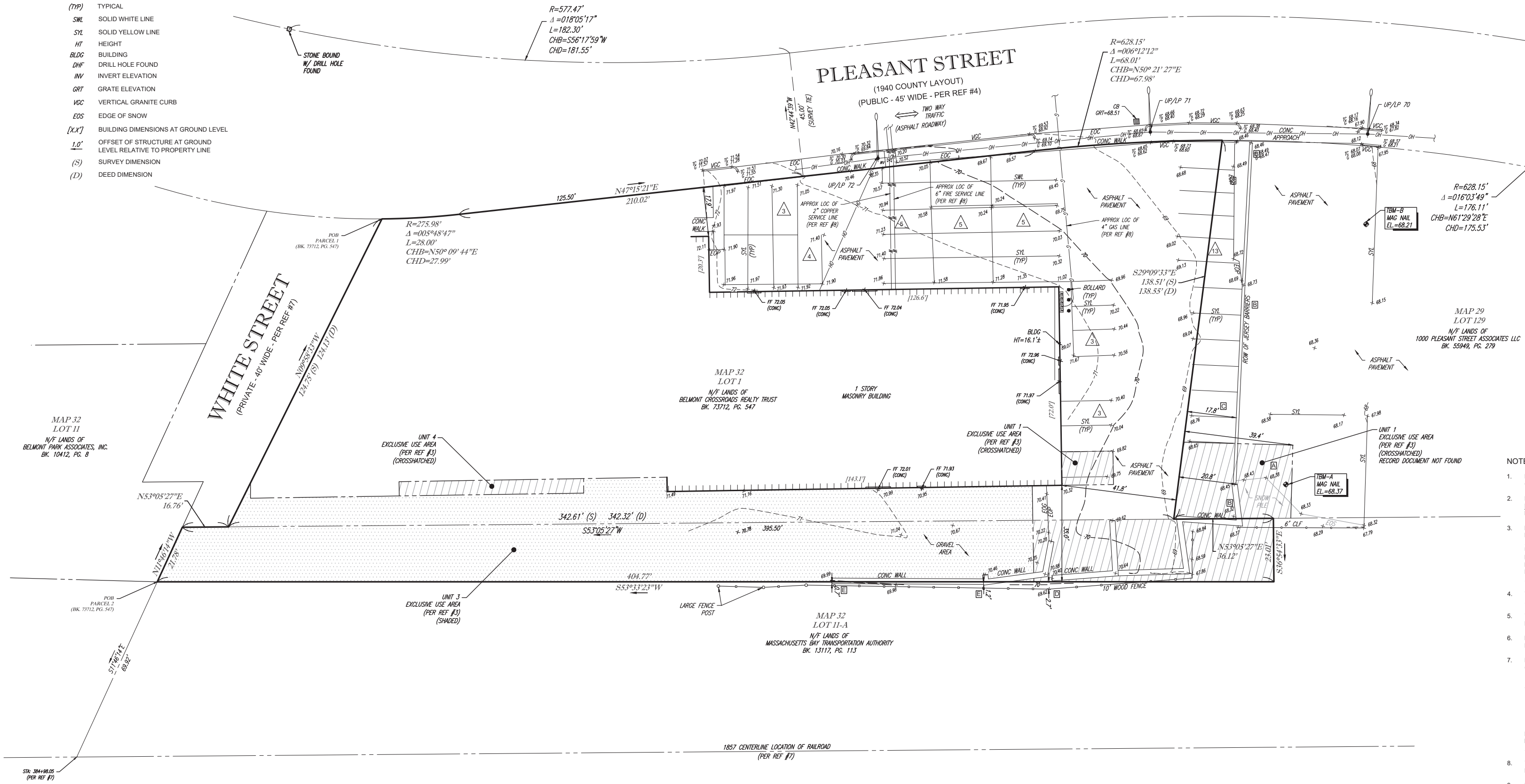


TABLE OF APPARENT ENCROACHMENTS

- A UNIT 1 EXCLUSIVE USE AREA CROSSES INTO LOT 129, BY AS MUCH AS 39.4', NO EASEMENT WAS FOUND IN DEEDS
- B ROW OF JERSEY BARRIERS AND CONCRETE BLOCK WALL ARE ON LOT 129, BY AS MUCH AS 20.8', NO EASEMENT WAS FOUND IN DEEDS
- C PORTION OF PARKING SPACES CROSS INTO LOT 129, BY AS MUCH AS 17.8', NO EASEMENT WAS FOUND IN DEEDS
- D 10' WOOD FENCE CROSSES INTO LOT 11A BY AS MUCH AS 2.7'.
- E CONCRETE WALL CROSSES INTO LOT 11A BY AS MUCH AS 1.2'.

NOTE: THESE ARE THE POSSIBLE ENCROACHMENTS OBSERVED DURING THE FIELD SURVEY. THERE MAY BE OTHERS NOT RECOGNIZED BY THE SURVEYOR.

NOTES:

1. PROPERTY KNOWN AS LOT 1 AS SHOWN ON THE TOWN OF BELMONT, MIDDLESEX COUNTY, COMMONWEALTH OF MASSACHUSETTS MAP NO. 32.
2. PARCEL 1 AREA = 40,001 SQUARE FEET OR 0.918 ACRES
   PARCEL 2 AREA = 8,555 SQUARE FEET OR 0.196 ACRES
   LOT 1 TOTAL AREA = 48,556 SQUARE FEET OR 1.114 ACRES
3. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARKOUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
4. THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
5. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
6. BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE "X-UNSHADED" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER REF. #2
7. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), BASED ON GPS OBSERVATIONS UTILIZING THE KEYSTONE VRS NETWORK (KEYNETGPS) TAKEN AT THE TIME OF THE FIELD SURVEY.

   TEMPORARY BENCHMARKS SET:

   TBM-A: MAG NAIL SET IN ASPHALT PAVEMENT, ELEVATION = 68.37

   TBM-B: MAG NAIL SET IN ASPHALT PAVEMENT, ELEVATION = 68.21

   PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BENCHMARKS ILLUSTRATED ON THIS SKETCH HAVE NOT BEEN DISTURBED AND THEIR ELEVATIONS HAVE BEEN CONFIRMED. ANY CONFLICTS MUST BE REPORTED PRIOR TO CONSTRUCTION.
8. THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
9. PARTIAL TOPOGRAPHY SHOWN PER CONTRACTUAL AGREEMENT WITH CLIENT.

THE COMMONWEALTH OF MASSACHUSETTS REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

THIS SURVEY HAS BEEN PERFORMED IN THE FIELD UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, BELIEF, AND INFORMATION, THIS SURVEY HAS BEEN PERFORMED IN ACCORDANCE WITH CURRENTLY ACCEPTED ACCURACY STANDARDS.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL

COMMONWEALTH OF MASSACHUSETTS GERRY L. HOLDRIGHT NO. 49211 REGISTERED PROFESSIONAL LAND SURVEYOR

12-16-2020
DATE

GERRY L. HOLDRIGHT, PLS
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

FIELD DATE	12-7-2020
FIELD BOOK NO.	20-16 MA
FIELD BOOK PG.	55
FIELD CREW	S.B.H.
DRAWN:	B.A.V.

BOUNDARY & PARTIAL TOPOGRAPHIC SURVEY
CALVERDE NATURALS, INC.

1010 PLEASANT STREET
LOT 1, MAP 32
TOWN OF BELMONT, MIDDLESEX COUNTY
COMMONWEALTH OF MASSACHUSETTS

CONTROL POINT ASSOCIATES, INC.
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
508.948.3000 - 508.948.3003 FAX
WWW.CPASURVEY.COM
ALBANY, NY 518-217-5010
CHALFONT, PA 215-712-9800
HAUPPAUGE, NY 631-580-2645
MANHATTAN, NY 646-780-0411
MT LAUREL, NJ 609-857-2099
WARREN, NJ 908-668-0099

REVIEWED:	APPROVED:	DATE	SCALE	FILE NO.	DWG. NO.
S.P.P.	G.L.H.	12-16-2020	1" = 20'	03-200211-00	1 OF 1

Zoning Compliance Check List
(Registered Civil Engineer)

Property Address: 1010 Pleasant Street **Zone:** LB II

Civil Engineer Signature and Stamp: 

Date: 04/05/2021

	REQUIRED	EXISTING	PROPOSED
Lot Area	N/S	39,910 sf	no change
Lot Frontage	20 ft	306.0 ft	no change
Floor Area Ratio	1.05	0.51	no change
Lot Coverage	35%	51% (E)	no change
Open Space	N/S	1.8%	6.1%
Front Setback	10 ft	7.1 ft (E)	no change
Side Setback	0 ft	0 ft	no change
Side Setback	0 ft	41.8 ft	no change
Rear Setback	20 ft	10 ft (E)	no change
Building Height	32 ft	< 32 ft	no change
Stories	2	1	no change
½ Story Calculation			
(E) - Existing non-conformance			

NOTES:

Traffic Impact and Access Study

Proposed Marijuana Dispensary
Belmont, Massachusetts

Prepared for:

Calverde Naturals, LLC
Winchester, Massachusetts

February 2020

Prepared by:

Vanasse & Associates inc
Transportation Engineers & Planners

35 New England Business Center Drive
Suite 140
Andover, MA 01810

CONTENTS

CONTENTS (CONTINUED)

FIGURES

TABLES

EXECUTIVE SUMMARY

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Traffic Impact and Access Study (TIAS) to identify traffic impacts associated with a proposed retail marijuana dispensary to be located at 1010 Pleasant Street (Route 60) in Belmont, Massachusetts. The purpose of this study is to review existing and future traffic conditions in the vicinity of the site, determine the traffic impact from the proposed project at key intersections expected to experience increased traffic levels from the Project, and to assess the access requirements for the Project, including impacts within the study area.

PROPOSED DEVELOPMENT

The Project entails the repurposing of approximately 4,150 square feet (sf) of commercial space within a multi-tenant commercial building located at 1010 Pleasant Street in Belmont, Massachusetts. The Project also includes the reconfiguration of the existing parking field in order to provide a total of 25 spaces for employees and customers of the facility.

Access to the Project site is currently provided via one curb cut onto the eastern side of Pleasant Street. No changes to the existing site access are proposed as part of the site redevelopment.

EXISTING CONDITIONS

A comprehensive field inventory was conducted to collect existing roadway geometrics, traffic volumes, and operating characteristics, as well as land use information. Traffic volumes were collected during October 2019 at the intersections expected to accommodate the majority of Project-related traffic. The study area includes the following locations:

- Pleasant Street at Trapelo Road
- Pleasant Street at Concord Avenue
- Pleasant Street at Site Driveway

FUTURE CONDITIONS

Traffic volumes within the study area were projected to the year 2026, which reflects a seven-year planning horizon consistent with State traffic study guidelines. These conditions incorporate traffic growth due to general background traffic increases as well as incorporation of development projects currently under construction but expected to generate traffic in the future.

Project-Generated Traffic

Based upon industry published trip generation rates, the Project is expected to generate approximately 606 vehicle trips on an average weekday (303 entering and 303 exiting), with approximately 53 vehicle trips (26 entering and 27 exiting) expected during the weekday evening peak hour. On Saturday the project is expected to generate approximately 606 vehicle trips (303 entering and 303 exiting) with approximately 85 vehicle trips (40 entering and 45 exiting) expected during the Saturday midday peak hour.

It is noted that the Project site currently houses an active contractor's office that will be relocated to a different space on site as part of the site redevelopment. Therefore no reduction in trip generation was applied for the relocation of the existing contractor's office traffic generation.

The projected vehicle trips were distributed onto area roadways based on existing travel patterns. Traffic-volume increases due to the Project at off-site locations were shown to result in an increase of approximately 1 to 2 percent as compared to No-Build conditions.

Traffic Operations Analysis

The results of the traffic operations analysis reveal that the addition of project-related traffic to the study area roadways and intersections is not anticipated to significantly impact traffic operations within the study area over No-Build conditions. In all instances overall delays are projected to increase by approximately 1 second or less as compared to future No-Build conditions.

RECOMMENDATIONS

The following measures are recommended to ensure safe and efficient access to the Project.

Project Access

Site access is currently provided onto the eastern side of Pleasant Street. As part of the site redevelopment the following recommendations are made with respect to site access.

- It is recommended that both site driveways operate under STOP-sign control with painted STOP-bars provided at the driveway approaches to Pleasant Street. Painted centerlines should also be installed to delineate inbound and outbound traffic flows. All pavement markings and signage should be installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) design criteria.

- All proposed signs and landscaping should be located to ensure adequate sight lines are maintained along Pleasant Street, with proposed landscaping along the site frontage restricted to two feet in height.

- On-street parking is currently restricted along the site frontage on Pleasant Street. If deemed appropriate by the Town of Belmont, it is recommended that the applicant install additional No Parking signs on the utility pole along the site frontage to further reinforce the parking restriction in this area.

Traffic and Parking Management Plan

It is recommended that a traffic and parking management plan be developed in consultation with the Town of Belmont's Police Department to accommodate the increased customer demand that may occur during the initial opening period for the dispensary. The goal of the traffic and parking management plan will be to manage customer demands so as not to exceed the available parking within the project site with consideration of employee parking requirements. After the initial opening period, operations should be reviewed with the Police Chief or their designee on a periodic basis to determine if there is a need to continue the elements of the traffic and parking management plan.

With implementation of these measures, VAI has concluded that the Project can be safely accommodated with minimal impact on the area road network.

INTRODUCTION

INTRODUCTION

VAI has prepared this TIAS to identify traffic impacts associated with a proposed retail marijuana dispensary to be located at 1010 Pleasant Street (Route 60) in Belmont, Massachusetts. The purpose of this study is to review existing and future traffic conditions in the vicinity of the site, determine the traffic impact from the proposed project at key intersections expected to experience increased traffic levels from the Project, and to assess the access requirements for the Project, including impacts within the study area.

PROPOSED DEVELOPMENT

The Project entails the repurposing of approximately 4,150 sf of commercial space within a multi-tenant commercial building located at 1010 Pleasant Street in Belmont, Massachusetts. The Project also includes the reconfiguration of the existing parking field in order to provide a total of twenty five (25) spaces for employees and customers of the facility.

Access to the Project site is currently provided via one curb cut onto the eastern side of Pleasant Street. No changes to the existing site access are proposed as part of the site redevelopment. The location of the Project site, relative to the surrounding transportation system is displayed in Figure 1.

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Belmont and was generally conducted in accordance with state guidelines for Transportation Impact Assessments. The study was conducted in three distinct stages as follows.

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

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the project were assessed along with future traffic demands due to expected traffic growth independent of the project. A seven-year time horizon was selected for analyses consistent with

Figure -

2019 Existing
Peak Hour Traffic Volumes

Vanasse & Associates inc

state guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

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

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in October of 2019. The field investigation consisted of an inventory of existing roadway geometrics; traffic volumes; and operating characteristics; as well as posted speed limits, sight distances and land use information within the study area. The study area for the project contains the major roadways which provide access to the project, as well as the intersections which are expected to accommodate the majority of project-related traffic. The study area is listed below and graphically depicted in Figure 2.

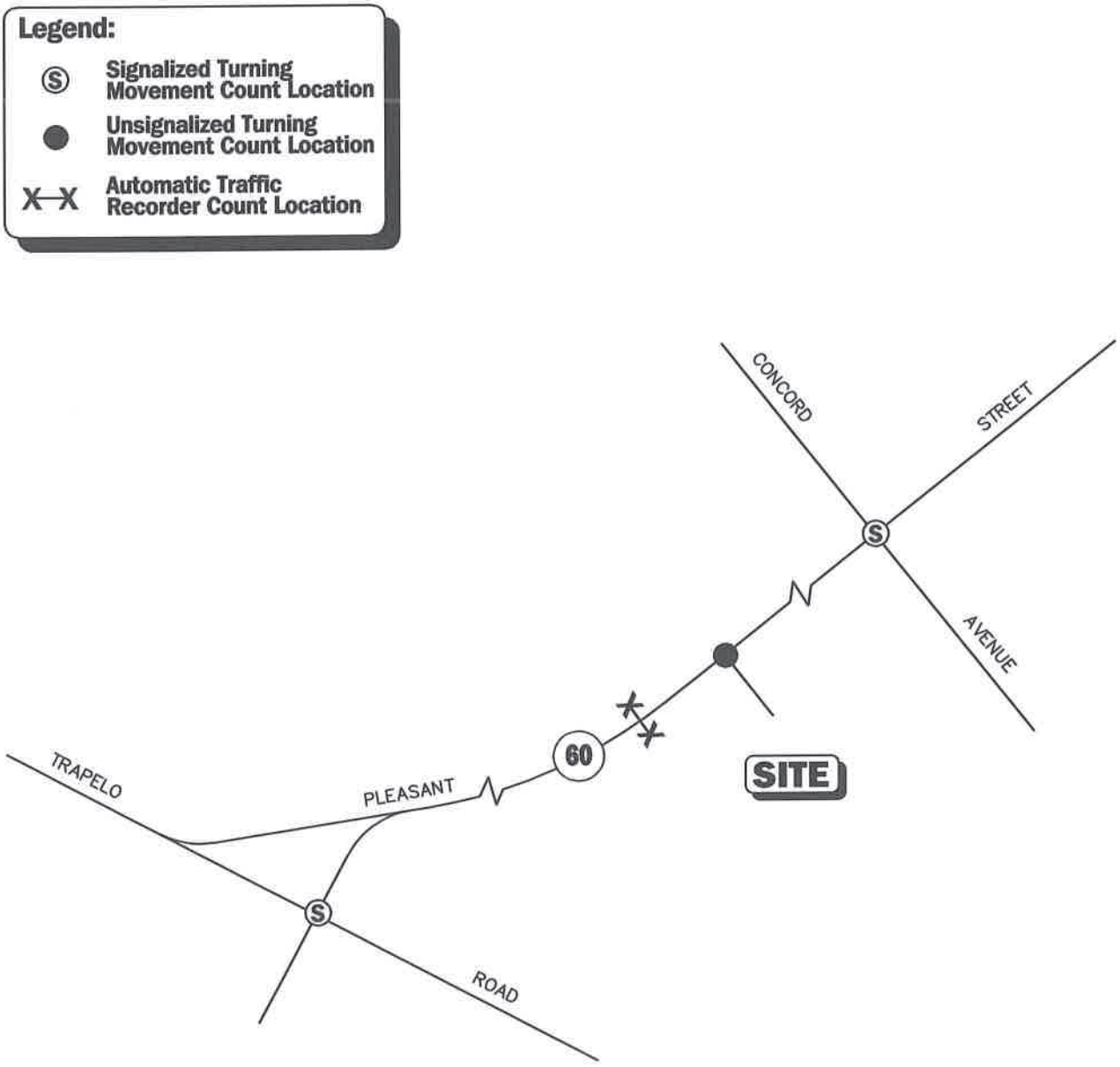
- Pleasant Street at Trapelo Road
- Pleasant Street at Concord Avenue
- Pleasant Street at Site Driveway

The following describes the study area roadways and intersections.

ROADWAYS

Pleasant Street

Pleasant Street (Route 60) is a two-lane local arterial roadway under the jurisdiction of the Town of Belmont that traverses the study area in a general north-south orientation, providing access between Trapelo Road to the south and the Town of Arlington to the north. Within the study area Pleasant Street provides a single approximate 12-foot wide travel lane in each direction with an approximate 4-foot shoulder provided along both sides of the corridor. In the vicinity of the Project site, on-street parking is prohibited along both side of the corridor. Sidewalk is provided along the eastern side of the corridor, adjacent to the Project site. The speed limit on Pleasant Street is not posted in the vicinity of the Project. Land use along the corridor consists primarily of a mix of commercial properties.



Not To Scale

Figure 2

2019 Existing
Peak Hour Traffic Volumes

Vanasse & Associates inc

INTERSECTIONS

Pleasant Street at Trapelo Road

Pleasant Street and private residential driveways intersect Trapelo Road from the north and south to form a four-way intersection that operates under traffic signal control. The Trapelo Road eastbound approach provides an approximate 12-foot wide exclusive left-turn lane and an approximate 12-foot wide through/right-turn lane with an approximate 5-foot wide marked shoulder provided. The Trapelo Road westbound approach provides two approximate 12-foot wide general purpose travel lanes with an approximate 4-foot wide marked shoulder provided. The Pleasant Street southbound approach provides an approximate 14-foot wide left-turn/through lane and an approximate 12-foot wide channelized right-turn lane that operates under YIELD-sign control. The northbound approach consists of two residential driveways that provide an approximate 25 total feet in width. The traffic signal at this location operates under a three-phase signal sequence, with a protected left-turn phase provided for eastbound traffic on Trapelo Road. Sidewalk is provided along both sides of Trapelo Road and the eastern side of Pleasant Street at this location, with painted crosswalks provide across the eastbound and southbound approaches to this intersection. Land use in the vicinity of this intersection consists primarily of a mix of commercial and residential uses.

Pleasant Street at Concord Avenue

Pleasant Street intersects Concord Avenue from the north and south to form a four-way intersection that operates under traffic signal control. The Concord Avenue eastbound approach provides an approximate 20-foot wide shared left-turn/through lane and an approximate 14-foot wide channelized right-turn lane that operates under STOP-sign control, with an approximate 3-foot wide marked shoulder provided. The Concord Avenue westbound approach provides a single approximate 20-foot wide general purpose travel lane. The Pleasant Street northbound and southbound approaches to this intersection provide an approximate 12-foot wide general purpose travel lane. The traffic signal at this location operates under a three-phase signal sequence, with a protected left-turn phase provided for westbound traffic on Concord Avenue. Sidewalk is provided along both sides of both sides of Pleasant Street, north of Concord Avenue and along the eastern side of the corridor south of Concord Avenue. Sidewalk is provided along both sides of Concord Avenue, east of Pleasant Street and along the southern side of Concord Avenue, west of Pleasant Street. Painted crosswalks are provided across all four intersection approaches to this location. Land use in the vicinity of this intersection consists primarily of a mix of institutional and residential uses, including Belmont Town Hall and the Town of Belmont Police Station.

EXISTING TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, manual turning movement counts (TMCs) and vehicle classification counts were conducted in October 2019. Peak-period manual TMCs were performed during the weekday evening (4:00 to 6:00 PM) and Saturday midday (11:00 AM to 2:00 PM) peak periods at each study area intersection. Additionally, in order to document daily traffic volumes within the study area, automatic traffic recorder (ATR) counts were also conducted along Pleasant Street over a 48-hour period to document weekday and Saturday daily traffic conditions within the study area.

Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, seasonal adjustment factors provided by MassDOT were reviewed. Based on a review of this data, traffic volumes for the month of October are approximately 6 percent higher than average annual conditions. As such, collected traffic volumes were not adjusted and reflect a conservative analysis scenario. 2019 Existing traffic volumes are summarized in Table 1 and graphically depicted in Figure 3.

As summarized in Table 1, Pleasant Street was found to accommodate approximately 13,558 vehicles per day (vpd) on a typical weekday, including with 1,136 vehicles per hour (vph) during the weekday evening peak hour. Peak hour traffic volume during the Saturday midday peak hour amounts to 858 vph. The weekday evening peak hour generally occur between 4:45 and 5:45 PM, with the Saturday midday peak hour generally occurs between 12:30 and 1:30 PM. In all instance the individual peak hour traffic volumes for each intersection were utilized for analysis purposes.

Table 1
2019 EXISTING TRAFFIC VOLUMES

		Weekday Evening Peak Hour			Saturday Midday Peak Hour		
Location	AWT[a]	VPH[b]	K Factor[c]	Directional Distribution[d]	VPH	K Factor	Directional Distribution
Pleasant Street (Route 60)	13,558	1,136	8.4	55% NB	858	--	51% NB

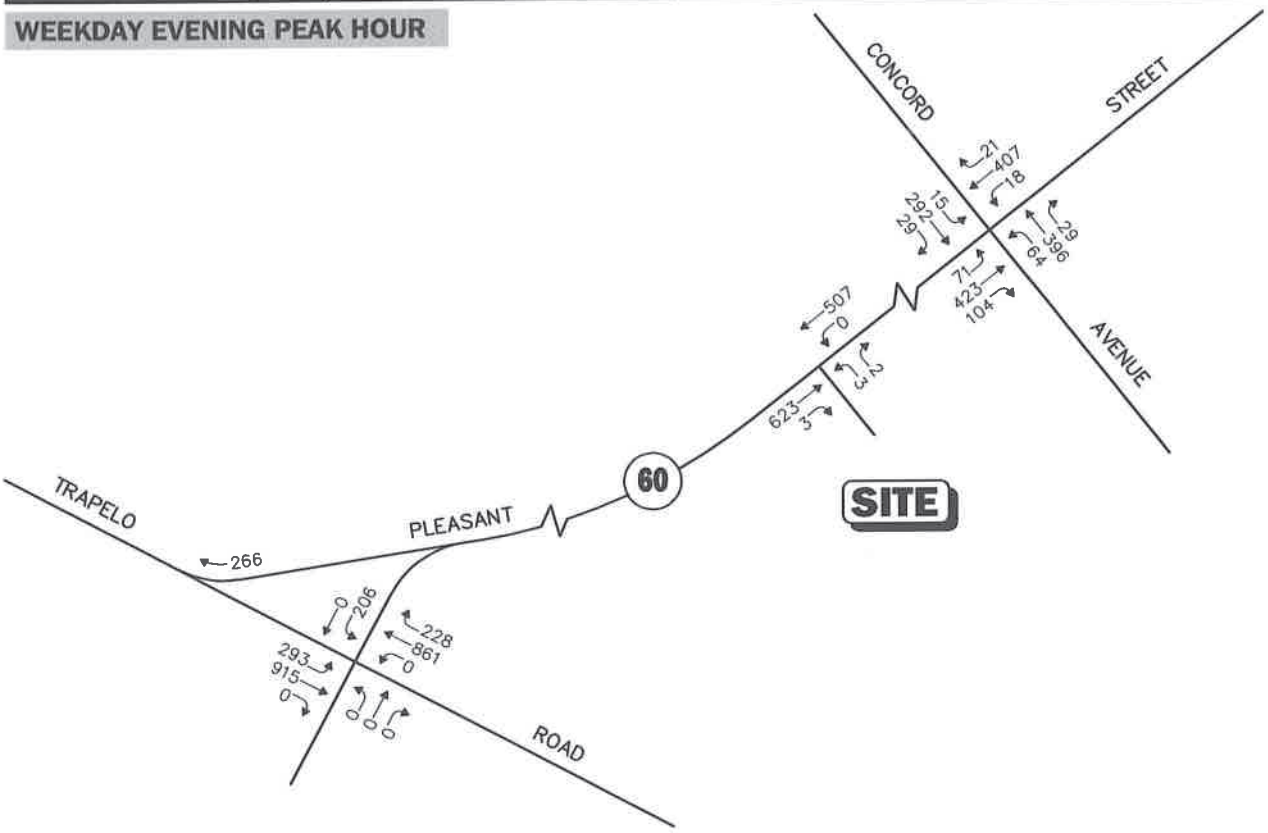
[a]Average weekday traffic in vehicles per day.
[b]Vehicles per hour.
[c]Percent of daily traffic that occurs during the peak hour.
[d]Percent traveling in the peak direction.
NB = northbound, SB = southbound

PEDESTRIAN AND BICYCLE FACILITIES

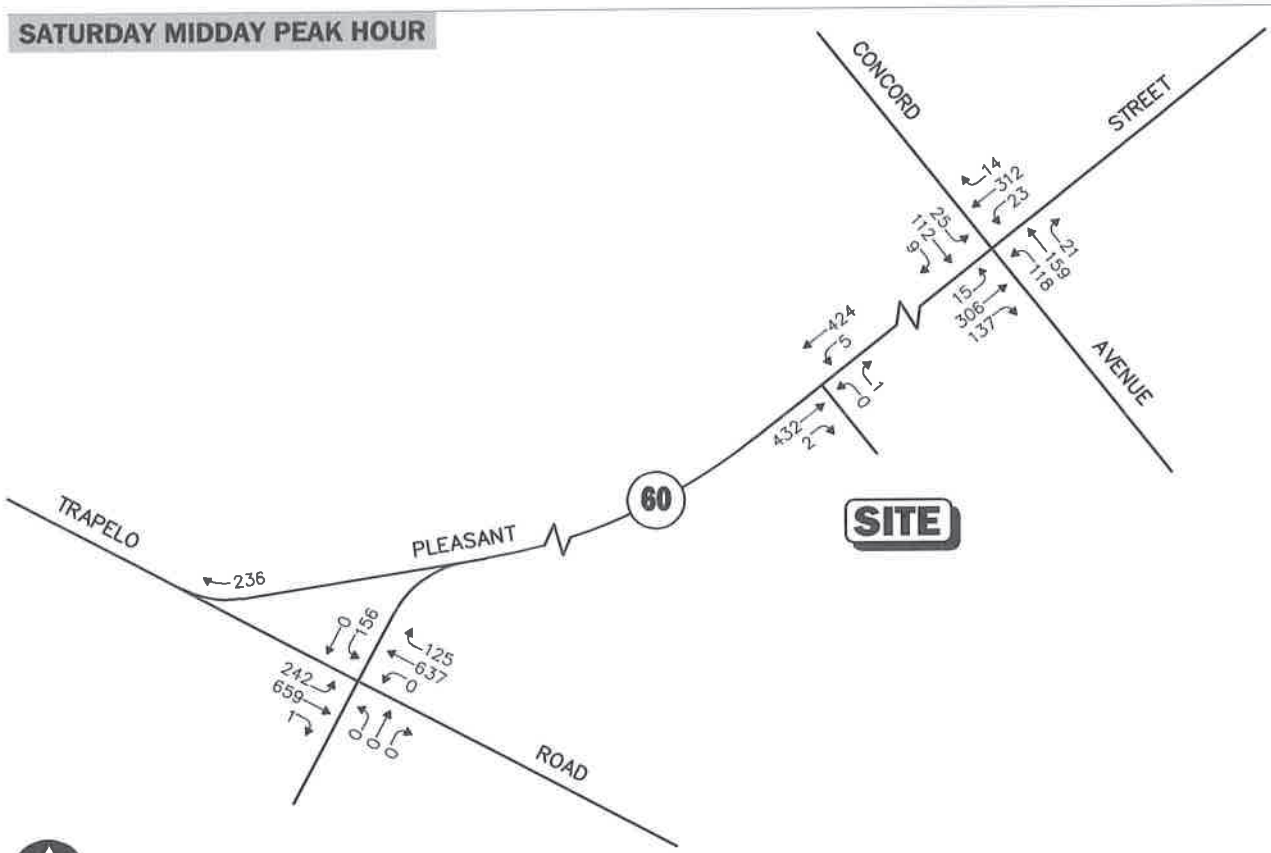
A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in October of 2019. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study intersections.

In general, sidewalk is currently provided along the eastern side of Pleasant Street within the study area. Painted crosswalks and pedestrian signal equipment are provided at the signalized intersections with Trapelo Road and Concord Avenue. No formal bicycle facilities were noted in the study area, though the combined travel width along Pleasant Street (travel land and shoulder) can safely accommodate vehicular and bicycle traffic in a shared manner.

WEEKDAY EVENING PEAK HOUR



SATURDAY MIDDAY PEAK HOUR



Not To Scale

Figure 3

2019 Existing
Peak Hour Traffic Volumes

Vanasse & Associates inc

PUBLIC TRANSPORTATION

Public transportation services, including bus and commuter rail service, are provided within the study area by the Massachusetts Bay Transportation Authority (MBTA). Specifically, commuter rail service is provided on the Fitchburg commuter rail line, with service provided within the study area via the Waverly station, located within walking distance of the Project site.

Local bus service is also provided within the study area by the MBTA. Bus service within the study area is provided along Trapelo Road, within walking distance of the Project site. Specifically, bus service is provided via the following routes:

- Route 73 – Waverly Square - Harvard
- Route 554 – Waverly Square – Downtown Boston

Public transportation schedules and maps are provided in the technical appendix of this report.

SIGHT DISTANCE ANALYSIS

As part of the ATR data collection effort, vehicular speeds were collected along Pleasant Street, in the vicinity of the site access drive in order to determine prevailing travel speeds along the corridor. The speed limit on Pleasant Street in the vicinity of the site is 30 miles per hour (mph). However, based on the collected data, the average vehicle travel speeds in the northbound and southbound direction were determined to be 29 mph in the northbound direction and 30 mph in the southbound direction. The 85th percentile vehicle speed, which is utilized for analysis purposes was determined to be 33 mph in the northbound direction and 36 mph in the southbound direction.

Based on the 85th percentile travel speed, the required sight distances to ensure safe site access were determined. Based on the requirements[1] of the American Association of State Highway and Transportation Officials (AASHTO) a total of 230 feet of sight distance is required to and from the south, with a total of 260 feet of sight distance required to and from the north. Field observations reveal that in excess of 350 feet of sight distance is available in both directions, exceeding AASHTO requirements.

MOTOR VEHICLE CRASH DATA

Motor vehicle crash information for the study area intersections was provided by the MassDOT Highway Division Safety Management/Traffic Operations Unit for the most recent five-year period available (2014 through 2018) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, weather condition, lighting condition, pavement condition, and severity and are presented in Table 2.

As summarized in Table 2, the intersection that experienced the most crashes over the five year review period is the intersection of Pleasant Street with Trapelo Road. A total of 55 motor vehicle collisions were reported, averaging 11 crashes per year. The majority of the crashes were angle or rear-end collisions, occurred on dry pavement in clear weather and resulted in property damage only. The motor vehicle crash rate for this location exceeds MassDOT's average crash rate for signalized intersections in this MassDOT District.

[1] *A Policy on Geometric Design of Highways and Street, 6th Edition;* AASHTO, 2011.

The remaining study area intersections experienced approximately 3 or less crashes per year on average during the five year review period. The crash rates for these intersections were observed to be lower than the MassDOT District 4 crash rates for signalized and unsignalized intersections. There were no reported fatalities within the study area over the five-year review period.

Table 2
MOTOR VEHICLE CRASH DATA SUMMARY[a]

Scenario	Pleasant Street at Trapelo Road	Pleasant Street at Concord Avenue	Pleasant Street at Site Driveway
Year:			
2014	13	5	1
2015	13	4	0
2016	8	2	0
2017	7	2	0
2018	14	4	0
Total	55	17	1
Average[a]	11.0	3.4	0.2
Crash Rate[b]	0.87	0.42	0.04
Significant	Yes	No	No
Type:			
Angle	17	5	0
Rear-End	23	8	0
Head-On	3	0	0
Sideswipe	9	3	0
Fixed Object	3	1	1
Unknown/Other	0	0	0
Total	55	17	1
Weather Conditions:			
Clear	41	13	1
Cloudy/Rain	10	2	0
Snow/Ice	3	2	0
Fog	0	0	0
Unknown/Other	1	0	0
Total	55	17	1
Lighting Conditions:			
Daylight	46	13	1
Dawn/Dusk	2	0	0
Dark (lit)	7	4	0
Dark (unlit)	0	0	0
Unknown/Other	0	0	0
Total	55	17	1
Pavement Conditions:			
Dry	45	12	1
Wet	7	1	0
Snow/Ice	2	2	0
Unknown/Other	1	2	0
Total	55	17	1
Severity:			
Property Damage Only	40	11	1
Personal Injury	11	5	0
Fatality	0	0	0
Unknown/Other	4	1	0
Total	55	17	1

[a]Average crash over five-year period.
[b]Crash rate per million entering vehicles (mev).
Source: MassDOT Crash Data, 2014 through 2018.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the year 2026, which reflects a seven-year planning horizon consistent with State traffic study guidelines. Independent of the Project, traffic volumes on the roadway network in the year 2026 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon this 2026 No-Build traffic network reflect the 2026 Build conditions with the Project.

FUTURE TRAFFIC GROWTH

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

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

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

General Background Traffic Growth

In order to conservatively account for future traffic growth and presently unforeseen development within the study area a 1.0 percent per year compounded annual background traffic growth rate was applied to the 2019 traffic volumes over the seven-year planning horizon. It is noted that this growth rate well exceeds the background growth rate utilized for other recent area development traffic assessments.

Specific Development by Others

The Planning Division of the Town of Belmont's Department of Community Development was contacted to determine whether there are any specific area development projects that are expected to influence future

traffic volumes within the study area. Based on discussions, preliminary development plans are currently under consideration for a portion of the McLean Hospital Zone 3 property, which would potentially include up to 110 apartment units as well as 40 age-restricted housing units that would be accessed via Olmstead Drive. The Project would require a rezoning of the property as well as receipt of all required local approvals. At the time of this report's preparation no definitive site plans have been presented to the Town for site plan review, therefore this potential project was not included in the analysis of future traffic conditions. However, as discussed in subsequent sections of this report, a sensitivity analysis was conducted to evaluate the impact of this potential project on future traffic conditions, which indicates no notable change to traffic operations without the project and that no additional off-site mitigation measures would be required to accommodate the combined traffic of the proposed dispensary and the potential McLean residential redevelopment.

Roadway Improvement Projects

The Planning Division of the Town of Belmont's Department of Community Development was contacted in order to determine if there are any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no roadway improvements area anticipated to occur within the study area, outside of routine maintenance operations.

No-Build Traffic Volumes

The 2026 No-Build peak-hour traffic-volume networks were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2019 Existing peak-hour traffic volumes. The resulting 2026 No-Build weekday evening and Saturday midday peak-hour traffic volume networks are shown on Figure 4.

PROJECT-GENERATED TRAFFIC

The project includes the repurposing of approximately 4,150 sf of existing commercial space in order to accommodate a marijuana dispensary. Specifically, the project will include 2,130 sf of dispensary space and 1,830 sf of back office space, with 190 sf of unusable space. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published by the ITE for LUC 882, Marijuana Dispensary was utilized and LUC 710 – General Office Building were utilized. In order to provide a conservative assessment of Project impacts, the 190 sf of unusable space was included in the trip generation calculations for the dispensary component of the Project. The trip generation estimates are summarized in Table 3.

Zoning Compliance Check List
(Registered Civil Engineer)

Property Address: 1010 Pleasant Street **Zone:** LB II

Civil Engineer Signature and Stamp: 

Date: 04/05/2021

	REQUIRED	EXISTING	PROPOSED
Lot Area	N/S	39,910 sf	no change
Lot Frontage	20 ft	306.0 ft	no change
Floor Area Ratio	1.05	0.51	no change
Lot Coverage	35%	51% (E)	no change
Open Space	N/S	1.8%	6.1%
Front Setback	10 ft	7.1 ft (E)	no change
Side Setback	0 ft	0 ft	no change
Side Setback	0 ft	41.8 ft	no change
Rear Setback	20 ft	10 ft (E)	no change
Building Height	32 ft	< 32 ft	no change
Stories	2	1	no change
½ Story Calculation			
(E) - Existing non-conformance			

NOTES:

Traffic Impact and Access Study

Proposed Marijuana Dispensary
Belmont, Massachusetts

Prepared for:

Calverde Naturals, LLC
Winchester, Massachusetts

February 2020

Prepared by:

Vanasse & Associates inc
Transportation Engineers & Planners

35 New England Business Center Drive
Suite 140
Andover, MA 01810

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FIGURES

TABLES

EXECUTIVE SUMMARY

INTRODUCTION

Vanasse & Associates, Inc. (VAI) has prepared this Traffic Impact and Access Study (TIAS) to identify traffic impacts associated with a proposed retail marijuana dispensary to be located at 1010 Pleasant Street (Route 60) in Belmont, Massachusetts. The purpose of this study is to review existing and future traffic conditions in the vicinity of the site, determine the traffic impact from the proposed project at key intersections expected to experience increased traffic levels from the Project, and to assess the access requirements for the Project, including impacts within the study area.

PROPOSED DEVELOPMENT

The Project entails the repurposing of approximately 4,150 square feet (sf) of commercial space within a multi-tenant commercial building located at 1010 Pleasant Street in Belmont, Massachusetts. The Project also includes the reconfiguration of the existing parking field in order to provide a total of 25 spaces for employees and customers of the facility.

Access to the Project site is currently provided via one curb cut onto the eastern side of Pleasant Street. No changes to the existing site access are proposed as part of the site redevelopment.

EXISTING CONDITIONS

A comprehensive field inventory was conducted to collect existing roadway geometrics, traffic volumes, and operating characteristics, as well as land use information. Traffic volumes were collected during October 2019 at the intersections expected to accommodate the majority of Project-related traffic. The study area includes the following locations:

- Pleasant Street at Trapelo Road
- Pleasant Street at Concord Avenue
- Pleasant Street at Site Driveway

FUTURE CONDITIONS

Traffic volumes within the study area were projected to the year 2026, which reflects a seven-year planning horizon consistent with State traffic study guidelines. These conditions incorporate traffic growth due to general background traffic increases as well as incorporation of development projects currently under construction but expected to generate traffic in the future.

Project-Generated Traffic

Based upon industry published trip generation rates, the Project is expected to generate approximately 606 vehicle trips on an average weekday (303 entering and 303 exiting), with approximately 53 vehicle trips (26 entering and 27 exiting) expected during the weekday evening peak hour. On Saturday the project is expected to generate approximately 606 vehicle trips (303 entering and 303 exiting) with approximately 85 vehicle trips (40 entering and 45 exiting) expected during the Saturday midday peak hour.

It is noted that the Project site currently houses an active contractor's office that will be relocated to a different space on site as part of the site redevelopment. Therefore no reduction in trip generation was applied for the relocation of the existing contractor's office traffic generation.

The projected vehicle trips were distributed onto area roadways based on existing travel patterns. Traffic-volume increases due to the Project at off-site locations were shown to result in an increase of approximately 1 to 2 percent as compared to No-Build conditions.

Traffic Operations Analysis

The results of the traffic operations analysis reveal that the addition of project-related traffic to the study area roadways and intersections is not anticipated to significantly impact traffic operations within the study area over No-Build conditions. In all instances overall delays are projected to increase by approximately 1 second or less as compared to future No-Build conditions.

RECOMMENDATIONS

The following measures are recommended to ensure safe and efficient access to the Project.

Project Access

Site access is currently provided onto the eastern side of Pleasant Street. As part of the site redevelopment the following recommendations are made with respect to site access.

- It is recommended that both site driveways operate under STOP-sign control with painted STOP-bars provided at the driveway approaches to Pleasant Street. Painted centerlines should also be installed to delineate inbound and outbound traffic flows. All pavement markings and signage should be installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) design criteria.

- All proposed signs and landscaping should be located to ensure adequate sight lines are maintained along Pleasant Street, with proposed landscaping along the site frontage restricted to two feet in height.

- On-street parking is currently restricted along the site frontage on Pleasant Street. If deemed appropriate by the Town of Belmont, it is recommended that the applicant install additional No Parking signs on the utility pole along the site frontage to further reinforce the parking restriction in this area.

Traffic and Parking Management Plan

It is recommended that a traffic and parking management plan be developed in consultation with the Town of Belmont's Police Department to accommodate the increased customer demand that may occur during the initial opening period for the dispensary. The goal of the traffic and parking management plan will be to manage customer demands so as not to exceed the available parking within the project site with consideration of employee parking requirements. After the initial opening period, operations should be reviewed with the Police Chief or their designee on a periodic basis to determine if there is a need to continue the elements of the traffic and parking management plan.

With implementation of these measures, VAI has concluded that the Project can be safely accommodated with minimal impact on the area road network.

INTRODUCTION

INTRODUCTION

VAI has prepared this TIAS to identify traffic impacts associated with a proposed retail marijuana dispensary to be located at 1010 Pleasant Street (Route 60) in Belmont, Massachusetts. The purpose of this study is to review existing and future traffic conditions in the vicinity of the site, determine the traffic impact from the proposed project at key intersections expected to experience increased traffic levels from the Project, and to assess the access requirements for the Project, including impacts within the study area.

PROPOSED DEVELOPMENT

The Project entails the repurposing of approximately 4,150 sf of commercial space within a multi-tenant commercial building located at 1010 Pleasant Street in Belmont, Massachusetts. The Project also includes the reconfiguration of the existing parking field in order to provide a total of twenty five (25) spaces for employees and customers of the facility.

Access to the Project site is currently provided via one curb cut onto the eastern side of Pleasant Street. No changes to the existing site access are proposed as part of the site redevelopment. The location of the Project site, relative to the surrounding transportation system is displayed in Figure 1.

STUDY METHODOLOGY

This study was prepared in consultation with the Town of Belmont and was generally conducted in accordance with state guidelines for Transportation Impact Assessments. The study was conducted in three distinct stages as follows.

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

In the second stage of the study, future traffic conditions were projected and analyzed. Specific travel demand forecasts for the project were assessed along with future traffic demands due to expected traffic growth independent of the project. A seven-year time horizon was selected for analyses consistent with

state guidelines for the preparation of TIAs. The traffic analysis conducted in stage two identifies existing or projected future roadway capacity, traffic safety, and site access issues.

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

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in October of 2019. The field investigation consisted of an inventory of existing roadway geometrics; traffic volumes; and operating characteristics; as well as posted speed limits, sight distances and land use information within the study area. The study area for the project contains the major roadways which provide access to the project, as well as the intersections which are expected to accommodate the majority of project-related traffic. The study area is listed below and graphically depicted in Figure 2.

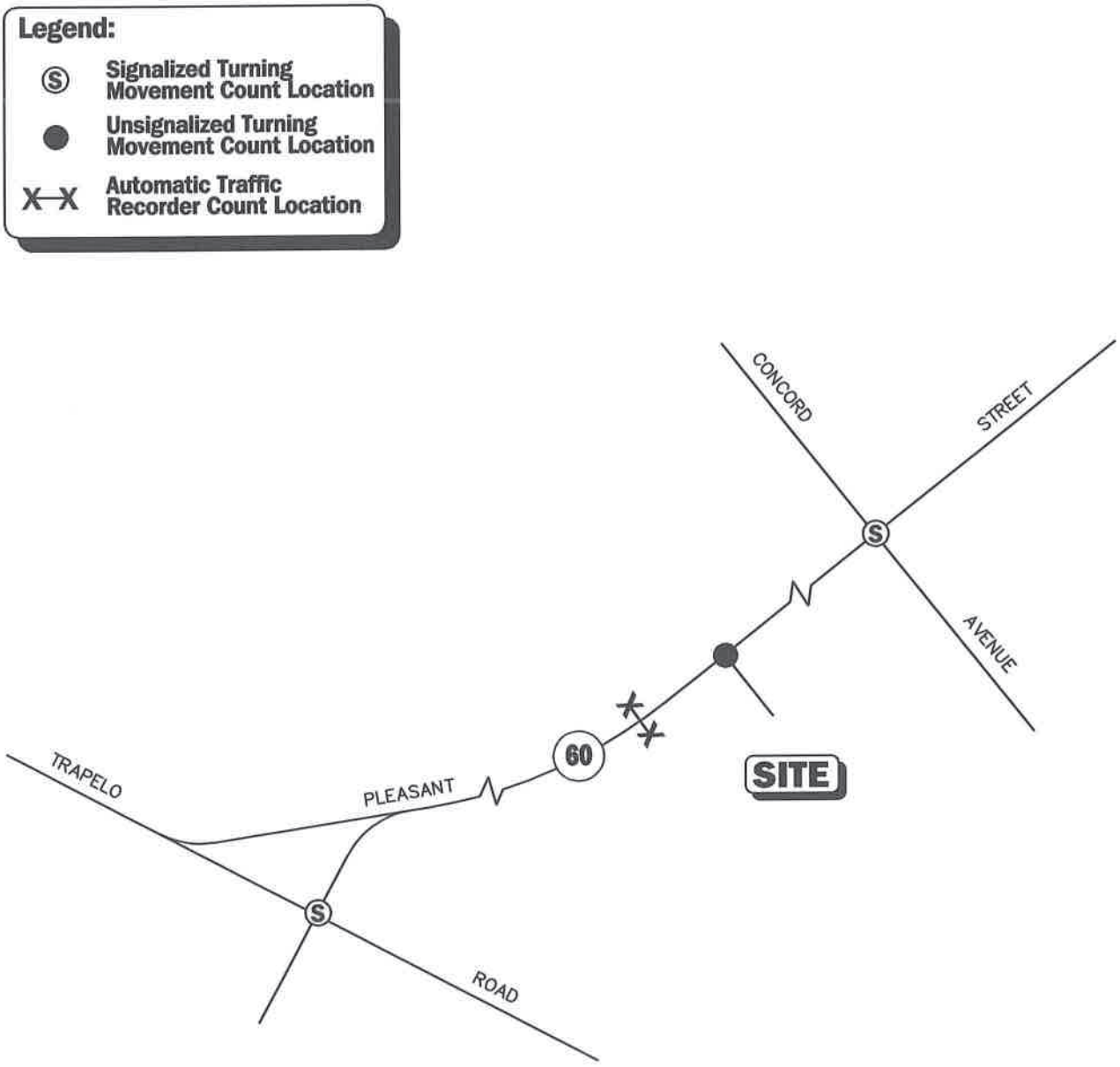
- Pleasant Street at Trapelo Road
- Pleasant Street at Concord Avenue
- Pleasant Street at Site Driveway

The following describes the study area roadways and intersections.

ROADWAYS

Pleasant Street

Pleasant Street (Route 60) is a two-lane local arterial roadway under the jurisdiction of the Town of Belmont that traverses the study area in a general north-south orientation, providing access between Trapelo Road to the south and the Town of Arlington to the north. Within the study area Pleasant Street provides a single approximate 12-foot wide travel lane in each direction with an approximate 4-foot shoulder provided along both sides of the corridor. In the vicinity of the Project site, on-street parking is prohibited along both side of the corridor. Sidewalk is provided along the eastern side of the corridor, adjacent to the Project site. The speed limit on Pleasant Street is not posted in the vicinity of the Project. Land use along the corridor consists primarily of a mix of commercial properties.



Not To Scale

Figure 2

2019 Existing
Peak Hour Traffic Volumes

Vanasse & Associates inc

INTERSECTIONS

Pleasant Street at Trapelo Road

Pleasant Street and private residential driveways intersect Trapelo Road from the north and south to form a four-way intersection that operates under traffic signal control. The Trapelo Road eastbound approach provides an approximate 12-foot wide exclusive left-turn lane and an approximate 12-foot wide through/right-turn lane with an approximate 5-foot wide marked shoulder provided. The Trapelo Road westbound approach provides two approximate 12-foot wide general purpose travel lanes with an approximate 4-foot wide marked shoulder provided. The Pleasant Street southbound approach provides an approximate 14-foot wide left-turn/through lane and an approximate 12-foot wide channelized right-turn lane that operates under YIELD-sign control. The northbound approach consists of two residential driveways that provide an approximate 25 total feet in width. The traffic signal at this location operates under a three-phase signal sequence, with a protected left-turn phase provided for eastbound traffic on Trapelo Road. Sidewalk is provided along both sides of Trapelo Road and the eastern side of Pleasant Street at this location, with painted crosswalks provide across the eastbound and southbound approaches to this intersection. Land use in the vicinity of this intersection consists primarily of a mix of commercial and residential uses.

Pleasant Street at Concord Avenue

Pleasant Street intersects Concord Avenue from the north and south to form a four-way intersection that operates under traffic signal control. The Concord Avenue eastbound approach provides an approximate 20-foot wide shared left-turn/through lane and an approximate 14-foot wide channelized right-turn lane that operates under STOP-sign control, with an approximate 3-foot wide marked shoulder provided. The Concord Avenue westbound approach provides a single approximate 20-foot wide general purpose travel lane. The Pleasant Street northbound and southbound approaches to this intersection provide an approximate 12-foot wide general purpose travel lane. The traffic signal at this location operates under a three-phase signal sequence, with a protected left-turn phase provided for westbound traffic on Concord Avenue. Sidewalk is provided along both sides of both sides of Pleasant Street, north of Concord Avenue and along the eastern side of the corridor south of Concord Avenue. Sidewalk is provided along both sides of Concord Avenue, east of Pleasant Street and along the southern side of Concord Avenue, west of Pleasant Street. Painted crosswalks are provided across all four intersection approaches to this location. Land use in the vicinity of this intersection consists primarily of a mix of institutional and residential uses, including Belmont Town Hall and the Town of Belmont Police Station.

EXISTING TRAFFIC VOLUMES

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, manual turning movement counts (TMCs) and vehicle classification counts were conducted in October 2019. Peak-period manual TMCs were performed during the weekday evening (4:00 to 6:00 PM) and Saturday midday (11:00 AM to 2:00 PM) peak periods at each study area intersection. Additionally, in order to document daily traffic volumes within the study area, automatic traffic recorder (ATR) counts were also conducted along Pleasant Street over a 48-hour period to document weekday and Saturday daily traffic conditions within the study area.

Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, seasonal adjustment factors provided by MassDOT were reviewed. Based on a review of this data, traffic volumes for the month of October are approximately 6 percent higher than average annual conditions. As such, collected traffic volumes were not adjusted and reflect a conservative analysis scenario. 2019 Existing traffic volumes are summarized in Table 1 and graphically depicted in Figure 3.

As summarized in Table 1, Pleasant Street was found to accommodate approximately 13,558 vehicles per day (vpd) on a typical weekday, including with 1,136 vehicles per hour (vph) during the weekday evening peak hour. Peak hour traffic volume during the Saturday midday peak hour amounts to 858 vph. The weekday evening peak hour generally occur between 4:45 and 5:45 PM, with the Saturday midday peak hour generally occurs between 12:30 and 1:30 PM. In all instance the individual peak hour traffic volumes for each intersection were utilized for analysis purposes.

Table 1
2019 EXISTING TRAFFIC VOLUMES

		Weekday Evening Peak Hour			Saturday Midday Peak Hour		
Location	AWT[a]	VPH[b]	K Factor[c]	Directional Distribution[d]	VPH	K Factor	Directional Distribution
Pleasant Street (Route 60)	13,558	1,136	8.4	55% NB	858	--	51% NB

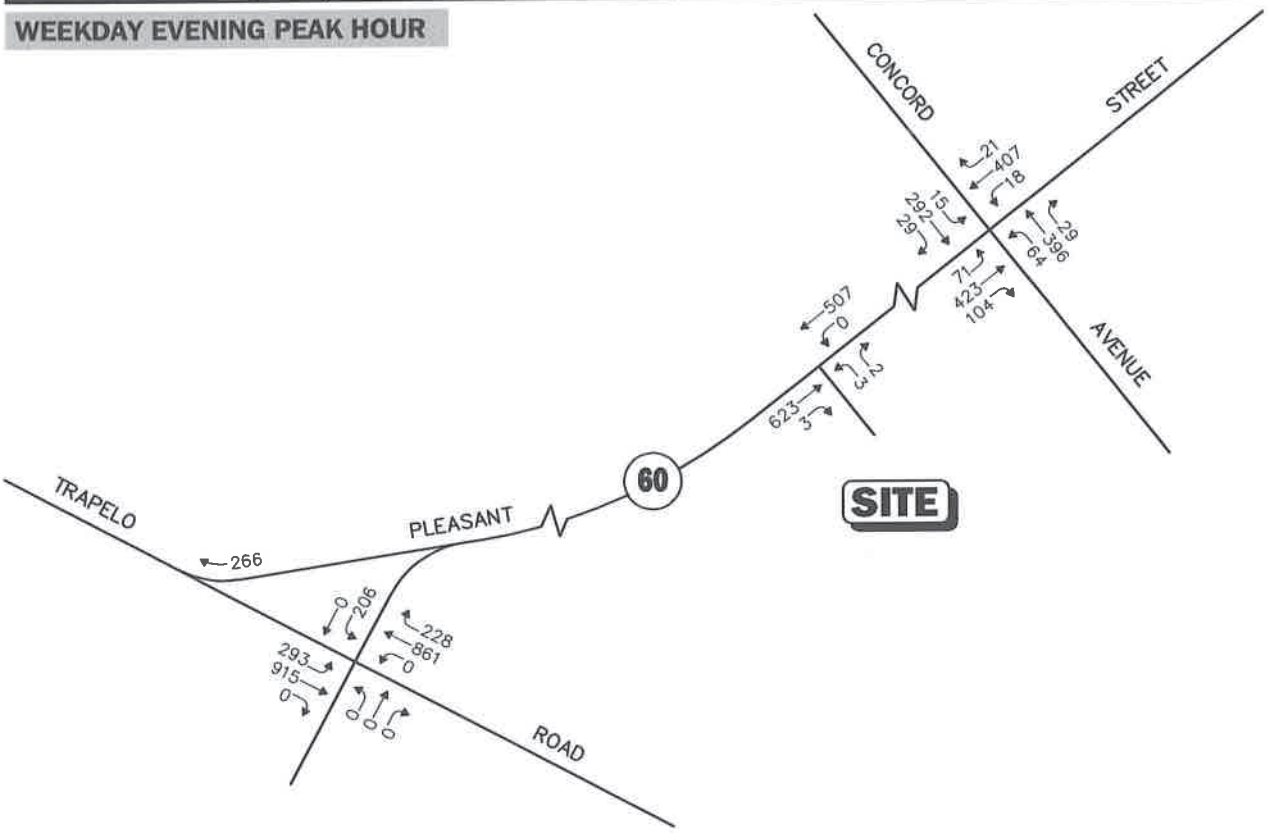
[a]Average weekday traffic in vehicles per day.
[b]Vehicles per hour.
[c]Percent of daily traffic that occurs during the peak hour.
[d]Percent traveling in the peak direction.
NB = northbound, SB = southbound

PEDESTRIAN AND BICYCLE FACILITIES

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in October of 2019. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways and at the study intersections.

In general, sidewalk is currently provided along the eastern side of Pleasant Street within the study area. Painted crosswalks and pedestrian signal equipment are provided at the signalized intersections with Trapelo Road and Concord Avenue. No formal bicycle facilities were noted in the study area, though the combined travel width along Pleasant Street (travel land and shoulder) can safely accommodate vehicular and bicycle traffic in a shared manner.

WEEKDAY EVENING PEAK HOUR



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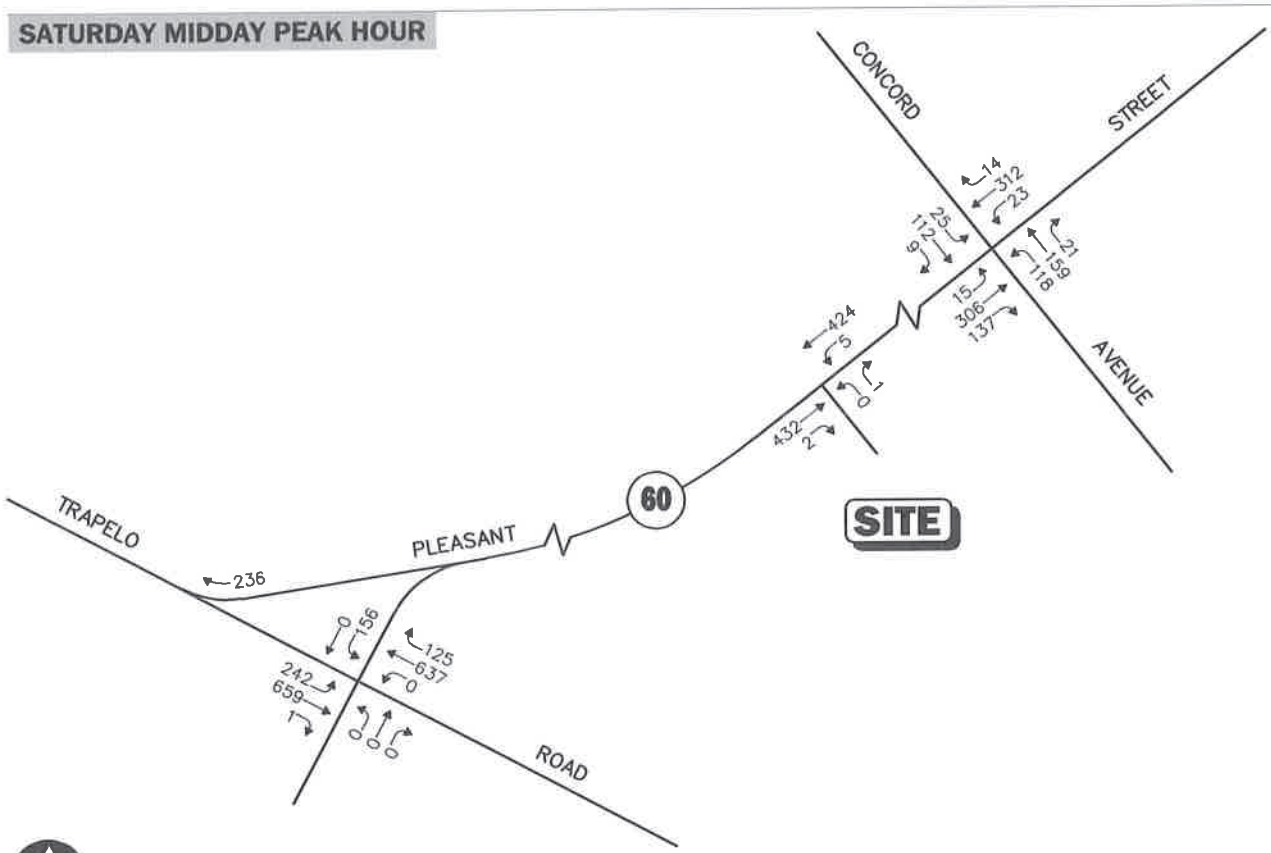

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Head-On	3	0	0
Sideswipe	9	3	0
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Snow/Ice	3	2	0
Fog	0	0	0
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Lighting Conditions:			
Daylight	46	13	1
Dawn/Dusk	2	0	0
Dark (lit)	7	4	0
Dark (unlit)	0	0	0
Unknown/Other	0	0	0
Total	55	17	1
Pavement Conditions:			
Dry	45	12	1
Wet	7	1	0
Snow/Ice	2	2	0
Unknown/Other	1	2	0
Total	55	17	1
Severity:			
Property Damage Only	40	11	1
Personal Injury	11	5	0
Fatality	0	0	0
Unknown/Other	4	1	0
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[a]Average crash over five-year period.
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Specific Development by Others

The Planning Division of the Town of Belmont's Department of Community Development was contacted to determine whether there are any specific area development projects that are expected to influence future

traffic volumes within the study area. Based on discussions, preliminary development plans are currently under consideration for a portion of the McLean Hospital Zone 3 property, which would potentially include up to 110 apartment units as well as 40 age-restricted housing units that would be accessed via Olmstead Drive. The Project would require a rezoning of the property as well as receipt of all required local approvals. At the time of this report's preparation no definitive site plans have been presented to the Town for site plan review, therefore this potential project was not included in the analysis of future traffic conditions. However, as discussed in subsequent sections of this report, a sensitivity analysis was conducted to evaluate the impact of this potential project on future traffic conditions, which indicates no notable change to traffic operations without the project and that no additional off-site mitigation measures would be required to accommodate the combined traffic of the proposed dispensary and the potential McLean residential redevelopment.

Roadway Improvement Projects

The Planning Division of the Town of Belmont's Department of Community Development was contacted in order to determine if there are any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no roadway improvements area anticipated to occur within the study area, outside of routine maintenance operations.

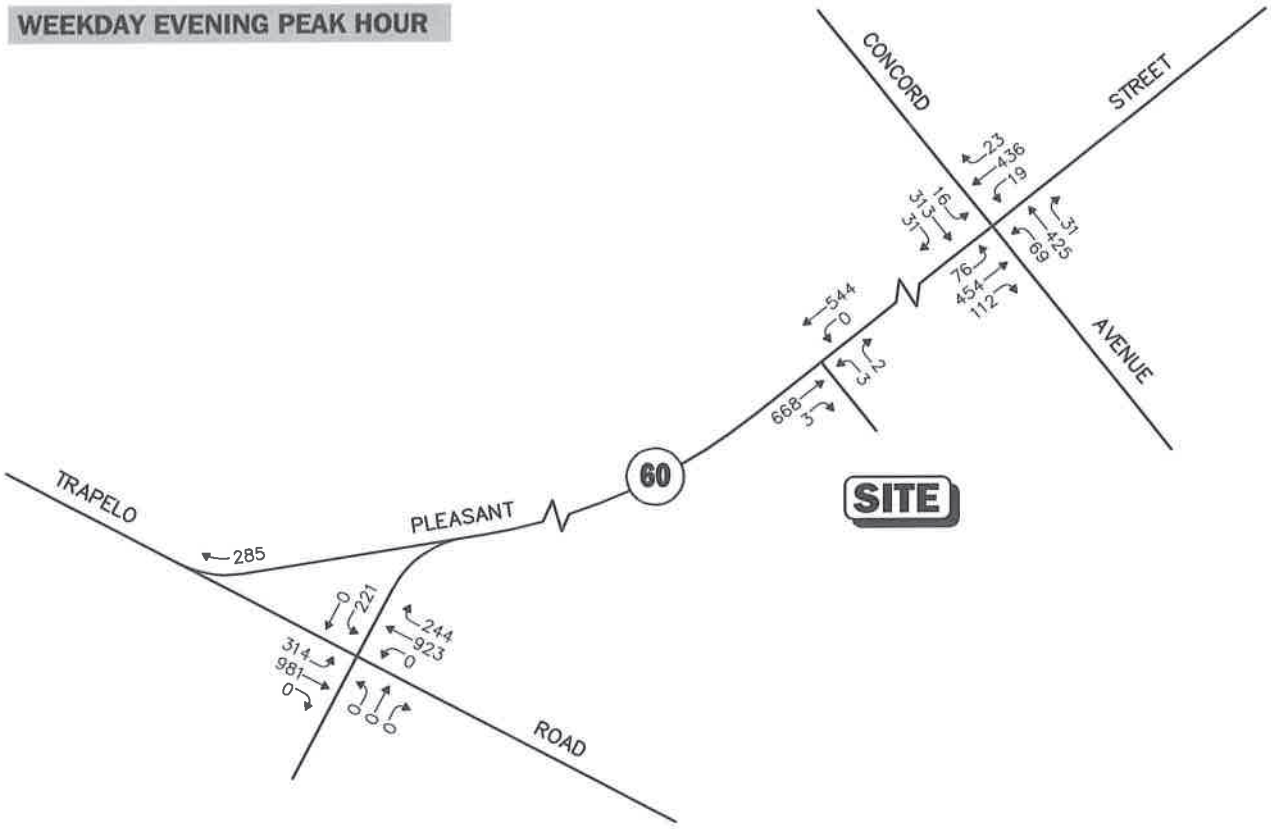
No-Build Traffic Volumes

The 2026 No-Build peak-hour traffic-volume networks were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2019 Existing peak-hour traffic volumes. The resulting 2026 No-Build weekday evening and Saturday midday peak-hour traffic volume networks are shown on Figure 4.

PROJECT-GENERATED TRAFFIC

The project includes the repurposing of approximately 4,150 sf of existing commercial space in order to accommodate a marijuana dispensary. Specifically, the project will include 2,130 sf of dispensary space and 1,830 sf of back office space, with 190 sf of unusable space. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published by the ITE for LUC 882, Marijuana Dispensary was utilized and LUC 710 – General Office Building were utilized. In order to provide a conservative assessment of Project impacts, the 190 sf of unusable space was included in the trip generation calculations for the dispensary component of the Project. The trip generation estimates are summarized in Table 3.

WEEKDAY EVENING PEAK HOUR



SATURDAY MIDDAY PEAK HOUR

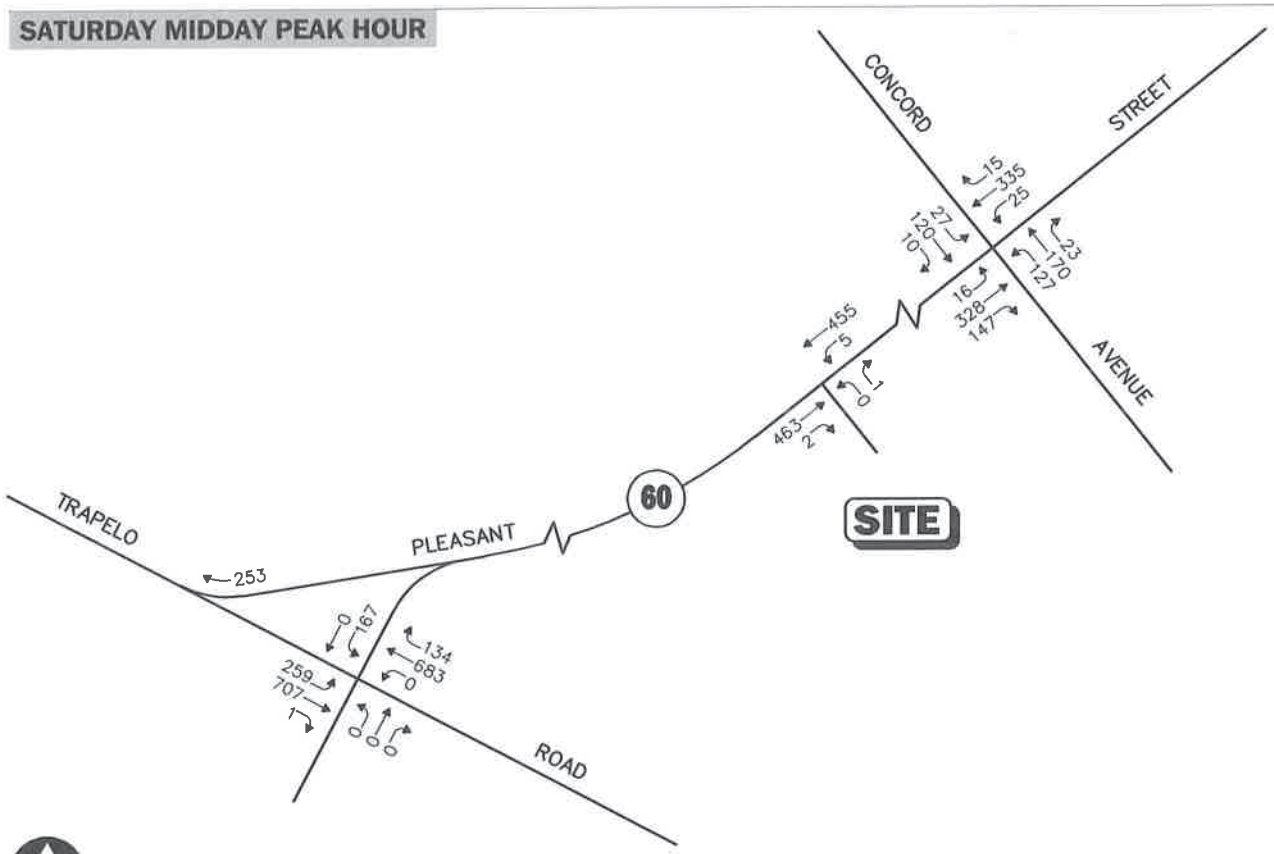


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Figure 4

2026 No-Build
Peak Hour Traffic Volumes

Vanasse & Associates inc

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Table 3
TRIP GENERATION SUMMARY

Time Period/Direction	New Trips[a]
Weekday Daily:	606
Weekday Evening:	
Entering	26
Exiting	27
Total	53
Saturday:	606
Saturday Midday:	
Entering	40
Exiting	45
Total	85

[a]Based on ITE LUC 882, Marijuana Dispensary; 2,320 sf and LUC 710, General Office Space; 1,830 sf.

As summarized in Table 3, the Project is expected to generate approximately 606 vehicle trips on an average weekday (303 entering and 303 exiting), with approximately 53 vehicle trips (26 entering and 27 exiting) expected during the weekday evening peak hour. On Saturday the project is expected to generate approximately 606 vehicle trips (303 entering and 303 exiting) with approximately 85 vehicle trips (40 entering and 45 exiting) expected during the Saturday midday peak hour.

It is noted that the Project site currently houses an active contractor's office that will be relocated to a different space on site as part of the site redevelopment. Therefore no reduction in trip generation was applied for the relocation of the existing contractor's office traffic generation.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project was determined based on a review of existing travel patterns at the study intersections. The trip distribution patterns for the Project are summarized in Table 4 and displayed on Figure 5. As summarized in Table 5, approximately 35 percent of Project-generated traffic is expected to arrive and depart the site via Trapelo Road to the west; 30 percent to and from Trapelo Road to the east; 15 percent to and from Pleasant Street to the north; 15 percent to and from Concord Avenue to the east; and 5 percent to and from Concord Avenue to the west. Based on these distribution patterns the weekday evening and Saturday midday peak-hour site-generated traffic volumes were assigned on the study area roadway network as shown on Figure 6.

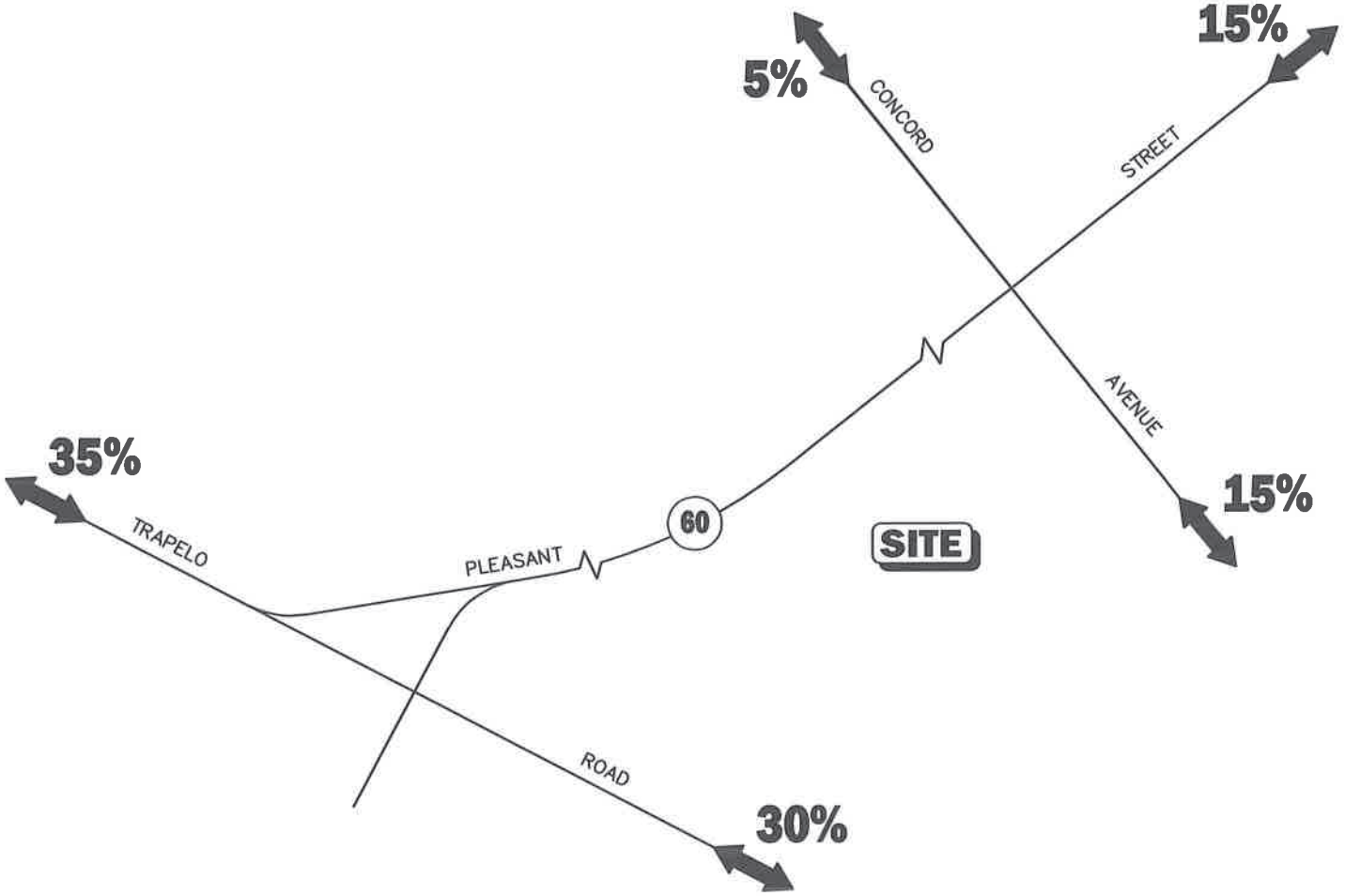

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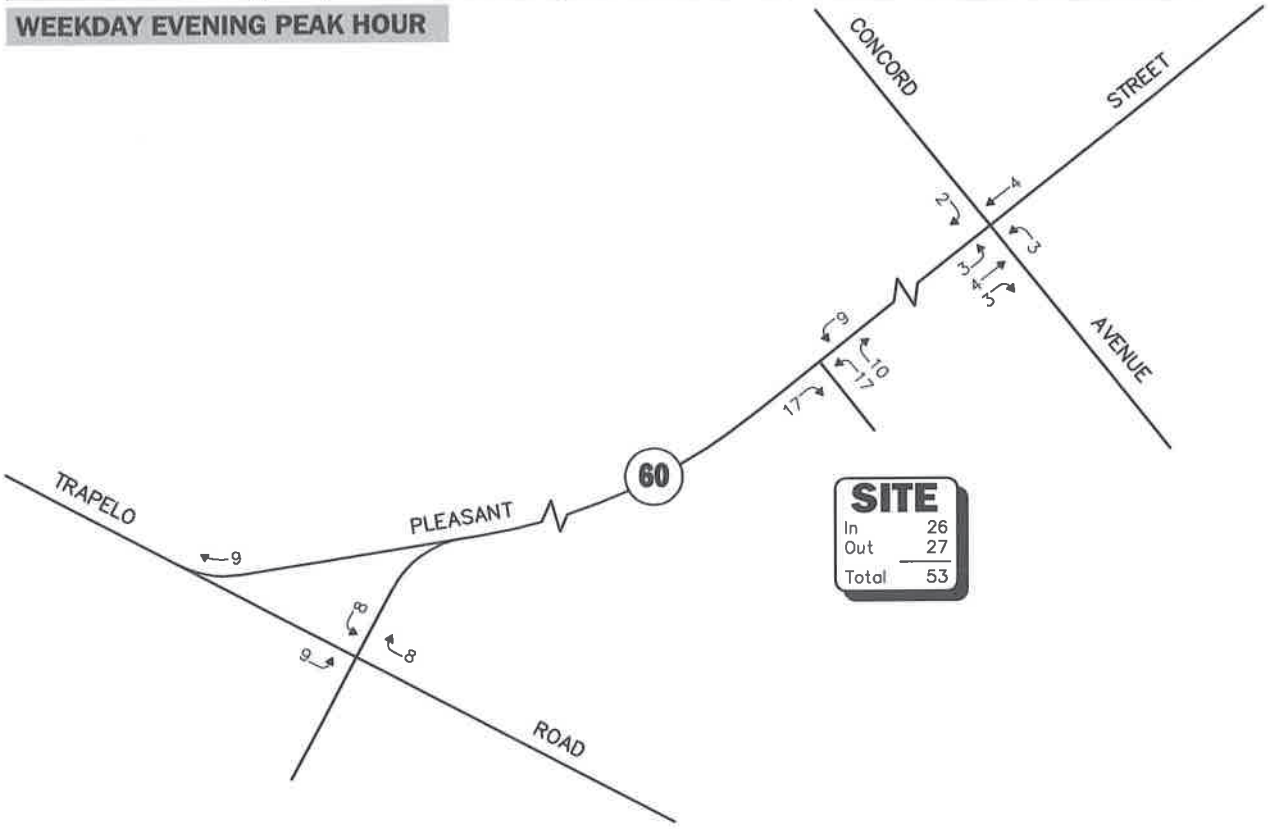
Figure 5

Trip Distribution Map

Vanasse & Associates inc

WEEKDAY EVENING PEAK HOUR



SATURDAY MIDDAY PEAK HOUR

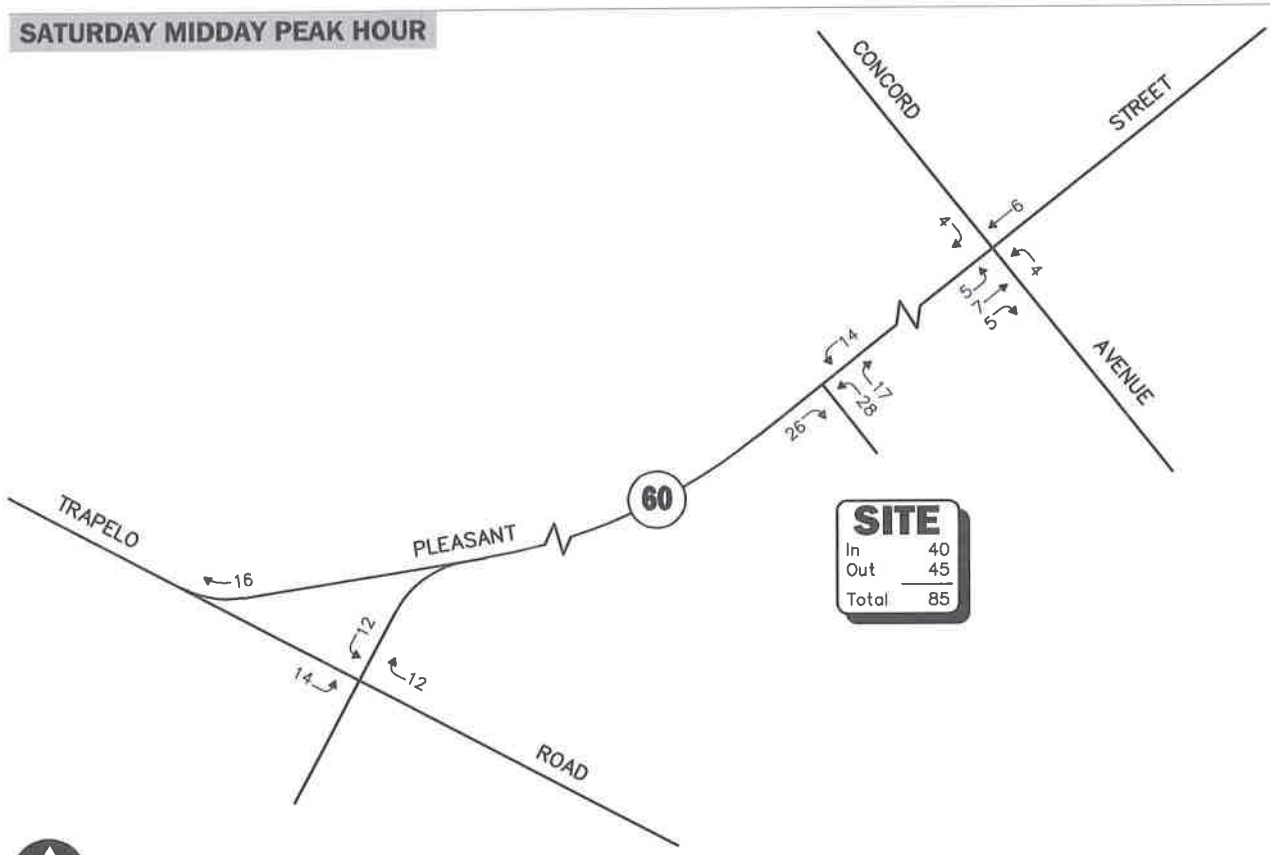


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Figure 6

Project-Generated Peak Hour Traffic Volumes

Vanasse & Associates inc

Table 4
TRIP-DISTRIBUTION SUMMARY

Roadway	Direction (To/From)	Percent
Trapelo Road	West	35
Trapelo Road	East	30
Pleasant Street	North	15
Concord Avenue	East	15
Concord Avenue	West	5
TOTAL		100

FUTURE TRAFFIC VOLUMES - BUILD CONDITION

The 2026 Build condition networks consist of the Project-generated traffic volumes added to the 2026 No-Build traffic volumes. The 2026 Build weekday evening and Saturday midday peak-hour traffic-volume networks are graphically depicted on Figure 7.

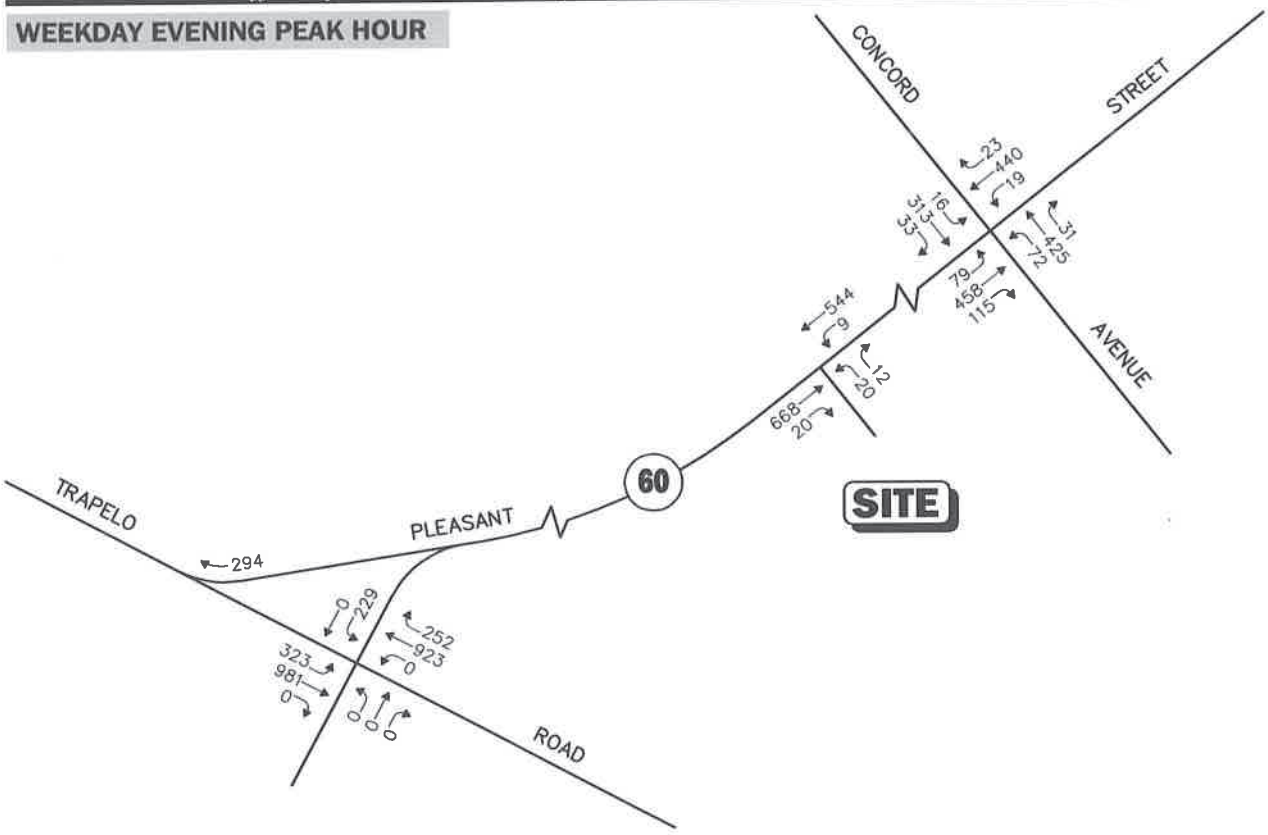
A summary of peak-hour projected traffic-volume increases external to the study area that is the subject of this assessment is shown in Table 5. These volumes are based on the projected traffic volume increases from the Project.

Table 5
PEAK-HOUR TRAFFIC-VOLUME INCREASES

Location/Peak Hour	2026 No-Build	2026 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
Pleasant Street at Trapelo Road:				
Weekday Evening	2,968	3,002	34	1.1
Saturday Midday	2,204	2,258	54	2.5
Pleasant Street at Concord Avenue:				
Weekday Evening	2,005	2,024	19	0.9
Saturday Midday	1,343	1,374	31	2.3

As summarized in Table 5, project-related traffic-volume increases within the study area, relative to 2026 No-Build conditions, are anticipated to range from 0.9 to 2.5 percent during the peak periods.

WEEKDAY EVENING PEAK HOUR



SATURDAY MIDDAY PEAK HOUR

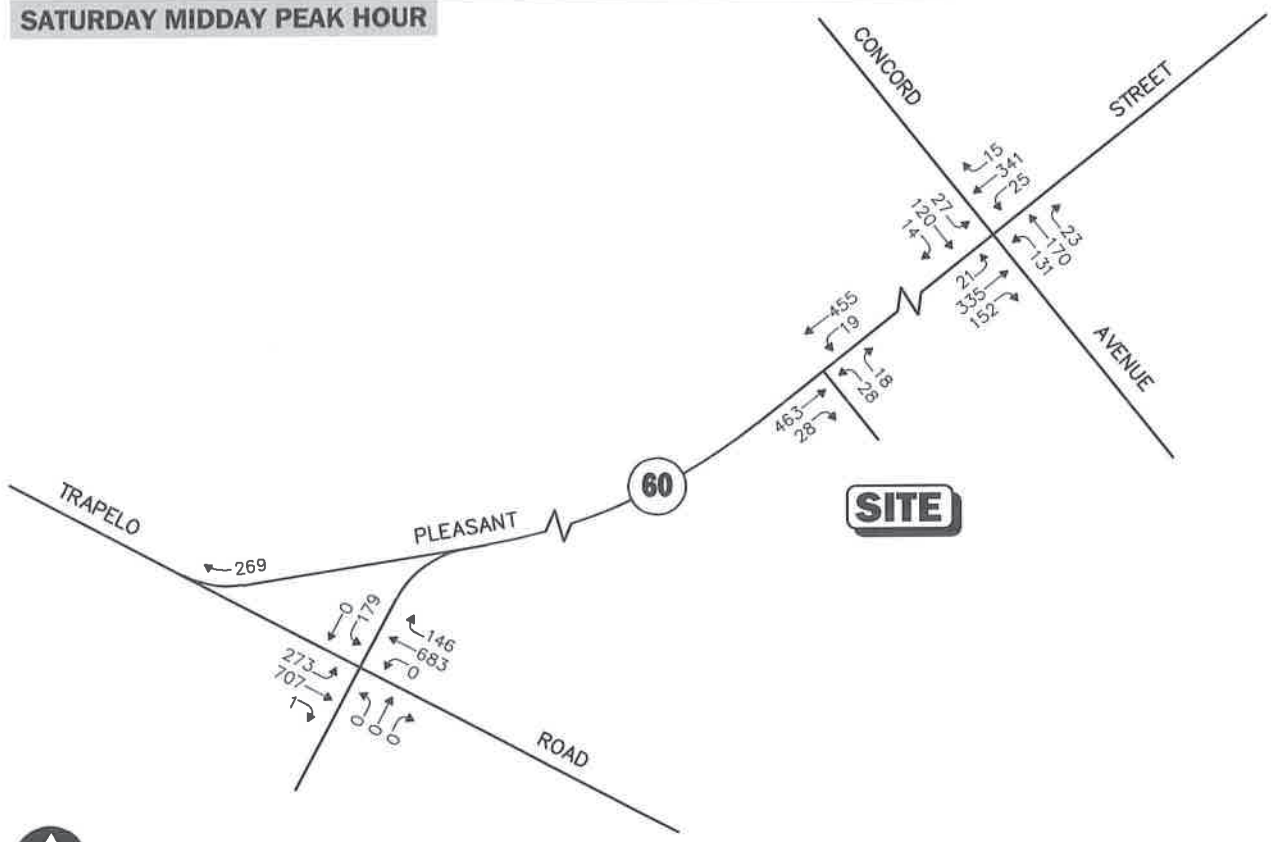


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Figure 7

2026 Build
Peak Hour Traffic Volumes

Vanasse & Associates inc

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TRAFFIC OPERATIONS ANALYSIS

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

METHODOLOGY

Levels of Service

A primary result of capacity analyses is the assignment of level of service to traffic facilities under various traffic-flow conditions.[2] The concept of level of service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

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

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

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

Unsignalized Intersections

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

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

The levels of service of unsignalized intersections are determined by application of a procedure described in the 2000 *Highway Capacity Manual.*[3] Level of service is measured in terms of average control delay. Mathematically, control delay is a function of the capacity and degree of saturation of the lane group and/or approach under study and is a quantification of motorist delay associated with traffic control devices such as traffic signals and STOP signs. Control delay includes the effects of initial deceleration delay approaching a STOP sign, stopped delay, queue move-up time, and final acceleration delay from a stopped condition. Definitions for level of service at unsignalized intersections are also given in the 2000 *Highway Capacity Manual.* Table 6 summarizes the relationship between level of service and average control delay for two way stop controlled and all-way stop controlled intersections.

Table 6
LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS[a]

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

[a]Source: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2000.

[3]*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2000.

Signalized Intersections

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

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

Similar to unsignalized intersections, levels of service for signalized intersections are also calculated using the operational analysis methodology of the 2010 *Highway Capacity Manual*. For signalized intersections, this method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on delay. Level-of-service designations are based on the criterion of control or signal delay per vehicle. Control or signal delay is a measure of driver discomfort, frustration, and fuel consumption, and includes initial deceleration delay approaching the traffic signal, queue move-up time, stopped delay and final acceleration delay. Table 7 summarizes the relationship between level of service and control delay. The tabulated control delay criterion may be applied in assigning level-of-service designations to individual lane groups, to individual intersection approaches, or to entire intersections.

Table 7
LEVEL-OF-SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS[a]

Level-Of-Service by Volume-to-Capacity Ratio		Average Control Delay
v/c ≤1.0	v/c > 1.0	(Seconds Per Vehicle)
A	F	≤10.0
B	F	10.1 to 20.0
C	F	20.1 to 35.0
D	F	35.1 to 55.0
E	F	55.1 to 80.0
F	F	>80.0

[a]Source: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2000.

ANALYSIS RESULTS

Level-of-service and vehicle queue analyses were conducted for 2019 Existing, 2026 No-Build and 2026 Build conditions for the intersections within the study area. The results of the intersection capacity analyses are summarized for signalized and unsignalized intersections in Tables 8 through Table 10, with the detailed analysis results presented in the Appendix.

Table 8
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY – WEEKDAY EVENING PEAK HOUR

		2019 Existing			2026 No-Build			2026 Build		
Location	Approach	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	V/C	Delay	LOS
Pleasant Street at Trapelo Road	Eastbound	0.81	25	C	0.85	28	C	0.87	28	C
	Westbound	0.82	29	C	0.86	32	C	0.87	32	C
	Northbound	0.00	<5	A	0.00	<5	A	0.00	<5	A
	Southbound	0.55	19	B	0.61	20	C	0.63	21	C
	Intersection	--	**25**	**C**	--	**28**	**C**	--	**28**	**C**
Pleasant Street at Concord Avenue	Eastbound	0.45	18	B	0.45	18	B	0.45	18	B
	Westbound	0.70	26	C	0.72	26	C	0.73	27	C
	Northbound	0.78	28	C	0.91	40	C	0.93	45	C
	Southbound	0.54	19	B	0.61	22	B	0.61	22	B
	Intersection	--	**23**	**C**	--	**28**	**C**	--	**29**	**C**

[a]Volume-to-capacity ratio.
[b]Average delay per vehicle (in seconds).
[c]Level of service.

Table 9
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY – SATURDAY MIDDAY PEAK HOUR

		2019 Existing			2026 No-Build			2026 Build		
Location	Approach	V/C[a]	Delay[b]	LOS[c]	V/C	Delay	LOS	V/C	Delay	LOS
Pleasant Street at Trapelo Road	Eastbound	0.69	19	B	0.72	21	C	0.75	21	C
	Westbound	0.68	24	C	0.71	25	C	0.71	25	C
	Northbound	0.00	<5	A	0.00	<5	A	0.00	<5	A
	Southbound	0.39	15	B	0.42	15	B	0.46	16	B
	Intersection	--	**20**	**C**	--	**21**	**C**	--	**22**	**C**
Pleasant Street at Concord Avenue	Eastbound	0.30	19	B	0.30	19	B	0.31	19	B
	Westbound	0.66	28	C	0.67	28	C	0.67	28	C
	Northbound	0.44	9	A	0.49	12	B	0.51	12	B
	Southbound	0.37	9	A	0.41	11	B	0.42	12	B
	Intersection	--	**15**	**B**	--	**16**	**B**	--	**16**	**B**

[a]Volume-to-capacity ratio.
[b]Average delay per vehicle (in seconds).
[c]Level of service.

Table 10
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY - PLEASANT STREET AT SITE DRIVEWAY

Location/ Time Period	Approach	2019 Existing V/C[a]	2019 Existing Delay[b]	2019 Existing LOS[c]	2026 No-Build V/C	2026 No-Build Delay	2026 No-Build LOS	2026 Build V/C	2026 Build Delay	2026 Build LOS
Weekday Evening Peak Hour	Westbound	0.02	19	C	0.02	21	C	0.17	25	D
	Northbound	0.00	<5	A	0.00	<5	A	0.00	<5	A
	Southbound	0.00	<5	A	0.00	<5	A	0.01	<5	A
Saturday Midday Peak Hour	Westbound	0.00	11	B	0.00	11	B	0.16	18	C
	Northbound	0.00	<5	A	0.00	<5	A	0.00	<5	A
	Southbound	0.01	<5	A	0.01	<5	A	0.02	<5	A

[a]Volume-to-capacity ratio.
[b]Average delay per vehicle (in seconds).
[c]Level of service.

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

Signalized Intersections

Pleasant Street at Trapelo Road

Under 2019 Existing conditions, this signalized intersection was shown to operate at an overall LOS C during the weekday evening and Saturday midday peak hours. Under 2026 No-Build conditions, this signalized intersection is projected to continue operate at an overall LOS C during the weekday evening and Saturday midday peak hours. Under 2026 Build conditions, this location is projected to continue to operate at an overall LOS C during the weekday evening and Saturday midday peak hours, with Project-related traffic increase resulting in increases to overall delays of approximately 1 second or less as compared to No-Build conditions.

Pleasant Street at Concord Avenue

Under 2019 Existing conditions, this signalized intersection was shown to operate at an overall LOS C during the weekday evening peak hour and at an overall LOS B during the Saturday midday peak hour. Under 2026 No-Build conditions, this signalized intersection is projected to continue to operate at an overall LOS C during the weekday evening peak hour and at an overall LOS B during the Saturday midday peak hour. Under 2026 Build conditions, this location is projected to continue to operate at an overall LOS C during the weekday evening and at a LOS B during the Saturday midday peak hour, with Project-related traffic increase resulting in increases to overall delays of approximately 1 second or less as compared to No-Build conditions.

Unsignalized Intersections

Pleasant Street at Site Driveway

Under 2026 Build conditions, critical movements at the Project site driveway are projected to operate at LOS D during the weekday evening peak hour and LOS C during the Saturday midday peak hour, with mainline traffic volumes along Pleasant Street operating at LOS A during both time periods.

Sensitivity Analysis

As previously noted, the McLean Hospital is currently evaluating redevelopment options for portions of their property, including land located in Zone 3. The current potential redevelopment program that is under review would include approximately 110 apartment units as well as 40 age restricted residential units. This potential project would require a rezone of the property and receipt of all local approvals required from the Town of Belmont.

In order to identify the impact of this potential redevelopment under future Build conditions, a sensitivity analysis was conducted. Specifically, trip generation calculations were performed for the 110 apartments and 40 age restricted units for both the weekday evening and Saturday midday peak hours based on data published by the ITE. Based on this data the Zone 3 redevelopment would generate approximately 72 vehicle trips during the weekday evening peak hour and approximately 90 vehicle trips during the Saturday midday peak hour. It is noted that this redevelopment project would generate more traffic than the proposed dispensary during both peak periods, with the weekday evening generation approximately fifty percent higher that of the proposed dispensary use. Additional traffic volumes associated with the potential McLean redevelopment were distributed onto the local roadway network in accordance with observed traffic patterns as previously described.

Capacity analyses were performed under future Build conditions, with traffic associated with the McLean redevelopment in place. The results of the capacity analyses indicate no notable change to traffic operations with the additional traffic associated with this use. Specifically, during both peak periods future 2026 Build overall delays at both signalized study area locations are projected to increase by only 1 to 3 seconds per vehicle, with no reduction to overall levels of service. Similarly, no reduction to projected levels of service for the Project's site driveway are expected, with exiting delays increasing by only one second per vehicle due to traffic associated with the potential residential development. Trip generation calculations and capacity analysis results for the sensitivity analysis are provided in the technical appendix of this document.

CONCLUSIONS

VAI has completed a detailed transportation assessment of the potential impacts on the surrounding transportation infrastructure associated with a proposed marijuana dispensary to be located at 1010 Pleasant Street in Belmont, Massachusetts. The following specific areas have been evaluated as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project.

The Project is expected to generate approximately 606 vehicle trips on an average weekday (303 entering and 303 exiting), with approximately 53 vehicle trips (26 entering and 27 exiting) expected during the weekday evening peak hour. On Saturday the project is expected to generate approximately 606 vehicle trips (303 entering and 303 exiting) with approximately 85 vehicle trips (40 entering and 45 exiting) expected during the Saturday midday peak hour.

The results of the capacity analyses indicate that in general the project is not expected to result in a notable impact to area traffic operations, with no significant impact to projected delays within the study area. Based on the above, VAI has concluded that the Project can be safely accommodated with minimal impact on the area road network.

In order to ensure safe and efficient access to the Project, VAI recommends the following measures be implemented.

RECOMMENDATIONS

The following measures are recommended to ensure safe and efficient access to the Project.

Project Access

Site access is currently provided onto the eastern side of Pleasant Street. As part of the site redevelopment the following recommendations are made with respect to site access.

- It is recommended that both site driveways operate under STOP-sign control with painted STOP-bars provided at the driveway approaches to Pleasant Street. Painted centerlines should also be installed to delineate inbound and outbound traffic flows. All pavement markings and signage should be installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) design criteria.

- All proposed signs and landscaping should be located to ensure adequate sight lines are maintained along Pleasant Street, with proposed landscaping along the site frontage restricted to two feet in height.

- On-street parking is currently restricted along the site frontage on Pleasant Street. If deemed appropriate by the Town of Belmont, it is recommended that the applicant install additional No Parking signs on the utility pole along the site frontage to further reinforce the parking restriction in this area.

Traffic and Parking Management Plan

It is recommended that a traffic and parking management plan be developed in consultation with the Town of Belmont's Police Department to accommodate the increased customer demand that may occur during the initial opening period for the dispensary. The goal of the traffic and parking management plan will be to manage customer demands so as not to exceed the available parking within the project site with consideration of employee parking requirements. After the initial opening period, operations should be reviewed with the Police Chief or their designee on a periodic basis to determine if there is a need to continue the elements of the traffic and parking management plan.

With implementation of these measures, VAI has concluded that the Project can be safely accommodated with minimal impact on the area road network.

APPENDIX

TRAFFIC COUNT DATA
MOTOR VEHICLE CRASH DATA
TRIP GENERATION CALCULATIONS
CAPACITY ANALYSIS WORKSHEETS
SENSITIVITY ANALYSIS DATA

TRAFFIC COUNT 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

1010 Pleasant Street
between driveways
City, State: Belmont, MA
Client: V&A/ S. Kelly

197270 A Volume
Site Code: 8444
Date Start: 11/13/19
Date End: 11/16/19

Start	EB				WB				Combined				11/14/19
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		Thu
12:00	5		103		7		80		12		183		
12:15	4		101		8		87		12		188		
12:30	1		99		5		86		6		185		
12:45	3	13	115	418	5	25	94	347	8	38	209	765	
01:00	2		88		0		109		2		197		
01:15	2		87		2		90		4		177		
01:30	0		100		6		108		6		208		
01:45	3	7	107	382	2	10	82	389	5	17	189	771	
02:00	8		100		1		95		9		195		
02:15	2		102		4		114		6		216		
02:30	1		115		3		107		4		222		
02:45	1	12	128	445	3	11	131	447	4	23	259	892	
03:00	2		144		2		126		4		270		
03:15	2		134		4		124		6		258		
03:30	1		165		4		140		5		305		
03:45	3	8	142	585	4	14	102	492	7	22	244	1077	
04:00	2		138		0		138		2		276		
04:15	2		151		7		118		9		269		
04:30	5		163		7		131		12		294		
04:45	5	14	138	590	21	35	113	500	26	49	251	1090	
05:00	8		142		11		120		19		262		
05:15	14		159		18		133		32		292		
05:30	23		159		39		130		62		289		
05:45	33	78	133	593	54	122	113	496	87	200	246	1089	
06:00	37		107		44		125		81		232		
06:15	40		126		58		96		98		222		
06:30	76		96		95		89		171		185		
06:45	90	243	102	431	126	323	85	395	216	566	187	826	
07:00	120		108		146		94		266		202		
07:15	114		86		148		94		262		180		
07:30	112		79		127		56		239		135		
07:45	104	450	76	349	160	581	60	304	264	1031	136	653	
08:00	103		57		154		51		257		108		
08:15	96		54		156		61		252		115		
08:30	123		58		158		49		281		107		
08:45	101	423	55	224	187	655	36	197	288	1078	91	421	
09:00	79		58		144		58		223		116		
09:15	102		43		142		42		244		85		
09:30	76		46		112		40		188		86		
09:45	74	331	45	192	108	506	52	192	182	837	97	384	
10:00	75		37		109		31		184		68		
10:15	69		14		95		34		164		48		
10:30	86		21		97		26		183		47		
10:45	76	306	22	94	95	396	18	109	171	702	40	203	
11:00	91		17		75		18		166		35		
11:15	81		18		93		13		174		31		
11:30	86		21		94		14		180		35		
11:45	87	345	9	65	96	358	11	56	183	703	20	121	
Total	2230		4368		3036		3924		5266		8292		
Percent	42.3%		52.7%		57.7%		47.3%						
Day Total		6598				6960				13558			
Peak	07:00	-	04:30	-	08:00	-	02:45	-	08:00	-	04:30	-	-	-
Vol.	450	-	602	-	655	-	521	-	1078	-	1099	-	-	-
P.H.F.	0.938		0.923		0.876		0.930		0.936		0.935			

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

1010 Pleasant Street
between driveways
City, State: Belmont, MA
Client: V&A/ S. Kelly

197253 A Speed
Site Code: 8444
Date Start: 13-Nov-19
Date End: 15-Nov-19

EB

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 Perce	Avera (Mean
11/14/ 19	0	0	0	2	7	4	0	0	0	0	0	0	0	13	36	33
01:00	0	0	1	0	4	2	0	0	0	0	0	0	0	7	36	32
02:00	0	0	0	1	5	6	0	0	0	0	0	0	0	12	37	34
03:00	0	0	0	4	3	1	0	0	0	0	0	0	0	8	33	30
04:00	0	0	2	2	7	3	0	0	0	0	0	0	0	14	35	31
05:00	0	1	9	24	30	12	1	1	0	0	0	0	0	78	34	30
06:00	9	2	8	26	139	53	5	1	0	0	0	0	0	243	36	31
07:00	38	4	22	86	205	90	4	0	0	0	1	0	0	450	35	30
08:00	57	14	31	92	186	41	2	0	0	0	0	0	0	423	33	27
09:00	37	6	22	96	139	30	1	0	0	0	0	0	0	331	33	27
10:00	15	7	23	68	130	58	4	0	1	0	0	0	0	306	35	30
11:00	29	4	25	90	146	48	2	1	0	0	0	0	0	345	33	29
12 PM	17	4	19	114	207	54	3	0	0	0	0	0	0	418	33	30
13:00	22	4	12	103	177	58	6	0	0	0	0	0	0	382	34	30
14:00	26	10	24	108	192	77	7	1	0	0	0	0	0	445	35	30
15:00	49	20	58	172	240	45	1	0	0	0	0	0	0	585	33	27
16:00	34	15	35	196	268	41	1	0	0	0	0	0	0	590	33	28
17:00	28	5	41	220	261	37	1	0	0	0	0	0	0	593	33	28
18:00	16	1	15	122	237	38	2	0	0	0	0	0	0	431	33	30
19:00	13	1	7	108	183	36	1	0	0	0	0	0	0	349	33	30
20:00	2	0	14	64	122	22	0	0	0	0	0	0	0	224	33	30
21:00	5	0	4	58	105	18	2	0	0	0	0	0	0	192	33	30
22:00	0	0	0	32	49	11	1	1	0	0	0	0	0	94	33	31
23:00	0	0	1	16	31	16	1	0	0	0	0	0	0	65	36	32
Total	397	98	373	1804	3073	801	45	5	1	0	1	0	0	6598		
%	6.0%	1.5%	5.7%	27.3%	46.6%	12.1%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	08:00	09:00	07:00	07:00	06:00	05:00	10:00		07:00			07:00		
Vol.	57	14	31	96	205	90	5	1	1		1			450		
PM Peak	15:00	15:00	15:00	17:00	16:00	14:00	14:00	14:00						17:00		
Vol.	49	20	58	220	268	77	7	1						593		

Stats

15th Percentile :	24 MPH
50th Percentile :	30 MPH
85th Percentile :	33 MPH
95th Percentile :	37 MPH
Mean Speed(Average) :	29 MPH
10 MPH Pace Speed :	25-34 MPH
Number in Pace :	4877
Percent in Pace :	73.9%
Number of Vehicles > 35 MPH :	693
Percent of Vehicles > 35 MPH :	10.5%

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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1010 Pleasant Street
between driveways
City, State: Belmont, MA
Client: V&A/ S. Kelly

197253 A Speed
Site Code: 8444
Date Start: 13-Nov-19
Date End: 15-Nov-19

WB

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 Perce	Avera (Mean
11/14/ 19	0	0	0	3	10	12	0	0	0	0	0	0	0	25	37	34
01:00	0	0	0	1	1	7	0	1	0	0	0	0	0	10	38	37
02:00	0	0	0	1	4	5	1	0	0	0	0	0	0	11	38	35
03:00	0	0	1	2	6	4	0	1	0	0	0	0	0	14	37	33
04:00	0	0	0	3	9	17	6	0	0	0	0	0	0	35	39	36
05:00	3	0	1	5	54	49	10	0	0	0	0	0	0	122	38	34
06:00	15	2	9	39	137	107	13	1	0	0	0	0	0	323	37	32
07:00	47	**10**	15	**85**	265	142	16	1	0	0	0	0	0	581	36	30
08:00	**57**	8	**45**	80	**275**	**167**	**21**	2	0	0	0	0	0	**655**	36	30
09:00	19	8	18	75	248	122	16	0	0	0	0	0	0	506	36	31
10:00	17	3	24	39	176	119	13	**5**	0	0	0	0	0	396	37	32
11:00	23	2	20	61	153	88	10	1	0	0	0	0	0	358	36	30
12 PM	24	5	15	63	148	83	9	0	0	0	0	0	0	347	36	30
13:00	32	4	20	57	181	89	6	0	0	0	0	0	0	389	36	30
14:00	42	3	8	98	198	93	5	0	0	0	0	0	0	447	35	29
15:00	50	10	9	94	**217**	**101**	**11**	0	0	0	0	0	0	492	35	29
16:00	**52**	**14**	**30**	113	203	84	4	0	0	0	0	0	0	**500**	34	28
17:00	33	0	22	**185**	193	57	4	**2**	0	0	0	0	0	496	33	29
18:00	19	0	3	96	195	75	6	1	0	0	0	0	0	395	35	31
19:00	14	0	8	77	165	37	3	0	0	0	0	0	0	304	33	30
20:00	2	0	1	50	95	45	4	0	0	0	0	0	0	197	36	32
21:00	6	0	2	30	108	44	2	0	0	0	0	0	0	192	35	32
22:00	3	0	0	13	63	27	2	1	0	0	0	0	0	109	36	32
23:00	0	0	1	5	21	23	6	0	0	0	0	0	0	56	38	34
Total	458	69	252	1275	3125	1597	168	16	0	0	0	0	0	6960		
%	6.6%	1.0%	3.6%	18.3%	44.9%	22.9%	2.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	07:00	08:00	07:00	08:00	08:00	08:00	10:00						08:00		
Vol.	57	10	45	85	275	167	21	5						655		
PM Peak	16:00	16:00	16:00	17:00	15:00	15:00	15:00	17:00						16:00		
Vol.	52	14	30	185	217	101	11	2						500		

Stats

15th Percentile :	25 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH
95th Percentile :	38 MPH
Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	30-39 MPH
Number in Pace :	4722
Percent in Pace :	67.8%
Number of Vehicles > 35 MPH :	1462
Percent of Vehicles > 35 MPH :	21.0%

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM
Class:

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

Cars and Heavy Vehicles (Combined)

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	72	0	0	52	0	124	42	0	228	0	0	0	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212	68	0	0	280	1	0	0	0	0	0	1	675
4:15 PM	0	70	0	0	50	0	120	56	0	218	0	0	0	274	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236	69	0	0	305	0	0	0	0	0	0	0	699
4:30 PM	0	60	0	0	58	0	118	75	0	193	0	0	0	268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	78	0	0	311	0	0	0	0	0	0	0	697
4:45 PM	0	63	0	0	46	0	109	55	0	222	0	0	0	277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234	78	0	0	312	0	0	0	0	0	0	0	698
Total	0	265	0	0	206	0	471	228	0	861	0	0	0	1089	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	915	293	0	0	1208	1	0	0	0	0	0	1	2769
5:00 PM	0	57	0	0	52	0	109	53	0	180	0	0	0	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242	79	0	0	321	0	0	0	0	1	0	1	664
5:15 PM	0	67	0	0	59	0	126	78	0	166	1	0	0	245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227	79	1	1	308	0	0	0	0	0	0	0	679
5:30 PM	0	53	0	0	73	0	126	65	0	172	0	0	0	237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194	71	0	0	265	0	0	0	0	0	0	0	628
5:45 PM	0	53	0	0	57	0	120	52	0	182	0	0	0	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	221	65	0	0	286	0	0	0	0	0	0	0	640
Total	0	240	0	0	241	0	481	248	0	700	1	0	0	949	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	884	294	1	1	1180	0	0	0	0	1	0	1	2611
Grand Total	0	505	0	0	447	0	952	476	0	1561	1	0	0	2038	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1799	587	1	1	2388	1	0	0	0	1	0	2	5380
Approach %	0.0	53.0	0.0	0.0	47.0	0.0		23.4	0.0	76.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	75.3	24.6	0.0	0.0		50.0	0.0	0.0	0.0	50.0	0.0		
Total %	0.0	9.4	0.0	0.0	8.3	0.0	17.7	8.8	0.0	29.0	0.0	0.0	0.0	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.4	10.9	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							1064							2146							0							1							2068							1	5380
Cars	0	481	0	0	443	0	924	466	0	1537	1	0	0	2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1772	577	1	1	2351	1	0	0	0	1	0	2	5281
% Cars	0.0	95.2	0.0	0.0	99.1	0.0	97.1	97.9	0.0	98.5	100.0	0.0	0.0	98.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.5	98.3	100.0	100.0	98.5	100.0	0.0	0.0	0.0	100.0	0.0	100.0	98.2
Exiting Leg Total							1044							2215							0							1							2010							1	5231
Heavy Vehicles	0	24	0	0	4	0	28	10	0	24	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	10	0	0	37	0	0	0	0	0	0	0	99
% Heavy Vehicles	0.0	4.8	0.0	0.0	0.9	0.0	2.9	2.1	0.0	1.5	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.7	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Exiting Leg Total							20							31							0							0							48							0	99

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

4:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	72	0	0	52	0	124	42	0	228	0	0	0	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212	68	0	0	280	1	0	0	0	0	0	1	675
4:15 PM	0	70	0	0	50	0	120	56	0	218	0	0	0	274	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	236	69	0	0	305	0	0	0	0	0	0	0	699
4:30 PM	0	60	0	0	58	0	118	75	0	193	0	0	0	268	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	78	0	0	311	0	0	0	0	0	0	0	697
4:45 PM	0	63	0	0	46	0	109	55	0	222	0	0	0	277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234	78	0	0	312	0	0	0	0	0	0	0	698
Total Volume	0	265	0	0	206	0	471	228	0	861	0	0	0	1089	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	915	293	0	0	1208	1	0	0	0	0	0	1	2769
% Approach Total	0.0	56.3	0.0	0.0	43.7	0.0		20.9	0.0	79.1	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	75.7	24.3	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.910	0.000	0.000	0.888	0.000	0.950	0.760	0.000	0.944	0.000	0.000	0.000	0.983	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	0.969	0.939	0.000	0.000	0.968	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.990
Cars	0	253	0	0	205	0	458	223	0	847	0	0	0	1070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	899	285	0	0	1184	1	0	0	0	0	0	1	2713
Cars %	0.0	95.5	0.0	0.0	99.5	0.0	97.2	97.8	0.0	98.4	0.0	0.0	0.0	98.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.3	97.3	0.0	0.0	98.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	98.0
Heavy Vehicles	0	12	0	0	1	0	13	5	0	14	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	8	0	0	24	0	0	0	0	0	0	0	56
Heavy Vehicles %	0.0	4.5	0.0	0.0	0.5	0.0	2.8	2.2	0.0	1.6	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.7	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
Cars Enter Leg	0	253	0	0	205	0	458	223	0	847	0	0	0	1070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	899	285	0	0	1184	1	0	0	0	0	0	1	2713
Heavy Enter Leg	0	12	0	0	1	0	13	5	0	14	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	8	0	0	24	0	0	0	0	0	0	0	56
Total Entering Leg	0	265	0	0	206	0	471	228	0	861	0	0	0	1089	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	915	293	0	0	1208	1	0	0	0	0	0	1	2769
Cars Exiting Leg							508							1104							0							0							1101							0	2713
Heavy Exiting Leg							13							17							0							0							26							0	56
Total Exiting Leg							521							1121							0							0							1127							0	2769

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Cars

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	71	0	0	52	0	123	40	0	227	0	0	0	267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208	63	0	0	271	1	0	0	0	0	0	1	662
4:15 PM	0	66	0	0	50	0	116	55	0	214	0	0	0	269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230	69	0	0	299	0	0	0	0	0	0	0	684
4:30 PM	0	55	0	0	57	0	112	73	0	188	0	0	0	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232	76	0	0	308	0	0	0	0	0	0	0	681
4:45 PM	0	61	0	0	46	0	107	55	0	218	0	0	0	273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229	77	0	0	306	0	0	0	0	0	0	0	686
Total	0	253	0	0	205	0	458	223	0	847	0	0	0	1070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	899	285	0	0	1184	1	0	0	0	0	0	1	2713
5:00 PM	0	54	0	0	52	0	106	51	0	178	0	0	0	229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240	78	0	0	318	0	0	0	0	1	0	1	654
5:15 PM	0	63	0	0	58	0	121	78	0	164	1	0	0	243	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	224	79	1	1	305	0	0	0	0	0	0	0	669
5:30 PM	0	51	0	0	71	0	122	63	0	169	0	0	0	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	71	0	0	262	0	0	0	0	0	0	0	616
5:45 PM	0	60	0	0	57	0	117	51	0	179	0	0	0	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	218	64	0	0	282	0	0	0	0	0	0	0	629
Total	0	228	0	0	238	0	466	243	0	690	1	0	0	934	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	873	292	1	1	1167	0	0	0	0	1	0	1	2568
Grand Total	0	481	0	0	443	0	924	466	0	1537	1	0	0	2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1772	577	1	1	2351	1	0	0	0	1	0	2	5281
Approach %	0.0	52.1	0.0	0.0	47.9	0.0		23.3	0.0	76.7	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	75.4	24.5	0.0	0.0		50.0	0.0	0.0	0.0	50.0	0.0		
Total %	0.0	9.1	0.0	0.0	8.4	0.0	17.5	8.8	0.0	29.1	0.0	0.0	0.0	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	10.9	0.0	0.0	44.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Existing Leg Total							1044							2215							0							1							2020							1	5281

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

4:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	71	0	0	52	0	123	40	0	227	0	0	0	267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208	63	0	0	271	1	0	0	0	0	0	1	662
4:15 PM	0	66	0	0	50	0	116	55	0	214	0	0	0	269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230	69	0	0	299	0	0	0	0	0	0	0	684
4:30 PM	0	55	0	0	57	0	112	73	0	188	0	0	0	261	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	232	76	0	0	308	0	0	0	0	0	0	0	681
4:45 PM	0	61	0	0	46	0	107	55	0	218	0	0	0	273	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229	77	0	0	306	0	0	0	0	0	0	0	686
Total Volume	0	253	0	0	205	0	458	223	0	847	0	0	0	1070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	899	285	0	0	1184	1	0	0	0	0	0	1	2713
% Approach Total	0.0	55.2	0.0	0.0	44.8	0.0		20.8	0.0	79.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	75.9	24.1	0.0	0.0		100.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.831	0.000	0.000	0.899	0.000	0.931	0.764	0.000	0.933	0.000	0.000	0.000	0.980	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	0.969	0.925	0.000	0.000	0.961	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.989
Existing Leg	0	253	0	0	205	0	458	223	0	847	0	0	0	1070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	899	285	0	0	1184	1	0	0	0	0	0	1	2713
Exiting Leg							508							1104							0							0							1101							0	2713
Total							966							2174							0							0							2285							1	5426

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	0	0	1	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5	0	0	9	0	0	0	0	0	0	0	13
4:15 PM	0	4	0	0	0	0	4	1	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	15
4:30 PM	0	5	0	0	1	0	6	2	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	16
4:45 PM	0	2	0	0	0	0	2	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	12
Total	0	12	0	0	1	0	13	5	0	14	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	8	0	0	24	0	0	0	0	0	0	0	56
5:00 PM	0	3	0	0	0	0	3	2	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	10
5:15 PM	0	4	0	0	1	0	5	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	10
5:30 PM	0	2	0	0	2	0	4	2	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	12
5:45 PM	0	3	0	0	0	0	3	1	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	11
Total	0	12	0	0	3	0	15	5	0	10	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2	0	0	13	0	0	0	0	0	0	0	43
Grand Total	0	24	0	0	4	0	28	10	0	24	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	10	0	0	37	0	0	0	0	0	0	0	99
Approach %	0.0	85.7	0.0	0.0	14.3	0.0		29.4	0.0	70.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	73.0	27.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	24.2	0.0	0.0	4.0	0.0	28.3	10.1	0.0	24.2	0.0	0.0	0.0	34.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.3	10.1	0.0	0.0	37.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							20							31							0							0							48							0	99
Buses	0	8	0	0	2	0	10	3	0	11	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	7	0	0	20	0	0	0	0	0	0	0	44
% Buses	0.0	33.3	0.0	0.0	50.0	0.0	35.7	30.0	0.0	45.8	0.0	0.0	0.0	41.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.1	70.0	0.0	0.0	54.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.4
Exiting Leg Total							10							15							0							0							19							0	44
Single-Unit Trucks	0	13	0	0	2	0	15	6	0	12	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	3	0	0	15	0	0	0	0	0	0	0	48
% Single-Unit	0.0	54.2	0.0	0.0	50.0	0.0	53.6	60.0	0.0	50.0	0.0	0.0	0.0	52.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.4	30.0	0.0	0.0	40.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.5
Exiting Leg Total							5							14							0							0							25							0	48
Articulated Trucks	0	3	0	0	0	0	3	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	7
% Articulated	0.0	12.5	0.0	0.0	0.0	0.0	10.7	10.0	0.0	4.2	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1
Exiting Leg Total							1							2							0							0							4							0	7

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

4:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	0	0	1	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	5	0	0	9	0	0	0	0	0	0	0	13
4:15 PM	0	4	0	0	0	0	4	1	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6	0	0	0	0	0	0	0	15
4:30 PM	0	5	0	0	1	0	6	2	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	16
4:45 PM	0	2	0	0	0	0	2	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	6	0	0	0	0	0	0	0	12
Total Volume	0	12	0	0	1	0	13	5	0	14	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	8	0	0	24	0	0	0	0	0	0	0	56
% Approach Total	0.0	92.3	0.0	0.0	7.7	0.0		26.3	0.0	73.7	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.600	0.000	0.000	0.250	0.000	0.542	0.625	0.000	0.700	0.000	0.000	0.000	0.679	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	0.667	0.400	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.875
Buses	0	3	0	0	1	0	4	3	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	0	0	11	0	0	0	0	0	0	0	22
Buses %	0.0	25.0	0.0	0.0	100.0	0.0	30.8	60.0	0.0	28.6	0.0	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.3	75.0	0.0	0.0	45.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.3
Single-Unit Trucks	0	7	0	0	0	0	7	2	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	11	0	0	0	0	0	0	0	29
Single-Unit %	0.0	58.3	0.0	0.0	0.0	0.0	53.8	40.0	0.0	64.3	0.0	0.0	0.0	57.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.3	25.0	0.0	0.0	45.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	51.8
Articulated Trucks	0	2	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5
Articulated %	0.0	16.7	0.0	0.0	0.0	0.0	15.4	0.0	0.0	7.1	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
Buses	0	3	0	0	1	0	4	3	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	0	0	11	0	0	0	0	0	0	0	22
Single-Unit Trucks	0	7	0	0	0	0	7	2	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	11	0	0	0	0	0	0	0	29
Articulated Trucks	0	2	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5
Total Entering Leg	0	12	0	0	1	0	13	5	0	14	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	8	0	0	24	0	0	0	0	0	0	0	56
Buses							9							6							0							7							16							0	22
Single-Unit Trucks							4							9							0							0							16							0	29
Articulated Trucks							0							2							0							0							3							0	5
Total Exiting Leg							13							17							0							0							26							0	56

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Buses

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	9
4:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	4
4:30 PM	0	2	0	0	1	0	3	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3
Total	0	3	0	0	1	0	4	3	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	0	0	10	0	0	0	0	0	0	0	22
5:00 PM	0	1	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5
5:15 PM	0	1	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5
5:30 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	6
5:45 PM	0	2	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	5
Total	0	5	0	0	1	0	6	0	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	9	0	0	0	0	0	0	0	22
Grand Total	0	8	0	0	2	0	10	3	0	11	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	7	0	0	20	0	0	0	0	0	0	0	44
Approach %	0.0	80.0	0.0	0.0	20.0	0.0		21.4	0.0	78.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	65.0	35.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	18.2	0.0	0.0	4.5	0.0	22.7	6.8	0.0	25.0	0.0	0.0	0.0	31.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.5	15.9	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Entering Leg Total							10							15							0							0							19							0	44

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

4:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	0	0	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	0	0	0	0	9
4:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4
4:30 PM	0	2	0	0	1	0	3	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	6
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3
Total Volume	0	3	0	0	1	0	4	3	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	0	0	11	0	0	0	0	0	0	0	22
% Approach Total	0.0	75.0	0.0	0.0	25.0	0.0		42.9	0.0	57.1	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	45.5	54.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.375	0.000	0.000	0.250	0.000	0.333	0.375	0.000	0.500	0.000	0.000	0.000	0.875	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	0.625	0.300	0.000	0.000	0.458	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.611
Entering Leg	0	3	0	0	1	0	4	3	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	6	0	0	11	0	0	0	0	0	0	0	22
Exiting Leg							9							6							0							0							7							0	22
Total							13							13							0							0							18							0	44

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Single-Unit Trucks

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3
4:15 PM	0	4	0	0	0	0	4	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	11
4:30 PM	0	2	0	0	0	0	2	2	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	9
4:45 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	6
Total	0	7	0	0	0	0	7	2	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	11	0	0	0	0	0	0	0	29
5:00 PM	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
5:15 PM	0	3	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5
5:30 PM	0	1	0	0	1	0	2	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	6
5:45 PM	0	1	0	0	0	0	1	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5
Total	0	6	0	0	2	0	8	4	0	3	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	19
Grand Total	0	13	0	0	2	0	15	6	0	12	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	3	0	0	15	0	0	0	0	0	0	0	48
Approach %	0.0	86.7	0.0	0.0	13.3	0.0		33.3	0.0	66.7	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	80.0	20.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	27.1	0.0	0.0	4.2	0.0	31.3	12.5	0.0	25.0	0.0	0.0	0.0	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	6.3	0.0	0.0	31.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							9							14							0							0							25							0	48

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

4:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3
4:15 PM	0	4	0	0	0	0	4	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	11
4:30 PM	0	2	0	0	0	0	2	2	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	9
4:45 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	5
Total Volume	0	7	0	0	0	0	7	2	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	11	0	0	0	0	0	0	0	29
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		18.2	0.0	81.8	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	81.8	18.2	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.438	0.000	0.000	0.000	0.000	0.438	0.250	0.000	0.563	0.000	0.000	0.000	0.458	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	0.563	0.500	0.000	0.000	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.659
Entering Leg	0	7	0	0	0	0	7	2	0	9	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	2	0	0	11	0	0	0	0	0	0	0	29
Exiting Leg							4							9							0							0							16							0	29
Total							11							20							0							0							27							0	58

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM
Class: Articulated Trucks

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

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	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	0	1	0	0	0	1	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3
Total	0	2	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	5
5:00 PM	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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	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	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	3	0	0	0	0	3	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	7
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		50.0	0.0	50.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	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		
Total %	0.0	42.9	0.0	0.0	0.0	0.0	42.9	14.3	0.0	14.3	0.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Existing Leg Total							1							2							0						0							4							0	7

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

4:15 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	3
5:00 PM	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	3	0	0	0	0	3	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	6
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		50.0	0.0	50.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	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		
PHF	0.000	0.750	0.000	0.000	0.000	0.000	0.750	0.250	0.000	0.250	0.000	0.000	0.000	0.500	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	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	3	0	0	0	0	3	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	6
Exiting Leg							1							1							0						0							4							0	6
Total							4							3							0						0							5							0	12

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Bicycles (on Roadway and Crosswalks)

	Pleasant Street from North									Trapelo Road from East								
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total
4:00 PM	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
4:30 PM	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
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	1	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
5:30 PM	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	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
Approach %	0.0	50.0	0.0	0.0	50.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total %	0.0	5.6	0.0	0.0	5.6	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total									2									10

	Driveway from Southeast									Driveway from South								
	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-WB	CW-EB	Total
4:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
4:15 PM	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
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
5:00 PM	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	1	0	1	0	0	0	0	0	0	1	0	1
5:30 PM	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
Total	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
Grand Total	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	2
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	100.0	0.0	
Total %	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	11.1
Exiting Leg Total									2									2

	Trapelo Road from West									Driveway from Northwest									
	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-NB	CW-SB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-NEB	CW-SWB	Total	Total
4:00 PM	0	0	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	5
4:15 PM	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
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	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	0	6	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	8
5:00 PM	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	1	0	1	5
5:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	3	2	0	0	0	0	5	0	0	0	0	0	0	1	0	1	10
Grand Total	0	0	9	2	0	0	0	0	11	0	0	0	0	0	0	1	0	1	18
Approach %	0.0	0.0	81.8	18.2	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0		
Total %	0.0	0.0	50.0	11.1	0.0	0.0	0.0	0.0	61.1	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	5.6	
Exiting Leg Total									1									1	18

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

4:45 PM

	Pleasant Street from North									Trapelo Road from East								
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	1	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
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
% Approach Total	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	
PHF	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
Entering Leg	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Exiting Leg									2									4
Total									3									4

	Driveway from Southeast									Driveway from South								
	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-WB	CW-EB	Total
4:45 PM	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
5:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
5:30 PM	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	0	1	0	0	0	0	0	0	1	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	100.0	0.0	
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250
Entering Leg	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1
Exiting Leg									1									1
Total									2									2

	Trapelo Road from West									Driveway from Northwest									
	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-NB	CW-SB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-NEB	CW-SWB	Total	Total
4:45 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	1	0	1	5
5:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	4	2	0	0	0	0	6	0	0	0	0	0	0	1	0	1	10
% Approach Total	0.0	0.0	66.7	33.3	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.000	0.500	0.250	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.500
Entering Leg	0	0	4	2	0	0	0	0	6	0	0	0	0	0	0	1	0	1	10
Exiting Leg									1									1	10
Total									7									2	20

PDI File #: 197270 A
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Pedestrians

	Pleasant Street from North									Trapelo Road from East									Driveway from Southeast									Driveway from South									Trapelo Road from West									Driveway from Northwest									Total
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-SE	CW-NB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-NB	CW-SE	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-WB	CW-NEB	Total	
4:00 PM	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	1	1	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	2	17
4:15 PM	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	2	3	5	26
4:30 PM	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7	11	0	0	0	0	0	0	3	6	9	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	2	2	31
4:45 PM	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	3	0	3	27
Total	0	0	0	0	0	0	15	9	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	15	27	0	0	0	0	0	0	11	14	25	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	7	5	12	101
5:00 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	3	0	3	14
5:15 PM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	4	12	0	0	0	0	0	0	8	4	12	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2	29
5:30 PM	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0	3	23
5:45 PM	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	0	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Total	0	0	0	0	0	0	11	3	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	15	31	0	0	0	0	0	0	16	14	30	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	7	1	8	87
Grand Total	0	0	0	0	0	0	26	12	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	30	58	0	0	0	0	0	0	27	28	55	0	0	0	0	0	0	5	12	17	0	0	0	0	0	0	14	6	20	188
Approach %	0	0	0	0	0	0	68	32		0	0	0	0	0	0	0	0		0	0	0	0	0	0	48	52		0	0	0	0	0	0	49	51		0	0	0	0	0	0	29	71		0	0	0	0	0	0	70	30		
Total %	0	0	0	0	0	0	14	6.4	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	16	31	0	0	0	0	0	0	14	15	29	0	0	0	0	0	0	2.7	6.4	9	0	0	0	0	0	0	7.4	3.2	11	
Existing Leg Total									38									0									58									55									17									20	188

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

4:00 PM	Pleasant Street from North									Trapelo Road from East									Driveway from Southeast									Driveway from South									Trapelo Road from West									Driveway from Northwest									Total
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-SE	CW-NB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-NB	CW-SE	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-WB	CW-NEB	Total	
4:00 PM	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	2	17
4:15 PM	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	2	3	5	26
4:30 PM	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	7	11	0	0	0	0	0	0	3	6	9	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	2	2	31
4:45 PM	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	3	0	3	27
Total Volume	0	0	0	0	0	0	15	9	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	15	27	0	0	0	0	0	0	11	14	25	0	0	0	0	0	0	4	9	13	0	0	0	0	0	0	7	5	12	101
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	62.5	37.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	44.4	55.6		0.0	0.0	0.0	0.0	0.0	0.0	44.0	56.0		0.0	0.0	0.0	0.0	0.0	0.0	30.8	69.2		0.0	0.0	0.0	0.0	0.0	0.0	58.3	41.7		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.563	0.667	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	0.600	0.536	0.614	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.583	0.694	0.000	0.000	0.000	0.000	0.000	0.000	0.333	0.450	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.417	0.650	n/a%
Entering Leg	0	0	0	0	0	0	15	9	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	15	27	0	0	0	0	0	0	11	14	25	0	0	0	0	0	0	4	5	13	0	0	0	0	0	0	7	5	12	101
Existing Leg									24									0									27									25									13									12	101
Total									48									0									54									50									26									24	202

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Cars and Heavy Vehicles (Combined)

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	51	0	0	42	0	93	39	0	151	1	0	0	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141	55	0	0	196	0	0	0	0	0	0	0	480
11:15 AM	0	45	0	0	33	0	78	30	0	154	0	0	0	184	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	151	62	0	0	213	0	0	0	0	0	0	0	477
11:30 AM	0	64	0	0	25	0	89	29	0	154	1	0	0	184	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	163	59	0	0	223	0	0	0	0	0	0	0	497
11:45 AM	0	60	0	0	48	0	108	37	0	166	0	0	0	203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170	53	0	0	223	0	0	0	0	0	0	0	534
Total	0	220	0	0	148	0	368	135	0	625	2	0	0	762	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	1	625	229	0	0	855	0	0	0	0	0	0	0	1988
12:00 PM	0	53	1	0	35	0	89	35	0	160	0	0	0	195	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	116	43	0	0	159	0	0	0	0	0	0	0	444
12:15 PM	0	55	0	0	48	0	103	26	0	174	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158	58	0	0	216	0	0	0	0	0	0	0	519
12:30 PM	0	49	0	0	38	0	87	35	0	160	0	0	0	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175	64	0	0	239	0	0	0	0	0	0	0	521
12:45 PM	0	67	0	0	37	0	104	39	0	148	0	0	0	187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165	63	0	0	228	0	0	0	0	0	0	0	519
Total	0	224	1	0	158	0	383	135	0	642	0	0	0	777	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	614	228	0	0	842	0	0	0	0	0	0	0	2003
1:00 PM	0	65	0	0	33	0	98	25	0	155	0	0	0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	161	57	0	0	219	0	0	0	0	0	0	0	497
1:15 PM	0	57	0	0	44	0	101	42	0	163	0	0	0	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144	39	0	0	183	0	0	0	0	0	0	0	489
1:30 PM	0	54	1	0	31	0	86	30	0	149	0	0	0	179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	66	0	0	215	0	0	0	0	0	0	0	480
1:45 PM	0	62	0	0	32	0	94	31	0	144	0	0	0	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143	47	0	0	190	0	0	0	0	0	0	0	459
Total	0	238	1	0	140	0	379	128	0	611	0	0	0	739	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	597	209	0	0	807	0	0	0	0	0	0	0	1925
Grand Total	0	682	2	0	446	0	1130	398	0	1878	2	0	0	2278	1	0	0	0	0	0	1	0	3	0	0	0	0	0	3	1	1	1836	666	0	0	2504	0	0	0	0	0	0	0	5916
Approach %	0.0	60.4	0.2	0.0	39.5	0.0		17.5	0.0	82.4	0.1	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	73.3	26.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	11.5	0.0	0.0	7.5	0.0	19.1	6.7	0.0	31.7	0.0	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	31.0	11.3	0.0	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							1064							1286							1						5							2560							0	5916
Cars	0	664	2	0	433	0	1099	388	0	1854	2	0	0	2244	1	0	0	0	0	0	1	0	3	0	0	0	0	0	3	1	1	1802	654	0	0	2458	0	0	0	0	0	0	0	5805
% Cars	0.0	97.4	100.0	0.0	97.1	0.0	97.3	97.5	0.0	98.7	100.0	0.0	0.0	98.5	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	98.1	98.2	0.0	0.0	98.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1
Exiting Leg Total							1042							2239							1						5							2518							0	5805
Heavy Vehicles	0	18	0	0	13	0	31	10	0	24	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	12	0	0	46	0	0	0	0	0	0	0	111
% Heavy Vehicles	0.0	2.6	0.0	0.0	2.9	0.0	2.7	2.5	0.0	1.3	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.8	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Exiting Leg Total							22							47							0						0							42							0	111

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
12:15 PM	0	55	0	0	48	0	103	26	0	174	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158	58	0	0	216	0	0	0	0	0	0	0	519
12:30 PM	0	49	0	0	38	0	87	35	0	160	0	0	0	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	175	64	0	0	239	0	0	0	0	0	0	0	521
12:45 PM	0	67	0	0	37	0	104	39	0	148	0	0	0	187	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165	63	0	0	228	0	0	0	0	0	0	0	519
1:00 PM	0	65	0	0	33	0	98	25	0	155	0	0	0	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	161	57	0	0	219	0	0	0	0	0	0	0	497
Total Volume	0	236	0	0	156	0	392	125	0	637	0	0	0	762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	659	242	0	0	902	0	0	0	0	0	0	0	2056
% Approach Total	0.0	60.2	0.0	0.0	39.8	0.0		16.4	0.0	83.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.1	0.0	73.1	26.8	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.881	0.000	0.000	0.813	0.000	0.942	0.801	0.000	0.915	0.000	0.000	0.000	0.953	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	0.000	0.941	0.945	0.000	0.000	0.944	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.987
Cars	0	231	0	0	150	0	381	120	0	630	0	0	0	750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	648	236	0	0	885	0	0	0	0	0	0	0	2016
Cars %	0.0	97.9	0.0	0.0	96.2	0.0	97.2	96.0	0.0	98.9	0.0	0.0	0.0	98.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	98.3	97.5	0.0	0.0	98.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1
Heavy Vehicles	0	5	0	0	6	0	11	5	0	7	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	6	0	0	17	0	0	0	0	0	0	0	40
Heavy Vehicles %	0.0	2.1	0.0	0.0	3.8	0.0	2.8	4.0	0.0	1.1	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	2.5	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Cars Enter Leg	0	231	0	0	150	0	381	120	0	630	0	0	0	750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	648	236	0	0	885	0	0	0	0	0	0	0	2016
Heavy Enter Leg	0	5	0	0	6	0	11	5	0	7	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	6	0	0	17	0	0	0	0	0	0	0	40
Total Entering Leg	0	236	0	0	156	0	392	125	0	637	0	0	0	762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	659	242	0	0	902	0	0	0	0	0	0	0	2056
Cars Exiting Leg							356							798							0						1							861							0	2016
Heavy Exiting Leg							11							17							0						0							12							0	40
Total Exiting Leg							367							815							0						1							873							0	2056

PDI File #: **197270 AA**
Location: **N: Pleasant Street S: Driveway NW: Driveway**
Location: **E: Trapelo Road W: Trapelo Road SE: Driveway**
City, State: **Belmont, MA**
Client: **VAI/S.Kelly**
Site Code: **8444**
Count Date: **Saturday, November 16, 2019**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Cars

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	50	0	0	39	0	89	39	0	145	1	0	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	139	55	0	0	194	0	0	0	0	0	0	0	468
11:15 AM	0	43	0	0	32	0	75	29	0	154	0	0	0	183	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	149	62	0	0	211	0	0	0	0	0	0	0	471
11:30 AM	0	53	0	0	25	0	78	29	0	152	1	0	0	182	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	158	56	0	0	215	0	0	0	0	0	0	0	486
11:45 AM	0	56	0	0	48	0	104	37	0	165	0	0	0	202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167	53	0	0	220	0	0	0	0	0	0	0	526
Total	0	212	0	0	144	0	356	134	0	616	2	0	0	752	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	1	613	226	0	0	840	0	0	0	0	0	0	0	1951
12:00 PM	0	50	1	0	35	0	86	34	0	157	0	0	0	191	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	115	41	0	0	156	0	0	0	0	0	0	0	434
12:15 PM	0	54	0	0	48	0	102	26	0	171	0	0	0	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	56	0	0	212	0	0	0	0	0	0	0	511
12:30 PM	0	49	0	0	36	0	85	34	0	158	0	0	0	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174	61	0	0	235	0	0	0	0	0	0	0	512
12:45 PM	0	65	0	0	34	0	99	37	0	147	0	0	0	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161	62	0	0	223	0	0	0	0	0	0	0	506
Total	0	218	1	0	153	0	372	131	0	633	0	0	0	764	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	606	220	0	0	826	0	0	0	0	0	0	0	1963
1:00 PM	0	63	0	0	32	0	95	23	0	154	0	0	0	177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	157	57	0	0	215	0	0	0	0	0	0	0	487
1:15 PM	0	57	0	0	43	0	100	42	0	162	0	0	0	204	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143	38	0	0	181	0	0	0	0	0	0	0	485
1:30 PM	0	52	1	0	30	0	83	29	0	146	0	0	0	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	143	66	0	0	209	0	0	0	0	0	0	0	467
1:45 PM	0	62	0	0	31	0	93	29	0	143	0	0	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140	47	0	0	187	0	0	0	0	0	0	0	452
Total	0	234	1	0	136	0	371	123	0	605	0	0	0	728	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	583	208	0	0	792	0	0	0	0	0	0	0	1891
Grand Total	0	664	2	0	433	0	1099	388	0	1854	2	0	0	2244	1	0	0	0	0	0	1	0	3	0	0	0	0	0	3	1	1	1802	654	0	0	2458	0	0	0	0	0	0	0	5805
Approach %	0.0	60.4	0.2	0.0	39.4	0.0		17.3	0.0	82.6	0.1	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	73.3	26.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	11.4	0.0	0.0	7.5	0.0	18.9	6.7	0.0	31.9	0.0	0.0	0.0	38.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	31.0	11.3	0.0	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Entering Leg Total							1042							2239							1							5							2518							0	5805

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
12:15 PM	0	54	0	0	48	0	102	26	0	171	0	0	0	197	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	56	0	0	212	0	0	0	0	0	0	0	511
12:30 PM	0	49	0	0	36	0	85	34	0	158	0	0	0	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174	61	0	0	235	0	0	0	0	0	0	0	512
12:45 PM	0	65	0	0	34	0	99	37	0	147	0	0	0	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161	62	0	0	223	0	0	0	0	0	0	0	526
1:00 PM	0	63	0	0	32	0	95	23	0	154	0	0	0	177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	157	57	0	0	215	0	0	0	0	0	0	0	487
Total Volume	0	231	0	0	150	0	381	120	0	630	0	0	0	750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	648	236	0	0	885	0	0	0	0	0	0	0	2016
% Approach Total	0.0	60.6	0.0	0.0	39.4	0.0		16.0	0.0	84.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.1	0.0	73.2	26.7	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.888	0.000	0.000	0.781	0.000	0.934	0.811	0.000	0.921	0.000	0.000	0.000	0.951	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	0.000	0.931	0.952	0.000	0.000	0.941	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.964
Entering Leg	0	231	0	0	150	0	381	120	0	630	0	0	0	750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	648	236	0	0	885	0	0	0	0	0	0	0	2016
Exiting Leg							356							738							0							1							861							0	2016
Total							737							1548							0							1							1746							0	4032

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508-875-0100 Fax: 509-875-0118
Email: datarequests@pdillc.com

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	1	0	0	3	0	4	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	12
11:15 AM	0	2	0	0	1	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	6
11:30 AM	0	1	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	3	0	0	8	0	0	0	0	0	0	0	11
11:45 AM	0	4	0	0	0	0	4	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	8
Total	0	8	0	0	4	0	12	1	0	8	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	3	0	0	15	0	0	0	0	0	0	0	37
12:00 PM	0	3	0	0	0	0	3	1	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	10
12:15 PM	0	1	0	0	0	0	1	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	8
12:30 PM	0	0	0	0	2	0	2	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	9
12:45 PM	0	2	0	0	3	0	5	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	0	13
Total	0	6	0	0	5	0	11	4	0	9	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	0	0	16	0	0	0	0	0	0	0	40
1:00 PM	0	2	0	0	1	0	3	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	10
1:15 PM	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	4
1:30 PM	0	2	0	0	1	0	3	1	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	0	13
1:45 PM	0	0	0	0	1	0	1	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	7
Total	0	4	0	0	4	0	8	5	0	6	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	1	0	0	15	0	0	0	0	0	0	0	34
Grand Total	0	18	0	0	13	0	31	10	0	24	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	12	0	0	46	0	0	0	0	0	0	0	111
Approach %	0.0	58.1	0.0	0.0	41.9	0.0		29.4	0.0	70.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	73.9	26.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	16.2	0.0	0.0	11.7	0.0	27.9	9.0	0.0	21.6	0.0	0.0	0.0	30.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.6	10.8	0.0	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Existing Leg Total							22							47							0							0							42							0	111
Buses	0	1	0	0	0	0	1	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	14
% Buses	0.0	5.6	0.0	0.0	0.0	0.0	3.2	0.0	0.0	25.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6
Exiting Leg Total							0							7							0							0							7							0	14
Single-Unit Trucks	0	15	0	0	11	0	26	10	0	15	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	12	0	0	36	0	0	0	0	0	0	0	87
% Single-Unit	0.0	83.3	0.0	0.0	84.6	0.0	83.9	100.0	0.0	62.5	0.0	0.0	0.0	73.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70.6	100.0	0.0	0.0	78.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	78.4
Exiting Leg Total							22							35							0							0							30							0	67
Articulated Trucks	0	2	0	0	2	0	4	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	10
% Articulated	0.0	11.1	0.0	0.0	15.4	0.0	12.9	0.0	0.0	12.5	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
Exiting Leg Total							0							5							0							0							5							0	10

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
12:00 PM	0	3	0	0	0	0	3	1	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	10
12:15 PM	0	1	0	0	0	0	1	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	8
12:30 PM	0	0	0	0	2	0	2	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	9
12:45 PM	0	2	0	0	3	0	5	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	0	0	0	0	13
Total Volume	0	6	0	0	5	0	11	4	0	9	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	0	0	16	0	0	0	0	0	0	0	40
%Approach Total	0.0	54.5	0.0	0.0	45.5	0.0		30.8	0.0	69.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.417	0.000	0.550	0.500	0.000	0.750	0.000	0.000	0.000	0.813	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	0.500	0.667	0.000	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.769
Buses	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Single-Unit Trucks	0	6	0	0	5	0	11	4	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	0	0	14	0	0	0	0	0	0	0	34
Single-Unit %	0.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	55.6	0.0	0.0	0.0	69.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	100.0	0.0	0.0	87.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
Buses	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4
Single-Unit Trucks	0	6	0	0	5	0	11	4	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	0	0	14	0	0	0	0	0	0	0	34
Articulated Trucks	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Entering Leg	0	6	0	0	5	0	11	4	0	9	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	0	0	16	0	0	0	0	0	0	0	40
Buses							0							2							0							0							2							0	4
Single-Unit Trucks							11							9							0							0							14							0	34
Articulated Trucks							0							2							0							0							2							0	2
Total Exiting Leg							11							13							0							0							15							0	40

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Buses

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 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	1	0	0	0	1	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
Total	0	1	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	6
12:00 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	0	1	0	0	0	1	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4
1:00 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	0	1	0	0	0	1	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
1:45 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4
Grand Total	0	1	0	0	0	0	1	0	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	0	14
Approach %	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	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		
Total %	0.0	7.1	0.0	0.0	0.0	0.0	7.1	0.0	0.0	42.9	0.0	0.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	
Entering Leg Total							0							7							0							0							7							0	14

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 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	1	0	0	0	1	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
Total Volume	0	1	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	6
% Approach Total	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	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		
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.500	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	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	1	0	0	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	6
Exiting Leg							0							3							0							0							3							0	6
Total							1							5							0							0							6							0	12

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Single-Unit Trucks

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Right	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	1	0	0	2	0	3	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	8
11:15 AM	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	4
11:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	6	0	0	0	0	0	0	0	8
11:45 AM	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	6
Total	0	5	0	0	3	0	8	1	0	6	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	0	0	11	0	0	0	0	0	0	0	26
12:00 PM	0	3	0	0	0	0	3	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	8
12:15 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	6
12:30 PM	0	0	0	0	2	0	2	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	9
12:45 PM	0	2	0	0	3	0	5	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	11
Total	0	6	0	0	5	0	11	4	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	0	0	14	0	0	0	0	0	0	0	34
1:00 PM	0	2	0	0	0	0	2	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	8
1:15 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
1:30 PM	0	2	0	0	1	0	3	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	10
1:45 PM	0	0	0	0	1	0	1	2	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	7
Total	0	4	0	0	3	0	7	5	0	4	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	1	0	0	11	0	0	0	0	0	0	0	27
Grand Total	0	15	0	0	11	0	26	10	0	15	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	12	0	0	36	0	0	0	0	0	0	0	87
Approach %	0.0	57.7	0.0	0.0	42.3	0.0		40.0	0.0	60.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	66.7	33.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	17.2	0.0	0.0	12.6	0.0	29.9	11.5	0.0	17.2	0.0	0.0	0.0	28.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.6	13.8	0.0	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							22							35							0							0							30							0	87

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Right	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
12:00 PM	0	3	0	0	0	0	3	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	8
12:15 PM	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	0	6
12:30 PM	0	0	0	0	2	0	2	1	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	0	9
12:45 PM	0	2	0	0	3	0	5	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	11
Total Volume	0	6	0	0	5	0	11	4	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	0	0	14	0	0	0	0	0	0	0	34
% Approach Total	0.0	54.5	0.0	0.0	45.5	0.0		44.4	0.0	55.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	42.9	57.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.417	0.000	0.550	0.500	0.000	0.625	0.000	0.000	0.000	0.750	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	0.500	0.667	0.000	0.000	0.875	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.773
Entering Leg	0	6	0	0	5	0	11	4	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	8	0	0	14	0	0	0	0	0	0	0	34
Exiting Leg							12							11							0							0							11							0	34
Total							23							20							0							0							25							0	68

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Articulated Trucks

	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
11:45 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	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	1	0	3	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5
12:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 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	0	1	0	0	0	1	0	0	0	0	0	0	0	1
1:30 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	0	1	0	0	0	1	0	0	0	0	0	0	0	1
1:45 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3
Grand Total	0	2	0	0	2	0	4	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	10
Approach %	0.0	50.0	0.0	0.0	50.0	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	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	20.0	0.0	0.0	20.0	0.0	40.0	0.0	0.0	30.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	
Entering Leg Total							0							5							0							0							5							0	10

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Pleasant Street from North							Trapelo Road from East							Driveway from Southeast							Driveway from South							Trapelo Road from West							Driveway from Northwest							
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Total	Total
11:00 AM	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
11:45 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	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	0	1	0	3	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5
% Approach Total	0.0	66.7	0.0	0.0	33.3	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	100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.250	0.000	0.750	0.000	0.000	0.250	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	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.625
Entering Leg	0	2	0	0	1	0	3	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	5
Exiting Leg							0							2							0							0							3							0	5
Total							3							3							0							0							4							0	10

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Bicycles (on Roadway and Crosswalks)

	Pleasant Street from North									Trapelo Road from East									Driveway from Southeast									Driveway from South									Trapelo Road from West									Driveway from Northwest									Total
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-WB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-WB	CW-SB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-NB	CW-SB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-WB	CW-SB	Total	
11:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1
11:30 AM	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 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	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	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
12:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	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	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
12:45 PM	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3
1:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 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	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	1
1:30 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 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	0	0	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	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	2	0	0	0	3	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	2	0	0	0	0	0	0	0	0	0	1	1	0	9
Approach %	0.0	33.3	0.0	0.0	66.7	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		0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	11.1	0.0	0.0	22.2	0.0	0.0	0.0	33.3	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.2	22.2	0.0	0.0	0.0	0.0	44.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.1	
Exiting Leg Total									2									4									0									0									2									1	9

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Pleasant Street from North									Trapelo Road from East									Driveway from Southeast									Driveway from South									Trapelo Road from West									Driveway from Northwest									Total
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-WB	CW-SB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	CW-NB	CW-SB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	CW-NB	CW-SB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	CW-WB	CW-SB	Total	
12:30 PM	0	1	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	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
12:45 PM	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	3
1:00 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 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	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	1	1	0	7
% Approach Total	0.0	50.0	0.0	0.0	50.0	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		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	50.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.250	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.143
Entering Leg	0	1	0	0	1	0	0	0	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	3	0	0	0	0	0	0	1	1	0	7
Exiting Leg									2									2									0									0									3									1	7
Total									4									3									0									0									5									2	14

PDI File #: 197270 AA
Location: N: Pleasant Street S: Driveway NW: Driveway
Location: E: Trapelo Road W: Trapelo Road SE: Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Pedestrians

	Pleasant Street from North									Trapelo Road from East									Driveway from Southeast									Driveway from South									Trapelo Road from West									Driveway from Northwest									
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Ch-WB	Ch-SB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Ch-SB	Ch-WB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Ch-WB	Ch-SB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Ch-WB	Ch-SB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Ch-WB	Ch-SB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Ch-WB	Ch-SB	Total	Total
11:00 AM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
11:15 AM	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	11
11:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2	21
11:45 AM	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	7	0	0	0	0	0	0	1	6	7	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	2	21
Total	0	0	0	0	0	0	3	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	12	19	0	0	0	0	0	0	7	12	19	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	3	1	4	56
12:00 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	1	2	3	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	14
12:30 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	10
12:45 PM	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	0	1	10
Total	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	12	0	0	0	0	0	0	6	6	12	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4	0	4	40
1:00 PM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	0	0	6	1	7	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	17
1:15 PM	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:30 PM	0	0	0	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	12
1:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	7
Total	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	3	12	0	0	0	0	0	0	9	3	12	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	38
Grand Total	0	0	0	0	0	0	13	13	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	21	43	0	0	0	0	0	0	22	21	43	0	0	0	0	0	0	5	8	13	0	0	0	0	0	0	7	2	9	134
Approach %	0	0	0	0	0	0	50	50		0	0	0	0	0	0	0	0		0	0	0	0	0	0	51	49		0	0	0	0	0	0	51	49		0	0	0	0	0	0	38	62		0	0	0	0	0	0	78	22		
Total %	0	0	0	0	0	0	9.7	9.7	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	32	0	0	0	0	0	0	16	16	32	0	0	0	0	0	0	3.7	6	9.7	0	0	0	0	0	0	5.2	1.5	6.7	
Exiting Leg Total									26									0									43									43									13									9	134

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:30 AM	Pleasant Street from North									Trapelo Road from East									Driveway from Southeast									Driveway from South									Trapelo Road from West									Driveway from Northwest									
	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Ch-WB	Ch-SB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Ch-SB	Ch-WB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Ch-WB	Ch-SB	Total	Hard Right	Right	Thru	Bear Left	Left	U-Turn	Ch-WB	Ch-SB	Total	Right	Bear Right	Thru	Left	Hard Left	U-Turn	Ch-WB	Ch-SB	Total	Hard Right	Bear Right	Thru	Bear Left	Hard Left	U-Turn	Ch-WB	Ch-SB	Total	Total
11:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	4	4	8	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	21
11:45 AM	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	7	0	0	0	0	0	0	1	6	7	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	2	21
12:00 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	1	2	3	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12:15 PM	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	14
Total Volume	0	0	0	0	0	0	4	5	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	12	22	0	0	0	0	0	0	10	12	22	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	3	1	4	62
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	44.4	55.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	45.5	54.5		0.0	0.0	0.0	0.0	0.0	0.0	45.5	54.5		0.0	0.0	0.0	0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	0.0	0.0	75.0	25.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.625	0.563	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	0.625	0.500	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.500	0.688	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.500	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.250	0.500	0.731
Entering Leg	0	0	0	0	0	0	4	5	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	12	22	0	0	0	0	0	0	10	12	22	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	3	1	4	62
Exiting Leg									9									0									22									22									5									4	62
Total									18									0									44									44									10									8	124

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Cars and Heavy Vehicles (Combined)

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:00 PM	138	0	0	0	138	1	0	0	0	1	0	0	2	0	2	1	0	136	0	137	278
4:15 PM	127	0	1	0	128	2	0	0	0	2	0	0	1	0	1	0	0	158	0	158	289
4:30 PM	124	0	0	0	124	2	0	0	0	2	0	0	1	0	1	0	0	170	0	170	297
4:45 PM	111	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	148	0	148	259
Total	500	0	1	0	501	5	0	0	0	5	0	0	4	0	4	1	0	612	0	613	1123
5:00 PM	128	0	0	0	128	0	1	0	0	1	0	0	1	0	1	0	1	139	0	140	270
5:15 PM	132	0	0	0	132	0	0	0	0	0	0	0	0	0	0	1	0	175	0	176	308
5:30 PM	136	0	0	0	136	1	0	0	0	1	0	1	1	0	2	1	0	161	0	162	301
5:45 PM	125	0	0	0	125	0	0	0	0	0	0	0	0	0	0	0	0	127	0	127	252
Total	521	0	0	0	521	1	1	0	0	2	0	1	2	0	3	2	1	602	0	605	1131
Grand Total	1021	0	1	0	1022	6	1	0	0	7	0	1	6	0	7	3	1	1214	0	1218	2254
Approach %	99.9	0.0	0.1	0.0		85.7	14.3	0.0	0.0		0.0	14.3	85.7	0.0		0.2	0.1	99.7	0.0		
Total %	45.3	0.0	0.0	0.0	45.3	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.3	0.1	0.0	53.9	0.0	54.0	
Exiting Leg Total					1221					2					3					1028	2254
Cars	998	0	0	0	998	6	1	0	0	7	0	1	6	0	7	3	1	1193	0	1197	2209
% Cars	97.7	0.0	0.0	0.0	97.7	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	98.3	0.0	98.3	98.0
Exiting Leg Total					1200					1					3					1005	2209
Heavy Vehicles	23	0	1	0	24	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21	45
% Heavy Vehicles	2.3	0.0	100.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	2.0
Exiting Leg Total					21					1					0					23	45

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

4:45 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:45 PM	111	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	148	0	148	259
5:00 PM	128	0	0	0	128	0	1	0	0	1	0	0	1	0	1	0	1	139	0	140	270
5:15 PM	132	0	0	0	132	0	0	0	0	0	0	0	0	0	0	1	0	175	0	176	308
5:30 PM	136	0	0	0	136	1	0	0	0	1	0	1	1	0	2	1	0	161	0	162	301
Total Volume	507	0	0	0	507	1	1	0	0	2	0	1	2	0	3	2	1	623	0	626	1138
% Approach Total	100.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	33.3	66.7	0.0		0.3	0.2	99.5	0.0		
PHF	0.932	0.000	0.000	0.000	0.932	0.250	0.250	0.000	0.000	0.500	0.000	0.250	0.500	0.000	0.375	0.500	0.250	0.890	0.000	0.889	0.924
Cars	496	0	0	0	496	1	1	0	0	2	0	1	2	0	3	2	1	617	0	620	1121
Cars %	97.8	0.0	0.0	0.0	97.8	100.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0	100.0	99.0	0.0	99.0	98.5
Heavy Vehicles	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	17
Heavy Vehicles %	2.2	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	1.5
Cars Enter Leg	496	0	0	0	496	1	1	0	0	2	0	1	2	0	3	2	1	617	0	620	1121
Heavy Enter Leg	11	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	17
Total Entering Leg	507	0	0	0	507	1	1	0	0	2	0	1	2	0	3	2	1	623	0	626	1138
Cars Exiting Leg					619					1					2					499	1121
Heavy Exiting Leg					6					0					0					11	17
Total Exiting Leg					625					1					2					510	1138

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Cars

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:00 PM	137	0	0	0	137	1	0	0	0	1	0	0	2	0	2	1	0	130	0	131	271
4:15 PM	123	0	0	0	123	2	0	0	0	2	0	0	1	0	1	0	0	155	0	155	281
4:30 PM	120	0	0	0	120	2	0	0	0	2	0	0	1	0	1	0	0	166	0	166	289
4:45 PM	110	0	0	0	110	0	0	0	0	0	0	0	0	0	0	0	0	147	0	147	257
Total	490	0	0	0	490	5	0	0	0	5	0	0	4	0	4	1	0	598	0	599	1098
5:00 PM	124	0	0	0	124	0	1	0	0	1	0	0	1	0	1	0	1	136	0	137	263
5:15 PM	128	0	0	0	128	0	0	0	0	0	0	0	0	0	0	1	0	175	0	176	304
5:30 PM	134	0	0	0	134	1	0	0	0	1	0	1	1	0	2	1	0	159	0	160	297
5:45 PM	122	0	0	0	122	0	0	0	0	0	0	0	0	0	0	0	0	125	0	125	247
Total	508	0	0	0	508	1	1	0	0	2	0	1	2	0	3	2	1	595	0	598	1111
Grand Total	998	0	0	0	998	6	1	0	0	7	0	1	6	0	7	3	1	1193	0	1197	2209
Approach %	100.0	0.0	0.0	0.0		85.7	14.3	0.0	0.0		0.0	14.3	85.7	0.0		0.3	0.1	99.7	0.0		
Total %	45.2	0.0	0.0	0.0	45.2	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.3	0.1	0.0	54.0	0.0	54.2	
Exiting Leg Total					1200					1					3					1005	2209

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

4:45 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:45 PM	110	0	0	0	110	0	0	0	0	0	0	0	0	0	0	0	0	147	0	147	257
5:00 PM	124	0	0	0	124	0	1	0	0	1	0	0	1	0	1	0	1	136	0	137	263
5:15 PM	128	0	0	0	128	0	0	0	0	0	0	0	0	0	0	1	0	175	0	176	304
5:30 PM	134	0	0	0	134	1	0	0	0	1	0	1	1	0	2	1	0	159	0	160	297
Total Volume	496	0	0	0	496	1	1	0	0	2	0	1	2	0	3	2	1	617	0	620	1121
% Approach Total	100.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0		0.0	33.3	66.7	0.0		0.3	0.2	99.5	0.0		
PHF	0.925	0.000	0.000	0.000	0.925	0.250	0.250	0.000	0.000	0.500	0.000	0.250	0.500	0.000	0.375	0.500	0.250	0.881	0.000	0.881	0.922
Entering Leg	496	0	0	0	496	1	1	0	0	2	0	1	2	0	3	2	1	617	0	620	1121
Exiting Leg					619					1					2					499	1121
Total					1115					3					5					1119	2242

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	7
4:15 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	8
4:30 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	8
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	10	0	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	25
5:00 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	7
5:15 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
5:45 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
Total	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	20
Grand Total	23	0	1	0	24	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21	45
Approach %	95.8	0.0	4.2	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	51.1	0.0	2.2	0.0	53.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.7	0.0	46.7	
Exiting Leg Total					21					1					0					23	45
Buses	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	19
% Buses	43.5	0.0	0.0	0.0	41.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	42.9	42.2
Exiting Leg Total					9					0					0					10	19
Single-Unit Trucks	11	0	1	0	12	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	23
% Single-Unit	47.8	0.0	100.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.4	0.0	52.4	51.1
Exiting Leg Total					11					1					0					11	23
Articulated Trucks	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
% Articulated	8.7	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	4.8	6.7
Exiting Leg Total					1					0					0					2	3

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

4:00 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	7
4:15 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	8
4:30 PM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	8
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	10	0	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	25
% Approach Total	90.9	0.0	9.1	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.625	0.000	0.250	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.583	0.781
Buses	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	12
Buses %	30.0	0.0	0.0	0.0	27.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.3	0.0	64.3	48.0
Single-Unit Trucks	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	11
Single-Unit %	50.0	0.0	100.0	0.0	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.7	0.0	35.7	44.0
Articulated Trucks	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Articulated %	20.0	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Buses	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	12
Single-Unit Trucks	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	11
Articulated Trucks	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Entering Leg	10	0	1	0	11	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	25
Buses					9					0					0					3	12
Single-Unit Trucks					5					1					0					5	11
Articulated Trucks					0					0					0					2	2
Total Exiting Leg					14					1					0					10	25

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM

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

Class: **Buses**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	7
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	12
5:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Grand Total	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	19
Approach %	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	100.0	0.0		
Total %	52.6	0.0	0.0	0.0	52.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.4	0.0	47.4	
Exiting Leg Total					9					0					0					10	19

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

4:00 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	7
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
4:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	12
% Approach Total	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	100.0	0.0		
PHF	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.375	0.429
Entering Leg	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	12
Exiting Leg					9					0					0					3	12
Total					12					0					0					12	24

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM

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

Class: **Single-Unit Trucks**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	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
4:15 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	5	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	11
5:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
5:15 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
Total	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	12
Grand Total	11	0	1	0	12	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	23
Approach %	91.7	0.0	8.3	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	47.8	0.0	4.3	0.0	52.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.8	0.0	47.8	
Exiting Leg Total					11					1					0					11	23

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

4:15 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:15 PM	4	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Total Volume	7	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	15
% Approach Total	87.5	0.0	12.5	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0		
PHF	0.438	0.000	0.250	0.000	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.583	0.625
Entering Leg	7	0	1	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	15
Exiting Leg					7					1					0					7	15
Total					15					1					0					14	30

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office 508-875-0100 Fax 508-875-0118
Email datarequest@pdillc.com

Class: **Articulated Trucks**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	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
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	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
5:45 PM	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	1	0	1	1
Grand Total	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Approach %	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	100.0	0.0		
Total %	66.7	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	
Exiting Leg Total					1					0					0					2	3

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

4:15 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
% Approach Total	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	100.0	0.0		
PHF	0.500	0.000	0.000	0.000	0.500	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	0.250	0.750
Entering Leg	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Exiting Leg					1					0					0					2	3
Total					3					0					0					3	6

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM

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

Class:

Bicycles (on Roadway and Crosswalks)

	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	3	0	0	0	3	3
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	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	6
Grand Total	3	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	7
Approach %	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	100.0	0.0	0.0	0.0		
Total %	42.9	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	0.0	0.0	0.0	57.1	
Exiting Leg Total							4							0							0							3	7

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

5:00 PM	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
5:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	3	0	0	0	3	3
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	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Total Volume	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	6
% Approach Total	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	100.0	0.0	0.0	0.0		
PHF	0.500	0.000	0.000	0.000	0.000	0.000	0.500	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	0.333	0.000	0.000	0.000	0.333	0.500
Entering Leg	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	6
Exiting Leg							4							0							0							2	6
Total							6							0							0							6	12

PDI File #: 197270 B
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM
Class: Pedestrians

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

	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4
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	3	1	4	0	0	0	0	1	2	3	0	0	0	0	0	0	0	7
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	4	1	5	0	0	0	0	0	0	0	10
Grand Total	0	0	0	0	0	0	0	0	0	0	0	4	5	9	0	0	0	0	5	3	8	0	0	0	0	0	0	0	17
Approach %	0	0	0	0	0	0		0	0	0	0	44.4	55.6		0	0	0	0	62.5	37.5		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	23.5	29.4	52.9	0	0	0	0	29.4	17.6	47.1	0	0	0	0	0	0	0	
Exiting Leg Total							0							9							8							0	17

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

5:00 PM	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	4	1	5	0	0	0	0	0	0	0	10
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	20.0	80.0		0.0	0.0	0.0	0.0	80.0	20.0		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	0.250	0.500	0.625	0.000	0.000	0.000	0.000	0.500	0.250	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	4	1	5	0	0	0	0	0	0	0	10
Exiting Leg							0							5							5							0	10
Total							0							10							10							0	20

PDI File #: **197270 BB**
Location: **N: Pleasant Street S: Pleasant Street**
Location: **E: #1010 Driveway SE: #1010 Driveway**
City, State: **Belmont, MA**
Client: **VAI/S.Kelly**
Site Code: **8444**
Count Date: **Saturday, November 16, 2019**
Start Time: **11:00 AM**
End Time: **2:00 PM**
Class:

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

Cars and Heavy Vehicles (Combined)

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	96	0	0	0	96	0	0	0	0	0	0	0	0	0	0	0	0	106	0	106	202
11:15 AM	100	0	0	0	100	1	0	0	0	1	0	1	0	0	1	0	0	106	0	106	208
11:30 AM	107	0	0	0	107	0	0	0	0	0	0	0	0	0	0	0	1	102	0	103	210
11:45 AM	116	0	0	0	116	0	0	0	0	0	0	0	0	0	0	0	0	105	0	105	221
Total	419	0	0	0	419	1	0	0	0	1	0	1	0	0	1	0	1	419	0	420	841
12:00 PM	96	0	0	0	96	1	0	0	0	1	0	0	0	0	0	0	0	96	0	96	193
12:15 PM	111	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	104	0	104	215
12:30 PM	95	0	1	0	96	0	0	0	0	0	0	0	0	0	0	0	0	114	0	114	210
12:45 PM	113	0	0	0	113	1	0	0	0	1	0	0	0	0	0	1	0	115	0	116	230
Total	415	0	1	0	416	2	0	0	0	2	0	0	0	0	0	1	0	429	0	430	848
1:00 PM	101	0	2	0	103	0	0	0	0	0	0	0	0	0	0	0	0	95	0	95	198
1:15 PM	115	0	2	0	117	0	0	0	0	0	0	0	0	0	0	1	0	108	0	109	226
1:30 PM	94	0	0	0	94	1	0	0	0	1	0	0	0	0	0	1	0	101	0	102	197
1:45 PM	109	0	0	0	109	1	0	0	0	1	0	0	0	0	0	0	0	92	0	92	202
Total	419	0	4	0	423	2	0	0	0	2	0	0	0	0	0	2	0	396	0	398	823
Grand Total	1253	0	5	0	1258	5	0	0	0	5	0	1	0	0	1	3	1	1244	0	1248	2512
Approach %	99.6	0.0	0.4	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.2	0.1	99.7	0.0		
Total %	49.9	0.0	0.2	0.0	50.1	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	49.5	0.0	49.7	
Exiting Leg Total					1250					6					3					1253	2512
Cars	1231	0	5	0	1236	5	0	0	0	5	0	1	0	0	1	3	0	1221	0	1224	2466
% Cars	98.2	0.0	100.0	0.0	98.3	100.0	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	98.2	0.0	98.1	98.2
Exiting Leg Total					1227					5					3					1231	2466
Heavy Vehicles	22	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	1	23	0	24	46
% Heavy Vehicles	1.8	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1.8	0.0	1.9	1.8
Exiting Leg Total					23					1					0					22	46

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
12:30 PM	95	0	1	0	96	0	0	0	0	0	0	0	0	0	0	0	0	114	0	114	210
12:45 PM	113	0	0	0	113	1	0	0	0	1	0	0	0	0	0	1	0	115	0	116	230
1:00 PM	101	0	2	0	103	0	0	0	0	0	0	0	0	0	0	0	0	95	0	95	198
1:15 PM	115	0	2	0	117	0	0	0	0	0	0	0	0	0	0	1	0	108	0	109	226
Total Volume	424	0	5	0	429	1	0	0	0	1	0	0	0	0	0	2	0	432	0	434	864
% Approach Total	98.8	0.0	1.2	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.5	0.0	99.5	0.0		
PHF	0.922	0.000	0.625	0.000	0.917	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.939	0.000	0.935	0.939
Cars	416	0	5	0	421	1	0	0	0	1	0	0	0	0	0	2	0	425	0	427	849
Cars %	98.1	0.0	100.0	0.0	98.1	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	98.4	0.0	98.4	98.3
Heavy Vehicles	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	15
Heavy Vehicles %	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	1.7
Cars Enter Leg	416	0	5	0	421	1	0	0	0	1	0	0	0	0	0	2	0	425	0	427	849
Heavy Enter Leg	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	15
Total Entering Leg	424	0	5	0	429	1	0	0	0	1	0	0	0	0	0	2	0	432	0	434	864
Cars Exiting Leg					426					5					2					416	849
Heavy Exiting Leg					7					0					0					8	15
Total Exiting Leg					433					5					2					424	864

PDI File #: **197270 BB**
Location: **N: Pleasant Street S: Pleasant Street**
Location: **E: #1010 Driveway SE: #1010 Driveway**
City, State: **Belmont, MA**
Client: **VAI/S.Kelly**
Site Code: **8444**
Count Date: **Saturday, November 16, 2019**
Start Time: **11:00 AM**
End Time: **2:00 PM**

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

Class: **Cars**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Hard Left	U-Turn	Total	Hard Right	Right	Thru	U-Turn	Total	Total
11:00 AM	93	0	0	0	93	0	0	0	0	0	0	0	0	0	0	0	0	104	0	104	197
11:15 AM	99	0	0	0	99	1	0	0	0	1	0	1	0	0	1	0	0	104	0	104	205
11:30 AM	107	0	0	0	107	0	0	0	0	0	0	0	0	0	0	0	0	98	0	98	205
11:45 AM	112	0	0	0	112	0	0	0	0	0	0	0	0	0	0	0	0	105	0	105	217
Total	411	0	0	0	411	1	0	0	0	1	0	1	0	0	1	0	0	411	0	411	824
12:00 PM	93	0	0	0	93	1	0	0	0	1	0	0	0	0	0	0	0	93	0	93	187
12:15 PM	111	0	0	0	111	0	0	0	0	0	0	0	0	0	0	0	0	102	0	102	213
12:30 PM	92	0	1	0	93	0	0	0	0	0	0	0	0	0	0	0	0	111	0	111	204
12:45 PM	111	0	0	0	111	1	0	0	0	1	0	0	0	0	0	1	0	113	0	114	226
Total	407	0	1	0	408	2	0	0	0	2	0	0	0	0	0	1	0	419	0	420	830
1:00 PM	98	0	2	0	100	0	0	0	0	0	0	0	0	0	0	0	0	94	0	94	194
1:15 PM	115	0	2	0	117	0	0	0	0	0	0	0	0	0	0	1	0	107	0	108	225
1:30 PM	92	0	0	0	92	1	0	0	0	1	0	0	0	0	0	1	0	99	0	100	193
1:45 PM	108	0	0	0	108	1	0	0	0	1	0	0	0	0	0	0	0	91	0	91	200
Total	413	0	4	0	417	2	0	0	0	2	0	0	0	0	0	2	0	391	0	393	812
Grand Total	1231	0	5	0	1236	5	0	0	0	5	0	1	0	0	1	3	0	1221	0	1224	2466
Approach %	99.6	0.0	0.4	0.0		100.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.2	0.0	99.8	0.0		
Total %	49.9	0.0	0.2	0.0	50.1	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	49.5	0.0	49.6	
Exiting Leg Total					1227					5					3					1231	2466

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Hard Left	U-Turn	Total	Hard Right	Right	Thru	U-Turn	Total	Total
12:30 PM	92	0	1	0	93	0	0	0	0	0	0	0	0	0	0	0	0	111	0	111	204
12:45 PM	111	0	0	0	111	1	0	0	0	1	0	0	0	0	0	1	0	113	0	114	226
1:00 PM	98	0	2	0	100	0	0	0	0	0	0	0	0	0	0	0	0	94	0	94	194
1:15 PM	115	0	2	0	117	0	0	0	0	0	0	0	0	0	0	1	0	107	0	108	225
Total Volume	416	0	5	0	421	1	0	0	0	1	0	0	0	0	0	2	0	425	0	427	849
% Approach Total	98.8	0.0	1.2	0.0		100.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.5	0.0	99.5	0.0		
PHF	0.904	0.000	0.625	0.000	0.900	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.940	0.000	0.936	0.939
Entering Leg	416	0	5	0	421	1	0	0	0	1	0	0	0	0	0	2	0	425	0	427	849
Exiting Leg					426					5					2					416	849
Total					847					6					2					843	1698

PDI File #: 197270 BB
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

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

Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	5
11:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5	5
11:45 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	1	8	0	9	17
12:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
12:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
12:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Total	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	18
1:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
1:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	11
Grand Total	22	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	1	23	0	24	46
Approach %	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	4.2	95.8	0.0		
Total %	47.8	0.0	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	50.0	0.0	52.2	
Exiting Leg Total					23					1					0					22	46
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0
Single-Unit Trucks	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	37
% Single-Unit	90.9	0.0	0.0	0.0	90.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73.9	0.0	70.8	80.4
Exiting Leg Total					17					0					0					20	37
Articulated Trucks	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	6	0	7	9
% Articulated	9.1	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	26.1	0.0	29.2	19.6
Exiting Leg Total					6					1					0					2	9

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:15 AM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	5	5
11:45 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
Total Volume	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	1	9	0	10	18
% Approach Total	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	10.0	90.0	0.0		
PHF	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.563	0.000	0.500	0.750
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	14
Single-Unit %	100.0	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	66.7	0.0	60.0	77.8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	33.3	0.0	40.0	22.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	14
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
Total Entering Leg	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	1	9	0	10	18
Buses					0					0					0					0	0
Single-Unit Trucks					6					0					0					8	14
Articulated Trucks					3					1					0					0	4
Total Exiting Leg					9					1					0					8	18

PDI File #: 197270 BB
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office 508 875 0100 Fax 508 875 0118
Email datarequest@pdillc.com

Class: **Buses**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	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
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	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
Grand Total	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	0.0	0.0	
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	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
% 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		
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
Entering Leg	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	0

PDI File #: 197270 BB
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

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

Class: **Single-Unit Trucks**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
11:45 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	10
12:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
12:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
12:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
Total	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	18
1:00 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1:30 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3
1:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Total	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	9
Grand Total	20	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	37
Approach %	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	100.0	0.0		
Total %	54.1	0.0	0.0	0.0	54.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.9	0.0	45.9	
Exiting Leg Total					17					0					0					20	37

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:45 AM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:45 AM	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
12:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	6
Total Volume	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	18
% Approach Total	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	100.0	0.0		
PHF	0.625	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.667	0.750
Entering Leg	10	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	18
Exiting Leg					8					0					0					10	18
Total					18					0					0					18	36

PDI File #: 197270 BB
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

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

Class: **Articulated Trucks**

	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5	0	6	7
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Grand Total	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	6	0	7	9
Approach %	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	14.3	85.7	0.0		
Total %	22.2	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	66.7	0.0	77.8	
Exiting Leg Total					6					1					0					2	9

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Pleasant Street from North					#1010 Driveway from East					#1010 Driveway from Southeast					Pleasant Street from South					
	Thru	Bear Left	Left	U-Turn	Total	Right	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	U-Turn	Total	Total
11:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5	0	6	7
% Approach Total	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	16.7	83.3	0.0		
PHF	0.250	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	0.250	0.625	0.000	0.500	0.583
Entering Leg	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	5	0	6	7
Exiting Leg					5					1					0					1	7
Total					6					1					0					7	14

PDI File #: 197270 BB
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Bicycles (on Roadway and Crosswalks)

	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
11:00 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
11:15 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
11:30 AM	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
11:45 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	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
12:15 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
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	1	0	0	0	1	3
Total	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	3	0	0	0	3	7
1:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
1:30 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
1:45 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	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	4
Grand Total	3	0	0	0	0	0	3	0	0	0	0	1	1	2	0	0	0	0	2	1	3	0	0	6	0	0	0	6	14
Approach %	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	100.0	0.0	0.0	0.0		
Total %	21.4	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	7.1	7.1	14.3	0.0	0.0	0.0	0.0	14.3	7.1	21.4	0.0	0.0	42.9	0.0	0.0	0.0	42.9	
Exiting Leg Total							6							2							3							3	14

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	1	0	0	0	1	3
1:00 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3
Total Volume	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	6	0	0	0	6	9
% Approach Total	100.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	100.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.750
Entering Leg	1	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	1	0	0	6	0	0	0	6	9
Exiting Leg							6							1							1							1	9
Total							7							2							2							7	18

PDI File #: 197270 BB
Location: N: Pleasant Street S: Pleasant Street
Location: E: #1010 Driveway SE: #1010 Driveway
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

PRECISION DATA INDUSTRIES, LLC
46 Morton Street, Framingham, MA 01702
Office: 508.875.0100 Fax: 508.875.0118
Email: datarequests@pdi-ltc.com

Class: **Pedestrians**

	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
11:00 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
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	1	3	4	0	0	0	0	0	0	0	8
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	2	0	0	0	0	0	0	0	3
Total	0	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	2	4	6	0	0	0	0	0	0	0	13
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	0	0	0	4
12:15 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
12:30 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
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	6
Total	0	0	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	1	4	5	0	0	0	0	0	0	0	10
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4
1:15 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
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	4	0	4	0	0	0	0	0	0	0	8
1:45 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	6	6	0	0	0	0	6	0	6	0	0	0	0	0	0	0	12
Grand Total	0	0	0	0	0	0	0	0	0	0	0	8	10	18	0	0	0	0	9	8	17	0	0	0	0	0	0	0	35
Approach %	0	0	0	0	0	0		0	0	0	0	44.4	55.6		0	0	0	0	52.9	47.1		0	0	0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	22.9	28.6	51.4	0	0	0	0	25.7	22.9	48.6	0	0	0	0	0	0	0	
Exiting Leg Total							0							18							17							0	35

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:45 PM	Pleasant Street from North							#1010 Driveway from East							#1010 Driveway from Southeast							Pleasant Street from South							
	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	U-Turn	CW-WB	CW-EB	Total	Total
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3	3	0	0	0	0	0	0	0	6
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2	0	2	0	0	0	0	0	0	0	4
1:15 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
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	4	0	4	0	0	0	0	0	0	0	8
Total Volume	0	0	0	0	0	0	0	0	0	0	0	3	6	9	0	0	0	0	6	3	9	0	0	0	0	0	0	0	18
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	33.3	66.7		0.0	0.0	0.0	0.0	66.7	33.3		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	0.250	0.375	0.563	0.000	0.000	0.000	0.000	0.375	0.250	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	3	6	9	0	0	0	0	6	3	9	0	0	0	0	0	0	0	18
Exiting Leg							0							9							9							0	18
Total							0							18							18							0	36

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Cars and Heavy Vehicles (Combined)

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
4:00 PM	18	91	0	6	0	115	8	99	29	0	0	136	0	0	0	0	0	0	0	36	89	8	0	133	6	0	38	5	0	49	433
4:15 PM	11	93	0	2	0	106	8	121	18	0	0	147	0	0	0	0	0	0	0	27	116	19	0	162	6	0	47	6	0	59	474
4:30 PM	3	117	0	2	0	122	6	116	11	0	0	133	0	0	0	0	0	0	0	22	85	24	0	131	2	0	58	15	0	75	461
4:45 PM	9	88	0	5	0	102	8	91	15	0	0	114	0	0	0	0	0	0	0	44	116	28	0	188	6	0	33	4	0	43	447
Total	41	389	0	15	0	445	30	427	73	0	0	530	0	0	0	0	0	0	0	129	405	79	0	614	20	0	176	30	0	226	1815
5:00 PM	5	84	0	1	0	90	5	95	26	0	0	126	0	0	0	0	0	0	0	26	105	20	0	152	7	0	51	2	0	60	428
5:15 PM	2	108	0	10	0	120	9	86	15	0	0	110	0	0	0	0	0	0	0	27	95	15	0	137	2	0	77	4	0	83	450
5:30 PM	6	112	0	2	0	120	3	113	8	0	0	124	0	0	0	0	0	0	0	14	116	20	0	150	10	0	72	5	0	87	481
5:45 PM	8	103	0	5	0	116	12	102	15	0	0	129	0	0	0	0	0	0	0	37	106	16	0	159	10	0	92	4	0	106	510
Total	21	407	0	18	0	446	29	396	64	0	0	489	0	0	0	0	0	0	0	104	423	71	0	598	29	0	292	15	0	336	1869
Grand Total	62	795	0	33	0	891	59	823	137	0	0	1019	0	0	0	0	0	0	0	233	829	150	0	1212	49	0	468	45	0	562	3684
Approach %	7.0	89.3	0.0	3.7	0.0		5.8	80.8	13.4	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	19.2	68.4	12.4	0.0		8.7	0.0	83.3	8.0	0.0		
Total %	1.7	21.6	0.0	0.9	0.0	24.2	1.6	22.3	3.7	0.0	0.0	27.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	22.5	4.1	0.0	32.9	1.3	0.0	12.7	1.2	0.0	15.3	
Exiting Leg Total						933						734						0						982						1035	3684
Cars	62	773	0	32	0	867	58	818	136	0	0	1012	0	0	0	0	0	0	0	233	817	149	0	1199	48	0	465	43	0	556	3634
% Cars	100.0	97.1	0.0	97.0	0.0	97.3	98.3	99.4	99.3	0.0	0.0	99.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	98.6	99.3	0.0	98.9	98.0	0.0	99.4	95.6	0.0	98.9	98.6
Exiting Leg Total						918						730						0						957						1029	3634
Heavy Vehicles	0	23	0	1	0	24	1	5	1	0	0	7	0	0	0	0	0	0	0	0	12	1	0	13	1	0	3	2	0	6	50
% Heavy Vehicles	0.0	2.9	0.0	3.0	0.0	2.7	1.7	0.6	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.7	0.0	1.1	2.0	0.0	0.6	4.4	0.0	1.1	1.4
Exiting Leg Total						15						4						0						25						6	50

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

5:00 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
5:00 PM	5	84	0	1	0	90	5	95	26	0	0	126	0	0	0	0	0	0	0	26	106	20	0	152	7	0	51	2	0	60	428
5:15 PM	2	108	0	10	0	120	9	86	15	0	0	110	0	0	0	0	0	0	0	27	95	15	0	137	2	0	77	4	0	83	450
5:30 PM	6	112	0	2	0	120	3	113	8	0	0	124	0	0	0	0	0	0	0	14	116	20	0	150	10	0	72	5	0	87	481
5:45 PM	8	103	0	5	0	116	12	102	15	0	0	129	0	0	0	0	0	0	0	37	106	16	0	159	10	0	92	4	0	106	510
Total Volume	21	407	0	18	0	446	29	396	64	0	0	489	0	0	0	0	0	0	0	104	423	71	0	598	29	0	292	15	0	336	1869
% Approach Total	4.7	91.3	0.0	4.0	0.0		5.9	81.0	13.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	17.4	70.7	11.9	0.0		8.6	0.0	86.9	4.5	0.0		
PHF	0.656	0.908	0.000	0.450	0.000	0.929	0.604	0.876	0.615	0.000	0.000	0.948	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.703	0.912	0.888	0.000	0.940	0.725	0.000	0.793	0.750	0.000	0.792	0.916
Cars	21	391	0	17	0	429	29	395	64	0	0	488	0	0	0	0	0	0	0	104	416	70	0	590	29	0	292	14	0	335	1842
Cars %	100.0	96.1	0.0	94.4	0.0	96.2	100.0	99.7	100.0	0.0	0.0	99.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	98.3	98.6	0.0	98.7	100.0	0.0	100.0	93.3	0.0	99.7	98.6
Heavy Vehicles	0	16	0	1	0	17	0	1	0	0	0	1	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	1	0	1	27
Heavy Vehicles %	0.0	3.9	0.0	5.6	0.0	3.8	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.4	0.0	1.3	0.0	0.0	0.0	6.7	0.0	0.3	1.4
Cars Enter Leg	21	391	0	17	0	429	29	395	64	0	0	488	0	0	0	0	0	0	0	104	416	70	0	590	29	0	292	14	0	335	1842
Heavy Enter Leg	0	16	0	1	0	17	0	1	0	0	0	1	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	1	0	1	27
Total Entering Leg	21	407	0	18	0	446	29	396	64	0	0	489	0	0	0	0	0	0	0	104	423	71	0	598	29	0	292	15	0	336	1869
Cars Exiting Leg						459						413						0						484						486	1842
Heavy Exiting Leg						8						1						0						16						2	27
Total Exiting Leg						467						414						0						500						488	1869

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Cars

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	18	90	0	6	0	114	8	97	29	0	0	134	0	0	0	0	0	0	0	36	89	8	0	133	5	0	38	5	0	48	429
4:15 PM	11	91	0	2	0	104	8	121	17	0	0	146	0	0	0	0	0	0	0	27	115	19	0	161	6	0	47	6	0	59	470
4:30 PM	3	114	0	2	0	119	6	114	11	0	0	131	0	0	0	0	0	0	0	22	84	24	0	130	2	0	56	14	0	72	452
4:45 PM	9	87	0	5	0	101	7	91	15	0	0	113	0	0	0	0	0	0	0	44	113	28	0	185	6	0	32	4	0	42	441
Total	41	382	0	15	0	438	29	423	72	0	0	524	0	0	0	0	0	0	0	129	401	79	0	609	19	0	173	29	0	221	1792
5:00 PM	5	79	0	1	0	85	5	95	26	0	0	126	0	0	0	0	0	0	0	26	104	19	0	149	7	0	51	1	0	59	419
5:15 PM	2	104	0	9	0	115	9	85	15	0	0	109	0	0	0	0	0	0	0	27	94	15	0	136	2	0	77	4	0	83	443
5:30 PM	6	108	0	2	0	116	3	113	8	0	0	124	0	0	0	0	0	0	0	14	114	20	0	148	10	0	72	5	0	87	475
5:45 PM	8	100	0	5	0	113	12	102	15	0	0	129	0	0	0	0	0	0	0	37	104	16	0	157	10	0	92	4	0	106	505
Total	21	391	0	17	0	429	29	395	64	0	0	488	0	0	0	0	0	0	0	104	416	70	0	590	29	0	292	14	0	335	1842
Grand Total	62	773	0	32	0	867	58	818	136	0	0	1012	0	0	0	0	0	0	0	233	817	149	0	1199	48	0	465	43	0	556	3634
Approach %	7.2	89.2	0.0	3.7	0.0		5.7	80.8	13.4	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	19.4	68.1	12.4	0.0		8.6	0.0	83.6	7.7	0.0		
Total %	1.7	21.3	0.0	0.9	0.0	23.9	1.6	22.5	3.7	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	22.5	4.1	0.0	33.0	1.3	0.0	12.8	1.2	0.0	15.3	
Exiting Leg Total						918						730						0						957						1029	3634

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

5:00 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
5:00 PM	5	79	0	1	0	85	5	95	26	0	0	126	0	0	0	0	0	0	0	26	104	19	0	149	7	0	51	1	0	59	419
5:15 PM	2	104	0	9	0	115	9	85	15	0	0	109	0	0	0	0	0	0	0	27	94	15	0	136	2	0	77	4	0	83	443
5:30 PM	6	108	0	2	0	116	3	113	8	0	0	124	0	0	0	0	0	0	0	14	114	20	0	148	10	0	72	5	0	87	475
5:45 PM	8	100	0	5	0	113	12	102	15	0	0	129	0	0	0	0	0	0	0	37	104	16	0	157	10	0	92	4	0	106	505
Total Volume	21	391	0	17	0	429	29	395	64	0	0	488	0	0	0	0	0	0	0	104	416	70	0	590	29	0	292	14	0	335	1842
% Approach Total	4.9	91.1	0.0	4.0	0.0		5.9	80.9	13.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	17.6	70.5	11.9	0.0		8.7	0.0	87.2	4.2	0.0		
PHF	0.656	0.905	0.000	0.472	0.000	0.925	0.604	0.874	0.615	0.000	0.000	0.946	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.703	0.912	0.875	0.000	0.939	0.725	0.000	0.793	0.700	0.000	0.790	0.912
Entering Leg	21	391	0	17	0	429	29	395	64	0	0	488	0	0	0	0	0	0	0	104	416	70	0	590	29	0	292	14	0	335	1842
Exiting Leg						459						413						0						484						486	1842
Total						888						901						0						1074						821	3684

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	4
4:15 PM	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
4:30 PM	0	3	0	0	0	3	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	1	0	3	9
4:45 PM	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	0	0	1	6
Total	0	7	0	0	0	7	1	4	1	0	0	6	0	0	0	0	0	0	0	0	5	0	0	5	1	0	3	1	0	5	23
5:00 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	1	0	1	9
5:15 PM	0	4	0	1	0	5	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	7
5:30 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6
5:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5
Total	0	16	0	1	0	17	0	1	0	0	0	1	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	1	0	1	27
Grand Total	0	23	0	1	0	24	1	5	1	0	0	7	0	0	0	0	0	0	0	0	12	1	0	13	1	0	3	2	0	6	50
Approach %	0.0	95.8	0.0	4.2	0.0		14.3	71.4	14.3	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	92.3	7.7	0.0		16.7	0.0	50.0	33.3	0.0		
Total %	0.0	46.0	0.0	2.0	0.0	48.0	2.0	10.0	2.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0	2.0	0.0	26.0	2.0	0.0	6.0	4.0	0.0	12.0	
Exiting Leg Total						15						4						0						25						6	50
Buses	0	11	0	0	0	11	1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	1	0	4	18
% Buses	0.0	47.8	0.0	0.0	0.0	45.8	100.0	20.0	0.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	7.7	0.0	0.0	100.0	50.0	0.0	66.7	36.0
Exiting Leg Total						3						3						0						11						1	18
Single-Unit Trucks	0	10	0	0	0	10	0	4	1	0	0	5	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	1	0	1	26
% Single-Unit	0.0	43.5	0.0	0.0	0.0	41.7	0.0	80.0	100.0	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.3	0.0	0.0	76.9	0.0	0.0	0.0	50.0	0.0	16.7	52.0
Exiting Leg Total						11						0						0						11						4	26
Articulated Trucks	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0	0	0	1	6
% Articulated	0.0	8.7	0.0	100.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	100.0	0.0	15.4	100.0	0.0	0.0	0.0	0.0	16.7	12.0
Exiting Leg Total						1						1						0						3						1	6

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

4:30 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
4:30 PM	0	3	0	0	0	3	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	1	0	3	9
4:45 PM	0	1	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	0	0	1	6
5:00 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	0	1	0	1	9
5:15 PM	0	4	0	1	0	5	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	7
Total Volume	0	13	0	1	0	14	1	3	0	0	0	4	0	0	0	0	0	0	0	0	7	1	0	8	0	0	3	2	0	5	31
% Approach Total	0.0	92.9	0.0	7.1	0.0		25.0	75.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	87.5	12.5	0.0		0.0	0.0	60.0	40.0	0.0		
PHF	0.000	0.650	0.000	0.250	0.000	0.700	0.250	0.375	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.250	0.000	0.667	0.000	0.000	0.375	0.500	0.000	0.417	0.861
Buses	0	5	0	0	0	5	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	11
Buses %	0.0	38.5	0.0	0.0	0.0	35.7	100.0	33.3	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	50.0	0.0	80.0	35.5
Single-Unit Trucks	0	6	0	0	0	6	0	2	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	15
Single-Unit %	0.0	46.2	0.0	0.0	0.0	42.9	0.0	66.7	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	0.0	0.0	75.0	0.0	0.0	0.0	50.0	0.0	20.0	48.4
Articulated Trucks	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5
Articulated %	0.0	15.4	0.0	100.0	0.0	21.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	100.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	16.1
Buses	0	5	0	0	0	5	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	11
Single-Unit Trucks	0	6	0	0	0	6	0	2	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	15
Articulated Trucks	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5
Total Entering Leg	0	13	0	1	0	14	1	3	0	0	0	4	0	0	0	0	0	0	0	0	7	1	0	8	0	0	3	2	0	5	31
Buses						2						3						0						5						1	11
Single-Unit Trucks						7						0						0						6						2	15
Articulated Trucks						1						1						0						2						1	5
Total Exiting Leg						10						4						0						13						4	31

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Buses

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	2	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	6
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	3	0	0	0	3	1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	1	0	4	10
5:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	8	0	0	0	8	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
Grand Total	0	11	0	0	0	11	1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	1	0	4	18
Approach %	0.0	100.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	75.0	25.0	0.0		
Total %	0.0	61.1	0.0	0.0	0.0	61.1	5.6	5.6	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	5.6	0.0	0.0	16.7	5.6	0.0	22.2	
Exiting Leg Total						3						3						0						11						1	18

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

4:15 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	2	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	6
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
5:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	4	0	0	0	4	1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	1	0	4	11
% Approach Total	0.0	100.0	0.0	0.0	0.0		50.0	50.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	100.0	0.0	0.0		0.0	0.0	75.0	25.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	0.500	0.250	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.375	0.250	0.000	0.333	0.458
Entering Leg	0	4	0	0	0	4	1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	1	0	4	11
Exiting Leg						3						3						0						4						1	11
Total						7						5						0						5						5	22

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Single-Unit Trucks

	Pleasant Street (from North)						Concord Avenue (from East)						Police Station (from Southeast)						Pleasant Street (from South)						Concord Avenue (from West)						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	2	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3
Total	0	3	0	0	0	3	0	3	1	0	0	4	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	11
5:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	4
5:15 PM	0	3	0	0	0	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
5:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3
Total	0	7	0	0	0	7	0	1	0	0	0	1	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	15
Grand Total	0	10	0	0	0	10	0	4	1	0	0	5	0	0	0	0	0	0	0	0	10	0	0	10	0	0	0	1	0	1	26
Approach %	0.0	100.0	0.0	0.0	0.0		0.0	80.0	20.0	0.0	0.0		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	100.0	0.0		
Total %	0.0	38.5	0.0	0.0	0.0	38.5	0.0	15.4	3.8	0.0	0.0	19.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.5	0.0	0.0	38.5	0.0	0.0	0.0	3.8	0.0	3.8	
Exiting Leg Total						11						0						0						11						4	26

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

4:30 PM	Pleasant Street (from North)						Concord Avenue (from East)						Police Station (from Southeast)						Pleasant Street (from South)						Concord Avenue (from West)						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:30 PM	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3
5:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	4
5:15 PM	0	3	0	0	0	3	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5
Total Volume	0	6	0	0	0	6	0	2	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	15
% Approach Total	0.0	100.0	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	100.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.000	0.250	0.750
Entering Leg	0	6	0	0	0	6	0	2	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	0	0	0	1	0	1	15
Exiting Leg						7						0						0						6						2	15
Total						13						2						0						12						3	30

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Articulated Trucks

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	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	1	0	0	0	0	1	1
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	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	0	0
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	3
5:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	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	0	0
Total	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	4
Grand Total	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	1	0	0	0	0	1	6
Approach %	0.0	66.7	0.0	33.3	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	50.0	50.0	0.0		100.0	0.0	0.0	0.0	0.0		
Total %	0.0	33.3	0.0	16.7	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	16.7	0.0	33.3	16.7	0.0	0.0	0.0	0.0	16.7	
Exiting Leg Total						1						1						0						3						1	6

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

4:30 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
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	0	0
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	3
5:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5
% Approach Total	0.0	66.7	0.0	33.3	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	50.0	50.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.250	0.000	0.750	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	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.417
Entering Leg	0	2	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	5
Exiting Leg						1						1						0						2						1	5
Total						4						1						0						4						1	10

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
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

Bicycles (on Roadway and Crosswalks)

	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	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	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	1	2
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	0	0	0	0	0	2	0	0	0	0	2	2
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	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	0	3	0	0	0	0	3	6
5:00 PM	1	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	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
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	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
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	1	1	0	1	2	0	0	0	0	3	0	0	0	0	0	0	0	0	4
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	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	3	0	0	0	0	4	0	0	0	0	0	0	1	1	8
Grand Total	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	3	3	0	1	4	0	0	0	0	5	0	0	3	0	0	0	1	4	14
Approach %	100.0	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	100.0		0.0	20.0	80.0	0.0	0.0	0.0	0.0		0.0	0.0	75.0	0.0	0.0	0.0	25.0		
Total %	7.1	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	7.1	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	21.4	21.4	0.0	7.1	28.6	0.0	0.0	0.0	0.0	35.7	0.0	0.0	21.4	0.0	0.0	0.0	7.1	28.6	
Exiting Leg Total								4								4								3								0								3	14

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

4:45 PM	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
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	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	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	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2
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	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
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	1	1	0	1	2	0	0	0	0	3	0	0	0	0	0	0	0	0	4
Total Volume	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	3	0	0	0	0	4	0	0	0	0	0	0	1	1	8
% Approach Total	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	100.0		0.0	25.0	75.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	100.0		
PHF	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	0.000	0.000	0.500	0.500	0.000	0.250	0.375	0.000	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500
Entering Leg	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	3	0	0	0	0	4	0	0	0	0	0	0	1	1	8
Exiting Leg								3								1								2								0								2	8
Total								4								1								4								4								3	16

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Thursday, November 14, 2019
Start Time: 4:00 PM
End Time: 6:00 PM
Class:

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

Pedestrians

	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	0	0	0	0	0	1	2	3	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	9
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	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4
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	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	0	0	0	0	0	1	8	9	0	0	0	0	0	0	5	5	0	0	0	0	0	1	0	1	19
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	5
5:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	3	2	5	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	10
5:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	2	1	3	6
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	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	2	0	0	0	0	0	1	2	3	0	0	0	0	0	5	3	8	0	0	0	0	0	2	1	3	0	0	0	0	0	2	3	5	21
Grand Total	0	0	0	0	0	1	3	4	0	0	0	0	0	2	3	5	0	0	0	0	0	6	11	17	0	0	0	0	0	2	6	8	0	0	0	0	0	3	3	6	40
Approach %	0	0	0	0	0	25	75		0	0	0	0	0	40	60		0	0	0	0	0	35	65		0	0	0	0	0	25	75		0	0	0	0	0	50	50		
Total %	0	0	0	0	0	2.5	7.5	10	0	0	0	0	0	5	7.5	13	0	0	0	0	0	15	28	43	0	0	0	0	0	5	15	20	0	0	0	0	0	7.5	7.5	15	
Exiting Leg Total								4								5								17								8								6	40

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

4:45 PM	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-NB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-NB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
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	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	5
5:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	3	2	5	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	10
5:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	2	1	3	6
Total Volume	0	0	0	0	0	0	2	2	0	0	0	0	0	1	2	3	0	0	0	0	0	5	5	10	0	0	0	0	0	2	3	5	0	0	0	0	0	2	3	5	25
% 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	33.3	66.7		0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	40.0	60.0		0.0	0.0	0.0	0.0	0.0	40.0	60.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.000	0.000	0.000	0.417	0.625	0.500	0.000	0.000	0.000	0.000	0.000	0.500	0.375	0.625	0.000	0.000	0.000	0.000	0.000	0.250	0.750	0.417	0.625
Entering Leg	0	0	0	0	0	0	2	2	0	0	0	0	0	1	2	3	0	0	0	0	0	5	5	10	0	0	0	0	0	2	3	5	0	0	0	0	0	2	3	5	25
Exiting Leg								2								3								10								5								5	25
Total								4								6								20								10								10	50

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Cars and Heavy Vehicles (Combined)

	Pleasant Street (from North)						Concord Avenue (from East)						Police Station (from Southeast)						Pleasant Street (from South)						Concord Avenue (from West)						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
11:00 AM	6	73	0	10	0	89	5	39	22	0	0	66	0	0	0	0	0	0	0	26	67	1	0	94	1	0	30	3	0	34	283
11:15 AM	5	68	0	11	0	84	5	44	28	0	0	77	0	0	0	0	0	0	0	32	64	3	0	99	2	0	29	7	0	38	298
11:30 AM	1	83	0	8	0	92	5	38	32	0	0	75	0	0	0	0	0	0	0	24	80	5	0	109	5	0	32	4	0	41	317
11:45 AM	8	71	0	3	0	82	6	35	33	0	0	74	0	0	0	4	0	4	0	31	70	4	0	105	3	0	29	7	0	39	304
Total	20	295	0	32	0	347	21	156	115	0	0	292	0	0	0	4	0	4	0	113	281	13	0	407	11	0	120	21	0	152	1202
12:00 PM	3	80	0	0	0	83	3	33	23	0	0	59	0	0	0	0	0	0	0	24	70	5	0	99	5	0	41	5	0	51	292
12:15 PM	2	89	0	7	0	98	6	47	25	0	0	78	0	0	0	0	0	0	0	29	82	2	0	113	2	0	31	6	0	39	328
12:30 PM	1	72	0	4	0	77	9	37	26	0	0	72	0	0	0	0	0	0	0	33	79	5	0	117	1	0	30	5	0	36	302
12:45 PM	5	80	0	6	0	91	2	36	32	0	0	70	0	0	0	0	0	0	0	33	77	4	0	114	5	0	30	9	0	44	319
Total	11	321	0	17	0	349	20	153	106	0	0	279	0	0	0	0	0	0	0	119	308	16	0	443	13	0	132	25	0	170	1241
1:00 PM	6	71	0	6	0	83	4	39	35	0	0	78	0	0	0	0	0	0	0	42	68	4	0	114	1	0	21	5	0	27	302
1:15 PM	5	86	0	5	0	97	3	35	29	0	0	67	0	0	0	0	0	0	0	33	76	5	0	114	2	0	32	6	0	40	318
1:30 PM	2	72	0	4	0	78	8	33	34	0	0	75	0	0	0	0	0	0	0	32	73	3	0	108	4	0	30	2	0	36	297
1:45 PM	4	70	0	2	0	76	9	33	36	0	0	78	0	0	0	0	0	0	0	34	58	9	0	101	2	0	28	3	1	34	289
Total	18	299	0	17	0	334	24	140	134	0	0	298	0	0	0	0	0	0	0	141	275	21	0	437	9	0	111	16	1	137	1206
Grand Total	49	915	0	66	0	1030	65	449	355	0	0	869	0	0	0	4	0	4	0	373	864	50	0	1287	33	0	363	62	1	459	3649
Approach %	4.8	88.8	0.0	6.4	0.0		7.5	51.7	40.9	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	29.0	67.1	3.9	0.0		7.2	0.0	79.1	13.5	0.2		
Total %	1.3	25.1	0.0	1.8	0.0	28.2	1.8	12.3	9.7	0.0	0.0	23.8	0.0	0.0	0.0	0.1	0.0	0.1	0.0	10.2	23.7	1.4	0.0	35.3	0.9	0.0	9.9	1.7	0.0	12.6	
Exiting Leg Total						991						802						0						1307						549	3649
Cars	49	893	0	66	0	1008	65	444	353	0	0	862	0	0	0	4	0	4	0	366	847	50	0	1263	31	0	359	60	1	451	3588
% Cars	100.0	97.6	0.0	100.0	0.0	97.9	100.0	98.9	99.4	0.0	0.0	99.2	0.0	0.0	0.0	100.0	0.0	100.0	0.0	98.1	98.0	100.0	0.0	98.1	93.9	0.0	98.9	96.8	100.0	98.3	98.3
Exiting Leg Total						972						791						0						1281						544	3588
Heavy Vehicles	0	22	0	0	0	22	0	5	2	0	0	7	0	0	0	0	0	0	0	7	17	0	0	24	2	0	4	2	0	8	61
% Heavy Vehicles	0.0	2.4	0.0	0.0	0.0	2.1	0.0	1.1	0.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.0	0.0	0.0	1.9	6.1	0.0	1.1	3.2	0.0	1.7	1.7
Exiting Leg Total						19						11						0						26						5	61

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Pleasant Street (from North)						Concord Avenue (from East)						Police Station (from Southeast)						Pleasant Street (from South)						Concord Avenue (from West)						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
12:15 PM	2	89	0	7	0	98	6	47	25	0	0	78	0	0	0	0	0	0	0	29	82	2	0	113	2	0	31	6	0	39	328
12:30 PM	1	72	0	4	0	77	9	37	26	0	0	72	0	0	0	0	0	0	0	33	79	5	0	117	1	0	30	5	0	36	302
12:45 PM	5	80	0	6	0	91	2	36	32	0	0	70	0	0	0	0	0	0	0	33	77	4	0	114	5	0	30	9	0	44	319
1:00 PM	6	71	0	6	0	83	4	39	35	0	0	78	0	0	0	0	0	0	0	42	68	4	0	114	1	0	21	5	0	27	302
Total Volume	14	312	0	23	0	349	21	159	118	0	0	298	0	0	0	0	0	0	0	137	306	15	0	458	9	0	112	25	0	146	1251
% Approach Total	4.0	89.4	0.0	6.6	0.0		7.0	53.4	39.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	29.9	66.8	3.3	0.0		6.2	0.0	76.7	17.1	0.0		
PHF	0.583	0.876	0.000	0.821	0.000	0.890	0.583	0.846	0.843	0.000	0.000	0.955	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.815	0.933	0.750	0.000	0.979	0.450	0.000	0.903	0.694	0.000	0.830	0.954
Cars	14	304	0	23	0	341	21	157	116	0	0	294	0	0	0	0	0	0	0	135	298	15	0	448	9	0	110	23	0	142	1225
Cars %	100.0	97.4	0.0	100.0	0.0	97.7	100.0	98.7	98.3	0.0	0.0	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.5	97.4	100.0	0.0	97.8	100.0	0.0	98.2	92.0	0.0	97.3	97.9
Heavy Vehicles	0	8	0	0	0	8	0	2	2	0	0	4	0	0	0	0	0	0	0	2	8	0	0	10	0	0	2	2	0	4	26
Heavy Vehicles %	0.0	2.6	0.0	0.0	0.0	2.3	0.0	1.3	1.7	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.6	0.0	0.0	2.2	0.0	0.0	1.8	8.0	0.0	2.7	2.1
Cars Enter Leg	14	304	0	23	0	341	21	157	116	0	0	294	0	0	0	0	0	0	0	135	298	15	0	448	9	0	110	23	0	142	1225
Heavy Enter Leg	0	8	0	0	0	8	0	2	2	0	0	4	0	0	0	0	0	0	0	2	8	0	0	10	0	0	2	2	0	4	26
Total Entering Leg	14	312	0	23	0	349	21	159	118	0	0	298	0	0	0	0	0	0	0	137	306	15	0	458	9	0	112	25	0	146	1251
Cars Exiting Leg						342						268						0						429						186	1225
Heavy Exiting Leg						10						4						0						10						2	26
Total Exiting Leg						352						272						0						439						188	1251

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Cars

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
11:00 AM	5	70	0	10	0	86	5	39	22	0	0	66	0	0	0	0	0	0	0	26	66	1	0	93	1	0	30	3	0	34	279
11:15 AM	5	66	0	11	0	82	3	42	28	0	0	75	0	0	0	0	0	0	0	32	63	3	0	98	2	0	28	7	0	37	292
11:30 AM	1	82	0	8	0	91	5	37	32	0	0	74	0	0	0	0	0	0	0	23	78	5	0	106	4	0	32	4	0	40	311
11:45 AM	8	68	0	3	0	79	6	35	33	0	0	74	0	0	0	4	0	4	0	30	69	4	0	103	3	0	29	7	0	39	299
Total	20	286	0	32	0	338	21	153	115	0	0	289	0	0	0	4	0	4	0	111	276	13	0	400	10	0	119	21	0	150	1181
12:00 PM	3	77	0	0	0	80	3	33	23	0	0	59	0	0	0	0	0	0	0	22	68	5	0	95	4	0	41	5	0	50	284
12:15 PM	2	88	0	7	0	97	6	47	25	0	0	78	0	0	0	0	0	0	0	28	81	2	0	111	2	0	31	6	0	39	325
12:30 PM	1	72	0	4	0	77	9	37	25	0	0	71	0	0	0	0	0	0	0	32	76	5	0	113	1	0	30	4	0	35	296
12:45 PM	5	76	0	6	0	87	2	36	32	0	0	70	0	0	0	0	0	0	0	33	74	4	0	111	5	0	29	8	0	42	310
Total	11	313	0	17	0	341	20	153	105	0	0	278	0	0	0	0	0	0	0	115	299	16	0	430	12	0	131	23	0	166	1215
1:00 PM	6	68	0	6	0	80	4	37	34	0	0	75	0	0	0	0	0	0	0	42	67	4	0	113	1	0	20	5	0	26	294
1:15 PM	6	85	0	5	0	96	3	35	29	0	0	67	0	0	0	0	0	0	0	33	75	5	0	113	2	0	31	6	0	39	315
1:30 PM	2	71	0	4	0	77	8	33	34	0	0	75	0	0	0	0	0	0	0	31	72	3	0	106	4	0	30	2	0	36	294
1:45 PM	4	70	0	2	0	76	9	33	36	0	0	78	0	0	0	0	0	0	0	34	58	9	0	101	2	0	28	3	1	34	289
Total	18	294	0	17	0	329	24	138	133	0	0	295	0	0	0	0	0	0	0	140	272	21	0	433	9	0	109	16	1	135	1192
Grand Total	49	893	0	66	0	1008	65	444	353	0	0	862	0	0	0	4	0	4	0	366	847	50	0	1263	31	0	359	60	1	451	3588
Approach %	4.9	88.6	0.0	6.5	0.0		7.5	51.5	41.0	0.0	0.0		0.0	0.0	0.0	100.0	0.0		0.0	29.0	67.1	4.0	0.0		6.9	0.0	79.6	13.3	0.2		
Total %	1.4	24.9	0.0	1.8	0.0	28.1	1.8	12.4	9.8	0.0	0.0	24.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	10.2	23.6	1.4	0.0	35.2	0.9	0.0	10.0	1.7	0.0	12.6	
Exiting Leg Total						972						791						0						1281						544	3588

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:15 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	U-Turn	Total	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
12:15 PM	2	88	0	7	0	97	6	47	25	0	0	78	0	0	0	0	0	0	0	28	81	2	0	111	2	0	31	6	0	39	325
12:30 PM	1	72	0	4	0	77	9	37	25	0	0	71	0	0	0	0	0	0	0	32	76	5	0	113	1	0	30	4	0	35	296
12:45 PM	5	76	0	6	0	87	1	36	32	0	0	70	0	0	0	0	0	0	0	33	74	4	0	111	5	0	29	8	0	42	310
1:00 PM	6	68	0	6	0	80	4	37	34	0	0	75	0	0	0	0	0	0	0	42	67	4	0	113	1	0	20	5	0	26	294
Total Volume	14	304	0	23	0	341	21	157	116	0	0	294	0	0	0	0	0	0	0	135	298	15	0	448	9	0	110	23	0	142	1225
% Approach Total	4.1	89.1	0.0	6.7	0.0		7.1	53.4	39.5	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	30.1	66.5	3.3	0.0		6.3	0.0	77.5	16.2	0.0		
PHF	0.583	0.864	0.000	0.821	0.000	0.879	0.583	0.835	0.853	0.000	0.000	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.804	0.920	0.750	0.000	0.991	0.450	0.000	0.887	0.719	0.000	0.845	0.942
Entering Leg	14	304	0	23	0	341	21	157	116	0	0	294	0	0	0	0	0	0	0	135	298	15	0	448	9	0	110	23	0	142	1225
Exiting Leg						342						268						0						429						186	1225
Total						683						562						0						877						328	2450

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM

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

Class: Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
11:15 AM	0	2	0	0	0	2	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	6
11:30 AM	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	1	0	0	0	0	1	6
11:45 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	5
Total	0	9	0	0	0	9	0	3	0	0	0	3	0	0	0	0	0	0	0	2	5	0	0	7	1	0	1	0	0	2	21
12:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	1	0	0	0	0	1	8
12:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	1	0	1	6
12:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	0	2	9
Total	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
1:00 PM	0	3	0	0	0	3	0	2	1	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	8
1:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	3
1:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
1:45 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	0	0
Total	0	5	0	0	0	5	0	2	1	0	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	2	0	0	2	14
Grand Total	0	22	0	0	0	22	0	5	2	0	0	7	0	0	0	0	0	0	0	7	17	0	0	24	2	0	4	2	0	8	61
Approach %	0.0	100.0	0.0	0.0	0.0		0.0	71.4	28.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	29.2	70.8	0.0	0.0		25.0	0.0	50.0	25.0	0.0		
Total %	0.0	36.1	0.0	0.0	0.0	36.1	0.0	8.2	3.3	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	27.9	0.0	0.0	39.3	3.3	0.0	6.6	3.3	0.0	13.1	
Exiting Leg Total						19						11						0						26						5	61
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	25.0	3.3
Exiting Leg Total						0						2						0						0						0	2
Single-Unit Trucks	0	18	0	0	0	18	0	5	2	0	0	7	0	0	0	0	0	0	0	6	16	0	0	22	2	0	2	2	0	6	53
% Single-Unit	0.0	81.8	0.0	0.0	0.0	81.8	0.0	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.7	94.1	0.0	0.0	91.7	100.0	0.0	50.0	100.0	0.0	75.0	86.9
Exiting Leg Total						18						8						0						22						5	53
Articulated Trucks	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	6
% Articulated	0.0	18.2	0.0	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	5.9	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	9.8
Exiting Leg Total						1						1						0						4						0	6

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
12:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	1	0	0	0	0	1	8
12:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	1	0	1	6
12:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	0	2	9
Total Volume	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
% Approach Total	0.0	100.0	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	30.8	69.2	0.0	0.0		25.0	0.0	25.0	50.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.750	0.000	0.000	0.813	0.250	0.000	0.250	0.500	0.000	0.500	0.722
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Single-Unit Trucks	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
Single-Unit %	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0	100.0	100.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Single-Unit Trucks	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
Articulated Trucks	0	0	0	0	0	0	0	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 Entering Leg	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
Buses						0						0						0						0						0	0
Single-Unit Trucks						11						5						0						10						0	26
Articulated Trucks						0						0						0						0						0	0
Total Exiting Leg						11						5						0						10						0	26

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Buses

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
11:00 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
11:15 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
11:30 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
11:45 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
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
12:00 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	0	0
12:15 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	0	0
12:30 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	0	0
12:45 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	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
1:00 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	1	0	0	1	1
1:15 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	1	0	0	1	1
1:30 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	0	0
1:45 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	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	2	0	0	2	2
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	2	0	0	2	2
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	100.0	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	100.0	0.0	0.0	100.0	
Exiting Leg Total						0						2						0						0						0	2

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
12:30 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	0	0
12:45 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	0	0
1:00 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	1	0	0	1	1
1:15 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	1	0	0	1	1
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	2	0	0	2	2
% 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	100.0	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	0.500	0.000	0.000	0.500	0.500
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	2	0	0	2	2
Exiting Leg						0						2						0						0						0	2
Total						0						2						0						0						2	4

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Single-Unit Trucks

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	1	5
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	2	0	0	3	1	0	0	0	0	1	5
11:45 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	5
Total	0	6	0	0	0	6	0	3	0	0	0	3	0	0	0	0	0	0	0	2	4	0	0	6	1	0	1	0	0	2	17
12:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	1	0	0	0	0	1	8
12:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	1	0	1	6
12:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	0	2	9
Total	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
1:00 PM	0	2	0	0	0	2	0	2	1	0	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6
1:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
1:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
1:45 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	0	0
Total	0	4	0	0	0	4	0	2	1	0	0	3	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	10
Grand Total	0	18	0	0	0	18	0	5	2	0	0	7	0	0	0	0	0	0	0	6	16	0	0	22	2	0	2	2	0	6	53
Approach %	0.0	100.0	0.0	0.0	0.0		0.0	71.4	28.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	27.3	72.7	0.0	0.0		33.3	0.0	33.3	33.3	0.0		
Total %	0.0	34.0	0.0	0.0	0.0	34.0	0.0	9.4	3.8	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	30.2	0.0	0.0	41.5	3.8	0.0	3.8	3.8	0.0	11.3	
Exiting Leg Total						18						8						0						22						5	53

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:00 PM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
12:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4	1	0	0	0	0	1	8
12:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	3
12:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	1	0	1	6
12:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	1	1	0	2	9
Total Volume	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
% Approach Total	0.0	100.0	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	30.8	69.2	0.0	0.0		25.0	0.0	25.0	50.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.750	0.000	0.000	0.813	0.250	0.000	0.250	0.500	0.000	0.500	0.722
Entering Leg	0	8	0	0	0	8	0	0	1	0	0	1	0	0	0	0	0	0	0	4	9	0	0	13	1	0	1	2	0	4	26
Exiting Leg						11						5						0						10						0	26
Total						19						6						0						23						4	52

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Articulated Trucks

	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 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
Total	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
12:00 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	0	0
12:15 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	0	0
12:30 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	0	0
12:45 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	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
1:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 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	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
1:45 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	0	0
Total	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
Grand Total	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	6
Approach %	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	50.0	50.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Total %	0.0	66.7	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	16.7	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	
Entering Leg Total						1						1						0						4						0	6

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Pleasant Street from North						Concord Avenue from East						Police Station from Southeast						Pleasant Street from South						Concord Avenue from West						
	Right	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Total	Hard Right	Right	Thru	Left	U-Turn	Total	Right	Bear Right	Thru	Left	U-Turn	Total	Total
11:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2
11:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 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
Total Volume	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
% Approach Total	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	100.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.000	0.750	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	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Entering Leg	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4
Exiting Leg						1						0						0						3						0	4
Total						4						0						0						4						0	8

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Bicycles (on Roadway and Crosswalks)

	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								
	Right	Thru	Bear Left	Left	U-Turn	Cbl-EB	Cbl-WB	Total	Right	Thru	Left	Hard Left	U-Turn	Cbl-SE	Cbl-NW	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Cbl-SW	Cbl-NE	Total	Hard Right	Right	Thru	Left	U-Turn	Cbl-NE	Cbl-SE	Total	Right	Bear Right	Thru	Left	U-Turn	Cbl-NW	Cbl-SE	Total	Total
11:00 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	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:45 AM	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0	1	2
Total	0	2	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	7
12:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	1	2	0	0	2	0	0	0	0	2	6
12:15 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	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	1	5
12:45 PM	0	1	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	0	0	0	0	1	0	0	1	0	0	0	0	1	4
Total	0	1	0	0	0	0	0	1	0	3	0	0	0	0	0	3	0	0	0	0	0	1	1	2	0	0	4	0	0	0	1	5	1	0	3	0	0	0	0	4	15
1:00 PM	0	0	0	0	0	0	0	0	0	1	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	1	0	0	0	2	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	5
1:30 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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
1:45 PM	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	1	0	1	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	2	2	0	0	4	0	0	0	0	4	0	0	1	1	1	0	0	3	12
Grand Total	0	4	0	1	0	0	0	5	0	6	0	0	0	0	0	6	0	1	0	0	0	1	4	6	0	0	8	0	0	0	1	9	1	0	5	1	1	0	0	8	34
Approach %	0.0	80.0	0.0	20.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0		0.0	16.7	0.0	0.0	0.0	16.7	66.7		0.0	0.0	88.9	0.0	0.0	0.0	11.1		12.5	0.0	62.5	12.5	12.5	0.0	0.0		
Total %	0.0	11.8	0.0	2.9	0.0	0.0	0.0	14.7	0.0	17.6	0.0	0.0	0.0	0.0	0.0	17.6	0.0	2.9	0.0	0.0	0.0	2.9	11.8	17.6	0.0	0.0	23.5	0.0	0.0	0.0	2.9	26.5	2.9	0.0	14.7	2.9	2.9	0.0	0.0	23.5	
Exiting Leg Total								10								6								5								6								7	34

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

12:30 PM	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								
	Right	Thru	Bear Left	Left	U-Turn	Cbl-EB	Cbl-WB	Total	Right	Thru	Left	Hard Left	U-Turn	Cbl-SE	Cbl-NW	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	Cbl-SW	Cbl-NE	Total	Hard Right	Right	Thru	Left	U-Turn	Cbl-NE	Cbl-SE	Total	Right	Bear Right	Thru	Left	U-Turn	Cbl-NW	Cbl-SE	Total	Total
12:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	0	0	1	5
12:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	4
1:00 PM	0	0	0	0	0	0	0	0	0	1	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	1	0	0	0	2	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	5
Total Volume	0	1	0	0	0	0	0	1	0	3	0	0	0	0	0	3	0	0	0	0	0	1	2	3	0	0	6	0	0	0	0	6	1	0	2	1	0	0	0	4	17
% Approach Total	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	33.3	66.7		0.0	0.0	100.0	0.0	0.0	0.0	0.0		25.0	0.0	50.0	25.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.250	0.000	0.500	0.250	0.000	0.000	0.000	0.500	0.850
Entering Leg	0	1	0	0	0	0	0	1	0	3	0	0	0	0	0	3	0	0	0	0	0	1	2	3	0	0	6	0	0	0	0	6	1	0	2	1	0	0	0	4	17
Exiting Leg								7								2								3								2								3	17
Total								8								5								6								8								7	34

PDI File #: 197270 C
Location: N: Pleasant Street S: Pleasant Street
Location: E: Concord Avenue W: Concord Avenue SE: Police Station
City, State: Belmont, MA
Client: VAI/S.Kelly
Site Code: 8444
Count Date: Saturday, November 16, 2019
Start Time: 11:00 AM
End Time: 2:00 PM
Class:

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

Pedestrians

	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								Total
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	6
11:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	12
Total	0	0	0	0	0	2	2	4	0	0	0	0	0	1	1	2	0	0	0	0	0	4	6	10	0	0	0	0	0	2	2	4	0	0	0	0	0	2	1	3	23
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	5
12:15 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	0	0	0	0	0	0	0	0	3	1	4	4
12:30 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	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	3	4	0	0	0	0	0	1	0	1	0	0	0	0	0	3	1	4	9
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15 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	0	0	0	0	0	0	0	0	1	1	1	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	4
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	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	0	0	0	0	0	1	1	2	0	0	0	0	0	2	3	5	0	0	0	0	0	0	2	2	0	0	0	0	0	1	1	2	10
Grand Total	0	0	0	0	0	2	2	4	0	0	0	0	0	2	2	4	0	0	0	0	0	7	12	19	0	0	0	0	0	3	4	7	0	0	0	0	0	5	3	8	42
Approach %	0	0	0	0	0	50	50		0	0	0	0	0	50	50		0	0	0	0	0	36.8	63.2		0	0	0	0	0	42.9	57.1		0	0	0	0	0	62.5	37.5		
Total %	0	0	0	0	0	4.76	4.76	9.52	0	0	0	0	0	4.76	4.76	9.52	0	0	0	0	0	16.7	28.6	45.2	0	0	0	0	0	7.14	9.52	16.7	0	0	0	0	0	11.9	7.14	19	
Exiting Leg Total								4								4								19								7								8	42

Peak Hour Analysis from 11:00 AM to 02:00 PM begins at:

11:00 AM	Pleasant Street from North								Concord Avenue from East								Police Station from Southeast								Pleasant Street from South								Concord Avenue from West								Total
	Right	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Right	Bear Right	Bear Left	Hard Left	U-Turn	CW-NWB	CW-NEB	Total	Hard Right	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Bear Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	
11:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	6
11:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0	0	0	0	0	2	0	2	0	0	0	0	0	2	1	3	12
Total Volume	0	0	0	0	0	2	2	4	0	0	0	0	0	1	1	2	0	0	0	0	0	4	6	10	0	0	0	0	0	2	2	4	0	0	0	0	0	2	1	3	23
% Approach Total	0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	40.0	60.0		0.0	0.0	0.0	0.0	0.0	50.0	50.0		0.0	0.0	0.0	0.0	0.0	66.7	33.3		
PHF	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.333	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.375	0.479
Entering Leg	0	0	0	0	0	2	2	4	0	0	0	0	0	1	1	2	0	0	0	0	0	4	6	10	0	0	0	0	0	2	2	4	0	0	0	0	0	2	1	3	23
Exiting Leg								4								2								10								4								3	23
Total								8								4								20								8								6	46

MOTOR VEHICLE CRASH DATA

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : BELMONT COUNT DATE : 2019

DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

MHD USE ONLY

Source # [ ]

~ INTERSECTION DATA ~

MAJOR STREET : TRAPELO ROAD ST # [ ]

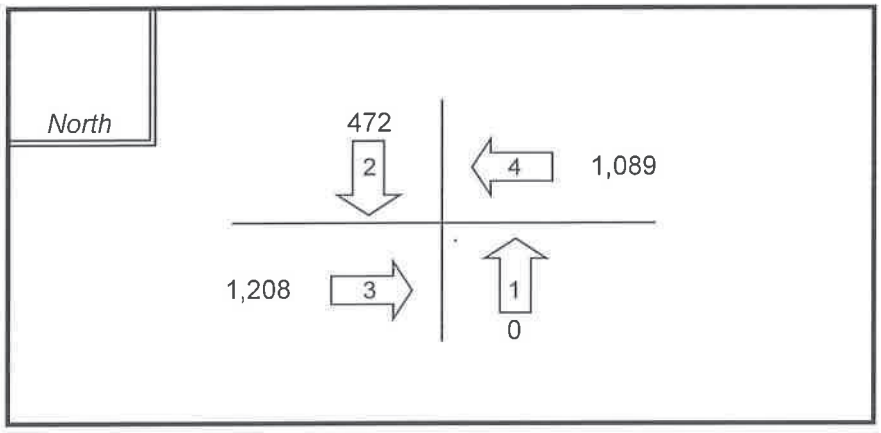
MINOR STREET(S) : PLEASANT STREET ST # [ ]

ST # [ ]

ST # [ ]

ST # [ ]

INTERSECTION DIAGRAM
(Label Approaches)



INTERSECTION REF # [ ]

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	0	472	1,208	1,089		**2,769**

" K " FACTOR : **0.080** APPROACH ADT : **34,613** ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 55 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (**A**) : **11.00**

CRASH RATE CALCULATION : 0.87 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Accident Rate for District 4 signalized intersections = 0.73

Accident Rate for District 4 unsignalized intersections = 0.57

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : BELMONT COUNT DATE : 2019 *MHD USE*

DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X] Source #

~ INTERSECTION DATA ~

MAJOR STREET : CONCORD AVENUE ST #

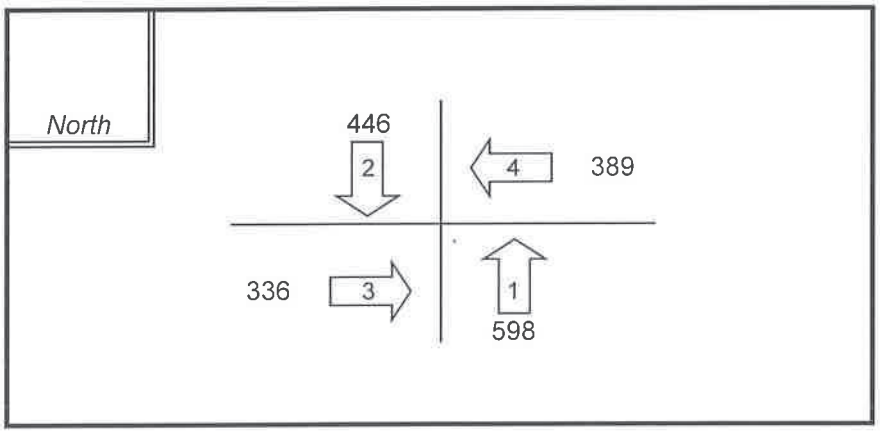
MINOR STREET(S) : PLEASANT STREET ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSE

REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	**Total Entering Vehicles**
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	598	446	336	389		**1,769**

" K " FACTOR : **0.080** APPROACH ADT : **22,113** ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 17 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (**A**) : **3.40**

CRASH RATE CALCULATION : **0.42** RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Accident Rate for District 4 signalized intersections = 0.73

Accident Rate for District 4 unsignalized intersections = 0.57

MassHighway

CRASH RATE WORKSHEET

CITY/TOWN : BELMONT COUNT DATE : 2019 MHD USE

DISTRICT : 4 UNSIGNALIZED : X SIGNALIZED : Source #

~ INTERSECTION DATA ~

MAJOR STREET : PLEASANT STREET ST #

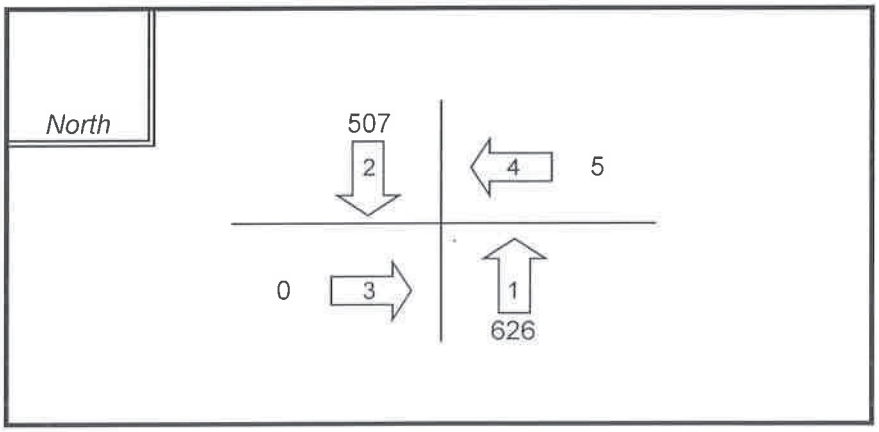
MINOR STREET(S) : SITE DRIVEWAY ST #

ST #

ST #

ST #

INTERSECTION DIAGRAM (Label Approaches)



INTERSE REF #

Peak Hour Volumes

APPROACH :	1	2	3	4	5	Total Entering Vehicles
DIRECTION :	NB	SB	EB	WB		
VOLUMES (AM/PM) :	626	507	0	5		1,138

" K " FACTOR : 0.080 APPROACH ADT : 14,225 ADT = TOTAL VOL/"K" FACT.

TOTAL # OF ACCIDENTS : 1 # OF YEARS : 5 AVERAGE # OF ACCIDENTS (A) : 0.20

CRASH RATE CALCULATION : 0.04 RATE = $\frac{(A * 1{,}000{,}000)}{(ADT * 365)}$

Comments : Accident Rate for District 4 signalized intersections = 0.73

Accident Rate for District 4 unsignalized intersections = 0.57

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	ıber of Veh	Light Conditions	Manner of Collision	Road Surface Condition	Weather Conditions	Roadway	Near Intersection Roadway
3731020	BELMONT	01/05/2014	Property damage only (none injured)	4:13 PM	2	Dusk	Rear-end	Wet	Rain/Cloudy	PLEASANT ST Rte 60 W / TRAPELO RD	
3731027	BELMONT	01/14/2014	Property damage only (none injured)	5:41 PM	2	Dark - lighted roadway	Sideswipe, same direction	Wet	Rain	PLEASANT ST / TRAPELO RD	
3733273	BELMONT	02/05/2014	Property damage only (none injured)	12:32 PM	1	Daylight	Single vehicle crash	Slush	Snow/Blowing sand, snow	PLEASANT STREET / TRAPELO ROAD	
3784412	BELMONT	03/21/2014	Property damage only (none injured)	7:53 AM	2	Daylight	Angle	Dry	Cloudy	PLEASANT ST / TRAPELO RD	
3799403	BELMONT	04/16/2014	Property damage only (none injured)	6:50 PM	2	Dusk	Rear-end	Dry	Clear	PLEASANT ST / TRAPELO RD	
3799409	BELMONT	05/01/2014	Non-fatal injury	5:37 PM	2	Daylight	Head-on	Dry	Clear	PLEASANT ST / TRAPELO RD	
3869503	BELMONT	06/11/2014	Property damage only (none injured)	10:48 AM	2	Daylight	Angle	Dry	Clear/Clear	PLEASANT ST Rte 60 / TRAPELO RD	
3910702	BELMONT	08/13/2014	Property damage only (none injured)	11:38 AM	2	Daylight	Rear-end	Wet	Cloudy/Rain	TRAPELO RD	
3911039	BELMONT	07/08/2014	Property damage only (none injured)	9:53 AM	2	Daylight	Rear-end	Dry	Clear	PLEASANT STREET / TRAPELO ROAD	
3950575	BELMONT	08/21/2014	Property damage only (none injured)	8:12 AM	2	Daylight	Angle	Dry	Clear	PLEASANT ST / TRAPELO RD	
3988936	BELMONT	10/30/2014	Property damage only (none injured)	8:32 AM	2	Daylight	Sideswipe, same direction	Dry	Clear	PLEASANT ST / TRAPELO RD	
3988944	BELMONT	11/13/2014	Property damage only (none injured)	7:50 AM	2	Daylight	Sideswipe, same direction	Dry	Clear/Clear	PLEASANT ST / TRAPELO RD	
3990023	BELMONT	10/10/2014	Not Reported	5:30 PM	2	Daylight	Sideswipe, same direction	Dry	Clear	PLEASANT STREET / TRAPELO ROAD	
4060679	BELMONT	02/09/2015	Not Reported	5:00 PM	3	Dark - lighted roadway	Rear-end	Snow	Snow	PLEASANT ST / TRAPELO RD	
4060683	BELMONT	02/12/2015	Property damage only (none injured)	10:50 AM	2	Daylight	Sideswipe, same direction	Dry	Clear	TRAPELO ROAD	PLEASANT STREET
4060695	BELMONT	02/20/2015	Property damage only (none injured)	4:07 PM	2	Daylight	Rear-end	Dry	Clear	PLEASANT ST / TRAPELO RD	
4060702	BELMONT	02/27/2015	Property damage only (none injured)	10:37 AM	1	Unknown	Rear-end	Unknown	Unknown	PLEASANT ST / TRAPELO RD	
4060747	BELMONT	04/23/2015	Not Reported	7:39 AM	1	Daylight	Sideswipe, same direction	Dry	Clear	PLEASANT ST / TRAPELO RD	
4060783	BELMONT	06/04/2015	Not Reported	7:29 AM	2	Daylight	Angle	Dry	Clear	PLEASANT ST / TRAPELO RD	
4062484	BELMONT	05/29/2015	Non-fatal injury	1:09 PM	2	Daylight	Rear-end	Dry	Clear	PLEASANT STREET / TRAPELO ROAD	
4076411	BELMONT	08/05/2015	Property damage only (none injured)	8:24 AM	3	Daylight	Angle	Dry	Clear	TRAPELO ROAD / TRAPELO ROAD / PLEASANT STREET	
4076418	BELMONT	07/07/2015	Non-fatal injury	2:36 PM	2	Daylight	Rear-end	Dry	Clear	/ / PLEASANT STREET	TRAPELO ROAD
4177563	BELMONT	09/16/2015	Property damage only (none injured)	8:58 AM	2	Daylight	Angle	Dry	Clear	PLEASANT ST / TRAPELO RD	
4177603	BELMONT	11/03/2015	Property damage only (none injured)	9:46 PM	1	Dark - lighted roadway	Single vehicle crash	Dry	Clear	TRAPELO RD / PLEASANT ST	
4178511	BELMONT	09/24/2015	Property damage only (none injured)	12:37 PM	3	Daylight	Sideswipe, opposite direction	Dry	Clear	PLEASANT STREET / TRAPELO ROAD	
4178931	BELMONT	09/17/2015	Property damage only (none injured)	12:34 PM	2	Daylight	Angle	Dry	Clear	PLEASANT STREET / TRAPELO ROAD	
4190363	BELMONT	03/11/2016	Property damage only (none injured)	3:17 PM	2	Daylight	Angle	Dry	Clear/Clear	PLEASANT ST / TRAPELO RD	
4190365	BELMONT	03/15/2016	Non-fatal injury	4:56 PM	2	Daylight	Head-on	Wet	Rain/Cloudy	PLEASANT ST / TRAPELO RD	
4190407	BELMONT	04/27/2016	Non-fatal injury	3:11 PM	3	Daylight	Angle	Dry	Clear	PLEASANT ST / TRAPELO RD	
4190408	BELMONT	04/28/2016	Property damage only (none injured)	5:31 PM	2	Daylight	Rear-end	Dry	Cloudy	PLEASANT ST / TRAPELO RD	
4190409	BELMONT	04/30/2016	Non-fatal injury	4:25 PM	2	Daylight	Head-on	Dry	Clear	PLEASANT ST / TRAPELO RD	
4302300	BELMONT	09/29/2016	Property damage only (none injured)	5:35 PM	2	Daylight	Angle	Dry	Clear	PLEASANT ST / TRAPELO RD	
4302314	BELMONT	10/24/2016	Property damage only (none injured)	9:00 AM	2	Daylight	Rear-end	Dry	Clear	PLEASANT ST / TRAPELO RD	
4302347	BELMONT	12/16/2016	Property damage only (none injured)	7:44 AM	3	Daylight	Rear-end	Dry	Clear	PLEASANT ST / TRAPELO RD	
4380481	BELMONT	05/26/2017	Non-fatal injury	12:04 PM	2	Daylight	Rear-end	Dry	Clear	PLEASANT ST / TRAPELO RD	
4380495	BELMONT	06/05/2017	Property damage only (none injured)	7:52 AM	2	Daylight	Rear-end	Wet	Rain	PLEASANT ST / TRAPELO RD	
4380622	BELMONT	04/14/2017	Property damage only (none injured)	1:27 PM	2	Daylight	Angle	Dry	Clear/Clear	TRAPELO RD / PLEASANT ST	
4380633	BELMONT	05/19/2017	Property damage only (none injured)	8:01 AM	2	Daylight	Angle	Dry	Clear/Clear	PLEASANT ST / TRAPELO RD	
4381828	BELMONT	06/21/2017	Property damage only (none injured)	8:57 AM	2	Daylight	Rear-end	Dry	Clear/Clear	TRAPELO RD	
4399849	BELMONT	07/28/2017	Property damage only (none injured)	12:10 PM	2	Daylight	Angle	Dry	Clear/Clear	PLEASANT ST Rte 60 N / TRAPELO RD	
4415759	BELMONT	08/31/2017	Property damage only (none injured)	4:03 PM	2	Daylight	Sideswipe, same direction	Dry	Clear	PLEASANT ST / TRAPELO RD	
4493775	BELMONT	01/31/2018	Property damage only (none injured)	10:07 AM	1	Daylight	Single vehicle crash	Dry	Clear/Clear	PLEASANT ST / TRAPELO RD	
4512520	BELMONT	02/26/2018	Property damage only (none injured)	5:53 PM	2	Dark - lighted roadway	Rear-end	Dry	Clear/Clear	TRAPELO RD	PLEASANT ST
4512521	BELMONT	02/28/2018	Non-fatal injury	8:55 PM	3	Dark - lighted roadway	Rear-end	Dry	Clear/Clear	PLEASANT ST / TRAPELO RD	
4516426	BELMONT	03/12/2018	Property damage only (none injured)	11:51 AM	2	Daylight	Angle	Wet	Cloudy/Cloudy	PLEASANT ST / TRAPELO RD	
4516437	BELMONT	03/17/2018	Non-fatal injury	11:24 AM	4	Daylight	Rear-end	Dry	Clear	PLEASANT ST / TRAPELO RD	
4533143	BELMONT	05/01/2018	Property damage only (none injured)	7:24 AM	2	Daylight	Rear-end	Dry	Clear	PLEASANT STREET / TRAPELO ROAD	
4554581	BELMONT	06/09/2018	Property damage only (none injured)	4:47 PM	2	Daylight	Rear-end	Dry	Clear/Other	PLEASANT ST / TRAPELO RD	
4561048	BELMONT	06/30/2018	Non-fatal injury	5:02 PM	2	Daylight	Sideswipe, same direction	Dry	Clear	TRAPELO RD	PLEASANT ST
4593556	BELMONT	08/15/2018	Non-fatal injury	3:44 PM	2	Daylight	Rear-end	Dry	Clear/Unknown	PLEASANT ST / TRAPELO RD	
4601347	BELMONT	09/19/2018	Property damage only (none injured)	8:55 AM	2	Daylight	Rear-end	Dry	Cloudy/Sleet, hail	TRAPELO RD	
4601450	BELMONT	09/24/2018	Property damage only (none injured)	7:37 PM	2	Dark - lighted roadway	Angle	Dry	Clear/Clear	PLEASANT ST. / TRAPELO RD.	
4613931	BELMONT	10/11/2018	Non-fatal injury	12:07 PM	3	Daylight	Rear-end	Dry	Clear/Clear	TRAPELO RD	PLEASANT ST
4613937	BELMONT	10/17/2018	Property damage only (none injured)	10:15 PM	2	Dark - lighted roadway	Angle	Wet	Rain/Rain	PLEASANT ST / TRAPELO RD	
4645958	BELMONT	12/31/2018	Property damage only (none injured)	2:49 PM	2	Daylight	Angle	Dry	Cloudy	PLEASANT STREET	

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	ıber of Veh	Light Conditions	Manner of Collision	Road Surface Condition	Weather Conditions	Roadway
3731137	BELMONT	01/28/2014	Property damage only (none injured)	9:55 AM	2	Daylight	Angle	Not reported	Clear	CONCORD AV
3733235	BELMONT	02/07/2014	Property damage only (none injured)	1:10 PM	2	Daylight	Sideswipe, same direction	Dry	Clear	CONCORD AV / PLEASANT ST Rte 60
3869589	BELMONT	06/03/2014	Non-fatal injury	11:34 AM	2	Daylight	Sideswipe, same direction	Dry	Clear	CONCORD AV / PLEASANT ST
3950591	BELMONT	09/04/2014	Property damage only (none injured)	1:12 AM	2	Dark - lighted roadway	Angle	Dry	Clear	CONCORD AV / PLEASANT ST
3988972	BELMONT	12/17/2014	Non-fatal injury	6:46 PM	2	Dark - lighted roadway	Rear-end	Dry	Clear	CONCORD AV / PLEASANT ST
4060694	BELMONT	02/20/2015	Non-fatal injury	1:50 PM	2	Daylight	Angle	Dry	Clear	CONCORD AV / PLEASANT ST
4060698	BELMONT	02/24/2015	Property damage only (none injured)	2:23 PM	1	Daylight	Single vehicle crash	Dry	Clear	CONCORD AV
4060756	BELMONT	01/09/2015	Property damage only (none injured)	9:17 AM	2	Daylight	Rear-end	Snow	Snow	CONCORD AV / PLEASANT ST
4060789	BELMONT	06/08/2015	Property damage only (none injured)	2:37 PM	2	Daylight	Rear-end	Dry	Clear	CONCORD AVENUE
4190423	BELMONT	01/22/2016	Property damage only (none injured)	5:49 PM	2	Dark - lighted roadway	Rear-end	Sand, mud, dirt, oil, gravel	Cloudy	CONCORD AV / PLEASANT ST
4302297	BELMONT	09/26/2016	Not Reported	1:11 PM	2	Daylight	Rear-end	Dry	Clear	CONCORD AV / PLEASANT ST
4380485	BELMONT	01/07/2017	Property damage only (none injured)	2:47 PM	3	Daylight	Angle	Ice	Snow	CONCORD AV / PLEASANT ST
4380638	BELMONT	05/30/2017	Property damage only (none injured)	3:59 PM	2	Daylight	Sideswipe, same direction	Dry	Clear	CONCORD AV
4593540	BELMONT	09/05/2018	Property damage only (none injured)	4:17 PM	2	Daylight	Rear-end	Dry	Clear	PLEASANT ST. / CONCORD AVE.
4601451	BELMONT	09/25/2018	Non-fatal injury	3:16 PM	2	Daylight	Rear-to-rear	Wet	Rain/Cloudy	CONCORD AV
4607931	BELMONT	09/29/2018	Non-fatal injury	10:15 PM	2	Dark - lighted roadway	Rear-end	Dry	Clear	PLEASANT ST / CONCORD AV
4645940	BELMONT	12/04/2018	Property damage only (none injured)	2:35 PM	2	Daylight	Angle	Dry	Clear/Clear	CONCORD AV / PLEASANT ST

Crash Number	City Town Name	Crash Date	Crash Severity	Crash Time	Number of Vehicles	;ht Conditic	Manner of Collision	Road Surface Condition	Weather Conditions	Roadway
3784545	BELMONT	03/16/2014	Property damage only (none injured)	3:36 PM	1	Daylight	Head-on	Dry	Clear	PLEASANT ST

TRIP GENERATION CALCULATIONS

Institute of Transportation Engineers (ITE)
Trip Generation, 10 th Edition
Land Use Code (LUC) 882 - Marijuana Dispensary

Average Vehicle Trips Ends vs: 1,000 sf of GFA
Independent Variable (X): 2.32

Average Weekday Daily

T = 252.7 * (X)
T = 252.7 * 2.32
T = 586.26
T = 588.00
T = 588 vehicle trips
with 50% (294 vpd) entering and 50% (294 vpd) exiting.

Weekday Morning Peak Hour Of Adjacent Street Traffic

T = 10.44 * (X)
T = 10.44 * 2.32
T = 24.22
T = 24 vehicle trips
with 56% (13 vph) entering and 44% (11 vph) exiting.

Weekday Evening Peak Hour Of Adjacent Street Traffic

T = 21.83 * (X)
T = 21.83 * 2.32
T = 50.65
T = 51 vehicle trips
with 50% (26 vph) entering and 50% (25 vph) exiting.

Saturday Daily

T = 259.31 * (X)
T = 259.31 * 2.32
T = 601.60
T = 602 vehicle trips
with 50% (301 vpd) entering and 50% (301 vpd) exiting.

Saturday Midday Peak Hour Of Generator

T = 36.43 * (X)
T = 36.43 * 2.32
T = 84.52
T = 85 vehicle trips
with 47% (40 vph) entering and 53% (45 vph) exiting.

Institute of Transportation Engineers (ITE)
Trip Generation, 10 th Edition
Land Use Code (LUC) 710 - General Office Building

Average Vehicle Trips Ends vs: 1,000 Square Feet Gross Floor Area
Independent Variable (X): 1.830

Average Weekday Daily

T = 9.74 * (X)
T = 9.74 * 1.830
T = 17.82
T = 18 vehicle trips
with 50% (9 vpd) entering and 50% (9 vpd) exiting.

Weekday Morning Peak Hour

T = 1.16 * (X)
T = 1.16 * 1.830
T = 2.12
T = 2 vehicle trips
with 86% (2 vph) entering and 14% (0 vph) exiting.

Weekday Evening Peak Hour

T = 1.15 * (X)
T = 1.15 * 1.83
T = 2.10
T = 2 vehicle trips
with 16% (0 vph) entering and 84% (2 vph) exiting.

Saturday Daily

T = 2.21 * (X)
T = 2.21 * 1.830
T = 4.04
T = 4 vehicle trips
with 50% (2 vpd) entering and 50% (2 vpd) exiting.

Saturday Midday Peak Hour Of Generator

T = 0.53 * (X)
T = 0.53 * 1.830
T = 0.97
T = 1 vehicle trips
with 54% (1 vpd) entering and 46% (0 vpd) exiting.

Trip Generation Summary - Proposed Marijuana Dispensary - Belmont, MA

	Dispensary	Office	Total
Size	2320	1830	4150
Weekday Evening Peak Hour			
Entering	26	0	26
Exiting	25	2	27
Total	51	2	53
Saturday Midday Peak Hour			
Entering	40	1	41
Exiting	45	0	45
Total	85	1	86
Weekday Daily	588	18	606
Saturday Daily	602	4	606

CAPACITY ANALYSIS RESULTS

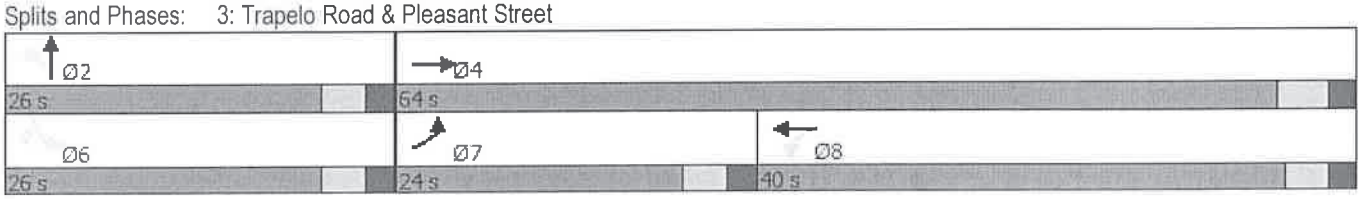
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	293	915	0	0	861	228	0	0	0	206	0	266
Future Volume (vph)	293	915	0	0	861	228	0	0	0	206	0	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.969							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3429	0	0	1773	0	1906	0	1538
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3429	0	0	1773	0	1519	0	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					44							280
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.97	0.97	0.97	0.98	0.98	0.98	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	0%	0%	2%	2%	0%	0%	0%	1%	0%	5%
Adj. Flow (vph)	302	943	0	0	879	233	0	0	0	217	0	280
Shared Lane Traffic (%)												
Lane Group Flow (vph)	302	943	0	0	1112	0	0	0	0	217	0	280
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	18.4	55.3			33.4					22.1		22.1
Actuated g/C Ratio	0.21	0.64			0.39					0.26		0.26
v/c Ratio	0.81	0.79			0.82					0.55		0.46
Control Delay	50.4	16.8			28.6					35.5		6.5
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	50.4	16.8			28.6					35.5		6.5
LOS	D	B			C					D		A
Approach Delay		25.0			28.6						19.1	
Approach LOS		C			C						B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 86
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 101.1% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: Trapelo Road & Pleasant Street



Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	623	3	0	507
Future Vol, veh/h	3	2	623	3	0	507
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	677	3	0	551

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1230	679	0	0	680	0
Stage 1	679	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	196	452	-	-	912	-
Stage 1	504	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	452	-	-	912	-
Mov Cap-2 Maneuver	196	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0
HCM LOS	C		

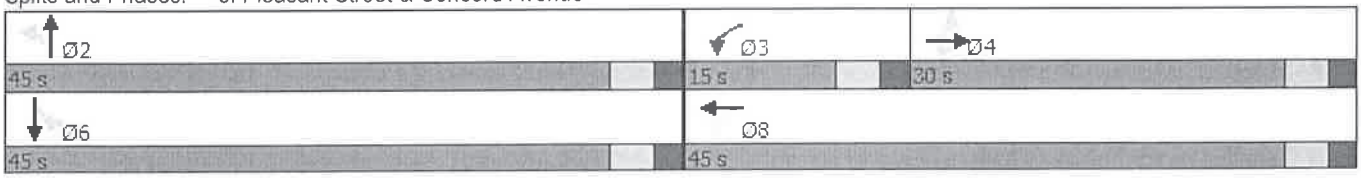
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	253	912	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	-	-	19.5	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	292	29	64	396	29	71	423	104	18	407	21
Future Volume (vph)	15	292	29	64	396	29	71	423	104	18	407	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.976			0.994	
Flt Protected		0.998			0.994			0.994			0.998	
Satd. Flow (prot)	0	2142	1830	0	2123	0	0	1815	0	0	1877	0
Flt Permitted		0.967			0.832			0.899			0.969	
Satd. Flow (perm)	0	2075	1830	0	1777	0	0	1642	0	0	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		5			16			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	1%	2%	0%	6%	0%	4%
Adj. Flow (vph)	19	370	37	67	417	31	76	450	111	19	438	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	389	37	0	515	0	0	637	0	0	480	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		34.8	33.8		34.8			41.3			41.3	
Actuated g/C Ratio		0.41	0.40		0.41			0.49			0.49	
v/c Ratio		0.45	0.05		0.70			0.78			0.54	
Control Delay		19.3	0.2		25.5			27.6			18.9	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		19.3	0.2		25.5			27.6			18.9	
LOS		B	A		C			C			B	
Approach Delay		17.6			25.5			27.6			18.9	
Approach LOS		B			C			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 84.2			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 23.0		Intersection LOS: C	
Intersection Capacity Utilization 110.4%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 8: Pleasant Street & Concord Avenue



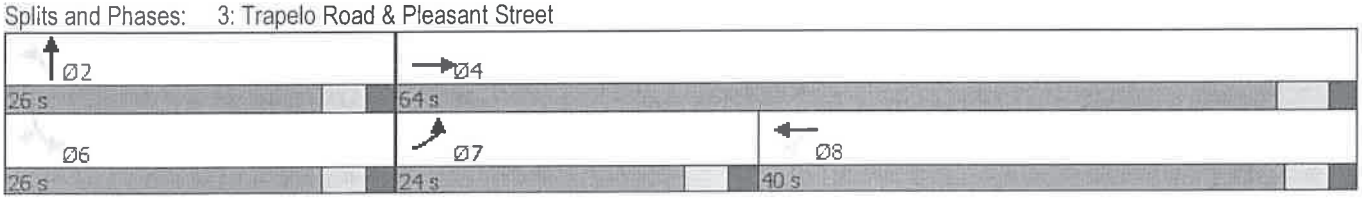
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	981	0	0	923	244	0	0	0	221	0	285
Future Volume (vph)	314	981	0	0	923	244	0	0	0	221	0	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.969							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3429	0	0	1773	0	1906	0	1538
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3429	0	0	1773	0	1519	0	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					44							300
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.97	0.97	0.97	0.98	0.98	0.98	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	0%	0%	2%	2%	0%	0%	0%	1%	0%	5%
Adj. Flow (vph)	324	1011	0	0	942	249	0	0	0	233	0	300
Shared Lane Traffic (%)												
Lane Group Flow (vph)	324	1011	0	0	1191	0	0	0	0	233	0	300
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	19.1	57.2			34.7					22.0		22.0
Actuated g/C Ratio	0.22	0.65			0.40					0.25		0.25
v/c Ratio	0.85	0.83			0.86					0.61		0.49
Control Delay	55.5	19.3			31.5					37.9		6.6
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	55.5	19.3			31.5					37.9		6.6
LOS	E	B			C					D		A
Approach Delay		28.1			31.5						20.3	
Approach LOS		C			C						C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 87.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 28.0 — Intersection LOS: C
Intersection Capacity Utilization 107.6% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: Trapelo Road & Pleasant Street



Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	2	668	3	0	544
Future Vol, veh/h	3	2	668	3	0	544
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	726	3	0	591

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1319	728	0	0	729	0
Stage 1	728	-	-	-	-	-
Stage 2	591	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	173	423	-	-	875	-
Stage 1	478	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	173	423	-	-	875	-
Mov Cap-2 Maneuver	173	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	227	875	-
HCM Lane V/C Ratio	-	-	0.024	-	-
HCM Control Delay (s)	-	-	21.2	0	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

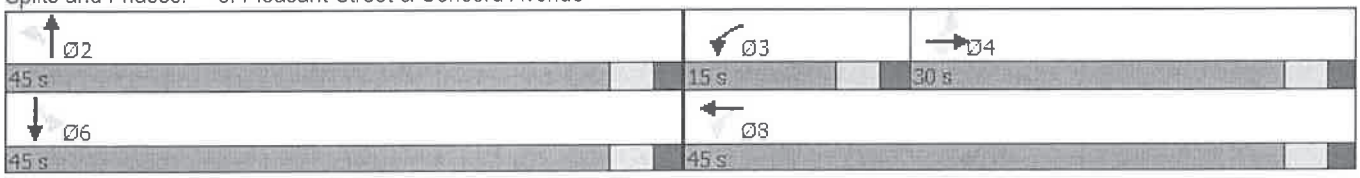
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	313	31	69	425	31	76	454	112	19	436	23
Future Volume (vph)	16	313	31	69	425	31	76	454	112	19	436	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.976			0.993	
Flt Protected		0.998			0.993			0.994			0.998	
Satd. Flow (prot)	0	2142	1830	0	2121	0	0	1815	0	0	1875	0
Flt Permitted		0.965			0.811			0.874			0.966	
Satd. Flow (perm)	0	2071	1830	0	1732	0	0	1596	0	0	1815	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		5			16			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	1%	2%	0%	6%	0%	4%
Adj. Flow (vph)	20	396	39	73	447	33	81	483	119	20	469	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	416	39	0	553	0	0	683	0	0	514	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		39.0	38.0		39.0			41.1			41.1	
Actuated g/C Ratio		0.44	0.43		0.44			0.47			0.47	
v/c Ratio		0.45	0.05		0.72			0.91			0.61	
Control Delay		18.9	0.5		26.1			40.4			21.7	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		18.9	0.5		26.1			40.4			21.7	
LOS		B	A		C			D			C	
Approach Delay		17.3			26.1			40.4			21.7	
Approach LOS		B			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 88.1
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 27.7 — Intersection LOS: C
Intersection Capacity Utilization 117.9% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Pleasant Street & Concord Avenue



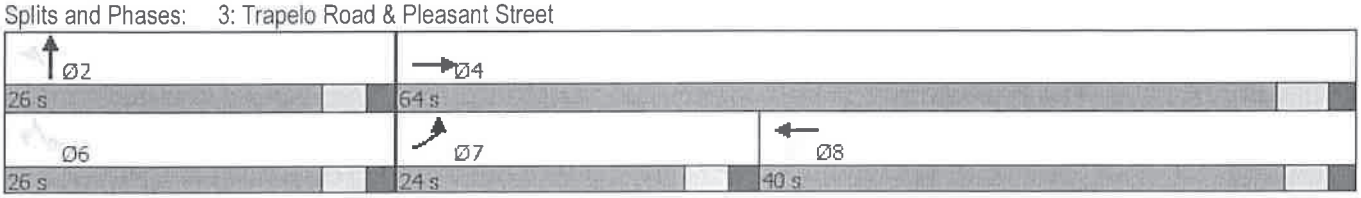
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	323	961	0	0	923	252	0	0	0	229	0	294
Future Volume (vph)	323	961	0	0	923	252	0	0	0	229	0	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.968							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3426	0	0	1773	0	1906	0	1538
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3426	0	0	1773	0	1519	0	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					46							309
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.97	0.97	0.97	0.98	0.98	0.98	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	0%	0%	2%	2%	0%	0%	0%	1%	0%	5%
Adj. Flow (vph)	333	991	0	0	942	257	0	0	0	241	0	309
Shared Lane Traffic (%)												
Lane Group Flow (vph)	333	991	0	0	1199	0	0	0	0	241	0	309
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	19.3	57.5			34.8					22.0		22.0
Actuated g/C Ratio	0.22	0.65			0.40					0.25		0.25
v/c Ratio	0.87	0.81			0.87					0.63		0.50
Control Delay	57.8	18.2			31.9					38.8		6.6
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	57.8	18.2			31.9					38.8		6.6
LOS	E	B			C					D		A
Approach Delay		28.1			31.9						20.7	
Approach LOS		C			C						C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 88.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 28.3 — Intersection LOS: C
Intersection Capacity Utilization 107.2% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: Trapelo Road & Pleasant Street



Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	13	668	20	9	544
Future Vol, veh/h	20	13	668	20	9	544
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	14	726	22	10	591

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1348	737	0	0	748	0
Stage 1	737	-	-	-	-	-
Stage 2	611	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	166	418	-	-	861	-
Stage 1	473	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	163	418	-	-	861	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	533	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.1	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	215	861	-
HCM Lane V/C Ratio	-	-	0.167	0.011	-
HCM Control Delay (s)	-	-	25.1	9.2	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

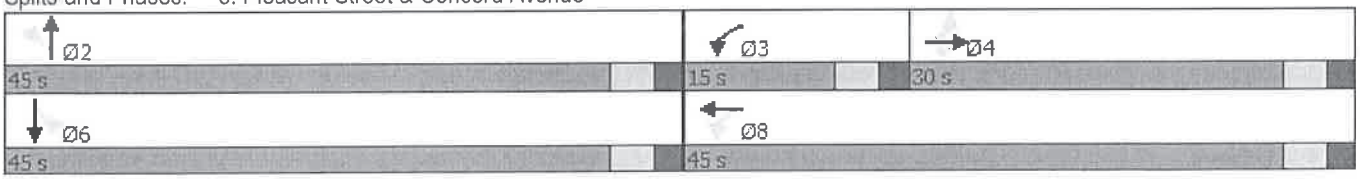
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	313	33	72	425	31	79	458	115	19	440	23
Future Volume (vph)	16	313	33	72	425	31	79	458	115	19	440	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.976			0.993	
Flt Protected		0.998			0.993			0.994			0.998	
Satd. Flow (prot)	0	2142	1830	0	2121	0	0	1816	0	0	1875	0
Flt Permitted		0.965			0.802			0.865			0.966	
Satd. Flow (perm)	0	2071	1830	0	1713	0	0	1580	0	0	1815	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		5			16			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	1%	2%	0%	6%	0%	4%
Adj. Flow (vph)	20	396	42	76	447	33	84	487	122	20	473	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	416	42	0	556	0	0	693	0	0	518	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		39.3	38.3		39.3			41.0			41.0	
Actuated g/C Ratio		0.44	0.43		0.44			0.46			0.46	
v/c Ratio		0.45	0.05		0.73			0.93			0.61	
Control Delay		18.8	0.7		26.5			44.6			22.0	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		18.8	0.7		26.5			44.6			22.0	
LOS		B	A		C			D			C	
Approach Delay		17.2			26.5			44.6			22.0	
Approach LOS		B			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 88.4
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 29.2 Intersection LOS: C
Intersection Capacity Utilization 119.9% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Pleasant Street & Concord Avenue



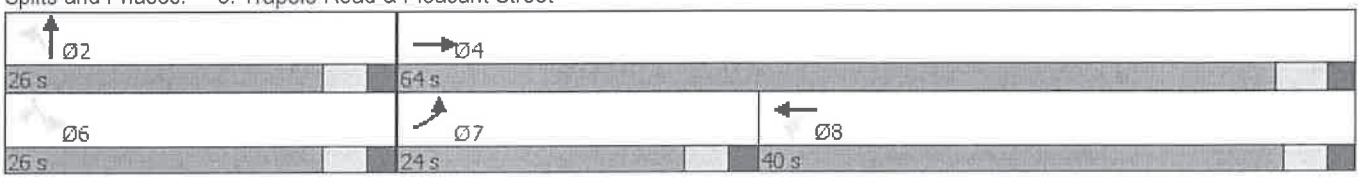
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	659	1	0	637	125	0	0	0	156	0	236
Future Volume (vph)	242	659	1	0	637	125	0	0	0	156	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.975							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3491	0	0	1773	0	1851	0	1583
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3491	0	0	1773	0	1475	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					30							251
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	0%	0%	1%	0%	0%	0%	0%	4%	0%	2%
Adj. Flow (vph)	257	701	1	0	671	132	0	0	0	166	0	251
Shared Lane Traffic (%)												
Lane Group Flow (vph)	257	702	0	0	803	0	0	0	0	166	0	251
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	16.3	45.2			25.3					22.4		22.4
Actuated g/C Ratio	0.21	0.59			0.33					0.29		0.29
v/c Ratio	0.69	0.64			0.68					0.38		0.39
Control Delay	38.9	12.7			24.3					27.7		5.8
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	38.9	12.7			24.3					27.7		5.8
LOS	D	B			C					C		A
Approach Delay		19.7			24.3						14.5	
Approach LOS		B			C						B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 76.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 20.4 — Intersection LOS: C
Intersection Capacity Utilization 75.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Trapelo Road & Pleasant Street



Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	432	2	5	424
Future Vol, veh/h	0	1	432	2	5	424
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	470	2	5	461

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	942	471	0	0	472	0
Stage 1	471	-	-	-	-	-
Stage 2	471	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	292	593	-	-	1090	-
Stage 1	628	-	-	-	-	-
Stage 2	628	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	290	593	-	-	1090	-
Mov Cap-2 Maneuver	290	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	624	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	593	1090	-
HCM Lane V/C Ratio	-	-	0.002	0.005	-
HCM Control Delay (s)	-	-	11.1	8.3	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

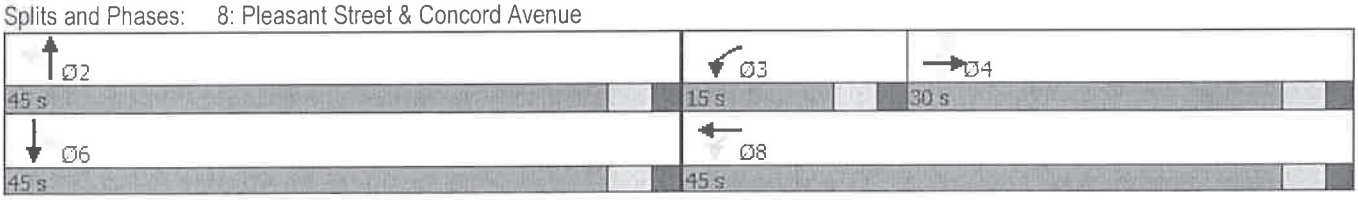
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	112	9	118	159	21	15	306	137	23	312	14
Future Volume (vph)	25	112	9	118	159	21	15	306	137	23	312	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990			0.960			0.995	
Flt Protected		0.991			0.981			0.998			0.997	
Satd. Flow (prot)	0	2070	1830	0	2064	0	0	1774	0	0	1836	0
Flt Permitted		0.915			0.774			0.985			0.960	
Satd. Flow (perm)	0	1911	1830	0	1628	0	0	1751	0	0	1768	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		6			31			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.98	0.98	0.98	0.89	0.89	0.89
Heavy Vehicles (%)	8%	2%	0%	2%	1%	0%	0%	3%	2%	0%	3%	0%
Adj. Flow (vph)	30	135	11	123	166	22	15	312	140	26	351	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	11	0	311	0	0	467	0	0	393	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		19.7	18.7		19.7			41.2			41.2	
Actuated g/C Ratio		0.29	0.27		0.29			0.60			0.60	
v/c Ratio		0.30	0.02		0.66			0.44			0.37	
Control Delay		20.2	0.1		28.3			9.8			9.5	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		20.2	0.1		28.3			9.8			9.5	
LOS		C	A		C			A			A	
Approach Delay		19.0			28.3			9.8			9.5	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 69
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 15.2 Intersection LOS: B
Intersection Capacity Utilization 58.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Pleasant Street & Concord Avenue



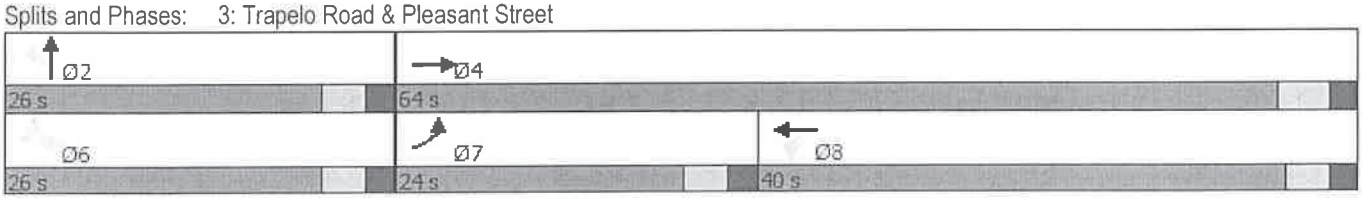
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	259	707	1	0	683	134	0	0	0	167	0	253
Future Volume (vph)	259	707	1	0	683	134	0	0	0	167	0	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.975							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3491	0	0	1773	0	1851	0	1583
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3491	0	0	1773	0	1475	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					30							269
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	0%	0%	1%	0%	0%	0%	0%	4%	0%	2%
Adj. Flow (vph)	276	752	1	0	719	141	0	0	0	178	0	269
Shared Lane Traffic (%)												
Lane Group Flow (vph)	276	753	0	0	860	0	0	0	0	178	0	269
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	17.1	47.5			26.9					22.3		22.3
Actuated g/C Ratio	0.22	0.61			0.34					0.28		0.28
v/c Ratio	0.72	0.67			0.71					0.42		0.42
Control Delay	41.7	13.2			25.1					29.5		5.9
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	41.7	13.2			25.1					29.5		5.9
LOS	D	B			C					C		A
Approach Delay		20.9			25.1						15.3	
Approach LOS		C			C						B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 78.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 21.4 Intersection LOS: C
Intersection Capacity Utilization 80.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Trapelo Road & Pleasant Street



Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	463	2	5	455
Future Vol, veh/h	0	1	463	2	5	455
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	503	2	5	495

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1009	504	0	0	505	0
Stage 1	504	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	266	568	-	-	1060	-
Stage 1	607	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	264	568	-	-	1060	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	607	-	-	-	-	-
Stage 2	602	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	568	1060	-
HCM Lane V/C Ratio	-	-	0.002	0.005	-
HCM Control Delay (s)	-	-	11.4	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

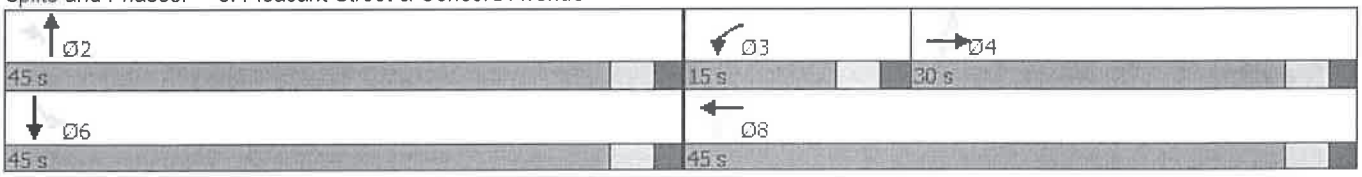
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	120	10	127	170	23	16	328	147	25	335	15
Future Volume (vph)	27	120	10	127	170	23	16	328	147	25	335	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990			0.960			0.995	
Flt Protected		0.991			0.981			0.998			0.997	
Satd. Flow (prot)	0	2070	1830	0	2064	0	0	1774	0	0	1836	0
Flt Permitted		0.910			0.759			0.984			0.956	
Satd. Flow (perm)	0	1900	1830	0	1597	0	0	1749	0	0	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		6			31			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.98	0.98	0.98	0.89	0.89	0.89
Heavy Vehicles (%)	8%	2%	0%	2%	1%	0%	0%	3%	2%	0%	3%	0%
Adj. Flow (vph)	33	145	12	132	177	24	16	335	150	28	376	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	12	0	333	0	0	501	0	0	421	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		22.2	21.2		22.2			41.4			41.4	
Actuated g/C Ratio		0.31	0.30		0.31			0.58			0.58	
v/c Ratio		0.30	0.02		0.67			0.49			0.41	
Control Delay		19.5	0.1		27.7			11.8			11.3	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		19.5	0.1		27.7			11.8			11.3	
LOS		B	A		C			B			B	
Approach Delay		18.3			27.7			11.8			11.3	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 71.6
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 16.2 Intersection LOS: B
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Pleasant Street & Concord Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	707	1	0	683	146	0	0	0	179	0	269
Future Volume (vph)	273	707	1	0	683	146	0	0	0	179	0	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.974							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3487	0	0	1773	0	1851	0	1583
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3487	0	0	1773	0	1475	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					34							286
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	0%	0%	1%	0%	0%	0%	0%	4%	0%	2%
Adj. Flow (vph)	290	752	1	0	719	154	0	0	0	190	0	286
Shared Lane Traffic (%)												
Lane Group Flow (vph)	290	753	0	0	873	0	0	0	0	190	0	286
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	17.7	48.9			27.7					22.3		22.3
Actuated g/C Ratio	0.22	0.61			0.35					0.28		0.28
v/c Ratio	0.75	0.66			0.71					0.46		0.44
Control Delay	43.3	13.0			25.2					30.7		6.0
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	43.3	13.0			25.2					30.7		6.0
LOS	D	B			C					C		A
Approach Delay		21.4			25.2						15.9	
Approach LOS		C			C						B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 79.8
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 21.7 — Intersection LOS: C
Intersection Capacity Utilization 81.1% — **ICU Level of Service D**
Analysis Period (min) 15

Splits and Phases: 3: Trapelo Road & Pleasant Street

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	18	463	28	19	455
Future Vol, veh/h	28	18	463	28	19	455
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	20	503	30	21	495

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1055	518	0	0	533	0
Stage 1	518	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	250	558	-	-	1035	-
Stage 1	598	-	-	-	-	-
Stage 2	586	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	243	558	-	-	1035	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	570	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.7	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	312	1035	-
HCM Lane V/C Ratio	-	-	0.16	0.02	-
HCM Control Delay (s)	-	-	18.7	8.5	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

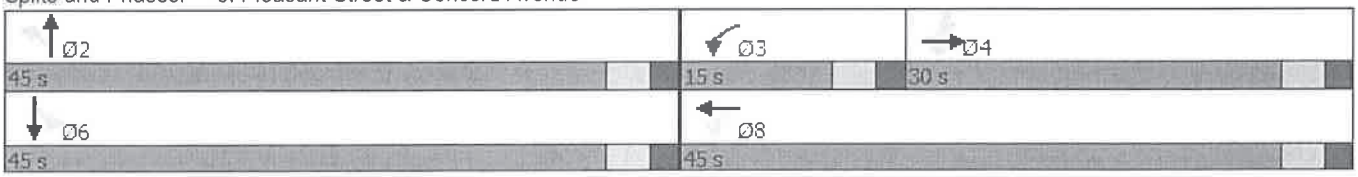
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	120	14	131	170	23	21	335	152	25	341	15
Future Volume (vph)	27	120	14	131	170	23	21	335	152	25	341	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990			0.960			0.995	
Flt Protected		0.991			0.980			0.998			0.997	
Satd. Flow (prot)	0	2070	1830	0	2062	0	0	1775	0	0	1836	0
Flt Permitted		0.909			0.754			0.978			0.955	
Satd. Flow (perm)	0	1898	1830	0	1586	0	0	1739	0	0	1758	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		6			31			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.98	0.98	0.98	0.89	0.89	0.89
Heavy Vehicles (%)	8%	2%	0%	2%	1%	0%	0%	3%	2%	0%	3%	0%
Adj. Flow (vph)	33	145	17	136	177	24	21	342	155	28	383	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	17	0	337	0	0	518	0	0	428	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		22.7	21.7		22.7			41.4			41.4	
Actuated g/C Ratio		0.31	0.30		0.31			0.57			0.57	
v/c Ratio		0.30	0.03		0.67			0.51			0.42	
Control Delay		19.3	0.1		27.7			12.4			11.8	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		19.3	0.1		27.7			12.4			11.8	
LOS		B	A		C			B			B	
Approach Delay		17.6			27.7			12.4			11.8	
Approach LOS		B			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 72.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 16.4 Intersection LOS: B
Intersection Capacity Utilization 64.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Pleasant Street & Concord Avenue



SENSITIVITY ANALYSIS DATA

Institute of Transportation Engineers (ITE)
Trip Generation, 10 th Edition
Land Use Code (LUC) 220 - Multifamily Housing (Low-Rise)

Average Vehicle Trips Ends vs: Dwelling Units
Independent Variable (X): 110

AVERAGE WEEKDAY DAILY

T = 7.32 * (X)
T = 7.32 * 110
T = 805.20
T = 806.00
T = 806 vehicle trips
with 50% (403 vpd) entering and 50% (403 vpd) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.46 * (X)
T = 0.46 * 110
T = 50.60
T = 51 vehicle trips
with 23% (12 vph) entering and 77% (39 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.56 * (X)
T = 0.56 * 110
T = 61.60
T = 62.00
T = 62 vehicle trips
with 63% (39 vph) entering and 37% (23 vph) exiting.

AVERAGE SATURDAY

T = 8.14 * (X)
T = 8.14 * 110
T = 895.40
T = 896.00
T = 896 vehicle trips
with 50% (448 vpd) entering and 50% (448 vpd) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

T = 0.70 * (X)
T = 0.70* 110
T = 77.00
T = 77 vehicle trips
with 54% (42 vph) entering and 46% (35 vph) exiting.

Institute of Transportation Engineers (ITE)
Trip Generation, 10 th Edition
Land Use Code (LUC) 252 - Senior Adult Housing - Attached

Average Vehicle Trips Ends vs: Dwelling Units
Independent Variable (X): 40

AVERAGE WEEKDAY DAILY

T = 3.70 * (X)
T = 3.70 * 40
T = 148.00
T = 148 vehicle trips
with 50% (74 vph) entering and 50% (74 vph) exiting.

WEEKDAY MORNING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.20 * (X)
T = 0.20 * 40
T = 8.00
T = 8 vehicle trips
with 35% (3 vph) entering and 65% (5 vph) exiting.

WEEKDAY EVENING PEAK HOUR OF ADJACENT STREET TRAFFIC

T = 0.26 * (X)
T = 0.26 * 40
T = 10.40
T = 10 vehicle trips
with 55% (6 vph) entering and 45% (4 vph) exiting.

SATURDAY DAILY

T = 3.23 * (X)
T = 3.23 * 40
T = 129.20
T = 130 vehicle trips
with 50% (65 vph) entering and 50% (65 vph) exiting.

SATURDAY MIDDAY PEAK HOUR OF GENERATOR

T = 0.33 * (X)
T = 0.33 * 40
T = 13.20
T = 13 vehicle trips
with 62% (8 vph) entering and 38% (5 vph) exiting

Trip Generation Summary - Potential McLean Hospital Redevelopment Zone 3

Land Use	Apartment	Senior Housing	**Total**
Units	110	40	**150**
Weekday Morning Peak Hour			
Entering	12	3	**15**
Exiting	39	5	**44**
Total	51	8	**59**
Weekday Evening Peak Hour			
Entering	39	6	**45**
Exiting	23	4	**27**
Total	62	10	**72**
Satuday Midday Peak Hour			
Entering	42	8	**50**
Exiting	35	5	**40**
Total	77	13	**90**

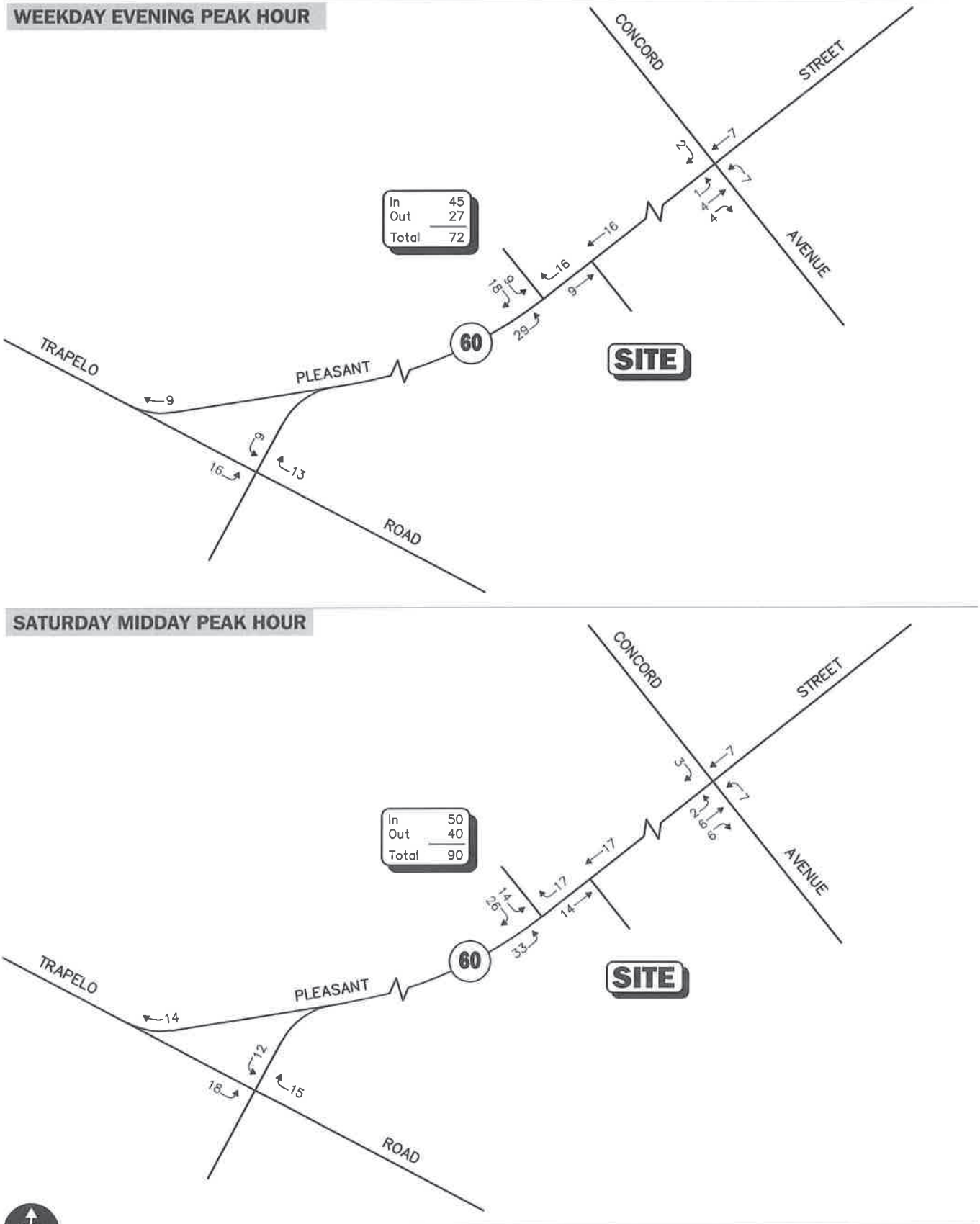
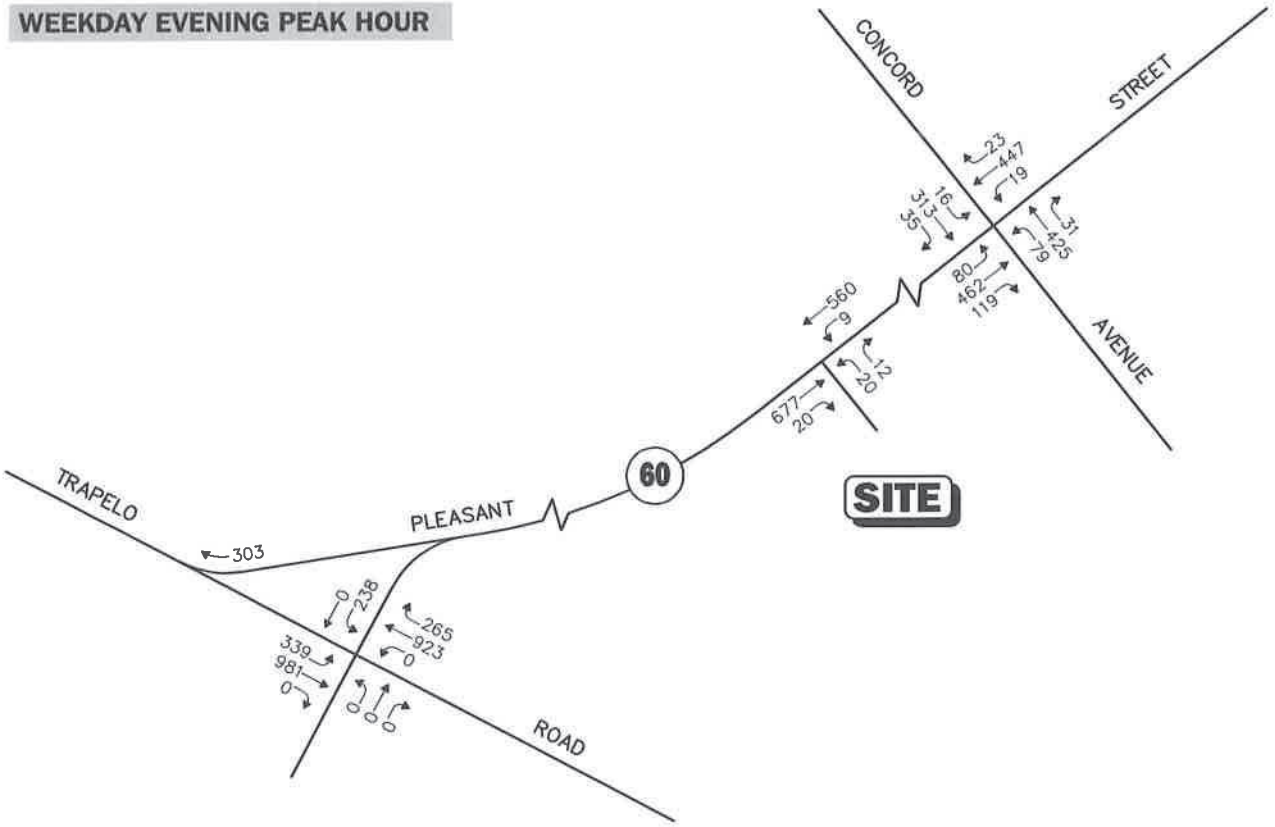


Figure A-1

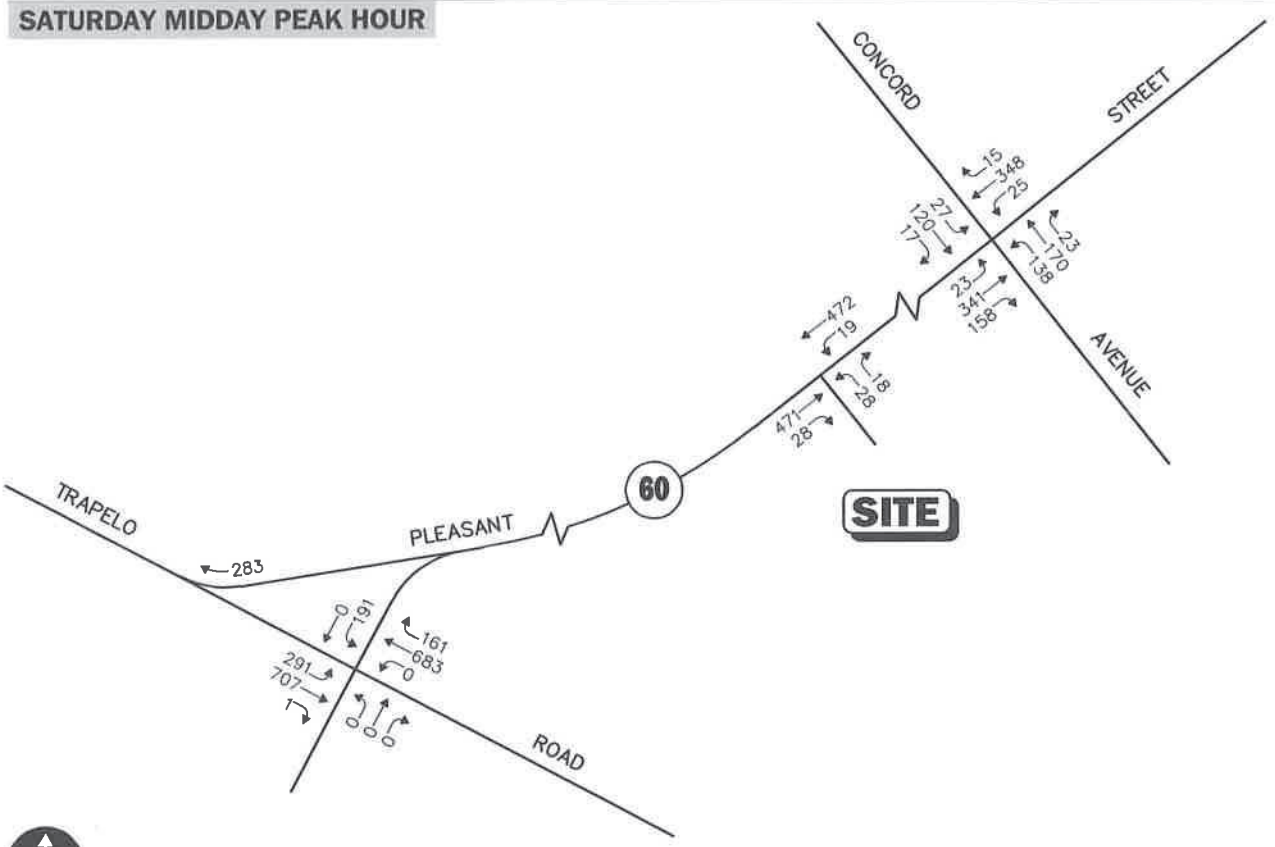
Background Development Project Potential McLean Hospital Zone 3 (110 Apartments/40 Senior Housing) Peak Hour Traffic Volumes

Vanasse & Associates inc

WEEKDAY EVENING PEAK HOUR



SATURDAY MIDDAY PEAK HOUR



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Not To Scale

Figure A-2

2026 Build
Peak Hour Traffic Volumes
With McLean Hospital Zone 3
Residential Development

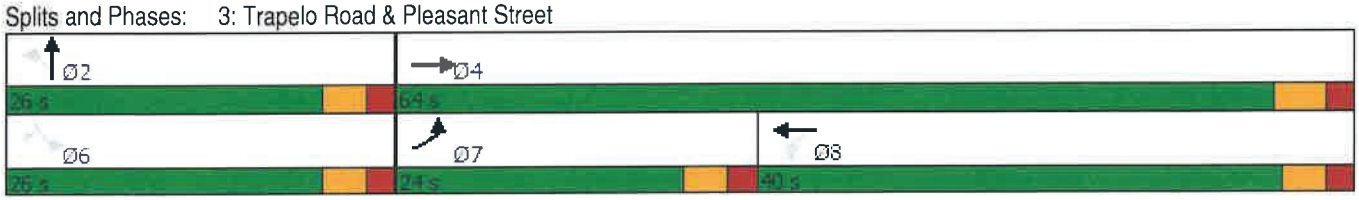
Vanasse & Associates inc

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	339	961	0	0	923	265	0	0	0	238	0	303
Future Volume (vph)	339	961	0	0	923	265	0	0	0	238	0	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.967							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3422	0	0	1773	0	1906	0	1538
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3422	0	0	1773	0	1519	0	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					49							319
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.97	0.97	0.97	0.98	0.98	0.98	0.92	0.92	0.92	0.95	0.95	0.95
Heavy Vehicles (%)	3%	2%	0%	0%	2%	2%	0%	0%	0%	1%	0%	5%
Adj. Flow (vph)	349	991	0	0	942	270	0	0	0	251	0	319
Shared Lane Traffic (%)												
Lane Group Flow (vph)	349	991	0	0	1212	0	0	0	0	251	0	319
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	19.6	58.1			35.0					22.0		22.0
Actuated g/C Ratio	0.22	0.66			0.40					0.25		0.25
v/c Ratio	0.90	0.81			0.88					0.67		0.51
Control Delay	62.4	18.0			32.6					40.4		6.7
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	62.4	18.0			32.6					40.4		6.7
LOS	E	B			C					D		A
Approach Delay		29.6			32.6						21.5	
Approach LOS		C			C						C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 88.6			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 29.3		Intersection LOS: C	
Intersection Capacity Utilization 108.2%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 3: Trapelo Road & Pleasant Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	313	35	79	425	31	80	462	119	19	447	23
Future Volume (vph)	16	313	35	79	425	31	80	462	119	19	447	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.976			0.994	
Flt Protected		0.998			0.993			0.994			0.998	
Satd. Flow (prot)	0	2142	1830	0	2121	0	0	1816	0	0	1877	0
Flt Permitted		0.965			0.784			0.857			0.966	
Satd. Flow (perm)	0	2071	1830	0	1675	0	0	1565	0	0	1817	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		5			16			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.79	0.79	0.79	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	7%	0%	0%	0%	0%	0%	1%	2%	0%	6%	0%	4%
Adj. Flow (vph)	20	396	44	83	447	33	85	491	127	20	481	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	416	44	0	563	0	0	703	0	0	526	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		40.5	39.5		40.5			41.0			41.0	
Actuated g/C Ratio		0.45	0.44		0.45			0.46			0.46	
v/c Ratio		0.44	0.05		0.74			0.97			0.63	
Control Delay		18.7	0.9		27.2			51.9			22.7	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		18.7	0.9		27.2			51.9			22.7	
LOS		B	A		C			D			C	
Approach Delay		17.0			27.2			51.9			22.7	
Approach LOS		B			C			D			C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 89.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 31.7 — Intersection LOS: C
Intersection Capacity Utilization 121.3% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Pleasant Street & Concord Avenue

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	12	677	20	9	560
Future Vol, veh/h	20	12	677	20	9	560
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	13	736	22	10	609

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1376	747	0	0	758	0
Stage 1	747	-	-	-	-	-
Stage 2	629	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	160	413	-	-	853	-
Stage 1	468	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	157	413	-	-	853	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	468	-	-	-	-	-
Stage 2	521	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.1	0	0.1
HCM LOS	D		

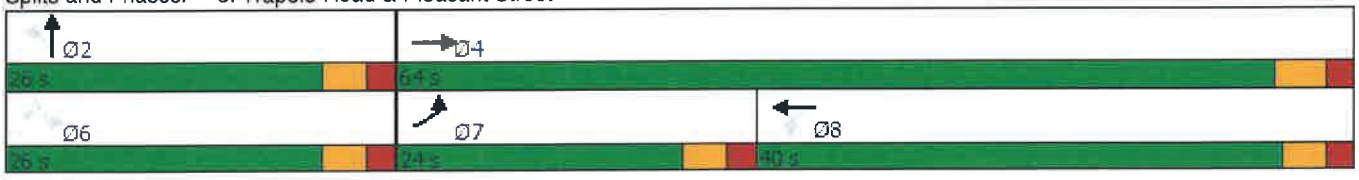
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	205	853	-
HCM Lane V/C Ratio	-	-	0.17	0.011	-
HCM Control Delay (s)	-	-	26.1	9.3	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	707	1	0	683	161	0	0	0	191	0	283
Future Volume (vph)	291	707	1	0	683	161	0	0	0	191	0	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	10	10	10	14	14	12
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.971							0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1752	1863	0	0	3477	0	0	1773	0	1851	0	1583
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	1752	1863	0	0	3477	0	0	1773	0	1475	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					38							301
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		722			803			62			1573	
Travel Time (s)		16.4			18.3			1.4			35.8	
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92	0.94	0.94	0.94
Heavy Vehicles (%)	3%	2%	0%	0%	1%	0%	0%	0%	0%	4%	0%	2%
Adj. Flow (vph)	310	752	1	0	719	169	0	0	0	203	0	301
Shared Lane Traffic (%)												
Lane Group Flow (vph)	310	753	0	0	888	0	0	0	0	203	0	301
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			14			14	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.09	1.09	0.92	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1		1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left		Right
Leading Detector (ft)	20	100		20	100		20	100		20		20
Trailing Detector (ft)	0	0		0	0		0	0		0		0
Detector 1 Position(ft)	0	0		0	0		0	0		0		0
Detector 1 Size(ft)	20	6		20	6		20	6		20		20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0		0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA					Perm		Perm
Protected Phases	7	4			8			2				
Permitted Phases				8			2			6		6
Detector Phase	7	4		8	8		2	2		6		6

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	10.0	23.5		23.0	23.0		23.0	23.0		23.0		23.0
Total Split (s)	24.0	64.0		40.0	40.0		26.0	26.0		26.0		26.0
Total Split (%)	26.7%	71.1%		44.4%	44.4%		28.9%	28.9%		28.9%		28.9%
Maximum Green (s)	19.0	58.5		35.0	35.0		21.0	21.0		21.0		21.0
Yellow Time (s)	3.0	3.5		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0		2.0
Lost Time Adjust (s)	-1.0	-1.0			-1.0			-1.0		-1.0		-1.0
Total Lost Time (s)	4.0	4.5			4.0			4.0		4.0		4.0
Lead/Lag	Lead			Lag	Lag							
Lead-Lag Optimize?	Yes			Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	None	None		None	None		Max	Max		Max		Max
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0		11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0		0
Act Effct Green (s)	18.2	49.9			28.1					22.2		22.2
Actuated g/C Ratio	0.23	0.62			0.35					0.28		0.28
v/c Ratio	0.78	0.65			0.72					0.50		0.46
Control Delay	46.0	12.8			25.5					31.9		6.1
Queue Delay	0.0	0.0			0.0					0.0		0.0
Total Delay	46.0	12.8			25.5					31.9		6.1
LOS	D	B			C					C		A
Approach Delay		22.5			25.5						16.5	
Approach LOS		C			C						B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 80.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 82.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 3: Trapelo Road & Pleasant Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	120	17	138	170	23	23	341	158	25	348	15
Future Volume (vph)	27	120	17	138	170	23	23	341	158	25	348	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.991			0.959			0.995	
Flt Protected		0.991			0.980			0.998			0.997	
Satd. Flow (prot)	0	2070	1830	0	2063	0	0	1773	0	0	1835	0
Flt Permitted		0.909			0.747			0.975			0.954	
Satd. Flow (perm)	0	1898	1830	0	1573	0	0	1732	0	0	1756	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85		5			32			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		666			550			721			319	
Travel Time (s)		15.1			12.5			16.4			7.3	
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.98	0.98	0.98	0.89	0.89	0.89
Heavy Vehicles (%)	8%	2%	0%	2%	1%	0%	0%	3%	2%	0%	3%	0%
Adj. Flow (vph)	33	145	20	144	177	24	23	348	161	28	391	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	20	0	345	0	0	532	0	0	436	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2			6		
Detector Phase	4	4	4	3	8		2	2		6	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.0	23.0	23.0	10.0	23.0		23.0	23.0		23.0	23.0	
Total Split (s)	30.0	30.0	30.0	15.0	45.0		45.0	45.0		45.0	45.0	
Total Split (%)	33.3%	33.3%	33.3%	16.7%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	25.0	25.0	25.0	10.0	40.0		40.0	40.0		40.0	40.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
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)		-1.0	0.0		-1.0			-1.0			-1.0	
Total Lost Time (s)		4.0	5.0		4.0			4.0			4.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Act Effct Green (s)		23.9	22.9		23.9			41.4			41.4	
Actuated g/C Ratio		0.33	0.31		0.33			0.56			0.56	
v/c Ratio		0.29	0.03		0.67			0.54			0.44	
Control Delay		18.9	0.1		27.4			13.5			12.6	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		18.9	0.1		27.4			13.5			12.6	
LOS		B	A		C			B			B	
Approach Delay		17.0			27.4			13.5			12.6	
Approach LOS		B			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 73.4			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 16.9		Intersection LOS: B	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 8: Pleasant Street & Concord Avenue

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	18	471	28	19	472
Future Vol, veh/h	28	18	471	28	19	472
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	20	512	30	21	513

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1082	527	0	0	542	0
Stage 1	527	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	241	551	-	-	1027	-
Stage 1	592	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	234	551	-	-	1027	-
Mov Cap-2 Maneuver	234	-	-	-	-	-
Stage 1	592	-	-	-	-	-
Stage 2	558	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.3	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	302	1027	-
HCM Lane V/C Ratio	-	-	0.166	0.02	-
HCM Control Delay (s)	-	-	19.3	8.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Vanasse & Associates inc
Transportation Engineers & Planners

35 New England Business Center Drive
Suite 140
Andover, MA 01810

Ref: 8444

March 23, 2021

Mr. Steve Tomasello
Calverde Naturals, Inc.
10 Briarwood Lane
Winchester, MA 01890

Re: Proposed Adult-Use Marijuana Dispensary
1010 Pleasant Street
Belmont, Massachusetts

Dear Steve:

Vanasse & Associates, Inc. (VAI) has prepared this letter to update the February 2020 Traffic Impact and Access Study[1] (TIAS) prepared in support of a proposed adult-use marijuana dispensary, to be located at 1010 Pleasant Street (Route 60) in Belmont, Massachusetts. Specifically, this letter summarizes our review of the updated site plan, building layout, parking accommodations and site access design.

As summarized in this letter, based on our review of the current plans, the findings of the initial TIAS remain unchanged, with Project-related traffic impact expected to result in minimal impacts to area traffic operations. Additionally, the proposed site design provides adequate parking to accommodate the peak demands for the Project. The proposed site access, which narrows the existing driveway width to a total of 24-feet is consistent with the Massachusetts Department of Transportation (MassDOT) design criteria for commercial driveways, and based on field observations provides adequate sight distance to accommodate the site access in a safe manner.

The following summarizes our review of the updated materials.

Site Layout

Based on a review of the current site layout, the proposed adult-use dispensary will occupy approximately 3,936± square feet (sf) of the northern end of the existing 1010 Pleasant Street building, including approximately 2,069± sf that will accommodate the dispensary sales area. This building footprint is slightly smaller than the dispensary layout analyzed as part of the initial TIA and as such, the trip generation projections and associated impacts to area traffic operations remains valid, if not conservative, assessment of Project impacts.

Parking Layout

The current parking layout for the Project provided a total of twenty-five (25) parking spaces for employees and customers of the dispensary. This parking supply is consistent with the previous site layout and based

[1] *Traffic Impact and Access Study – Proposed Marijuana Dispensary, Belmont, Massachusetts;* VAI, February 2020.

on parking demand data published by the Institute of Transportation Engineers[2] (ITE) is sufficient to accommodate the peak demands of the Project.

Site Access

Since the completion of the initial TIA, the proposed site access has been modified based on feedback received from the Town of Belmont Police and Fire Departments. Specifically, the proposed site access drive modifications will narrow the existing approximate forty foot curb cut to twenty-four feet in width and shift the driveway slightly to the north on Pleasant Street. This proposed driveway width is consistent with MassDOT's recommended driveway design criteria for commercial driveways and represents an improvement over existing conditions.

VAI has reviewed the available sight lines at the current driveway location, consistent with the methodology outlined in the initial TIA. Based on a review of the available sight lines, in excess of 350 feet of sight distance continues to be provided in both directions along Pleasant Street at the proposed driveway location, exceeding the American Association of State Highway and Transportation Officials (AASHTO)[3] sight line requirements for the travel speeds along the corridor, and ensuring that safe access can be provided to the Project.

Summary

In summary, based on our review of the updated site plan and building layout information, the findings of the initial TIA remain unchanged. The proposed adult-use marijuana dispensary is not projected to have a significant impact to area traffic operations, the proposed site access has been adequately designed to provide required sight distances, with an improved geometry as compared to existing conditions, and the proposed parking supply for the Project is adequate to accommodate the peak demands of the Project.

Should you have any questions or require any additional information, please feel free to contact me directly.

Sincerely,

VANASSE & ASSOCIATES, INC.

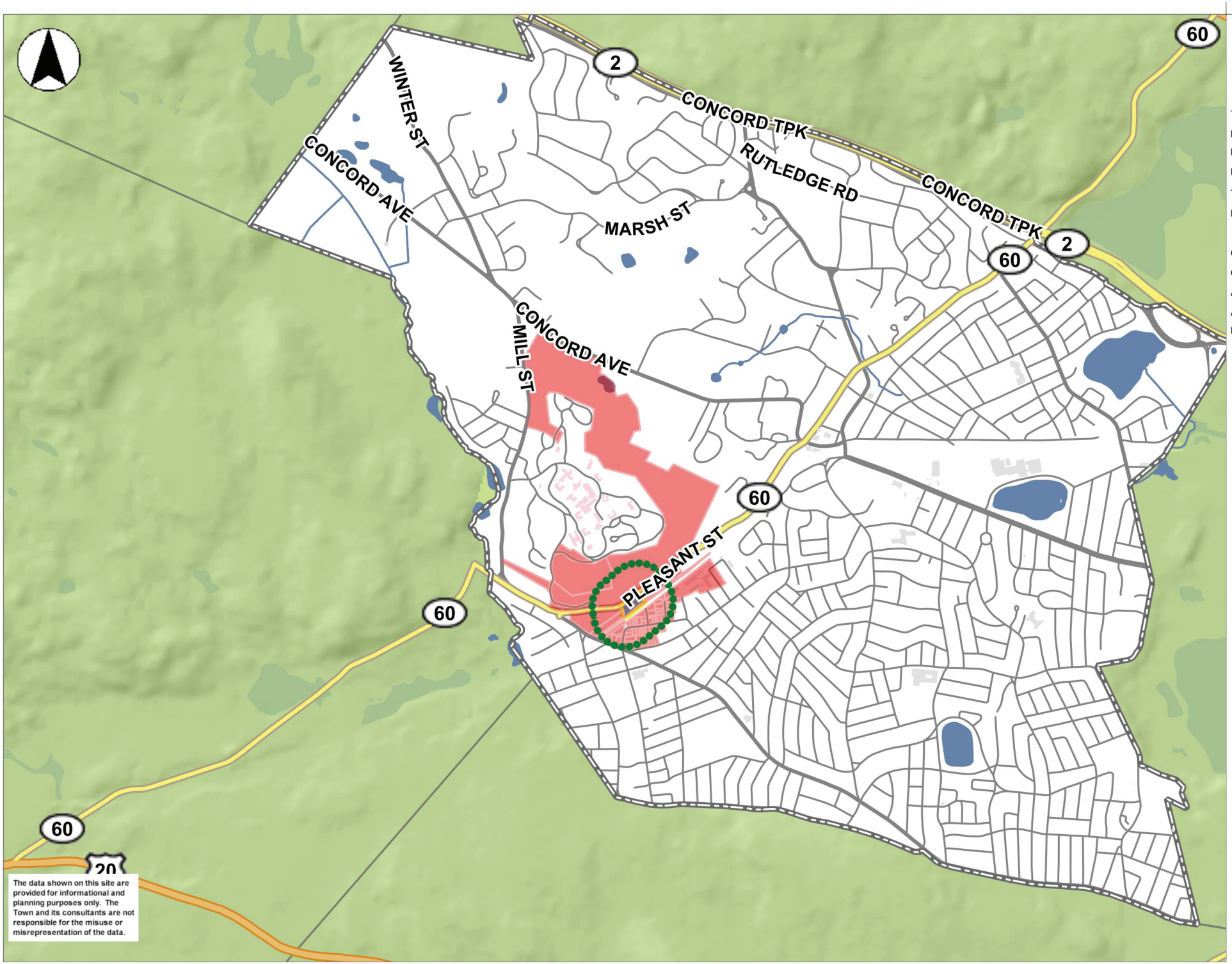
Shaun P. Kelly
Associate

Enclosure

cc: File

[2] *Parking Generation Manual,* 5th Edition; Institute of Transportation Engineers; Washington D.C.; January 2019.

[3] *A Policy on Geometric Design of Highway and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.



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CALVERDE NATURALS, LLC HOST COMMUNITY AGREEMENT FOR THE SITING OF A RECREATIONAL MARIJUANA ESTABLISHMENT IN BELMONT

This Host Community Agreement (the "**Agreement**") is entered into this 9th day of November, 2020 by and between the Town of Belmont, a municipal corporation under the laws of the Commonwealth of Massachusetts, acting by and through its Select Board , with a principal address of 455 Concord Ave, Belmont, MA 02478 (hereinafter the "**Municipality**") and Calverde Naturals, LLC with a principal office address of 10 Briarwood Lane, Winchester, MA 01890 (hereinafter "**Company**"), (Municipality and Company being referred to individually as a "Party" and collectively as the "**Parties**").

RECITALS

WHEREAS, Company intends to locate a licensed Recreational Marijuana Establishment, specifically a Marijuana Retailer Establishment ("**RME**") for the sale of marijuana in accordance with the laws of the Commonwealth of Massachusetts, including M.G.L. Chapters 94G and 94I, 935 CMR 500.100 and 935 CMR 500.102, and any other successor law, and/or regulations ("**MA Law**") and those of the Municipality ("**Local Law**");

WHEREAS, Company desires to provide community impact fee payments to the Municipality pursuant to M.G.L. c. 94G, § 3(d) in order to address any reasonable costs imposed upon the Municipality by Company's operations in the Municipality; and

WHEREAS, the Municipality acknowledges Company's intention to operate a RME for the sale of recreational marijuana in the Municipality at 1010 Pleasant Street, Belmont, MA 02478 (the "**Facility**"), and is willing to enter into this Agreement, subject to the terms and conditions set forth herein.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and for the mutual promises set forth below, the Parties agree as follows:

AGREEMENT

1. **Host Community Payments**.

    a. **RME Related Payments**. In the event that Company obtains a final license for the operation of a RME in the Municipality from the Cannabis Control Commission (the "**Commission**"), and receives all necessary approvals from the Municipality to operate a RME, then Company agrees to the following:

        i. The Company will pay a Community Impact Fee equal to 3.0% of the establishment's gross sales. The Term "gross sales" shall mean the total of all sales transactions of the Facility without limitation, including the sale of marijuana, marijuana infused products, paraphernalia, and any other product sold by the Facility.The first portion of payment for the first

year of operation shall be $25,000 payable to the Town on the facility's opening date with the remaining balance due within 12 months of opening (the "**RME Payment**").

ii. In subsequent years the payments shall be made in two installments, one in months 7 or 8 of the year to reflect the first six months of sales of that year, and the second reflecting the balance of sales payable within 60 days after the end of the year. For the purposes of any agreement, a "year" shall be considered as whatever 12 month period the parties agree to in the HCA.

iii. Each payment described herein shall be accompanied by any and all financial statements provided to the Commission for the period covered by such payments as well as a certification by the Company of the gross sales with respect to which the RME Payment has been calculated.

iv. The Company agrees to pay all required taxes customarily paid to the Town by other similarly situated businesses on a timely basis and further agrees that any such payments of taxes or of utilities will not reduce the amount owed by the Company to the Municipality as a RME Payment.

v. HCA and all associated payments are to commence upon the opening date and start of sales and not the effective date of execution.

vi. Company acknowledges that time is of the essence with respect to performance of its payment obligations hereunder and that late payments shall be subject to the higher of 5% of the belated payment or interest at the rates prescribed by M.G.L. 59, §57, following written notice of default and a 10 day opportunity to cure.

2. **Term and Termination**. The Term (the "**Term**") of this Agreement shall be five (5) years from the date that sales commence at the Facility (the "**Effective Date**") , unless sooner terminated or extended pursuant to the provisions herein. In the event Company ceases all operations in the Municipality, this Agreement shall terminate. In the event Company loses or has its license(s), approvals, and/or permits to operate in the Municipality revoked by the Commission or any other applicable licensing authorities (together, the "**Licensing Authorities**") or the Municipality, this Agreement shall terminate. This agreement is non-transferable other than to a wholly-owned subsidiary of the Company with no change in ownership. The Parties may agree to renegotiate or renew this Agreement prior to the end of the Term. Notwithstanding the foregoing, all payments required hereunder shall remain in effect for the full duration of Company's operation of the Facility. At the conclusion of the five-year term set forth above, the Parties may agree upon an extension of this Agreement or may negotiate the terms of a new host community agreement. The Company shall submit a proposed new Host Community Agreement to the Municipality no later than 120 days before the conclusion of the term of this Agreement.. Under no circumstances shall the Facility be in operation without an operative host community agreement.

Municipality may terminate this Agreement for cause by providing written notice to Company in the event that: (i) Company purposefully or with willful or gross negligence

violates any MA Law or Local Law with respect to the operation of the RME, and such violation remains uncured for 30 days following the Municipality's issuance to Company of written notice of such violation; (ii) Company fails to make payments to the Municipality as required under this Agreement, and such failure remains uncured for 10 days following the Municipality's issuance to Company of written notice of such violation; or (iii) there is any other material breach of the Agreement by Company, which material breach remains uncured for 30 days following the Municipality's issuance to Company of written notice of such violation.

3. **Payments**.

    a. The Company shall make the RME Payments to the Municipality as set forth in Section 1 of this Agreement. While the Municipality has the sole discretion for determining how to spend the RME Payment(s) (the "**Payments**"), the Parties understand and acknowledge that, as required by M.G.L. c. 94G, § 3(d), payments under a host community agreement are to be reasonably related to the costs imposed upon a municipality by virtue of operation of a marijuana establishment in such a municipality, and the Parties agree that the Payments are designed so that they shall be reasonably related to the actual or anticipated costs imposed upon the Municipality as a result of the operation of the RME. Further, the parties recognize and agree that it is inherently difficult to fully identify, evaluate and quantify the impacts to the Municipality of the RME and that the RME Payment is a fair and reasonable estimation of such impacts and shall remain so for the duration of Company's operation of the Facility. Therefore, the Parties expressly agree that the RME Payment is reasonably related to the costs that will be imposed upon the Municipality as a result of operation of the Facility.

4. **Acknowledgements**. The Municipality understands and acknowledges that Payments due pursuant to this Agreement are contingent upon the Company's receipt of all state and local approvals to operate a RME in the Municipality.

5. **Review**. During the Term of this Agreement, the Municipality and the Company will review the administration and implementation of the Agreement on an annual basis (the "**Annual Review**"). In connection with the Annual Review, the Parties may agree to modify the Agreement on such terms as are mutually acceptable, in writing.

6. **Community Support and Additional Obligations**.

    a. Local Vendors – to the extent such practice and its implementation are consistent with federal, state, and municipal laws and regulations, Company shall use good faith efforts in a legal and non-discriminatory manner to give priority to qualified local businesses and vendors in the provision of goods and services called for in the construction, maintenance and continued operation of the Facility.

b. Employment/Salaries – except for senior management, and to the extent such practice and its implementation are consistent with federal, state, and municipal laws and regulations, Company shall use good faith efforts in a legal and non-discriminatory manner to give priority to hire qualified residents of the Municipality as employees of the Facility.

c. Providing Commission Reports – The Company shall, at least annually, provide the Municipality with copies of all reports submitted to the Licensing Authorities regarding Company's operations at the Facility.

d. Working Cooperatively with the Town – The Company will work cooperatively with all necessary departments, boards, commissions, and agencies of the Municipality to ensure that Company's operations are compliant with all of the Municipality's codes, rules, and regulations.

e. Opening Day Plan – In order to ensure that the commencement of operations at the Facility is coordinated and non-disruptive to the surrounding community, the Company will submit an Opening Day Plan, to be approved by the Municipality, as a part of its Special Permit application.

f. Appointment Only Sales – For the first month of operations, all sales will be conducted using an appointment-only customer reservation system (the "**Appointment Only System**"). Thereafter, the Company will use the Appointment Only System during such times as determined appropriate by the Company and thethe Chief of Police.

g. Hours of Operation – The Company's hours of operations will be determined by the Planning Board, but shall not exceed the hours of 8am to 8pm, per the Town of Belmont Zoning Bylaw, Section 6F.3

h. All rules and regulations approved by Towns Boards and Committees will be followed including, but not limited to, the operator verifying the legal age of all customers using a government-issued identification prior to the customer being admitted into the facility and again prior to the completion of a transaction (25 is the minimum age to complete a transaction). Operator must utilize electronic identification verification measures when possible.

i. Other Local Approvals - Prior to commencing operations, the Company shall obtain an Adult Use Marijuana Sales Permit from the Belmont Board of Health and any other permits required by the Town (collectively, the "**Permits**"). The Company shall maintain all Permits in good standing as a condition of its continued operations in the Town.

j. Based on recommendations of the traffic study, which shall be paid for by the Company and specifically include analysis of traffic including and excluding the McLean development, the Company makes a commitment to fund the recommended mitigation.

7. **Support**. The Municipality agrees to submit to the Licensing Authorities all documentation and information reasonably required by the Licensing Authorities from the Municipality for the Licensing Authorities to process Company's applications for approval to operate the Facility. The Municipality agrees to reasonably cooperate with Company in regard to Company's application(s) for approvals for the RME with the required Licensing Authorities, but makes no representation or promise that Municipality or any of its departments, boards, commissions, and agencies will act on any license or permit request in any particular way other than by the Municipality's normal and regular course of conduct and in accordance with their codes, rules, and regulations and any statutory guidelines governing them.

8. **Annual Reporting.** Company shall submit an annual written report to the Municipality's Select Board within thirty (30) days after the payment of its fourth quarterly installment of the RME Payment with a certification of: (1) its annual sales; and (2) its compliance with all other requirements of this Agreement. During the term of this Agreement, Company shall, upon request of the Municipality, appear at a meeting of the Select Board to review compliance with the terms of this Agreement. Such meeting shall occur no later than thirty (30) days following written notice from the Municipality, unless the Parties mutually agree upon an alternative date.

Company shall maintain books, financial records, and other compilations of data pertaining to the requirements of this Agreement in accordance with standard accounting practices and any applicable regulations or guidelines of the Commission. All records shall be kept for a period of at least seven (7) years. Upon request by the Municipality, the Company shall provide the Municipality with the same access to its financial records (to be treated as confidential, to the extent allowed by law) as is required by the Commission and Department of Revenue for purposes of obtaining and maintaining a license for the Facility.

During the term of this Agreement, and for three (3) years following the termination of this Agreement, Company shall, upon request of the Municipality, have its financial records examined, copied and audited by an independent financial auditor, the expense of which shall be borne by Company. The independent financial auditor shall review the Company's financial records for purposes of determining that the payment of the RME Payment is in compliance with the terms of this Agreement. Such examination shall be made not less than thirty (30) days following written notice from the Municipality and shall occur only during normal business hours and at such place where said books, financial records and accounts are maintained. The independent financial audit shall include those parts of Company's books and financial records which relate to the payment, and shall include a certification of itemized gross sales for the previous

calendar year, and all other information required to ascertain compliance with the terms of this Agreement. The independent audit of such records shall be conducted in such a manner as not to interfere with the Company's normal business activities.

9. **Security and Safety.**

a. Security Plan – Company shall maintain security at the Facility in accordance with a security plan (the "**Security Plan**") presented to the Municipality and approved by the Licensing Authorities. In addition, Company shall at all times comply with MA Law and Local Law regarding security of the Facility. Company shall work with Municipality's Police Department in reviewing and approving the Security Plan prior to implementation and commencement of operations. Additionally, Company agrees to cooperate with the Police Department, including but not limited to periodic meetings to review operational concerns, security, delivery schedule and procedures, cooperation in investigations, and communications with the Police Department of any suspicious activities at or in the immediate vicinity of the Facility, and with regard to any anti-diversion procedures to ensure that the marijuana and marijuana products sold in the Facility are not being transferred to the illegal market or to minors. Company agrees to engage in semi-annual, at a minimum, meetings with Municipality's Police Chief and/or their designee to review the Security Plan and any operational concerns.

b. Operational Meetings - The Operator will engage in semi-annual, at a minimum, meetings with the Police Chief and/or their designee to review operational concerns or other issues and shall report to the Police within 24 hours of becoming aware of: diversion of marijuana, inventory discrepancies, theft, loss or other criminal action, discrepancy in weight or inventory during transportation, vehicle accidents, diversions, losses or other reportable incidents that occur during transport, any suspicious act involving sale, cultivation, distribution, process or production of marijuana, unauthorized destruction of marijuana, loss or unauthorized alteration of the establishment's records, alarm activation or other event that requires public safety personnel to respond, failure of security alarm due to power loss or mechanical failure expected to last longer than eight hours, or any other breach of security.

c. Approval of Changes to Security Plan – Any proposed changes to the Security Plan must be reviewed and approved by the Belmont Police Chief and/or their designee.

d. Surveillance – Company will site interior and exterior security cameras in coordination with the Belmont Police Department and provde unimpeded access to all security camera feeds to the Police Department, upon request.

e. Verifying Legal Age – All rules and regulations approved by Towns Boards and Committees will be followed, specifically the Company will verify the legal the legal age of all customers using government-issued identification prior to the customer being admitted into the facility and again prior to the completion of a transaction (25 being the minimum age to complete a transaction). Company will utilize electronic identification measures when possible.

f. Compliance with CORI Requirements – Company will comply with all the Commission's requirements regarding Criminal Offender Record Information (CORI) review for all staff annually hired and the Police Chief shall review and approve, within thirty days of receiving said CORI report, whether the individual is suitable to hold the position, such approval not to be unreasonably denied, conditioned, or delayed. In the event of no response by the Police Chief, or its designee, after thirty days, the hiring shall be deemed approved.

10. **Signage.** Company agrees that all signage will be in accordance with the standards set forth in the Town's Zoning By-law and approved by the Planning Board Special Permit review processs, if necessary.

11. **Inspections.** Company agrees and acknowledges that annual inspections of the Facility by the Municipality's Police Department, Fire Department, Building Department and Board of Health shall be a condition of continued operation of the Facility and agrees to cooperate with the Police Department, Fire Department and Board of Health in providing access for scheduled and unscheduled inspections of the Facility.

12. **Diversion Plan.** Company shall comply with the Commission's regulations at 935 CMR 500.100 and 500.102. In cooperation with and to the extent requested by the Municipality's Police Department, and consistent with the MA Law, Company shall work with the Police Department to implement a comprehensive diversion prevention plan to prevent diversion of marijuana and marijuana products to ineligible users, a form of which plan is to be approved by the Police Department and in place prior to the commencement of operation of the Facility by Company. Such plan shall include, but not be limited to, (i) training RME employees to be aware of, observe, and report any unusual behavior in visitors or other RME employees that may indicate the potential for diversion; (ii) strictly adhering to certification amounts and time periods (per MA Law); (iii) rigorous identification and verification procedures through the applicable Commission online system; (iv) utilizing seed-to-sale tracking software to closely track all inventory at the RME; and (v) refusing to complete a transaction if the customer appears to be under the influence of drugs or alcohol.

13. **Reporting**. Company agrees that it will report to the Belmont Police Department within 24 hours of becoming aware of : diversion of marijuana, inventory discrepancies, theft, loss or other criminal action, discrepancy in weight or inventory during transportation, vehicle accidents, diversion, losses or other reportable incidents that occur during transport, any suspicious act involving sale, cultivation, distribution, process or

production of marijuana, unauthorized destruction of marijuana, loss or unaauhtorized destruction of the establishment's records, alarm activation, or other event that requires public safety personnel to respond, failure of security alarm due to power loss or mechanical failure expected to last longer than eight hours, or any other breach of security.

14. **Diversity Hiring.** In accordance with the commitments set forth in the Company's Diversity Plan, Company will use best efforts to ensure that at least 10% of its staff are comprised of minorities, 5% of its staff are comprised of veterans, 5% of its staff are comprised of disabled indviduals, and 5% of its staff are comprised of individuals who identify as LGBTQ+.

15. **On-site Consumption.** The Company will prohibit on-site consumption of marijuana at the Facility, even if such activity is otherwise permitted by later statute or regulation

16. **Home Delivery**. Unless otherwise agreed to in writing by the Municipality, Company agrees that it will not offer home delivery of non-medical marijuana, even if such activity is otherwise permitted by later statute or regulation.

17. **Community Impact Hearing**. Company shall conduct a Community Outreach Meeting prior to commencement of operations to work collaboratively and cooperatively with its neighboring businesses and residents. Company shall, as a result of community feedback and neighborhood concerns, establish written policies and procedures to address mitigation of any concerns or issues that may arise through its operation of the Facility; said written policies and procedures, as may be amended from time to time at the request of the Select Board , shall be reviewed annually by the Select Board as part of Company's annual report to ensure compliance with the policies and procedures and to address any further impacts requiring mitigation. The policies and procedures addressing community impact mitigation shall be incorporated herein by reference and made a part of this Agreement, the same as if each were fully set forth herein.

18. **Approval of Manager**. If requested by the Municipality, Company shall provide to the Municipality, for review and approval, the name and relevant information, including but not limited to the information set forth in 935 CMR 500 or any successor regulation, of the person proposed to act as on-site manager of the Facility. The submittal shall include authorization to perform a Criminal Offender Record Information (CORI) check. The Municipality shall consider such request for approval within thirty days following submittal to determine if the person proposed is of suitable character to act as on-site manager. Such approval shall not be unreasonably denied, conditioned or delayed. In the event the Municipality does not confirm or reject the proposed on-site manager within thirty (30) days, the manager shall be deemed approved by the Municipality for purposes of this Agreement. This approval process shall also apply to any change of on-site manager.

19. **Governing Law**. This Agreement shall be governed and construed and enforced in accordance with the laws of the Commonwealth of Massachusetts, without regard to the principles of conflicts of law thereof. The Parties expressly waive any defense to enforcement based upon nonconformance with federal law regarding the illegality of marijuana.

20. **Validity**. Company agrees it shall not operate the Facility without a valid and effective host community agreement. Company further agrees it will not challenge, in any jurisdiction, the enforceability of any provision included in this Agreement; and to the extent the validity of this Agreement is challenged, Company shall pay for all reasonable fees and costs incurred by the Municipality in defending such challenge; furthermore, Company shall pay for all reasonable fees and costs incurred by the Municipality in enforcing this Agreement if the Municipality prevails.

21. **Amendments/Waiver**. Amendments or waivers of any term, condition, covenant, duty or obligation contained in this Agreement may be made only by written amendment executed by all Parties, prior to the effective date of the amendment.

22. **Severability**. If any term or condition of this Agreement or any application thereof shall to any extent be held invalid, illegal or unenforceable by a court of competent jurisdiction, the validity, legality, and enforceability of the remaining terms and conditions of this Agreement shall not be deemed affected thereby unless one or both Parties would be substantially or materially prejudiced.

23. **Successors/Assigns**. This Agreement is binding upon the Parties hereto, their successors, assigns and legal representatives. The Municipality shall not assign or transfer any interest or obligations in this Agreement without the prior written consent of the Company, which shall not be unreasonably delayed, conditioned, or withheld. The Company shall not assign or transfer any interest or obligation in this Agreement without the prior written consent of the Municipality, which shall not be unreasonably delayed, conditioned, or withheld.

24. **Entire Agreement**. This Agreement constitutes the entire integrated agreement between the Parties with respect to the matters described. This Agreement supersedes all prior agreements, negotiations and representations, either written or oral, and it shall not be modified or amended except by a written document executed by the Parties hereto.

25. **Notices**. Except as otherwise provided herein, any notices given under this Agreement shall be addressed as follows:

To the Municipality:

Patrice Garvin
Town Administrator
Town of Belmont
455 Concord Avenue

Belmont, MA 02478

To the Company:

Kelly Tomasello
Calverde Naturals, LLC
10 Briarwood Lane
Winchester, MA 01890

With a copy to:

Joseph M. Noone, Esq.
Avery, Dooley, & Noone, LLP
3 Brighton Street
Belmont, MA 02478

Notice shall be deemed given (a) two (2) business days after the date when it is deposited with the U.S. Post Office, if sent by first class or certified mail, (b) one (1) business day after the date when it is deposited with an overnight courier, if next business day delivery is required, or (c) upon the date personal delivery is made.

*** * * SIGNATURE PAGE FOLLOWS * * ***

IN WITNESS WHEREOF, the Parties hereto have duly executed this Host Community Agreement on the 24th day of November, 2020.

Town of Belmont, Massachusetts

Name: Roy Epstein
Chair, Select Board

Name: Thomas Caputo
Vice Chair: Select Board

Name: Adam Dash
Member: Select Board

Calverde Naturals, LLC

Name: Kelly Tomasello
Title: President

CAL VERDE
NATURALS

Trash Management

- ***Any trash containing marijuana or marijuana products is required to be stored securely on site within the dispensary vault. The products will be securely transported back to the cultivation and product manufacturing facility from which they emanated where they will be disposed of safely.***

- ***Minimal amounts of non-marijuana business related waste will be generated from the Facility and disposed of by commercial trash pickup no less than once weekly. Trash storage will be locked at all times and shielded from abutting uses.***

- ***Calverde will keep a copy of its waste disposal records on site in compliance with all Commission regulations.***

DRAINAGE MEMORANDUM

For

CAL VERDE
NATURALS

1010 Pleasant Street
Town of Belmont, Massachusetts
Middlesex County

Prepared by:

BOHLER
352 Turnpike Road
Southborough, MA 01772
(508) 480-9900 TEL.

COMMONWEALTH OF MASSACHUSETTS
JOSHUA G. SWERLING
CIVIL
No. 41697
REGISTERED
PROFESSIONAL ENGINEER

Joshua G. Swerling, P.E.
Massachusetts P.E. Lic. # 41697

BOHLER

March 16, 2021

#W201001

BOHLER

TABLE OF CONTENTS

APPENDICIES

I. SUMMARY

This report examines the changes in drainage that can be expected as the result of the redevelopment consisting of parking renovations for a new Calverde Naturals marijuana retail store located at 1010 Pleasant Street in the Town of Belmont, Massachusetts. The site, which contains approximately 0.92 acres of land, contains an existing building, paved parking lot, and associated landscaped areas.

The proposed project includes the reconstruction a portion of the existing parking lot that will serve the proposed Calverde Naturals retail store. The project also includes construction of new landscaped areas. This report addresses a comparative analysis of the pre- and post-development site runoff conditions using the Rational Method. The project will also provide erosion and sedimentation controls during the demolition and construction periods, as well as long term stabilization of the site.

The majority of the site area currently sheet flows offsite to the east. As a result of this redevelopment, a decrease in flow is expected to all discharge points as a result of the decrease of approximately 1,305 SF of impervious area.

The proposed site conditions will improve water quality through the decrease in impervious area. Implementation of stormwater Best Management Practices will comply with Massachusetts DEP standards. Stormwater management will meet all redevelopment requirements of the current Massachusetts Department of Environmental Protection Stormwater Policy Handbook and the Town of Belmont's requirements for stormwater drainage. The proposed drainage condition will maintain the existing drainage patterns.

The soils at the site are mapped as Urban land. Refer to **Appendix C** for additional information.

II. RATIONAL DRAINAGE CALCULATIONS

EXISTING CONDITIONS

Coverage type	acres	pct.	"C"	frac.	
Impervious	0.33	0.94	0.95	0.9	
Landscape / Grass	0.02	0.06	0.30	0.02	
Total	0.35			0.91	(Composite "C")

PROPOSED CONDITIONS

Coverage type	acres	pct.	"C"	frac.	
Impervious	0.3	0.86	0.95	0.81	
Landscape / Grass	0.05	0.14	0.30	0.04	
Total	0.35			0.86	(Composite "C")

Time of Concentration 5 MIN

IDF Chart	"I"
2-yr storm	4.3
10-yr storm	5.8
50-yr storm	7.2
100-yr storm	8.0

RUNOFF CALCULATIONS "Q" = C x I x A

Existing Conditions	C	I	A	Q	
2-yr storm	0.91	4.3	0.35	1.37	cfs
10-yr storm	0.91	5.8	0.35	1.85	cfs
50-yr storm	0.91	7.2	0.35	2.30	cfs
100-yr storm	0.91	8.0	0.35	2.56	cfs

Proposed Conditions	C	I	A	Q	
2-yr storm	0.86	4.3	0.35	1.29	cfs
10-yr storm	0.86	5.8	0.35	1.74	cfs
50-yr storm	0.86	7.2	0.35	2.16	cfs
100-yr storm	0.86	8.0	0.35	2.40	cfs

Difference (Existing vs. Proposed)			
2-yr storm	-0.08	cfs	-6%
10-yr storm	-0.11	cfs	-6%
50-yr storm	-0.14	cfs	-6%
100-yr storm	-0.16	cfs	-6%

III. STORMWATER MANAGEMENT STANDARDS

Standard #1: No New Untreated Discharges

The project has been designed to maintain the existing drainage patterns and will decrease peak flows as a result of a decrease in impervious area.

Standard #2: Peak Rate Attenuation

As outlined in **Section II**, the development of the site has been designed so that post-development peak rates of runoff as well as volume are below pre-development conditions for the 2-, 10-, 50-, and 100-year storm events.

Standard #3: Recharge

The project is a redevelopment and results in a significant decrease of impervious area. Thus, no recharge is required. However, on-site recharge will be increased due to the increase in pervious landscaped areas.

Standard #4: Water Quality

The project is a redevelopment and results in a significant decrease of impervious area. Thus, no water quality is required. However, water quality will be increased due to the increase in pervious landscaped areas.

Standard #5: Land Use with Higher Potential Pollutant Loads

Not Applicable for this project.

Standard #6: Critical Areas

Not Applicable for this project.

Standard #7: Redevelopment

The site is considered a redevelopment and results in a decrease of approximately 1,305 SF of impervious area.

Standard #8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

The proposed project will provide construction period erosion and sedimentation controls as indicated within the site plan set provided for this project. This includes a proposed construction exit, protection for stormwater inlets, protection around temporary material stock piles and various other techniques as outlined on the erosion and sediment control sheets.

Standard #9: Operation and Maintenance Plan (O&M Plan)

An Operation and Maintenance (O&M) Plan for this site has been prepared and is included in **Appendix E** of this report. The O&M Plan outlines procedures and time tables for the long term operation and maintenance of the proposed site stormwater management system, including initial inspections upon completion of construction and periodic monitoring of the system components, in accordance with established practices and the manufacturer's recommendations. The O&M Plan includes a list of responsible parties.

Standard #10: Prohibition of Illicit Discharges

The proposed stormwater system will only convey allowable non-stormwater discharges (firefighting waters, irrigation, air conditioning condensation, etc.) and will not contain any illicit discharges from prohibited sources.

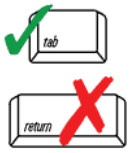
APPENDIX A: MASSACHUSETTS STORMWATER MANAGEMENT CHECKLIST

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

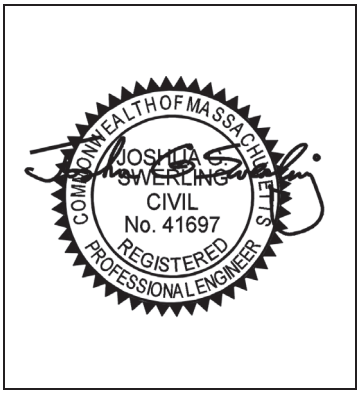
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☒ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☒ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☒ Reduced Impervious Area (Redevelopment Only)
- ☐ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of “country drainage” versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☒ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☒ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☐ The BMP is sized (and calculations provided) based on:

- ☐ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☒ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☒ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☒ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☒ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

APPENDIX B: PROJECT LOCATION MAPS

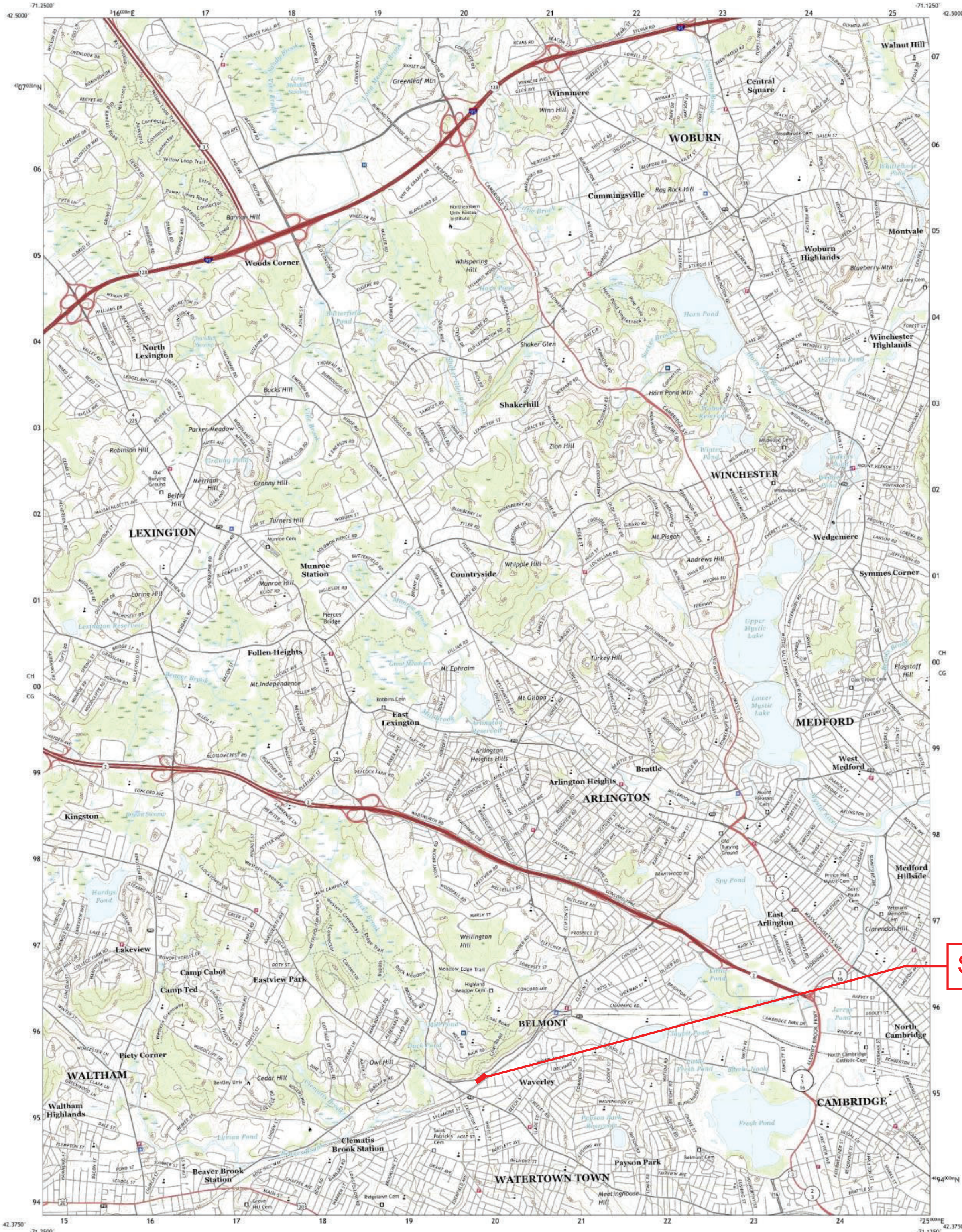
- *USGS MAP*
- *FEMA FIRMETTE*

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

LEXINGTON QUADRANGLE
MASSACHUSETTS - MIDDLESEX COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and 1 000-meter grid:Universal Transverse Mercator, Zone 19T
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, July 2016 - September 2016
Roads.....U.S. Census Bureau, 2016
Names.....GNIS, 1974 - 2018
Hydrography.....National Hydrography Dataset, 2005
Contours.....National Elevation Dataset, 2008 - 2017
Boundaries.....Multiple sources; see metadata file 2016 2017

Wetlands.....FWS National Wetlands Inventory 1991 - 1995

UTM GRID AND 2017 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011. A metadata file associated with this product is draft version 0.6.18

QUADRANGLE LOCATION

ADJOINING QUADRANGLES
1 Billerica
2 Wilmington
3 Reading
4 Concord
5 Boston North
6 Natick
7 Newton
8 Boston South

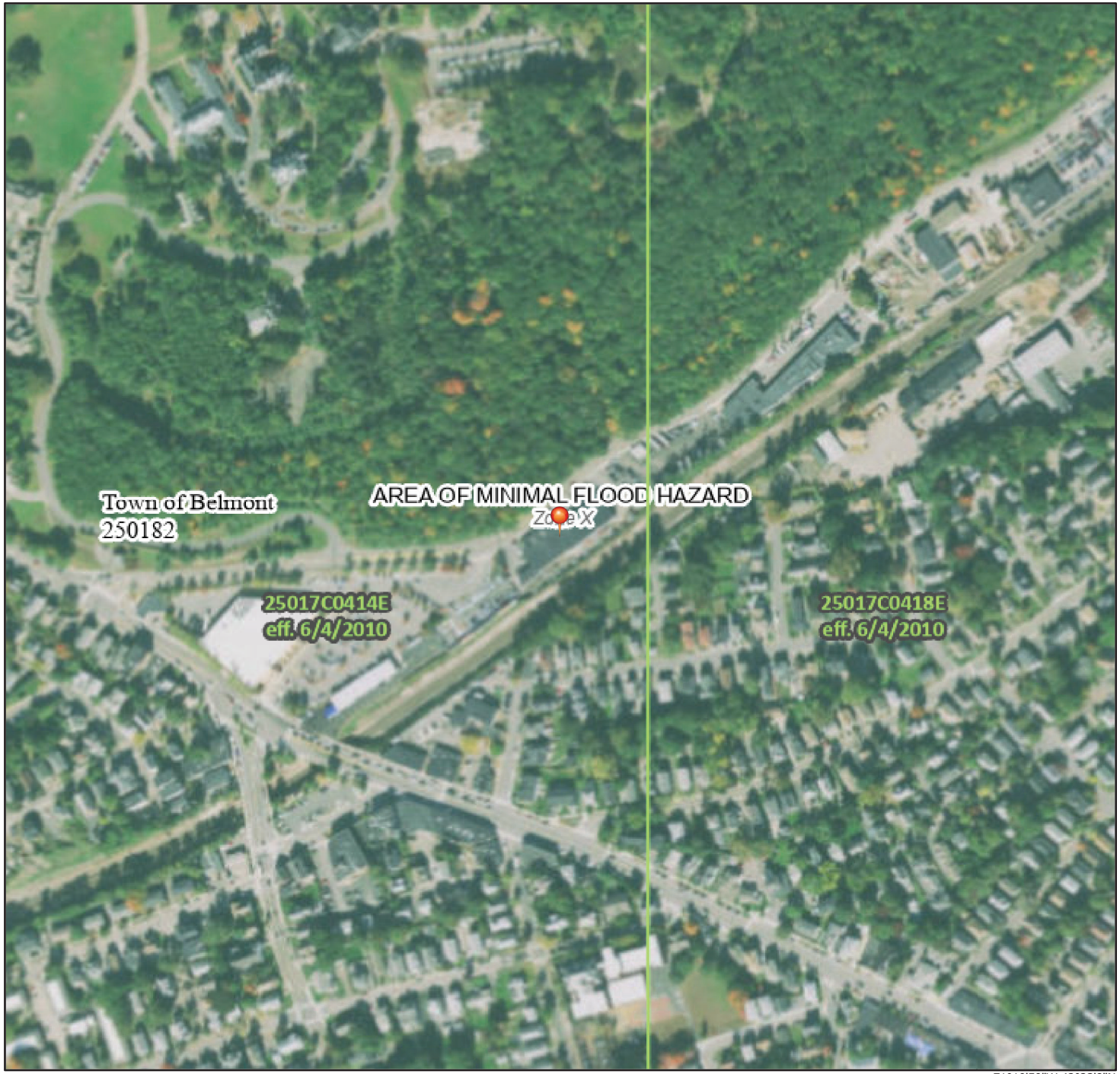
ROAD CLASSIFICATION
Expressway — Local Connector
Secondary Hwy — Local Road
Ramp — 4WD
Interstate Route — US Route — State Route

LEXINGTON, MA
2018

National Flood Hazard Layer FIRMette

FEMA

71°11'37"W 42°23'35"N



71°10'59"W 42°23'8"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 — Cross Sections with 1% Annual Chance
- 17.5 — Water Surface Elevation
- Coastal Transect
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

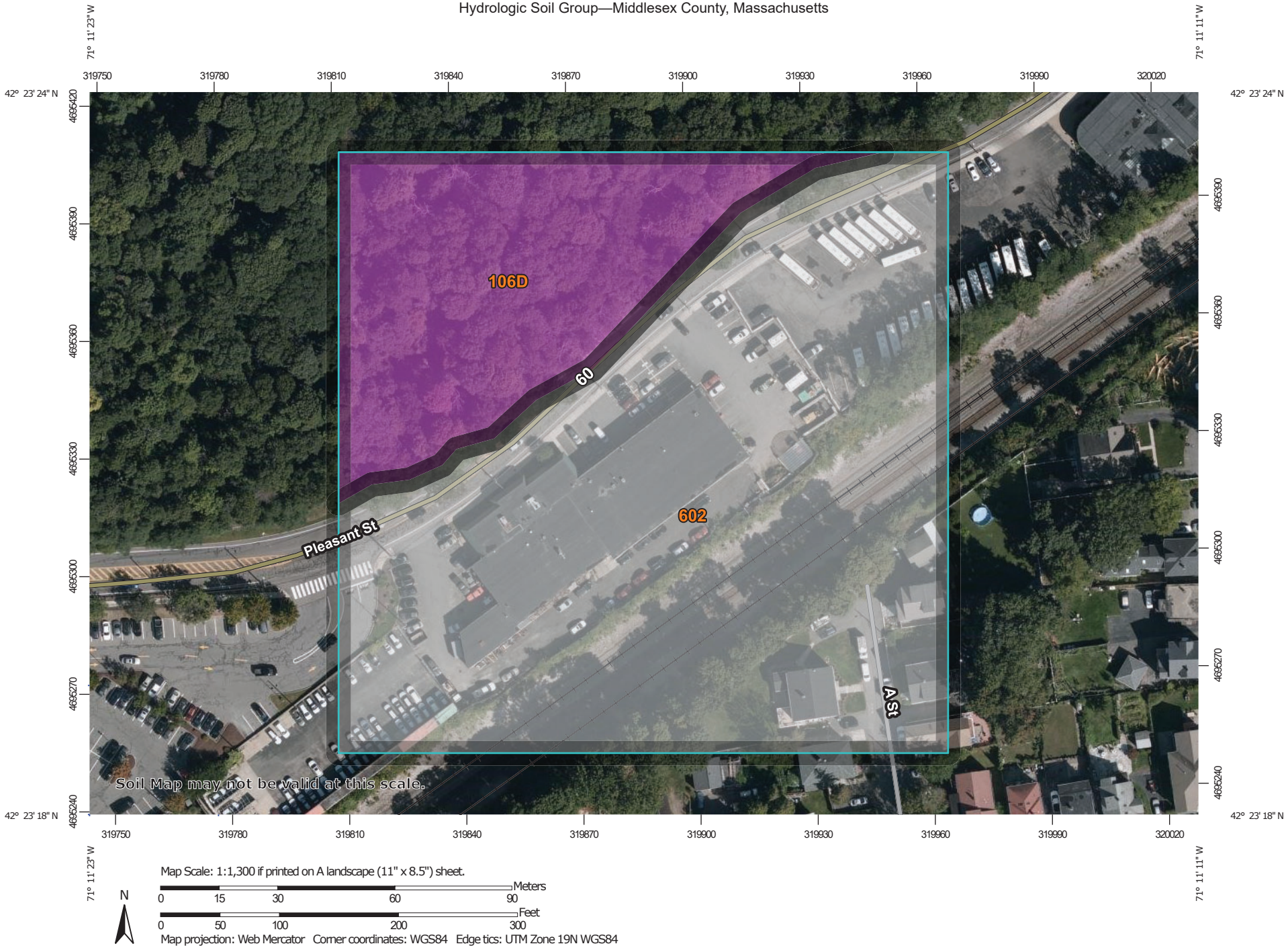
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/10/2021 at 8:08 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX C: SOIL AND WETLAND INFORMATION

- *NCRS CUSTOM SOIL RESOURCE REPORT*



Map Scale: 1:1,300 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 20, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 11, 2019—Oct 5, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
106D	Narragansett-Hollis-Rock outcrop complex, 15 to 25 percent slopes	A	1.6	26.7%
602	Urban land		4.4	73.3%
Totals for Area of Interest			**5.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

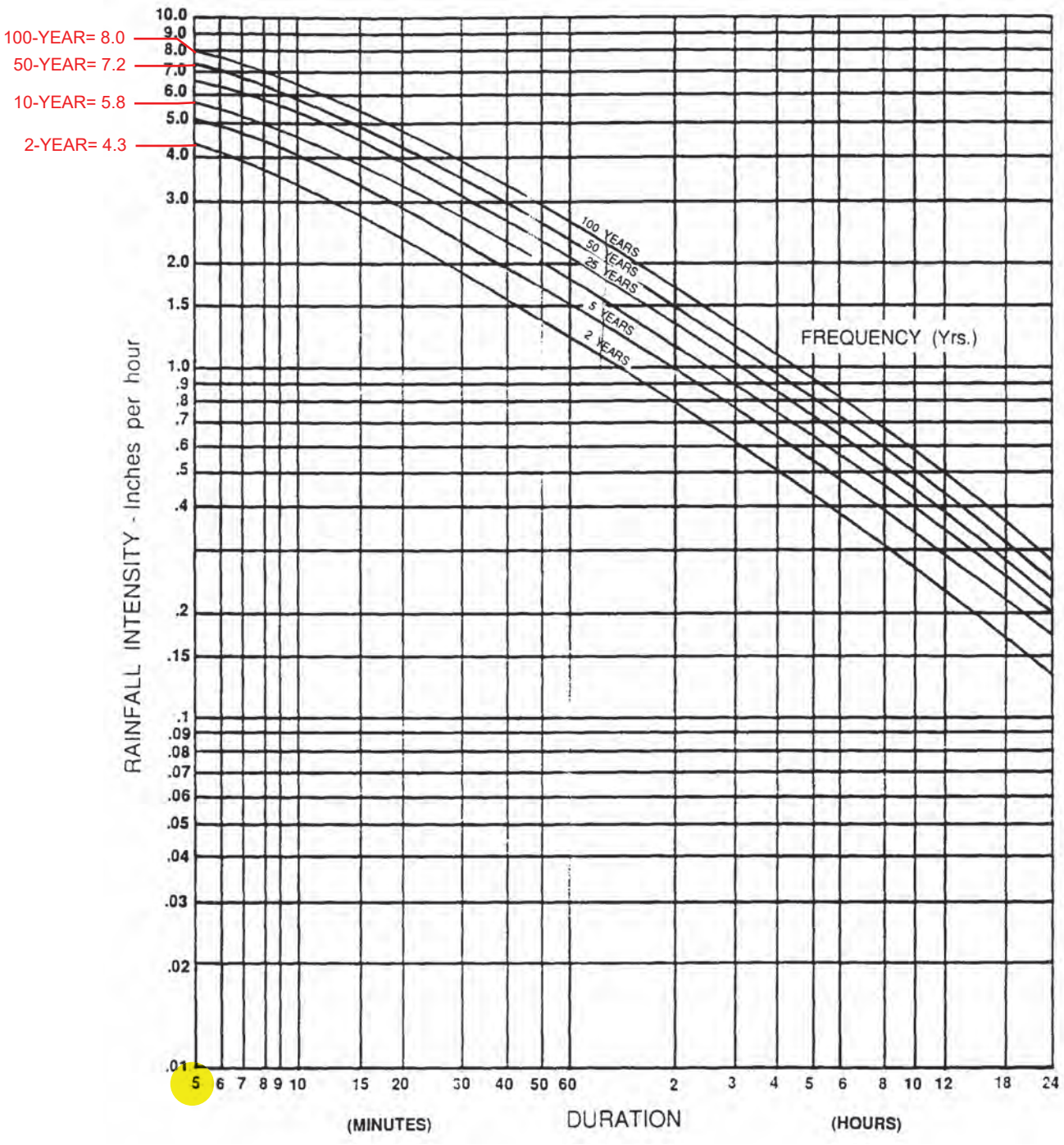
Tie-break Rule: Higher

APPENDIX D: RAINFALL DATA

- *INTENSITY-DURATION-FREQUENCY CURVE*

Exhibit 8-14

Intensity - Duration - Frequency Curve for Worcester, MA



Source: TR55 - Urban Hydrology for Small Wetlands, NRCS

APPENDIX E: OPERATION AND MAINTENANCE

- *STORMWATER OPERATION AND MAINTENANCE PLAN*
- *INSPECTION REPORT*
- *INSPECTION AND MAINTENANCE LOG FORM*
- *LONG-TERM POLLUTION PREVENTION PLAN*
- *ILLICIT DISCHARGE STATEMENT*
- *SPILL PREVENTION*

STORMWATER OPERATION AND MAINTENANCE PLAN

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

RESPONSIBLE PARTY DURING CONSTRUCTION:

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

RESPONSIBLE PARTY POST CONSTRUCTION:

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

Construction Phase

During the construction phase, all erosion control devices and measures shall be maintained in accordance with the final record plans, local/state approvals and conditions, the EPA Construction General Permit and the Stormwater Pollution Prevention Plan (SWPPP). Additionally, the maintenance of all erosion / siltation control measures during construction shall be the responsibility of the general contractor. Upon proper notice to the property owner, the Town/City or its authorized designee shall be allowed to enter the property at a reasonable time and in a reasonable manner for the purposes of inspection.

Post Development Controls

Once construction is completed, the post development stormwater controls are to be operated and maintained in compliance with the following permanent procedures (note that the continued implementation of these procedures shall be the responsibility of the Owner or its assignee):

1. Parking lots and on-site driveways: Sweep at least four (4) times per year and on a more frequent basis depending on sanding operations. All resulting sweepings shall be collected and properly disposed of offsite in accordance with MADEP and other applicable requirements.

STORMWATER MANAGEMENT SYSTEM

POST-CONSTRUCTION INSPECTION REPORT

LOCATION:

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

RESPONSIBLE PARTY:

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

NAME OF INSPECTOR:	INSPECTION DATE:
Note Condition of the Following (sediment depth, debris, standing water, damage, etc.):	
Other:	
Note Recommended Actions to be taken on the Following (sediment and/or debris removal, repairs, etc.):	
Other:	
Other:	
Comments:	

STORMWATER INSPECTION AND MAINTENANCE LOG FORM

Calverde Naturals, LLC
1010 Pleasant Street – Belmont, MA

Stormwater Management Practice	Responsible Party	Date	Maintenance Activity Performed

LONG-TERM POLLUTION PREVENTION PLAN

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

RESPONSIBLE PARTY DURING CONSTRUCTION:

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

RESPONSIBLE PARTY POST CONSTRUCTION:

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

For this site, the Long-Term Pollution Prevention Plan will consist of the following:

- No outdoor maintenance or washing of vehicles allowed.
- The property owner shall be responsible for "good housekeeping" including proper periodic maintenance of building and pavement areas, curbing, landscaping, etc.
- Proper storage and removal of solid waste (dumpsters).
- Sweeping of driveways a minimum of twice per year with a commercial cleaning unit. Any sediment removed shall be disposed of in accordance with applicable local and state requirements.
- Regular inspections and maintenance of Stormwater Management System as noted in the "O&M Plan".
- Snow removal shall be the responsibility of the property owner. Snow shall not be plowed, dumped and/or placed in forebays, infiltration basins or similar stormwater controls. Salting and/or sanding of pavement / walkway areas during winter conditions shall only be done in accordance with all state/local requirements and approvals.

OPERATON AND MAINTENANCE TRAINING PROGRAM

The Owner will coordinate an annual in-house training session to discuss the Operations and Maintenance Plan, the Long-Term Pollution Prevention Plan, and the Spill Prevention Plan and response procedures. Annual training will include the following:

Discuss the Operations and Maintenance Plan

- Explain the general operations of the stormwater management system and its BMPs
- Identify potential sources of stormwater pollution and measures / methods of reducing or eliminating that pollution
- Emphasize good housekeeping measures

Discuss the Spill Prevention and Response Procedures

- Explain the process in the event of a spill
- Identify potential sources of spills and procedures for cleanup and /or reporting and notification
- Complete a yearly inventory or Materials Safety Data sheets of all tenants and confirm that no potentially harmful chemicals are in use.
- Trash and other debris shall be removed from all areas of the site at least twice yearly.
- In no case shall snow be disposed of or stored in resource areas (wetlands, floodplain, streams or other water bodies).
- If necessary, stockpiled snow will be removed from the Site and disposed of at an off-site location in accordance with all local, state and federal regulations.

ILLICIT DISCHARGE STATEMENT

Certain types of non-stormwater discharges are allowed under the U.S. Environmental Protection Agency Construction General Permit. These types of discharges will be allowed under the conditions that no pollutants will be allowed to come in contact with the water prior to or after its discharge. The control measures which have been outlined previously in this LTPPP will be strictly followed to ensure that no contamination of these non-storm water discharges takes place. Any existing illicit discharges, if discovered during the course of the work, will be reported to MassDEP and the local DPW, as applicable, to be addressed in accordance with their respective policies. No illicit discharges will be allowed in conjunction with the proposed improvements.

Duly Acknowledged:

_____

Name & Title

SPILL PREVENTION AND RESPONSE PROCEDURES (POST CONSTRUCTION)

In order to prevent or minimize the potential for a spill of Hazardous Substances or Oil or come into contact with stormwater, the following steps will be implemented:

1. All Hazardous Substances or Oil (such as pesticides, petroleum products, fertilizers, detergents, acids, paints, paint solvents, cleaning solvents, etc.) will be stored in a secure location, with their lids on, preferably under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on site.

3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided on site.

4. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

5. It is the OWNER's responsibility to ensure that all Hazardous Waste on site is disposed of properly by a licensed hazardous material disposal company. The OWNER is responsible for not exceeding Hazardous Waste storage requirements mandated by the EPA or state and local authorities.

In the event of a spill of Hazardous Substances or Oil, the following procedures should be followed:

1. All measures should be taken to contain and abate the spill and to prevent the discharge of the Hazardous Substance or Oil to stormwater or off-site. (The spill area should be kept well ventilated and personnel should wear appropriate protective clothing to prevent injury from contact with the Hazardous Substances.)

2. For spills of less than five (5) gallons of material, proceed with source control and containment, clean-up with absorbent materials or other applicable means unless an imminent hazard or other circumstances dictate that the spill should be treated by a professional emergency response contractor.

3. For spills greater than five (5) gallons of material immediately contact the MADEP at the toll-free 24-hour statewide emergency number: **1-888-304-1133**, the local fire department (**9-1-1**) and an approved emergency response contractor. Provide information on the type of material spilled, the location of the spill, the quantity spilled, and the time of the spill to the emergency response contractor or coordinator, and proceed with prevention, containment and/or clean-up if so desired. (Use the form provided, or similar).

4. If there is a Reportable Quantity (RQ) release, then the National Response Center should be notified immediately at (800) 424-8802; within 14 days a report should be submitted to the EPA regional office describing the release, the date and circumstances of the release and the steps taken to prevent another release. This Pollution Prevention Plan should be updated to reflect any such steps or actions taken and measures to prevent the same from reoccurring.

SPILL PREVENTION CONTROL AND COUNTERMEASURE FORM

Calverde Naturals, LLC
1010 Pleasant Street
Belmont, MA

Where a release containing a hazardous substance occurs, the following steps shall be taken by the facility manager and/or supervisor:

1. Immediately notify The Belmont Fire Department (at **9-1-1**)

2. All measures must be taken to contain and abate the spill and to prevent the discharge of the pollutant(s) to off-site locations, receiving waters, wetlands and/or resource areas.

3. Notify the Belmont Board of Health at (617) 993-2720 and the Conservation Commission at (617) 993-2667.

4. Provide documentation from licensed contractor showing disposal and cleanup procedures were completed as well as details on chemicals that were spilled to the Town of Belmont Board of Health and Conservation Commission.

Date of spill:_____ Time:_____ Reported By:_____

Weather Conditions:_____

Material Spilled	**Location of Spill**	**Approximate Quantity of Spill (in gallons)**	**Agency(s) Notified**	**Date of Notification**

Cause of Spill:_____

_____

Measures Taken to Clean up Spill:_____

_____

Type of equipment: _____ Make: _____ Size:_____

License or S/N: _____

Location and Method of Disposal_____

_____

Procedures, method, and precautions instituted to prevent a similar occurrence from recurring:_____

_____

Additional Contact Numbers:

- DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) EMERGENCY PHONE: 1-888-304-1133
- NATIONAL RESPONSE CENTER PHONE: (800) 424-8802
- U.S. ENVIRONMENTAL PROTECTION AGENCYPHONE: (888) 372-7341