



Traffic Impact Statement

1386 Massachusetts Ave – Arlington, MA

ARL-0017

May 2, 2019

Revised January 5, 2020

TO: Town of Arlington
Board of Selectmen and Redevelopment Board

FROM: Tony Capachietti, *Project Manager*

DATE: October 7, 2019
Revised January 6, 2020

SUBJECT: Apothca, Inc.
Proposed Marijuana Dispensary
1386 Massachusetts Avenue, Arlington, MA

Hayes Engineering, Inc. (HEI) has prepared this Traffic Impact Statement pursuant to the request of the project proponent, Apothca, Inc. (Apothca), in support of the proposed co-located adult-use and medical marijuana dispensary at 1386 Massachusetts Avenue in Arlington, Massachusetts. The purpose of this Impact Statement is to evaluate the anticipated Average Daily and Peak Hour trip generation for the facility.

The existing 2,184[±] square foot (sf.) building at 1386 Massachusetts Avenue is occupied by *Arlington Swift Printing*, a copy, printing and shipping store. The Applicant proposes to convert the facility into a medical and adult-use marijuana dispensary within the existing footprint.



Figure 1 – 1386 Massachusetts Avenue, Arlington, MA © Google Image Capture

Trip Generation



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Average Daily Vehicle Trips and Peak Hour Trips for the project are calculated using data published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition.

The prior use at the facility is best classified as Institute of Transportation Engineers (ITE) Land Use Code (LUC) 920 – Copy, Print and Express Ship Store, defined in the ITE Trip Generation Manual, 10th Edition as being:

... a facility that offers a variety of copying, printing, binding, and shipping services. Retail sales of a limited range of office-related items including packing and shipping supplies are also commonly available. Technology services, such as computer rental and wireless Internet may also be provided.

Estimated Trip Generation rates for the 2,184[±] -sf. facility under its prior use are summarized in Table 1, below.

Table 1: Trip Generation LUC 920 – Copy, Print and Express Ship Store

<u>Time Period</u>	<u>LUC 920 Average Trip Ends per 1,000sf GFA</u>	<u>LUC 920 Estimated Vehicle Trip Ends^(1,2)</u>
Weekday Daily	123.00 ⁽³⁾	269 ⁽³⁾
Weekday AM Peak Hour	8.12	18
Weekday PM Peak Hour	12.30	27
Saturday Daily	Not Published	Not Published
Saturday Peak Hour	Not Published	Not Published

⁽¹⁾ Based on 2,184[±] -sf. of floor area

⁽²⁾ ITE cautions use due to small sample size

⁽³⁾ Estimated as 10 times peak hour

The proposed RMD use is best classified as Institute of Transportation Engineers (ITE) Land Use Code (LUC) 882, Marijuana Dispensary, defined in the ITE Trip Generation Manual, 10th Edition as being:

... a standalone facility where cannabis is sold to patients or consumers in a legal manner.

Trip Generation rates for the proposed 2,184[±] -sf. dispensary use are summarized in Table 2, below. It should be noted that the ITE cautions the use of its Marijuana Dispensary data as it was derived from a small sample set.

Table 2 has been updated to reflect average rates published by Spack Consulting as well as observed rates from dispensaries in Massachusetts from surveys conducted in June and October/November 2019. The decrease in trip generation rates from the June observations to the October/November observations should be noted as they correspond



to an approximate 400% increase in the number of operating recreational dispensaries in the Commonwealth.

TABLE 2
 Trip Generation, Proposed Marijuana Establishment

Time Period	ITE Average Trip Ends per 1,000sf GFA	ITE Estimated Trip Ends ^(1,2)	Spack Consulting Weighted Average per 1,000sf GFA	Spack Consulting Estimated Trip Ends ⁽¹⁾	Salem and Brookline Average Observed Rate per 1,000sf. ⁽³⁾	June 2019 Rate – Estimated Trip Ends ^(1,3)	Observed Rate per 1,000sf. Apothca Lynn, MA ⁽⁴⁾	Apothca Lynn Rate Estimated Trip Ends ^(1,4)
Weekday Daily	252.70	552	252.58	552	523.2	1,143	144.16	315
Weekday AM Peak Hour	20.88	46	23.61	52	40.6	89	Not Observed	-
Weekday PM Peak Hour	29.93	65	39.85	87	62.0	135	Not Observed	-
Saturday Daily	259.31	566	259.31	566	793.8	1,734	176.74	386
Saturday Peak Hour	36.43	80	36.43	80	74.2	162	Not Observed	-

⁽¹⁾ Based on 2,184± -sf. of floor area

⁽²⁾ ITE cautions use due to small sample size

⁽³⁾ Based on customer counts by HEI in Brookline and Salem, MA during June 2019

⁽⁴⁾ Based on transactions logged between October 26 and November 18, 2019 at the Apothca Lynnway facility in Lynn, MA

Trip generation rates for dispensary uses vary greatly which is expected for a new and limited land use. This sort of disparity was observed during the expansion of Krispy Kreme donut shops into new areas, however, as the uniqueness of the use dissipated so did the traffic. Hayes Engineering, Inc.’s experience and observations through our permitting assistance for over 110 cannabis related businesses in the Commonwealth of Massachusetts also indicates a downward trend in trip generation for dispensary uses. **For the purposes of this (revised) analysis the Spack Consulting Rates were selected as they are slightly higher than the ITE rates for peak hour and lie between the two observed Massachusetts rates.**

Table 3, below, compares estimated vehicle trip ends for the previous copy facility use and proposed marijuana business use:

TABLE 3
 Trip Generation, Summary – Prior Use vs. Proposed RME



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<u>Time Period/Direction</u>	<u>Prior Use Vehicle Trip Ends</u>	<u>Proposed RME Vehicle Trip Ends</u>	<u>Change in Trip Ends</u>
Weekday Daily	269 ⁽²⁾	552	+283
Weekday AM Peak Hour	18	52	+34
Weekday PM Peak Hour	27	87	+60
Saturday Daily	269 ⁽³⁾	566	+297
Saturday Peak	27 ⁽³⁾	80	+53

⁽¹⁾ As compared to weekday daily traffic for the prior use

⁽²⁾ Estimated as 10 times peak hour

⁽³⁾ Estimated as being equivalent to weekday daily

The proposed dispensary results in an increase to projected trip ends to the facility when compared to the previous use for all scenarios. Each vehicle represents two trip ends, one arriving and one departing from the facility. The anticipated increase in weekday daily vehicle trips to the facility is 142 vehicles (283 trip ends). It should be noted that not all trips represent “new” or “destination” vehicles on the route; destination trips have the greatest effect on traffic conditions. Pass-by trips have minimal impacts to traffic conditions. A pass-by trip is one where a vehicle is already on the route or very close to the route and stops on the way to their ultimate destination. Studies have shown that for retail uses similar to the proposed dispensary, a substantial portion of vehicle trips are from existing traffic passing by the site or diverted from another route in the vicinity of site. Data presented in the ITE Trip Generation Handbook indicates that for the average percentage of pass-by trips for Pharmacy/Drugstores without Drive-Through Windows is 49-percent during the weekday PM peak hour. HEI conducted a transportation survey of 257 patrons exiting an existing dispensary operating in Brookline, MA on June 13, 2019 identified 53.7% of patrons considered their stop to be a pass-by or diversion trip on their way to their ultimate destination. **While it is our opinion that dispensary uses, as they become more prevalent, will be similar to convenience type uses in their pass-by rates no reduction in trip generation is credited in this analysis.**

HEI also evaluated customer data from three (3) dispensaries currently operating in Massachusetts in Brookline, Salem and Gardner to determine the AM peak hour occurs at 11a-noon and does not typically coincide with the AM rush hour for traffic on the adjacent roadways. Peak PM hours for these dispensaries typically occur between the hours of 6p-7p.

The Massachusetts Department of Transportation Highway Division maintains vehicle counts on Massachusetts Avenue on either side of the site (see Figure 2) at the following locations:

- Location ID: 4871 - Massachusetts Avenue North of Pleasant Street
- Location ID: 4930 - Massachusetts Avenue North of Appleton Street

Average Annual Daily Traffic (AADT), as reported by MassDOT, for these count locations indicate that approximately 20,000 vehicles per day pass the project site. The projected daily increase in vehicle trips of 142 on an average day represents less than 1% of the 17,613



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vehicles reported at Location ID 4930. As such no significant changes to the prevailing traffic conditions are anticipated as a result of this project.

The Arlington Transportation Advisory Committee conducted AM and PM Peak turning movement counts at the intersection of Massachusetts Avenue and Park Avenue on November 19, 2019. The counts were conducted during the AM peak hour between 8:00a-9:00a and the PM peak hour between 5:00p and 6:00p. The movement counts were translated to eastbound and westbound traffic passing the project site and are summarized below:

	<u>Eastbound</u>	<u>Westbound</u>	<u>Total</u>
AM Peak Hour (8:00a-9:00a)	357 vehicles	259 vehicles	616 vehicles
PM Peak Hour (5:00p-6:00p)	429 vehicles	237 vehicles	666 vehicles

The total capacity of a two-way, two-lane highway is 3,200 passenger cars per hour, as identified in the Transportation Research Board's Highway Capacity Manual. The Apothca facility will not be open during the AM peak hour, however during the PM peak hour the 30 additional vehicles (60 trip ends) will increase the vehicle/capacity (v/c) ratio from 20.8% to 21.7%. Generally, a v/c ratio greater than 16% and less than 32% corresponds to level of service (LOS) C for a two-lane highway segment on level terrain without a passing zone. The projected increase in peak hour vehicle trips is not anticipated to adversely effect the prevailing traffic conditions.

The site is also located in proximity to a robust public transportation network. The project site is located within one-quarter mile of stops along the Massachusetts Bay Transit Authority (MBTA) 62, 62/76, 77, and 79 bus routes.

Parking Analysis

The site in its existing condition provides off-site parking for 6 vehicles. The parking lot can be reconfigured to provide parking for up to 12 vehicles (including one accessible space). The Town of Arlington Zoning By-Law section 6.1.4 requires 1 space per 300 sf. of floor area for retail uses. The parking requirement for the 2,184-sf. dispensary would be 7-spaces. Employees will be encouraged to use public transportation to avail as many spaces as possible for customers. The average transaction time for customers is between 15 and 20 minutes. This allows for the 12 parking spaces to turn over between 3 and 4 times per hour (36-48 vehicles per hour); the parking levels are adequate to handle the project PM peak hour of 44 vehicles (87 trip ends).

In addition to the on-site parking spaces there is additional on-street parking (2-hour limit) along both sides of Massachusetts Avenue in the project vicinity with taxi stands located immediately across Massachusetts Avenue from the site at the Arlington Heights Busway servicing the 62, 77, and 79 routes.



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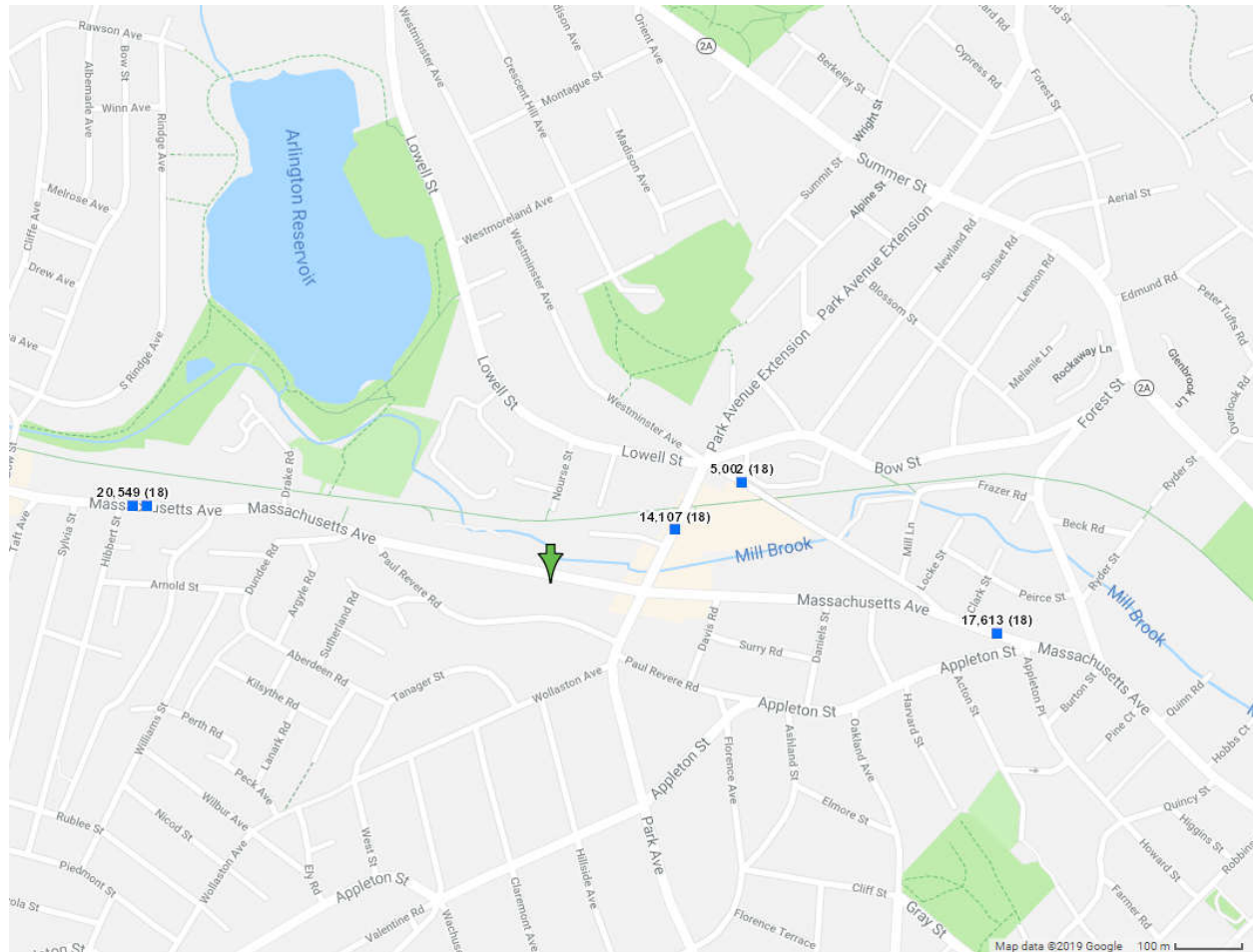


Figure 2 – 1386 Massachusetts Avenue, Arlington, MA MASSDOT Traffic Count Data

Queue Management

Customers will queue in the interior vestibule providing space for 15 people prior to entering the dispensary floor which will provide ample space for an additional 20-25 customers. The floorplate capacity of 35-40 customers, at an average transaction time of 15 minutes, will allow for approximately 105-160 customers per hour to be processed using only the interior queue.

During the initial opening period, customer levels may increase from those projected in this report as it may be the first recreational facility in the Arlington area. Apothca will incentivize the use of public transportation by its employees. Many of the current Apothca employees at its medical facility in Arlington use public transit to commute to work; this staff will transition to the new facility which is also proximate an MBTA bus route. Apothca will also allow those employees using bicycles to commute the ability to store their bicycles inside the building



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although no structured interior bicycle parking will be provided. Apothca will provide bicycle racks on the easterly side of the building for up to four (4) bicycles.

Apothca will also have temporary parking lot attendants during the initial opening phase to direct traffic into and out of the lot and manage any exterior queues that may form. The exterior queue will be maintained along the sidewalk that extends to the rear of the facility. At no time will customers be allowed to queue in the traveled way.

It is recommended that the Proponent work with the Arlington public safety offices to develop an opening day strategy that provides for police details, parking attendants and way-finding assistance to minimize disruptions during the initial opening period. This strategy should be reviewed on a daily, or weekly, basis to evaluate its continuing need and implemented until customer levels normalize.