


Holistic Industries
304 Somerville Ave
Somerville, MA 02143

Traffic Study

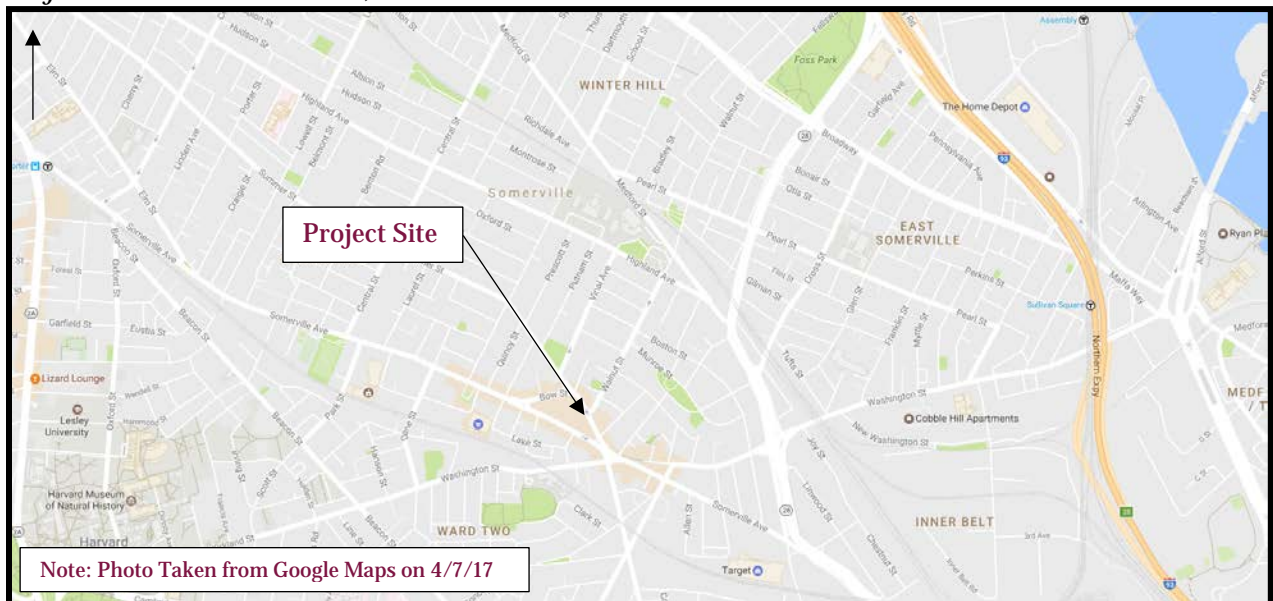
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 **Dewberry**
280 Summer Street, 10th Floor
Boston, MA 02210
Tel.: 617.695.3400
Fax: 617.695.3310
www.dewberry.com

Project Description

Holistic Industries has proposed a new medical marijuana facility to be located at 304 Somerville Ave in Somerville, MA. The facility will replace an existing tax practitioner small business and utilize the existing building. The total square footage of the facility will be 3,334 SF overall with 2,333 SF dedicated to retail space. The proposed hours of operation are Monday-Saturday, 10 AM – 8 PM, and Sunday 12 PM – 6 PM. The section of Somerville Ave in front of the proposed facility runs generally in a northwest to southeast direction. It is a one-way, two-lane street with a bike lane on the southern side in the Union Square area of Somerville. There are metered parking spaces on both sides of Somerville Ave from its junction with Bow Street to where it intersects Union Square.

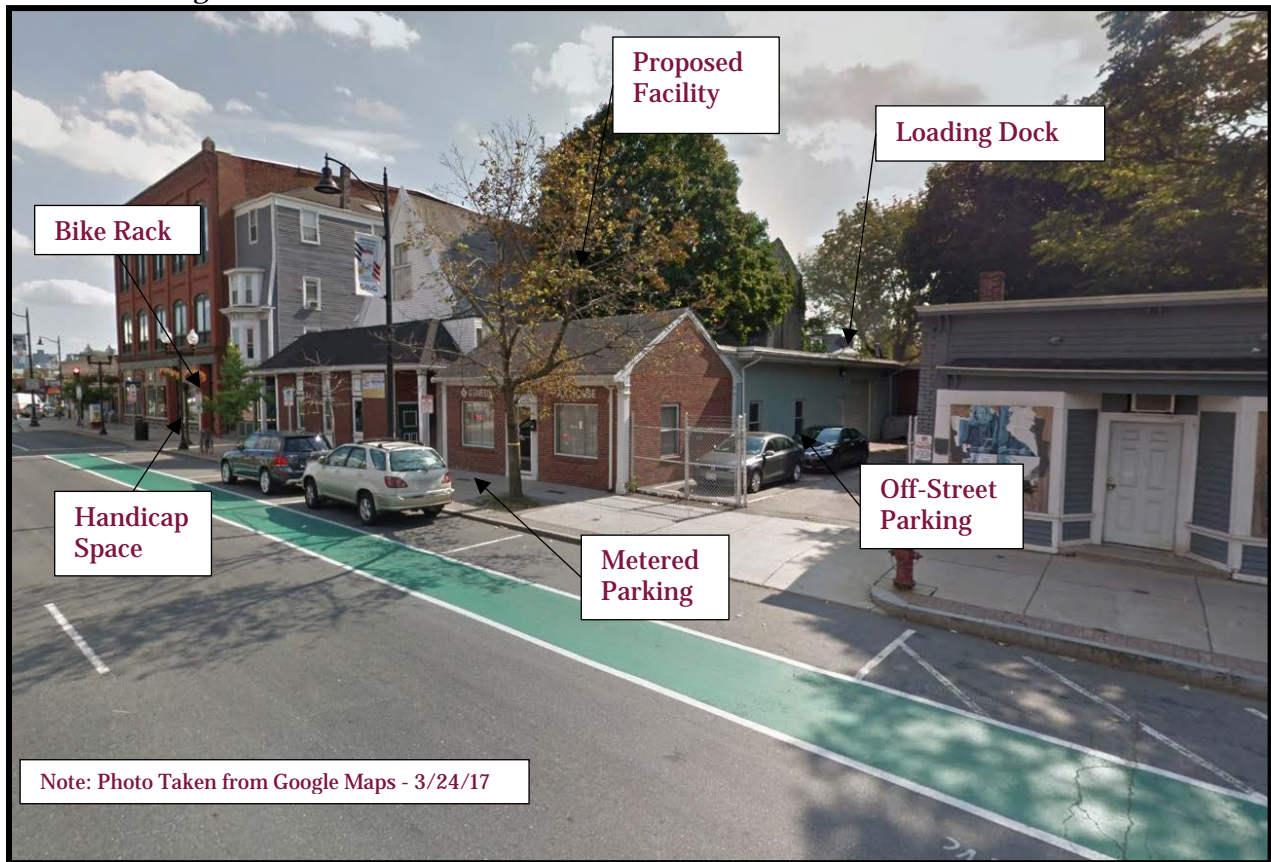
Project Location in Somerville, MA



Existing Transportation Access Network

For motor vehicles, there is metered street parking in front of the facility on Somerville Ave on both sides of the street (see below). There is (1) marked handicap space in front of the facility, approximately 50 feet beyond the facility entrance.

Photo 2: Existing Conditions

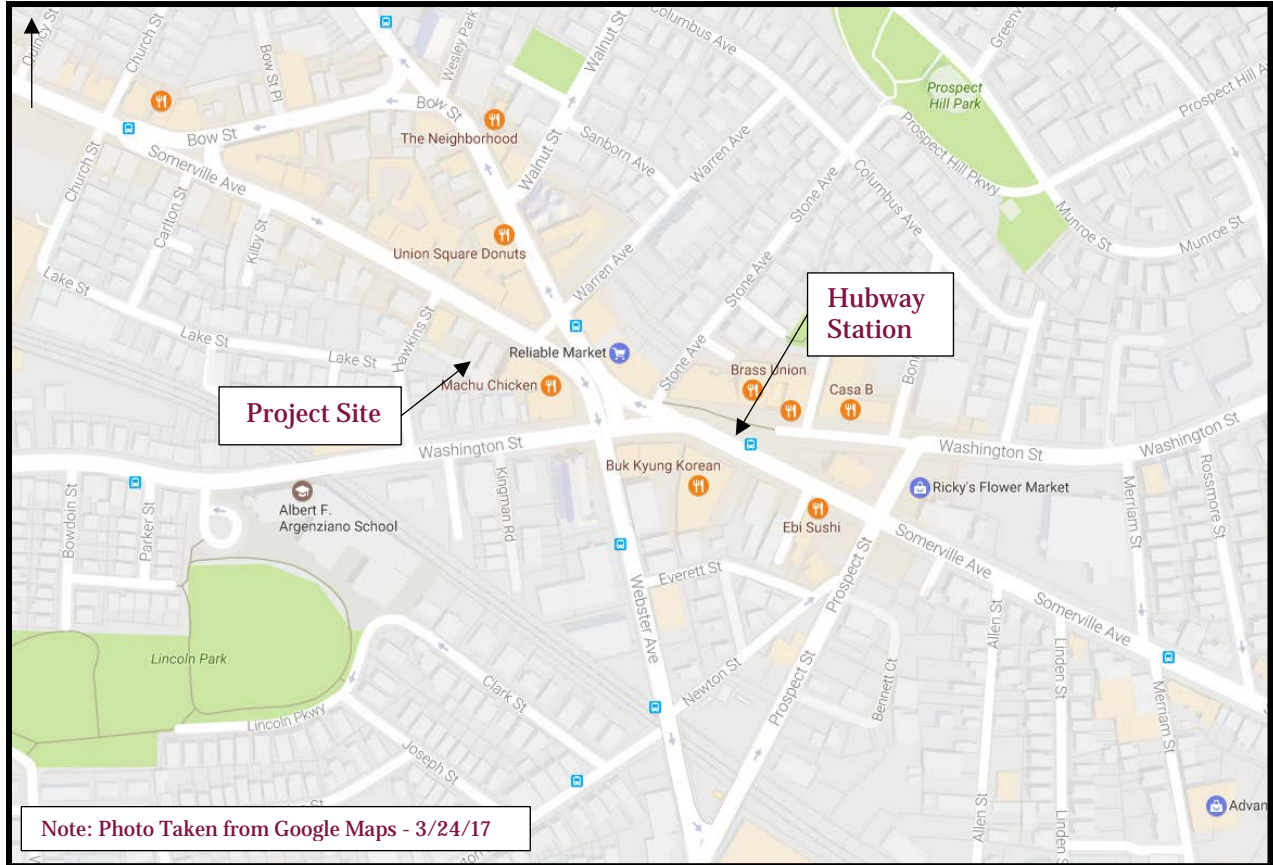


For public transit users, the closest MBTA train stations are Sullivan Square (Orange Line), Harvard Square and Porter Square (Red Line), and Lechmere (Green Line). However, these train stations are not within walking distance (less than 1/2 mile) of this facility and therefore incoming patrons would need to transfer to buses. Bus access is as follows:

- From Sullivan Square, the CT2, 91, and 86 buses serve Somerville Ave in Union Square throughout the day. Trips are approximately 10-14 minutes each way.
- From Harvard Square, the 86 bus serves Washington Street in Union Square throughout the day. Trips are approximately 13 minutes each way.
- From Porter Square, the 87 bus serves Somerville Ave in Union Square throughout the day. Trips are approximately 12 minutes each way.
- From Lechmere, the 87 bus serves Bow Street in Union Square throughout the day. Trips are approximately 10 minutes each way.

For cyclists, there is a Hubway station on Somerville Ave in Union Square approximately 500 feet past the facility entrance (see Hubway Station Location). For bike owners, there is (1) bike rack with space for (2) bikes located approximately 50 feet from the facility entrance. There are additional public bike racks in nearby Union Square.

Hubway Station Location



For pedestrians, there are sidewalks on both sides of Somerville Ave. To access the facility from Union Square bus stops and the Hubway Station, there are a series of crosswalks clearly marked across all streets in Union Square. There are push buttons at each cross walk which provide protected pedestrian phases.

Trip Generation

Trip generation data is typically estimated using the Institution of Transportation Engineers (ITE) Trip Generation manual. The medical marijuana industry is relatively new, so the information published in *Trip Generation, 9th Edition*, does not include industry-specific data.

To estimate trip generation rates using the ITE manual, three comparable land use codes were selected. The resulting trip rates are displayed in Table 1.

Table 1: Trips Generated Based on ITE Trip Generation Manual

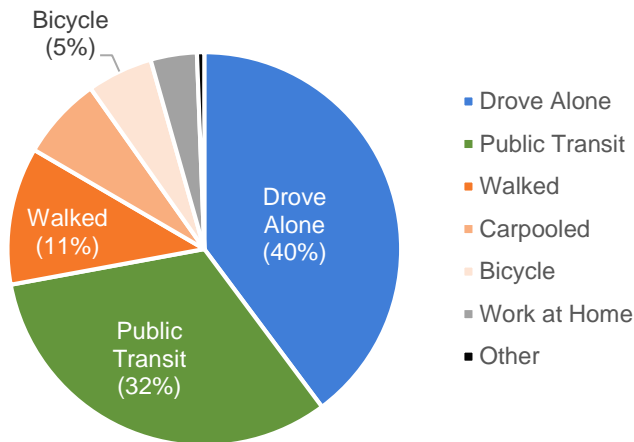
ITE Code	Description	Trips Generated ¹
814	Variety Store	Not available
826	Specialty Retail Center	136
897	Medical Equipment Store	Not Available

¹ Weekday Trips

The studies used for the land use code 826 ITE table were completed in the 1970s and 2000s at four locations across the US. The four studied locations had gross floor area of 15,000-42,000 square feet, far larger than the project site. The estimated 136 daily trips generated (Table 1) for the proposed facility will be used in this report as a conservative estimate and are based on the estimated 2,333 SF of retail space.

Using American Community Survey data provided by the Census Bureau, the City of Somerville reported the mode splits for commuting to work in 2015 (Figure 1).

Figure 1: 2015 Commuting Behavior in Somerville, MA



Source: U.S. Census Bureau

The data reveals that 40% of commuters in the City of Somerville choose to drive to work. Assuming this behavior is consistent for patrons of the proposed facility, and using 136 trip generations estimated, the number of daily weekday trips by car will be 54. Estimating that 10% will arrive during the peak hour, and that each patron will remain at the facility for approximately 30 minutes, the facility will require 3 parking spaces for patrons.

Parking Demand

It is anticipated that there will be 5 employees on site during business hours. All are expected to be local residents that will not need parking spaces at this facility. There will be three (3) parking spaces located in the private lot adjacent to the building. One of these spaces will be reserved for the manager on duty and at least one of the remaining spaces will be a marked handicap parking space that will be available to customers of the facility.

The facility proposes to have delivery vehicles on site once per week. The delivery vehicles will utilize the existing paved driveway and loading dock area located at the rear of the building for all deliveries. This will keep delivery trucks from blocking the street, impeding traffic flow, or occupying a parking space.

A parking study was done to determine if additional parking spaces would be needed for the proposed facility. For this study, a total of 32 marked parking spaces on both sides of Somerville Ave within 2 blocks of the project site were chosen for observation. These were deemed to be within reasonable walking distance (3-5 minutes) of the facility, the furthest being approximately 550 feet away (see below). The parking occupancy was observed at 15-minute intervals over a 2-hour time period on two different days: Sunday, April 2nd from 1:55 PM – 3:40 PM, and Monday, April 4th from 4:35 PM – 6:20 PM. Weather was around 50°F and sunny on both days.

Limits of Parking Study



Table 2: Parking Study Occupancy Results

Side of Street	April 2nd, 2017 - Sunday Afternoon		April 3rd, 2017 - Monday Afternoon	
	Spaces Available (%)	Average Number of Available Spaces	Spaces Available (%)	Average Number of Available Spaces
Northern	14.8	2.4	41.4	6.6
Southern	21.9	3.5	64.1	10.3
Total	18.4	5.9	52.7	16.9

The occupancy data provided here do not include the 5-minute loading space on the Northern side of Somerville Ave or the handicap space in front of the project site. During the study period, it was noted that the (1) handicap space in front of the project site was occupied over 60% of the time.

During the high traffic times observed during the Sunday afternoon study period, an average of 5.9 spaces were available at any given time. At off-peak hours during the Monday afternoon study period, an average of 16.9 spaces were available.

Due to the high availability of parking spaces, a full traffic analysis of Somerville Ave was not conducted.

Transportation Demand Management

The following is a list of recommendations based on the parking study and existing transportation access network findings:

- Encourage patrons and employees to utilize Hubway
- Provide (1) additional handicap space in the lot adjacent to the proposed facility
- Continually encourage all patrons and employees to utilize alternatives to driving to the facility through website postings as well as in-house pamphlets and posters
- Provide patrons and employees with detailed access information on alternative modes of transport, including:
 - MBTA bus routes and schedules
 - Bike parking locations and Hubway stations
 - MBTA The Ride services
 - Car sharing/ride matching programs like Lyft and Uber

Conclusion

Current parking occupancy rates, in conjunction with data on trip generation for similarly sized small businesses, do not warrant the addition of any further parking facilities. The proposed facility is abundantly served by public transportation via bus routes from nearby MBTA train stations and existing bicycle facilities. The remainder of patrons will be adequately served through the addition of (1) handicap space and the use of existing marked parking spaces within the vicinity of the building.

Land Use: 826 Specialty Retail Center

Description

Specialty retail centers are generally small strip shopping centers that contain a variety of retail shops and specialize in quality apparel, hard goods and services, such as real estate offices, dance studios, florists and small restaurants. Shopping center (Land Use 820) is a related use.

Additional Data

The sites were surveyed between the late 1970s and the 2000s in California, Florida, Georgia, New York and Pennsylvania.

Source Numbers

100, 304, 305, 367, 423, 507, 577

Specialty Retail Center (826)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday

Number of Studies: 4
Average 1000 Sq. Feet GLA: 25
Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
44.32	21.30 - 64.21	15.52

Data Plot and Equation

Caution - Use Carefully - Small Sample Size

