

Mobility Management Plan

Proposed Residential 9-15 Taylor Street

Somerville, MA



April 23, 2024

Garrett Construction Co.

MOBILITY MANAGEMENT PLAN

Proposed Residential Development 9-15 Taylor Street Somerville, Massachusetts

Prepared for:

City of Somerville

Applicant:

Garrett Construction Company

April 23, 2024

Prepared by:

Bayside Engineering
600 Unicorn Park Drive
Woburn, MA 01801

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SECTION 1: CONTACT INFORMATION

Project:

Proposed Apartments
9-15 Taylor Street
Somerville, MA 02144

Proponent:

Garrett Einis
Taylor Mystic LLC
47 Hillcrest Road
Weston, MA 02493
einisg@gmail.com
917-894-6127

SECTION 2: PROJECT DESCRIPTION

The site is located on the southeast side of Taylor Street between Sydney Street and Mystic Avenue. The site is zoned UR. The site is abutted by residential apartments on all sides. Currently, the site consists of two multi-family apartment buildings. Two driveways with curb cuts currently provide access to the site.

As currently proposed, the Project will consist of the demolition of the existing building and the construction of a single residential apartment building with 34 dwelling units.

Parking will be provided for 20 vehicles adjacent to the building and four (4) spaces in front of the site on Taylor Street. Access to the site is proposed by way of a single driveway to Taylor Street. Figure 1 shows the site location in relation to the surrounding area.



Figure 1
Site Location Map

The Project is bounded by Taylor Street to the west, and residential properties to the north,

south, and east. The project will close the two existing driveways to buildings 9 and 15 Taylor St. Vehicular access to the site is proposed by way of a new driveway at the southerly end of the property. Tenant access to the site will be provided by way of an entranceway fronting on Taylor Street as well as through elevators and stairs located within the central core of the building.

Parking will be provided for 20 vehicles adjacent to the building and four (4) spaces in front of the site on Taylor Street. Access to the site is proposed by way of a single driveway to Taylor Street.

Construction is anticipated to begin in June of 2024 and be complete by May 2025.

Parking will be provided for 20 vehicles adjacent to the building and four (4) spaces in front of the site on Taylor Street. The proposed parking results in an overall parking ratio of 0.71 spaces per dwelling unit for the Project.

The Bicycle Parking Plan shows the layout of where the bicycle parking will be on the site. Bicycle parking will be provided at no cost to the tenants of the Project. The project will provide outdoor bicycle racks to accommodate short-term parking for five (5) bicycles.

Loading and unloading of trucks for moving would be provided on site from the proposed parking lot. Deliveries would access the site from the front from Taylor Street. Garbage removal would be completed by a garbage truck, which would stop on Taylor Street and the trash containers would be wheeled out to the garbage truck and unloaded.

SECTION 3: LOCAL TRANSPORTATION REVIEW

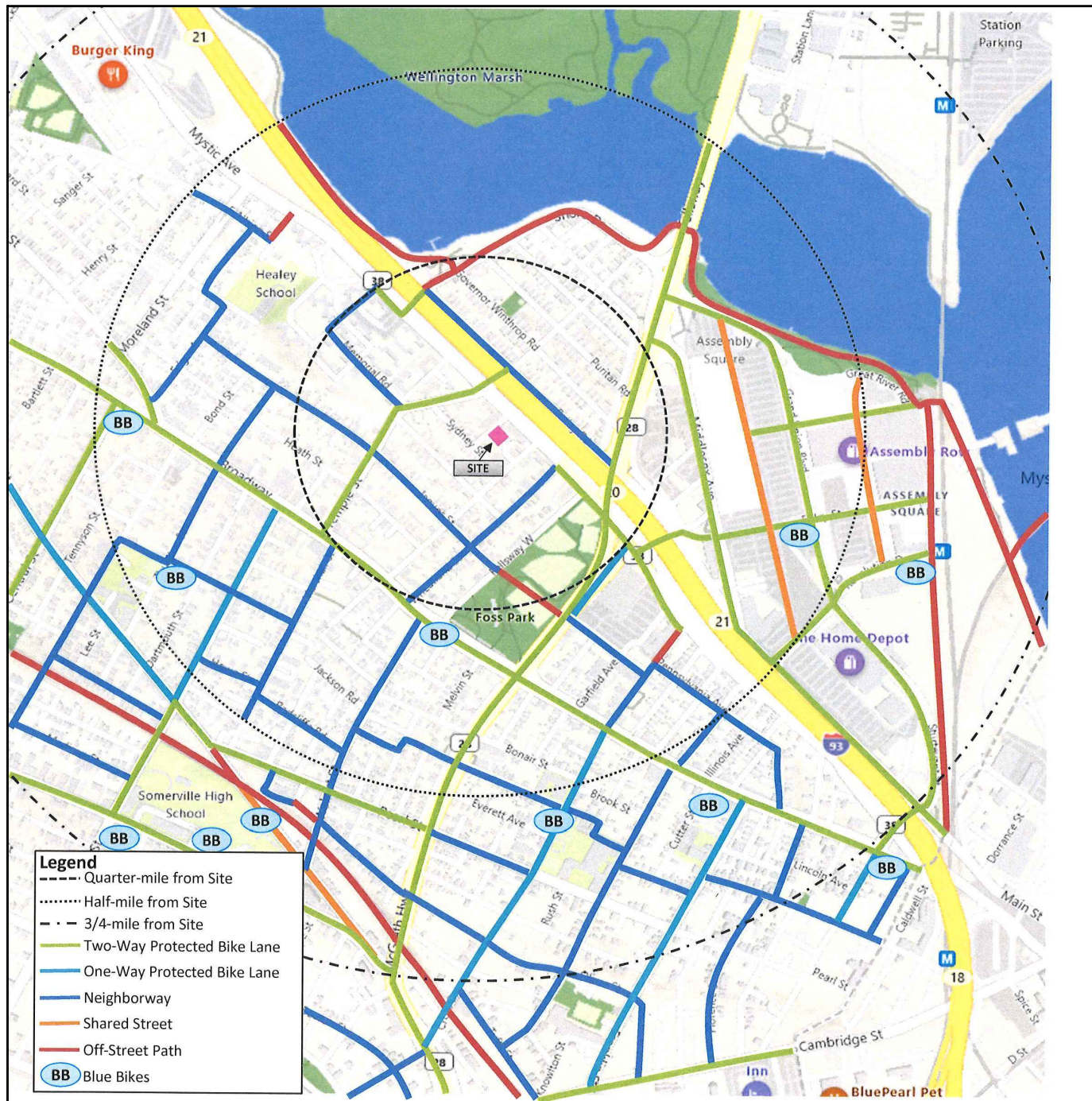
3.1 BICYCLE NETWORK

Within the study area, marked bicycle lanes are provided along Mystic Avenue (southbound only) and Temple Street (westbound only), with the remainder of the study area roadways generally providing sufficient width (combined travel lane and paved shoulder) to support bicycle travel in a shared traveled-way configuration. Figures 1 through 3 show the 2022 Existing weekday morning, weekday evening and Saturday midday peak-hour bicycle volumes at the study area intersections. Bicycle activity within the study area was primarily focused along the Mystic Avenue corridor, and along Temple Street.

Summarized on Figure 2 is a graphic showing the existing bicycle routes in Somerville. This map was obtained from Bike Somerville – City of Somerville Bicycle Network Plan (dated April 2023).

The Project is located in close proximity to bike lanes along Temple Street to Broadway and then to Mount Pleasant Street to the east or Powder House Square to the west. A few blocks further south, and generally parallel to Broadway is the existing Somerville Community Path. The Somerville Community Path is a paved rail trail in Somerville, running approximately 3.2 miles from Massachusetts Avenue to East Cambridge by way of Davis Square.

There are also several Bluebikes bike share stations near the Project site. The nearest Bluebikes Station is located at the intersection of Broadway and Fellsway West (nine (9) docks). The next closest, Broadway at Central Street, offers 16 docks. Beyond those two, both of which are within a 0.7 mile walk of the Project site, six (6) additional stations exist within a mile walk of the site. The existing Bluebikes stations in relation to the site are also shown on Figure 2.



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600 Unicorn Park Drive ▲ Woburn, MA 01801
 Phone: 781.932.3201 ▲ Fax: 781.932.3413
www.baysideengineering.com

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Figure 2
 Existing Bicycle Network

3.2 PEDESTRIAN FACILITIES

Pedestrian facilities, including sidewalks, curb ramps, and marked crosswalks, around the Project site are comprehensive, providing access from the site to the amenities and transportation resources of the surrounding neighborhood. Destinations like Sullivan Square can be reached within a one-mile walk, while Powder House Square can be reached within a 1.7 mile walk.

Generally, sidewalk widths vary between approximately 10 feet along Mystic Avenue and Temple Street, to approximately 7 feet along Taylor Street. Crosswalks exist at all intersection crossings near the Project site.

3.3 LOCAL TRANSIT NETWORK OVERVIEW

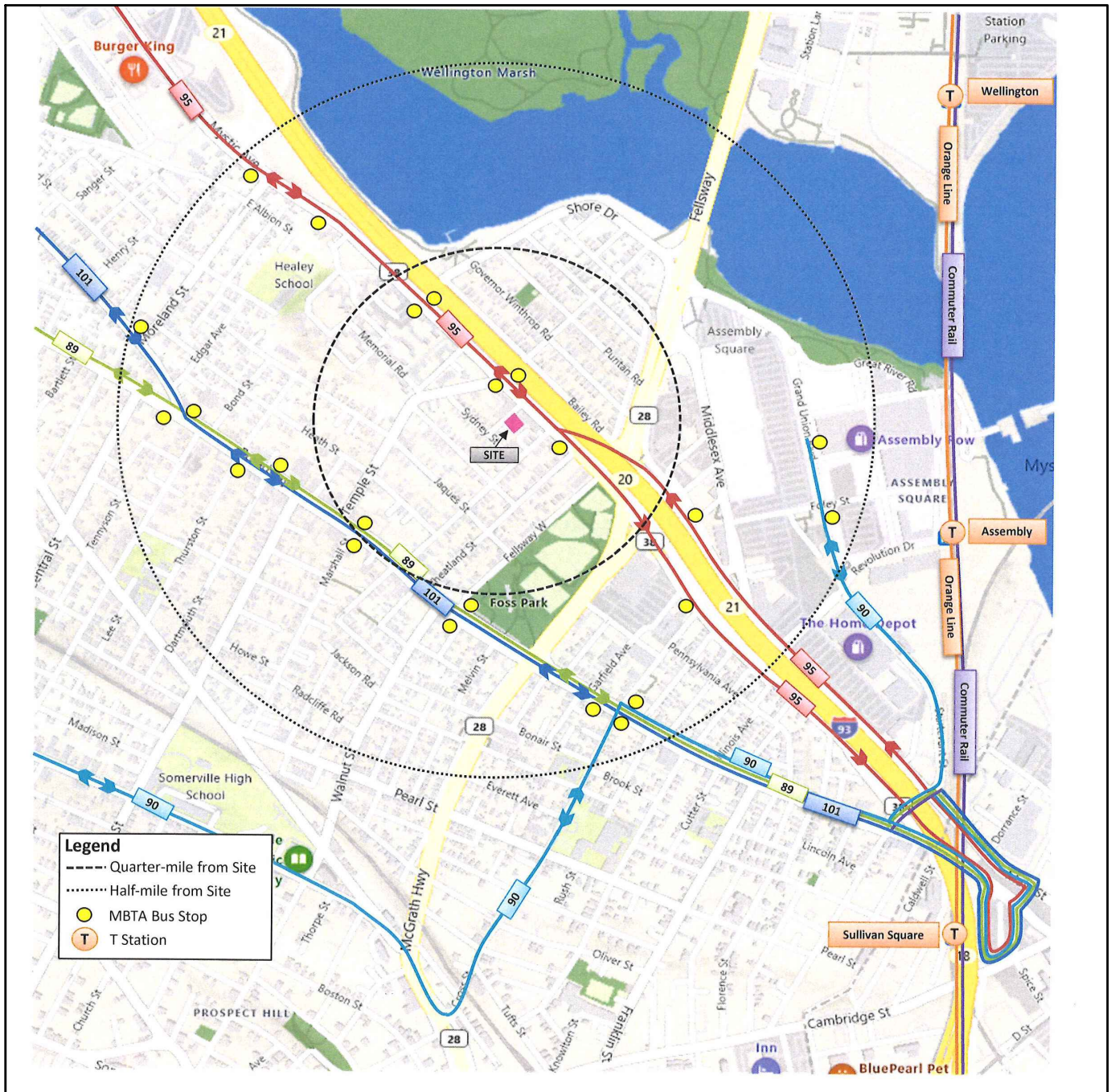
3.3.1 Bus Service

Table 1 on the following page summarizes existing MBTA bus service in the study area. Figure 3 shows the existing transportation facilities around the site.

Bus Route 89 provides access from Sullivan Square to Clarendon Hill or Davis Square. The closest bus stop to the project is on Broadway at Temple Street. Route 89 bus service is provided Monday through Friday from 4:30 AM to 1:47 AM, Saturday 4:38 AM to 1:50 AM, and Sunday from 5:24 AM to 1:40 AM. Route 89 operates during the weekday morning and evening peak periods, with average headways of 10 to 12 minutes, and with approximately 3,479 average daily boardings on weekdays, 1,714 average boardings on a Saturday, and 969 average boardings on a Sunday.

Bus Route 90 provides access from Assembly Row to Davis Square. The closest bus stop to the project is on Broadway at Temple Street. Route 90 bus service is provided Monday through Friday from 6:30 AM to 10:26 PM, Saturday 7:10 AM to 10:35 PM, and Sunday from 10:30 AM to 7:04 PM. Route 90 operates during the weekday morning and evening peak periods, with average headways of 35 minutes, and with approximately 1,073 average daily boardings on weekdays, 564 average boardings on a Saturday, and 330 average boardings on a Sunday.

Bus Route 95 provides access from Sullivan Square to Arlington Center or West Medford. The closest bus stop to the project is on Mystic Avenue at Temple Street. Route 95 bus service is provided Monday through Friday from 4:40 AM to 1:43 AM, Saturday from 5:45 AM to 1:41 AM, and Sunday from 8:00 AM to 1:39 AM. Route 95 operates during the weekday morning and evening peak periods, with average headways of 18 minutes, and with approximately 1,426 average daily boardings on weekdays, 647 average boardings on a Saturday, and 343 average boardings on a Sunday.



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Figure 3
 Existing Transportation
 Facilities

TABLE 1
PUBLIC TRANSPORTATION SUMMARY^a

| Bus Route | Origin | Destination | Boardings ^b | | | Weekday Headway ^c | | | Weekend Headway ^c | | Nearest Stop | Distance |
|-----------|--|--|------------------------|------------------------|----------------------|------------------------------|----------|-----------------------------|------------------------------|--------|---|---------------------------|
| | | | Total Average Weekday | Total Average Saturday | Total Average Sunday | Average Morning Peak Period | Off-Peak | Average Evening Peak Period | Saturday | Sunday | | |
| 89 | Sullivan Square Station (Boston, MA; MBTA Orange Line) | Clarendon Hill (Cambridge, MA) / Davis Station (Somerville, MA; MBTA Red Line) | 3,479 | 1,714 | 969 | 10 | 15-45 | 12 | 50-58 | 44-47 | Broadway at Temple Street (Outbound) / Broadway at Marshall Street (Inbound) | ±1,300 feet / ±1,400 feet |
| 90 | Assembly Row (Somerville, MA) | Davis Station (Somerville, MA) | 1,073 | 564 | 330 | 35 | 35-65 | 35 | 50-70 | 50-70 | Grand Union Boulevard opp. Artisan Way (Outbound) / Grand Union Boulevard at Canal Street (Inbound) | ±2,100 feet / ±2,200 feet |
| 95 | Sullivan Square Station (Boston, MA; MBTA Orange Line) | West Medford (Medford, MA) / Arlington Center (Arlington, MA) | 1,426 | 647 | 343 | 18 | 10-60 | 18 | 35-70 | 60-80 | Mystic Avenue at Temple Road | ±300 feet |
| 101 | Sullivan Square Station (Boston, MA; MBTA Orange Line) | Malden Center Station (Malden, MA) | 4,236 | 1,528 | 1,060 | 13 | 5-119 | 15 | 40-64 | 50-65 | Broadway at Temple Street (Outbound) / Broadway at Marshall Street (Inbound) | ±1,300 feet / ±1,400 feet |

^aSource: MBTA Open Data Portal

^bTotal Daily Passengers, Fall 2019

^cHeadway in minutes

3.3.2 Rapid Transit Service

The Project site is located one mile from Sullivan Square Station where users can access the MBTA Orange Line, providing service between Malden and Jamaica Plain, including North Station in Boston. At North Station, access is provided to the Green Line as well as the Commuter Rail. At the State Street Station, access is provided to the Blue Line and at Downtown Crossing, access is provided to the Red Line.

As described in section 3.3.1, the Project is also located within approximately $\frac{1}{4}$ mile of five bus stop pairs, which site users can use to access the MBTA Orange Line at Sullivan Square Station, and Assembly Station.

3.3.2 Rail Service

As indicated in Section 3.3.1, a one mile walk from the Project site is Sullivan Square Station, which provides access to the MBTA Commuter Rail system by way of the Orange Line to North Station. In addition to its inbound destination at North Station in Boston, outbound trains from Sullivan Square travel to destinations including Assembly Square, Wellington Station and Malden Center and Oak Grove.

SECTION 4: TRANSPORTATION ASSUMPTIONS

To determine the potential transportation impact of the Davis Square Plaza redevelopment, a number of assumptions were made. Among these assumptions are the volume of trips that the Project would generate to and from the site, the modes by which these trips would be made, and how they would be distributed in the transportation network.

4.1. Estimated Trip Generation

To estimate the number of vehicle trips associated with the Project, the Institute of Transportation Engineers' (ITE) publication, *Trip Generation* manual¹, 11th Edition, was referenced. ITE is a national research organization of transportation professionals, and the manual provides traffic generation information for various land uses compiled from studies conducted by members nationwide. Trip generation data for ITE LUC 221 – Multifamily Housing (Mid-Rise) was reviewed. These references establish vehicle trip rates (in this case expressed in trips per dwelling unit) based on traffic counts conducted at similar types of existing land uses. Understanding that Somerville is a dense urban environment, the ITE vehicle trip generation calculations were then adjusted to consider vehicle occupancy rate and mode split (transit, bike and walk).

4.2. Mode Splits

The trip generation calculations were then adjusted to consider vehicle occupancy rate and mode split (transit, bike and walk). 2017 National vehicle occupancy rates were used in conjunction with American Community Survey data from the U.S. Census data for tract 3501.04 (which encompasses Taylor Street in Somerville). Based on this assessment, the mode share used was approximately 66% auto trips and the remaining 34% non-auto trips. The resulting site generated vehicles trips are summarized in Table 2 for the proposed 34 apartments.

¹*Trip Generation*, Eleventh Edition; Institute of Transportation Engineers; Washington, DC; 2021.

TABLE 2
PROPOSED TRIP-GENERATION SUMMARY

| | Proposed Apartment Trips ^a | Proposed Apartment Person Trips ^b | Transit Trips ^c | Walk Trips ^d | Other Trips ^e | Remaining Person Trips By Auto | Adjusted Vehicular Auto Trips |
|-----------------------------------|---|--|-------------------------------|----------------------------|-----------------------------|--------------------------------------|-------------------------------------|
| Average Weekday Daily Traffic | 154 | 182 | 50 | 4 | 10 | 118 | 100 |
| <i>Weekday Morning Peak Hour:</i> | | | | | | | |
| Entering | 3 | 4 | 1 | 0 | 0 | 3 | 3 |
| <u>Exiting</u> | <u>10</u> | <u>12</u> | <u>3</u> | <u>0</u> | <u>1</u> | <u>8</u> | <u>7</u> |
| Total | 13 | 16 | 4 | 0 | 1 | 11 | 10 |
| <i>Weekday Evening Peak Hour:</i> | | | | | | | |
| Entering | 8 | 9 | 2 | 0 | 0 | 7 | 6 |
| <u>Exiting</u> | <u>5</u> | <u>6</u> | <u>2</u> | <u>0</u> | <u>0</u> | <u>4</u> | <u>3</u> |
| Total | 13 | 15 | 4 | 0 | 0 | 11 | 9 |
| Saturday Daily Traffic | 156 | 184 | 50 | 4 | 10 | 120 | 102 |
| <i>Saturday Midday Peak Hour:</i> | | | | | | | |
| Entering | 7 | 8 | 2 | 0 | 0 | 6 | 5 |
| <u>Exiting</u> | <u>6</u> | <u>7</u> | <u>2</u> | <u>0</u> | <u>0</u> | <u>5</u> | <u>4</u> |
| Total | 13 | 15 | 4 | 0 | 0 | 11 | 9 |

^aBased on ITE LUC 221, Multifamily Housing (Mid-Rise); 34 units.

^bPerson trips adjusted based on 2017 National vehicle occupancy rate of 1.18 (home to work).

^cTransit trips are projected to be 27% of all Person Trips for Census Tract 3501.04.

^dWalk trips are projected to be 2.2% of all Person Trips for Census Tract 3501.04.

^eOther means trips, including bicycling, are projected to be 5.0% of all Person Trips for Census Tract 3501.04.

4.3. Parking Demand

Parking will be provided for 20 vehicles adjacent to the building and four (4) spaces in front of the site on Taylor Street. Access to the site is proposed by way of a single driveway to Taylor Street.

Secure bicycle parking will be provided within the Project site.

4.4. Trip Distribution

Once volumes are generated, traffic impacts must be derived by determining where new trips may take place. Depending on the type and size of project, this can be affected by, but not limited to numerous factors, including:

- The layout of surrounding streets,
- The locations of the nearest transit facilities,
- The locations of nearby on- and off-street public parking,
- The location of entrances (specifically principal entrances) at the Project site,

- The location of loading or service areas, and
- The location(s) of bicycle parking.

A gravity model was developed based on Worcester Journey-to-Work data from the U.S. Census to determine the expected trip distribution. Table 3 summarizes the expected trip distribution.

TABLE 3
PROPOSED TRIP DISTRIBUTION

| Route | Direction | Percent of Entering Trips | Percent of Exiting Trips |
|---------------|-----------|------------------------------|-----------------------------|
| Mystic Avenue | North | 17 | 17 |
| Mystic Avenue | South | 46 | 63 |
| Temple Street | West | 20 | 20 |
| Sydney Street | South | <u>17</u> | <u>0</u> |
| TOTAL | | 100 | 100 |

SECTION 5: MOBILITY MANAGEMENT COMMITMENT

Reducing the number of vehicular trips to the site and supporting multimodal travel is an essential component of the Project. The Proponent is committed to undertaking efforts to help the City reach its goal of controlling the percentage of trips made to the site by motor vehicle. The Proponent has a mode share goal of greater than 50% for non-vehicle travel, consistent with SomerVision, and would implement several programs and services through lease agreements with future tenants to promote walking, biking, and transit use. As tenants have not yet been selected for the Project, the proposed mobility management commitments are focused on physical resources and future programs. The Proponent is committed to selecting tenants that would embrace these transportation demand management (TDM) and mobility management goals.

5.1. Design/Physical Strategies

- **Pedestrian-Friendly Design Strategies**

Set directly south of Mystic Avenue, the Project's site design embraces walkability by providing a major through-connection from Mystic Avenue to Broadway by a series of generally parallel routes.

- **Limited On-Site Parking**

Embedded in this transit-, bike-, and pedestrian-friendly environment, the Project would be providing limited on-site parking, further embracing the goal of reducing vehicle travel. Ample access opportunities are available through transit and non-motorized modes.

- **Transit Information Board**

With many transit facilities within proximity to the Project site, ensuring existing transit is used is key to achieving the targeted mode share. The Proponent would provide transit schedules and locations of nearby transit stations, as well as

Bluebikes locations. The Proponent would also investigate the possibility of posting transit information on a website.

- **Bicycle Accommodations**

To allow for bicycle commuting to the Project site, the Proponent would provide bicycle parking on site, as detailed above.

SECTION 6: MONITORING AND ANNUAL REPORTING

Ensuring that these strategies are helping the Project meet its transportation mode share goal would be an ongoing effort. To this end, the Proponent would undertake the following commitments to monitoring and annual reporting:

- **Annual Travel Survey**

To determine progress toward a mode share goal, the Proponent would collaborate with its tenants to develop and administer a travel survey each year, intended to determine the travel behavior of tenant's visitors. The results of this survey would help to identify the mode share of the site.

- **Annual Status Updates**

Based on the results of the travel survey, the Proponent would prepare a status report on its progress toward the mode share goal. This report would then be submitted to the City of Somerville.

- **New Strategies**

Should it be determined that the Project is falling short of multimodal travel goals, the Proponent commits to develop and implement new strategies to reach the goal. The Proponent would also implement new strategies as additional resources become available, such as the creation of a TMA in the Project area.

- **Biennial Counts of Parking/Ins and Outs**

While the Project does have limited on-site parking, the Proponent would commit to monitoring parking on the site, to determine if the parking supply is adequate.