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## PROJECT OVERVIEW

The proposed development would consist of a 16-unit residential condominium located to the west of the intersection of Washington Street and Shawmut Avenue Extension in Boston, MA. Access to the site is to be provided via one unsignalized, full access driveway located on Washington Street on the southwest side of the proposed building. Access to the project site would be shared with the existing Schoolhouse Building Apartments parking lot located to the northwest of the project site. The proposed project site would provide a total of 16 parking spaces (14 interior and 2 exterior) and one exterior loading space.

## EXISTING ROADWAY CONDITIONS

Washington Street runs in a general north-south direction and is classified as an urban principal arterial under City of Boston jurisdiction. The roadway provides one lane of travel in each direction in the vicinity of the site and provides access to commercial and residential land uses. The Boston Police Department District B-2 Roxbury station and a midblock bus stop for MBTA Route 42 are located on the northbound side of Washington Street, adjacent to the project site. Parking is permitted on both sides of the roadway south of the proposed project site.

Shawmut Avenue Extension connects Washington Street and Malcolm X Boulevard and is classified as an urban minor arterial under City of Boston jurisdiction. The roadway generally provides two lanes of travel in each direction, narrowing to a single lane approach at its intersection with Washington Street. The roadway is under stop-control at its intersection with Washington Street and parking is not permitted on either side of the roadway.

The proposed project site is located in close proximity to public transit including Dudley Station (approximately 0.1 miles away) and the MBTA Orange Line (approximately 0.6 miles away). Dudley Station provides access to 16 MBTA Bus Routes and the Silver Line connecting Dudley Square with destinations such as South Station, Logan Airport, Kenmore Square, Forest Hills, Ashmont, Central Square, and Harvard Square.

A network of sidewalks are provided along each of the adjacent streets serving the proposed project. Access across Shawmut Avenue Extension and Washington Street is provided directly east of the

project site via unsignalized crosswalks. On-street bicycle facilities include shared lane markings on Washington Street in front of the project site.

**TRIP GENERATION**

Vehicle trip estimates for the proposed project were developed using the Institute of Transportation Engineers’ (ITE) publication, *Trip Generation Manual, 9<sup>th</sup> Edition*. ITE is a national research organization of transportation professionals, and the *Trip Generation Manual, 9<sup>th</sup> Edition* provides traffic generation information for various land uses compiled from studies conducted by members nationwide. Vehicle trip estimates for the project were calculated based on the ITE data for Land Use Code 230 (Residential Condominium/Townhouse). The ITE data establishes vehicle trip rates (in this case expressed in trips per dwelling unit) based on actual traffic counts conducted at similar existing facilities.

Table 1 presents the number of vehicle trips expected to be generated by the proposed residential development based on the ITE data.

**Table 1: Vehicular Trip Generation**

Description	Weekday AM			Weekday PM			Saturday		
	In	Out	Total	In	Out	Total	In	Out	Total
Proposed Residential Project <sup>1</sup>	1	6	7	5	3	8	4	4	8

1. ITE Land Use Code 230 (Residential Condominium/Townhouse) based on 16 dwelling units

As shown in Table 1, the peak hour trip generation of the proposed residential development is shown to be approximately 7 new vehicle trips (1 entering vehicle and 6 exiting vehicles) during the weekday morning peak hour, approximately 8 new vehicles trips (5 entering vehicles and 3 exiting vehicles) during the weekday afternoon peak hour and approximately 8 new vehicle trips (4 entering vehicles and 4 exiting vehicles) during the Saturday midday peak hour.

Given the proximity of the proposed development to public transit, it is expected that a portion of the project trips generated by the proposed residential development would be non-vehicular. Based on the information collected through the American Community Survey (2006-2010) for commuting trips originating in census tracts surrounding the project site, approximately 27% to 48% of commuters are shown to take public transportation. Therefore, the number of vehicle trips generated by the proposed project is likely to be fewer than the number of vehicle trips identified in Table 1. Due to the overall low number of trips associated with the proposed project, the transit system in the vicinity of the project site is not expected to be significantly impacted.

**SIGHT DISTANCE**

A field review of the available sight distance was conducted at the location of the proposed site driveway on Washington Street. No posted speed limits on Washington Street were identified in the

vicinity of the project site. Vehicle speeds, collected by radar as part of this study, indicated that the 85<sup>th</sup> percentile speed on Washington Street was approximately 30 miles per hour in the northbound direction of travel and approximately 31 miles per hour in the southbound direction of travel.

The American Association of State Highway and Transportation Officials (AASHTO) publication, *A Policy on Geometric Design, 2011 Edition*, defines minimum sight distances at intersections. The minimum sight distance is based on the required stopping sight distance (SSD) for vehicles traveling along the main road. According to AASHTO, “If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient time to anticipate and avoid collisions.” Table 2 summarizes the AASHTO sight distance standards for the adjacent roadway speeds and the available sight distance at the proposed site driveway.

**Table 2: Sight Distance Requirements**

<b>Location</b>	<b>Direction</b>	<b>85th Percentile Speed (mph)</b>	<b>SSD<sup>1</sup> Required (ft)</b>	<b>Sight Distance Measured (ft)</b>	<b>Meets Requirements</b>
<b>Site</b>	Looking Left (North)	35	250	>400	Yes
<b>Driveway</b>	Looking Right (South)	30	200	275	Yes

1. AASHTO Stopping sight distance (See AASHTO Exhibit 3-1).

As shown in Table 2, 250 feet is the required sight distance for a speed of 35 miles per hour and 200 feet is the required sight distance for a speed of 30 miles per hour. The available sight distance looking to the left (north) from the proposed site driveway is measured to be approximately 400 feet along Washington Street, with sight lines extending beyond the intersection of Washington Street and Malcom X Boulevard/Dudley Street. Sight lines from the proposed project driveway also extend to Shawmut Avenue Extension, located approximately 100 feet north of the proposed site driveway. Vehicles exiting the site, looking left (north) are expected to be able to see vehicles queued at the stop bar on Shawmut Avenue Extension, waiting to turn right onto Washington Street. The proposed residential building is not expected to impede the sight line of a car exiting the project site driveway looking for oncoming vehicles originating from Shawmut Avenue Extension. In order to maintain the sight lines between the project site driveway and Shawmut Avenue Extension, proposed landscaping within the view corridor shall be maintained below a height of three feet and the branches of the proposed tree plantings shall not restrict visibility.

Approximately 275 feet of sight distance is available looking to the right (south) along Washington Street from the proposed site driveway. Available sight distances between vehicles on Washington Street and vehicles exiting the project site meet the SSD requirements for vehicle speeds up to 35 miles per hour which exceeds the 85<sup>th</sup> percentile speed on the roadway. Therefore, vehicles are expected to be

able to safely exit the project site. Due to the limited parking directly adjacent to the proposed site driveway, pedestrians walking along Washington Street across the driveway will be visible to vehicles entering and exiting the project site.

**PARKING DEMAND**

The proposed on-site parking for the residential development would provide 14 internal parking spaces and 2 external parking spaces, with each parking space numbered and assigned to a specific residential unit. The existing parking spaces for the Schoolhouse Building Apartments are proposed to be relocated to the southwest side of the parking lot and the total number of parking spaces (13) would be maintained.

The expected parking demand for the proposed project has been estimated based on data provided in the Institute of Transportation Engineers (ITE) publication *Parking Generation Handbook, 4<sup>th</sup> Edition* for Land Use Code 230 (Residential Condominium/Townhouse). The *Parking Generation Handbook, 4<sup>th</sup> Edition* provides parking demand information for a variety of land uses, and the data is compiled from studies conducted by members nationwide. The ITE data establishes parking demand rates (in this case expressed in spaces per unit) based on actual parking counts conducted at similar types of existing facilities. This land use code presents data for 12 suburban locations and one urban location. Due to the heavily urban environment of the proposed project site, the data presented for the urban location was utilized for the parking demand estimate.

A summary of the average peak period parking demand for a 16-unit urban residential condominium during a weekday based on the ITE data provided for Land Use Code 230 is shown in Table 3 below.

**Table 3: ITE Average Weekday Peak Parking Demand**

<b>Urban Residential Condominium Townhouse</b>	
	<b>Urban</b>
Parking Spaces/Unit	0.85
Parking Spaces	14

As shown in Table 3, the average weekday peak period parking demand for a 16-unit residential condominium based on the urban ITE data set is shown to be approximately 14 parking spaces. Based on information collected through the American Community Survey (2006-2010) in the nearby census tracts, approximately 32% to 61% of households do not have a car. With such a high percentage of households without a car, the demand for parking spaces within the development is not expected to exceed the 16 parking spaces provided on site.

The proposed project would also provide bicycle parking within the internal parking area.

Under existing conditions, parking on Washington Street is permitted on both sides of the roadway south of the proposed project site. The on-street parking is not restricted with the exception of street cleaning or snow emergencies. Visitors to the proposed residential development would be expected to park in those unrestricted spaces. Parking is not permitted on Washington Street immediately adjacent to the project site or on Shawmut Avenue Extension. It is recommended to maintain the existing "Tow Zone – No Stopping Any Time" signage adjacent to the project site driveway on Washington Street to provide additional visibility for pedestrians on the sidewalk and vehicles exiting the project site.

### **SITE CIRCULATION**

The proposed project would share access to Washington Street with the existing Schoolhouse Building Apartments. With the proposed project in place the existing parking for the Schoolhouse Building would be relocated to the southwest side of the shared access drive. The proposed configuration would include striped parking spaces for the Schoolhouse Building. The shared site driveway is proposed to be approximately 20 feet wide, which is expected to be sufficient for low volume, two-way parking circulation. Vehicles pulling into and out of the Schoolhouse Building parking spaces are expected to have sufficient room to do so without significantly impacting vehicles entering and exiting the interior parking area of the proposed project. Due to the low number of vehicle trips associated with the proposed project, interaction between the parking spaces for the Schoolhouse Building and the vehicles entering and exiting the proposed project is not expected to hinder on-site circulation. Access to the internal parking area is configured to allow one entering or one exiting vehicle at a time with minimal conflicts anticipated due to the low traffic volumes. The proposed internal aisle width should be sufficient for safe interior circulation.

Pedestrians would access the proposed site via a network of existing and proposed sidewalks. The existing sidewalks on Washington Street and Shawmut Avenue Extension adjacent to the site would not be impacted by the project. As part of the project, a sidewalk connecting the Schoolhouse Building Apartments and the proposed residential project to Shawmut Avenue Extension would be constructed. The developer is exploring alternative sidewalk configurations to modify what is currently depicted on the plans. The plans show a connection between the rear of the proposed condominium building and the Schoolhouse apartments. The developer is committed to maintaining an appropriate pedestrian connection from Washington Street to the Schoolhouse apartments.

### **CONCLUSION**

The proposed development is expected to generate minimal traffic volumes during peak periods. The available sight distance for vehicles exiting the proposed sight driveway was measured, and exceeds SSD requirements, allowing for safe and efficient access from the project site. Pedestrians traveling along Washington Street are also expected to be visible to vehicles entering and exiting the project site. Due to the urban nature of the project site, the number of parking spaces on site is considered to be appropriate for the number of proposed condominiums.