

## TRANSPORTATION IMPACT ASSESSMENT

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WELLESLEY PARK  
148 WESTON ROAD  
WELLESLEY, MASSACHUSETTS

*Prepared for:*

WELLESLEY PARK LLC  
Boston, Massachusetts

February 2018

*Prepared by:*

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Dear Reviewer:

This letter shall certify that this *Transportation Impact Assessment* has been prepared under my direct supervision and responsible charge. I am a Registered Professional Engineer (P.E.) in the Commonwealth of Massachusetts (Massachusetts P.E. No. 38871, Civil) and hold Certification as a Professional Traffic Operations Engineer (PTOE) from the Transportation Professional Certification Board, Inc. (TPCB), an affiliate of the Institute of Transportation Engineers (ITE) (PTOE Certificate No. 993). I am also a Fellow of the Institute of Transportation Engineers (FITE).

Sincerely,

VANASSE & ASSOCIATES, INC.

Jeffrey S. Dirk, P.E., PTOE, FITE  
Principal

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## EXECUTIVE SUMMARY

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Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of a 55-unit residential apartment community to be known as Wellesley Park and located at 148 Weston Road in Wellesley, Massachusetts (hereafter referred to as the “Project”). At present, the Project site consists of areas of open and wooded space, with portions of the property previously occupied by a single-family home and associated appurtenances that have since been removed.

This assessment was prepared in consultation with the Massachusetts Department of Transportation (MassDOT) and the Town of Wellesley; was performed in accordance with MassDOT’s *Transportation Impact Assessment (TIA) Guidelines* and the Traffic Review standards for a Project of Significant Impact (PSI) as defined in Section XVIA of the Town of Wellesley Zoning Bylaw; and was conducted pursuant to the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineers (ITE)<sup>1</sup> and with adjustment to account for the use of public transportation and pedestrian and bicycle trips, the Project is expected to generate approximately 240 automobile trips, 34 transit trips and 34 pedestrian/bicycle trips on an average weekday (two-way, 24-hour volumes), with 16 automobile trips, 3 transit trips and 2 pedestrian/bicycle trips expected during the weekday morning peak-hour, and 20 automobile trips, 3 transit trips and 3 pedestrian/bicycle trips expected during the weekday evening peak-hour;
2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no predicted changes in level-of-service (LOS) and the majority of the movements at the study intersections shown to operate at LOS D or better under all analysis conditions where an LOS of “D” or better is defined as “acceptable” operating conditions;
3. Independent of the Project, left-turn movements from Linden Street at Weston Road were identified as operating over capacity (defined as LOS “F”) during both the weekday morning and evening peak hours, with Project-related impacts at the intersection defined as an increase in vehicle queuing of up to one (1) vehicle;

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<sup>1</sup>*Trip Generation*, 10<sup>th</sup> Edition; Institute of Transportation Engineers; Washington, DC; 2017.

4. Similarly, the Weston Road/Central Street intersection was shown to operate at or over capacity (LOS “E” or “F”, respectively) during both the weekday morning and evening peak hours under 2025 traffic volume conditions independent of the Project, with Project-related impacts at the intersection defined as an increase in overall motorist delay of less than 3.0 seconds and in vehicle queuing of up to one (1) vehicle;
5. All movements exiting the Project site driveway intersection with Weston Road are expected to operate at LOS D or better during the peak hours with vehicle queueing of approximately one (1) vehicle;
6. Both the Weston Road/Linden Street and Weston Road/Central Street intersections were found to have motor vehicle crash rates that were above the MassDOT average crash rates for a signalized or unsignalized intersection, as appropriate. Recommendations have been provided as a part of this assessment to advance safety-related improvements at both intersections (discussion follows); and
7. Lines of sight to and from the Project site driveway at its intersection with Weston Road were found to meet, exceed or could be made to meet or exceed the recommended minimum sight distance to function in a safe manner for the appropriate approach speed along Weston Road.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

## **RECOMMENDATIONS**

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

### **Project Access**

Access to the Project will be provided by way of a new driveway that will intersect the west side of Weston Road approximately 420 feet north of Linden Street. The following recommendations are offered with respect to Project access and internal circulation:

- The Project site driveway should be a minimum of 18-feet wide and a maximum of 24-feet wide, or as required to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Town of Wellesley Fire Department pursuant to the requirements of NFPA® 1.<sup>2</sup>
- Where perpendicular parking is provided, the drive aisle behind the parking should be a minimum of 23-feet in order to allow for vehicle maneuvering.

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<sup>2</sup>National Fire Protection Association (NFPA)® 1, *Fire Code*, Seventh Edition; NFPA; Quincy, Massachusetts; 2015; as amended per 527 CMR.

- A STOP-sign and marked STOP-line should be provided for vehicles exiting the Project site to Weston Road.
- All signs and pavement markings to be installed within the Project site shall conform to the applicable standards of the *Manual on Uniform Traffic Control Devices (MUTCD)*.<sup>3</sup>
- Consideration should be given to installing a sidewalk along the Project site frontage on Weston Road and extending to the crosswalk at Linden Street.
- Marked crosswalks with Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided at all proposed pedestrian crossings.
- A school bus waiting area should be provided at an appropriate location on Weston Road defined in consultation with the Town.
- Signs and landscaping to be installed as a part of the Project within intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.
- Existing vegetation located along the west side of Weston Road, south of the Project site driveway and within the public right-of-way, should be selectively trimmed in order to provide the required line of sight to/from the south from the driveway.
- Snow windrows within sight triangle areas shall be promptly removed where such accumulations would impede sight lines.
- Consideration should be given to installing electric vehicle charging stations within the Project site and to accommodating the staging of car-sharing vehicles (ZipCar or similar).

## **Off-Site**

### **Weston Road at Linden Street**

The addition of Project-related traffic to the intersection of Weston Road at Linden Street was not shown to result in a change in LOS, with Project-related impacts at the intersection defined as an increase in vehicle queuing of up to one (1) vehicle. Independent of and unrelated to the Project, the intersection was found to have a motor vehicle crash rate that was slightly above the MassDOT District 6 average for an unsignalized intersection. In an effort to advance safety improvements at this location that are warranted as a result of existing conditions unrelated to the Project, the Project proponent will facilitate the completion of a Road Safety Audit (RSA) in order to identify improvements strategies for this intersection.

### **Weston Road at Central Street**

The addition of Project-related traffic to the intersection of Weston Road at Central Street was not shown to result in a change in LOS with the Project-related impacts at the intersection defined as an increase in overall motorist delay of less than 3.0 seconds and in vehicle queuing of up to one (1) vehicle. Independent of and unrelated to the Project, the intersection was found to have a motor vehicle crash rate that was slightly above the MassDOT District 6 average for a signalized intersection. In an effort to advance safety improvements at this location that are warranted as a result of existing conditions unrelated to the Project, the Project proponent will facilitate the

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<sup>3</sup>*Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

completion of an RSA in order to identify improvements strategies for this intersection. In addition, Project proponent will design and implement an optimal traffic signal timing plan to improve overall traffic operations. With implementation of an optimal traffic signal timing plan, overall intersection operations are predicted to remain at LOS F during the weekday morning peak-hour with reduced motorist delay, and to improve to LOS D (from LOS E) during the weekday evening peak-hour (an improvement over No-Build conditions).

### **Transportation Demand Management**

Public transportation services are provided within the study area by the Massachusetts Bay Transportation Authority (MBTA) (Commuter Rail) and the MetroWest Regional Transit Authority (MWRTA) (fixed-route bus service), and are accessible to residents of the Project. Wellesley Square Station on the Framingham/Worcester Line of the MBTA commuter rail system is located at 1 Grove Street which is within a 10-minute walking distance of the Project site. MWRTA bus Route 8 provides service along Linden Street and Central Street with a stop at Cross Street which is within a 5-minute walking distance of the Project site. In addition to scheduled stops, MWRTA buses also operate in a passenger demand service mode and will stop anywhere along the service route where it is safe to pick-up or discharge a passenger. The MWRTA also operates Paratransit Services for passengers who meet ADA requirements and provides transportation services for seniors and the disabled through the Wellesley Council on Aging.

In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures should be implemented as a part of the Project:

- The owner or property manager should contact MassRIDES to obtain information on facilitating and encouraging healthy transportation options for residents of the Project;
- Information regarding public transportation services, maps, schedules and fare information should be posted in a central location and/or otherwise made available to residents;
- A “welcome packet” should be provided to residents detailing available public transportation services, bicycle and walking alternatives, and commuter options available through MassRIDES’ and their NuRide program which rewards individuals that choose to walk, bicycle, carpool, vanpool or that use public transportation to travel to and from work;
- Residents should be made aware of the Emergency Ride Home (ERH) program available through MassRIDES, which reimburses employees of a participating MassRIDES employer partner worksite that is registered for ERH and that carpool, take transit, bicycle, walk or vanpool to work;
- Pedestrian accommodations should consist of installing a sidewalk along the Project site frontage on Weston Road and extending to the crosswalk at Linden Street;
- A mail drop should be provided in a central location; and
- Secure bicycle parking should be provided consisting of: i) exterior bicycle parking conveniently located proximate to the building entrance; and ii) weather protected bicycle parking located in a secure area within the building.

With implementation of the above recommendations, safe and efficient vehicular, pedestrian and bicycle access will be provided to the Project site and the Project can be accommodated within the confines of the existing and improved transportation system.

## **INTRODUCTION**

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Vanasse & Associates, Inc. (VAI) has conducted a Transportation Impact Assessment (TIA) in order to determine the potential impacts on the transportation infrastructure associated with the proposed construction of a 55-unit residential apartment community to be known as Wellesley Park and located at 148 Weston Road in Wellesley, Massachusetts (hereafter referred to as the “Project”). This study evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Weston Road, and at the following specific intersections: Weston Road at Central Street; Weston Road at Linden Street; and Weston Road at Howe Street.

### **PROJECT DESCRIPTION**

The Project will entail the construction of a 55-unit residential apartment community to be known as Wellesley Park and located at 148 Weston Road in Wellesley, Massachusetts. The Project site encompasses approximately 0.83± acres of land that is bounded by residential properties and areas of open and wooded space to the north and south; Weston Road to the east; and the Crosstown Trail and areas of open and wooded space to the west. Figure 1 depicts the Project site location in relation to the existing roadway network. At present, the Project site consists of areas of open and wooded space, with portions of the property previously occupied by a single-family home and associated appurtenances that have since been removed.

Access to the Project will be provided by way of a new driveway that will intersect the west side of Weston Road approximately 420 feet north of Linden Street. On-site parking will be provided for 67 vehicles consisting of: 60 parking spaces for residents of the Project that will be located in a garage beneath the proposed building; six (6) surface parking spaces for visitors; and one (1) parking space for deliveries; or a parking ratio of approximately 1.22 spaces per dwelling unit.



Figure 1  
Site Location Map



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## **STUDY METHODOLOGY**

This study was prepared in consultation with the Massachusetts Department of Transportation (MassDOT) and the Town of Wellesley; was performed in accordance with: i) MassDOT's *Transportation Impact Assessment (TIA) Guidelines*; ii) the Traffic Review standards for a Project of Significant Impact (PSI) as defined in Section XVIA of the Town of Wellesley Zoning Bylaw; and iii) the standards of the Traffic Engineering and Transportation Planning professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics; pedestrian and bicycle facilities; on-street parking; public transportation services; observations of traffic flow; and collection of pedestrian, bicycle and vehicle 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 from the current year was selected for analyses consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. The analysis conducted in stage two identifies existing or projected future capacity, safety, and access issues, as these areas relate to the transportation infrastructure.

The third stage of the study presents and evaluates measures to address deficiencies in the transportation infrastructure, if any, identified in stage two of the study.

## **EXISTING CONDITIONS**

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A comprehensive field inventory of existing conditions within the study area was conducted in January 2018. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; on-street parking; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area for the Project was selected to contain the major roadway providing access to the Project site, Weston Road, as well as the following specific intersections: Weston Road at Central Street; Weston Road at Linden Street; and Weston Road at Howe Street.

The following describes the study area roadway and intersections as observed in January 2018.

### **Roadway**

#### **Weston Road**

- Two-lane urban minor arterial roadway under Town jurisdiction
- Traverses a general north-south direction and provide access to Route 9 to the north and Central Street (Route 135) and Washington Street (Route 16) to the south
- Provides two 11 to 12-foot wide travel lanes separated by a double-yellow centerline with 1 to 2-foot wide marked shoulders
- Posted speed limit is 30 miles per hour (mph)
- Sidewalks are provided along the east side of the roadway in the vicinity of the Project site
- Illumination is provided by way of street lights mounted on wood poles
- Land use within the study area consists of the Project site, the Crosstown Trail, areas of open and wooded space, and residential properties

## Intersections

Table 1 and Figure 2 summarize lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in January 2018.

**Table 1**  
**STUDY AREA INTERSECTION DESCRIPTION**

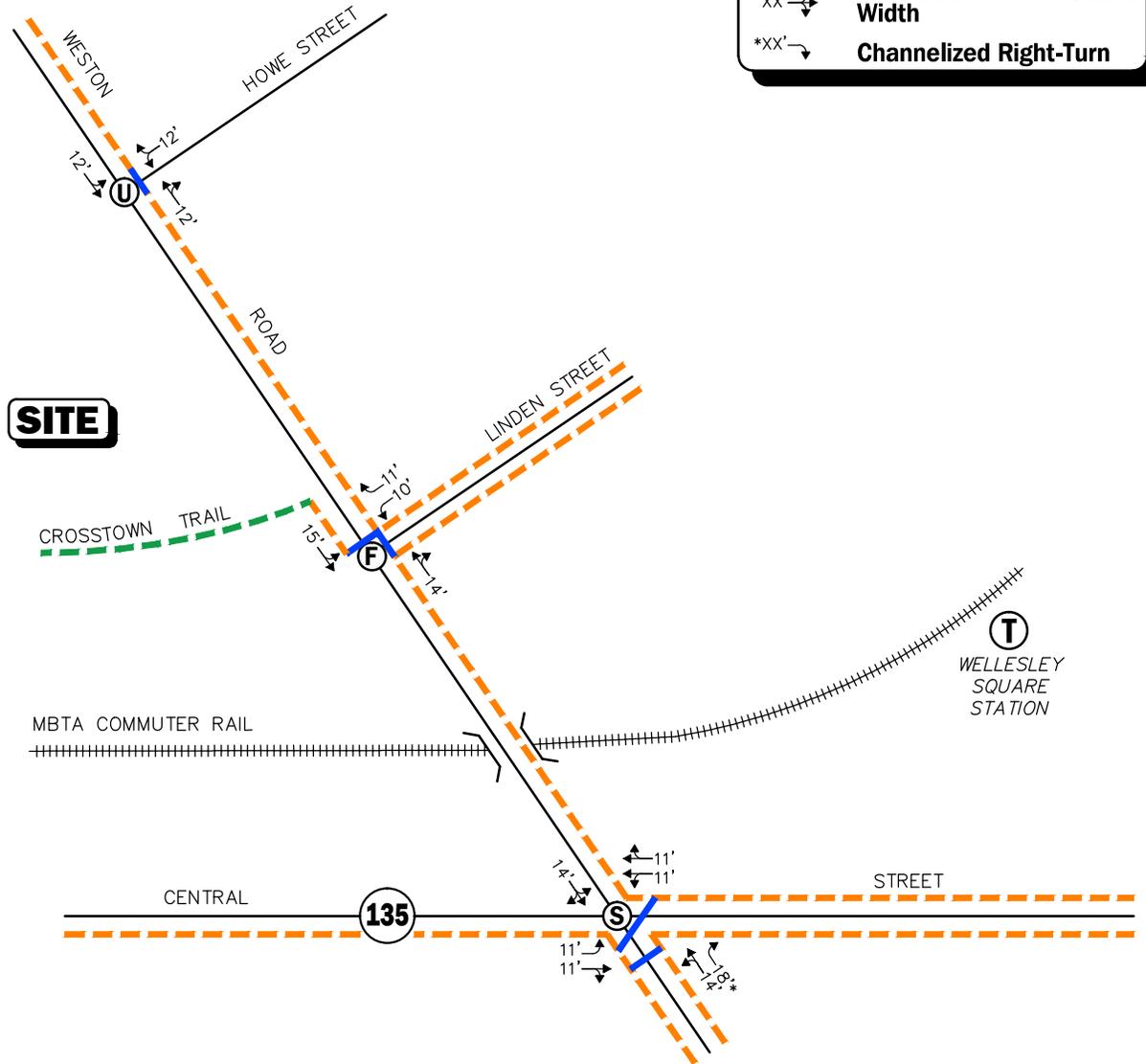
<b>Intersection</b>	<b>Traffic Control Type<sup>a</sup></b>	<b>No. of Travel Lanes Provided</b>	<b>Shoulder Provided? (Yes/No/Width)</b>	<b>Pedestrian Accommodations? (Yes/No/Description)</b>	<b>Bicycle Accommodations? (Yes/No/Description)</b>
Weston Rd./ Linden St.	F	1 per direction on Weston Rd.; 1 left-turn and 1 right-turn lane on Linden St.	Yes – 1 to 2-feet on Weston Rd. and 1-foot on Linden St.	Yes – Sidewalks along both sides of Linden St. and the east side of Weston Rd.; crosswalks for crossing north and east legs of intersection; pedestrian traffic signal equipment and phasing provided	Yes <sup>b</sup> – Shared traveled-way on Weston Rd.
Weston Rd./ Central St.	TS	1 left-turn lane and 1 general-purpose lane on Central St. eastbound; 2 general-purpose lanes on Central St. westbound; 1 left/through lane and 1 channelized right-turn lane on Weston Rd. northbound and 1 general-purpose lane on Weston Rd. southbound	Yes – 2 to 3-feet on Weston Rd.	Yes – Sidewalks along both sides of Central St. east of intersection and Weston Rd. south of the intersection, along south side of Central St. west of intersection and along east side of Weston Rd. north of the intersection; crosswalks for crossing Central St. and the south leg of intersection; pedestrian traffic signal equipment and phasing provided	Yes – Shared traveled-way
Weston Rd./ Howe Rd.	S	1 per direction on all approaches	Yes – 1-foot on Weston Rd.	Yes – Sidewalk along the east side of Weston Rd.; crosswalk for crossing Howe St.	No

<sup>a</sup>TS = traffic signal control; F = flashing signal/beacon; S = STOP-sign control; NC = no control present.

<sup>b</sup>Combined shoulder and travel lane width equal to or exceed 14 feet.

**Legend:**

- Ⓢ Signalized Intersection
- ⓕ Flashing Signal/Beacon
- Ⓤ Unsignalized Intersection
- Sidewalk
- Crosswalk
- - - Trail
- xx' → Lane Use and Travel Lane Width
- \*xx' → Channelized Right-Turn



North Arrow  
Not To Scale



**Figure 2**

**Existing Intersection Lane Use, Travel Lane Width and Pedestrian Facilities**

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**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 completed in January 2018 while public schools were in regular session. The ATR counts were conducted over a continuous 48-hour period from January 23, 2018 (Tuesday) through January 24, 2018 (Wednesday) on Weston Road in the vicinity of the Project site in order to record weekday traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period manual TMCs performed at the study intersections on January 24, 2018 (Wednesday).<sup>4</sup> These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.

**Traffic-Volume Adjustments**

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, traffic volume data from MassDOT Continuous Count Station No. 32 located on I-95 south of Route 20 in Weston were reviewed.<sup>5</sup> Based on a review of this data, it was determined that traffic volumes for the month of January are approximately 9.7 percent below average-month conditions and, therefore, the January traffic count data was adjusted upward to average-month conditions. The 2018 Existing traffic volumes are summarized in Table 2, with the weekday morning and evening peak-hour traffic volumes graphically depicted on Figure 3. Note that the peak-hour traffic volumes presented in Table 2 were obtained from the aforementioned Figure.

**Table 2**  
**2018 EXISTING TRAFFIC VOLUMES**

Location	AWT <sup>a</sup>	Weekday Morning Peak-Hour (8:00 – 9:00 AM)			Weekday Evening Peak-Hour (4:15 – 5:15 PM)		
		VPH <sup>b</sup>	K Factor <sup>c</sup>	Directional Distribution	VPH	K Factor	Directional Distribution
Weston Road, south of Howe Street	16,255	1,552	9.5	57.1% NB	1,363	8.4	51.4% SB

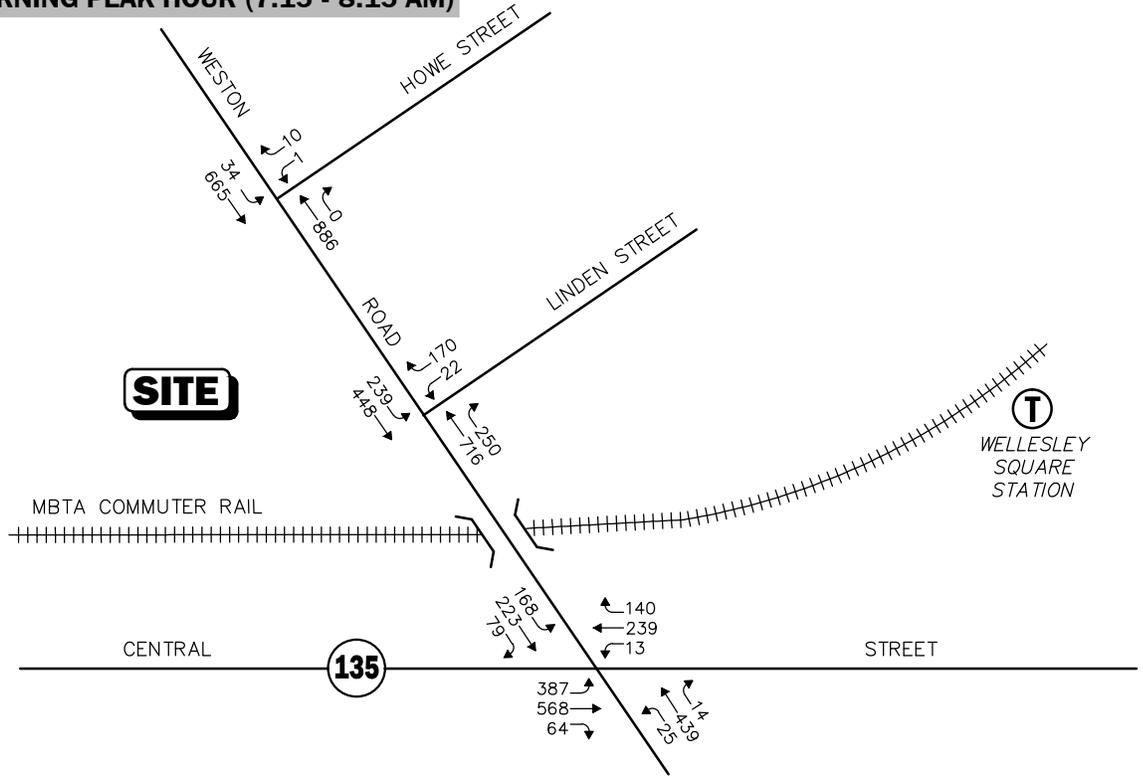
<sup>a</sup>Average weekday traffic in vehicles per day.  
<sup>b</sup>Vehicles per hour.  
<sup>c</sup>Percent of daily traffic occurring during the peak-hour.  
 NB = northbound; SB = southbound.

As can be seen in Table 2, Weston Road in the vicinity of the Project site was found to accommodate approximately 16,255 vehicles on an average weekday (two-way, 24-hour volume), with approximately 1,552 vehicles per hour (vph) during the weekday morning peak-hour and 1,363 vph during the weekday evening peak-hour.

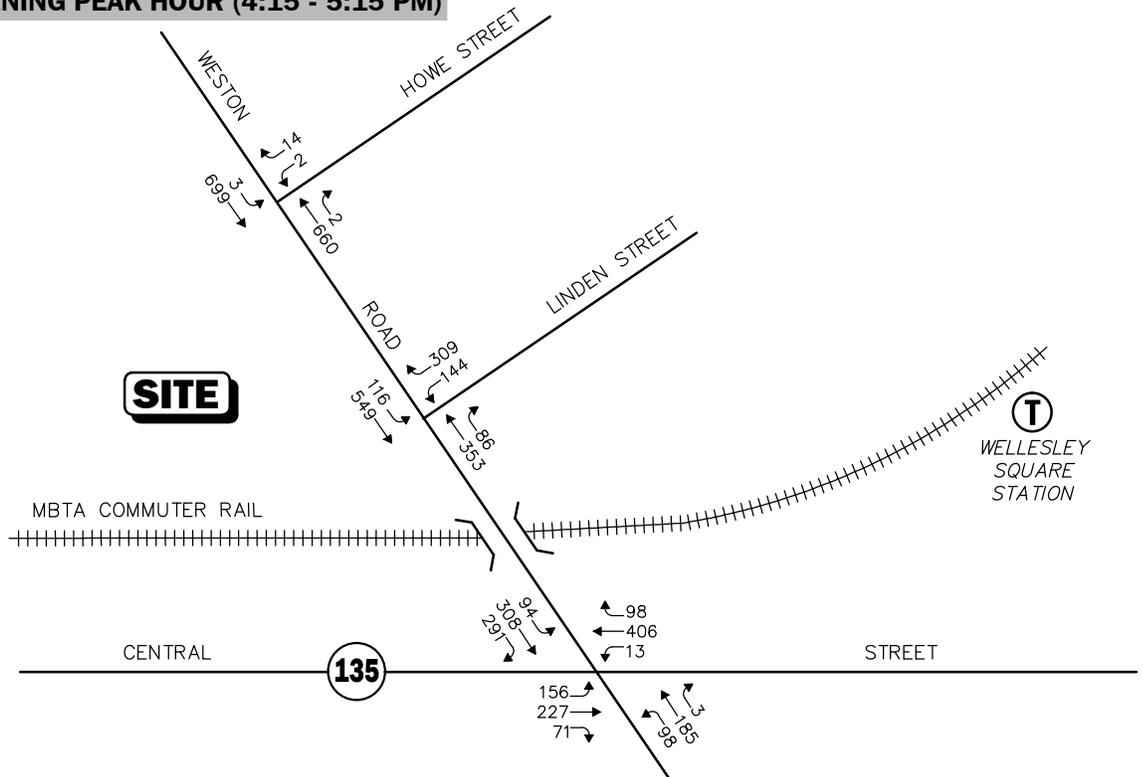
<sup>4</sup>Recognizing that Wednesday is a half-day for elementary schools in Wellesley, a comparison of the traffic volume data collected on Tuesday and Wednesday as a part of the ATR count along Weston Road was completed. This comparison indicated that traffic volumes on a Wednesday are approximately 11 percent higher on daily (24-hour) basis, with peak-hour traffic volumes approximately 8 percent higher during the morning peak-hour and 10 percent higher during the evening peak-hour.

<sup>5</sup>MassDOT Traffic Volumes for the Commonwealth of Massachusetts; 2018.

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.  
Not To Scale

Figure 3



2018 Existing Peak Hour Traffic Volumes

## **SPOT SPEED MEASUREMENTS**

Vehicle travel speed measurements were performed on Linden Street in the vicinity of the Project site in conjunction with the ATR counts. Table 3 summarizes the vehicle travel speed measurements.

**Table 3**  
**VEHICLE TRAVEL SPEED MEASUREMENTS**

	Weston Road, south of Howe Street	
	Northbound	Southbound
Mean Travel Speed (mph)	28	28
85 <sup>th</sup> Percentile Speed (mph)	32	34
Posted Speed Limit (mph)	30	30

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Weston Road in the vicinity of the Project site was found to be approximately 28 mph in both directions. The measured 85<sup>th</sup> percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be approximately 32 mph in the northbound direction and 34 mph southbound, which is slightly above the posted speed limit of 30 mph. The 85<sup>th</sup> percentile speed is used as the basis of engineering design and in the evaluation of sight distances, and is often used in establishing posted speed limits.

## **PEDESTRIAN AND BICYCLE FACILITIES**

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in January 2018. 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, as well as the location of existing and planned future bicycle facilities.

### **Pedestrian Facilities**

As detailed on Figure 2, sidewalks are generally provided along one or both sides of the study area roadways, with marked crosswalks provided for crossing one or more approaches of the study intersections. The crossings at the signalized study area intersections are included as a part of the traffic signal system at the intersections (pedestrian pushbuttons, signal indications and phasing are provided for the crossings). An inventory of sidewalk conditions along the Project site frontage and within 600 feet of the Project site indicates that the sidewalks are generally in good condition, with Americans with Disabilities Act (ADA) compliant wheelchair ramps provided at pedestrian crossings and detectable panels provided at the crossings at the Weston Road/Linden Street intersection. In addition, the Crosstown Trail, a pedestrian trail along the Cochituate Aqueduct, is located south of the Project site and is accessible from Weston Road.

Figure 4 depicts the 2018 Existing weekday morning and evening peak-hour pedestrian volumes at the study area intersections which were collected in conjunction with the January 2018 TMCs. A review of the pedestrian volume data at the study intersections indicates that the largest number of pedestrian crossings occurred at the south crossing of Weston Road at the Weston Road/Central Street intersection during both the weekday morning and evening peak hours (30 to 38 crossings were observed).

### **Bicycle Facilities**

Linden Street, Weston Road and portions of Central Street generally provide sufficient width (combined travel lane and paved shoulder) to support bicycle travel in a shared traveled-way configuration.<sup>6</sup> Figure 5 depicts the 2018 Existing weekday morning and evening peak-hour bicycle volumes at the study area intersections which were collected in conjunction with the January 2018 TMCs. Given the seasonality of the bicycle count data (January), bicycle activity within the study area was found to be relatively modest, with bi-directional bicycle volumes found to range from approximately one (1) to two (2) bicyclists during the peak hours.

### **PUBLIC TRANSPORTATION**

Public transportation services are provided within the study area by the MBTA (Commuter Rail) and the MetroWest Regional Transit Authority (MWRTA) (fixed-route bus service), and are accessible to residents of the Project. Wellesley Square Station on the Framingham/Worcester Line of the MBTA Commuter Rail system is located at 1 Grove Street which is within a 10-minute walking distance of the Project site. MWRTA bus Route 8 provides service along Linden Street and Central Street with a stop at Cross Street which is within a 5-minute walking distance of the Project site. In addition to scheduled stops, MWRTA buses also operate in a passenger demand service mode and will stop anywhere along the service route where it is safe to pick-up or discharge a passenger. The MWRTA also operates Paratransit Services for passengers who meet ADA requirements and provides transportation services for seniors and the disabled through the Wellesley Council on Aging.

As noted in the previous section, sidewalks are generally provided along one or both sides of the study area roadways that provide opportunities (with additional enhancements) to link the Project site to Wellesley Square Station and the MWRTA bus service along Linden Street and Central Street. As such, it is expected that a portion of the residents of the Project will use public transportation as their primary mode of transportation.

The public transportation schedules and fare information are provided in the Appendix.

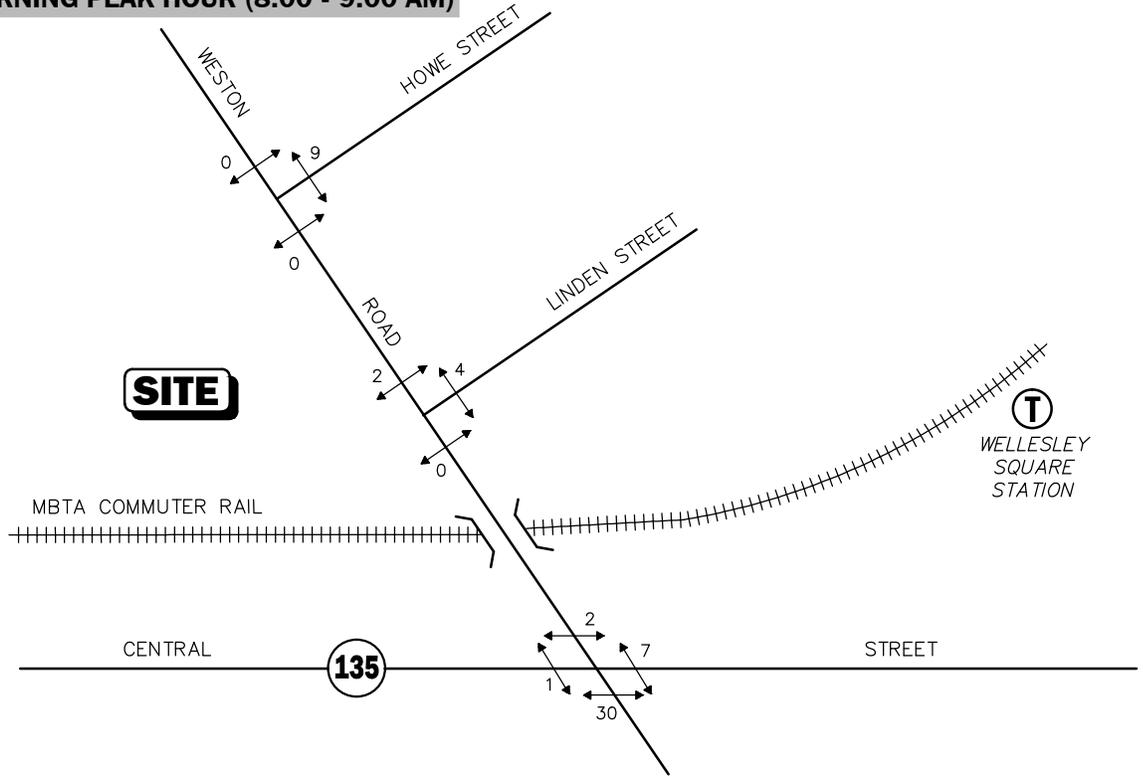
### **MOTOR VEHICLE CRASH DATA**

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 (2011 through 2015, inclusive) in order to examine motor vehicle crash trends occurring within the study area. The data is summarized by intersection, type, severity, roadway and weather conditions and day of occurrence, and presented in Table 4.

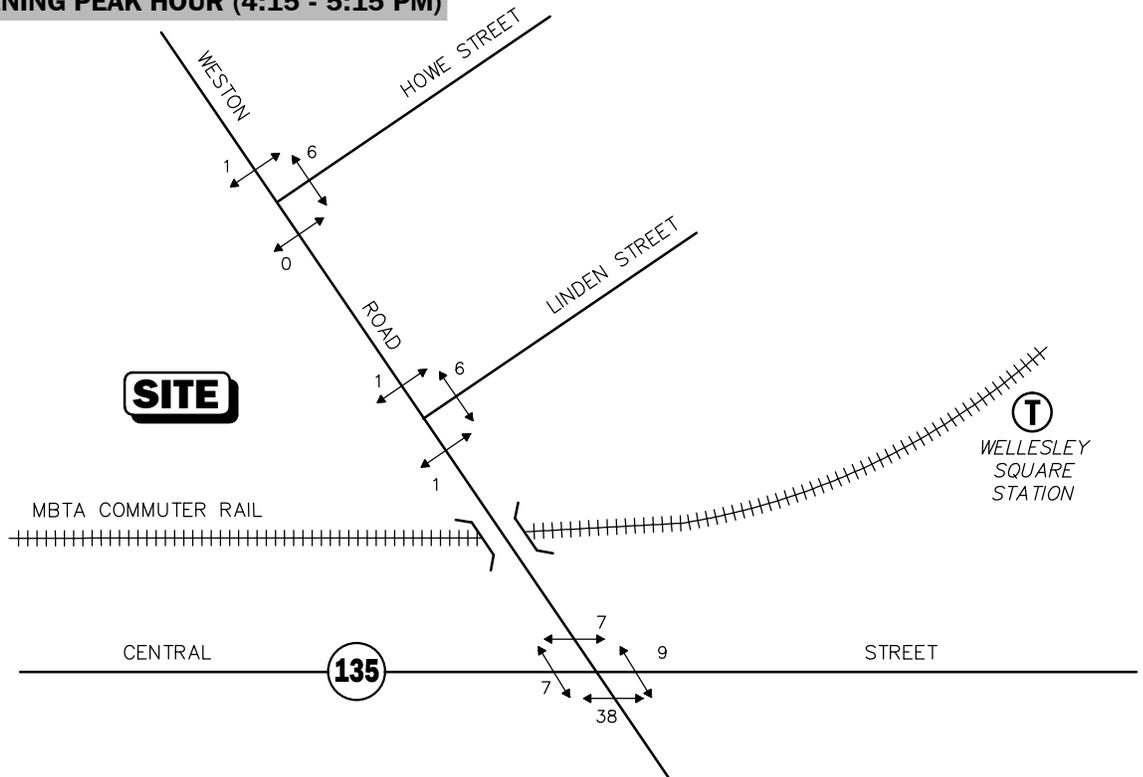
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<sup>6</sup>A minimum combined travel lane and paved shoulder width of 14-feet is required to support bicycle travel in a shared traveled-way condition.

WEEKDAY MORNING PEAK HOUR (8:00 - 9:00 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)



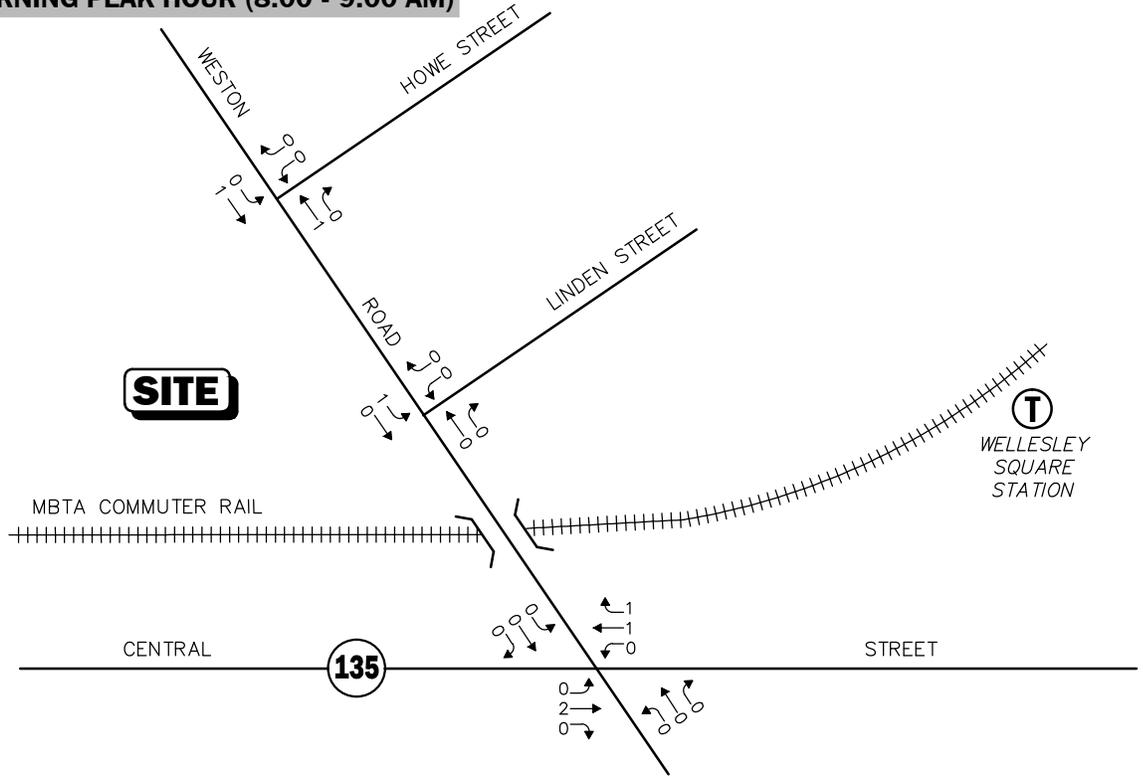
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.  
Not To Scale

Figure 4

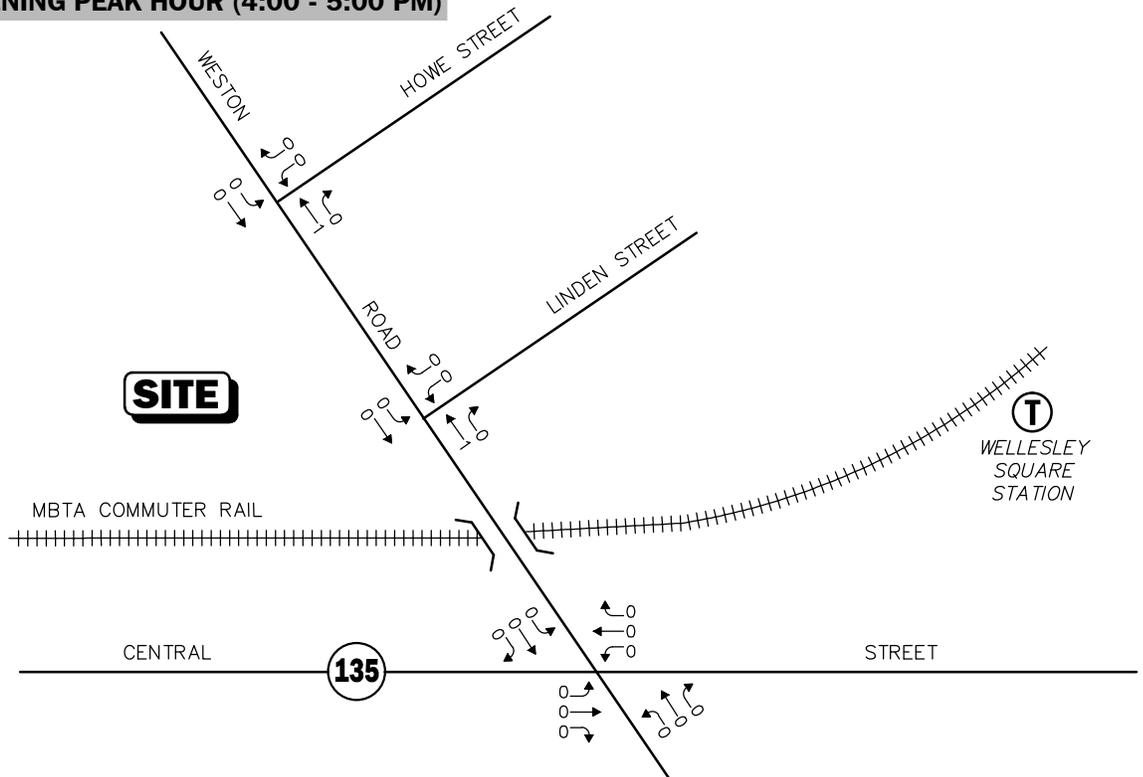


2018 Existing Peak Hour Pedestrian Volumes

WEEKDAY MORNING PEAK HOUR (8:00 - 9:00 AM)



WEEKDAY EVENING PEAK HOUR (4:00 - 5:00 PM)



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.  
Not To Scale

Figure 5



2018 Existing Peak Hour Bicycle Volumes

**Table 4**  
**MOTOR VEHICLE CRASH DATA SUMMARY<sup>a</sup>**

	Weston Road/ Linden Street	Weston Road/ Central Street	Weston Road/ Howe Street
Traffic Control Type: <sup>b</sup>	U	TS	U
<i>Year:</i>			
2011	3	4	0
2012	7	5	1
2013	3	9	1
2014	2	5	1
<u>2015</u>	<u>2</u>	<u>6</u>	<u>0</u>
Total	17	29	3
Average	3.40	5.80	0.60
Rate <sup>c</sup>	0.57	0.73	0.11
MassDOT Crash Rate: <sup>d</sup>	0.58/0.53	0.77/0.70	0.58/0.53
Significant? <sup>e</sup>	Yes	Yes	No
<i>Type:</i>			
Angle	3	7	0
Rear-End	10	16	3
Head-On	0	1	0
Sideswipe	2	2	0
Fixed Object	0	0	0
Pedestrian/Bicycle	2	2	0
<u>Unknown/Other</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	17	29	3
<i>Conditions:</i>			
Clear	10	18	2
Cloudy	4	6	1
Rain	3	4	0
<u>Snow/Ice</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	17	29	3
<i>Lighting:</i>			
Daylight	14	24	3
Dawn/Dusk	1	0	0
Dark (Road Lit)	2	5	0
<u>Dark (Road Unlit)</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	17	29	3
<i>Day of Week:</i>			
Monday through Friday	16	21	2
Saturday	1	6	1
<u>Sunday</u>	<u>0</u>	<u>2</u>	<u>0</u>
Total	17	29	3
<i>Severity:</i>			
Property Damage Only	12	28	2
Personal Injury	4	1	1
<u>Fatality</u>	<u>1</u>	<u>0</u>	<u>0</u>
Total	17	29	3

<sup>a</sup>Source: MassDOT Safety Management/Traffic Operations Unit records, 2011 through 2015.

<sup>b</sup>Traffic Control Type: U = unsignalized; TS = traffic signal.

<sup>c</sup>Crash rate per million vehicles entering the intersection.

<sup>d</sup>Statewide/District crash rate.

<sup>e</sup>The intersection crash rate is significant if it is found to exceed the MassDOT statewide or District (District 6) crash rates.

As can be seen in Table 4, the Weston Road/Linden Street intersection was reported to have experienced a total of 17 crashes over the five-year review period, the majority of which resulted in property damage only; occurred on a weekday; under clear weather and during daylight; and were classified as rear-end type crashes. This intersection was found to have a motor vehicle crash rate that was slightly above the MassDOT District average crash rate (District 6) for an unsignalized intersection. In addition, a motor vehicle crash that resulted in a fatality was also reported at the intersection. The subject crash occurred on August 24, 2012 at 1:58 PM and involved a truck that struck a bicyclist travelling along Weston Road. After a thorough investigation by the Wellesley Police Department and the Massachusetts State Police, it was determined that probable cause existed to charge the truck driver with negligent/unsafe operation. After presentation of the case to the Norfolk County Grand Jury, the grand jury found that there was insufficient evidence to pursue charges against the truck driver.

The Weston Road/Central Street intersection was reported to have experienced a total of 29 crashes over the five-year review period, the majority of which resulted in property damage only; occurred on a weekday; under clear weather and during daylight; and were classified as rear-end type crashes. This intersection was found to have a motor vehicle crash rate that was slightly above the MassDOT District average crash rate for a signalized intersection.

The Weston Road/Howe Street intersection was reported to have experienced a total of three (3) crashes over the five-year review period, the majority of which resulted in property damage only; occurred on a weekday; under clear weather and during daylight; and were classified as rear-end type crashes. This intersection was found to have a motor vehicle crash rate below both the MassDOT statewide and District averages for an unsignalized intersection.

A review of the MassDOT statewide High Crash Location List indicated that a section of Central Street between Weston Road and a point east of Cross Street is included on MassDOT's Highway Safety Improvement Program (HSIP) listing as high crash cluster location for 2013-2015. MassDOT defines a HSIP eligible cluster as: *"...a cluster in which the total number of 'equivalent property damage only' crashes is within the top 5 percent of all clusters in that region. 'Equivalent property damage only' is a method of combining the number of crashes with the severity of crashes based on a weighted scale where a fatal crash is worth 10, an injury crash is worth 5 and a property damage only crash is worth 1."* Designation as a HSIP location allows for MassDOT to prioritize funding for safety-related improvements in a specific region of the state.

The detailed MassDOT Crash Rate Worksheets and High Crash Location mapping are provided in the Appendix.

## **FUTURE CONDITIONS**

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Traffic volumes in the study area were projected to the year 2025, which reflects a seven-year planning horizon consistent with MassDOT's *Transportation Impact Assessment (TIA) Guidelines*. Independent of the Project, traffic volumes on the roadway network in the year 2025 under No-Build conditions include all existing traffic and new traffic resulting from background traffic growth. Anticipated Project-generated traffic volumes superimposed upon the 2025 No-Build traffic volumes reflect 2025 Build traffic volume 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, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

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

### **Specific Development by Others**

The Town of Wellesley Planning Department was contacted in order to determine if there were any projects planned within the study area that would have an impact on future traffic volumes at the study intersections. Based on this discussion, the following projects were identified for inclusion in this assessment:

- ***Sport Complex, 900 Worcester Road, Wellesley Massachusetts.*** This proposed project will entail the construction of a 130,000 square foot (sf) sport complex that will include two (2) regulation-sized ice rinks, a synthetic turf field and a 35,000 sf health club with an aquatics center that will feature an Olympic-size swimming pool.
- ***Wellesley Crossing, 8 Delanson Circle, Wellesley, Massachusetts.*** This proposed project consists of the construction of a 90-unit residential apartment community to be located at 8 Delanson Circle in Wellesley, Massachusetts.

Traffic volumes associated with the aforementioned specific development projects by others were obtained from their respective traffic studies or using trip-generation information available from the Institute of Transportation Engineers (ITE)<sup>7</sup> for the appropriate land use, and were assigned onto the study area roadway network based on existing traffic patterns where no other information was available. No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

### **General Background Traffic Growth**

Traffic-volume data compiled by MassDOT from Continuous Count Station No. 32 located on I-95 south of Route 20 in Weston were reviewed. Based on a review of this data, it was determined that traffic volumes within the study area have remained relatively stable (little or no growth) over the past several years. In order to provide a conservative (high) analysis scenario and a prudent planning condition for the Project, a 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

### **Roadway Improvement Projects**

The MassDOT and the Town of Wellesley were contacted in order to determine if there were any planned future roadway improvement projects expected to be complete by 2025 within the study area. Based on these discussions, no roadway improvement projects aside from routine maintenance activities were identified to be planned within the study area at this time.

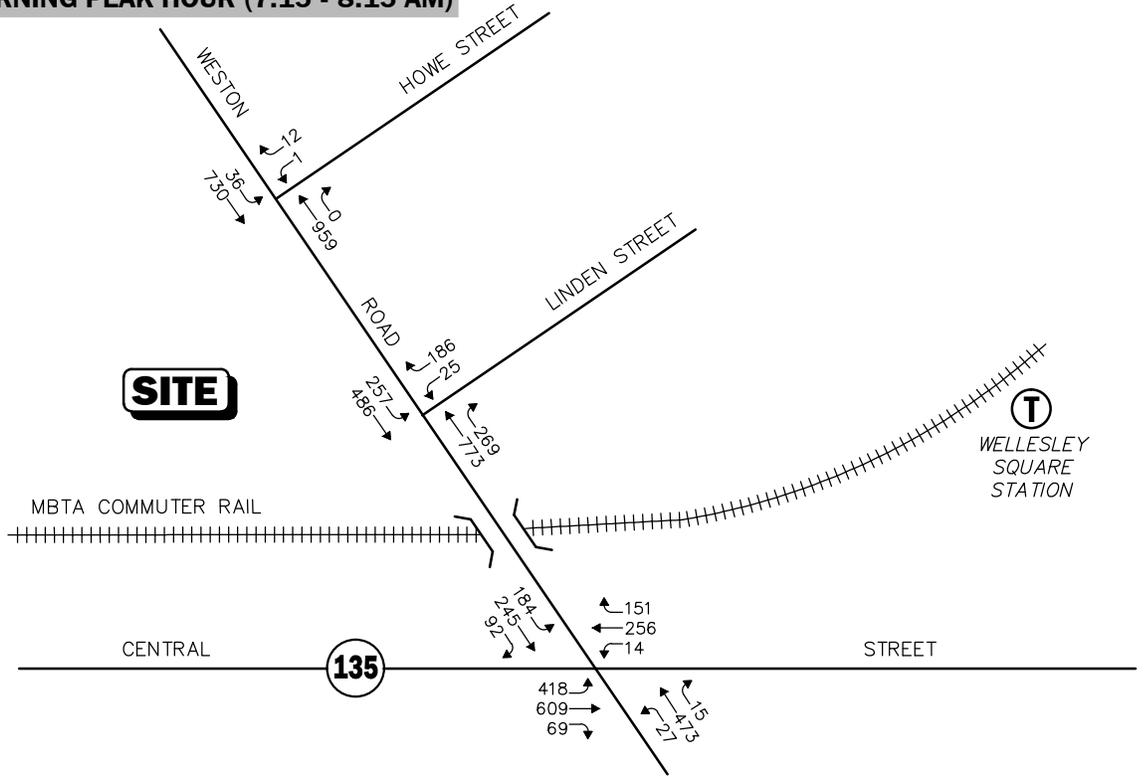
### **No-Build Traffic Volumes**

The 2025 No-Build condition peak-hour traffic-volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2018 Existing peak-hour traffic volumes and then adding the peak-hour traffic volumes associated with the identified specific development projects by others. The resulting 2025 No-Build weekday morning and evening peak-hour traffic volumes are shown on Figure 6.

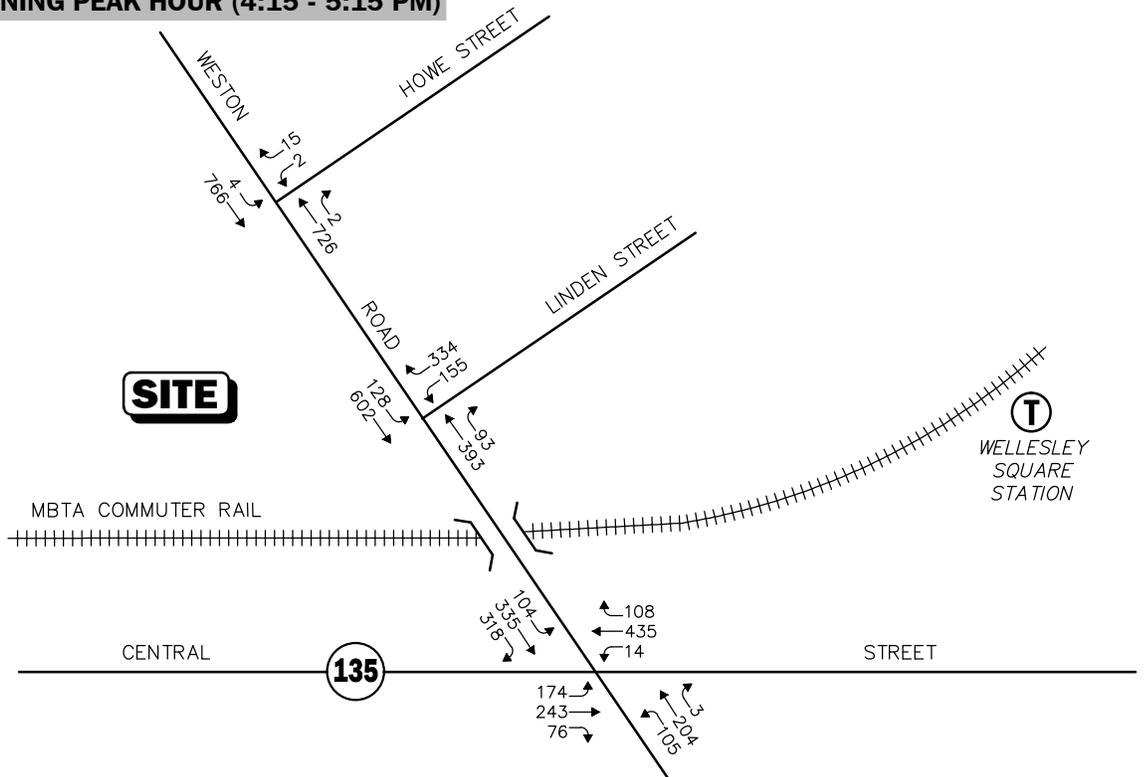
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<sup>7</sup>Ibid 1

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.  
Not To Scale

Figure 6



2025 No-Build  
Peak Hour Traffic Volumes

## **PROJECT-GENERATED TRAFFIC**

Design year (2025 Build) traffic volumes for the study area roadways were determined by estimating Project-generated traffic volumes and assigning those volumes on the study roadways. The following sections describe the methodology used to develop the anticipated traffic characteristics of the Project.

As proposed, the Project will entail the construction of a 55-unit residential apartment community. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE<sup>8</sup> for a similar land use as that proposed were used. ITE Land Use Code (LUC) 221, *Multifamily Housing (Mid-Rise)*, was used to develop the base traffic characteristics of the Project.

### **Transit Use**

Given the availability of public transportation services to the Project site (MBTA commuter rail and MWRTA bus service), the interconnected network of sidewalks and on-road bicycle accommodations, it is expected that a portion of the residents of the Project will use public transportation services, walk or bicycle, thereby reducing the volume of traffic that may be associated with the Project. In order to determine the proportion of residents of the Project that may use public transportation, walk or bicycle as their primary mode of transportation, travel mode data obtained from the 2011-2015 American Community Survey (ACS) for the Town of Wellesley were reviewed. Based on a review of this data, the following commuting modes were identified for workers age 16 or older that reside within the Town:

- *Single-Occupant Vehicle: 60.7%*
- *Car/Vanpool: 4.9%*
- *Public Transportation: 10.9%*
- *Walk: 13.1%*
- *Bicycle: 0.7%*
- *Other: 0.8%*
- *Worked at Home: 8.9%*

Approximately 39 percent of workers that reside in the Town reported that they used an alternative mode of transportation to single-occupancy vehicles to travel to/from work, with approximately 5 percent participating in a car or vanpool, 11 percent using public transportation, 13 percent walking and 1 percent bicycling.

In order to account for the use of alternative modes of transportation to single-occupancy vehicles, the base ITE trip-generation calculations were first converted to person trips using a vehicle occupancy ratio of 1.13 persons per vehicle, which was obtained from the 2009 National Household Travel Survey, and were then disseminated to the modes of transportation that are accessible to the residents of the Project: public transportation (transit), pedestrian/bicycle and automobile.

In order to provide a conservative (high) analysis condition from which to assess the potential impact of the Project on the transportation infrastructure, it was assumed that 80 percent of the trips generated by the Project would consist of automobile trips, with 10 percent of trips assumed to be made using public transportation and 10 percent consisting of pedestrian/bicycle trips. Both

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<sup>8</sup>Ibid 1.

the public transportation and pedestrian/bicycle rates are slightly lower than 11 percent and 14 percent utilization documented in the ACS, respectively.

Table 5 summarizes the traffic characteristics of the Project using the above methodology.

**Table 5**  
**TRIP-GENERATION SUMMARY**

Trip Period/Direction	ITE Trips <sup>a</sup>	Person Trips				
		Total Person Trips <sup>b</sup>	Automobile Trips (80%)	Transit Trips (10%)	Pedestrian/Bicycle Trips (10%)	Automobile Trips <sup>c</sup>
<i>Average Weekday Daily:</i>						
Entering	150	170	136	17	17	120
<u>Exiting</u>	<u>150</u>	<u>170</u>	<u>136</u>	<u>17</u>	<u>17</u>	<u>120</u>
Total	300	340	272	34	34	240
<i>Weekday Morning Peak Hour:</i>						
Entering	5	6	5	1	0	4
<u>Exiting</u>	<u>15</u>	<u>17</u>	<u>13</u>	<u>2</u>	<u>2</u>	<u>12</u>
Total	20	23	18	3	2	16
<i>Weekday Evening Peak Hour:</i>						
Entering	15	17	13	2	2	12
<u>Exiting</u>	<u>10</u>	<u>11</u>	<u>9</u>	<u>1</u>	<u>1</u>	<u>8</u>
Total	25	28	22	3	3	20

<sup>a</sup>Based on ITE LUC 221, *Multifamily Housing (Mid-Rise)*, and 55 dwelling units.

<sup>b</sup>ITE vehicle trips x vehicle occupancy ratio (VOR) of 1.13. VOR obtained from: *Summary of Travel Trends: 2009 National Household Travel Survey*; FHWA; Washington, D.C.; June 2011.

<sup>c</sup>Automobile person trips divided by 1.13.

### Project-Generated Traffic Volume Summary

As can be seen in Table 5, after applying appropriate adjustments to account for the use of public transportation and pedestrian and bicycle trips, the Project is expected to generate approximately 240 automobile trips, 34 transit trips and 34 pedestrian/bicycle trips on an average weekday (two-way, 24-hour volumes), with 16 automobile trips (4 vehicles entering and 12 exiting), 3 transit trips and 2 pedestrian/bicycle trips expected during the weekday morning peak-hour, and 20 automobile trips (12 vehicles entering and 8 exiting), 3 transit trips and 3 pedestrian/bicycle trips expected during the weekday evening peak-hour.

### TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution of generated trips to and from the Project site was determined based on a review of Journey-to-Work data obtained from the U.S. Census for persons residing in the Town of Wellesley, and then refined based on existing traffic patterns within the study area during the commuter peak periods. This methodology is consistent with the residential nature of

the Project and commuter traffic patterns during the peak hours. The general trip distribution for the Project is graphically depicted on Figure 7. The additional traffic expected to be generated by the Project was assigned on the study area roadway network as shown on Figure 8.

### **FUTURE TRAFFIC VOLUMES - BUILD CONDITION**

The 2025 Build condition traffic volumes were developed by adding the traffic expected to be generated by the Project to the 2025 No-Build traffic volumes. The resulting 2025 Build peak-hour traffic-volumes are graphically depicted on Figure 9.

A summary of peak-hour projected traffic-volume increases outside of the study area that is the subject of this assessment is shown in Table 6. These volumes are based on the expected increases from the Project.

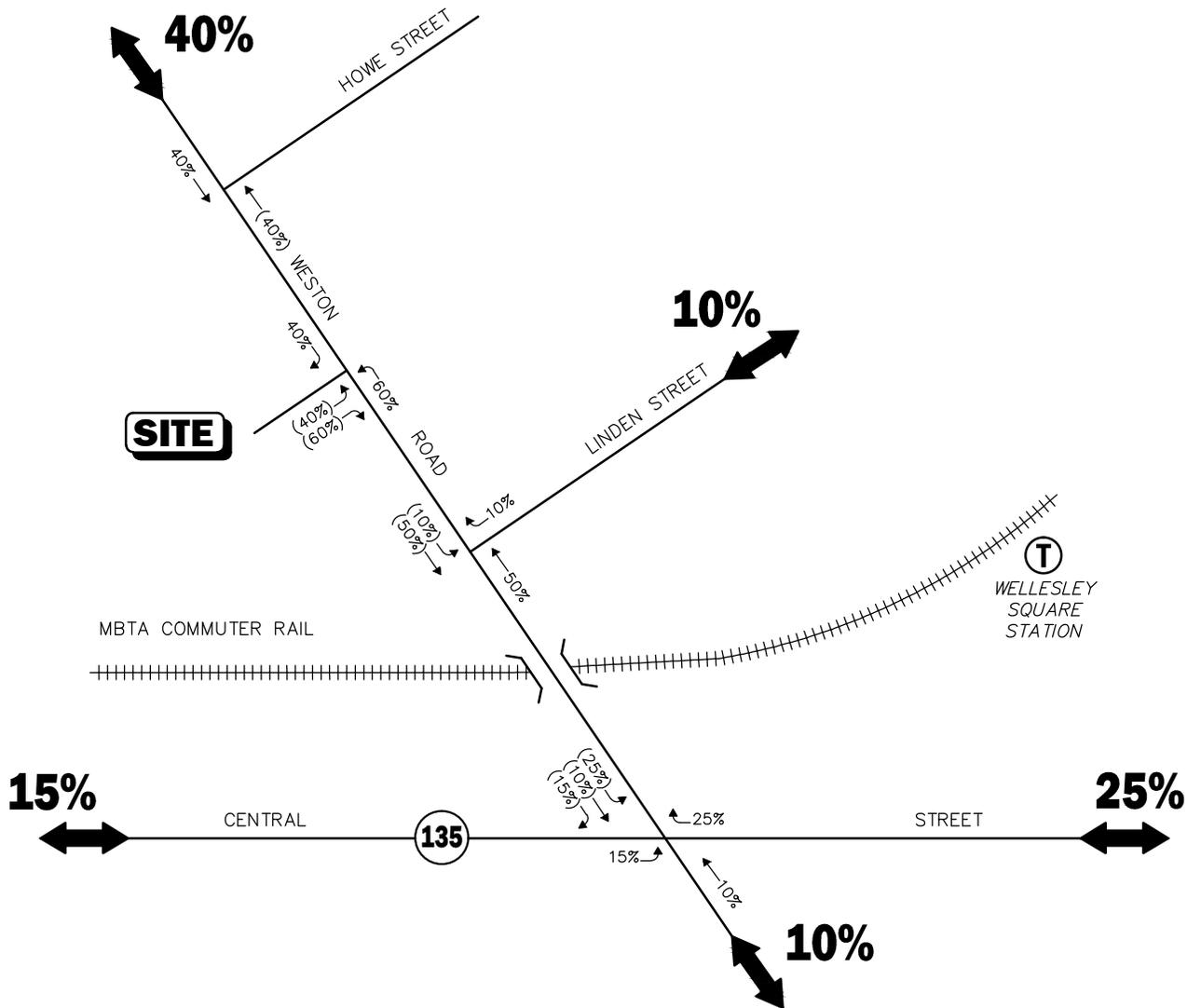
**Table 6**  
**PEAK-HOUR TRAFFIC-VOLUME INCREASES**

Location/Peak Hour	2018 Existing	2025 No-Build	2025 Build	Traffic Volume Increase Over No-Build	Percent Increase Over No-Build
<i>Weston Road, north of Howe Street:</i>					
Weekday Morning	1,595	1,737	1,744	7	0.4
Weekday Evening	1,376	1,511	1,519	8	0.5
<i>Weston Road, south of Central Street:</i>					
Weekday Morning	778	843	844	1	0.1
Weekday Evening	678	737	739	2	0.3
<i>Linden Street, east of Weston Road:</i>					
Weekday Morning	681	737	738	1	0.1
Weekday Evening	655	710	712	2	0.3
<i>Central Street, east of Weston Road:</i>					
Weekday Morning	1,142	1,229	1,233	4	0.3
Weekday Evening	841	907	912	5	0.6
<i>Central Street, west of Weston Road:</i>					
Weekday Morning	1,362	1,471	1,474	3	0.2
Weekday Evening	1,249	1,351	1,354	3	0.2

As shown in Table 6, Project-related traffic-volume increases outside of the study area relative to 2025 No-Build conditions are anticipated to range from 0.1 to 0.6 percent during the peak periods, with vehicle increases shown to range from 1 to 8 vehicles. *When dispersed over the peak-hour, such increases would not result in a significant impact (increase) on motorist delays or vehicle queuing outside of the immediate study area that is the subject of this assessment.*

**Legend:**

- XX Entering Trips
- (XX) Exiting Trips



Not To Scale

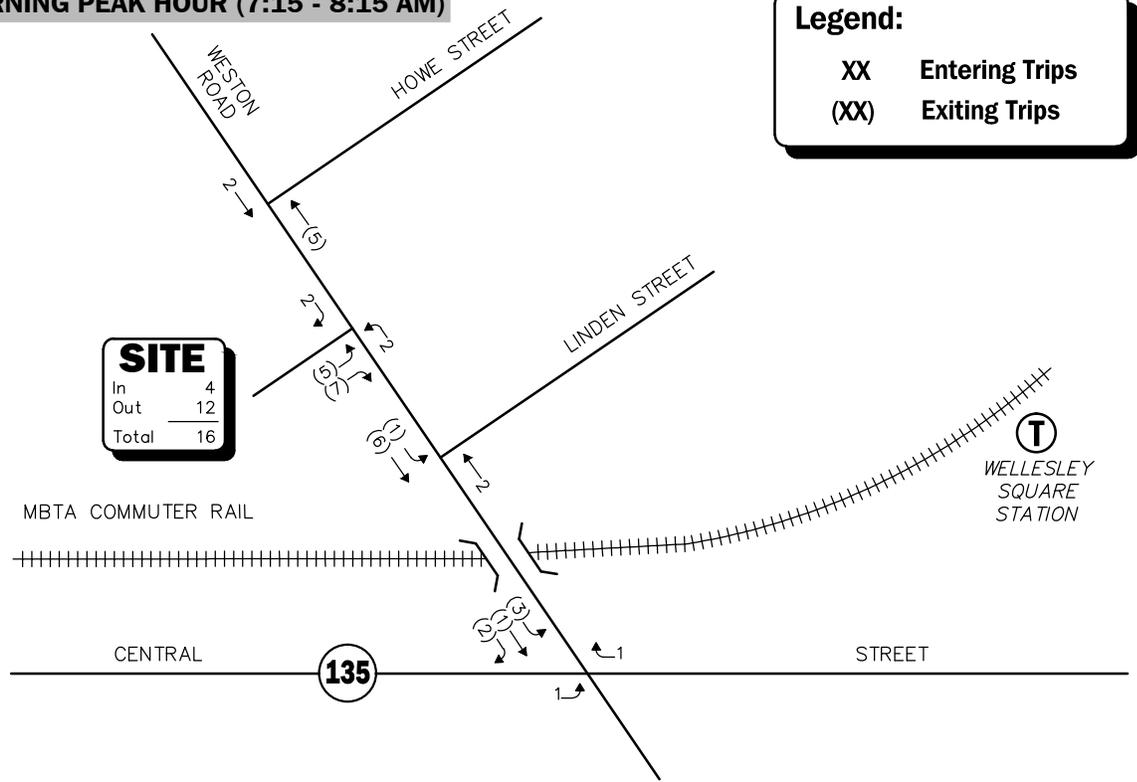
Figure 7



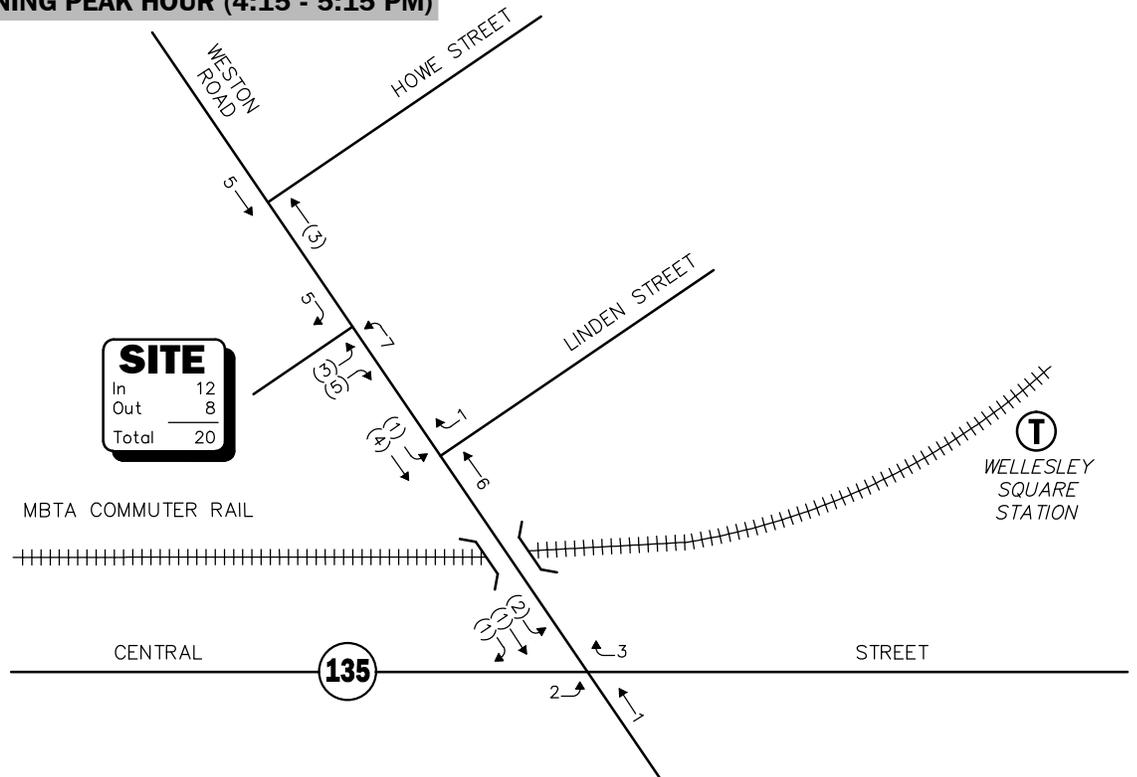
Trip Distribution Map

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WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)



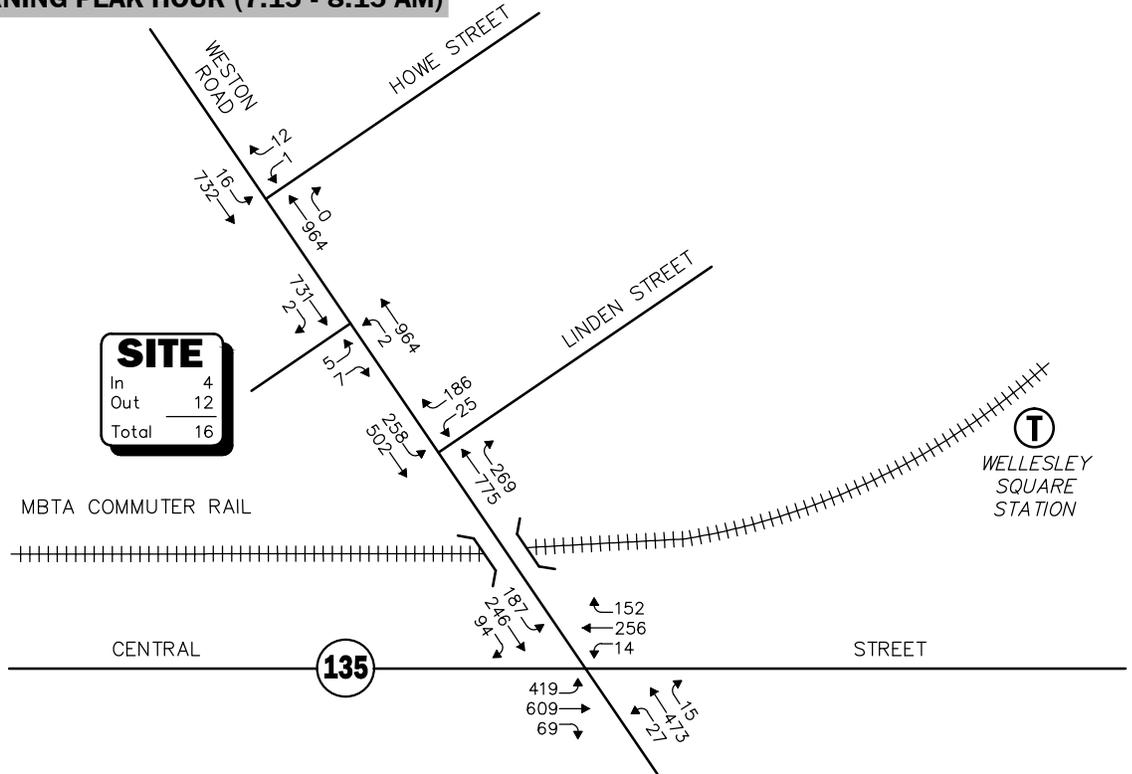
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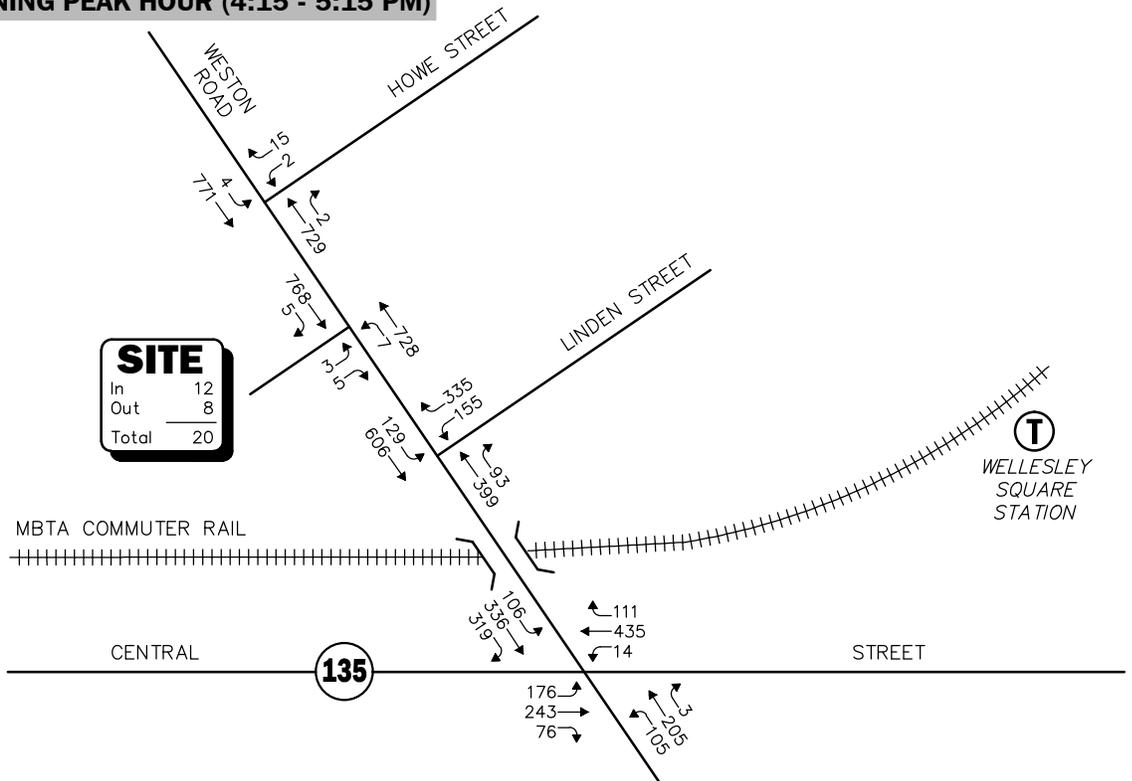
Figure 8

Project-Generated Peak Hour Traffic Volumes

WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)



WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)



Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.  
Not To Scale

Figure 9



2025 Build  
Peak Hour Traffic Volumes

# **TRAFFIC OPERATIONS ANALYSIS**

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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.<sup>9</sup> 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.

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<sup>9</sup>The capacity analysis methodology is based on the concepts and procedures presented in the *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

## **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.

Levels of service for signalized intersections were calculated using the Percentile Delay Method implemented as a part of the Synchro™ 8 software as required by MassDOT. The Percentile Delay Method assesses the effects of signal type, timing, phasing, and progression; vehicle mix; and geometrics on “percentile” delay. Level-of-service designations are based on the criterion of percentile delay per vehicle and is a measure of: i) driver discomfort; ii) motorist frustration; and iii) fuel consumption; and includes a uniform delay based on percentile volumes using a Poisson arrival pattern, an initial queue move-up time, and a queue interaction delay that accounts for delays resulting from queues extending from adjacent intersections. Table 7 summarizes the relationship between level-of-service and percentile delay, and uses the same numerical delay thresholds as the HCM method. The tabulated percentile 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**

Level of Service	Percentile Delay Per Vehicle (Seconds)
A	$\leq 10.0$
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	$> 80.0$

**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 2010 *Highway Capacity Manual*.<sup>10</sup> 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 2010 *Highway Capacity Manual*. Table 8 summarizes the relationship between level of service and average control delay for two-way stop controlled and all-way stop controlled intersections.

<sup>10</sup>*Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010.

**Table 8**  
**LEVEL-OF-SERVICE CRITERIA FOR**  
**UNIGNALIZED INTERSECTIONS<sup>a</sup>**

Level-of-Service by Volume-to-Capacity Ratio		Average Control Delay (Seconds Per Vehicle)
v/c ≤ 1.0	v/c > 1.0	
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

<sup>a</sup>Source: *Highway Capacity Manual*; Transportation Research Board; Washington, DC; 2010; page 19-2.

### **Vehicle Queue Analysis**

Vehicle queue analyses are a direct measurement of an intersection’s ability to process vehicles under various traffic control and volume scenarios and lane use arrangements. The vehicle queue analysis was performed using the Synchro™ intersection capacity analysis software which is based upon the methodology and procedures presented in the 2010 *Highway Capacity Manual*. The Synchro™ vehicle queue analysis methodology is a simulation based model which reports the number of vehicles that experience a delay of six seconds or more at an intersection. For signalized intersections, Synchro™ reports both the average (50<sup>th</sup> percentile) the 95<sup>th</sup> percentile vehicle queue. For unsignalized intersections, Synchro™ reports the 95<sup>th</sup> percentile vehicle queue. Vehicle queue lengths are a function of the capacity of the movement under study and the volume of traffic being processed by the intersection during the analysis period. The 95<sup>th</sup> percentile vehicle queue is the vehicle queue length that will be exceeded only 5 percent of the time, or approximately three minutes out of 60 minutes during the peak one hour of the day (during the remaining 57 minutes, the vehicle queue length will be less than the 95<sup>th</sup> percentile queue length).

### **ANALYSIS RESULTS**

Level-of-service and vehicle queue analyses were conducted for 2018 Existing, 2025 No-Build and 2025 Build conditions for the intersections within the study area. The results of the intersection capacity and vehicle queue analyses are summarized in Tables 9 and 10. The detailed analysis results are presented in the Appendix.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, a LOS of “D” or better is generally defined as “acceptable” operating conditions.

### **Signalized Intersection**

**Weston Road/Central Street** – Under 2018 Existing conditions, this signalized intersection was shown to operate at an overall LOS E during the weekday morning peak-hour and at LOS D during the weekday evening peak-hour. Under 2025 No-Build and 2025 Build conditions, overall operating conditions at the intersection were shown to degrade to LOS F during the weekday morning peak-hour and to LOS E during the weekday evening peak-hour as a result of traffic increases independent of the Project. Project-related impacts at this intersection were defined as an increase in overall motorist delay of less than 3.0 seconds and in vehicle queuing of up to one (1) vehicle.

### **Unsignalized Intersections**

**Weston Road/Linden Street** – Left-turn movements from Linden Street were shown to operate at LOS F under all analysis conditions, with no change in LOS for any movement predicted to occur as a result of the Project. Project-related impacts were defined as an increase in vehicle queuing of up to one (1) vehicle.

**Weston Road/Howe Street** – All movements at this intersection were shown to operate at LOS C or better under all analysis conditions, with no change in LOS for any movement predicted to occur as a result of the Project. Project-related impacts were defined as an increase in average motorist delay of less than 1.0 seconds with no material increase in vehicle queuing.

**Weston Road/Project Site Driveway** – All movements exiting the Project site driveway were shown to operate at LOS D or better during both the weekday morning and evening peak hours, with a predicted vehicle queue of up to one (1) vehicle. All movements along Weston Road approaching the Project site driveway were shown to operate at LOS A during the peak hours with negligible vehicle queuing.

**Table 9**  
**SIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY**

Signalized Intersection/Peak-hour/Movement	2018 Existing				2025 No-Build				2025 Build			
	V/C <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue <sup>d</sup> 50 <sup>th</sup> /95 <sup>th</sup>	V/C	Delay	LOS	Queue 50 <sup>th</sup> /95 <sup>th</sup>	V/C	Delay	LOS	Queue 50 <sup>th</sup> /95 <sup>th</sup>
<b>Weston Road at Central Street</b>												
<i>Weekday Morning:</i>												
Central Street EB LT	1.04	>80.0	F	7/23	1.10	>80.0	F	9/26	1.10	>80.0	F	9/26
Central Street EB TH/RT	0.89	41.8	D	14/30	0.89	42.1	D	16/33	0.89	42.1	D	16/33
Central Street WB LT/TH/RT	0.58	35.8	D	5/8	0.58	35.9	D	5/9	0.58	35.9	D	5/9
Weston Road NB LT/TH	0.56	24.8	C	9/18	0.63	28.0	C	10/20	0.63	28.0	C	10/20
Weston Road NB RT	0.02	0.1	A	0/0	0.02	0.1	A	0/0	0.02	0.1	A	0/0
Weston Road SB LT/TH/RT	1.30	>80.0	F	17/31	1.84	>80.0	F	22/31	1.86	>80.0	F	22/31
<b>Overall</b>	--	<b>71.0</b>	<b>E</b>	--	--	<b>&gt;80.0</b>	<b>F</b>	--	--	<b>&gt;80.0</b>	<b>F</b>	--
<i>Weekday Evening:</i>												
Central Street EB LT	0.53	25.4	C	2/5	0.60	27.7	C	3/6	0.60	27.9	C	3/6
Central Street EB TH/RT	0.45	23.0	C	4/10	0.47	23.3	C	5/10	0.47	23.3	C	5/10
Central Street WB LT	0.77	41.1	D	6/10	0.81	43.0	D	6/11	0.81	43.2	D	6/12
Weston Road NB LT/TH	0.62	30.3	C	5/13	0.74	37.5	D	6/15	0.74	37.8	D	6/15
Weston Road NB RT	0.00	0.0	A	0/0	0.00	0.0	A	0/0	0.00	0.0	A	0/0
Weston Road SB LT/TH/RT	1.01	62.1	E	13/33	1.21	>80.0	F	20/38	1.22	>80.0	F	20/39
<b>Overall</b>	--	<b>42.9</b>	<b>D</b>	--	--	<b>69.6</b>	<b>E</b>	--	--	<b>72.4</b>	<b>E</b>	--

<sup>a</sup>Volume-to-capacity ratio.

<sup>b</sup>Percentile delay per vehicle in seconds.

<sup>c</sup>Level-of-Service.

<sup>d</sup>Queue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

**Table 10**  
**UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY**

Unsignalized Intersection/ Peak Hour/Movement	2018 Existing				2025No-Build				2025 Build			
	Demand <sup>a</sup>	Delay <sup>b</sup>	LOS <sup>c</sup>	Queue <sup>d</sup> 95 <sup>th</sup>	Demand	Delay	LOS	Queue 95 <sup>th</sup>	Demand	Delay	LOS	Queue 95 <sup>th</sup>
<b>Weston Road at Linden Street</b>												
<i>Weekday Morning:</i>												
Linden Street WB LT	22	>50.0	F	2	25	>50.0	F	3	25	>50.0	F	3
Linden Street WB RT	170	25.6	C	3	186	32.5	D	4	186	32.7	D	4
Weston Road NB TH/RT	966	0.0	A	0	1,042	0.0	A	0	1,044	0.0	A	0
Weston Road SB LT/TH	687	4.6	A	2	753	5.0	A	2	760	5.0	A	2
<i>Weekday Evening:</i>												
Linden Street WB LT	144	>50.0	F	7	155	>50.0	F	10	155	>50.0	F	11
Linden Street WB RT	309	16.3	C	3	334	19.0	C	4	335	19.3	C	4
Weston Road NB TH/RT	439	0.0	A	0	486	0.0	A	0	492	0.0	A	0
Weston Road SB LT/TH	665	1.5	A	1	730	1.6	A	1	735	1.6	A	1
<b>Weston Road at Howe Street</b>												
<i>Weekday Morning:</i>												
Howe Street WB LT/RT	11	20.0	C	1	13	21.9	C	1	13	22.0	C	1
Weston Road NB TH/RT	886	0.0	A	0	959	0.0	A	0	964	0.0	A	0
Weston Road SB LT/TH	699	0.5	A	1	766	0.5	A	1	368	0.5	A	1
<i>Weekday Evening:</i>												
Howe Street WB LT/RT	16	16.5	C	1	17	18.2	C	1	17	18.2	C	1
Weston Road NB TH/RT	662	0.0	A	0	728	0.0	A	0	731	0.0	A	0
Weston Road SB LT/TH	702	0.0	A	0	766	0.0	A	0	775	0.0	A	0
<b>Weston Road at the Project Site Driveway</b>												
<i>Weekday Morning:</i>												
Project Site Driveway EB LT/RT	--	--	--	--	--	--	--	--	12	30.9	D	1
Weston Road NB LT/TH	--	--	--	--	--	--	--	--	966	0.0	A	0
Weston Road SB TH/RT	--	--	--	--	--	--	--	--	733	0.0	A	0
<i>Weekday Evening:</i>												
Project Site Driveway EB LT/RT	--	--	--	--	--	--	--	--	8	24.6	C	0
Weston Road NB LT/TH	--	--	--	--	--	--	--	--	735	0.1	A	0
Weston Road SB TH/RT	--	--	--	--	--	--	--	--	773	0.0	A	0

<sup>a</sup>Demand in vehicles per hour.

<sup>b</sup>Average control delay per vehicle (in seconds).

<sup>c</sup>Level-of-Service.

<sup>d</sup>Queue length in vehicles.

NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

## SIGHT DISTANCE EVALUATION

Sight distance measurements were performed at the Project site driveway intersection with Weston Road in accordance with MassDOT and American Association of State Highway and Transportation Officials (AASHTO)<sup>11</sup> requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 11 presents the measured SSD and ISD at the subject intersection.

**Table 11**  
**SIGHT DISTANCE MEASUREMENTS<sup>a</sup>**

Intersection/Sight Distance Measurement	Feet		
	Recommended Minimum (SSD)	Desirable (ISD) <sup>b</sup>	Measured
<b><i>Weston Road at the Project Site Driveway</i></b>			
<i>Stopping Sight Distance:</i>			
Weston Road approaching from the north	250	--	600+
Weston Road approaching from the south	250	--	600+
<i>Intersection Sight Distance:</i>			
Looking to the north from the Project Site Driveway	250	335/390	251+
Looking to the south from the Project Site Driveway	250	335/390	201/322 <sup>c</sup>

<sup>a</sup>Recommended minimum values obtained from: *A Policy on Geometric Design of Highways and Streets*, 6<sup>th</sup> Edition; American Association of State Highway and Transportation Officials (AASHTO); 2011; and based on an approach speed of 35 mph along Weston Road.

<sup>b</sup>Value shown is the intersection sight distance for a vehicle turning right/left exiting a roadway or driveway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

<sup>c</sup>Sight distance that can be achieved with the trimming of vegetation located along the west side of Weston Road within the public right-of-way.

<sup>11</sup>*A Policy on Geometric Design of Highway and Streets*, 6th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2011.

As can be seen in Table 11, the available lines of sight at the Project site driveway intersection with Weston Road were found to meet, exceed or could be made to meet or exceed the recommended minimum sight distance (SSD) to function in a safe manner based on a 35 mph approach speed along Weston Road, which is slightly above the 85<sup>th</sup> percentile vehicle travel speed that was measured along Weston Road (32 to 34 mph) and 5 mph above the posted speed limit (30 mph).

## **CONCLUSIONS AND RECOMMENDATIONS**

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### **CONCLUSIONS**

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed construction of a 55-unit residential apartment community to be known as Wellesley Park and located at 148 Weston Road in Wellesley, 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. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE<sup>12</sup> and with adjustment to account for the use of public transportation and pedestrian and bicycle trips, the Project is expected to generate approximately 240 automobile trips, 34 transit trips and 34 pedestrian/bicycle trips on an average weekday (two-way, 24-hour volumes), with 16 automobile trips, 3 transit trips and 2 pedestrian/bicycle trips expected during the weekday morning peak-hour, and 20 automobile trips, 3 transit trips and 3 pedestrian/bicycle trips expected during the weekday evening peak-hour;
2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no predicted changes in LOS and the majority of the movements at the study intersections shown to operate at LOS D or better under all analysis conditions where an LOS of “D” or better is defined as “acceptable” operating conditions;
3. Independent of the Project, left-turn movements from Linden Street at Weston Road were identified as operating over capacity (defined as LOS “F”) during both the weekday morning and evening peak hours, with Project-related impacts at the intersection defined as an increase in vehicle queuing of up to one (1) vehicle;
4. Similarly, the Weston Road/Central Street intersection was shown to operate at or over capacity (LOS “E” or “F”, respectively) during both the weekday morning and evening peak hours under 2025 traffic volume conditions independent of the Project, with Project-

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<sup>12</sup>Ibid 1.

- related impacts at the intersection defined as an increase in overall motorist delay of less than 3.0 seconds and in vehicle queuing of up to one (1) vehicle;
5. All movements exiting the Project site driveway intersection with Weston Road are expected to operate at LOS D or better during the peak hours with vehicle queuing of approximately one (1) vehicle;
  6. Both the Weston Road/Linden Street and Weston Road/Central Street intersections were found to have motor vehicle crash rates that were above the MassDOT average crash rates for a signalized or unsignalized intersection, as appropriate. Recommendations have been provided as a part of this assessment to advance safety-related improvements at both intersections (discussion follows); and
  7. Lines of sight to and from the Project site driveway at its intersection with Weston Road were found to meet, exceed or could be made to meet or exceed the recommended minimum sight distance to function in a safe manner for the appropriate approach speed along Weston Road.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations that follow.

## **RECOMMENDATIONS**

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended as a part of this evaluation and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

### **Project Access**

Access to the Project will be provided by way of a new driveway that will intersect the west side of Weston Road approximately 420 feet north of Linden Street. The following recommendations are offered with respect to Project access and internal circulation:

- The Project site driveway should be a minimum of 18-feet wide and a maximum of 24-feet wide, or as required to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle as defined by the Town of Wellesley Fire Department pursuant to the requirements of NFPA® 1.<sup>13</sup>
- Where perpendicular parking is provided, the drive aisle behind the parking should be a minimum of 23-feet in order to allow for vehicle maneuvering.
- A STOP-sign and marked STOP-line should be provided for vehicles exiting the Project site to Weston Road.

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<sup>13</sup>Ibid 2.

- All signs and pavement markings to be installed within the Project site shall conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).<sup>14</sup>
- Consideration should be given to installing a sidewalk along the Project site frontage on Weston Road and extending to the crosswalk at Linden Street.
- Marked crosswalks with Americans with Disabilities Act (ADA) compliant wheelchair ramps should be provided at all proposed pedestrian crossings.
- A school bus waiting area should be provided at an appropriate location on Weston Road defined in consultation with the Town.
- Signs and landscaping to be installed as a part of the Project within intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.
- Existing vegetation located along the west side of Weston Road, south of the Project site driveway and within the public right-of-way, should be selectively trimmed in order to provide the required line of sight to/from the south from the driveway.
- Snow windrows within sight triangle areas shall be promptly removed where such accumulations would impede sight lines.
- Consideration should be given to installing electric vehicle charging stations within the Project site and to accommodating the staging of car-sharing vehicles (ZipCar or similar).

## **Off-Site**

### **Weston Road at Linden Street**

The addition of Project-related traffic to the intersection of Weston Road at Linden Street was not shown to result in a change in LOS, with Project-related impacts at the intersection defined as an increase in vehicle queuing of up to one (1) vehicle. Independent of and unrelated to the Project, the intersection was found to have a motor vehicle crash rate that was slightly above the MassDOT District 6 average for an unsignalized intersection. In an effort to advance safety improvements at this location that are warranted as a result of existing conditions unrelated to the Project, the Project proponent will facilitate the completion of a Road Safety Audit (RSA) in order to identify improvements strategies for this intersection.

### **Weston Road at Central Street**

The addition of Project-related traffic to the intersection of Weston Road at Central Street was not shown to result in a change in LOS with the Project-related impacts at the intersection defined as an increase in overall motorist delay of less than 3.0 seconds and in vehicle queuing of up to one (1) vehicle. Independent of and unrelated to the Project, the intersection was found to have a motor vehicle crash rate that was slightly above the MassDOT District 6 average for a signalized intersection. In an effort to advance safety improvements at this location that are warranted as a result of existing conditions unrelated to the Project, the Project proponent will facilitate the completion of an RSA in order to identify improvements strategies for this intersection. In addition, Project proponent will design and implement an optimal traffic signal timing plan to improve overall traffic operations. With implementation of an optimal traffic signal timing plan,

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<sup>14</sup>Ibid 3.

overall intersection operations are predicted to remain at LOS F during the weekday morning peak-hour with reduced motorist delay, and to improve to LOS D (from LOS E) during the weekday evening peak-hour (an improvement over No-Build conditions).

### **Transportation Demand Management**

Public transportation services are provided within the study area by the MBTA (Commuter Rail) and the MWRTA (fixed-route bus service), and are accessible to residents of the Project. Wellesley Square Station on the Framingham/Worcester Line of the MBTA commuter rail system is located at 1 Grove Street which is within a 10-minute walking distance of the Project site. MWRTA bus Route 8 provides service along Linden Street and Central Street with a stop at Cross Street which is within a 5-minute walking distance of the Project site. In addition to scheduled stops, MWRTA buses also operate in a passenger demand service mode and will stop anywhere along the service route where it is safe to pick-up or discharge a passenger. The MWRTA also operates Paratransit Services for passengers who meet ADA requirements and provides transportation services for seniors and the disabled through the Wellesley Council on Aging.

In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures should be implemented as a part of the Project:

- The owner or property manager should contact MassRIDES to obtain information on facilitating and encouraging healthy transportation options for residents of the Project;
- Information regarding public transportation services, maps, schedules and fare information should be posted in a central location and/or otherwise made available to residents;
- A “welcome packet” should be provided to residents detailing available public transportation services, bicycle and walking alternatives, and commuter options available through MassRIDES’ and their NuRide program which rewards individuals that choose to walk, bicycle, carpool, vanpool or that use public transportation to travel to and from work;
- Residents should be made aware of the Emergency Ride Home (ERH) program available through MassRIDES, which reimburses employees of a participating MassRIDES employer partner worksite that is registered for ERH and that carpool, take transit, bicycle, walk or vanpool to work;
- Pedestrian accommodations should consist of installing a sidewalk along the Project site frontage on Weston Road and extending to the crosswalk at Linden Street;
- A mail drop should be provided in a central location; and
- Secure bicycle parking should be provided consisting of: i) exterior bicycle parking conveniently located proximate to the building entrance; and ii) weather protected bicycle parking located in a secure area within the building.

With implementation of the above recommendations, safe and efficient vehicular, pedestrian and bicycle access will be provided to the Project site and the Project can be accommodated within the confines of the existing and improved transportation system.

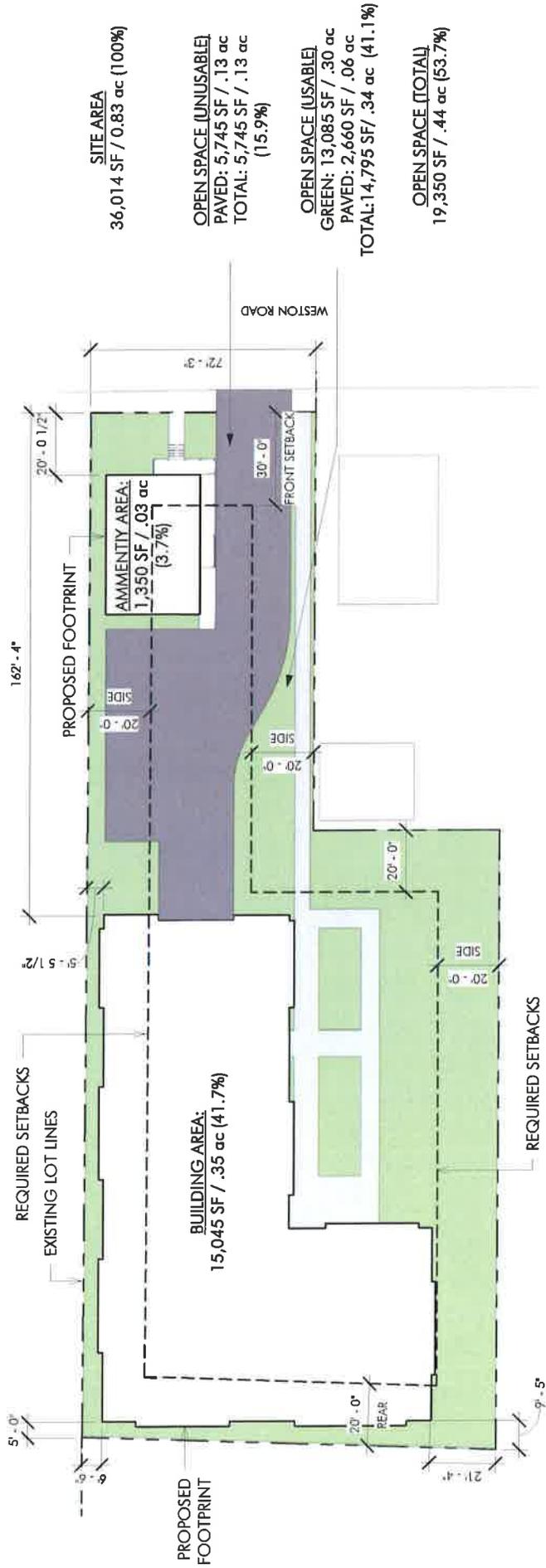
## APPENDIX

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PROJECT SITE PLAN  
AUTOMATIC TRAFFIC RECORDER COUNT DATA  
MANUAL TURNING MOVEMENT COUNT DATA  
SEASONAL ADJUSTMENT DATA  
CROSSTOWN TRAIL MAP  
PUBLIC TRANSPORTATION SCHEDULES  
VEHICLE TRAVEL SPEED DATA  
MASSDOT CRASH RATE WORKSHEETS  
GENERAL BACKGROUND TRAFFIC GROWTH  
BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS  
TRIP-GENERATION CALCULATIONS  
MODE OF TRANSPORTATION FOR THE TOWN OF WELLESLEY  
JOURNEY TO WORK TRIP DISTRIBUTION  
CAPACITY ANALYSIS WORKSHEETS

PROJECT SITE PLAN

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**SITE AREA**  
36,014 SF / 0.83 ac (100%)

**OPEN SPACE (UNUSABLE)**  
PAVED: 5,745 SF / .13 ac  
TOTAL: 5,745 SF / .13 ac (15.9%)

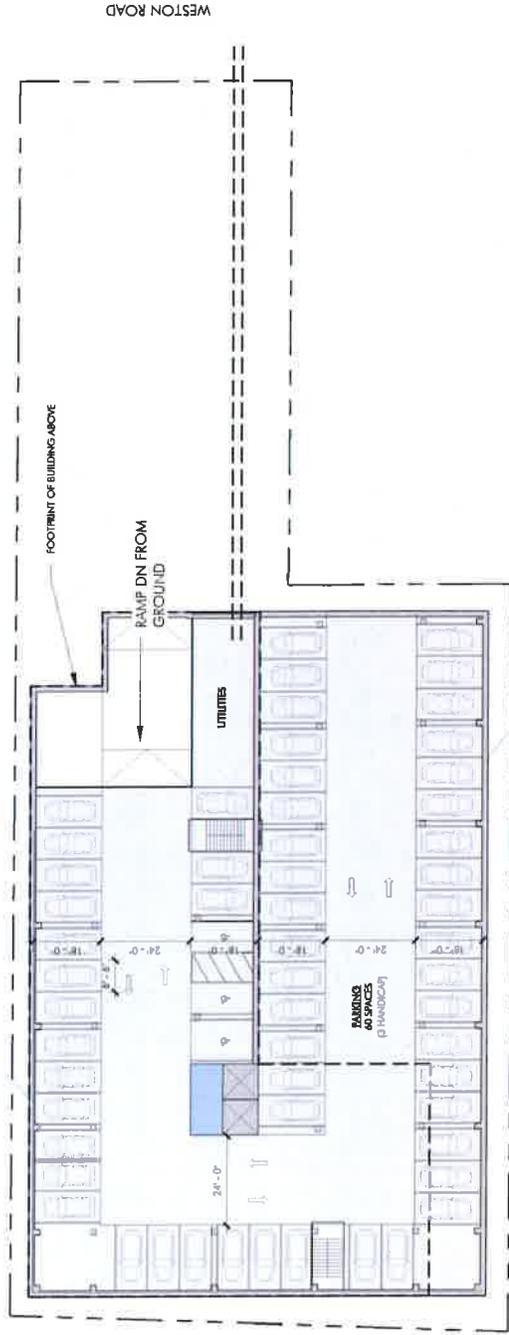
**OPEN SPACE (USABLE)**  
GREEN: 13,085 SF / .30 ac  
PAVED: 2,660 SF / .06 ac  
TOTAL: 14,795 SF / .34 ac (41.1%)

**OPEN SPACE (TOTAL)**  
19,350 SF / .44 ac (53.7%)

**ZONING OVERVIEW**

SINGLE RESIDENCE 15	ALLOWABLE/REQ'D	PROPOSED	COMPLIANCE
MAXIMUM BUILDING HEIGHT	45'-0"	58'-7"	NO
MINIMUM LOT SIZE	15,000 SF	36,014 SF	YES
MINIMUM OPEN SPACE	20%	53%	YES
MINIMUM LOT FRONTAGE	60'-0"	72'-3"	YES
MINIMUM FRONT YARD WIDTH	60'-0"	72'-3"	YES
MINIMUM FRONT YARD DEPTH	30'-0"	20'-0"	NO
MINIMUM SIDE YARD	20'-0"	5'-0"	NO
MINIMUM REAR YARD	20'-0"	5'-0"	NO





1/32" = 1'-0"

01

EMBARC

PARKING PLAN BELOW GRADE  
 148 WESTON ROAD  
 148 WESTON ROAD WELLESLEY, MA 02482  
 OCTOBER 17, 2017

**EMBARC** STUDIO  
 ARCHITECTURE DESIGN

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AUTOMATIC TRAFFIC RECORDER COUNT DATA

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# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774VOL1

Start Time	1/23/2018 Tue	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		2	110			3	109				
12:15		2	116			5	113				
12:30		2	112			4	96				
12:45		0	108	6	446	1	98	13	416	19	862
01:00		0	118			2	107				
01:15		1	110			1	100				
01:30		1	102			0	90				
01:45		0	110	2	440	1	99	4	396	6	836
02:00		0	102			1	91				
02:15		0	106			2	106				
02:30		0	141			1	99				
02:45		1	130	1	479	0	105	4	401	5	880
03:00		1	104			1	155				
03:15		0	138			0	164				
03:30		1	163			0	145				
03:45		3	128	5	533	1	138	2	602	7	1135
04:00		2	132			3	139				
04:15		4	136			4	145				
04:30		2	170			3	134				
04:45		7	128	15	566	8	116	18	534	33	1100
05:00		2	147			11	146				
05:15		13	131			13	143				
05:30		17	144			8	113				
05:45		16	136	48	558	23	143	55	545	103	1103
06:00		37	129			32	123				
06:15		54	113			23	148				
06:30		83	108			52	112				
06:45		127	89	301	439	93	139	200	522	501	961
07:00		145	93			98	85				
07:15		178	102			156	82				
07:30		210	77			135	55				
07:45		170	56	703	328	163	50	552	272	1255	600
08:00		160	73			176	48				
08:15		164	62			152	40				
08:30		156	78			160	42				
08:45		143	57	623	270	149	41	637	171	1260	441
09:00		133	50			127	25				
09:15		124	50			96	25				
09:30		121	27			87	24				
09:45		118	24	496	151	117	15	427	89	923	240
10:00		113	19			101	18				
10:15		90	18			96	6				
10:30		101	15			87	14				
10:45		94	13	398	65	93	4	377	42	775	107
11:00		105	9			114	9				
11:15		103	6			108	7				
11:30		113	5			98	3				
11:45		113	1	434	21	116	2	436	21	870	42
Total		3032	4296			2725	4011			5757	8307
Percent		41.4%	58.6%			40.5%	59.5%			40.9%	59.1%

# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774VOL1

Start Time	1/24/2018 Wed	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	133			6	117				
12:15		1	116			0	121				
12:30		5	118			4	103				
12:45		4	102	14	469	1	125	11	466	25	935
01:00		1	110			1	127				
01:15		0	125			0	112				
01:30		2	121			0	119				
01:45		0	137	3	493	1	134	2	492	5	985
02:00		0	131			0	158				
02:15		0	109			1	161				
02:30		1	160			0	173				
02:45		1	151	2	551	1	174	2	666	4	1217
03:00		1	147			0	157				
03:15		0	146			1	176				
03:30		3	146			0	172				
03:45		1	155	5	594	4	161	5	666	10	1260
04:00		0	126			3	152				
04:15		3	140			3	158				
04:30		0	163			1	164				
04:45		3	140	6	569	9	173	16	647	22	1216
05:00		9	151			9	136				
05:15		13	144			13	127				
05:30		15	121			18	164				
05:45		22	131	59	547	24	150	64	577	123	1124
06:00		25	113			27	118				
06:15		50	95			19	155				
06:30		66	103			62	150				
06:45		122	107	263	418	92	133	200	556	463	974
07:00		148	84			122	118				
07:15		179	103			177	73				
07:30		239	98			129	75				
07:45		190	67	756	352	175	65	603	331	1359	683
08:00		165	89			149	51				
08:15		172	62			158	50				
08:30		175	49			169	32				
08:45		124	51	636	251	168	29	644	162	1280	413
09:00		158	47			141	33				
09:15		136	52			128	33				
09:30		125	40			132	19				
09:45		98	45	517	184	117	14	518	99	1035	283
10:00		116	29			108	19				
10:15		119	22			98	28				
10:30		125	16			102	8				
10:45		124	9	484	76	121	13	429	68	913	144
11:00		124	18			113	8				
11:15		130	4			124	3				
11:30		148	3			135	4				
11:45		132	3	534	28	144	3	516	18	1050	46
Total		3279	4532			3010	4748			6289	9280
Percent		42.0%	58.0%			38.8%	61.2%			40.4%	59.6%
Grand Total		6311	8828			5735	8759			12046	17587
Percent		41.7%	58.3%			39.6%	60.4%			40.7%	59.3%

ADT                      ADT 14,816                      AADT 14,816

# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774VOL1

Start Time	1/22/2018		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	13	11	14	11	*	*	*	*	*	*	*	*	10	12
01:00	*	*	4	2	3	2	*	*	*	*	*	*	*	*	2	3
02:00	*	*	1	2	2	2	*	*	*	*	*	*	*	*	2	3
03:00	*	*	5	5	5	5	*	*	*	*	*	*	*	*	5	4
04:00	*	*	15	16	6	16	*	*	*	*	*	*	*	*	10	17
05:00	*	*	48	55	59	64	*	*	*	*	*	*	*	*	54	60
06:00	*	*	301	200	263	200	*	*	*	*	*	*	*	*	282	200
07:00	*	*	703	552	756	603	*	*	*	*	*	*	*	*	730	578
08:00	*	*	623	637	636	644	*	*	*	*	*	*	*	*	630	640
09:00	*	*	496	427	517	518	*	*	*	*	*	*	*	*	506	472
10:00	*	*	398	377	484	429	*	*	*	*	*	*	*	*	441	403
11:00	*	*	434	436	534	516	*	*	*	*	*	*	*	*	484	476
12:00 PM	*	*	446	416	469	466	*	*	*	*	*	*	*	*	458	441
01:00	*	*	440	396	493	492	*	*	*	*	*	*	*	*	466	444
02:00	*	*	479	401	551	666	*	*	*	*	*	*	*	*	515	534
03:00	*	*	533	602	594	666	*	*	*	*	*	*	*	*	564	634
04:00	*	*	566	534	569	647	*	*	*	*	*	*	*	*	568	590
05:00	*	*	558	545	547	577	*	*	*	*	*	*	*	*	552	561
06:00	*	*	439	522	418	556	*	*	*	*	*	*	*	*	428	539
07:00	*	*	328	272	352	331	*	*	*	*	*	*	*	*	340	302
08:00	*	*	270	171	251	162	*	*	*	*	*	*	*	*	260	166
09:00	*	*	151	89	184	99	*	*	*	*	*	*	*	*	168	94
10:00	*	*	65	42	76	68	*	*	*	*	*	*	*	*	70	55
11:00	*	*	21	21	28	18	*	*	*	*	*	*	*	*	24	20
Lane	0	0	7328	6736	7811	7758	0	0	0	0	0	0	0	0	7569	7248
Day	0	0	14064	14064	15569	15569	0	0	0	0	0	0	0	0	14817	14817
AM Peak	-	-	07:00	08:00	07:00	08:00	-	-	-	-	-	-	-	-	07:00	08:00
Vol.	-	-	703	637	756	644	-	-	-	-	-	-	-	-	730	640
PM Peak	-	-	16:00	15:00	15:00	14:00	-	-	-	-	-	-	-	-	16:00	15:00
Vol.	-	-	566	602	594	666	-	-	-	-	-	-	-	-	568	634

Comb. Total      0      14064      15569      0      0      0      14817

ADT      ADT 14,816      AADT 14,816

**MANUAL TURNING MOVEMENT COUNT DATA**

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**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Weston Rd From North		Howe St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	2	119	0	0	145	1	267
07:15 AM	6	169	1	0	196	0	372
07:30 AM	5	134	0	3	241	0	383
07:45 AM	14	159	0	1	211	1	386
<b>Total</b>	<b>27</b>	<b>581</b>	<b>1</b>	<b>4</b>	<b>793</b>	<b>2</b>	<b>1408</b>
08:00 AM	6	144	0	5	160	1	316
08:15 AM	6	149	0	1	180	0	336
08:30 AM	2	157	0	1	159	1	320
08:45 AM	2	163	1	0	147	1	314
<b>Total</b>	<b>16</b>	<b>613</b>	<b>1</b>	<b>7</b>	<b>646</b>	<b>3</b>	<b>1286</b>
<b>Grand Total</b>	<b>43</b>	<b>1194</b>	<b>2</b>	<b>11</b>	<b>1439</b>	<b>5</b>	<b>2694</b>
Apprch %	3.5	96.5	15.4	84.6	99.7	0.3	
Total %	1.6	44.3	0.1	0.4	53.4	0.2	
Cars	43	1184	2	9	1424	5	2667
% Cars	100	99.2	100	81.8	99	100	99
Trucks	0	10	0	2	15	0	27
% Trucks	0	0.8	0	18.2	1	0	1

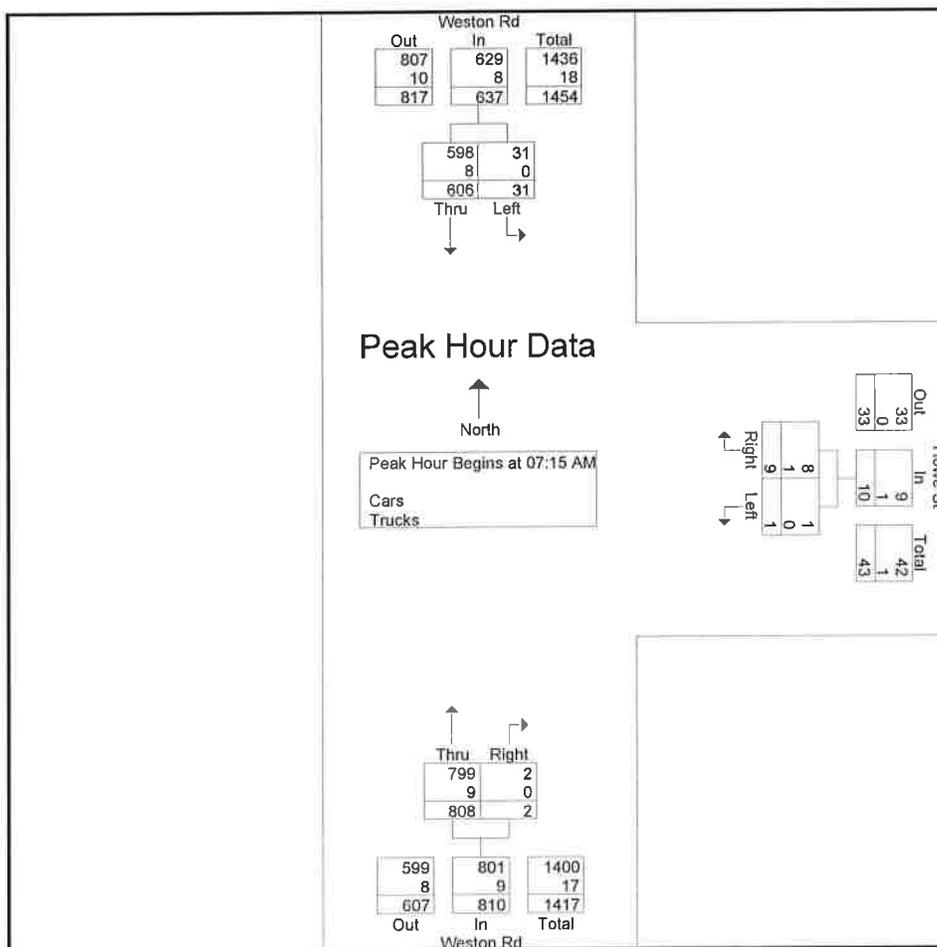
## Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Howe Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740001  
 Site Code : 77740001  
 Start Date : 1/24/2018  
 Page No : 2

Start Time	Weston Rd From North			Howe St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	6	169	175	1	0	1	196	0	196	372
07:30 AM	5	134	139	0	3	3	241	0	241	383
07:45 AM	14	159	173	0	1	1	211	1	212	386
08:00 AM	6	144	150	0	5	5	160	1	161	316
<b>Total Volume</b>	<b>31</b>	<b>606</b>	<b>637</b>	<b>1</b>	<b>9</b>	<b>10</b>	<b>808</b>	<b>2</b>	<b>810</b>	<b>1457</b>
<b>% App. Total</b>	<b>4.9</b>	<b>95.1</b>		<b>10</b>	<b>90</b>		<b>99.8</b>	<b>0.2</b>		
PHF	.554	.896	.910	.250	.450	.500	.838	.500	.840	.944
Cars	31	598	629	1	8	9	799	2	801	1439
% Cars	100	98.7	98.7	100	88.9	90.0	98.9	100	98.9	98.8
Trucks	0	8	8	0	1	1	9	0	9	18
% Trucks	0	1.3	1.3	0	11.1	10.0	1.1	0	1.1	1.2



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 4

Groups Printed- Cars

Start Time	Weston Rd From North		Howe St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	2	118	0	0	143	1	264
07:15 AM	6	166	1	0	195	0	368
07:30 AM	5	132	0	3	239	0	379
07:45 AM	14	156	0	0	208	1	379
<b>Total</b>	<b>27</b>	<b>572</b>	<b>1</b>	<b>3</b>	<b>785</b>	<b>2</b>	<b>1390</b>
08:00 AM	6	144	0	5	157	1	313
08:15 AM	6	148	0	1	180	0	335
08:30 AM	2	157	0	0	157	1	317
08:45 AM	2	163	1	0	145	1	312
<b>Total</b>	<b>16</b>	<b>612</b>	<b>1</b>	<b>6</b>	<b>639</b>	<b>3</b>	<b>1277</b>
<b>Grand Total</b>	<b>43</b>	<b>1184</b>	<b>2</b>	<b>9</b>	<b>1424</b>	<b>5</b>	<b>2667</b>
Apprch %	3.5	96.5	18.2	81.8	99.7	0.3	
Total %	1.6	44.4	0.1	0.3	53.4	0.2	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 7

Groups Printed- Trucks

Start Time	Weston Rd From North		Howe St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	1	0	0	2	0	3
07:15 AM	0	3	0	0	1	0	4
07:30 AM	0	2	0	0	2	0	4
07:45 AM	0	3	0	1	3	0	7
<b>Total</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>18</b>
08:00 AM	0	0	0	0	3	0	3
08:15 AM	0	1	0	0	0	0	1
08:30 AM	0	0	0	1	2	0	3
08:45 AM	0	0	0	0	2	0	2
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>9</b>
<b>Grand Total</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>2</b>	<b>15</b>	<b>0</b>	<b>27</b>
Apprch %	0	100	0	100	100	0	
Total %	0	37	0	7.4	55.6	0	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 10

Groups Printed- Bikes Peds

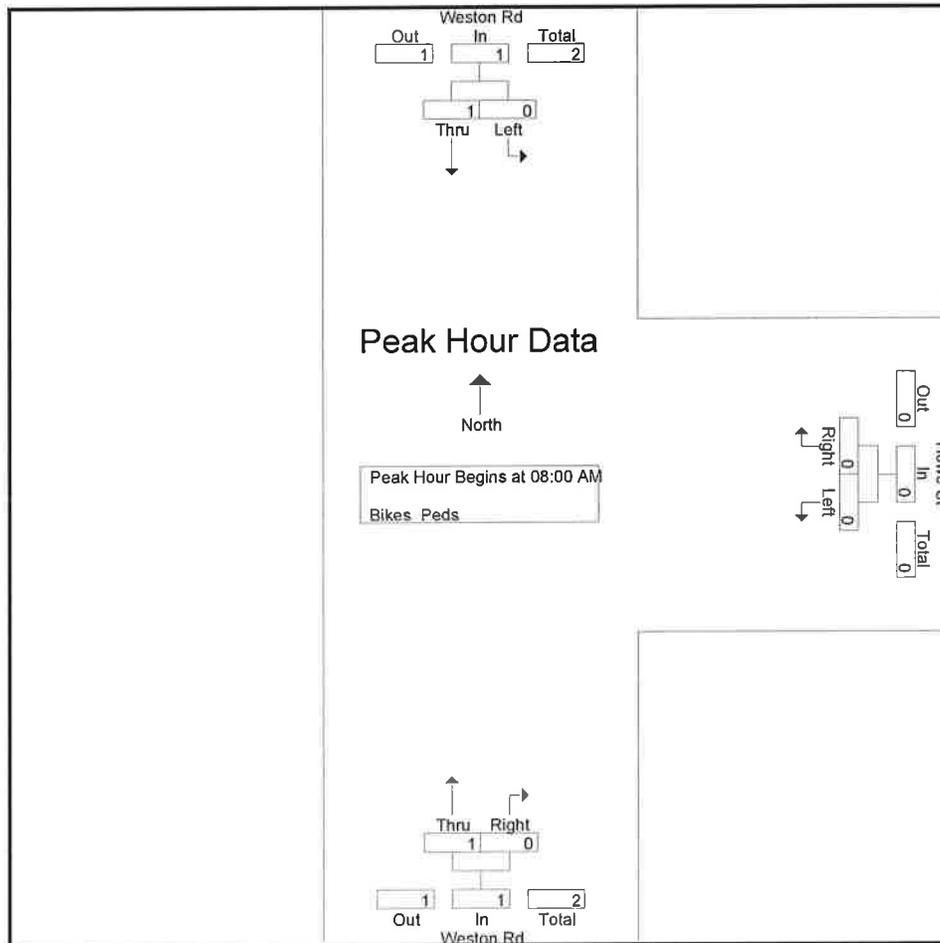
Start Time	Weston Rd From North			Howe St From East			Weston Rd From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	3	0	0	0	3	0	3
07:30 AM	0	0	0	0	0	1	0	0	0	1	0	1
07:45 AM	0	0	0	0	0	2	0	0	0	2	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>
08:00 AM	0	0	0	0	0	3	0	0	0	3	0	3
08:15 AM	0	0	0	0	0	1	0	0	0	1	0	1
08:30 AM	0	0	0	0	0	0	1	0	0	0	1	1
08:45 AM	0	1	0	0	0	2	0	0	0	2	1	3
<b>Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>8</b>
<b>Grand Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>14</b>
Approch %	0	100		0	0		100	0				
Total %	0	50		0	0		50	0		85.7	14.3	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 11

Start Time	Weston Rd From North			Howe St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	1	1	0	0	0	1	0	1	2
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.250	.000	.250	.500



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Weston Rd From North		Howe St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	3	159	0	7	135	0	304
04:15 PM	0	147	1	1	140	0	289
04:30 PM	0	168	0	2	167	2	339
04:45 PM	0	163	1	3	139	0	306
<b>Total</b>	<b>3</b>	<b>637</b>	<b>2</b>	<b>13</b>	<b>581</b>	<b>2</b>	<b>1238</b>
05:00 PM	2	138	0	2	153	0	295
05:15 PM	1	132	0	5	140	1	279
05:30 PM	0	154	0	2	125	0	281
05:45 PM	4	141	0	3	139	0	287
<b>Total</b>	<b>7</b>	<b>565</b>	<b>0</b>	<b>12</b>	<b>557</b>	<b>1</b>	<b>1142</b>
<b>Grand Total</b>	<b>10</b>	<b>1202</b>	<b>2</b>	<b>25</b>	<b>1138</b>	<b>3</b>	<b>2380</b>
Apprch %	0.8	99.2	7.4	92.6	99.7	0.3	
Total %	0.4	50.5	0.1	1.1	47.8	0.1	
Cars	10	1198	2	24	1134	3	2371
% Cars	100	99.7	100	96	99.6	100	99.6
Trucks	0	4	0	1	4	0	9
% Trucks	0	0.3	0	4	0.4	0	0.4

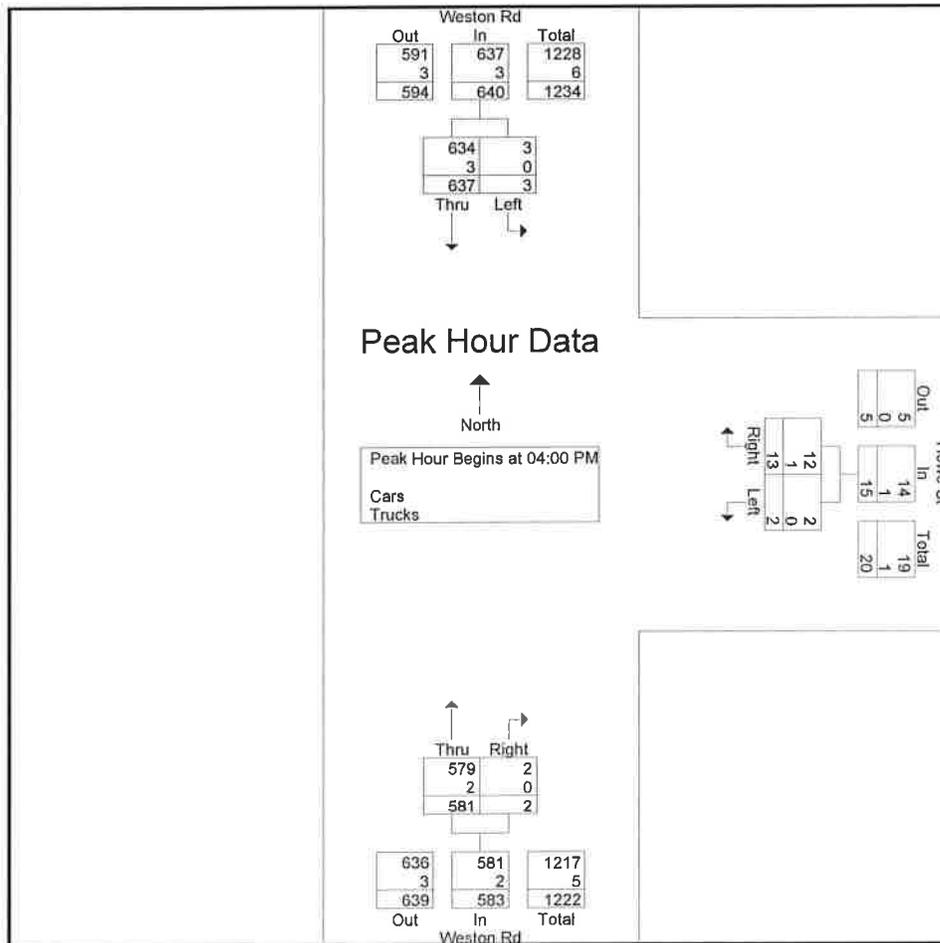
# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Howe Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740001  
 Site Code : 77740001  
 Start Date : 1/24/2018  
 Page No : 2

Start Time	Weston Rd From North			Howe St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	3	159	162	0	7	7	135	0	135	304
04:15 PM	0	147	147	1	1	2	140	0	140	289
04:30 PM	0	168	168	0	2	2	167	2	169	339
04:45 PM	0	163	163	1	3	4	139	0	139	306
<b>Total Volume</b>	<b>3</b>	<b>637</b>	<b>640</b>	<b>2</b>	<b>13</b>	<b>15</b>	<b>581</b>	<b>2</b>	<b>583</b>	<b>1238</b>
% App. Total	0.5	99.5		13.3	86.7		99.7	0.3		
PHF	.250	.948	.952	.500	.464	.536	.870	.250	.862	.913
Cars	3	634	637	2	12	14	579	2	581	1232
% Cars	100	99.5	99.5	100	92.3	93.3	99.7	100	99.7	99.5
Trucks	0	3	3	0	1	1	2	0	2	6
% Trucks	0	0.5	0.5	0	7.7	6.7	0.3	0	0.3	0.5



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 4

Groups Printed- Cars

Start Time	Weston Rd From North		Howe St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	3	158	0	7	133	0	301
04:15 PM	0	146	1	1	140	0	288
04:30 PM	0	167	0	2	167	2	338
04:45 PM	0	163	1	2	139	0	305
<b>Total</b>	<b>3</b>	<b>634</b>	<b>2</b>	<b>12</b>	<b>579</b>	<b>2</b>	<b>1232</b>
05:00 PM	2	137	0	2	153	0	294
05:15 PM	1	132	0	5	139	1	278
05:30 PM	0	154	0	2	124	0	280
05:45 PM	4	141	0	3	139	0	287
<b>Total</b>	<b>7</b>	<b>564</b>	<b>0</b>	<b>12</b>	<b>555</b>	<b>1</b>	<b>1139</b>
<b>Grand Total</b>	<b>10</b>	<b>1198</b>	<b>2</b>	<b>24</b>	<b>1134</b>	<b>3</b>	<b>2371</b>
Apprch %	0.8	99.2	7.7	92.3	99.7	0.3	
Total %	0.4	50.5	0.1	1	47.8	0.1	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 7

Groups Printed- Trucks

Start Time	Weston Rd From North		Howe St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	1	0	0	2	0	3
04:15 PM	0	1	0	0	0	0	1
04:30 PM	0	1	0	0	0	0	1
04:45 PM	0	0	0	1	0	0	1
<b>Total</b>	0	3	0	1	2	0	6
05:00 PM	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	1	0	1
05:30 PM	0	0	0	0	1	0	1
05:45 PM	0	0	0	0	0	0	0
<b>Total</b>	0	1	0	0	2	0	3
<b>Grand Total</b>	0	4	0	1	4	0	9
Apprch %	0	100	0	100	100	0	
Total %	0	44.4	0	11.1	44.4	0	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 10

Groups Printed- Bikes Peds

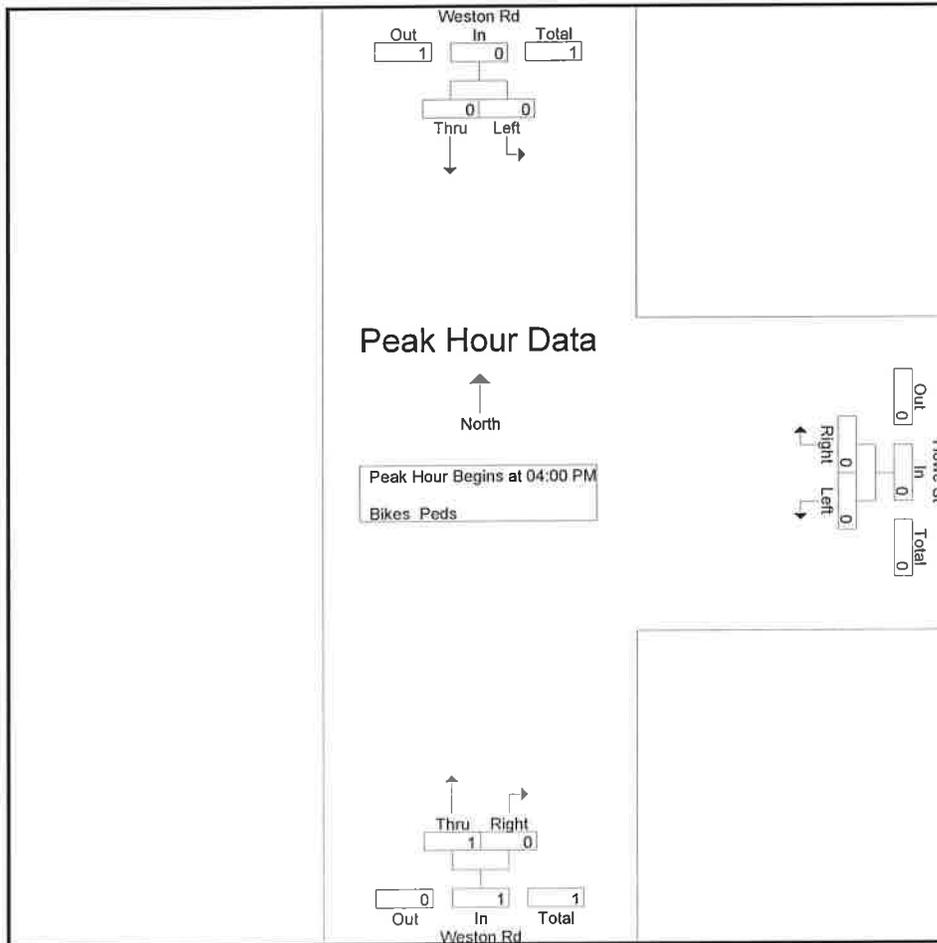
Start Time	Weston Rd From North			Howe St From East			Weston Rd From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	1	0	0	4	1	0	0	5	1	6
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	1
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>	<b>8</b>
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	2	0	0	0	2	0	2
05:45 PM	0	0	0	0	0	2	0	0	0	2	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>1</b>	<b>12</b>
Apprch %	0	0		0	0		100	0				
Total %	0	0		0	0		100	0		91.7	8.3	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Howe Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740001  
Site Code : 77740001  
Start Date : 1/24/2018  
Page No : 11

Start Time	Weston Rd From North			Howe St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Weston Rd From North		Linden St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	42	73	1	22	127	34	299
07:15 AM	71	93	2	29	167	48	410
07:30 AM	48	83	6	48	189	55	429
07:45 AM	45	115	6	53	156	54	429
<b>Total</b>	<b>206</b>	<b>364</b>	<b>15</b>	<b>152</b>	<b>639</b>	<b>191</b>	<b>1567</b>
08:00 AM	54	87	6	25	138	71	381
08:15 AM	45	102	5	28	148	53	381
08:30 AM	39	131	11	42	126	64	413
08:45 AM	46	115	7	33	113	55	369
<b>Total</b>	<b>184</b>	<b>435</b>	<b>29</b>	<b>128</b>	<b>525</b>	<b>243</b>	<b>1544</b>
<b>Grand Total</b>	<b>390</b>	<b>799</b>	<b>44</b>	<b>280</b>	<b>1164</b>	<b>434</b>	<b>3111</b>
Apprch %	32.8	67.2	13.6	86.4	72.8	27.2	
Total %	12.5	25.7	1.4	9	37.4	14	
Cars	381	793	41	276	1153	432	3076
% Cars	97.7	99.2	93.2	98.6	99.1	99.5	98.9
Trucks	9	6	3	4	11	2	35
% Trucks	2.3	0.8	6.8	1.4	0.9	0.5	1.1

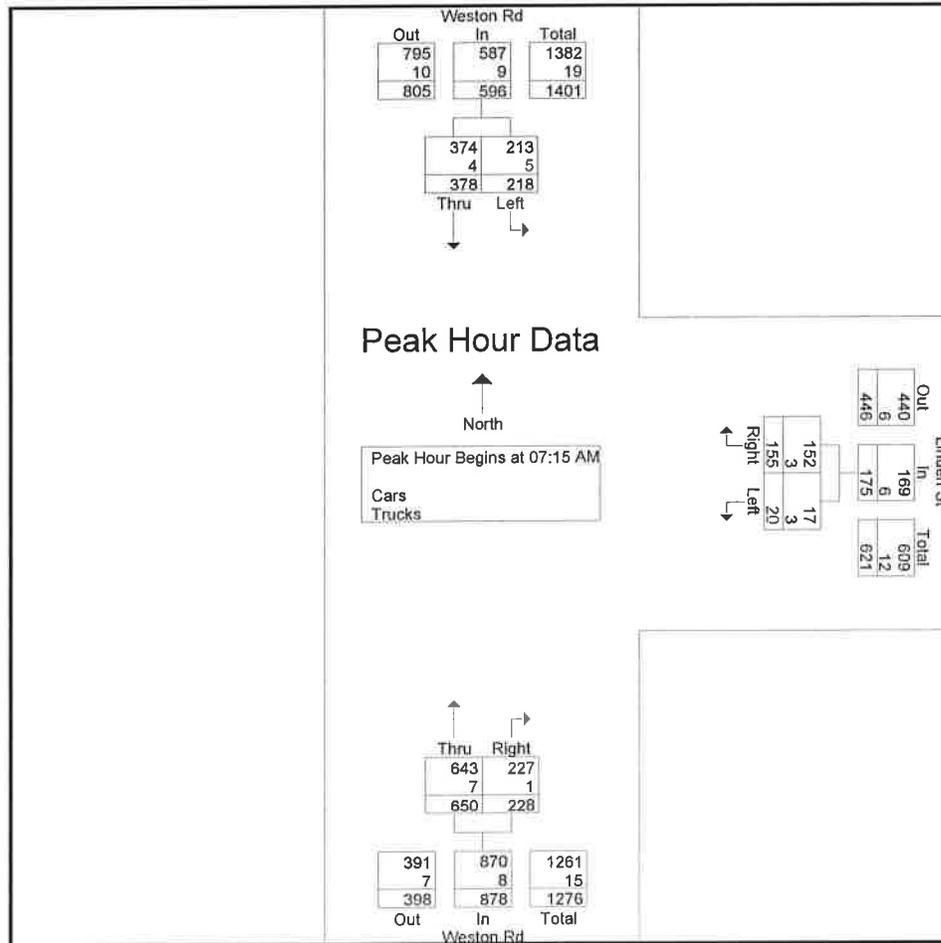
## Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Linden Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740002  
 Site Code : 77740002  
 Start Date : 1/24/2018  
 Page No : 2

Start Time	Weston Rd From North			Linden St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	71	93	164	2	29	31	167	48	215	410
07:30 AM	48	83	131	6	48	54	189	55	244	429
07:45 AM	45	115	160	6	53	59	156	54	210	429
08:00 AM	54	87	141	6	25	31	138	71	209	381
Total Volume	218	378	596	20	155	175	650	228	878	1649
% App. Total	36.6	63.4		11.4	88.6		74	26		
PHF	.768	.822	.909	.833	.731	.742	.860	.803	.900	.961
Cars	213	374	587	17	152	169	643	227	870	1626
% Cars	97.7	98.9	98.5	85.0	98.1	96.6	98.9	99.6	99.1	98.6
Trucks	5	4	9	3	3	6	7	1	8	23
% Trucks	2.3	1.1	1.5	15.0	1.9	3.4	1.1	0.4	0.9	1.4



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 4

Groups Printed- Cars

Start Time	Weston Rd From North		Linden St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	41	73	1	21	126	34	296
07:15 AM	68	93	2	29	166	48	406
07:30 AM	47	81	4	48	186	55	421
07:45 AM	45	113	5	51	155	53	422
<b>Total</b>	<b>201</b>	<b>360</b>	<b>12</b>	<b>149</b>	<b>633</b>	<b>190</b>	<b>1545</b>
08:00 AM	53	87	6	24	136	71	377
08:15 AM	44	101	5	28	148	53	379
08:30 AM	39	131	11	42	125	64	412
08:45 AM	44	114	7	33	111	54	363
<b>Total</b>	<b>180</b>	<b>433</b>	<b>29</b>	<b>127</b>	<b>520</b>	<b>242</b>	<b>1531</b>
<b>Grand Total</b>	<b>381</b>	<b>793</b>	<b>41</b>	<b>276</b>	<b>1153</b>	<b>432</b>	<b>3076</b>
Apprch %	32.5	67.5	12.9	87.1	72.7	27.3	
Total %	12.4	25.8	1.3	9	37.5	14	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 7

Groups Printed- Trucks

Start Time	Weston Rd From North		Linden St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	1	0	0	1	1	0	3
07:15 AM	3	0	0	0	1	0	4
07:30 AM	1	2	2	0	3	0	8
07:45 AM	0	2	1	2	1	1	7
<b>Total</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>1</b>	<b>22</b>
08:00 AM	1	0	0	1	2	0	4
08:15 AM	1	1	0	0	0	0	2
08:30 AM	0	0	0	0	1	0	1
08:45 AM	2	1	0	0	2	1	6
<b>Total</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>13</b>
<b>Grand Total</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>11</b>	<b>2</b>	<b>35</b>
Apprch %	60	40	42.9	57.1	84.6	15.4	
Total %	25.7	17.1	8.6	11.4	31.4	5.7	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 10

Groups Printed- Bikes Peds

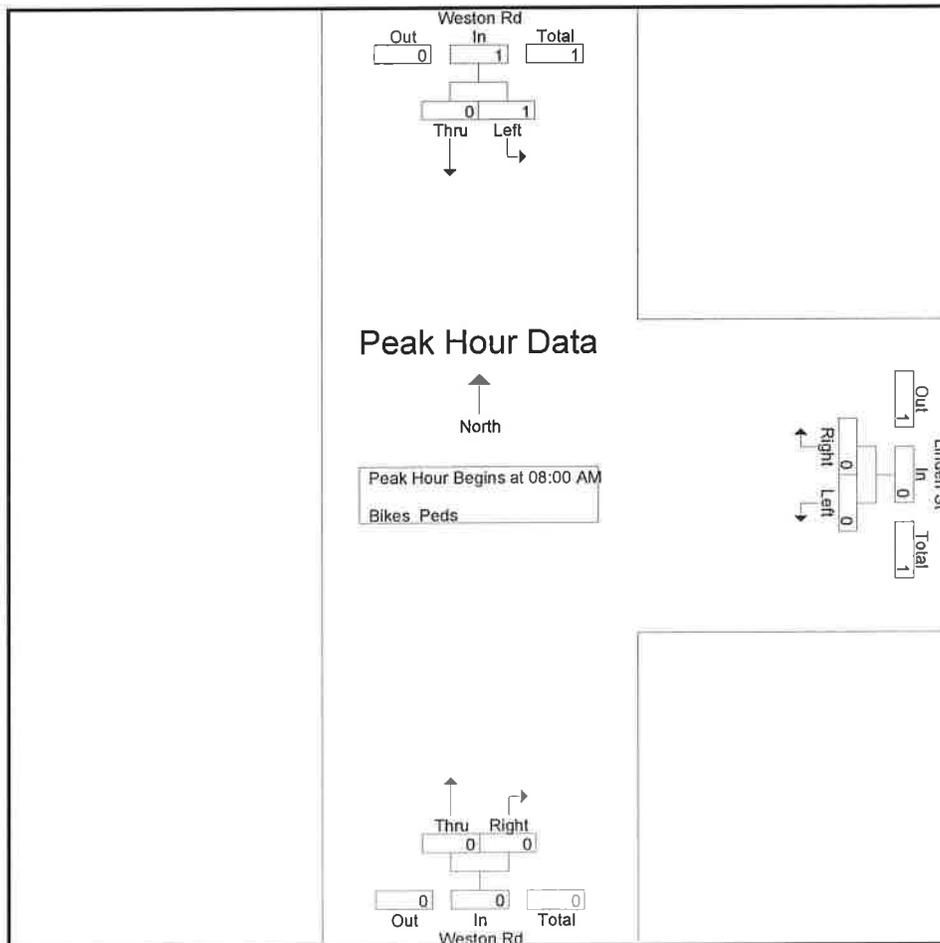
Start Time	Weston Rd From North			Linden St From East			Weston Rd From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	0	0	2	0	0	0	3	0	3
07:30 AM	0	0	0	0	0	1	0	0	0	1	0	1
07:45 AM	0	0	1	0	0	1	0	0	0	2	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>6</b>
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	1	0	0	0	1	0	1
08:45 AM	1	0	0	0	0	2	0	0	0	2	1	3
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>4</b>
<b>Grand Total</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>10</b>
Approch %	100	0		0	0		0	0				
Total %	100	0		0	0		0	0		90	10	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 11

Start Time	Weston Rd From North			Linden St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	1	0	1	0	0	0	0	0	0	1
Total Volume	1	0	1	0	0	0	0	0	0	1
% App. Total	100	0		0	0		0	0		
PHF	.250	.000	.250	.000	.000	.000	.000	.000	.000	.250



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Weston Rd From North		Linden St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	33	121	14	61	70	17	316
04:15 PM	28	113	30	74	64	10	319
04:30 PM	26	143	23	87	81	15	375
04:45 PM	30	131	34	67	74	24	360
<b>Total</b>	<b>117</b>	<b>508</b>	<b>101</b>	<b>289</b>	<b>289</b>	<b>66</b>	<b>1370</b>
05:00 PM	26	111	38	58	95	18	346
05:15 PM	24	115	36	70	72	21	338
05:30 PM	22	129	29	56	69	16	321
05:45 PM	23	121	34	68	71	13	330
<b>Total</b>	<b>95</b>	<b>476</b>	<b>137</b>	<b>252</b>	<b>307</b>	<b>68</b>	<b>1335</b>
<b>Grand Total</b>	<b>212</b>	<b>984</b>	<b>238</b>	<b>541</b>	<b>596</b>	<b>134</b>	<b>2705</b>
Apprch %	17.7	82.3	30.6	69.4	81.6	18.4	
Total %	7.8	36.4	8.8	20	22	5	
Cars	212	981	238	540	593	134	2698
% Cars	100	99.7	100	99.8	99.5	100	99.7
Trucks	0	3	0	1	3	0	7
% Trucks	0	0.3	0	0.2	0.5	0	0.3

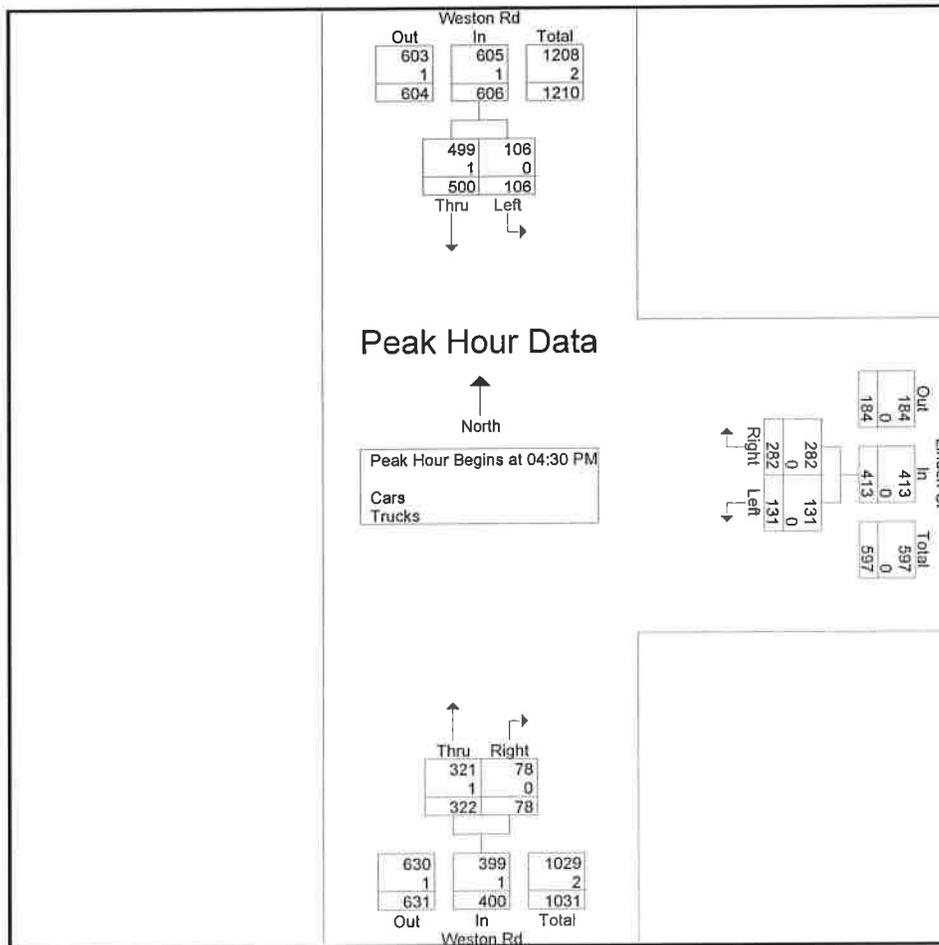
# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Linden Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740002  
 Site Code : 77740002  
 Start Date : 1/24/2018  
 Page No : 2

Start Time	Weston Rd From North			Linden St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	26	143	169	23	87	110	81	15	96	375
04:45 PM	30	131	161	34	67	101	74	24	98	360
05:00 PM	26	111	137	38	58	96	95	18	113	346
05:15 PM	24	115	139	36	70	106	72	21	93	338
<b>Total Volume</b>	<b>106</b>	<b>500</b>	<b>606</b>	<b>131</b>	<b>282</b>	<b>413</b>	<b>322</b>	<b>78</b>	<b>400</b>	<b>1419</b>
<b>% App. Total</b>	<b>17.5</b>	<b>82.5</b>		<b>31.7</b>	<b>68.3</b>		<b>80.5</b>	<b>19.5</b>		
PHF	.883	.874	.896	.862	.810	.939	.847	.813	.885	.946
Cars	106	499	605	131	282	413	321	78	399	1417
% Cars	100	99.8	99.8	100	100	100	99.7	100	99.8	99.9
Trucks	0	1	1	0	0	0	1	0	1	2
% Trucks	0	0.2	0.2	0	0	0	0.3	0	0.3	0.1



**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 4

Groups Printed- Cars

Start Time	Weston Rd From North		Linden St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	33	120	14	61	68	17	313
04:15 PM	28	112	30	74	64	10	318
04:30 PM	26	142	23	87	81	15	374
04:45 PM	30	131	34	67	74	24	360
<b>Total</b>	<b>117</b>	<b>505</b>	<b>101</b>	<b>289</b>	<b>287</b>	<b>66</b>	<b>1365</b>
05:00 PM	26	111	38	58	95	18	346
05:15 PM	24	115	36	70	71	21	337
05:30 PM	22	129	29	55	69	16	320
05:45 PM	23	121	34	68	71	13	330
<b>Total</b>	<b>95</b>	<b>476</b>	<b>137</b>	<b>251</b>	<b>306</b>	<b>68</b>	<b>1333</b>
<b>Grand Total</b>	<b>212</b>	<b>981</b>	<b>238</b>	<b>540</b>	<b>593</b>	<b>134</b>	<b>2698</b>
Apprch %	17.8	82.2	30.6	69.4	81.6	18.4	
Total %	7.9	36.4	8.8	20	22	5	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 7

Groups Printed- Trucks

Start Time	Weston Rd From North		Linden St From East		Weston Rd From South		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	1	0	0	2	0	3
04:15 PM	0	1	0	0	0	0	1
04:30 PM	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>5</b>
05:00 PM	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	1	0	1
05:30 PM	0	0	0	1	0	0	1
05:45 PM	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>
<b>Grand Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>7</b>
Apprch %	0	100	0	100	100	0	
Total %	0	42.9	0	14.3	42.9	0	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 10

Groups Printed- Bikes Peds

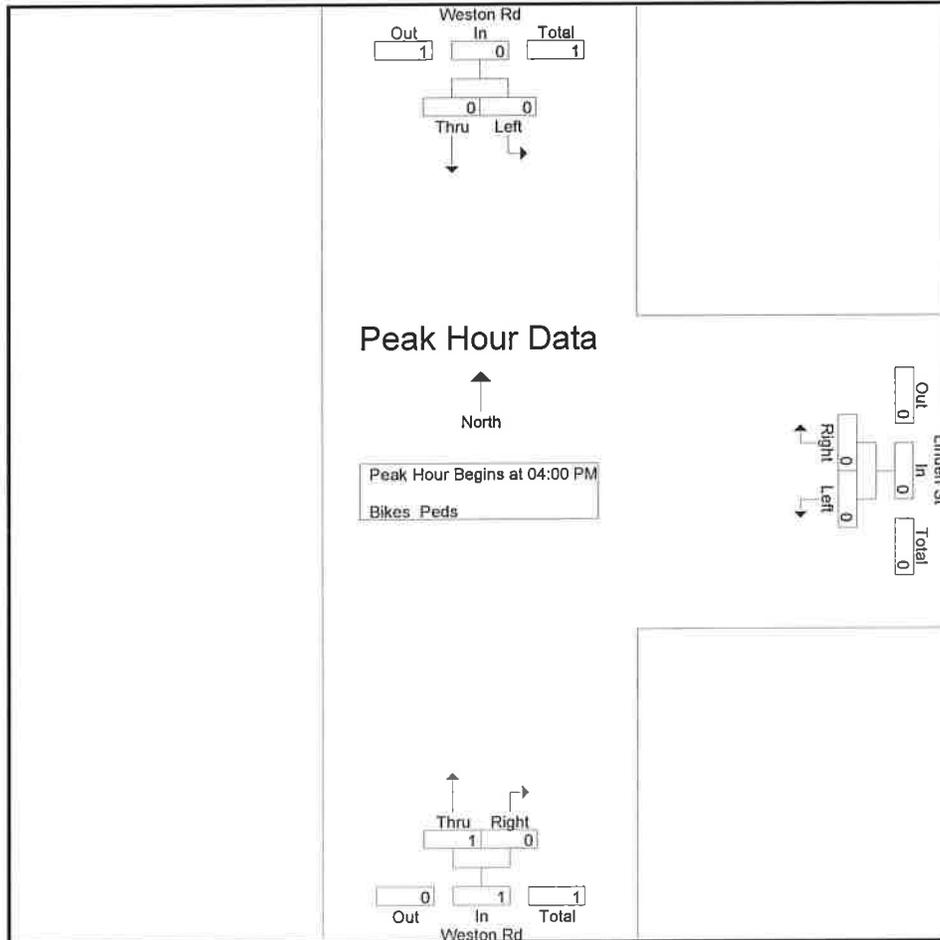
Start Time	Weston Rd From North			Linden St From East			Weston Rd From South			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	0	1	0	0	1	0	0	1	3	0	3
04:15 PM	0	0	0	0	0	4	1	0	0	4	1	5
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	0	0	1	0	0	6	1	0	1	8	1	9
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	2	0	0	0	2	0	2
05:45 PM	0	0	1	0	0	1	0	0	0	2	0	2
<b>Total</b>	0	0	1	0	0	3	0	0	0	4	0	4
<b>Grand Total</b>	0	0	2	0	0	9	1	0	1	12	1	13
Apprch %	0	0		0	0		100	0				
Total %	0	0		0	0		100	0		92.3	7.7	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Linden Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740002  
Site Code : 77740002  
Start Date : 1/24/2018  
Page No : 11

Start Time	Weston Rd From North			Linden St From East			Weston Rd From South			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
<b>Total Volume</b>	0	0	0	0	0	0	1	0	1	1
<b>% App. Total</b>	0	0		0	0		100	0		
<b>PHF</b>	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250



# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 1

## Groups Printed- Cars - Trucks

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total
	Left	Thru	Right										
07:00 AM	38	24	10	2	35	23	6	70	1	64	129	10	412
07:15 AM	52	40	11	2	45	30	1	107	3	73	130	19	513
07:30 AM	32	43	17	2	51	39	3	120	1	83	145	12	548
07:45 AM	41	64	21	3	55	35	9	86	3	82	149	20	568
Total	163	171	59	9	186	127	19	383	8	302	553	61	2041
08:00 AM	40	44	18	4	42	27	5	97	5	87	112	13	494
08:15 AM	40	52	16	3	70	23	6	85	4	90	112	13	514
08:30 AM	41	63	35	3	67	20	6	100	3	69	113	17	537
08:45 AM	36	53	29	2	61	36	13	65	2	61	118	17	493
Total	157	212	98	12	240	106	30	347	14	307	455	60	2038
Grand Total	320	383	157	21	426	233	49	730	22	609	1008	121	4079
Approch %	37.2	44.5	18.3	3.1	62.6	34.3	6.1	91.1	2.7	35	58	7	
Total %	7.8	9.4	3.8	0.5	10.4	5.7	1.2	17.9	0.5	14.9	24.7	3	
Cars	315	381	152	20	411	228	48	727	20	607	998	117	4024
% Cars	98.4	99.5	96.8	95.2	96.5	97.9	98	99.6	90.9	99.7	99	96.7	98.7
Trucks	5	2	5	1	15	5	1	3	2	2	10	4	55
% Trucks	1.6	0.5	3.2	4.8	3.5	2.1	2	0.4	9.1	0.3	1	3.3	1.3

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street : Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 2

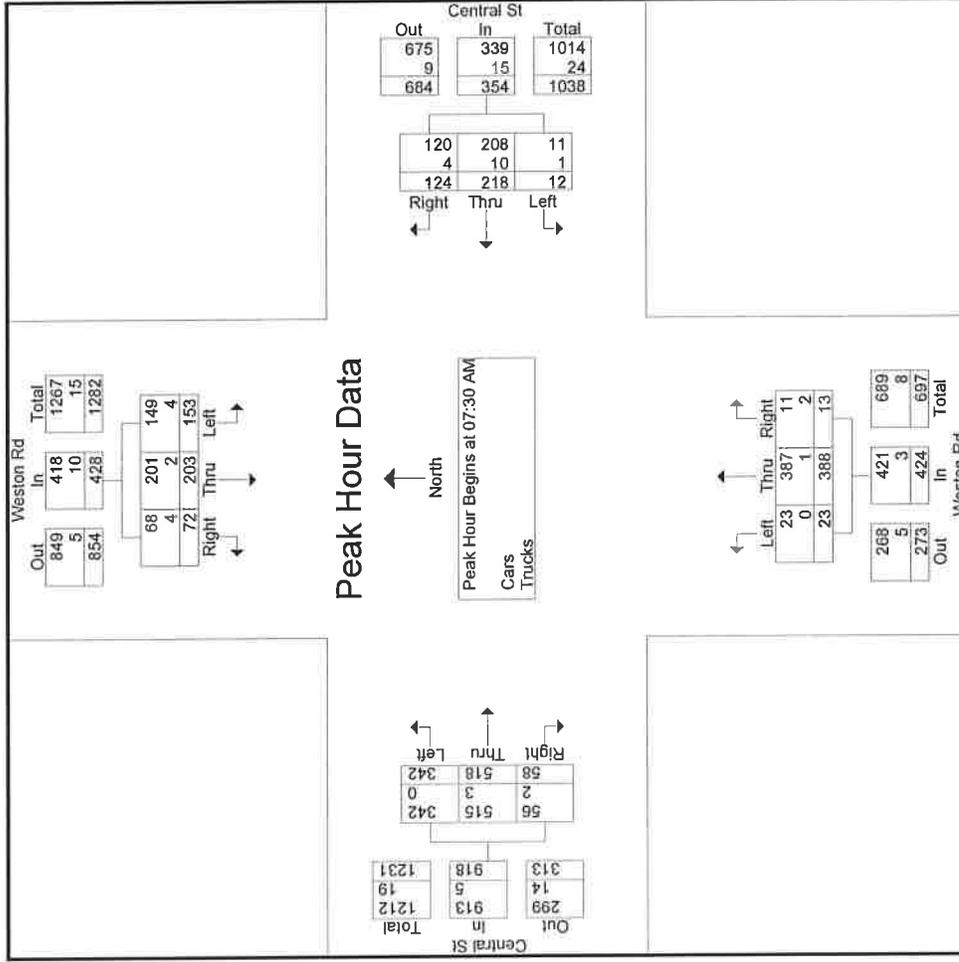
Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total					
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	32	43	17	92	2	51	39	92	3	120	1	124	83	145	12	240	548
07:45 AM	41	64	21	126	3	55	35	93	9	86	3	98	82	149	20	251	568
08:00 AM	40	44	18	102	4	42	27	73	5	97	5	107	87	112	13	212	494
08:15 AM	40	52	16	108	3	70	23	96	6	85	4	95	90	112	13	215	514
Total Volume	153	203	72	428	12	218	124	354	23	388	13	424	342	518	58	918	2124
% App. Total	35.7	47.4	16.8		3.4	61.6	35		5.4	91.5	3.1		37.3	56.4	6.3		
PHF	.933	.793	.857	.849	.750	.779	.795	.922	.639	.808	.650	.855	.950	.869	.725	.914	.935
Cars	149	201	68	418	11	208	120	339	23	387	11	421	342	515	56	913	2091
% Cars	97.4	99.0	94.4	97.7	91.7	95.4	96.8	95.8	100	99.7	84.6	99.3	100	99.4	96.6	99.5	98.4
Trucks	4	2	4	10	1	10	4	15	0	1	2	3	0	3	2	5	33
% Trucks	2.6	1.0	5.6	2.3	8.3	4.6	3.2	4.2	0	0.3	15.4	0.7	0	0.6	3.4	0.5	1.6

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 3



## Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

### Peak Hour for Each Approach Begins at:

	07:45 AM			08:00 AM			07:15 AM			07:15 AM						
+0 mins.	41	64	21	126	4	42	27	73	1	107	3	111	73	130	19	222
+15 mins.	40	44	18	102	3	70	23	96	3	120	1	124	83	145	12	240
+30 mins.	40	52	16	108	3	67	20	90	9	86	3	98	82	149	20	251
+45 mins.	41	63	35	139	2	61	36	99	5	97	5	107	87	112	13	212
Total Volume	162	223	90	475	12	240	106	358	18	410	12	440	325	536	64	925
% App. Total	34.1	46.9	18.9		3.4	67	29.6		4.1	93.2	2.7		35.1	57.9	6.9	

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Central Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740003  
Site Code : 77740003  
Start Date : 1/24/2018  
Page No : 5

Groups Printed- Cars

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	37	24	9	2	34	23	6	70	1	64	126	8	404
07:15 AM	52	40	11	2	43	30	1	107	3	72	128	19	508
07:30 AM	31	42	15	2	47	37	3	120	1	83	143	12	536
07:45 AM	40	63	19	3	53	34	9	86	3	82	149	20	561
<b>Total</b>	<b>160</b>	<b>169</b>	<b>54</b>	<b>9</b>	<b>177</b>	<b>124</b>	<b>19</b>	<b>383</b>	<b>8</b>	<b>301</b>	<b>546</b>	<b>59</b>	<b>2009</b>
08:00 AM	39	44	18	4	39	26	5	96	4	87	111	11	484
08:15 AM	39	52	16	2	69	23	6	85	3	90	112	13	510
08:30 AM	41	63	35	3	65	19	6	99	3	69	111	17	531
08:45 AM	36	53	29	2	61	36	12	64	2	60	118	17	490
<b>Total</b>	<b>155</b>	<b>212</b>	<b>98</b>	<b>11</b>	<b>234</b>	<b>104</b>	<b>29</b>	<b>344</b>	<b>12</b>	<b>306</b>	<b>452</b>	<b>58</b>	<b>2015</b>
<b>Grand Total</b>	<b>315</b>	<b>381</b>	<b>152</b>	<b>20</b>	<b>411</b>	<b>228</b>	<b>48</b>	<b>727</b>	<b>20</b>	<b>607</b>	<b>998</b>	<b>117</b>	<b>4024</b>
<b>Apprch %</b>	<b>37.1</b>	<b>44.9</b>	<b>17.9</b>	<b>3</b>	<b>62.4</b>	<b>34.6</b>	<b>6</b>	<b>91.4</b>	<b>2.5</b>	<b>35.2</b>	<b>58</b>	<b>6.8</b>	
<b>Total %</b>	<b>7.8</b>	<b>9.5</b>	<b>3.8</b>	<b>0.5</b>	<b>10.2</b>	<b>5.7</b>	<b>1.2</b>	<b>18.1</b>	<b>0.5</b>	<b>15.1</b>	<b>24.8</b>	<b>2.9</b>	

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 9

## Groups Printed- Trucks

Start Time	Weston Rd From North		Central St From East		Weston Rd From South		Central St From West		Int. Total
	Left	Right	Left	Right	Left	Right	Left	Right	
07:00 AM	1	1	0	0	0	0	0	3	8
07:15 AM	0	0	0	0	0	0	1	2	5
07:30 AM	1	2	0	2	0	0	0	2	12
07:45 AM	1	2	0	1	0	0	0	0	7
<b>Total</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>32</b>
08:00 AM	1	0	0	1	0	1	0	1	10
08:15 AM	1	0	1	0	0	1	0	0	4
08:30 AM	0	0	0	1	0	1	0	2	6
08:45 AM	0	0	0	0	1	1	1	0	3
<b>Total</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>23</b>
<b>Grand Total</b>	<b>5</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>10</b>	<b>55</b>
<b>Apprch %</b>	<b>41.7</b>	<b>16.7</b>	<b>4.8</b>	<b>23.8</b>	<b>16.7</b>	<b>50</b>	<b>33.3</b>	<b>62.5</b>	<b>25</b>
<b>Total %</b>	<b>9.1</b>	<b>3.6</b>	<b>1.8</b>	<b>9.1</b>	<b>1.8</b>	<b>5.5</b>	<b>3.6</b>	<b>18.2</b>	<b>7.3</b>

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Central Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740003  
Site Code : 77740003  
Start Date : 1/24/2018  
Page No : 13

Start Time	Groups Printed- Bikes Peds												Exclu. Total	Inclu. Total	Int. Total			
	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West								
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>17</b>
08:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	11	2	13
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	13	1	14
08:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	8	1	9
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>40</b>	<b>4</b>	<b>44</b>
<b>Grand Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>57</b>	<b>4</b>	<b>61</b>
Apprch %	0	0	0	50	50	0	0	0	0	0	0	0	0	100	0			
Total %	0	0	0	25	25	0	0	0	0	0	0	0	0	50	0	93.4	6.6	

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 14

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total
	Left	Right	App. Total										
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	1	0	1	0	0	0	0	1	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	1
Total Volume	0	0	0	1	1	2	0	0	0	0	2	0	4
% App. Total	0	0	0	50	50	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.250	.250	.500	.000	.000	.000	.000	.500	.000	.500

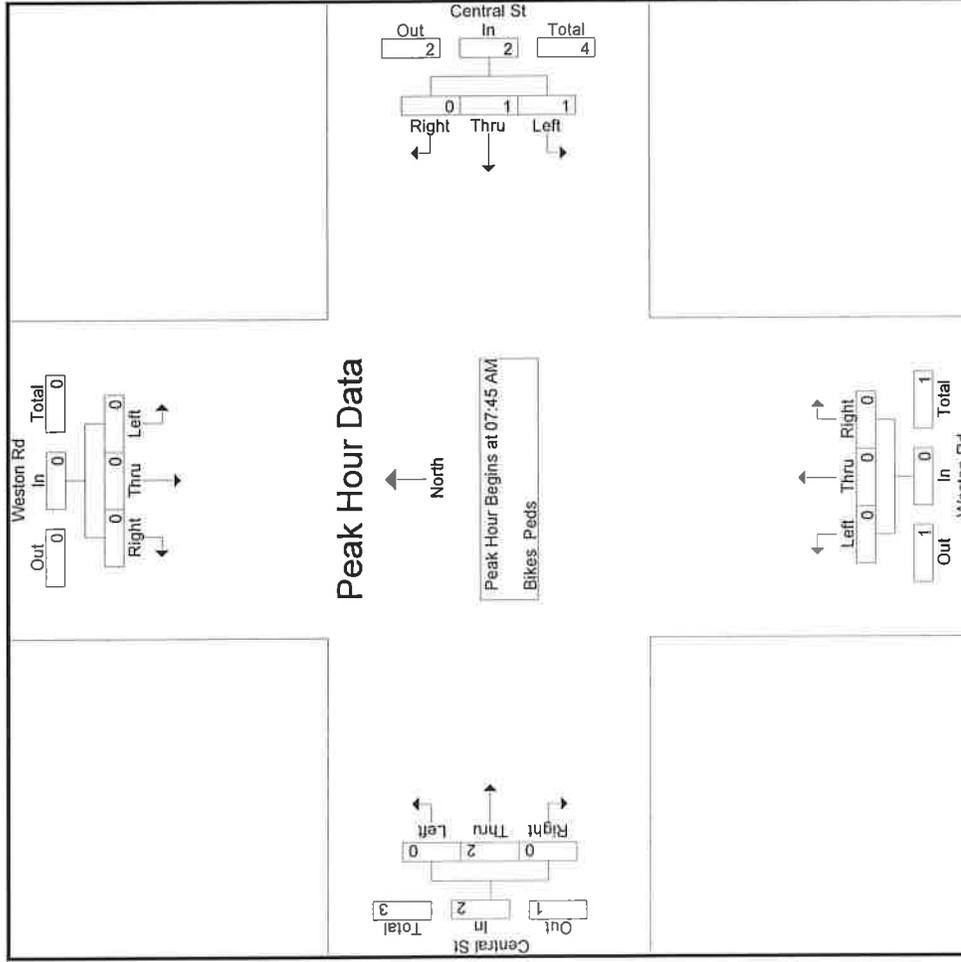
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street : Central Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740003  
Site Code : 77740003  
Start Date : 1/24/2018  
Page No : 15



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:45 AM			07:00 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	1	1	0	2	0	0	0	2	0
% App. Total	0	0	0	50	50	0	0	0	0	0	100	0

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 1

## Groups Printed- Cars - Trucks

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total
	Left	Thru	Right										
04:00 PM	26	80	41	3	79	18	15	41	5	28	58	8	402
04:15 PM	23	62	53	4	105	19	30	31	1	24	54	22	428
04:30 PM	28	78	56	1	87	29	11	35	0	34	46	13	418
04:45 PM	15	64	85	4	93	16	29	46	1	35	56	14	458
Total	92	284	235	12	364	82	85	153	7	121	214	57	1706
05:00 PM	16	63	59	3	85	21	19	48	1	42	51	16	424
05:15 PM	13	62	52	5	101	22	20	37	1	27	71	17	428
05:30 PM	20	68	60	4	86	17	16	37	2	25	61	12	408
05:45 PM	30	51	74	3	102	23	22	37	1	19	55	12	429
Total	79	244	245	15	374	83	77	159	5	113	238	57	1689
Grand Total	171	528	480	27	738	165	162	312	12	234	452	114	3395
Approch %	14.5	44.8	40.7	2.9	79.4	17.7	33.3	64.2	2.5	29.2	56.5	14.2	
Total %	5	15.6	14.1	0.8	21.7	4.9	4.8	9.2	0.4	6.9	13.3	3.4	
Cars	168	527	479	27	736	164	160	312	11	233	449	114	3380
% Cars	98.2	99.8	99.8	100	99.7	99.4	98.8	100	91.7	99.6	99.3	100	99.6
Trucks	3	1	1	0	2	1	2	0	1	1	3	0	15
% Trucks	1.8	0.2	0.2	0	0.3	0.6	1.2	0	8.3	0.4	0.7	0	0.4

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 2

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West							
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total				
04:15 PM	23	62	53	138	4	105	19	128	30	31	1	62	24	54	22	100	428
04:30 PM	28	78	56	162	1	87	29	117	11	35	0	46	34	46	13	93	418
04:45 PM	15	64	85	164	4	93	16	113	29	46	1	76	35	56	14	105	458
05:00 PM	16	63	59	138	3	85	21	109	19	48	1	68	42	51	16	109	424
Total Volume	82	267	253	602	12	370	85	467	89	160	3	252	135	207	65	407	1728
% App. Total	13.6	44.4	42		2.6	79.2	18.2		35.3	63.5	1.2		33.2	50.9	16		
PHF	.732	.856	.744	.918	.750	.881	.733	.912	.742	.833	.750	.829	.804	.924	.739	.933	.943
Cars	80	266	253	599	12	368	85	465	88	160	3	251	135	206	65	406	1721
% Cars	97.6	99.6	100	99.5	100	99.5	100	99.6	98.9	100	100	99.6	100	99.5	100	99.8	99.6
Trucks	2	1	0	3	0	2	0	2	1	0	0	1	0	1	0	1	7
% Trucks	2.4	0.4	0	0.5	0	0.5	0	0.4	1.1	0	0	0.4	0	0.5	0	0.2	0.4

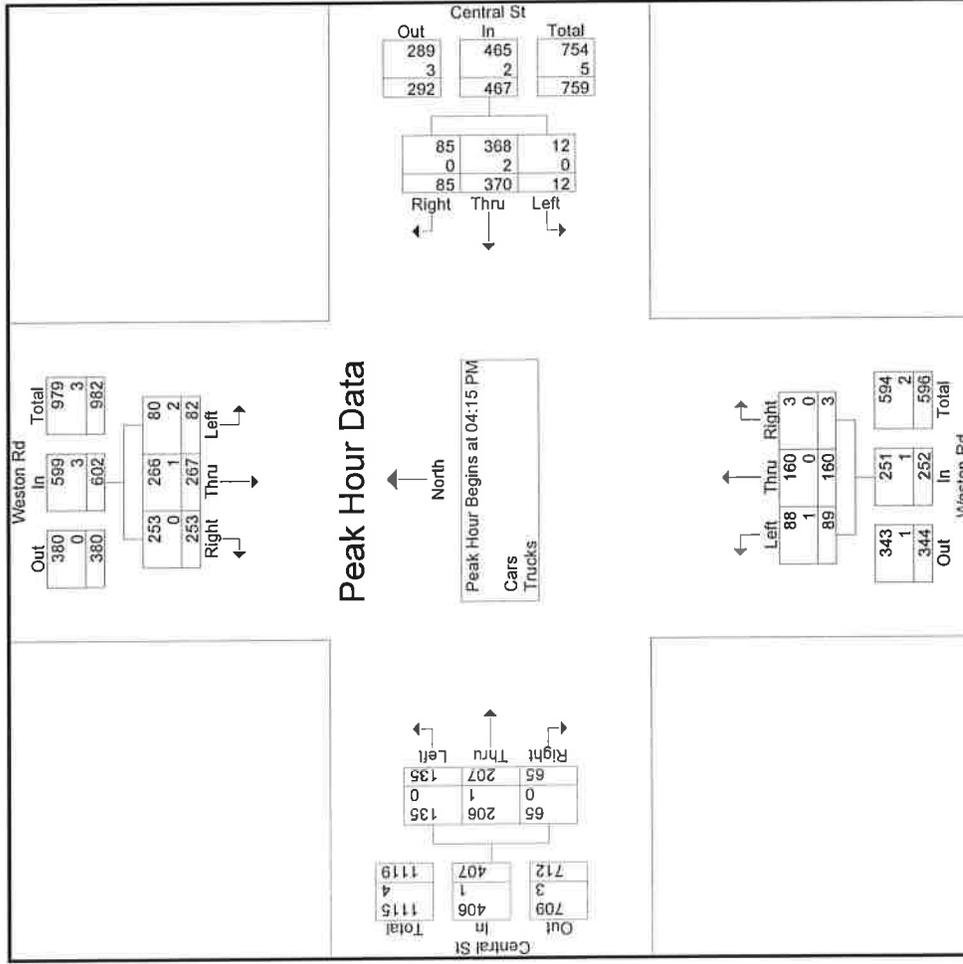
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

**Accurate Counts**  
978-664-2565

File Name : 77740003  
Site Code : 77740003  
Start Date : 1/24/2018  
Page No : 3

N/S Street : Weston Road  
E/W Street: Central Street  
City/State : Wellesley, MA  
Weather : Clear



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:45 PM			04:45 PM						
+0 mins.	26	80	41	147	3	85	21	109	29	46	1	76	35	56	14	105
+15 mins.	23	62	53	138	5	101	22	128	19	48	1	68	42	51	16	109
+30 mins.	28	78	56	162	4	86	17	107	20	37	1	58	27	71	17	115
+45 mins.	15	64	85	164	3	102	23	128	16	37	2	55	25	61	12	98
Total Volume	92	284	235	611	15	374	83	472	84	168	5	257	129	239	59	427
% App. Total	15.1	46.5	38.5	3.2	79.2	17.6	32.7	65.4	1.9	30.2	56	13.8				

**Accurate Counts**  
978-664-2565

N/S Street : Weston Road  
E/W Street: Central Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740003  
Site Code : 77740003  
Start Date : 1/24/2018  
Page No : 5

Groups Printed- Cars

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	25	80	40	3	79	17	14	41	5	27	58	8	397
04:15 PM	22	62	53	4	104	19	30	31	1	24	53	22	425
04:30 PM	28	77	56	1	86	29	11	35	0	34	46	13	416
04:45 PM	15	64	85	4	93	16	28	46	1	35	56	14	457
<b>Total</b>	<b>90</b>	<b>283</b>	<b>234</b>	<b>12</b>	<b>362</b>	<b>81</b>	<b>83</b>	<b>153</b>	<b>7</b>	<b>120</b>	<b>213</b>	<b>57</b>	<b>1695</b>
05:00 PM	15	63	59	3	85	21	19	48	1	42	51	16	423
05:15 PM	13	62	52	5	101	22	20	37	0	27	69	17	425
05:30 PM	20	68	60	4	86	17	16	37	2	25	61	12	408
05:45 PM	30	51	74	3	102	23	22	37	1	19	55	12	429
<b>Total</b>	<b>78</b>	<b>244</b>	<b>245</b>	<b>15</b>	<b>374</b>	<b>83</b>	<b>77</b>	<b>159</b>	<b>4</b>	<b>113</b>	<b>236</b>	<b>57</b>	<b>1685</b>
<b>Grand Total</b>	<b>168</b>	<b>527</b>	<b>479</b>	<b>27</b>	<b>736</b>	<b>164</b>	<b>160</b>	<b>312</b>	<b>11</b>	<b>233</b>	<b>449</b>	<b>114</b>	<b>3380</b>
<b>Approch %</b>	<b>14.3</b>	<b>44.9</b>	<b>40.8</b>	<b>2.9</b>	<b>79.4</b>	<b>17.7</b>	<b>33.1</b>	<b>64.6</b>	<b>2.3</b>	<b>29.3</b>	<b>56.4</b>	<b>14.3</b>	
<b>Total %</b>	<b>5</b>	<b>15.6</b>	<b>14.2</b>	<b>0.8</b>	<b>21.8</b>	<b>4.9</b>	<b>4.7</b>	<b>9.2</b>	<b>0.3</b>	<b>6.9</b>	<b>13.3</b>	<b>3.4</b>	

# Accurate Counts

978-664-2565

N/S Street : Weston Road  
 E/W Street: Central Street  
 City/State : Wellesley, MA  
 Weather : Clear

File Name : 77740003  
 Site Code : 77740003  
 Start Date : 1/24/2018  
 Page No : 9

## Groups Printed- Trucks

Start Time	Weston Rd From North			Central St From East			Weston Rd From South			Central St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	1	0	1	0	0	1	1	0	0	1	0	0	5
04:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	3
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>11</b>
05:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	1	0	2	0	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>
<b>Grand Total</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>15</b>
<b>Approch %</b>	<b>60</b>	<b>20</b>	<b>20</b>	<b>0</b>	<b>66.7</b>	<b>33.3</b>	<b>66.7</b>	<b>0</b>	<b>33.3</b>	<b>25</b>	<b>75</b>	<b>0</b>	<b>0</b>
<b>Total %</b>	<b>20</b>	<b>6.7</b>	<b>6.7</b>	<b>0</b>	<b>13.3</b>	<b>6.7</b>	<b>13.3</b>	<b>0</b>	<b>6.7</b>	<b>6.7</b>	<b>20</b>	<b>0</b>	<b>0</b>

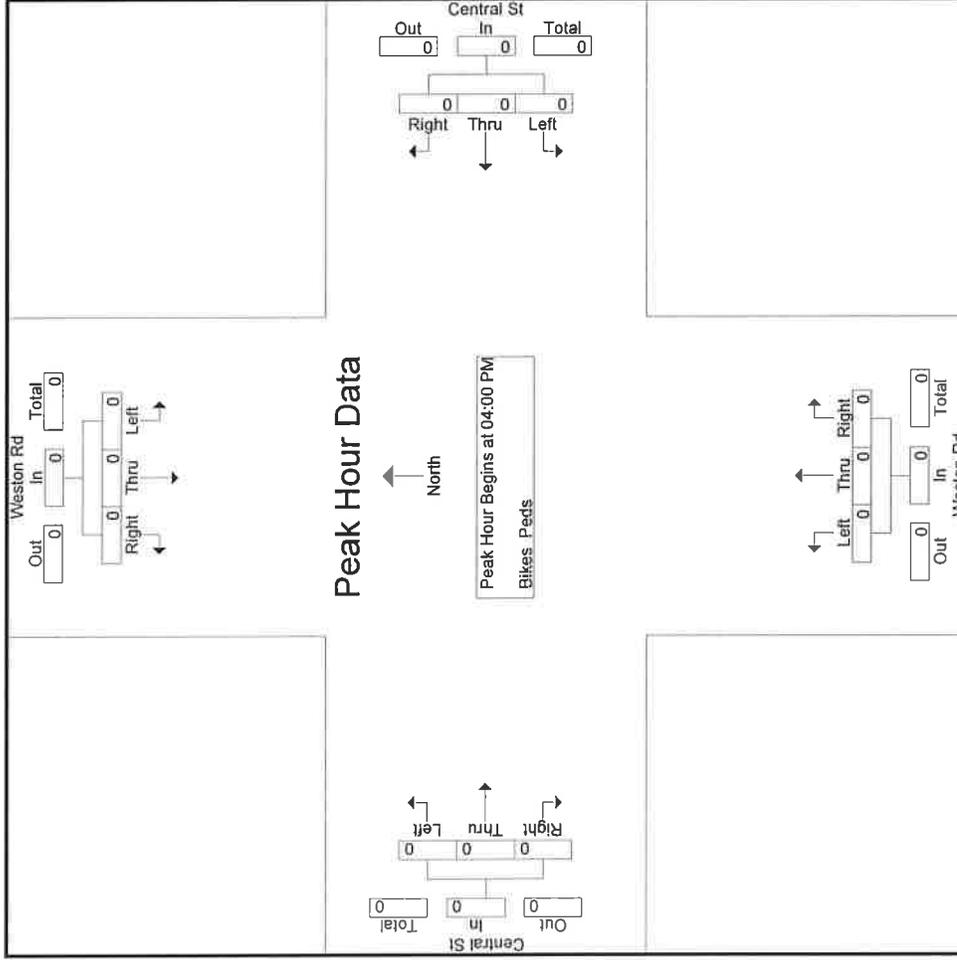




Accurate Counts  
978-664-2565

N/S Street : Weston Road  
E/W Street : Central Street  
City/State : Wellesley, MA  
Weather : Clear

File Name : 77740003  
Site Code : 77740003  
Start Date : 1/24/2018  
Page No : 15



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0

SEASONAL ADJUSTMENT DATA

---

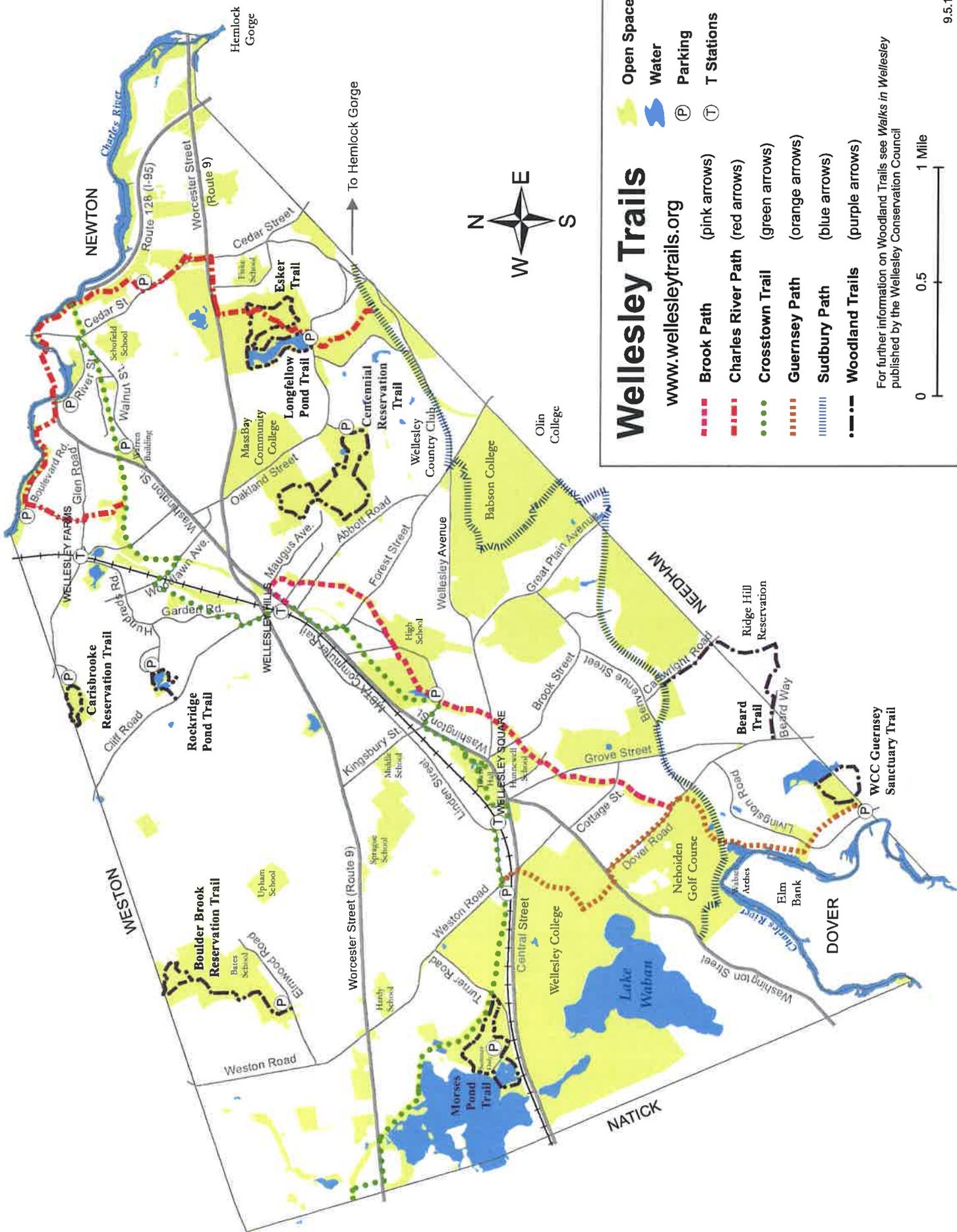
# Massachusetts Highway Department

## 32: Monthly Hourly Volume for January 2016

Location ID:	32																								TOTAL	
	MIDDLESEX																									
	1																									
	YANKEE DIVISION HIGHWAY																									
County:	U1-Boston																									
Functional Class	U1-Boston																									
Location:	Growth Factor Group:																									
	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	
1	2573	3162	2690	2587	2720	2859	2387	2065	2691	4011	5531	6983	7207	7262	7231	7170	6816	7129	6162	4845	3424	2800	2040	2313	104658	
2	1980	1864	2054	931	980	2264	2475	2934	3971	5712	7415	8755	9076	9557	9642	9586	9064	8520	7353	5757	4502	3836	2391	2707	123526	
3	2278	1977	2413	1449	882	1174	1959	1992	3032	4638	6388	7865	9205	8222	7782	7718	7982	7627	6204	4586	3738	2573	1740	1753	105177	
4	1309	953	856	1154	1949	4489	7019	10033	11908	10300	8140	7600	7828	8024	9891	11238	11540	12586	10479	6222	3837	2427	1804	1403	152989	
5																										
6	1057	685	387	354	767	3023	6566	11920	11540	10811	9476	8788	8878	9220	10828	11823	11550	12563	11246	5936	3737	3057	2892	2132	159236	
7	1662	1146	1125	1542	4176	7100	11802	11738	11692	9213	9043	9053	9318	11380	12100	11712	12513	9862	5079	3693	3163	3027	1988	165263		
8	1565	1139	1003	1080	1846	3765	6647	11852	12492	10700	9351	9187	9297	10043	11875	12106	11693	12414	8504	5826	4038	4185	3735	2993	167336	
9	2435	2115	3069	3136	2506	2922	3321	4674	6040	7371	8134	9189	10074	9788	9773	9833	9476	9310	7564	4701	3945	4891	4442	3346	142055	
10	3330	2503	2796	2741	2380	2506	3477	3291	3381	5016	6114	7362	8059	8184	7258	7834	7499	6784	5657	4276	3678	3545	5526	4036	117233	
11	3615	2911	2000	2955	2392	5307	7866	12821	11963	10902	8484	8185	8428	8473	10608	11668	11642	12350	10750	6612	3423	3077	2438	1904	170774	
12	1588	1607	699	740	1507	3824	6279	12589	12158	11114	9173	8571	8773	9367	10947	12304	12390	12147	7971	4409	4125	3508	3035	2469	161294	
13	2122	1997	1362	1076	1870	3643	6368	9461	11420	11305	9263	8545	8890	9061	10998	11810	11677	11823	6564	4858	3597	3503	2644	1873	155730	
14	1404	952	891	801	1404	3746	6414	7822	11807	11580	9589	9081	9108	9771	11662	12132	11749	10486	6853	5327	4226	3615	2795	2010	155225	
15	1563	1148	1952	2275	1520	3844	6621	9683	12454	10254	9437	9561	9943	10465	12490	11945	11409	11116	7523	6681	5442	5079	4446	3425	170276	
16	2251	2806	3359	3119	2742	3103	3171	3551	5081	6405	7705	8751	9775	9400	9192	9634	8077	5959	4427	3704	5058	5246	4323	2716	129555	
17	2709	2176	1974	1768	912	1003	1856	2446	3669	5627	7332	8983	9583	9386	9060	9199	8591	7762	5404	4111	4365	3810	3034	2702	117402	
18	1715	1439	1012	1063	1499	3307	5269	5824	6959	8025	8208	8733	9307	9303	10864	11167	10800	9390	5077	3918	2983	2577	1921	1996	132356	
19	1319	752	563	644	1240	3580	6437	8530	11959	11543	9487	8641	8959	9009	10978	11674	11459	9601	6452	4682	3474	3220	2124	1986	148313	
20	1203	869	560	608	1253	3639	6102	9021	12284	11686	9457	8815	9086	9373	11379	12252	10978	9855	6812	5340	4533	3998	3054	2342	154499	
21	1482	935	1171	1878	1651	3969	6539	10823	10905	12202	9423	9156	9164	9503	10770	11568	11999	11403	7171	5257	4489	4029	2766	2381	160634	
22	1872	1238	834	792	1258	3678	6405	12894	12325	10496	9175	9267	9758	10288	12410	12211	12009	9698	7045	5743	4443	3933	3601	2883	164256	
23	2104	1604	2209	1393	936	1529	2411	3660	5420	6606	7039	7896	8242	8076	7947	6672	5517	5398	4106	3704	2772	2732	2309	2131	102413	
24	1386	1581	764	560	577	677	1062	1750	2834	4194	5548	7059	8056	8581	9294	6692	5044	4017	4794	3654	3197	2447	1891	89923		
25	1149	894	950	2365	1562	4067	6830	12650	11814	10868	9156	7988	8081	8273	10543	11518	11626	12307	6384	5030	3961	3400	2632	2088	156136	
26	1584	1060	2219	1688	1746	4317	6876	12703	12030	11716	9036	8333	8707	8672	9906	10882	11265	10542	10477	5459	5167	5157	3467	2833	165842	
27	2981	2795	1169	1235	1926	4580	7620	11189	12416	10579	9463	8647	8908	8998	11247	11751	10895	11984	10874	5439	3985	3526	2851	2125	167183	
28	1293	828	720	627	1107	3631	6884	13011	12077	11721	9479	8946	8881	9059	11291	11886	10981	12388	10847	5903	4296	3551	3099	2169	164675	
29	1567	1133	831	988	1439	4145	6823	10851	12194	10561	9213	9124	9866	10362	12447	12157	11088	11832	10566	6219	3816	3604	3411	2829	167066	
30	2154	1422	1076	799	791	1623	2298	4642	6371	7490	8658	9700	10140	9920	9931	10213	9829	9489	8263	5245	3652	3912	3635	3184	134437	
31	2490	1739	1249	922	725	1133	1777	2459	3833	5617	7120	8653	9354	9869	9994	9924	9557	9104	7642	5661	4089	4160	3905	2421	123397	
																										150864.3
																										Average =
																										Yearly Average = 165476
																										165476/150864 = 1.097

## CROSTOWN TRAIL MAP

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# Wellesley Trails

[www.wellesleytrails.org](http://www.wellesleytrails.org)

- **Brook Path** (pink arrows)
- **Charles River Path** (red arrows)
- **Crosstown Trail** (green arrows)
- **Guernsey Path** (orange arrows)
- **Sudbury Path** (blue arrows)
- **Woodland Trails** (purple arrows)

**Open Space**

**Water**

**Parking**

**T Stations**

For further information on Woodland Trails see *Walks in Wellesley* published by the Wellesley Conservation Council



**Beard Trail.** A pleasant trail through the woods between Beard Way and Cartwright Rd. Connects with Ridge Hill Reservation in Needham. **Length:** 1.1 mi. **Markers:** purple arrows. **Access:** Beard Way at Grove St; Cartwright Rd at Beebe Meadow.

**Boulder Brook Reservation Trail.** Traverses a delightful variety of meadows, woods, streams, and craggy ledges. After crossing the meadow, the trail splits for a loop over Rocky Ledges (caution: steep drop-offs). **Length:** 1.6 mi, round trip. **Elevation gain:** 140 ft. **Markers:** purple arrows. **Access:** Kelly Memorial Park parking lot on Elmwood Rd.

**Biking Path.** A favorite trail for walking, jogging, and biking. Runs along Fuller and Caroline Brooks from Dover Rd at Nehoiden Golf Course to Maugus Ave across from the Wellesley Hills clock tower. **Length:** 2.3 mi. **Markers:** pink arrows. **Access:** State St parking lot; any street crossing along route.

**Carisbrooke Reservation Trail.** Explore rocky outcrops along Cold Stream Brook in the northern part of Town. Woodsy loop trail goes past Covati Pond. **Length:** 0.5 mi, round trip. **Markers:** purple arrows. **Access:** end of Glen Brook Rd at Weston town line.

**Centennial Reservation Trail.** Take a loop trail through woods and meadows to the top of Maugus Hill for a view of the Blue Hill. Trail goes past Bezanson Pond. **Length:** 1.7 mi, round trip. **Elevation gain:** 200 ft. **Markers:** purple arrows. **Access:** entrance road off Oakland St to parking lot.

**Charles River Path.** Great hike for scenic variety. Northern half goes along the Charles River, and southern half goes through the Town Forest. **Length:** 3.2 mi. **Markers:** red arrows. **Access:** parking area off Boulevard Rd; Washington St at the Charles River in Lower Falls; Ouellet Playground on Cedar St; Longfellow Pond parking lot on Oakland St.

**Crosstown Trail.** Walk the Cochituate Aqueduct from Natick near Rt 9 to the Charles River near Cedar St. Eastern and western sections follow wooded aqueduct path. Middle section, Weston Rd to Woodlawn Ave in Wellesley Hills, follows mainly roads with sections through parks and playing fields. **Length:** 6.0 mi. **Markers:** green arrows. **Access:** Weston Rd trail parking area; any street crossing along route.

**Esker Trail.** Scenic woods loop trail runs along a high glacial esker in the Town Forest. Trail leaves the Charles River Path 0.1 mi from start at Longfellow Pond. **Length:** 0.8 mi, round trip. **Elevation gain:** 80 ft. **Markers:** purple arrows. **Access:** Longfellow Pond parking lot on Oakland St.

**Guernsey Path.** An enjoyable walk along the Charles River, under the Waban Arches to the Nehoiden Golf Course and through Wellesley College. **Length:** 2.2 mi. **Markers:** orange arrows. **Access:** Winding River Rd parking area.

**Longfellow Pond Trail.** A popular loop trail around Longfellow Pond. Explore the pond ecology and other trails in the Town Forest. **Length:** 0.8 mi, round trip. **Markers:** purple arrows. **Access:** Longfellow Pond parking lot on Oakland St.

**Morses Pond Trail.** A lovely loop walk along the Morses Pond shoreline and through pine woods. **Length:** 1.2 mi, round trip. **Markers:** purple arrows. **Access:** entrance to the Town Beach on Turner Rd.

**Rockridge Pond Trail.** Short, pretty walk on a trail around part of this picturesque pond connecting Rockridge and Cliff Rds. **Length:** 0.4 mi. **Markers:** purple arrows. **Access:** Hundreds Cir parking area.

**Sudbury Path.** Follow the Sudbury Aqueduct from Needham to Wellesley College. Eastern section goes through the Town Forest and Babson College. Western section runs through Beebe Meadow and across the Waban Arches. **Length:** 4.6 mi. **Markers:** blue arrows. **Access:** any street crossing along route.

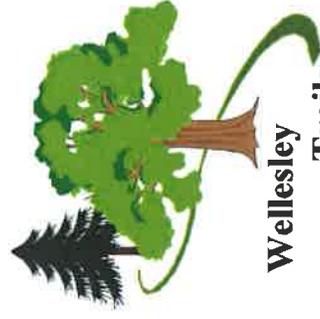
**WCC Guernsey Sanctuary Trail.** A pleasant loop trail to Sabrina Lake. Explore this diverse woodland with streams, ponds, wetlands and a vernal pool. **Length:** 0.6 mi, round trip. **Markers:** purple arrows. **Access:** Winding River Rd parking area.

### Trail Use Guidelines

- No motorized vehicles, littering, dumping, camping, fires, smoking, or alcoholic beverages.
- Stay on mowed trails. Fields are full of poison ivy.
- Do not feed, approach or touch wildlife, including waterfowl.
- Use protection against ticks and mosquito bites.
- Abide by town's restriction of no more than 2 dogs per person or 3 dogs with a permit.
- Pick up after your dog and properly dispose of the waste. Thanks!

### More Information

Get detailed trail descriptions and maps online at [www.wellesleytrails.org](http://www.wellesleytrails.org). Brochures are available at the Natural Resources Commission office in Town Hall. See the book *Walks in Wellesley*, published by the Wellesley Conservation Council. Contact us at [trails@wellesleyma.gov](mailto:trails@wellesleyma.gov) for questions or to report trail problems.



**Wellesley  
Trails**

# Trails Map

*Explore and enjoy 26 miles of  
trails in town conservation  
lands and along  
interconnecting paths.*

**Natural Resources Commission**  
**Wellesley Trails Committee**  
[wellesleytrails.org](http://wellesleytrails.org)

**PUBLIC TRANSPORTATION SCHEDULES**

---

Stations > Wellesley Square

# Wellesley Square Zone 3

1 Grove St Wellesley, MA 02482-7714 [Get directions](#) →



Station Info	Departures
--------------	------------

 **Track Change:** Please board all peak outbound Worcester Line trains on the inbound platforms at... +1 more  **VIEW**

## Parking

**Parking Spaces:** 224

**Accessible Spaces:** 2

**Parking Rate:** \$4.50 daily.

Residents - \$3.00 with Resident

[Parking Debit Card.](#)

**Managed by:** City of Wellesley

[View City of Wellesley's](#)

[Website](#) →

**Note:** City of Wellesley is responsible for parking lot snow removal, maintenance and fee collection. Please contact MBTA Customer Service regarding station and platform snow removal, cleanliness and maintenance issues.

## Accessibility

Wellesley Square is not an accessible station.

## Fares

### Commuter Rail Fares

Zone 3 One Way 

CharlieTicket or Cash

\$7.50

Zone 3 Monthly Pass   

CharlieTicket

\$244.25

[View Commuter Rail Zone 3 fares list](#) 

### Nearby MBTA fare retail sales locations

**Needham Junction Ice Cream**

40 Junction St

3.4 mi

**Star Market**

2040 Commonwealth Ave  
Newton, MA

4.3 mi

# FRAMINGHAM/WORCESTER LINE effective November 20, 2017

Trains in shaded columns will NOT OPERATE when the Framingham/Worcester Authority is operating on a REDUCED SCHEDULE

Massachusetts Bay Transportation Authority **MBTA** Commuter Rail is operating on a REDUCED SCHEDULE

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Massachusetts Bay Transportation Authority **MBTA** Commuter Rail is operating on a REDUCED SCHEDULE

## Monday to Friday

### Inbound to Boston

STATION	500	502	582	504	584	506	586	508	588	510	552	590	PM
8 Worcester	6:45	5:15	5:50	6:22	6:57	7:24	8:00						1506
8 Grafton	6:58	5:28	6:03	6:35	7:10	7:37							1512
7 Westborough	7:11	5:41	6:16	6:48	7:23	7:50							1518
6 Southborough	7:24	5:54	6:29	7:01	7:36	8:03							1524
5 Framingham	7:37	6:07	6:42	7:14	7:49	8:16							1530
4 West Natick	7:50	6:20	6:55	7:27	8:02	8:29							1536
4 Natick Center	8:03	6:33	7:08	7:40	8:15	8:42							1542
3 Wellesley Square	8:16	6:46	7:21	7:53	8:28	8:55							1548
3 Wellesley Hills	8:29	6:59	7:34	8:06	8:41	9:08							1554
3 Wellesley Farms	8:42	7:12	7:47	8:19	8:54	9:21							16:00
2 Auburndale	8:55	7:25	8:00	8:32	9:07	9:34							16:06
2 West Newton	9:08	7:38	8:13	8:45	9:20	9:47							16:12
1 Newtonville	9:21	7:51	8:26	8:58	9:33	10:00							16:18
1A Back Bay	9:34	8:04	8:39	9:11	9:46	10:13							16:24
1A South Station	9:47	8:17	8:52	9:24	9:59	10:26							16:30

### Outbound from Boston

STATION	1501	1503	1505	1507	1509	1511	1513	1515	1517	1519	1521	1523	1525	1527	PM
1A South Station	6:45	8:15	8:50	9:22	9:57	10:24	11:00								1506
1A Back Bay	6:58	8:28	9:03	9:35	10:10	10:37									1512
1A Yawkey	7:11	8:41	9:16	9:48	10:23	10:50									1518
1A Boston Landing	7:24	8:54	9:29	10:01	10:36	11:03									1524
1 Newtonville	7:37	9:07	9:42	10:14	10:49	11:16									1530
2 West Newton	7:50	9:20	9:55	10:27	11:02	11:29									1536
2 Auburndale	8:03	9:33	10:08	10:40	11:15	11:42									1542
3 Wellesley Farms	8:16	9:46	10:21	10:53	11:28	11:55									1548
3 Wellesley Hills	8:29	9:59	10:34	11:06	11:41	12:08									1554
3 Wellesley Square	8:42	10:12	10:47	11:19	11:54	12:21									16:00
4 Natick Center	8:55	10:25	11:00	11:32	12:07	12:34									16:06
4 West Natick	9:08	10:38	11:13	11:45	12:20	12:47									16:12
5 Framingham	9:21	10:51	11:26	11:58	12:33	13:00									16:18
6 Ashland	9:34	11:04	11:39	12:11	12:46	13:13									16:24
7 Westborough	9:47	11:17	11:52	12:24	12:59	13:26									16:30
8 Grafton	10:00	11:30	12:05	12:37	13:12	13:39									16:36
8 Worcester	10:13	11:43	12:18	12:50	13:25	13:52									16:42

## Saturday & Sunday

### Inbound to Boston

STATION	1500	1502	1504	1506	1508	1510	1512	1514	1516	1518	1520	1522	1524	1526	1528	1530	PM
8 Worcester	7:00	8:50	10:50	12:50	2:30	4:30	6:30	8:30	10:30	11:00							1506
8 Grafton	7:13	9:03	11:03	13:03	2:43	4:43	6:43	8:43	10:43	11:13							1512
7 Westborough	7:26	9:16	11:16	13:16	2:56	4:56	6:56	8:56	10:56	11:26							1518
6 Southborough	7:39	9:29	11:29	13:29	3:09	5:09	7:09	9:09	11:09	11:39							1524
5 Framingham	7:52	9:42	11:42	13:42	3:22	5:22	7:22	9:22	11:22	11:52							1530
4 West Natick	8:05	9:55	11:55	13:55	3:35	5:35	7:35	9:35	11:35	12:05							1536
4 Natick Center	8:18	10:08	12:08	14:08	3:48	5:48	7:48	9:48	11:48	12:18							1542
3 Wellesley Square	8:31	10:21	12:21	14:21	4:01	6:01	8:01	10:01	12:01	12:31							1548
3 Wellesley Hills	8:44	10:34	12:34	14:34	4:14	6:14	8:14	10:14	12:14	12:44							1554
3 Wellesley Farms	8:57	10:47	12:47	14:47	4:27	6:27	8:27	10:27	12:27	12:57							16:00
2 Auburndale	9:10	11:00	13:00	15:00	4:40	6:40	8:40	10:40	12:40	13:10							16:06
2 West Newton	9:23	11:13	13:13	15:13	4:53	6:53	8:53	10:53	12:53	13:23							16:12
1 Newtonville	9:36	11:26	13:26	15:26	5:06	7:06	9:06	11:06	13:06	13:36							16:18
1A Back Bay	9:49	11:39	13:39	15:39	5:19	7:19	9:19	11:19	13:19	13:49							16:24
1A South Station	10:02	11:52	13:52	15:52	5:29	7:29	9:29	11:29	13:29	14:02							16:30

### Outbound from Boston

STATION	1501	1503	1505	1507	1509	1511	1513	1515	1517	1519	1521	1523	1525	1527	1529	1531	PM
1A South Station	6:40	8:40	10:40	12:40	2:20	4:20	6:20	8:20	10:20	10:50							1506
1A Back Bay	6:53	8:53	10:53	12:53	2:33	4:33	6:33	8:33	10:33	11:03							1512
1A Yawkey	7:06	9:06	11:06	13:06	2:46	4:46	6:46	8:46	10:46	11:16							1518
1A Boston Landing	7:19	9:19	11:19	13:19	2:59	4:59	6:59	8:59	10:59	11:29							1524
1 Newtonville	7:32	9:32	11:32	13:32	3:12	5:12	7:12	9:12	11:12	11:42							1530
2 West Newton	7:45	9:45	11:45	13:45	3:25	5:25	7:25	9:25	11:25	11:55							1536
2 Auburndale	7:58	9:58	11:58	13:58	3:38	5:38	7:38	9:38	11:38	12:08							1542
3 Wellesley Farms	8:11	10:11	12:11	14:11	3:48	5:48	7:48	9:48	11:48	12:18							1548
3 Wellesley Hills	8:24	10:24	12:24	14:24	3:58	5:58	7:58	9:58	11:58	12:28							1554
3 Wellesley Square	8:37	10:37	12:37	14:37	4:08	6:08	8:08	10:08	12:08	12:38							16:00
4 Natick Center	8:50	10:50	12:50	14:50	4:18	6:18	8:18	10:18	12:18	12:48							16:06
4 West Natick	9:03	11:03	13:03	15:03	4:28	6:28	8:28	10:28	12:28	12:58							

# ROUTE 8: Wellesley



## Cash Fare Information

Adult fare: \$1.50 / \$1.25 with a Charlie Card  
 Student fare: \$1.00 with valid Student ID.  
 Children under 6 ride free when accompanied by an adult.  
 Children under 12 may not ride unaccompanied.  
 Elderly (65 years of age or older) - \$0.75 with photo ID indicating date of birth or a MWRTA senior TAP Pass or \$0.70 with a Charlie Card  
 Individuals with disabilities - Valid MBTA Access Card, Medicare Card or MWRTA Disabled TAP Pass are accepted as proof of eligibility for the MWRTA reduced fare program.  
 Charlie Cards are available free of charge at the Central Hub or on the bus. Value can be added to existing cards onboard, online at mbta.com, or at an MBTA kiosk.

## No service provided on the following Holidays:

- New Year's Day
- Patriot's Day
- Memorial Day
- Independence Day
- Thanksgiving Day
- Christmas Day

## Transfer/Connections

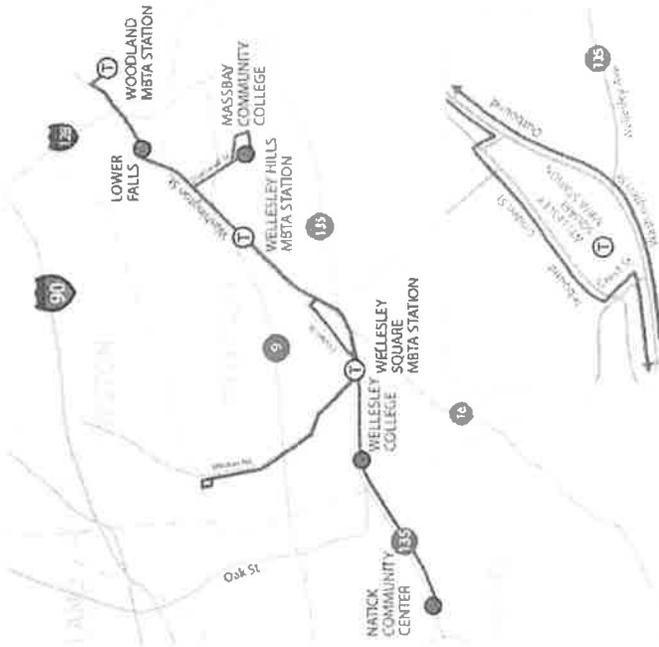
Transfer coupons are available on all buses and are good for transfers within the MWRTA system only. Transfers are not compatible within the MBTA system. Riders wishing to transfer (free of charge), from one route to another (in the same direction), must ask the driver for a transfer coupon and present it to the next driver within 90 minutes. Riders can access MBTA Commuter Rail Service in Downtown Framingham, at the West Natick Commuter Rail Station, Downtown Natick as well as Wellesley Square and Wellesley Hills. For MBTA schedule and service information call 617.222.3200.

## Schedule Times

Scheduled times are only approximate; please wait for the MWRTA ten minutes in advance of scheduled times to assure not missing the bus.

The MWRTA uses the Flag Down System which allows buses to stop anywhere along their routes to pick up passengers, where it is safe to do so. Passengers can hail MWRTA buses by waving.

# Route 8 (Monday-Friday Service)



Effective Summer 2016

Please visit our website: [www.mwrta.com](http://www.mwrta.com)  
 MWRTA Customer Service: (508) 935-2222



Follow Us: @mwrta



MetroWest Regional  
 Transit Authority  
 Public Transportation System



## VEHICLE TRAVEL SPEED DATA

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# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774SPD1

NB

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total
01/23/18	0	0	0	0	0	0	0	0	1	0	2	1	0	2		6
01:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0		2
02:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0		1
03:00	0	0	0	0	0	0	0	0	0	1	1	1	2	0		5
04:00	1	0	0	0	0	0	1	2	3	5	1	2	0	0		15
05:00	1	0	0	0	0	0	0	1	4	11	20	7	3	1		48
06:00	7	0	0	0	1	1	1	8	59	104	73	33	12	2		301
07:00	65	1	0	11	36	36	39	43	165	188	94	22	3	0		703
08:00	61	0	0	0	2	5	19	59	118	197	119	35	6	2		623
09:00	27	0	0	0	0	2	15	23	110	150	113	47	8	1		496
10:00	19	0	0	0	0	0	2	15	68	133	123	29	8	1		398
11:00	31	0	0	0	0	4	6	32	104	129	97	25	6	0		434
12 PM	20	0	0	0	0	0	0	14	65	137	142	57	7	4		446
13:00	22	0	0	0	0	1	5	16	70	138	130	49	8	1		440
14:00	14	0	0	0	0	2	2	20	80	163	137	50	10	1		479
15:00	26	0	0	2	2	3	17	24	84	194	130	43	8	0		533
16:00	51	0	0	0	0	1	2	35	97	197	136	41	6	0		566
17:00	40	0	0	0	0	0	11	45	143	178	110	28	3	0		558
18:00	25	0	0	0	0	2	4	16	104	158	85	33	9	3		439
19:00	13	0	0	0	0	2	8	10	65	105	84	35	6	0		328
20:00	1	0	0	0	0	0	1	11	54	97	65	33	7	1		270
21:00	1	0	0	0	0	1	1	4	24	47	36	30	4	3		151
22:00	0	0	0	0	0	0	0	3	13	17	19	7	4	2		65
23:00	0	0	0	0	0	0	0	2	4	2	1	7	4	1		21
<b>Total</b>	<b>425</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>41</b>	<b>60</b>	<b>134</b>	<b>384</b>	<b>1435</b>	<b>2353</b>	<b>1718</b>	<b>615</b>	<b>124</b>	<b>25</b>		<b>7328</b>

Daily

- 15th Percentile : 24 MPH
- 50th Percentile : 28 MPH
- 85th Percentile : 32 MPH
- 95th Percentile : 34 MPH

Mean Speed(Average) : 28 MPH

10 MPH Pace Speed : 25-34 MPH

Number in Pace : 5711

Percent In Pace : 77.9%

Number of Vehicles > 30 MPH : 2482

Percent of Vehicles > 30 MPH : 33.9%

# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774SPD1

NB

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	Total
	3	6	9	12	15	18	21	24	27	30	33	36	39	999	
01/24/18	0	0	0	0	0	0	0	0	0	4	5	3	1	1	14
01:00	0	0	0	0	0	1	0	0	0	1	0	0	0	1	3
02:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2
03:00	0	0	0	0	0	0	0	0	2	1	0	1	0	1	5
04:00	1	0	0	0	0	0	0	0	1	0	3	0	1	0	6
05:00	1	0	0	0	0	0	2	3	13	17	9	10	4	0	59
06:00	9	0	0	0	0	1	1	7	50	87	76	22	8	2	263
07:00	70	0	2	2	7	5	14	50	178	247	135	41	4	1	756
08:00	71	0	0	1	4	2	6	49	146	192	117	35	11	2	636
09:00	27	0	0	0	0	1	9	22	54	156	156	71	18	3	517
10:00	21	0	0	0	0	0	12	38	57	149	122	69	13	3	484
11:00	29	0	0	0	0	0	4	27	69	165	146	71	18	5	534
12 PM	20	0	0	0	0	1	2	14	68	143	127	78	16	0	469
13:00	32	0	0	1	0	3	1	18	63	120	147	83	19	6	493
14:00	47	0	0	0	0	2	5	25	69	171	146	69	12	5	551
15:00	54	0	0	0	1	1	7	22	81	204	146	63	15	0	594
16:00	56	0	1	0	0	4	10	17	84	185	143	51	16	2	569
17:00	33	0	0	0	0	0	8	36	128	175	121	42	4	0	547
18:00	20	0	0	0	0	3	1	30	86	142	92	31	9	4	418
19:00	11	0	0	0	0	0	5	12	42	135	96	38	13	2	352
20:00	3	0	0	0	0	0	0	8	43	80	67	37	11	2	251
21:00	0	0	0	0	0	2	0	7	19	52	72	23	8	1	184
22:00	0	0	0	0	0	0	0	0	8	23	23	19	1	2	76
23:00	0	0	0	0	0	0	0	1	3	7	11	4	0	2	28
<b>Total</b>	<b>505</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>12</b>	<b>26</b>	<b>87</b>	<b>386</b>	<b>1264</b>	<b>2457</b>	<b>1960</b>	<b>860</b>	<b>202</b>	<b>45</b>	<b>7811</b>

Daily  
 15th Percentile : 24 MPH  
 50th Percentile : 28 MPH  
 85th Percentile : 32 MPH  
 95th Percentile : 35 MPH  
  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 5968  
 Percent in Pace : 76.4%  
 Number of Vehicles > 30 MPH : 3067  
 Percent of Vehicles > 30 MPH : 39.3%

Grand Total	930	1	3	17	53	86	221	770	2699	4810	3678	1475	326	70	15139
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Overall  
 15th Percentile : 24 MPH  
 50th Percentile : 28 MPH  
 85th Percentile : 32 MPH  
 95th Percentile : 35 MPH  
  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 11679  
 Percent in Pace : 77.1%  
 Number of Vehicles > 30 MPH : 5549  
 Percent of Vehicles > 30 MPH : 36.7%

# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774SPD1

SB

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total
01/23/18	0	0	0	0	0	0	0	0	0	0	4	4	1	4		13
01:00	0	0	0	0	0	0	0	0	0	0	1	2	0	1		4
02:00	0	0	0	0	0	0	0	0	0	1	1	0	1	1		4
03:00	0	0	0	0	0	0	0	0	0	0	0	0	1	1		2
04:00	0	0	0	0	0	0	1	1	1	3	2	3	4	3		18
05:00	1	0	0	0	0	0	0	0	0	3	13	14	11	13		55
06:00	6	0	0	0	0	1	0	4	21	42	52	53	12	9		200
07:00	70	3	6	7	12	22	36	47	85	89	114	47	13	1		552
08:00	98	4	16	17	16	15	17	41	95	157	104	45	9	3		637
09:00	28	0	0	0	0	0	2	2	23	96	153	89	26	8		427
10:00	24	0	0	0	0	0	1	4	28	83	122	81	24	10		377
11:00	35	0	0	0	0	0	0	0	14	64	130	131	44	18		438
12 PM	21	0	3	1	0	3	2	1	18	50	123	115	58	23		416
13:00	20	0	0	0	0	0	0	3	19	66	114	104	46	24		398
14:00	21	0	0	0	0	0	1	5	25	50	126	100	51	22		401
15:00	39	2	2	11	8	3	4	13	45	111	184	135	36	9		602
16:00	37	0	1	0	0	0	5	12	33	115	183	103	37	8		534
17:00	31	0	0	0	0	1	14	28	76	160	181	57	13	4		545
18:00	25	0	0	0	0	2	4	20	76	157	147	67	17	7		522
19:00	9	0	0	0	0	0	0	6	8	43	77	73	43	13		272
20:00	2	0	0	0	0	0	0	1	7	30	63	41	14	13		171
21:00	5	0	0	0	0	1	0	0	2	8	21	22	20	10		89
22:00	0	0	0	0	0	0	0	0	2	6	11	11	6	6		42
23:00	0	0	0	0	0	0	0	0	0	2	5	7	5	2		21
<b>Total</b>	<b>472</b>	<b>9</b>	<b>28</b>	<b>36</b>	<b>36</b>	<b>48</b>	<b>87</b>	<b>188</b>	<b>576</b>	<b>1336</b>	<b>1911</b>	<b>1304</b>	<b>492</b>	<b>213</b>		<b>6736</b>

Daily

- 15th Percentile : 24 MPH
- 50th Percentile : 30 MPH
- 85th Percentile : 34 MPH
- 95th Percentile : 37 MPH

Mean Speed(Average) : 29 MPH

10 MPH Pace Speed : 27-36 MPH

Number in Pace : 4743

Percent in Pace : 70.4%

Number of Vehicles > 30 MPH : 3920

Percent of Vehicles > 30 MPH : 58.2%

# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774SPD1

SB

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total
01/24/18	0	0	0	0	0	0	0	0	0	2	2	4	1	2	2	11
01:00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
02:00	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2
03:00	0	0	0	0	0	0	0	0	1	1	1	1	0	1	5	5
04:00	0	0	0	0	0	1	0	0	1	0	6	6	2	0	16	16
05:00	0	0	0	0	0	0	1	1	2	5	11	22	12	10	64	64
06:00	7	0	0	0	0	0	3	2	17	45	73	34	17	2	200	200
07:00	100	10	15	15	22	19	38	62	56	129	81	44	10	2	603	603
08:00	109	5	12	15	18	20	35	57	87	111	93	56	21	5	644	644
09:00	32	0	0	0	1	0	2	12	25	98	183	111	39	15	518	518
10:00	20	0	2	3	1	6	9	10	19	56	119	127	45	12	429	429
11:00	26	0	0	0	0	1	1	8	38	127	156	103	43	13	516	516
12 PM	15	0	0	0	0	0	1	15	46	78	142	111	46	12	466	466
13:00	23	0	0	2	0	3	5	7	27	82	157	126	45	15	492	492
14:00	45	0	0	1	1	5	14	34	76	157	192	107	23	11	666	666
15:00	64	1	4	7	9	22	23	48	76	147	187	67	26	5	666	666
16:00	57	0	0	0	4	2	8	20	72	173	193	81	32	5	647	647
17:00	52	4	5	16	23	24	28	40	82	141	99	47	10	6	577	577
18:00	21	0	0	0	0	0	3	25	75	165	180	71	13	3	556	556
19:00	11	0	0	0	0	0	3	4	20	79	90	81	32	11	331	331
20:00	6	0	0	0	0	0	1	0	14	22	62	34	17	6	162	162
21:00	1	0	0	0	0	0	0	1	3	17	28	21	19	9	99	99
22:00	0	0	0	0	0	0	0	1	2	3	14	19	17	12	68	68
23:00	0	0	0	0	0	0	0	1	0	0	3	7	4	3	18	18
<b>Total</b>	<b>589</b>	<b>20</b>	<b>38</b>	<b>59</b>	<b>79</b>	<b>103</b>	<b>175</b>	<b>349</b>	<b>739</b>	<b>1639</b>	<b>2053</b>	<b>1281</b>	<b>474</b>	<b>160</b>	<b>7758</b>	

Daily  
 15th Percentile : 21 MPH  
 50th Percentile : 30 MPH  
 85th Percentile : 34 MPH  
 95th Percentile : 36 MPH  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 27-36 MPH  
 Number in Pace : 5219  
 Percent in Pace : 67.3%  
 Number of Vehicles > 30 MPH : 3968  
 Percent of Vehicles > 30 MPH : 51.1%

<b>Grand Total</b>	<b>1061</b>	<b>29</b>	<b>66</b>	<b>95</b>	<b>115</b>	<b>151</b>	<b>262</b>	<b>537</b>	<b>1315</b>	<b>2975</b>	<b>3964</b>	<b>2585</b>	<b>966</b>	<b>373</b>	<b>14494</b>
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Overall  
 15th Percentile : 22 MPH  
 50th Percentile : 30 MPH  
 85th Percentile : 34 MPH  
 95th Percentile : 36 MPH  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 27-36 MPH  
 Number in Pace : 9962  
 Percent in Pace : 68.7%  
 Number of Vehicles > 30 MPH : 7888  
 Percent of Vehicles > 30 MPH : 54.4%

**Accurate Counts**  
978-664-2565

Location : Weston Road  
Location : South of Howe Street  
City/State: Wellesley, MA

7774SPD1

NB, SB	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total
Start Time	3	6	9	12	15	18	21	24	27	30	33	36	39			
01/23/18	0	0	0	0	0	0	0	0	1	0	6	5	1	6	19	
01:00	0	0	0	0	0	0	0	0	0	2	1	2	0	1	6	
02:00	0	0	0	0	0	0	0	1	0	1	1	0	1	1	5	
03:00	0	0	0	0	0	0	0	0	0	1	1	1	3	1	7	
04:00	1	0	0	0	0	0	2	3	4	8	3	5	4	3	33	
05:00	2	0	0	0	0	0	0	1	4	14	33	21	14	14	103	
06:00	13	0	0	0	1	2	1	12	80	146	125	86	24	11	501	
07:00	135	4	6	18	48	58	75	90	250	277	208	69	16	1	1255	
08:00	159	4	16	17	18	20	36	100	213	354	223	80	15	5	1260	
09:00	55	0	0	0	0	2	17	25	133	246	266	136	34	9	923	
10:00	43	0	0	0	0	0	3	19	96	216	245	110	32	11	775	
11:00	66	0	0	0	0	4	6	32	118	193	227	156	50	18	870	
12 PM	41	0	3	1	0	3	2	15	81	187	265	172	65	27	862	
13:00	42	0	0	0	0	1	5	19	89	204	244	153	54	25	836	
14:00	35	0	0	0	0	2	3	25	105	213	263	150	61	23	880	
15:00	65	2	2	13	10	6	21	37	129	305	314	178	44	9	1135	
16:00	88	0	1	0	0	1	7	47	130	312	319	144	43	8	1100	
17:00	71	0	0	0	0	1	25	73	219	338	271	85	16	4	1103	
18:00	50	0	0	0	0	4	8	36	180	315	232	100	26	10	961	
19:00	22	0	0	0	0	2	8	16	73	148	161	108	49	13	600	
20:00	3	0	0	0	0	0	1	12	61	127	128	74	21	14	441	
21:00	6	0	0	0	0	2	1	4	26	55	57	52	24	13	240	
22:00	0	0	0	0	0	0	0	3	15	23	30	18	10	8	107	
23:00	0	0	0	0	0	0	0	2	4	4	6	14	9	3	42	
<b>Total</b>	<b>897</b>	<b>10</b>	<b>28</b>	<b>49</b>	<b>77</b>	<b>108</b>	<b>221</b>	<b>572</b>	<b>2011</b>	<b>3689</b>	<b>3629</b>	<b>1919</b>	<b>616</b>	<b>238</b>	<b>14064</b>	

Daily  
 15th Percentile : 24 MPH  
 50th Percentile : 29 MPH  
 85th Percentile : 33 MPH  
 95th Percentile : 35 MPH  
  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 25-34 MPH  
 Number in Pace : 9969  
 Percent in Pace : 70.9%  
 Number of Vehicles > 30 MPH : 6402  
 Percent of Vehicles > 30 MPH : 45.5%

# Accurate Counts

978-664-2565

Location : Weston Road  
 Location : South of Howe Street  
 City/State: Wellesley, MA

7774SPD1

NB, SB

Start Time	1	4	7	10	13	16	19	22	25	28	31	34	37	40	999	Total
01/24/18	0	0	0	0	0	0	0	0	0	6	7	7	2	3		25
01:00	0	0	0	0	0	1	0	0	0	2	0	1	0	1		5
02:00	0	0	0	0	0	0	0	1	0	1	1	1	0	0		4
03:00	0	0	0	0	0	0	0	0	3	2	1	2	0	2		10
04:00	1	0	0	0	0	1	0	0	2	0	9	6	3	0		22
05:00	1	0	0	0	0	0	3	4	15	22	20	32	16	10		123
06:00	16	0	0	0	0	1	4	9	67	132	149	56	25	4		463
07:00	170	10	17	17	29	24	52	112	234	376	216	85	14	3		1359
08:00	180	5	12	16	22	22	41	106	233	303	210	91	32	7		1280
09:00	59	0	0	0	1	1	11	34	79	254	339	182	57	18		1035
10:00	41	0	2	3	1	6	21	48	76	205	241	196	58	15		913
11:00	55	0	0	0	0	1	5	35	107	292	302	174	61	18		1050
12 PM	35	0	0	0	0	1	3	29	114	221	269	189	62	12		935
13:00	55	0	0	3	0	6	6	25	90	202	304	209	64	21		985
14:00	92	0	0	1	1	7	19	59	145	328	338	176	35	16		1217
15:00	118	1	4	7	10	23	30	70	157	351	313	130	41	5		1260
16:00	113	0	1	0	4	6	18	37	156	358	336	132	48	7		1216
17:00	85	4	5	16	23	24	36	76	210	316	220	89	14	6		1124
18:00	41	0	0	0	0	3	4	55	161	307	272	102	22	7		974
19:00	22	0	0	0	0	0	8	16	62	214	186	117	45	13		683
20:00	9	0	0	0	0	0	1	8	57	102	129	71	26	8		413
21:00	1	0	0	0	0	2	0	8	22	69	100	44	27	10		283
22:00	0	0	0	0	0	0	0	1	10	26	37	38	18	14		144
23:00	0	0	0	0	0	0	0	2	3	7	14	11	4	5		46
<b>Total</b>	<b>1094</b>	<b>20</b>	<b>41</b>	<b>63</b>	<b>91</b>	<b>129</b>	<b>262</b>	<b>735</b>	<b>2003</b>	<b>4096</b>	<b>4013</b>	<b>2141</b>	<b>676</b>	<b>205</b>	<b>15569</b>	

Daily  
 15th Percentile : 23 MPH  
 50th Percentile : 29 MPH  
 85th Percentile : 33 MPH  
 95th Percentile : 35 MPH  
  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 27-36 MPH  
 Number in Pace : 10918  
 Percent in Pace : 70.1%  
 Number of Vehicles > 30 MPH : 7035  
 Percent of Vehicles > 30 MPH : 45.2%

<b>Grand Total</b>	<b>1991</b>	<b>30</b>	<b>69</b>	<b>112</b>	<b>168</b>	<b>237</b>	<b>483</b>	<b>1307</b>	<b>4014</b>	<b>7785</b>	<b>7642</b>	<b>4060</b>	<b>1292</b>	<b>443</b>	<b>29633</b>
--------------------	-------------	-----------	-----------	------------	------------	------------	------------	-------------	-------------	-------------	-------------	-------------	-------------	------------	--------------

Overall  
 15th Percentile : 23 MPH  
 50th Percentile : 29 MPH  
 85th Percentile : 33 MPH  
 95th Percentile : 35 MPH  
  
 Mean Speed(Average) : 28 MPH  
 10 MPH Pace Speed : 27-36 MPH  
 Number in Pace : 20825  
 Percent in Pace : 70.3%  
 Number of Vehicles > 30 MPH : 13437  
 Percent of Vehicles > 30 MPH : 45.3%

MASSDOT CRASH RATE WORKSHEETS

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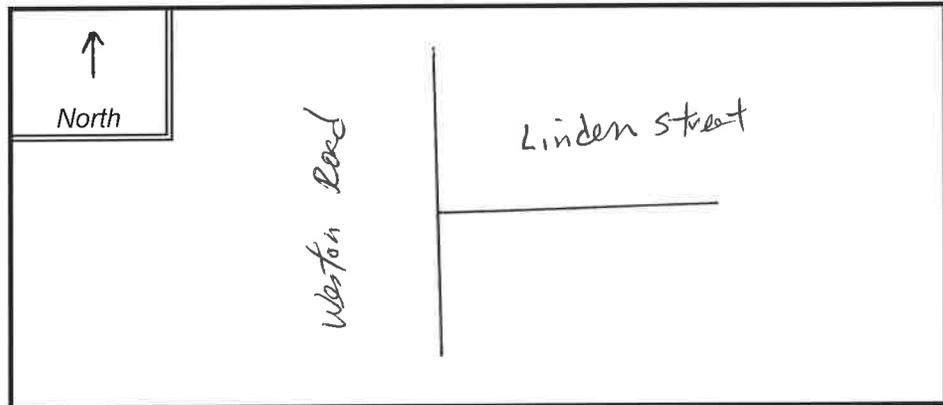
## INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Wellesley                      COUNT DATE : Jan-18  
 DISTRICT : 6                      UNSIGNALIZED :                       SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : Weston Road  
 MINOR STREET(S) : Linden Street

**INTERSECTION  
 DIAGRAM**  
 (Label Approaches)



**PEAK HOUR VOLUMES**

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	WB	NB	SB		
PEAK HOURLY VOLUMES (PM) :		453	439	665		<b>1,557</b>

"K" FACTOR :                       INTERSECTION ADT ( V ) = TOTAL DAILY APPROACH VOLUME :

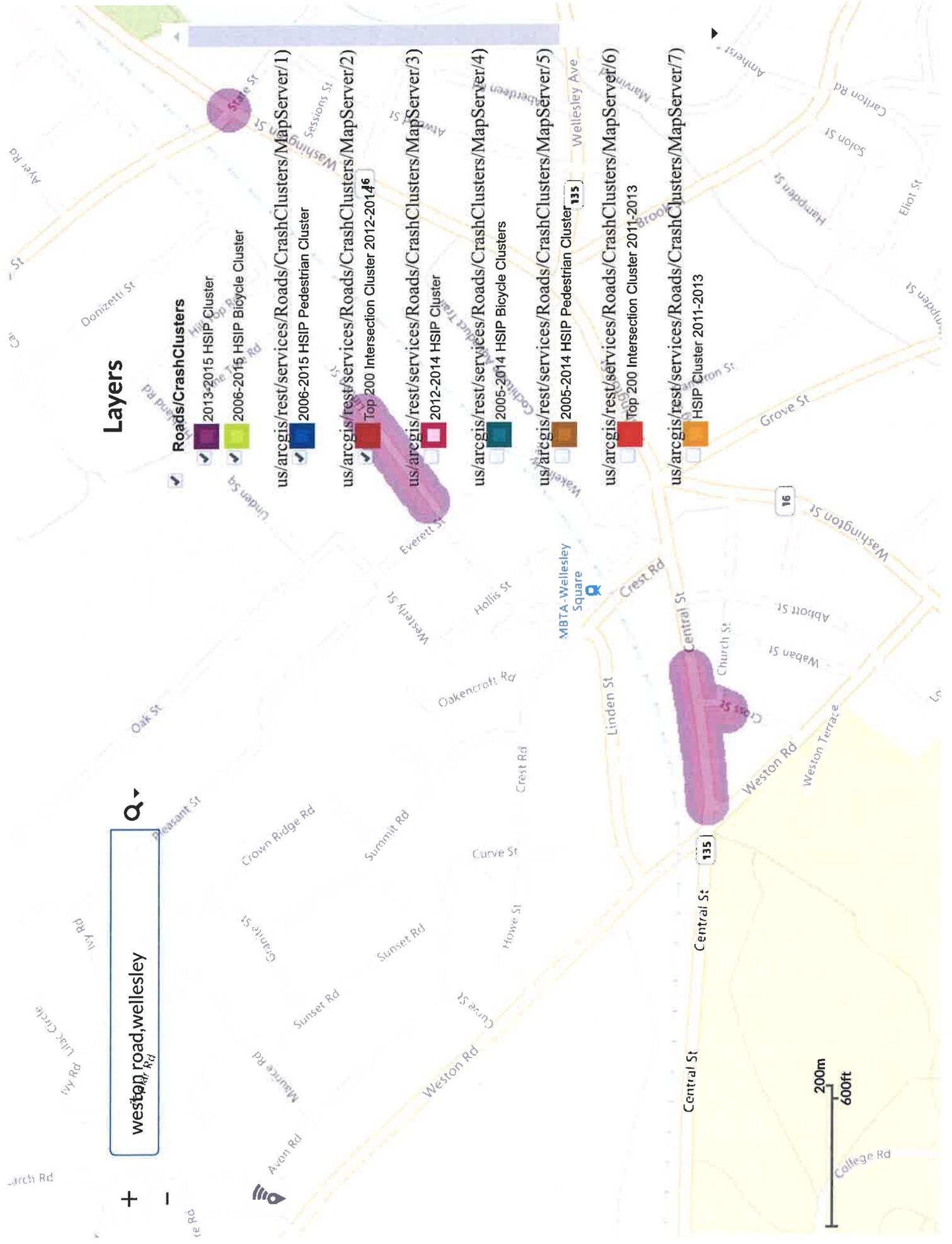
TOTAL # OF CRASHES :                       # OF YEARS :                       AVERAGE # OF CRASHES PER YEAR ( A ) :

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

Comments : Above MassDOT District 6 crash rate  
 Project Title & Date: Proposed Residential Development February 2018







### Layers

#### Roads/CrashClusters

2013-2015 HSIP Cluster

2006-2015 HSIP Bicycle Cluster

us/arcgis/rest/services/Roads/CrashClusters/MapServer/1)

2006-2015 HSIP Pedestrian Cluster

us/arcgis/rest/services/Roads/CrashClusters/MapServer/2)

Top 200 Intersection Cluster 2012-2014<sup>6</sup>

us/arcgis/rest/services/Roads/CrashClusters/MapServer/3)

2012-2014 HSIP Cluster

us/arcgis/rest/services/Roads/CrashClusters/MapServer/4)

2005-2014 HSIP Bicycle Clusters

us/arcgis/rest/services/Roads/CrashClusters/MapServer/5)

2005-2014 HSIP Pedestrian Cluster **135**

us/arcgis/rest/services/Roads/CrashClusters/MapServer/6)

Top 200 Intersection Cluster 2011-2013

us/arcgis/rest/services/Roads/CrashClusters/MapServer/7)

HSIP Cluster 2011-2013

weston road, wellesley



GENERAL BACKGROUND TRAFFIC GROWTH

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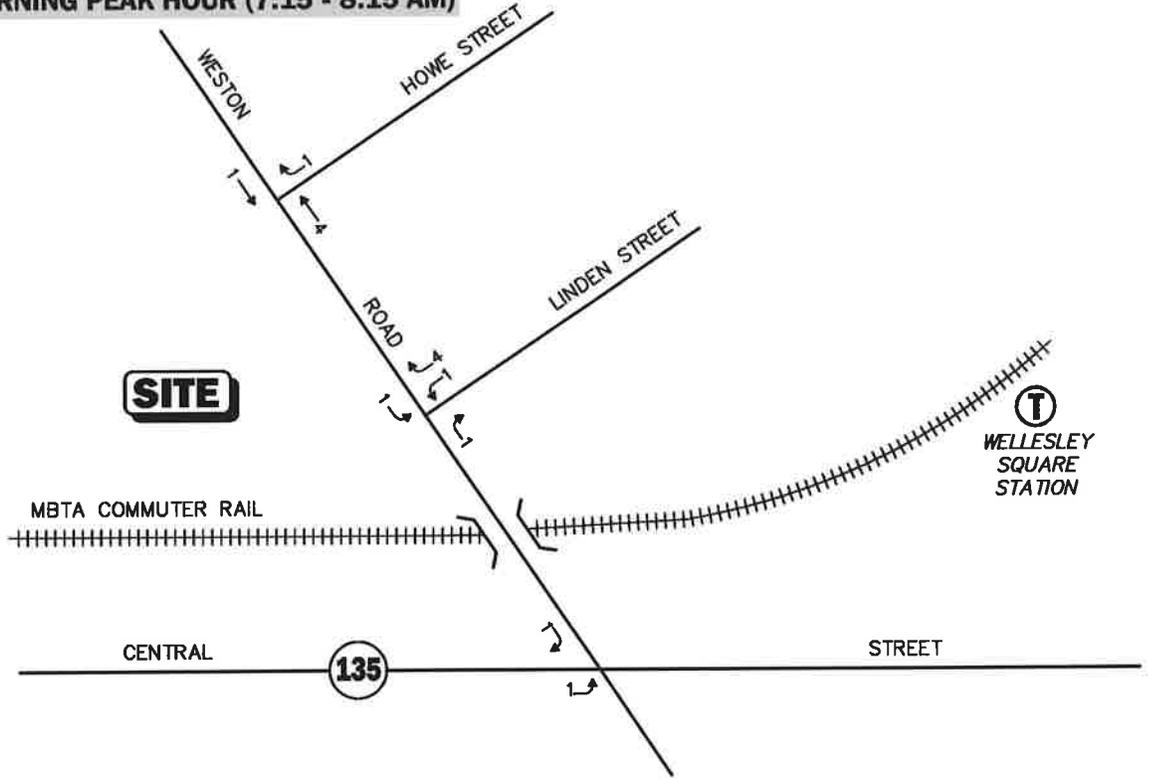
General Background Traffic Growth - Daily Traffic Volumes

CITY/TOWN	ROUTE/STREET	LOCATION	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average Annual
Wesston	I-95	South of Route 20 (Sta. 32)	169,066	166,700	165,404				154,800	163,302	165,552	156,519	165,476	-0.26%

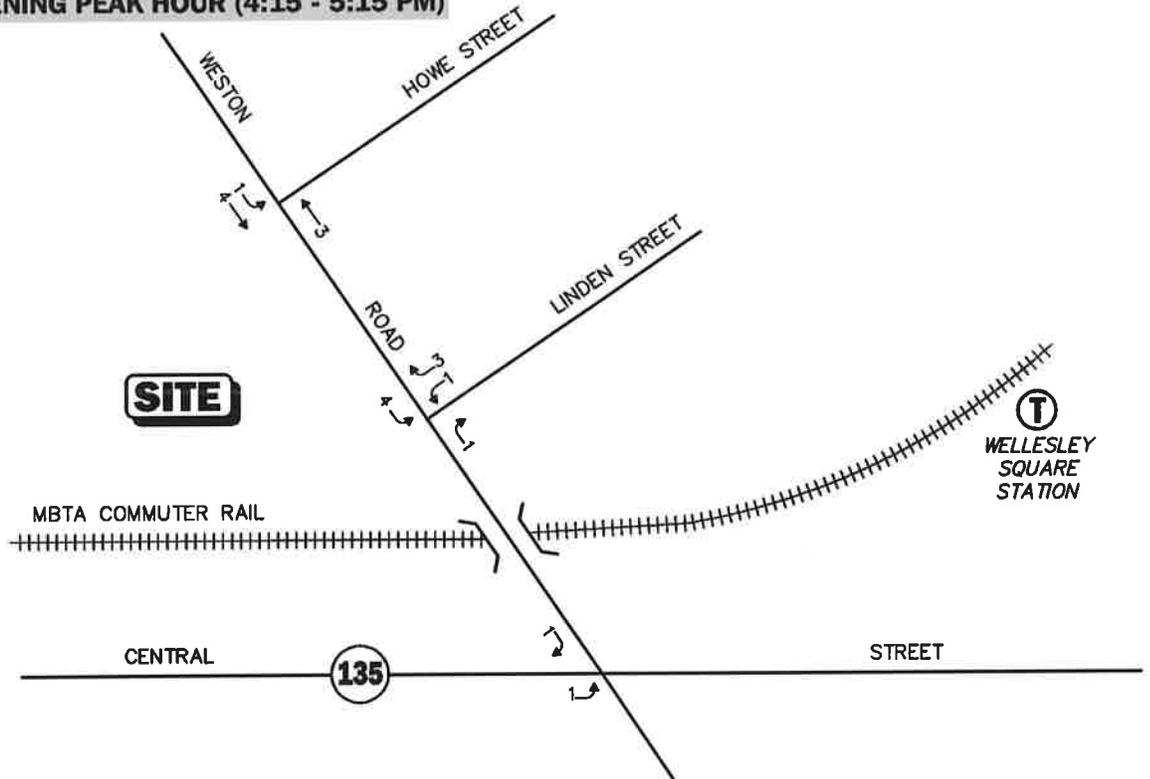
**BACKGROUND DEVELOPMENT TRAFFIC-VOLUME NETWORKS**

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**WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)**



**WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)**



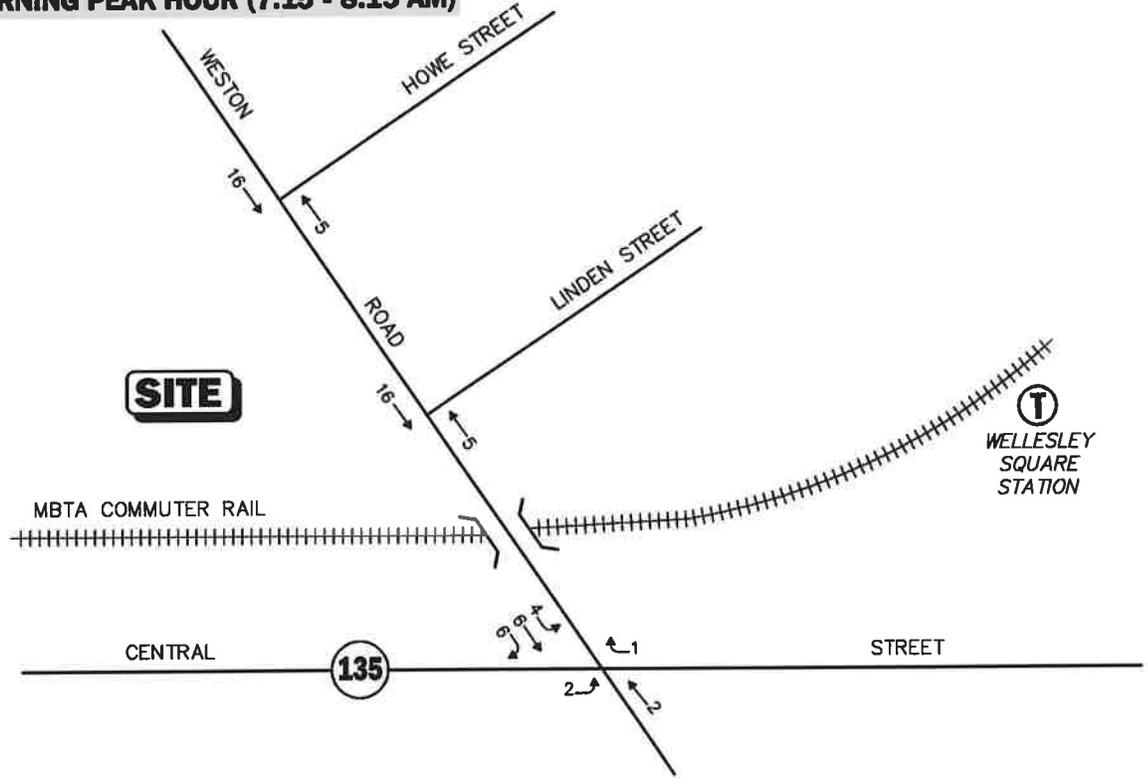
North arrow pointing up and slightly left. Text: Not To Scale



Figure A-1

**Wellesley Crossing  
Peak Hour Traffic Volumes**

**WEEKDAY MORNING PEAK HOUR (7:15 - 8:15 AM)**



**WEEKDAY EVENING PEAK HOUR (4:15 - 5:15 PM)**



Not To Scale



Figure A-2

**Proposed Sports Complex  
Peak Hour Traffic Volumes**

## TRIP-GENERATION CALCULATIONS

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# Multifamily Housing (Mid-Rise) (221)

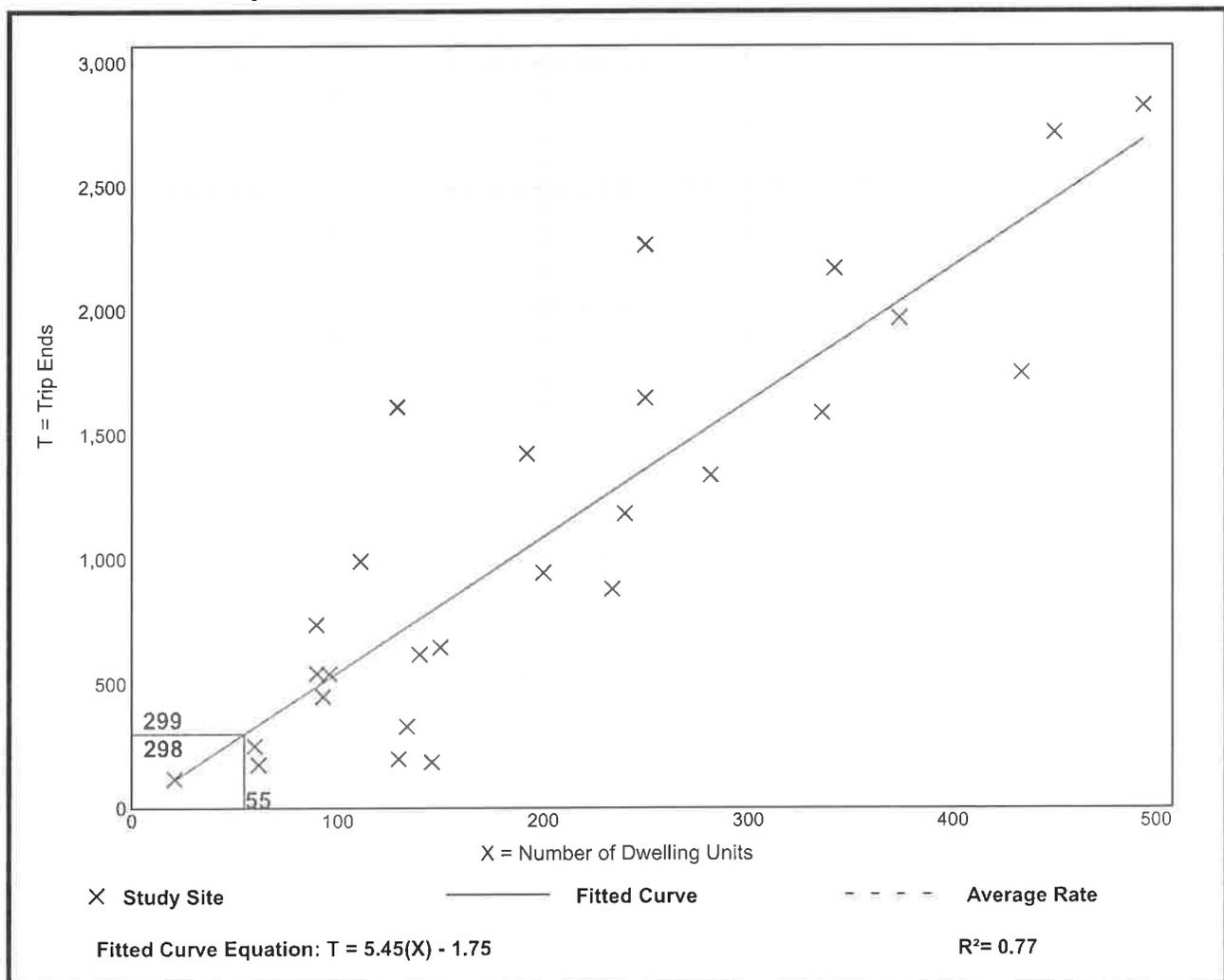
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 27  
Avg. Num. of Dwelling Units: 205  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

## Data Plot and Equation



# Multifamily Housing (Mid-Rise) (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,  
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 53

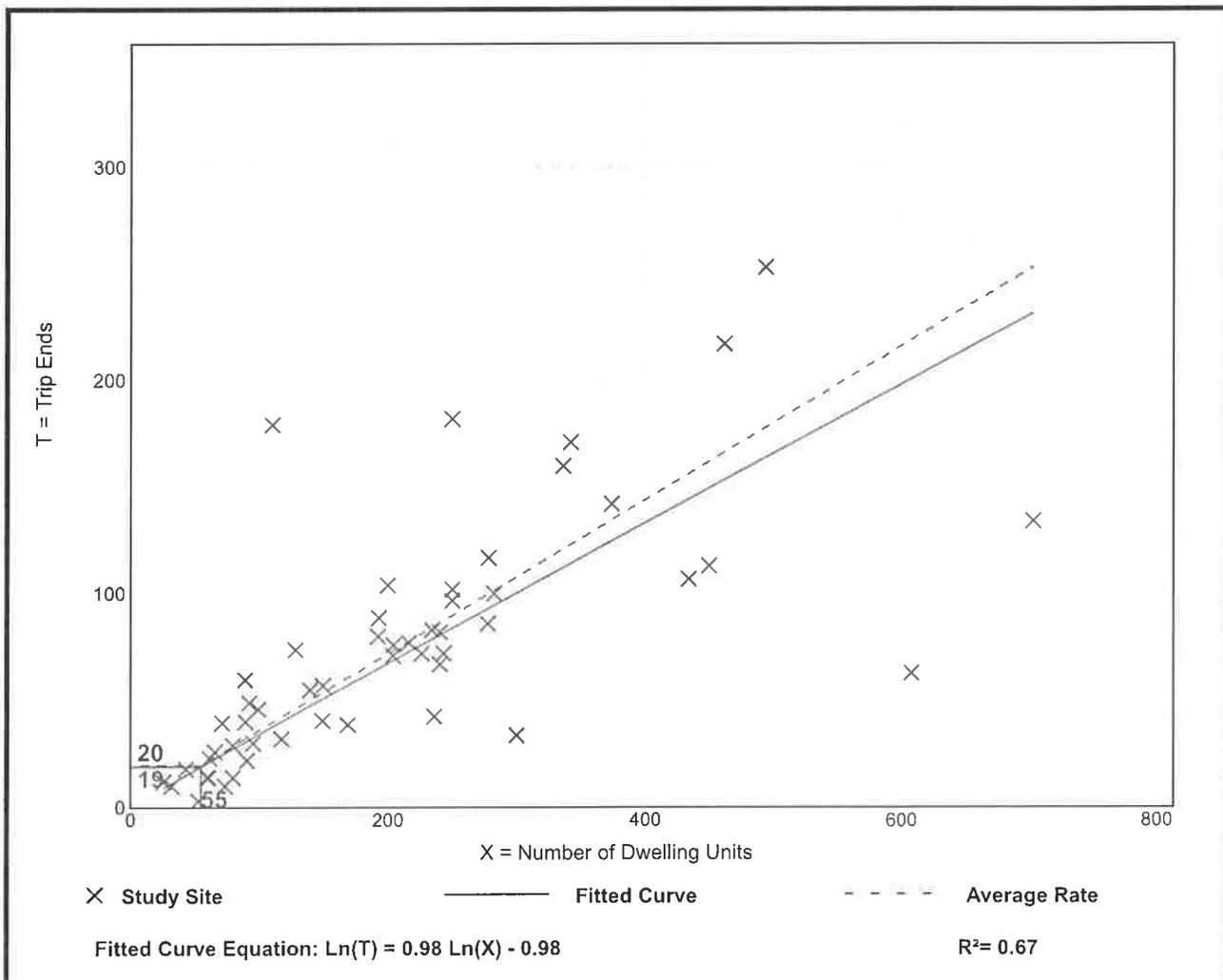
Avg. Num. of Dwelling Units: 207

Directional Distribution: 26% entering, 74% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.06 - 1.61	0.19

## Data Plot and Equation



# Multifamily Housing (Mid-Rise) (221)

**Vehicle Trip Ends vs: Dwelling Units**

**On a: Weekday,**

**Peak Hour of Adjacent Street Traffic,  
One Hour Between 4 and 6 p.m.**

**Setting/Location: General Urban/Suburban**

Number of Studies: 60

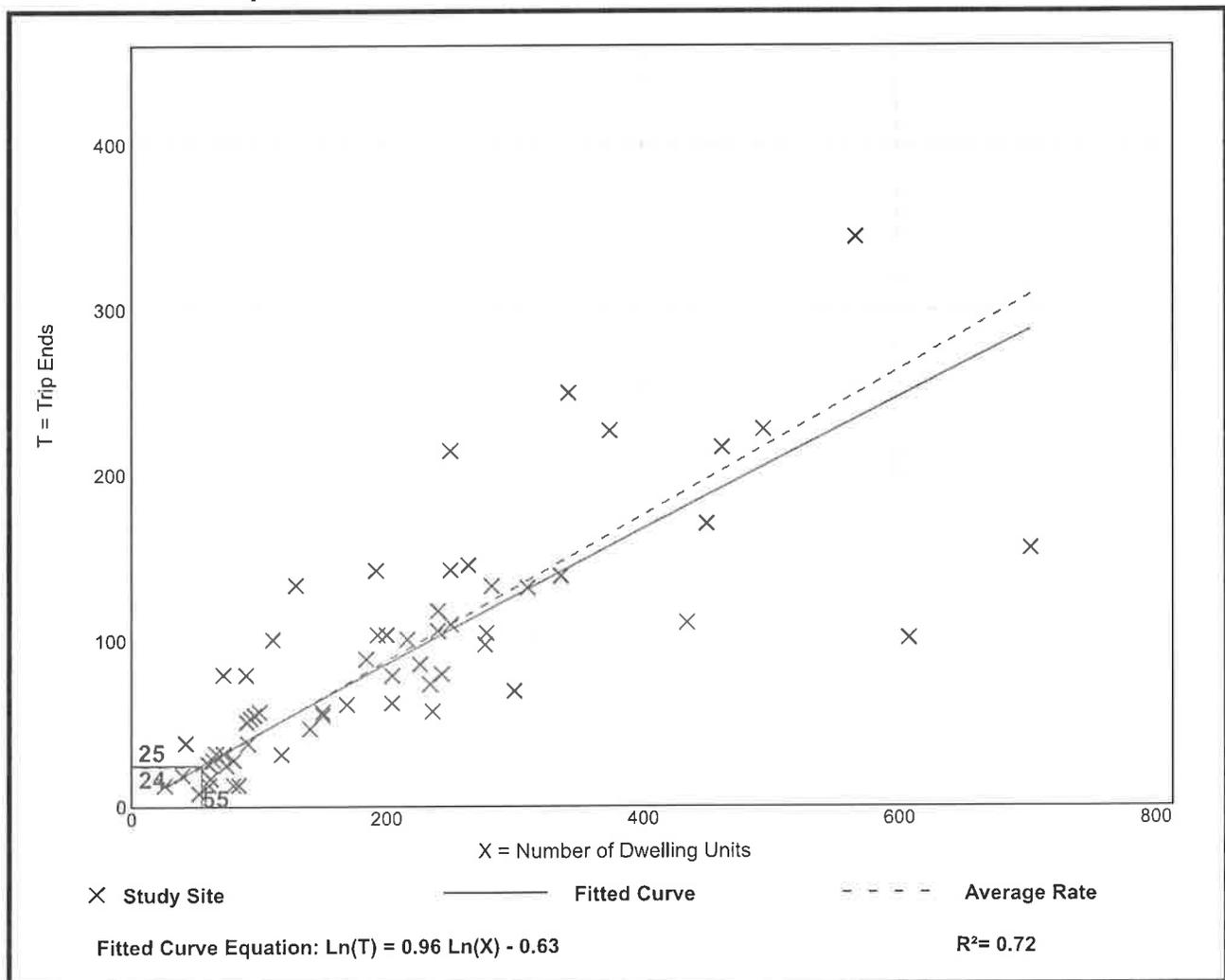
Avg. Num. of Dwelling Units: 208

Directional Distribution: 61% entering, 39% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

## Data Plot and Equation



MODE OF TRANSPORTATION FOR THE TOWN OF WELLESLEY

**MEANS OF TRANSPORTATION TO WORK**  
 Universe: Workers 16 years and over  
 2011-2015 American Community Survey 5-Year Estimates

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Versions of this table are available for the following years:	1 - 21 of 21	Wellesley town, Norfolk County, Massachusetts	
		Estimate	Margin of Error
2015		Total:	12,244 +/-387
2014		Car, truck, or van:	8,024 +/-398
2013		Drove alone	7,433 +/-363
2012		Carpooled:	591 +/-156
2011		In 2-person carpool	422 +/-123
2010		In 3-person carpool	71 +/-45
2009		In 4-person carpool	31 +/-21
		In 5- or 6-person carpool	41 +/-32
		In 7-or-more-person carpool	26 +/-24
		Public transportation (excluding taxicab):	1,331 +/-173
		Bus or trolley bus	116 +/-81
		Streetcar or trolley car (carro publico in Puerto Rico)	43 +/-26
		Subway or elevated	216 +/-75
		Railroad	956 +/-162
		Ferryboat	0 +/-22
		Taxicab	11 +/-13
		Motorcycle	5 +/-9
		Bicycle	82 +/-57
		Walked	1,607 +/-279
		Other means	94 +/-44
		Worked at home	1,090 +/-164

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

**Explanation of Symbols:**

An '\*\*\*' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.

An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.

An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.

An '\*\*\*\*' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

An '\*\*\*\*\*' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

An '(X)' means that the estimate is not applicable or not available.

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

Workers include members of the Armed Forces and civilians who were at work last week.

While the 2011-2015 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; In certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

**JOURNEY TO WORK TRIP DISTRIBUTION**

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Proposed Residential Development- Wellesley, MA

Residence	Workplace	Weston Road (North)	Weston Road (South)	Central Street (East)	Central Street (West)	Linden Street (East)
Massachusetts	Wellesley town	235	942	1884	1177	471
Massachusetts	Boston city	1974				219
Massachusetts	Cambridge city	554				62
Massachusetts	Newton city	237		119		118
Massachusetts	Needham town		69	207		
Massachusetts	Waltham city	199				66
Massachusetts	Framingham town	60			178	
Massachusetts	Brookline town	168				56
Massachusetts	Weston town	167				56
Massachusetts	Natick town	50			149	
Massachusetts	Marlborough city	128				
Massachusetts	Westwood town	105		105		
Massachusetts	Worcester city	101				
Massachusetts	Braintree Town city	99				
Massachusetts	Weymouth Town city	84				
Massachusetts	Watertown Town city	77	58			19
Massachusetts	Norwood town	64		64		
Massachusetts	Lexington town	60				
Massachusetts	Billerica town	55				
Massachusetts	Lowell city	54				
Massachusetts	Quincy city	54				
Massachusetts	Foxborough town	52		52		
Massachusetts	Dedham town	50	13	37		
Massachusetts	Franklin Town city	49		49		
		10,449	4,337	2,517	1,504	1,067

SAY

42% 10% 24% 14% 10%

40% 10% 25% 15% 10%

## CAPACITY ANALYSIS WORKSHEETS

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Weston Road at Central Street

Weston Road at Linden Street

Weston Road at Howe Street

Weston Road at the Project Site Driveway

Weston Road at Central Street

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1: Weston Road & Central Street  
2018 Existing Wkdy AM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	387	568	64	13	239	140	25	439	14	168	223	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1788	0	0	3159	0	0	2002	1404	0	1896	0
Flt Permitted	0.327				0.869			0.960			0.428	
Satd. Flow (perm)	601	1788	0	0	2751	0	0	1927	1404	0	826	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									123		10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		517			546			394			501	
Travel Time (s)		11.8			12.4			9.0			11.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	5%	5%	3%	0%	1%	15%	3%	1%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	412	672	0	0	417	0	0	494	15	0	500	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	16.0	51.0		35.0	35.0		36.0	36.0	36.0	13.0	49.0	
Total Split (%)	13.9%	44.3%		30.4%	30.4%		31.3%	31.3%	31.3%	11.3%	42.6%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effect Green (s)	42.0	42.0			25.8			45.6	45.6		45.6	
Actuated g/C Ratio	0.42	0.42			0.26			0.46	0.46		0.46	
v/c Ratio	1.04	0.89			0.58			0.56	0.02		1.30	
Control Delay	82.4	41.8			35.8			24.8	0.1		177.9	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	82.4	41.8			35.8			24.8	0.1		177.9	
LOS	F	D			D			C	A		F	
Approach Delay		57.2			35.8			24.0			177.9	
Approach LOS		E			D			C			F	
Queue Length 50th (ft)	176	352			113			221	0		~408	
Queue Length 95th (ft)	#575	#740			202			438	0		#759	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	395	861			873			888	713		386	

1: Weston Road & Central Street  
 2018 Existing Wkdy AM Peak Hour

2/1/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2018 Existing Wkdy AM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	1.04	0.78			0.48			0.56	0.02		1.30	

Intersection Summary

Area Type: Other  
 Cycle Length: 115  
 Actuated Cycle Length: 98.9  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.30  
 Intersection Signal Delay: 71.0  
 Intersection Capacity Utilization 108.9%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service G

- Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

13 s	36 s	51 s	15 s
49 s	16 s	35 s	

1: Weston Road & Central Street  
2018 Existing Wkdy PM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	227	71	13	406	98	98	185	3	94	308	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1771	0	0	3362	0	0	1985	1615	0	1893	0
Flt Permitted	0.193				0.943			0.553			0.856	
Satd. Flow (perm)	354	1771	0	0	3174	0	0	1117	1615	0	1632	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									142		41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		517			546			394			501	
Travel Time (s)		11.8			12.4			9.0			11.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	1%	0%	0%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	317	0	0	550	0	0	301	3	0	738	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	16.0	44.0		28.0	28.0		28.0	28.0	28.0	13.0	41.0	
Total Split (%)	16.0%	44.0%		28.0%	28.0%		28.0%	28.0%	28.0%	13.0%	41.0%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	34.6	34.6			19.5			38.0	38.0		38.0	
Actuated g/C Ratio	0.40	0.40			0.22			0.44	0.44		0.44	
v/c Ratio	0.53	0.45			0.77			0.62	0.00		1.01	
Control Delay	25.4	23.0			41.1			30.3	0.0		62.1	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	25.4	23.0			41.1			30.3	0.0		62.1	
LOS	C	C			D			C	A		E	
Approach Delay		23.8			41.1			30.0			62.1	
Approach LOS		C			D			C			E	
Queue Length 50th (ft)	50	105			133			108	0		330	
Queue Length 95th (ft)	124	236			242			#310	0		#819	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	336	834			897			486	784		734	

1: Weston Road & Central Street  
 2018 Existing Wkdy PM Peak Hour

2/1/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2018 Existing Wkdy PM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	0.49	0.38			0.61			0.62	0.00		1.01	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 87.1  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.01  
 Intersection Signal Delay: 42.9  
 Intersection LOS: D  
 Intersection Capacity Utilization 98.7%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

13 s	28 s	44 s	15 s
41 s	16 s	28 s	

1: Weston Road & Central Street  
2025 No-Build Wkdy AM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	418	609	69	14	256	151	27	473	15	184	245	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1788	0	0	3159	0	0	2002	1404	0	1895	0
Flt Permitted	0.329				0.847			0.958			0.350	
Satd. Flow (perm)	604	1788	0	0	2681	0	0	1923	1404	0	675	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									123			11
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		517			546			394			501	
Travel Time (s)		11.8			12.4			9.0			11.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	5%	5%	3%	0%	1%	15%	3%	1%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	445	721	0	0	448	0	0	532	16	0	555	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	16.0	51.0		35.0	35.0		36.0	36.0	36.0	13.0	49.0	
Total Split (%)	13.9%	44.3%		30.4%	30.4%		31.3%	31.3%	31.3%	11.3%	42.6%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	None
Act Effct Green (s)	46.6	46.6			30.5			45.2	45.2		45.2	
Actuated g/C Ratio	0.45	0.45			0.30			0.44	0.44		0.44	
v/c Ratio	1.10	0.89			0.56			0.63	0.02		1.84	
Control Delay	98.9	42.1			35.0			28.0	0.1		413.7	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	98.9	42.1			35.0			28.0	0.1		413.7	
LOS	F	D			C			C	A		F	
Approach Delay		63.7			35.0			27.2			413.7	
Approach LOS		E			C			C			F	
Queue Length 50th (ft)	~215	395			123			250	0		~536	
Queue Length 95th (ft)	#632	#823			220			482	0		#708	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	406	818			809			843	684		302	

1: Weston Road & Central Street  
 2025 No-Build Wkdy AM Peak Hour

2/1/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2025 No-Build Wkdy AM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	1.10	0.88			0.55			0.63	0.02		1.84	

Intersection Summary

Area Type: Other  
 Cycle Length: 115  
 Actuated Cycle Length: 103.2  
 Natural Cycle: 140  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.84  
 Intersection Signal Delay: 123.1  
 Intersection Capacity Utilization: 117.0%  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

13 s	36 s	51 s	15 s
49 s	16 s	35 s	

1: Weston Road & Central Street  
2025 No-Build Wkdy PM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	243	76	14	435	108	105	204	3	104	335	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1771	0	0	3359	0	0	1985	1615	0	1893	0
Flt Permitted	0.171				0.942			0.513			0.790	
Satd. Flow (perm)	314	1771	0	0	3167	0	0	1036	1615	0	1506	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									142		41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		517			546			394			501	
Travel Time (s)		11.8			12.4			9.0			11.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	1%	0%	0%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	340	0	0	593	0	0	329	3	0	805	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	16.0	44.0		28.0	28.0		28.0	28.0	28.0	13.0	41.0	
Total Split (%)	16.0%	44.0%		28.0%	28.0%		28.0%	28.0%	28.0%	13.0%	41.0%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	35.8	35.8			20.5			37.8	37.8		37.8	
Actuated g/C Ratio	0.41	0.41			0.23			0.43	0.43		0.43	
v/c Ratio	0.60	0.47			0.81			0.74	0.00		1.21	
Control Delay	27.7	23.3			43.0			37.5	0.0		131.6	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	27.7	23.3			43.0			37.5	0.0		131.6	
LOS	C	C			D			D	A		F	
Approach Delay		24.8			43.0			37.2			131.6	
Approach LOS		C			D			D			F	
Queue Length 50th (ft)	56	114			146			132	0		~485	
Queue Length 95th (ft)	137	255			#271			#376	0		#952	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	326	820			880			443	773		668	

1: Weston Road & Central Street  
 2025 No-Build Wkdy PM Peak Hour

2/1/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2025 No-Build Wkdy PM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	0.57	0.41			0.67			0.74	0.00		1.21	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 88.3

Natural Cycle: 110

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.21

Intersection Signal Delay: 69.6

Intersection LOS: E

Intersection Capacity Utilization 106.0%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

13 s	28 s	44 s	15 s
41 s	16 s	28 s	

1: Weston Road & Central Street  
2025 Build Wkdy AM Peak Hour

2/1/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	419	609	69	14	256	152	27	473	15	187	246	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1788	0	0	3159	0	0	2002	1404	0	1895	0
Flt Permitted	0.329				0.847			0.958			0.350	
Satd. Flow (perm)	604	1788	0	0	2681	0	0	1923	1404	0	675	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									123			11
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		517			546			394			501	
Travel Time (s)		11.8			12.4			9.0			11.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	5%	5%	3%	0%	1%	15%	3%	1%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	446	721	0	0	449	0	0	532	16	0	561	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	16.0	51.0		35.0	35.0		36.0	36.0	36.0	13.0	49.0	
Total Split (%)	13.9%	44.3%		30.4%	30.4%		31.3%	31.3%	31.3%	11.3%	42.6%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	46.6	46.6			30.5			45.2	45.2		45.2	
Actuated g/C Ratio	0.45	0.45			0.30			0.44	0.44		0.44	
v/c Ratio	1.10	0.89			0.57			0.63	0.02		1.86	
Control Delay	99.7	42.1			35.0			28.0	0.1		422.4	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	99.7	42.1			35.0			28.0	0.1		422.4	
LOS	F	D			C			C	A		F	
Approach Delay		64.1			35.0			27.2			422.4	
Approach LOS		E			C			C			F	
Queue Length 50th (ft)	~216	395			124			250	0		~544	
Queue Length 95th (ft)	#633	#823			220			482	0		#720	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	406	818			809			843	684		302	

1: Weston Road & Central Street  
 2025 Build Wkdy AM Peak Hour

2/1/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2025 Build Wkdy AM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	1.10	0.88			0.56			0.63	0.02		1.86	

Intersection Summary

Area Type: Other

Cycle Length: 115

Actuated Cycle Length: 103.2

Natural Cycle: 150

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.86

Intersection Signal Delay: 125.6

Intersection LOS: F

Intersection Capacity Utilization 117.3%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

13 s	36 s	51 s	15 s
49 s	16 s	35 s	

1: Weston Road & Central Street  
2025 Build Wkdy PM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	243	76	14	435	111	105	205	3	106	336	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1771	0	0	3356	0	0	1985	1615	0	1892	0
Flt Permitted	0.170				0.942			0.513			0.783	
Satd. Flow (perm)	312	1771	0	0	3164	0	0	1036	1615	0	1492	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									142		41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		517			546			394			501	
Travel Time (s)		11.8			12.4			9.0			11.4	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	1%	0%	0%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	340	0	0	596	0	0	330	3	0	809	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	16.0	44.0		28.0	28.0		28.0	28.0	28.0	13.0	41.0	
Total Split (%)	16.0%	44.0%		28.0%	28.0%		28.0%	28.0%	28.0%	13.0%	41.0%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	35.9	35.9			20.5			37.8	37.8		37.8	
Actuated g/C Ratio	0.41	0.41			0.23			0.43	0.43		0.43	
v/c Ratio	0.60	0.47			0.81			0.74	0.00		1.22	
Control Delay	27.9	23.2			43.2			37.8	0.0		139.2	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	27.9	23.2			43.2			37.8	0.0		139.2	
LOS	C	C			D			D	A		F	
Approach Delay		24.9			43.2			37.4			139.2	
Approach LOS		C			D			D			F	
Queue Length 50th (ft)	57	114			147			133	0		~494	
Queue Length 95th (ft)	#140	255			#281			#376	0		#962	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	325	819			878			443	772		662	

1: Weston Road & Central Street  
 2025 Build Wkdy PM Peak Hour

2/1/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2025 Build Wkdy PM Peak Hour

2/1/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	0.58	0.42			0.68			0.74	0.00		1.22	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 88.4  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.22  
 Intersection Signal Delay: 72.4  
 Intersection LOS: E  
 Intersection Capacity Utilization: 106.4%  
 ICU Level of Service: G  
 Analysis Period (min): 15

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

p1	p2	p4	p9
13 s	28 s	44 s	15 s
p6	p7	p8	
41 s	16 s	28 s	

1: Weston Road & Central Street  
2025 Build Wkdy AM Peak Hour w/Mitigation

2/5/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	419	609	69	14	256	152	27	473	15	187	246	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1788	0	0	3159	0	0	2002	1404	0	1895	0
Flt Permitted	0.262				0.823			0.957			0.372	
Satd. Flow (perm)	481	1788	0	0	2605	0	0	1921	1404	0	717	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									123			11
Link Speed (mph)		30			30			30				30
Link Distance (ft)		517			546			394				501
Travel Time (s)		11.8			12.4			9.0				11.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	5%	5%	3%	0%	1%	15%	3%	1%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	446	721	0	0	449	0	0	532	16	0	561	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	22.0	49.0		27.0	27.0		38.0	38.0	38.0	13.0	51.0	
Total Split (%)	19.1%	42.6%		23.5%	23.5%		33.0%	33.0%	33.0%	11.3%	44.3%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effect Green (s)	45.2	45.2			23.1			47.2	47.2			47.2
Actuated g/C Ratio	0.44	0.44			0.22			0.45	0.45			0.45
v/c Ratio	1.04	0.93			0.77			0.61	0.02			1.69
Control Delay	79.9	48.0			49.1			26.2	0.1			348.4
Queue Delay	0.0	0.0			0.0			0.0	0.0			0.0
Total Delay	79.9	48.0			49.1			26.2	0.1			348.4
LOS	E	D			D			C	A			F
Approach Delay		60.2			49.1			25.5				348.4
Approach LOS		E			D			C				F
Queue Length 50th (ft)	~206	411			141			240	0			~522
Queue Length 95th (ft)	#533	#847			#273			469	0			#890
Internal Link Dist (ft)		437			466			314				421
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	429	778			580			873	706			331

1: Weston Road & Central Street  
 2025 Build Wkdy AM Peak Hour w/Mitigation

2/5/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2025 Build Wkdy AM Peak Hour w/Mitigation

2/5/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	1.04	0.93			0.77			0.61	0.02		1.69	

Intersection Summary

Area Type: Other  
 Cycle Length: 115  
 Actuated Cycle Length: 103.8  
 Natural Cycle: 150  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.69  
 Intersection Signal Delay: 110.7  
 Intersection LOS: F  
 Intersection Capacity Utilization: 117.3%  
 ICU Level of Service: H  
 Analysis Period (min): 15

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

φ1 13 s	φ2 38 s	φ4 49 s	φ9 15 s
φ6 51 s	φ7 22 s	φ8 27 s	

1: Weston Road & Central Street  
 2025 Build Wkdy PM Peak Hour w/Mitigation

2/5/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	243	76	14	435	111	105	205	3	106	336	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	14	12	12	14	12
Storage Length (ft)	325		0	60		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	1745	1771	0	0	3356	0	0	1985	1615	0	1892	0
Flt Permitted	0.169				0.942			0.544			0.822	
Satd. Flow (perm)	310	1771	0	0	3164	0	0	1099	1615	0	1567	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)									142			44
Link Speed (mph)		30			30			30				30
Link Distance (ft)		517			546			394				501
Travel Time (s)		11.8			12.4			9.0				11.4
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	1%	0%	0%	2%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	340	0	0	596	0	0	330	3	0	809	0
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases	4			8			2		2	6		
Detector Phase	7	4		8	8		2	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0		20.0	20.0		20.0	20.0	20.0	8.0	20.0	
Total Split (s)	12.0	40.0		28.0	28.0		32.0	32.0	32.0	13.0	45.0	
Total Split (%)	12.0%	40.0%		28.0%	28.0%		32.0%	32.0%	32.0%	13.0%	45.0%	
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)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0			4.0			4.0	4.0		4.0	
Lead/Lag	Lead			Lag	Lag		Lag	Lag	Lag	Lead		
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None	None	None	None	
Act Effct Green (s)	32.9	32.9			20.7			41.7	41.7		41.7	
Actuated g/C Ratio	0.37	0.37			0.23			0.47	0.47		0.47	
v/c Ratio	0.77	0.52			0.81			0.64	0.00		1.07	
Control Delay	45.5	27.0			43.5			28.9	0.0		79.1	
Queue Delay	0.0	0.0			0.0			0.0	0.0		0.0	
Total Delay	45.5	27.0			43.5			28.9	0.0		79.1	
LOS	D	C			D			C	A		E	
Approach Delay		33.6			43.5			28.6			79.1	
Approach LOS		C			D			C			E	
Queue Length 50th (ft)	63	126			147			116	0		~394	
Queue Length 95th (ft)	#187	272			#281			#331	0		#898	
Internal Link Dist (ft)		437			466			314			421	
Turn Bay Length (ft)	325								50			
Base Capacity (vph)	244	726			865			513	830		755	

1: Weston Road & Central Street  
 2025 Build Wkdy PM Peak Hour w/Mitigation

2/5/2018

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	15.0
Total Split (s)	15.0
Total Split (%)	15%
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	

1: Weston Road & Central Street  
 2025 Build Wkdy PM Peak Hour w/Mitigation

2/5/2018

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0			0			0	0		0	
Spillback Cap Reductn	0	0			0			0	0		0	
Storage Cap Reductn	0	0			0			0	0		0	
Reduced v/c Ratio	0.77	0.47			0.69			0.64	0.00		1.07	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 89.3  
 Natural Cycle: 110  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.07  
 Intersection Signal Delay: 51.7  
 Intersection Capacity Utilization 106.4%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service G

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Weston Road & Central Street

13 s	32 s	40 s	15 s
45 s	12 s	28 s	

Weston Road at Linden Street

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2: Weston Road & Linden Street  
 2018 Existing Wkdy AM Peak Hour

2/1/2018

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑			↓
Volume (vph)	22	170	716	250	239	448
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	14	12	12	15
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1465	1531	1941	0	0	2027
Flt Permitted	0.950					0.983
Satd. Flow (perm)	1465	1531	1941	0	0	2027
Link Speed (mph)	30		30			30
Link Distance (ft)	321		501			822
Travel Time (s)	7.3		11.4			18.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	2%	1%	0%	2%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	177	1006	0	0	716
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	103.0%
Analysis Period (min)	15
	ICU Level of Service G

2: Weston Road & Linden Street  
2018 Existing Wkdy AM Peak Hour

2/1/2018

Intersection	
Int Delay, s/veh	6.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	22	170	716	250	239	448
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	110	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	15	2	1	0	2	1
Mvmt Flow	23	177	746	260	249	467

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1841	876	0	0	1006	0
Stage 1	876	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Critical Hdwy	6.55	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	77	348	-	-	689	-
Stage 1	387	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	39	348	-	-	689	-
Mov Cap-2 Maneuver	39	-	-	-	-	-
Stage 1	387	-	-	-	-	-
Stage 2	179	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	44		0		4.6
HCM LOS	E				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	39	348	689	-
HCM Lane V/C Ratio	-	-	0.588	0.509	0.361	-
HCM Control Delay (s)	-	-	186.2	25.6	13.2	0
HCM Lane LOS	-	-	F	D	B	A
HCM 95th %tile Q(veh)	-	-	2.1	2.8	1.6	-

2: Weston Road & Linden Street  
 2018 Existing Wkdy PM Peak Hour

2/1/2018

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↖	↑			↓
Volume (vph)	144	309	353	86	116	549
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	14	12	12	15
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1685	1561	1972	0	0	2071
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1685	1561	1972	0	0	2071
Link Speed (mph)	30		30			30
Link Distance (ft)	321		501			822
Travel Time (s)	7.3		11.4			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	152	325	463	0	0	700
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 77.1%

ICU Level of Service D

Analysis Period (min) 15

2: Weston Road & Linden Street  
2018 Existing Wkdy PM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 13.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	144	309	353	86	116	549
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	110	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	152	325	372	91	122	578

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1239	417	0	0	462	0
Stage 1	417	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	196	640	-	-	1110	-
Stage 1	669	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	164	640	-	-	1110	-
Mov Cap-2 Maneuver	164	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	365	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	45.1		0		1.5
HCM LOS	E				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	164	640	1110	-
HCM Lane V/C Ratio	-	-	0.924	0.508	0.11	-
HCM Control Delay (s)	-	-	107	16.3	8.6	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	6.8	2.9	0.4	-

2: Weston Road & Linden Street  
 2025 No-Build Wkdy AM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	25	186	773	269	257	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	14	12	12	15
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1465	1531	1941	0	0	2027
Flt Permitted	0.950					0.983
Satd. Flow (perm)	1465	1531	1941	0	0	2027
Link Speed (mph)	30		30			30
Link Distance (ft)	321		501			822
Travel Time (s)	7.3		11.4			18.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	2%	1%	0%	2%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	194	1085	0	0	785
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other  
 Control Type: Unsignalized  
 Intersection Capacity Utilization 110.7% ICU Level of Service H  
 Analysis Period (min) 15

2: Weston Road & Linden Street  
2025 No-Build Wkdy AM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 10.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	25	186	773	269	257	496
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	110	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	15	2	1	0	2	1
Mvmt Flow	26	194	805	280	268	517

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	1997	945	0	0	1085	0
Stage 1	945	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.55	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	61	318	-	-	643	-
Stage 1	358	-	-	-	-	-
Stage 2	318	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 25	318	-	-	643	-
Mov Cap-2 Maneuver	~ 25	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	132	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	78.2	0	5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	25	318	643	-
HCM Lane V/C Ratio	-	-	1.042	0.609	0.416	-
HCM Control Delay (s)	-	-	\$ 418.4	32.5	14.5	0
HCM Lane LOS	-	-	F	D	B	A
HCM 95th %tile Q(veh)	-	-	3.2	3.8	2	-

Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

2: Weston Road & Linden Street  
 2025 No-Build Wkdy PM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	155	334	393	93	128	602
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	14	12	12	15
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1685	1561	1974	0	0	2071
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1685	1561	1974	0	0	2071
Link Speed (mph)	30		30			30
Link Distance (ft)	321		501			822
Travel Time (s)	7.3		11.4			18.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
<b>Shared Lane Traffic (%)</b>						
Lane Group Flow (vph)	163	352	512	0	0	769
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other  
 Control Type: Unsignalized  
 Intersection Capacity Utilization 83.7% ICU Level of Service E  
 Analysis Period (min) 15

2: Weston Road & Linden Street  
2025 No-Build Wkdy PM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 24.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	155	334	393	93	128	602
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	110	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	163	352	414	98	135	634

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1366	463	0	0	512	0
Stage 1	463	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	164	603	-	-	1064	-
Stage 1	638	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	~ 132	603	-	-	1064	-
Mov Cap-2 Maneuver	~ 132	-	-	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	321	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	82.6	0	1.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	132	603	1064	-
HCM Lane V/C Ratio	-	-	1.236	0.583	0.127	-
HCM Control Delay (s)	-	-	219.5	19	8.9	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	10	3.7	0.4	-

Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

2: Weston Road & Linden Street  
 2025 Build Wkdy AM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	25	186	775	269	258	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	14	12	12	15
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1465	1531	1941	0	0	2027
Flt Permitted	0.950					0.983
Satd. Flow (perm)	1465	1531	1941	0	0	2027
Link Speed (mph)	30		30			30
Link Distance (ft)	321		501			244
Travel Time (s)	7.3		11.4			5.5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	15%	2%	1%	0%	2%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	194	1087	0	0	792
Sign Control	Stop		Free			Free

**Intersection Summary**

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 111.2% ICU Level of Service H

Analysis Period (min) 15

2: Weston Road & Linden Street  
2025 Build Wkdy AM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 10.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	25	186	775	269	258	502
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	110	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	15	2	1	0	2	1
Mvmt Flow	26	194	807	280	269	523

Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	2007	947	0	0	1088	0
Stage 1	947	-	-	-	-	-
Stage 2	1060	-	-	-	-	-
Critical Hdwy	6.55	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	60	317	-	-	641	-
Stage 1	357	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 25	317	-	-	641	-
Mov Cap-2 Maneuver	~ 25	-	-	-	-	-
Stage 1	357	-	-	-	-	-
Stage 2	129	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	78.4	0	5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	25	317	641	-
HCM Lane V/C Ratio	-	-	1.042	0.611	0.419	-
HCM Control Delay (s)	-	-	\$ 418.4	32.7	14.6	0
HCM Lane LOS	-	-	F	D	B	A
HCM 95th %tile Q(veh)	-	-	3.2	3.8	2.1	-

Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

2: Weston Road & Linden Street  
 2025 Build Wkdy PM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	155	335	399	93	129	606
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	14	12	12	15
Storage Length (ft)	0	110		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1685	1561	1974	0	0	2071
Flt Permitted	0.950					0.991
Satd. Flow (perm)	1685	1561	1974	0	0	2071
Link Speed (mph)	30		30			30
Link Distance (ft)	321		501			244
Travel Time (s)	7.3		11.4			5.5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	163	353	518	0	0	774
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	84.3%
Analysis Period (min)	15
	ICU Level of Service E

2: Weston Road & Linden Street  
2025 Build Wkdy PM Peak Hour

2/1/2018

Intersection	
Int Delay, s/veh	25.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	155	335	399	93	129	606
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	110	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	163	353	420	98	136	638

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1378	469	0	0	518	0
Stage 1	469	-	-	-	-	-
Stage 2	909	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	~ 161	598	-	-	1058	-
Stage 1	634	-	-	-	-	-
Stage 2	396	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 129	598	-	-	1058	-
Mov Cap-2 Maneuver	~ 129	-	-	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	317	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	86.6		0		1.6
HCM LOS	F				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	129	598	1058	-
HCM Lane V/C Ratio	-	-	1.265	0.59	0.128	-
HCM Control Delay (s)	-	-	231.9	19.3	8.9	0
HCM Lane LOS	-	-	F	C	A	A
HCM 95th %tile Q(veh)	-	-	10.2	3.8	0.4	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Weston Road at Howe Street

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3: Weston Road & Howe Street  
 2018 Existing Wkdy AM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	10	886	0	34	665
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1506	0	1881	0	0	1861
Flt Permitted	0.996					0.998
Satd. Flow (perm)	1506	0	1881	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	330		822			167
Travel Time (s)	7.5		18.7			3.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	11%	1%	0%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	943	0	0	743
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other  
 Control Type: Unsignalized  
 Intersection Capacity Utilization 72.7% ICU Level of Service C  
 Analysis Period (min) 15

3: Weston Road & Howe Street  
2018 Existing Wkdy AM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	10	886	0	34	665
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	94	94	94	94	94	94
Heavy Vehicles, %	0	11	1	0	0	2
Mvmt Flow	1	11	943	0	36	707

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1723	943	0	0	943	0
Stage 1	943	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	6.4	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	99	306	-	-	736	-
Stage 1	382	-	-	-	-	-
Stage 2	455	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	91	306	-	-	736	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	382	-	-	-	-	-
Stage 2	418	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	252	736
HCM Lane V/C Ratio	-	-	0.046	0.049
HCM Control Delay (s)	-	-	20	10.1
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0.2

3: Weston Road & Howe Street  
 2018 Existing Wkdy PM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	2	14	660	2	3	699
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1554	0	1900	0	0	1881
Flt Permitted	0.994					
Satd. Flow (perm)	1554	0	1900	0	0	1881
Link Speed (mph)	30		30			30
Link Distance (ft)	330		822			167
Travel Time (s)	7.5		18.7			3.8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	0%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	727	0	0	771
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other  
 Control Type: Unsignalized  
 Intersection Capacity Utilization 49.2% ICU Level of Service A  
 Analysis Period (min) 15

3: Weston Road & Howe Street  
2018 Existing Wkdy PM Peak Hour

2/1/2018

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	14	660	2	3	699
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	91	91	91	91	91	91
Heavy Vehicles, %	0	8	0	0	0	1
Mvmt Flow	2	15	725	2	3	768

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1501	726	0	0	727	0
Stage 1	726	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.4	6.28	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	-	-	2.2	-
Pot Cap-1 Maneuver	136	415	-	-	886	-
Stage 1	483	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	135	415	-	-	886	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	16.5		0		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 330	886	-
HCM Lane V/C Ratio	-	- 0.053	0.004	-
HCM Control Delay (s)	-	- 16.5	9.1	0
HCM Lane LOS	-	- C	A	A
HCM 95th %tile Q(veh)	-	- 0.2	0	-

3: Weston Road & Howe Street  
 2025 No-Build Wkdy AM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	12	959	0	36	730
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1502	0	1881	0	0	1861
Flt Permitted	0.996					0.998
Satd. Flow (perm)	1502	0	1881	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	330		822			167
Travel Time (s)	7.5		18.7			3.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	11%	1%	0%	0%	2%
<b>Shared Lane Traffic (%)</b>						
Lane Group Flow (vph)	14	0	1020	0	0	815
Sign Control	Stop		Free			Free

**Intersection Summary**

Area Type: Other  
 Control Type: Unsignalized  
 Intersection Capacity Utilization 77.7% ICU Level of Service D  
 Analysis Period (min) 15

3: Weston Road & Howe Street  
 2025 No-Build Wkdy AM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	12	959	0	36	730
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	94	94	94	94	94	94
Heavy Vehicles, %	0	11	1	0	0	2
Mvmt Flow	1	13	1020	0	38	777

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1873	1020	0
Stage 1	1020	-	-
Stage 2	853	-	-
Critical Hdwy	6.4	6.31	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.399	2.2
Pot Cap-1 Maneuver	80	276	688
Stage 1	351	-	-
Stage 2	421	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	72	276	688
Mov Cap-2 Maneuver	72	-	-
Stage 1	351	-	-
Stage 2	380	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.9	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	227	688
HCM Lane V/C Ratio	-	-	0.061	0.056
HCM Control Delay (s)	-	-	21.9	10.5
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

3: Weston Road & Howe Street  
 2025 No-Build Wkdy PM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	2	15	726	2	4	766
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1552	0	1900	0	0	1881
Flt Permitted	0.994					
Satd. Flow (perm)	1552	0	1900	0	0	1881
Link Speed (mph)	30		30			30
Link Distance (ft)	330		822			167
Travel Time (s)	7.5		18.7			3.8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	0%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	800	0	0	846
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.5% ICU Level of Service A

Analysis Period (min) 15

3: Weston Road & Howe Street  
 2025 No-Build Wkdy PM Peak Hour

2/1/2018

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	15	726	2	4	766
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	91	91	91	91	91	91
Heavy Vehicles, %	0	8	0	0	0	1
Mvmt Flow	2	16	798	2	4	842

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1650	799	0	0	800	0
Stage 1	799	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Critical Hdwy	6.4	6.28	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	-	-	2.2	-
Pot Cap-1 Maneuver	110	376	-	-	832	-
Stage 1	446	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	109	376	-	-	832	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	418	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	18.2		0		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	292	832
HCM Lane V/C Ratio	-	-	0.064	0.005
HCM Control Delay (s)	-	-	18.2	9.3
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

3: Weston Road & Howe Street  
2025 Build Wkdy AM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	1	12	964	0	36	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1502	0	1881	0	0	1861
Flt Permitted	0.996					0.998
Satd. Flow (perm)	1502	0	1881	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	330		579			167
Travel Time (s)	7.5		13.2			3.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	11%	1%	0%	0%	2%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	1026	0	0	817
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 77.8%

ICU Level of Service D

Analysis Period (min) 15

3: Weston Road & Howe Street  
2025 Build Wkdy AM Peak Hour

2/1/2018

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	12	964	0	36	732
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	94	94	94	94	94	94
Heavy Vehicles, %	0	11	1	0	0	2
Mvmt Flow	1	13	1026	0	38	779

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1881	1026	0	0	1026	0
Stage 1	1026	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Critical Hdwy	6.4	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	79	274	-	-	685	-
Stage 1	349	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	71	274	-	-	685	-
Mov Cap-2 Maneuver	71	-	-	-	-	-
Stage 1	349	-	-	-	-	-
Stage 2	379	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	225	685
HCM Lane V/C Ratio	-	-	0.061	0.056
HCM Control Delay (s)	-	-	22	10.6
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

3: Weston Road & Howe Street  
2025 Build Wkdy PM Peak Hour

2/1/2018

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	2	15	729	2	4	771
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1552	0	1900	0	0	1881
Flt Permitted	0.994					
Satd. Flow (perm)	1552	0	1900	0	0	1881
Link Speed (mph)	30		30			30
Link Distance (ft)	330		579			167
Travel Time (s)	7.5		13.2			3.8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	8%	0%	0%	0%	1%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	803	0	0	851
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.8%

ICU Level of Service A

Analysis Period (min) 15

3: Weston Road & Howe Street  
2025 Build Wkdy PM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	2	15	729	2	4	771
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	91	91	91	91	91	91
Heavy Vehicles, %	0	8	0	0	0	1
Mvmt Flow	2	16	801	2	4	847

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1658	802	0
Stage 1	802	-	-
Stage 2	856	-	-
Critical Hdwy	6.4	6.28	4.1
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.372	2.2
Pot Cap-1 Maneuver	109	375	830
Stage 1	445	-	-
Stage 2	420	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	108	375	830
Mov Cap-2 Maneuver	108	-	-
Stage 1	445	-	-
Stage 2	416	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	291	830
HCM Lane V/C Ratio	-	-	0.064	0.005
HCM Control Delay (s)	-	-	18.2	9.4
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Weston Road at the Project Site Driveway

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4: Weston Road & Site Driveway  
 2025 Build Wkdy AM Peak Hour

2/1/2018

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	5	7	2	964	731	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1676	0	0	1863	1863	0
Flt Permitted	0.981					
Satd. Flow (perm)	1676	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	171			244	579	
Travel Time (s)	3.9			5.5	13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	1050	797	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15

4: Weston Road & Site Driveway  
2025 Build Wkdy AM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	5	7	2	964	731	2
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	5	8	2	1048	795	2

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1848	796	797 0
Stage 1	796	-	- -
Stage 2	1052	-	- -
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	82	387	825 -
Stage 1	444	-	- -
Stage 2	336	-	- -
Platoon blocked, %			- -
Mov Cap-1 Maneuver	82	387	825 -
Mov Cap-2 Maneuver	82	-	- -
Stage 1	444	-	- -
Stage 2	334	-	- -

Approach	EB	NB	SB
HCM Control Delay, s	30.9	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	825	-	152	-	-
HCM Lane V/C Ratio	0.003	-	0.086	-	-
HCM Control Delay (s)	9.4	0	30.9	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

4: Weston Road & Site Drive  
 2025 Build Wkdy PM Peak Hour

2/1/2018

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	3	5	7	728	768	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	1676	0	0	1861	1861	0
Flt Permitted	0.982			0.999		
Satd. Flow (perm)	1676	0	0	1861	1861	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			244	579	
Travel Time (s)	5.1			5.5	13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	0	0	799	840	0
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.9%

ICU Level of Service A

Analysis Period (min) 15

4: Weston Road & Site Drive  
2025 Build Wkdy PM Peak Hour

2/1/2018

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	3	5	7	728	768	5
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	5	8	791	835	5

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1645	838	840
Stage 1	838	-	-
Stage 2	807	-	-
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	109	366	795
Stage 1	424	-	-
Stage 2	439	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	107	366	795
Mov Cap-2 Maneuver	107	-	-
Stage 1	424	-	-
Stage 2	431	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.6	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	795	-	192	-	-
HCM Lane V/C Ratio	0.01	-	0.045	-	-
HCM Control Delay (s)	9.6	0	24.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-