Traffic Impact Study

Proposed 40B Residential Development, 1223 Beacon Street, Brookline, Massachusetts

Prepared for:
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Executive Summary

A traffic impact analysis has been completed for a proposed 40B residential development at 1223 Beacon Street in Brookline, Massachusetts. The analysis concludes that the anticipated traffic impacts of the proposed development will be sufficiently dispersed on the area roadway network such that no area intersections will experience significant traffic operational impacts as a result of the development. Independent of this finding, recommendations are made to ensure safe and efficient site access. Also, post-build monitoring of site traffic generation is suggested.

Project Description

Chestnut Hill Realty is proposing redevelopment of a mixed-use site at 1223 Beacon Street in Brookline. The proposed project will adaptively reuse the front façade and a portion of the interior of an existing 70-unit four-story building with medical offices in the basement level, and restaurant space on the first floor. The front façade of the existing building will be maintained, and a new structure will be built behind it expanding the existing and adding 53 units. The building levels will step up from four to nine stories at the rear of the site and from nine to 11 stories in the southeast corner of the site. The existing medical office use will be retained. The proposed uses will be supported by up to 71 on site parking spaces and an additional eight surface spaces located at the end of a shared driveway off St. Paul Street.

Study Area

This traffic impact study evaluates area roadways and intersections that provide access to the project site. The study area for the proposed project includes two signalized intersections and two unsignalized intersections including the proposed site driveway. The study intersections include:

- Beacon Street/St. Paul Street (signalized)
- St. Paul Street/Longwood Avenue (signalized)
- St. Paul Street/Site Driveway(unsignalized)
- St. Paul Street/ Sewall Avenue (unsignalized)

Existing Traffic Volumes and Operations

Traffic counts were conducted on roadways in the project area in late February 2018. Of the intersections studied, the intersection of Beacon Street and St. Paul Street experiences the most transportation activity during the morning and afternoon peak hours. Pedestrian and bicycle volumes make up a significant portion of the transportation activity at this location. The Beacon

Street/St. Paul Street intersection carries nearly 2,550 vehicles, 125 bikes, and 450 pedestrians during the morning peak hour. During the afternoon peak hour, it carries approximately 2,500 vehicles, 100 bikes, and 700 pedestrians. Traffic operations analyses completed for the two signalized study intersections indicate that the intersections all operate below capacity during peak hours. The two unsignalized locations operate well below capacity during both peak hours.

Future Condition Scenarios

The traffic impact analysis also considers conditions for a future design year, 2025. The 2025 No Build scenario looks at future traffic conditions without the proposed residential development. This includes existing volumes increased by an overall growth rate plus anticipated traffic associated with other development projects that are currently in the planning stages. The overall background growth rate assumed is one percent per year.

Future Project Traffic

The 2025 Build condition superimposes the proposed development traffic on No Build traffic volumes. Estimates of anticipated peak hour vehicle trips associated with the proposed new residential units were determined based on trip rates published by the Institute of Transportation Engineers and commuter travel mode splits for this area provided in the US Census data. The proposed residential units are larger than the existing residential units. In general, the proposed include more than one bedroom while the existing include a single bedroom. The new residential units are expected to generate 176 net new daily vehicle trips, 20 new morning peak hour trips and 17 new evening peak hour trips. The project trips were assigned to the roadway system in accordance with existing travel patterns.

Future Traffic Operations

Intersection operating conditions were calculated and compared for No Build and Build conditions. No change in peak hour operating “levels of service” is expected as a result of project traffic at the study area intersections. Only minor increases in vehicle delay are anticipated due to the proposed development.

Traffic Mitigation

As noted above, the proposed residential development is expected to have a nominal impact on area traffic operations, consequently off-site traffic mitigation to address traffic congestion impacts is not warranted; however, it is recommended that traffic monitoring be conducted at the subject site following project completion. Data could be collected to quantify actual site traffic generation and this data could be used to inform the planning of future, similar development proposals.

1.0 Introduction

Chestnut Hill Realty is proposing to redevelop and increase the density of a mixed-use property located at 1223 Beacon Street just east of Coolidge Corner in Brookline, Massachusetts. This traffic study quantifies existing roadway and traffic conditions and provides forecasts of future traffic conditions with and without the proposed redevelopment. Traffic operations analyses were performed to assess the adequacy of the roadway system to safely accommodate the expected new vehicle trips associated with the proposed redevelopment.

1.1 PROJECT DESCRIPTION

The front façade of the existing four-story building on the site will be retained and new structure will be built behind it. above and to rear stepping up to 11 stories. The number of residential units on the site will increase from 70 to 123 and medical office space in the basement will be retained. Future vehicular access will remain by way of St. Paul Street and 71 on-site parking spaces supplemented by 8 surface spaces located at the end of the shared driveway. The proposed project site plan is shown in Figure 1.

1.2 STUDY AREA

The traffic study area includes the two signalized intersections nearest to the site. The study area also includes one unsignalized intersection and the site driveway. These study area intersections are:

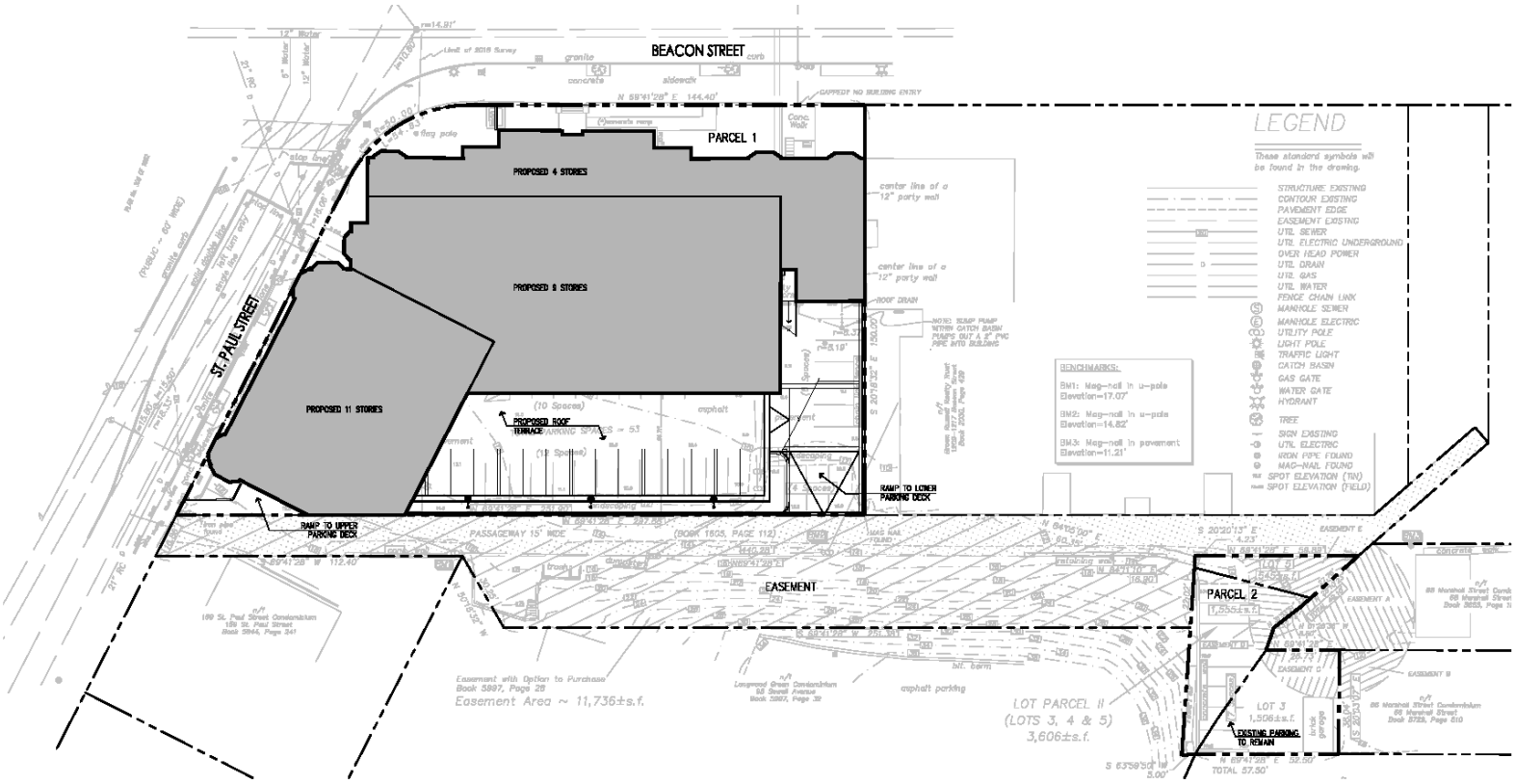
- Beacon Street/St. Paul Street (signalized)
- St. Paul Street/Longwood Avenue (signalized)
- St. Paul Street/Sewall Avenue (unsignalized)
- St. Paul Street/Proposed Shared Driveway (unsignalized)

The locations of the study area intersections are also shown on Figure 2.

1.3 STUDY PROCESS

This study was completed in three major steps relating to the following three chapters of this report.

First, Existing Conditions are established based on field visits, plan review and collection of new traffic data. Second, Future Conditions are then defined for No Build and Build conditions based on traffic forecasts for a 2025 design year. No Build conditions consider traffic growth independent of the proposed residential development. Build conditions superimpose project traffic on to the expected No Build traffic conditions.



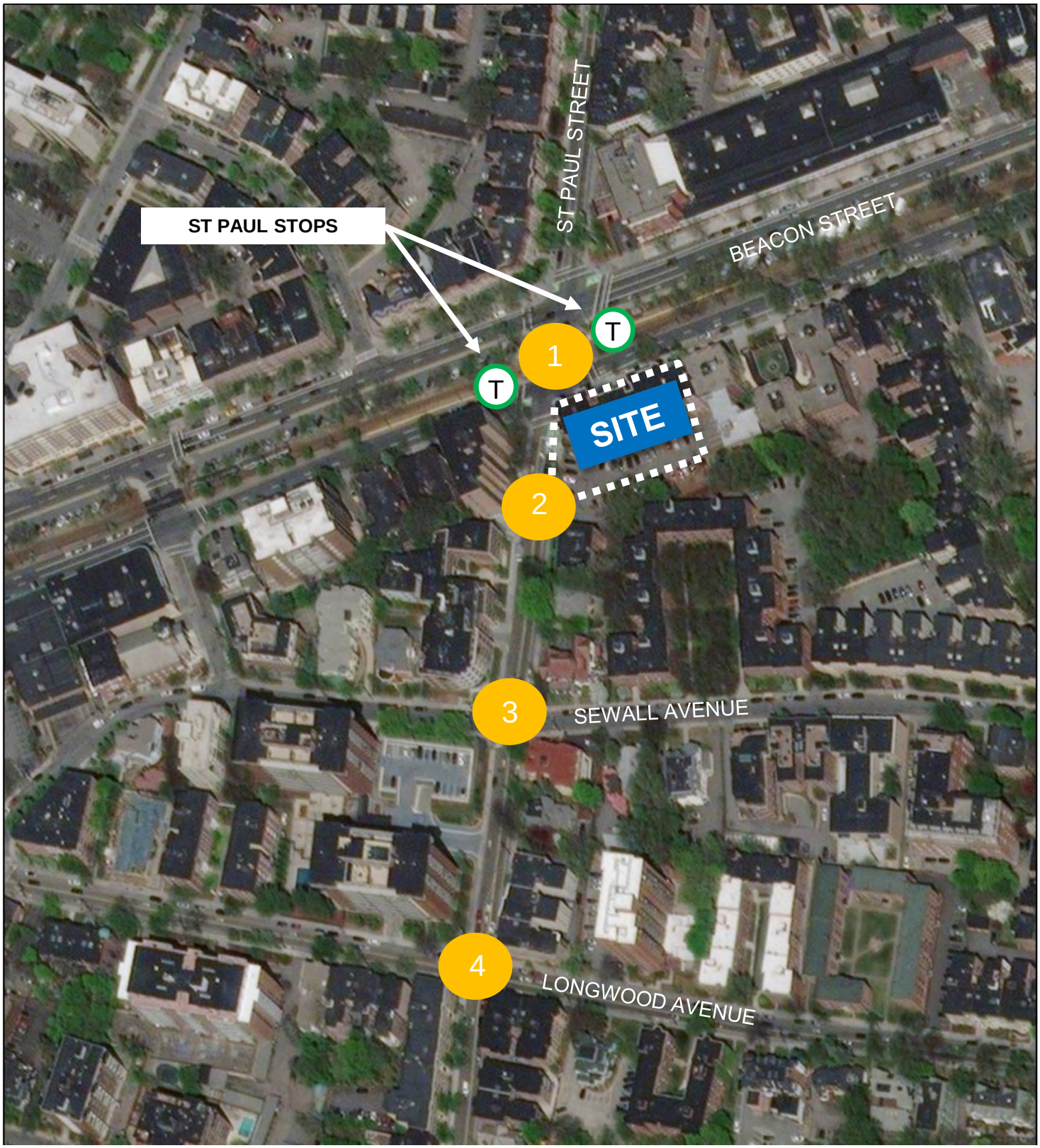
Source: Stantec Planning and Landscape Architecture, P.C. 5/22/18

Proposed Residential Development
Brookline, Massachusetts

Proposed Project Site Plan

Stantec Consulting Services Inc.

Figure 1



Base Map Source: Esri

Proposed Residential Development
Brookline, Massachusetts

Site Locus and Study Area Intersections

Stantec Consulting Services Inc.

Figure 2

Traffic operations analyses are then completed and compared for Existing, No Build and Build conditions to quantify the impacts of the proposed development on area traffic operations. Third, in the final step, measures to mitigate project traffic impacts are considered.

2.0 Existing Conditions

The project area includes the Beacon Street at St. Paul Street intersection and three other St. Paul Street intersections. Existing roadway and traffic conditions within this study area are described below.

2.1 ROADWAYS

2.1.1 Beacon Street

Beacon Street is functionally classified as an Urban Principal Arterial and is under the authority of the Town of Brookline (Town). Beacon Street generally runs in an east-west direction and connects Newton to Boston through Brookline. Within the study area, Beacon Street is divided by a wide median where the Massachusetts Bay Transportation Authority (MBTA) Green Line trolley operates. Through the study area, Beacon Street provides two travel lanes in each direction with additional turn lanes at some intersections. Bicycles share the outside travel lane in the eastbound direction and there is an exclusive bicycle lane in the westbound direction. Pedestrians are accommodated with 8 to12-foot sidewalks on both sides of the roadway. Land uses along Beacon Street are a mix of commercial and residential.

2.1.2 St. Paul Street

St. Paul Street is functionally classified as an Urban Minor Arterial and is under the jurisdiction of the Town of Brookline. St. Paul Street generally runs in a north-south direction and provides one travel lane in each direction. A bicycle lane is provided on the northbound side of the roadway and bicycle and vehicles share the southbound roadway. Sidewalks are provided along both sides of the street and are four to eight feet wide. Land uses along St. Paul Street are a principally residential.

2.1.3 Sewall Avenue

Sewall Avenue is an unclassified local and is under the jurisdiction of the Town of Brookline. Sewall Avenue generally runs in an east-west direction and provides one travel lane in each direction. On-street parking is provided along the north side of the street. Sidewalks are provided along both sides of the street. Land uses along Sewall Avenue are principally residential.

2.1.4 Longwood Avenue

Longwood avenue is functionally classified as an urban minor arterial and is under the jurisdiction of the town. Longwood avenue generally runs in an east-west direction and provides one travel

lane in each direction. A bicycle lane is provided on the eastbound side of the roadway and bicycle and vehicles share the westbound roadway. Sidewalks are provided along both sides of the street. Land uses along Longwood avenue are principally residential.

2.2 INTERSECTION CONDITIONS

2.2.1 Beacon Street/St. Paul Street

The intersection of Beacon Street with St. Paul Street is a four-legged, signalized intersection under the authority of the Town. The Beacon Street eastbound approach consists of two through lanes and a left turn lane. The outside (rightmost) lane is a shared vehicle-bicycle lane. There is on-street parking along this approach. The Beacon Street westbound approach consists of two through lanes, a left turn lane, a separate bike lane on the right side and curbside parking. The Beacon Street median at this location is very wide as it accommodates the MBTA Green Line trolley and stops in both directions. The St. Paul Street approaches each include a shared through/right turn lane and a dedicated left turn lane. Crosswalks are present on all approaches.

The traffic signal operates in four phases within an areawide system including Beacon Street and the St. Paul Street/Longwood Avenue intersection. These are:

- Beacon Street eastbound including the eastbound left turn.
- Beacon Street eastbound and westbound, MBTA eastbound and westbound and pedestrian crossings of St. Paul Street.
- Beacon Street westbound including left turns.
- St. Paul Street southbound and northbound and pedestrian crossing of Beacon Street.
- A 90-second cycle is programmed for the commuter peak periods.

2.2.2 St. Paul Street/Site Driveway

The intersection of St. Paul Street and the site driveway is approximately 180 feet south of the Beacon Street/St. Paul Street intersection. The intersection is a four-legged, unsignalized intersection under Town jurisdiction with the fourth leg being the driveway to a residential building on the west side of St. Paul Street. The site is accessed via a driveway off St. Paul Street that is shared by multiple adjacent properties. The site parking area is connected to this shared driveway approximately 50 feet from St. Paul Street. Both the site driveway and the driveway opposite it are single lane approaches. The St. Paul Street northbound and southbound approaches both consist of a general-purpose lane. Bicyclists share the southbound lane and a separate bicycle lane is provided in the northbound direction. Just south of the intersection, there is a short length of southbound roadway (less than 100 feet) where parking is not prohibited. Sidewalks are provided on both sides of St. Paul Street.

2.2.3 St. Paul Street/ Sewall Avenue

The intersection of St. Paul Street and Sewall Avenue is approximately 430 feet south of the Beacon Street/St. Paul Street intersection. The intersection is a four-legged, unsignalized intersection under Town jurisdiction with single lane roadways on all approaches and STOP control on the Sewall Avenue approaches. Sidewalks exist on both sides of all approaches and crosswalks are marked across all approaches. Parking is allowed on just the north side of Sewall Avenue. The St. Paul Street northbound approach includes a separate bicycle lane and on the southbound approach bicycles share the single general-purpose lane.

2.2.4 St. Paul Street/ Longwood Avenue

The intersection of St. Paul Street and Longwood Avenue is approximately 775 feet south of the Beacon Street/St. Paul Street intersection. The intersection is a four-legged, signalized intersection under Town jurisdiction with single lane roadways on all approaches except the southbound approach where a 60-foot long left turn lane is provided. Sidewalks exist on both sides of all approaches and crosswalks are marked across all approaches. Parking is allowed on just the north side of Longwood Avenue. The St. Paul Street northbound approach includes a separate bicycle lane and on the southbound approach bicycles share the single general-purpose lane. Similarly, the eastbound approach includes an exclusive bicycle lane and bicycles share the westbound Longwood Avenue travel lane.

The traffic signal operates with only two phases within the Beacon Street system that calls for 90-second cycles during peak commuter periods. The two phases are:

- St. Paul Street northbound and southbound with a concurrent pedestrian crossing of Longwood Avenue.
- Longwood Avenue eastbound and westbound with a concurrent pedestrian crossing of St. Paul Street.

2.3 TRAFFIC VOLUMES

Turning movement counts (TMC) were collected at the study area intersections on Tuesday, February 27, 2018 during the morning and afternoon commuter peak periods.

The counts indicate that morning peak traffic hours occurs between 7:15 and 8:15 AM. The afternoon peak hour occurs between 5:00 and 6:00 PM. In general, the afternoon peak hour volumes and the morning peak hour volumes are nearly equal at all intersections. The Beacon Street/St. Paul Street intersection carries the most vehicular traffic, processing more than 2,550 vehicles per hour during the morning peak hour and slightly less, 2,500 vehicles, during the evening peak hour. Bicycle and pedestrian traffic are also significant throughout the study area. At the Beacon Street/St. Paul Street intersection, there are 110-140 bicycles per hour during each peak hour. There are approximately 500 to 700 pedestrians crossing the intersection during the morning and afternoon peak hours, respectively.

At the St. Paul Street intersection with Longwood Avenue, the morning peak hour traffic volume is approximately 1,500 vehicles per hour along with 90 bicycles and 450 pedestrians. During the afternoon nearly 1,700 peak hour vehicles, over 100 bicycles, and 470 pedestrians travel through the intersection.

MassDOT uses data from continuous traffic count stations to determine seasonal traffic volume patterns for various roadway types. Published seasonal adjustment factors indicate that February volumes represent approximately average conditions. As such, the traffic counts, conducted in late February, are assumed to represent typical conditions for the study area. The existing peak hour vehicular volumes are shown in Figure 3. The existing bicycle and pedestrian volumes are shown on Figures 4, 5, and 6. The traffic count data is included in Appendix A.

2.4 TRAFFIC OPERATIONS

Traffic operations analyses were conducted using the above traffic volume, intersection geometry and traffic control data to determine existing intersection operating levels of service.

2.4.1 Level of Service Criteria

Level of service (LOS) is a term used to describe the quality of the traffic flow on a roadway facility at a particular point in time. It is an aggregate measure of travel delay, travel speed, congestion, driver discomfort, convenience, and safety based on a comparison of roadway system capacity to roadway system travel demand. Operating levels of service are reported on a scale of A to F, with A representing the best operating conditions with little or no delay to motorists, and F representing the worst operating conditions with long delays and traffic demands sometimes exceeding roadway capacity.

Intersection operating levels of service are calculated following procedures defined in the *Highway Capacity Manual*, published by the Transportation Research Board. For unsignalized and signalized intersections the operating level of service is based on travel delays. Delays can be measured in the field but generally are calculated as a function of traffic volume; peaking characteristic of traffic flow; percentage of heavy vehicles in the traffic stream; type of traffic control; number of travel lanes and lane use; intersection approach grades; and, pedestrian activity. Through this analysis volume-to-capacity ratios can be calculated for individual movements or for the intersection as a whole. A volume-to-capacity ratio of 1.0 indicates that a movement or intersection is operating at its theoretical capacity. The specific delay criteria applied per the *2010 Highway Capacity Manual* to determine operating levels of service are summarized in Table 1.

Table 1 Intersection Level of Service Criteria

	Average Delay per Vehicle (Seconds)	
Level of Service	Signalized Intersections	Unsignalized Intersections
A	≤10.0	≤10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F[1]	>80.0	>50.0

[1]Level of Service F is also assigned to movements if the volume-to-capacity ratio exceeds 1.0.

Source: *HCM 2010 Highway Capacity Manual*, Transportation Research Board, National Academy of Sciences, Washington, DC, 2010.

For unsignalized intersections, it is assumed that through movements on the main street have the right-of-way and are not delayed by side street traffic. Traffic turning left from the main street may be exposed to delays due to oncoming traffic on the main street. Generally, and in the case of this study, the longest delays at unsignalized intersections are experienced on the side streets by traffic waiting to enter or cross the main street.

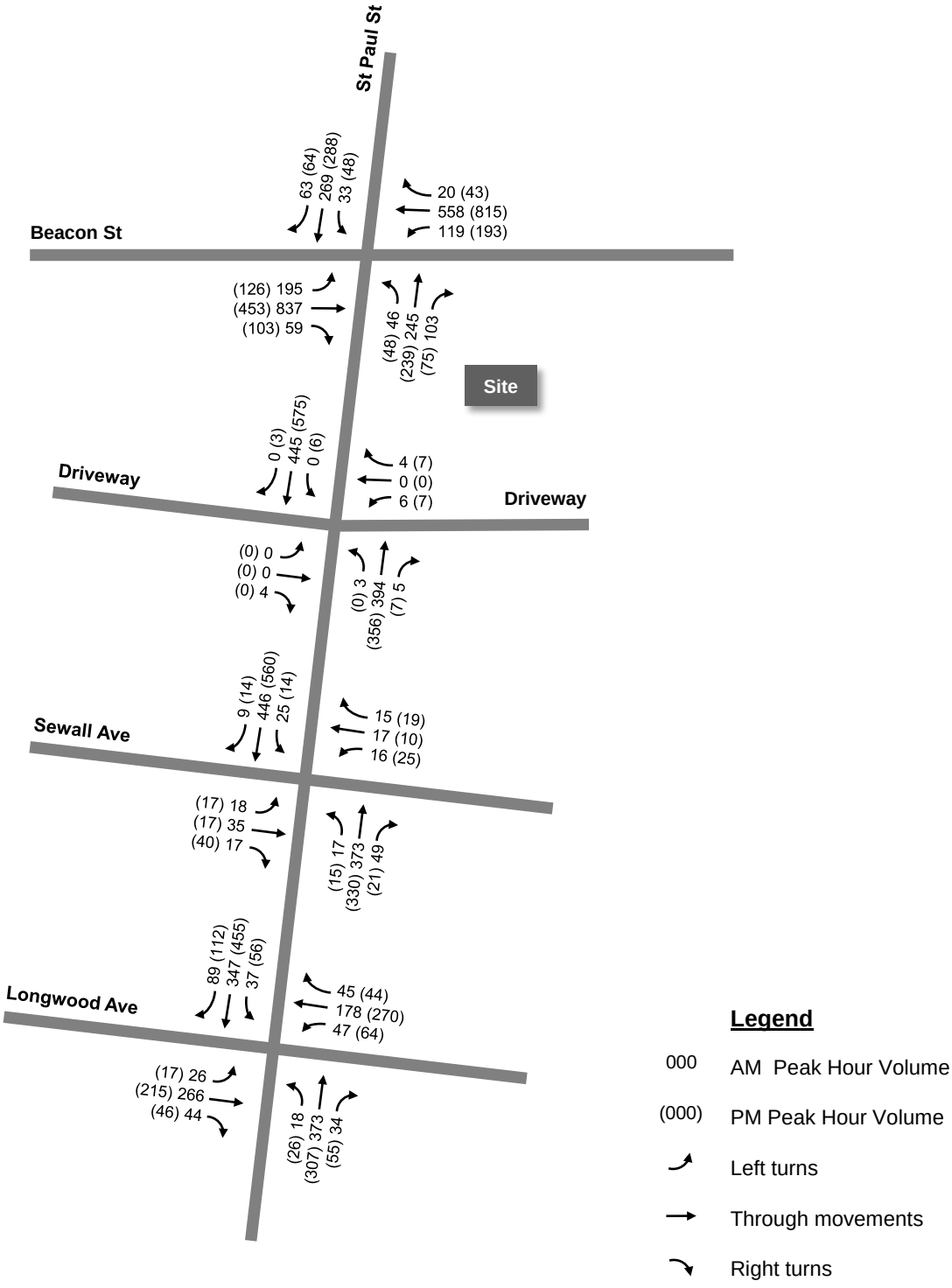
2.4.2 Calculated Operating Levels of Service

Capacity analysis results for the study area intersections are presented in Tables 2 and 3 below. The Beacon Street/St. Paul Street intersection operates at LOS C or D and below capacity during both peak hours. The signalized St. Paul Street/Longwood Avenue intersection operates at LOS C and below capacity during both peak hours. The unsignalized intersections operate at LOS C or better, with volumes below capacity for each movement. Analysis results by lane group and vehicle queuing calculations are provided in Appendix B.

Table 2 Existing Intersection Level of Service – Signalized Locations

Intersection	Peak Hour	LOS[1]	Delay[2]	V/C[3]
Signalized Intersections				
Beacon Street/St. Paul Street	AM PM	C D	34.8 38.8	0.80 0.88
St. Paul Street/Longwood Avenue	AM PM	C C	32.5 28.8	0.61 0.68

[1] LOS= Level of Service [2] Delay = Average delay expressed in seconds per vehicle
[3] V/C = Volume-to-capacity ratio for critical movements



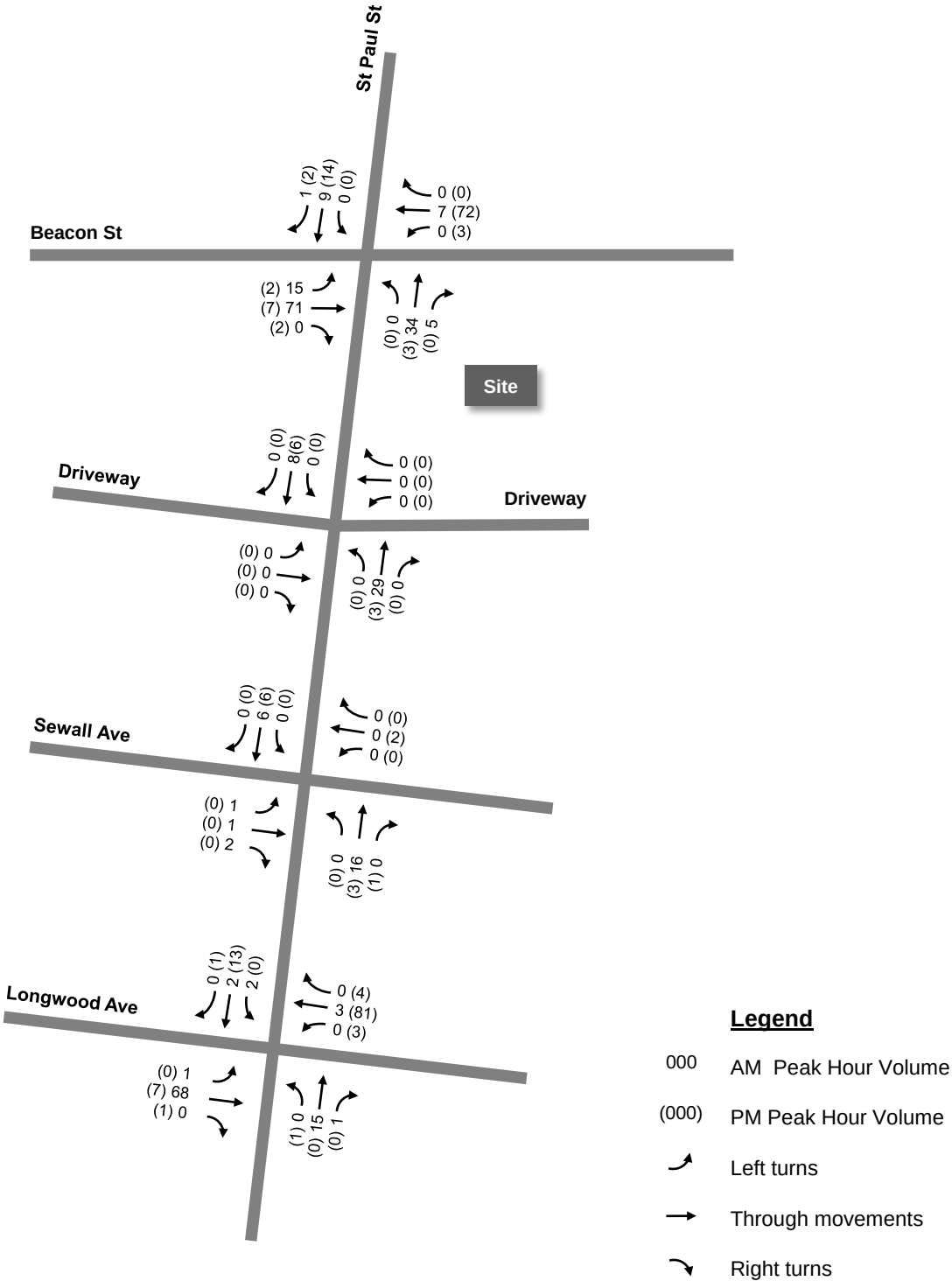
Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

Existing Peak Hour Traffic Volumes

Figure 3



Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

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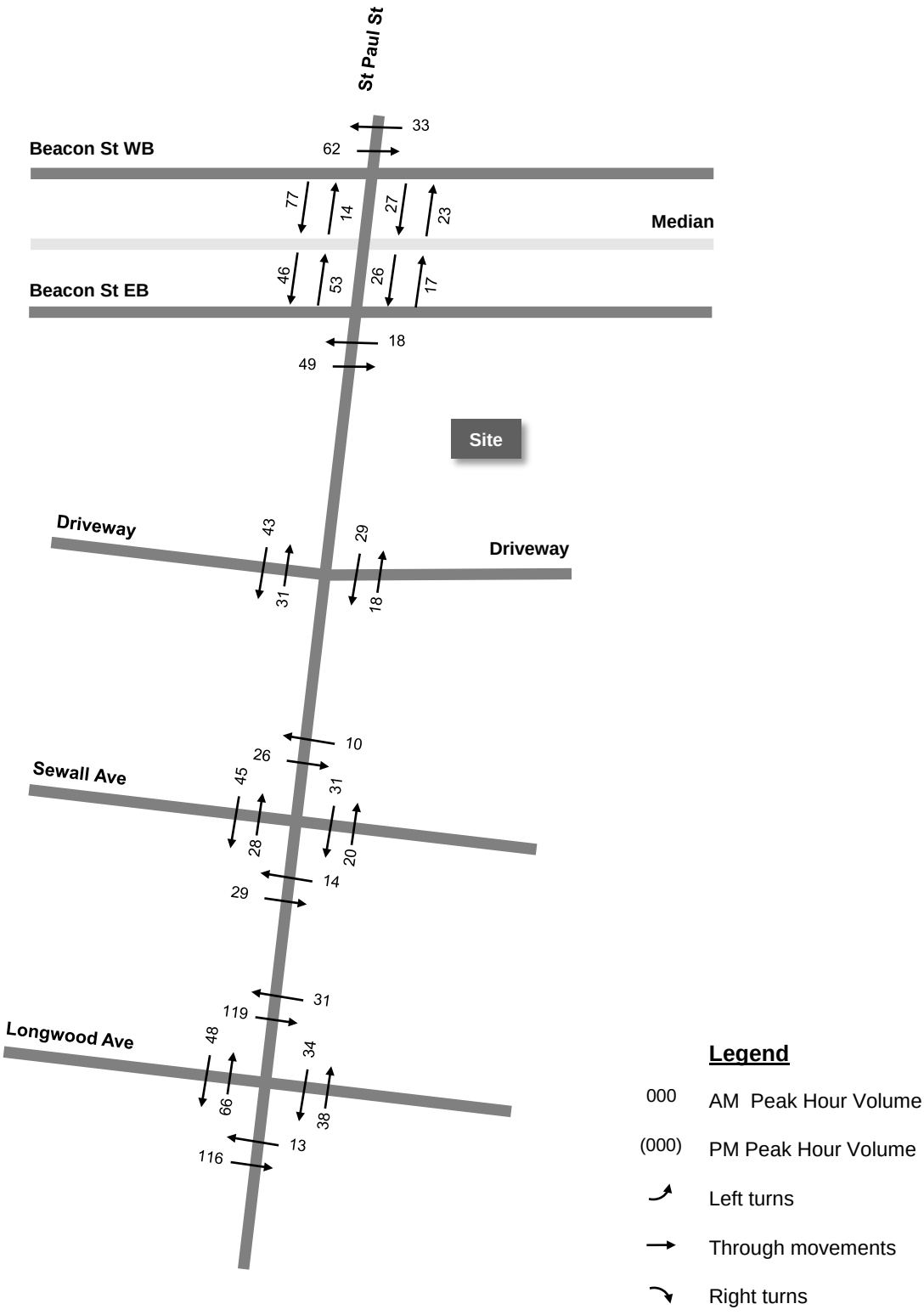
Existing Peak Hour Bicycle Volumes

Figure 4



Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

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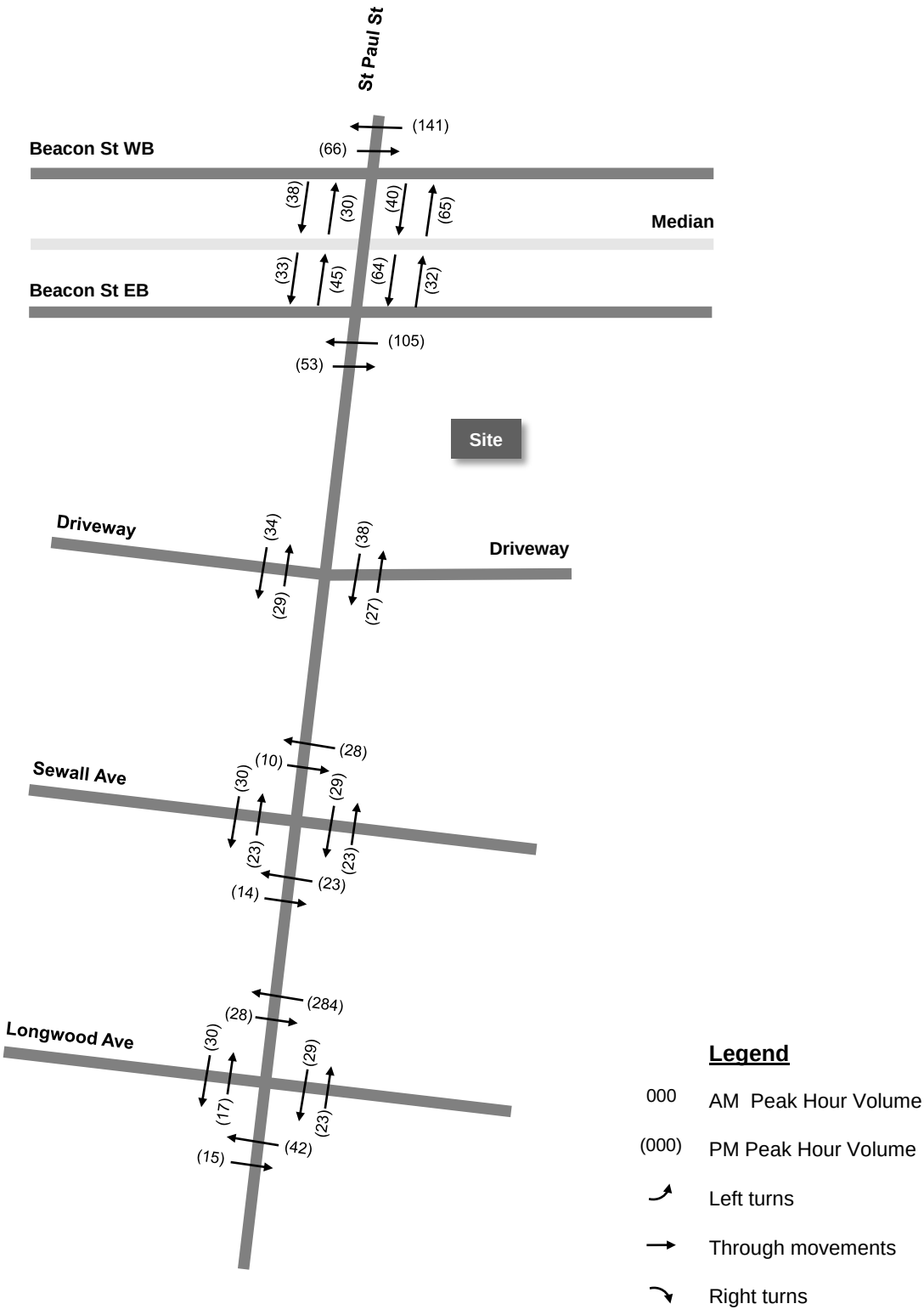
Existing Morning Peak Hour Pedestrian Volumes

Figure 5



Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

Existing Afternoon Peak Hour Pedestrian Volumes

Figure 6

Table 3 Existing Intersection Level of Service – Unsignalized Locations

Intersection	Peak Hour	LOS[1]	Delay[2]	V/C[3]
Unsignalized Intersections				
St. Paul Street/Site Drive/ Driveway				
Driveway EB Left/Through/Right	AM PM	B A	10.7 0.0	0.01 0.00
Site Drive WB Left/Through/Right	AM PM	B B	12.0 13.6	0.05 0.05
St. Paul Street/Sewall Avenue				
Sewall Avenue EB Left/Through/Right	AM PM	C C	17.7 15.7	0.28 0.19
Sewall Avenue WB Left/Through/Right	AM PM	C C	15.4 16.0	0.13 0.15

[1] LOS= Level of Service
[2] Delay = Average delay expressed in seconds per vehicle
[3] V/C = Volume-to-capacity ratio for the indicated minor street approach
EB-Eastbound, WB-westbound

The above level of service analysis and delay calculations apply to vehicular traffic. Delays for pedestrian and bicycle traffic depend on signal cycle lengths at the signalized intersections. As noted earlier, pedestrian volumes are significant within the study area. At both the signalized intersections, there are concurrent pedestrian signal phases, to accommodate pedestrian movements. The signal cycle lengths are 90 seconds for all signals within the study area, so a pedestrian would typically wait 45 seconds on average to cross a roadway. Bicycles generally move with vehicular traffic traveling in the same direction. Again, delays for bicyclists would be limited to the signal cycle (90 seconds) under the worst-case scenario and approximately 45 seconds on average.

2.4.3 Field Observations

Traffic operations at the study area intersections were observed during multiple field visits. In general, the field observations confirm the analysis results reported above.

2.5 SAFETY

Traffic safety conditions in the study area were documented by reviewing the crash history of the study area intersections using the MassDOT crash database. Reports for 2011 through 2015, the latest five years available, were reviewed. MassDOT reported 37 crashes at intersections in the study area over the five-year period. The greatest number of crashes occurred at the intersection of Beacon Street/St. Paul Street, with a total of 21 crashes, an average of nearly four crashes per year. Table 4 provides a summary of the number of crashes by type, time of day, weather and location. Of the 37 total crashes, three (8%) involved a pedestrian and two (5%) involved a cyclist.

Also shown are the average crash rates for this district of the state highway system for signalized and unsignalized intersections and the calculated crash rates for the study area intersections. The crash rates experienced at the three study area intersections are below the District 6 averages for signalized and unsignalized intersections. No recent crashes have been recorded at the site driveway (shared) intersection with St. Paul Street. The highest crash rates occur at the intersection of Beacon Street/St. Paul Street (0.41 crashes per million entering vehicles [MEV]). At St. Paul Street/Sewall Avenue the crash rate is 0.33 crashes/MEV and at St. Paul Street/ Longwood Avenue the crash rate is 0.30 crashes/ MEV. These crash rates are still below the MassDOT District 6 average for signalized intersections (0.70 crashes/MEV) and unsignalized intersections (0.53 crashes/MEV). The intersection crash data, as well as the crash rate worksheets, are included in Appendix C.

Table 4 Reported Crashes – 2011 to 2015

	Beacon St/ St. Paul St	St. Paul St/ Sewall Avenue	St. Paul St/ Longwood Avenue	Total
Year				
2011	4	2	1	7
2012	3	0	0	3
2013	2	2	2	6
2014	6	2	3	11
2015	6	1	3	10
Total	**21**	**7**	**9**	**37**
Type				
Angle	5	4	1	10
Rear-end	7	1	2	10
Head-on	0	0	0	0
Single Vehicle Crash	5	1	2	8
Sideswipe	4	1	4	9
Other/Not Reported	0	0	0	0
Total	**21**	**7**	**9**	**37**
Severity				
Property Damage	10	6	3	19
Personal Injury	11	1	6	18
Fatality	0	0	0	0
Not Reported	0	0	0	0
Total	**21**	**7**	**9**	**37**
Weather				
Clear	12	3	8	23
Cloudy	3	0	0	3
Rain	4	3	1	8
Snow/Ice	2	1	0	3
Fog	0	0	0	0

	Beacon St/ St. Paul St	St. Paul St/ Sewall Avenue	St. Paul St/ Longwood Avenue	Total
Unknown	0	0	0	0
Total	**21**	**7**	**9**	**37**
Time				
7:00AM to 9:00AM	1	0	1	2
9:00AM to 4:00PM	6	4	3	13
4:00PM to 6:00PM	5	2	1	8
6:00PM to 7:00AM	9	1	4	14
Total	**21**	**7**	**9**	**37**
Crash Rate*				
MassDOT District 6	0.70	0.53	0.70	
Intersection	**0.41**	**0.33**	**0.30**	

*Per Million Entering Vehicles (MEV)

2.6 PUBLIC TRANSPORTATION

The proposed project is located near public transportation. As noted, previously, the MBTA Green Line "C" branch operates within the center median of Beacon Street. The St. Paul Street inbound and outbound stops are approximately 150 feet from the project site. The "C" branch of the Green Line provides a connection from Cleveland Circle to downtown Boston. The trolleys run on six to seven-minute headways during weekday peak hours and seven to ten-minute headways during off-peak hours. On weekends, headways range from eight to 12 minutes for the "C" branch. In addition to the Green Line trolley, other nearby transit services include MBTA bus route #66 which operates along Harvard Street which is about one-quarter mile west of the site. Route 66 connects the Harvard Red Line station to Dudley station. Headways along route #66 are eight to nine minutes during weekday morning peak hours and eight to ten minutes during weekday afternoon peak hours. During off-peak hours, headways are approximately ten to 16 minutes. On weekends, headways range from 13 to 20 minutes. The public transportation information is included in Appendix D.

3.0 Assessment of Impacts

Traffic and roadway conditions in the project study area were projected to a 2025 design year. Future traffic forecasts were developed for two scenarios:

- 2025 without the proposed development (referred to as the No Build condition)
- 2025 with the proposed development (referred to as the Build condition)

The No Build traffic condition considers anticipated future background traffic growth exclusive of the potential traffic impacts of the proposed development. The Build traffic condition superimposes anticipated traffic associated with the proposed development on the No Build traffic volumes. Details of the assumptions made to define future conditions are described below as are the expected future peak hour intersection operations.

3.1 NO BUILD CONDITIONS

No Build traffic conditions reflect expected traffic volume levels for the study design year, 2025, assuming that the proposed development is not built. No Build traffic flow networks were developed by considering the anticipated traffic impacts of planned new development in the site vicinity and by application of an overall traffic growth rate to reflect impacts of potential land use changes outside of the project area and other factors.

The nearest continuous traffic count station to the study area that has data for recent years is on Park Drive south of Beacon Street. Volumes at this location decreased from 2010 to 2013. In order to provide a conservative analysis, a one percent annual traffic growth rate is assumed for this project.

The Brookline Planning Department has provided information about development projects in the site vicinity that may also directly and significantly impact area traffic volumes. These projects, considered as background for this study, are summarized in Table 5.

Table 5 Background Developments

Project Name	Size and Type	Vehicle Trip Generation			Source
		Daily	AM Peak Hour	PM Peak Hour	
40 Centre Street	40 Units Residential	126	10	12	MDM study
420 Harvard Street	25 Units Residential, Retail	56	3	4	VAI memo, prorated
1299 Beacon Street	197 Room Hotel, 12,285 SF Retail	n/a	73	49	VAI study

384 Harvard Street	62 Units Residential	214	12	15	Stantec
Devotion School	180,000 SF addition	n/a	68	35	VHB study
54 Auburn Street	12 Units Residential	88	6	7	ITE estimates
Babcock Place	62 Units Residential	500	34	52	VAI study
455 Harvard Street	17 Units Residential	86	5	7	VAI memo
Waldo Street	205 Room Hotel/ 134 Units Residential	2,142	113	149	Stantec study

Note: MDM, VAI and VHB refer to consulting firms that prepared traffic assessments for specific development projects.

For projects where no traffic study was available, trip generation estimates for the projects were developed by applying Institute of Transportation Engineers (ITE) trip rates published in the *Trip Generation Manual, 10th Edition.* The applied trip rates relate to apartments (ITE Land Use Code 220).

The 2025 No Build traffic flow networks are shown in Figure 7. The No Build networks include existing traffic volumes increased by seven percent combined with potential traffic from the background developments mentioned above and summarized in Appendix E.

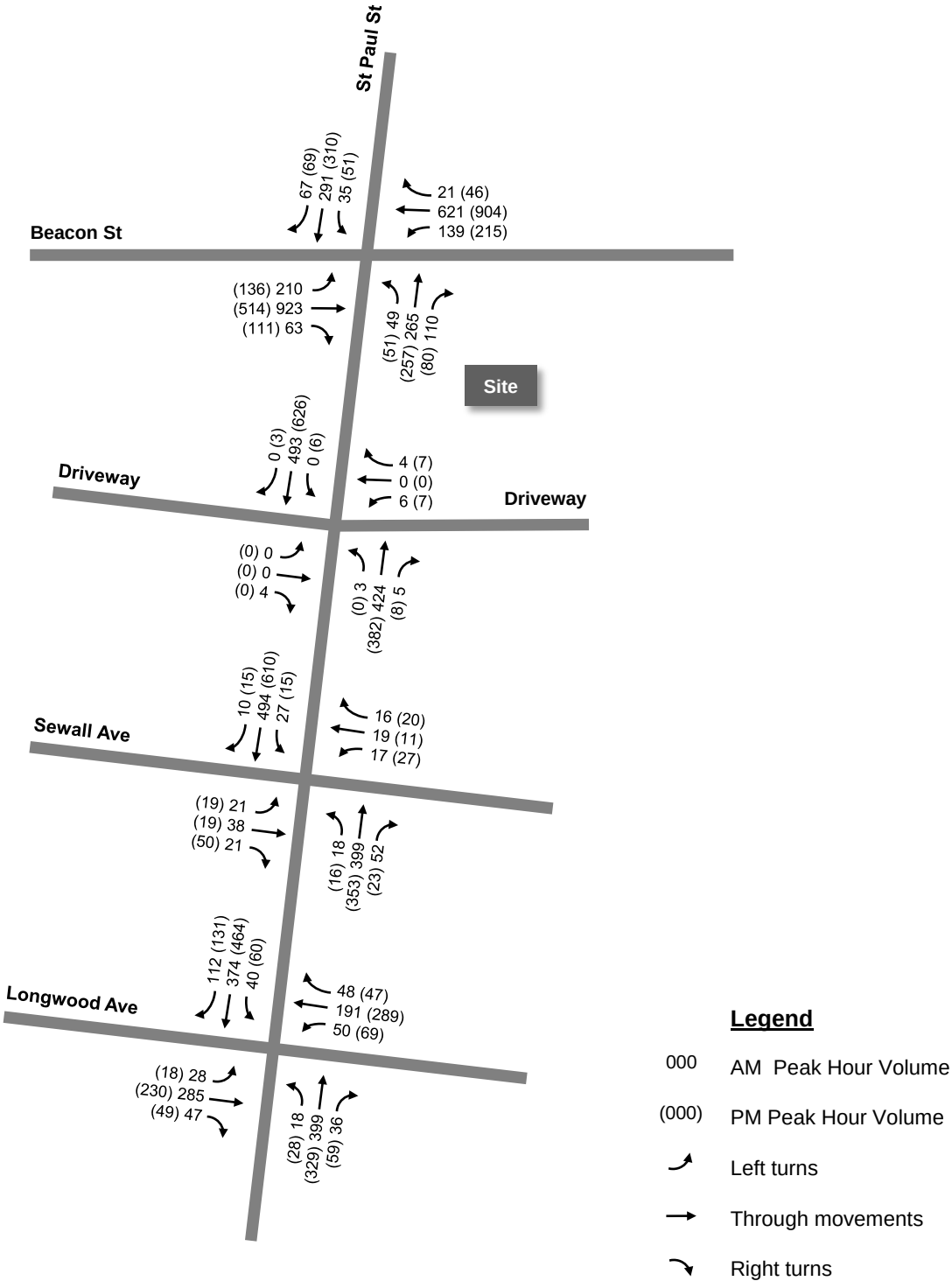
3.2 FUTURE BUILD CONDITIONS

Potential traffic generation for the proposed 123 residential units expanding the existing 70-unit mixed-use building (principally residential with medical offices in basement level) has been estimated and then assigned to the roadway network.

3.2.1 Trip Generation

Daily and peak hour vehicle trip generation estimates for the proposed redevelopment of 1223 Beacon Street were determined using trip generation rates available from the most recent (10th) edition of *Trip Generation* published by the Institute of Transportation Engineers (ITE). For this analysis, only the change in use was considered, that is, the generally larger units and addition of new residential units at the site. (It is assumed that existing medical offices on the site that will remain will continue to generate traffic at existing levels.) For the new residential units, Land Use Code 222 – Multifamily Housing (High Rise)-Dense Multi-Use Urban, was applied. As the data description implies, the rates are based on data collected at urban sites where alternative travel modes are readily available. The subject site shares this characteristic as:

- MBTA Green Line service is available on Beacon Street with a stop adjacent to the site at St. Paul Street;
- There are bicycle lanes on Beacon Street, St. Paul Street and Longwood Avenue; and,



Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

2025 No-Build Peak Hour Traffic Volumes

Figure 7

- There are ample sidewalks of 4 to 12-foot widths serving this dense, mixed-use neighborhood near Coolidge Corner.

Based on 2012-2016 US Census American Community Survey for Census Tract 4001 (the area that includes the proposed site) commuting data, approximately 36 percent of residents in Census Tract 4001 commute to work by automobile. The remaining 64 percent commute by transit, bike, walking, or work from home.

Trip estimates for the larger and new residential units were calculated by first estimating traffic volumes for the proposed 123 residential units and then subtracting estimated trips for the existing residential units. To provide a conservative estimate of the future trips, the existing 70 units were assumed to be equal to 35 proposed units resulting in an effective increase of 88 units. Applying the ITE trip rates, the proposed 123 residences are expected to generate approximately 285 vehicle trips daily, including 30 during the morning peak hour and 27 during the afternoon peak hour. The same rates applied to the existing 35 residential units indicate that they generate approximately 109 vehicle trips daily including 10 during the morning peak hour and 10 during the afternoon peak hour. Consequently, the additional daily vehicle trip total is 176 vehicle trips including 20 during the morning peak hour and 17 during the evening peak hour. Table 6 summarizes the project trip generation estimates by direction and the trip generation calculations are included in Appendix F including the graphical application of the average and equation derived values described above.

Table 6 Project Trip Generation

Time Period/Direction	Proposed Vehicle Trips	Existing Vehicle Trips	Additional Vehicle Trips
Daily			
Entering	142	54	88
Exiting	143	55	88
Total	285	109	176
Weekday Morning Peak Hour			
Entering	4	1	2
Exiting	26	9	10
Total	30	10	12
Weekday Afternoon Peak Hour			
Entering	19	7	12
Exiting	8	3	5
Total	27	10	17

Source: Institute of Transportation Engineers, *Trip Generation, 10th Edition*, Land Use Code 222 – Multifamily Housing (High Rise)-Dense Multi-Use Urban based on 123 proposed residential units and 70 existing units.

3.2.2 Trip Distribution and Assignment

Trip distribution for the proposed residential development is based on the existing traffic patterns in the study area. The vehicle trip distribution assumed for this project is:

- To/from the North via St. Paul Street:13%;
- To/from the South via St. Paul Street:13%;
- To/from the East on Longwood Avenue:10%;
- To/from the West on Longwood Avenue:10%;
- To/from the West on Sewall Avenue: 2%;
- To/from the East on Sewall Avenue: 2%;
- To/from the West via Beacon Street: 25%;
- To/from the East via Beacon Street: 25%;

Traffic entering the residential development will use the proposed driveway on St. Paul Street. The trip distribution for the proposed residential development is shown on Figure 8 and the peak hour trip assignments for the proposed project are shown on Figure 9.

3.2.3 Build Traffic Volumes

Build traffic volumes are comprised of the 2025 No Build volumes plus the development trips. The 2025 Build traffic volumes are shown on Figure 10.

3.3 TRAFFIC INCREASES

Anticipated project related traffic increases will be dispersed among the various roadways providing access to the project site, as discussed above. Traffic increases during the weekday morning and afternoon peak hours are less than one percent when compared to the baseline (No Build) traffic volumes for the study area intersections as shown in Table 7.

Table 7 Traffic Volume Increases

Intersection	Peak Hour	Entering Volume		
		No Build	Project Trips	Increase
Beacon Street/St. Paul Street	AM	2,575	13	0.5%
	PM	2,420	11	0.5%
St. Paul Street/Sewall Avenue	AM	831	7	0.8%
	PM	1,180	6	0.5%
St. Paul Street/Longwood Avenue	AM	1,629	7	0.4%
	PM	1,773	5	0.5%

The following analysis indicates there is excess capacity at all study intersections to accommodate the additional traffic.

3.4 FUTURE TRAFFIC OPERATING CONDITIONS

Traffic operations analyses were completed for the study area intersections for future conditions following the procedures used to assess existing operating conditions. Capacity analysis results for the signalized study area intersections are compared in Table 8 for existing conditions, 2025 No Build conditions and 2025 Build conditions. Table 9 shows the results for the same scenarios for the unsignalized intersections.

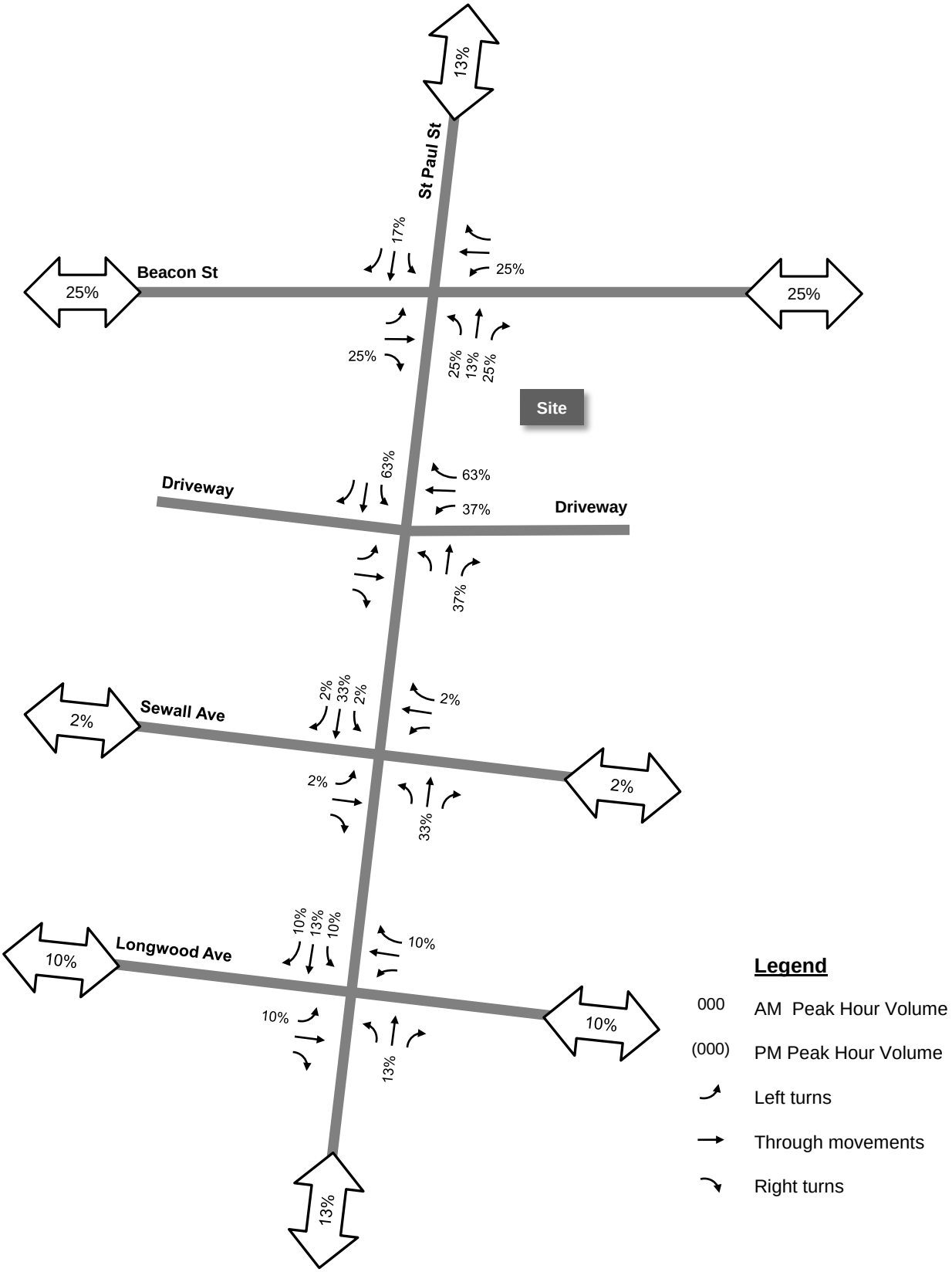
As shown in Table 8, operations in the No Build condition are similar to existing. Level of service changes from LOS C to LOS D at the Beacon Street/St. Paul Street and St Paul/ Longwood Avenue intersections. Intersection volume-to-capacity ratios increase noticeably reflecting the background traffic growth assumption (one percent per year growth for seven years). There are no changes in level of service as a result of the project traffic at the signalized intersections.

As shown in Table 9, operations at the unsignalized intersections and at the site driveway are expected to remain similar to existing conditions for the 2025 No Build and Build scenarios. There are no changes in level of service from existing conditions to the 2025 Build conditions. All minor street intersection approaches are expected to operate at LOS C or better for all time periods and scenarios.

Table 8 Intersection Level of Service Comparison – Signalized Locations

	Peak	Existing			2025 No-Build			2025 Build		
Intersection	Hour	LOS[1]	Delay[2]	V/C[3]	LOS	Delay	V/C	LOS	Delay	V/C
Signalized Intersections										
Beacon Street/ St. Paul Street	AM	C	35	0.80	D	41	0.88	D	41	0.88
	PM	D	39	0.83	D	42	0.88	D	43	0.88
St. Paul Street/Longwood Avenue	AM	C	33	0.61	D	36	0.67	D	36	0.68
	PM	C	29	0.68	C	31	0.73	C	31	0.73

[1] LOS= Level of Service, [2] Delay = Average delay expressed in seconds per vehicle, [3] V/C = Volume-to-capacity ratio for critical movements



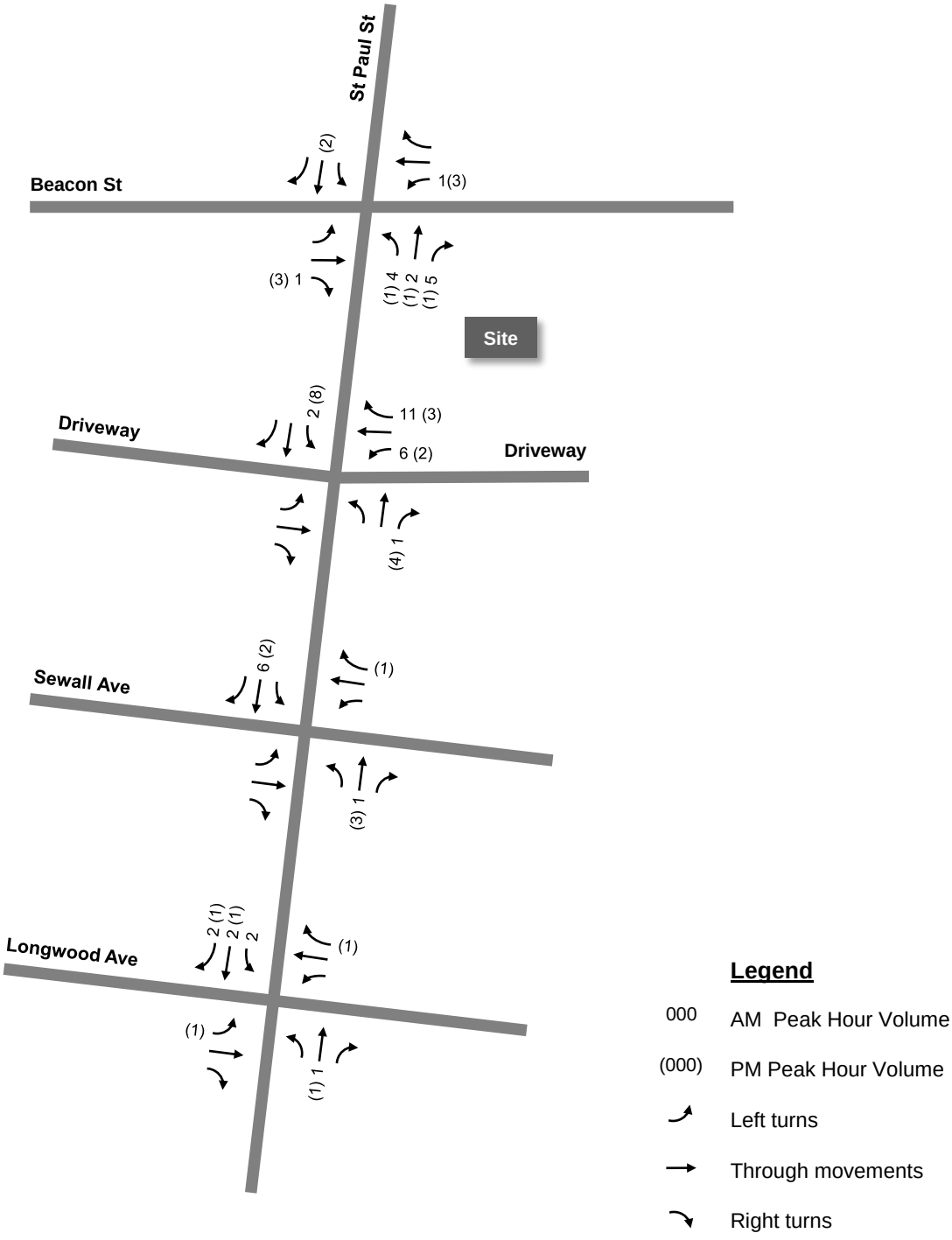
Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

Trip Distribution

Figure 8



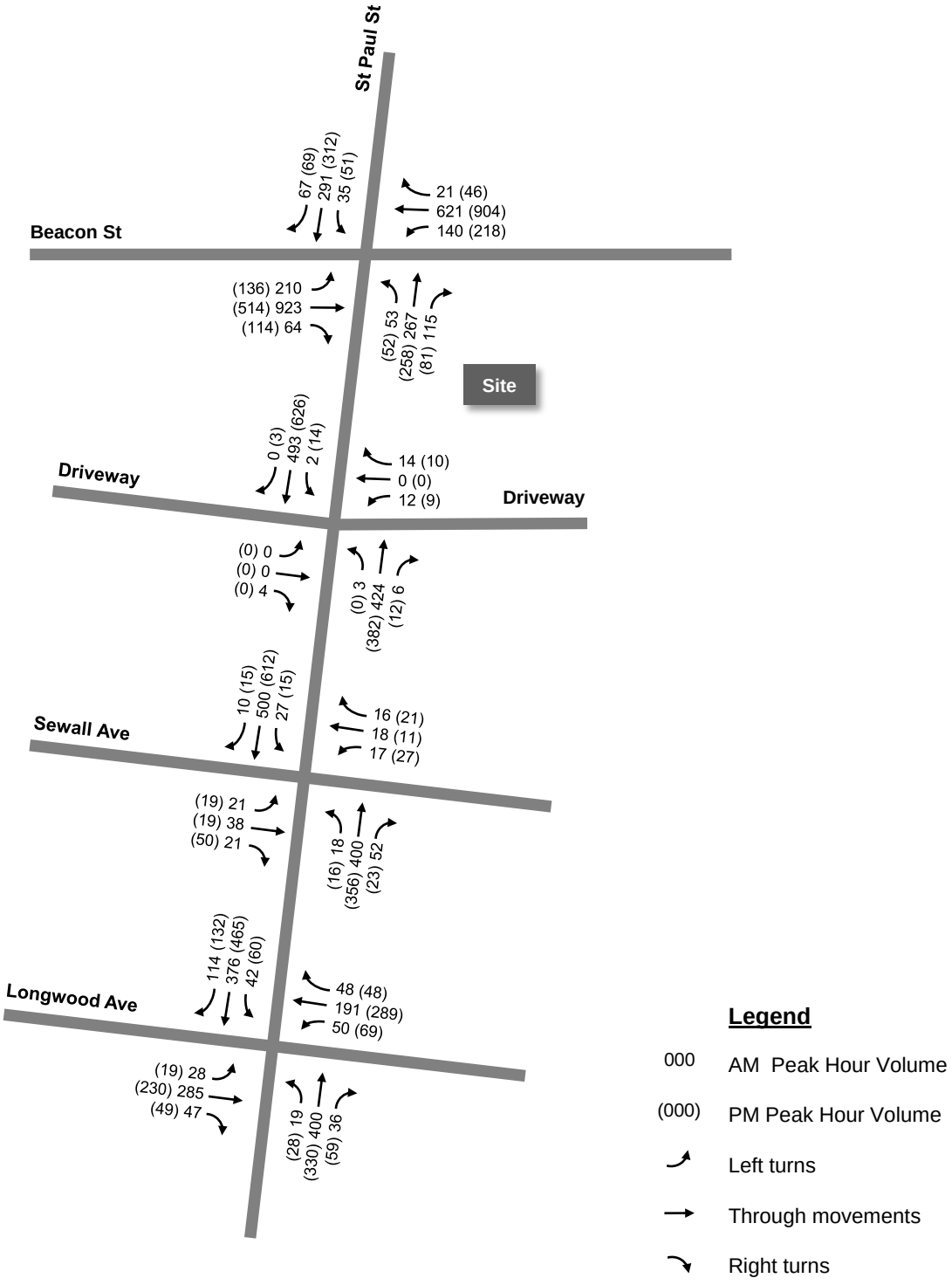
Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

Project Trips

Figure 9



Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

2025 Build Peak Hour Traffic Volumes

Figure 10

Capacity analysis worksheets for the future scenarios are included in Appendix G. These include more detailed analysis results (by lane group).

Table 9 Intersection Level of Service Comparison – Unsignalized Locations

Intersection	Peak Hour	Existing			2025 No-Build			2025 Build		
		LOS[1]	Delay[2]	V/C[3]	LOS	Delay	V/C	LOS	Delay	V/C
Unsignalized Intersections										
St. Paul Street/Site Drive/Driveway										
Driveway EB L/T/R	AM PM	B A	11 0	0.01 0.00	B A	11 0	0.01 0.00	B A	11 0	0.01 0.00
Site Drive WB L/T/R	AM PM	B B	12 14	0.05 0.05	B B	13 14	0.05 0.05	B B	13 15	0.12 0.07
St. Paul Street/Sewall Avenue										
Sewall Avenue EB L/T/R	AM PM	C C	18 16	0.28 0.19	C C	20 17	0.34 0.25	C C	20 18	0.34 0.26
Sewall Avenue WB L/T/R	AM PM	C C	15 16	0.13 0.15	C C	17 18	0.15 0.19	C C	17 18	0.15 0.19

[1] LOS= Level of Service, [2] Delay = Average delay expressed in seconds per vehicle, [3] V/C = Volume-to-capacity ratio for critical movements, L = Left, T = Through, R = Right

4.0 Traffic Mitigation

As noted above, the project will have nominal impacts at the study area intersections during the weekday peak hours. As such, no off-site roadway improvements are proposed to mitigate project related traffic volume impacts. However, it is recommended that traffic monitoring be conducted at the subject site following project completion. Data would be collected to quantify actual site traffic generation and this data could then be used to inform the planning of future, similar development proposals.

Appendix A Traffic Count Data

PDI File #: **186121 B**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
7:00 AM	18	0	41	4	0	0	63	6	116	0	28	3	0	153	0	0	0	0	0	0	0	16	0	51	7	0	0	74	15	126	0	39	2	0	182	0	0	0	0	0	0	0	472
7:15 AM	15	0	64	8	0	0	87	2	140	0	28	1	0	171	0	0	0	0	0	0	0	32	0	57	12	0	0	101	11	192	0	40	0	0	243	0	0	0	0	0	0	0	602
7:30 AM	18	0	76	4	0	0	98	4	147	0	31	2	0	184	0	0	0	0	0	0	0	28	0	60	13	0	0	101	17	219	0	37	2	0	275	0	0	0	0	0	0	0	658
7:45 AM	15	0	71	10	0	0	96	8	126	0	36	1	0	171	0	0	0	0	0	0	0	27	0	56	11	0	0	94	16	235	0	58	0	0	309	0	0	0	0	0	0	0	670
Total	66	0	252	26	0	0	344	20	529	0	123	7	0	679	0	0	0	0	0	0	0	103	0	224	43	0	0	370	59	772	0	174	4	0	1009	0	0	0	0	0	0	0	2402
8:00 AM	15	0	58	11	0	0	84	6	145	0	24	3	0	178	0	0	0	0	0	0	0	16	0	72	10	0	0	98	15	191	0	58	0	0	264	0	0	0	0	0	0	0	624
8:15 AM	10	0	35	9	0	0	54	9	122	0	32	2	0	165	0	0	0	0	0	0	0	30	0	55	10	0	0	95	19	169	0	53	1	0	242	0	0	0	0	0	0	0	556
8:30 AM	17	0	39	10	0	0	66	6	137	0	29	1	0	173	0	0	0	0	0	0	0	20	0	68	6	0	0	94	7	191	0	63	3	0	264	0	0	0	0	0	0	0	597
8:45 AM	10	0	39	6	0	0	55	6	152	0	24	1	0	183	0	0	0	0	0	0	0	15	0	61	9	0	0	85	7	169	0	61	1	0	238	0	0	0	0	0	0	0	561
Total	52	0	171	36	0	0	259	27	556	0	109	7	0	699	0	0	0	0	0	0	0	81	0	256	35	0	0	372	48	720	0	235	5	0	1008	0	0	0	0	0	0	0	2338
Grand Total	118	0	423	62	0	0	603	47	1085	0	232	14	0	1378	0	0	0	0	0	0	0	184	0	480	78	0	0	742	107	1492	0	409	9	0	2017	0	0	0	0	0	0	0	4740
Approach %	19.6	0.0	70.1	10.3	0.0	0.0		3.4	78.7	0.0	16.8	1.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		24.8	0.0	64.7	10.5	0.0	0.0		5.3	74.0	0.0	20.3	0.4	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	2.5	0.0	8.9	1.3	0.0	0.0	12.7	1.0	22.9	0.0	4.9	0.3	0.0	29.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	10.1	1.6	0.0	0.0	15.7	2.3	31.5	0.0	8.6	0.2	0.0	42.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							936							0							1752							762							0							1290	4740
Cars	110	0	415	60	0	0	585	46	1044	0	227	14	0	1331	0	0	0	0	0	0	0	183	0	472	75	0	0	730	101	1479	0	402	9	0	1991	0	0	0	0	0	0	0	4637
% Cars	93.2	0.0	98.1	96.8	0.0	0.0	97.0	97.9	96.2	0.0	97.8	100.0	0.0	96.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.5	0.0	98.3	96.2	0.0	0.0	98.4	94.4	99.1	0.0	98.3	100.0	0.0	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.8
Exiting Leg Total							920							0							1736							743							0							1238	4637
Heavy Vehicles	8	0	8	2	0	0	18	1	41	0	5	0	0	47	0	0	0	0	0	0	0	1	0	8	3	0	0	12	6	13	0	7	0	0	26	0	0	0	0	0	0	0	103
% Heavy Vehicles	6.8	0.0	1.9	3.2	0.0	0.0	3.0	2.1	3.8	0.0	2.2	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	1.7	3.8	0.0	0.0	1.6	5.6	0.9	0.0	1.7	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2
Exiting Leg Total							16							0							16							19							0							52	103

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
7:15 AM	15	0	64	8	0	0	87	2	140	0	28	1	0	171	0	0	0	0	0	0	0	32	0	57	12	0	0	101	11	192	0	40	0	0	243	0	0	0	0	0	0	0	602
7:30 AM	18	0	76	4	0	0	98	4	147	0	31	2	0	184	0	0	0	0	0	0	0	28	0	60	13	0	0	101	17	219	0	37	2	0	275	0	0	0	0	0	0	0	658
7:45 AM	15	0	71	10	0	0	96	8	126	0	36	1	0	171	0	0	0	0	0	0	0	27	0	56	11	0	0	94	16	235	0	58	0	0	309	0	0	0	0	0	0	0	670
8:00 AM	15	0	58	11	0	0	84	6	145	0	24	3	0	178	0	0	0	0	0	0	0	16	0	72	10	0	0	98	15	191	0	58	0	0	264	0	0	0	0	0	0	0	624
Total Volume	63	0	269	33	0	0	365	20	558	0	119	7	0	704	0	0	0	0	0	0	0	103	0	245	46	0	0	394	59	837	0	193	2	0	1091	0	0	0	0	0	0	0	2554
% Approach Total	17.3	0.0	73.7	9.0	0.0	0.0		2.8	79.3	0.0	16.9	1.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		26.1	0.0	62.2	11.7	0.0	0.0		5.4	76.7	0.0	17.7	0.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.875	0.000	0.885	0.750	0.000	0.000	0.931	0.625	0.949	0.000	0.826	0.583	0.000	0.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.805	0.000	0.851	0.885	0.000	0.000	0.975	0.868	0.890	0.000	0.832	0.250	0.000	0.883	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.953
Cars	58	0	265	31	0	0	354	19	534	0	117	7	0	677	0	0	0	0	0	0	0	103	0	240	44	0	0	387	55	831	0	190	2	0	1078	0	0	0	0	0	0	0	2496
Cars %	92.1	0.0	98.5	93.9	0.0	0.0	97.0	95.0	95.7	0.0	98.3	100.0	0.0	96.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	98.0	95.7	0.0	0.0	98.2	93.2	99.3	0.0	98.4	100.0	0.0	98.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.7
Heavy Vehicles	5	0	4	2	0	0	11	1	24	0	2	0	0	27	0	0	0	0	0	0	0	0	0	5	2	0	0	7	4	6	0	3	0	0	13	0	0	0	0	0	0	0	58
Heavy Vehicles %	7.9	0.0	1.5	6.1	0.0	0.0	3.0	5.0	4.3	0.0	1.7	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.3	0.0	0.0	1.8	6.8	0.7	0.0	1.6	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Cars Enter Leg	58	0	265	31	0	0	354	19	534	0	117	7	0	677	0	0	0	0	0	0	0	103	0	240	44	0	0	387	55	831	0	190	2	0	1078	0	0	0	0	0	0	0	2496
Heavy Enter Leg	5	0	4	2	0	0	11	1	24	0	2	0	0	27	0	0	0	0	0	0	0	0	0	5	2	0	0	7	4	6	0	3	0	0	13	0	0	0	0	0	0	0	58
Total Entering Leg	63	0	269	33	0	0	365	20	558	0	119	7	0	704	0	0	0	0	0	0	0	103	0	245	46	0	0	394	59	837	0	193	2	0	1091	0	0	0	0	0	0	0	2554
Cars Exiting Leg							449							0							972							437							0							638	2496
Heavy Exiting Leg							9							0							8							10							0							31	58
Total Exiting Leg							458							0							980							447							0							669	2554

PDI File #: **186121 B**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
7:00 AM	16	0	41	4	0	0	61	6	112	0	26	3	0	147	0	0	0	0	0	0	0	16	0	50	7	0	0	73	15	125	0	38	2	0	180	0	0	0	0	0	0	0	461
7:15 AM	15	0	62	7	0	0	84	2	135	0	28	1	0	166	0	0	0	0	0	0	0	32	0	55	12	0	0	99	9	190	0	40	0	0	239	0	0	0	0	0	0	0	588
7:30 AM	18	0	75	4	0	0	97	4	139	0	31	2	0	176	0	0	0	0	0	0	0	28	0	60	13	0	0	101	16	218	0	35	2	0	271	0	0	0	0	0	0	0	645
7:45 AM	12	0	70	9	0	0	91	7	119	0	35	1	0	162	0	0	0	0	0	0	0	27	0	55	10	0	0	92	16	233	0	58	0	0	307	0	0	0	0	0	0	0	652
Total	61	0	248	24	0	0	333	19	505	0	120	7	0	651	0	0	0	0	0	0	0	103	0	220	42	0	0	365	56	766	0	171	4	0	997	0	0	0	0	0	0	0	2346
8:00 AM	13	0	58	11	0	0	82	6	141	0	23	3	0	173	0	0	0	0	0	0	0	16	0	70	9	0	0	95	14	190	0	57	0	0	261	0	0	0	0	0	0	0	611
8:15 AM	10	0	34	9	0	0	53	9	118	0	31	2	0	160	0	0	0	0	0	0	0	29	0	55	9	0	0	93	18	168	0	53	1	0	240	0	0	0	0	0	0	0	546
8:30 AM	17	0	37	10	0	0	64	6	132	0	29	1	0	168	0	0	0	0	0	0	0	20	0	67	6	0	0	93	6	188	0	61	3	0	258	0	0	0	0	0	0	0	583
8:45 AM	9	0	38	6	0	0	53	6	148	0	24	1	0	179	0	0	0	0	0	0	0	15	0	60	9	0	0	84	7	167	0	60	1	0	235	0	0	0	0	0	0	0	551
Total	49	0	167	36	0	0	252	27	539	0	107	7	0	680	0	0	0	0	0	0	0	80	0	252	33	0	0	365	45	713	0	231	5	0	994	0	0	0	0	0	0	0	2291
Grand Total	110	0	415	60	0	0	585	46	1044	0	227	14	0	1331	0	0	0	0	0	0	0	183	0	472	75	0	0	730	101	1479	0	402	9	0	1991	0	0	0	0	0	0	0	4637
Approach %	18.8	0.0	70.9	10.3	0.0	0.0		3.5	78.4	0.0	17.1	1.1	0.0		0.0	0.0	0.0	0.0	0.0	0.0		25.1	0.0	64.7	10.3	0.0	0.0		5.1	74.3	0.0	20.2	0.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	2.4	0.0	8.9	1.3	0.0	0.0	12.6	1.0	22.5	0.0	4.9	0.3	0.0	28.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	10.2	1.6	0.0	0.0	15.7	2.2	31.9	0.0	8.7	0.2	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							920							0							1736							743							0							1238	4637

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
7:15 AM	15	0	62	7	0	0	84	2	135	0	28	1	0	166	0	0	0	0	0	0	0	32	0	55	12	0	0	99	9	190	0	40	0	0	239	0	0	0	0	0	0	0	588
7:30 AM	18	0	75	4	0	0	97	4	139	0	31	2	0	176	0	0	0	0	0	0	0	28	0	60	13	0	0	101	16	218	0	35	2	0	271	0	0	0	0	0	0	0	645
7:45 AM	12	0	70	9	0	0	91	7	119	0	35	1	0	162	0	0	0	0	0	0	0	27	0	55	10	0	0	92	16	233	0	58	0	0	307	0	0	0	0	0	0	0	652
8:00 AM	13	0	58	11	0	0	82	6	141	0	23	3	0	173	0	0	0	0	0	0	0	16	0	70	9	0	0	95	14	190	0	57	0	0	261	0	0	0	0	0	0	0	611
Total Volume	58	0	265	31	0	0	354	19	534	0	117	7	0	677	0	0	0	0	0	0	0	103	0	240	44	0	0	387	55	831	0	190	2	0	1078	0	0	0	0	0	0	0	2496
% Approach Total	16.4	0.0	74.9	8.8	0.0	0.0		2.8	78.9	0.0	17.3	1.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		26.6	0.0	62.0	11.4	0.0	0.0		5.1	77.1	0.0	17.6	0.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.806	0.000	0.883	0.705	0.000	0.000	0.912	0.679	0.947	0.000	0.836	0.583	0.000	0.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.805	0.000	0.857	0.846	0.000	0.000	0.958	0.859	0.892	0.000	0.819	0.250	0.000	0.878	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.957
Entering Leg	58	0	265	31	0	0	354	19	534	0	117	7	0	677	0	0	0	0	0	0	0	103	0	240	44	0	0	387	55	831	0	190	2	0	1078	0	0	0	0	0	0	0	2496
Exiting Leg							449							0							972							437							0							638	2496
Total							803							677							972							824							1078							638	4992

PDI File #: **186121 B**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St. Paul Street from North							Beacon Street from East							Beacon Street from Southeast							St. Paul Street from South							Beacon Street from Southwest							Beacon Street from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
7:00 AM	2	0	0	0	0	0	2	0	4	0	2	0	0	6	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	2	0	0	0	0	0	0	0	11
7:15 AM	0	0	2	1	0	0	3	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	2	0	0	0	0	4	0	0	0	0	0	0	0	14
7:30 AM	0	0	1	0	0	0	1	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	0	0	0	0	0	0	0	13
7:45 AM	3	0	1	1	0	0	5	1	7	0	1	0	0	9	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	18
Total	5	0	4	2	0	0	11	1	24	0	3	0	0	28	0	0	0	0	0	0	0	0	0	4	1	0	0	5	3	6	0	3	0	0	12	0	0	0	0	0	0	0	56
8:00 AM	2	0	0	0	0	0	2	0	4	0	1	0	0	5	0	0	0	0	0	0	0	0	0	2	1	0	0	3	1	1	0	1	0	0	3	0	0	0	0	0	0	0	13
8:15 AM	0	0	1	0	0	0	1	0	4	0	1	0	0	5	0	0	0	0	0	0	0	1	0	0	1	0	0	2	1	1	0	0	0	0	2	0	0	0	0	0	0	0	10
8:30 AM	0	0	2	0	0	0	2	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	3	0	2	0	0	6	0	0	0	0	0	0	0	14
8:45 AM	1	0	1	0	0	0	2	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	1	0	0	3	0	0	0	0	0	0	0	10
Total	3	0	4	0	0	0	7	0	17	0	2	0	0	19	0	0	0	0	0	0	0	1	0	4	2	0	0	7	3	7	0	4	0	0	14	0	0	0	0	0	0	0	47
Grand Total	8	0	8	2	0	0	18	1	41	0	5	0	0	47	0	0	0	0	0	0	0	1	0	8	3	0	0	12	6	13	0	7	0	0	26	0	0	0	0	0	0	0	103
Approach %	44.4	0.0	44.4	11.1	0.0	0.0		2.1	87.2	0.0	10.6	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		8.3	0.0	66.7	25.0	0.0	0.0		23.1	50.0	0.0	26.9	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	7.8	0.0	7.8	1.9	0.0	0.0	17.5	1.0	39.8	0.0	4.9	0.0	0.0	45.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	7.8	2.9	0.0	0.0	11.7	5.8	12.6	0.0	6.8	0.0	0.0	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							16							0							16							19							0							52	103
Buses	1	0	2	0	0	0	3	0	7	0	0	0	0	7	0	0	0	0	0	0	0	0	0	5	0	0	0	5	1	1	0	4	0	0	6	0	0	0	0	0	0	0	21
% Buses	12.5	0.0	25.0	0.0	0.0	0.0	16.7	0.0	17.1	0.0	0.0	0.0	0.0	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	62.5	0.0	0.0	0.0	41.7	16.7	7.7	0.0	57.1	0.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4
Exiting Leg Total							9							0							1							3							0							8	21
Single-Unit Trucks	7	0	5	2	0	0	14	1	31	0	5	0	0	37	0	0	0	0	0	0	0	1	0	2	3	0	0	6	5	12	0	3	0	0	20	0	0	0	0	0	0	0	77
% Single-Unit	87.5	0.0	62.5	100.0	0.0	0.0	77.8	100.0	75.6	0.0	100.0	0.0	0.0	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	25.0	100.0	0.0	0.0	50.0	83.3	92.3	0.0	42.9	0.0	0.0	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.8
Exiting Leg Total							6							0							15							15							0							41	77
Articulated Trucks	0	0	1	0	0	0	1	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
% Articulated	0.0	0.0	12.5	0.0	0.0	0.0	5.6	0.0	7.3	0.0	0.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9
Exiting Leg Total							1							0							0							1							0							3	5

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street from North							Beacon Street from East							Beacon Street from Southeast							St. Paul Street from South							Beacon Street from Southwest							Beacon Street from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
7:15 AM	0	0	2	1	0	0	3	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	2	0	0	0	2	2	2	0	0	0	0	4	0	0	0	0	0	0	0	14
7:30 AM	0	0	1	0	0	0	1	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	4	0	0	0	0	0	0	0	13
7:45 AM	3	0	1	1	0	0	5	1	7	0	1	0	0	9	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	18
8:00 AM	2	0	0	0	0	0	2	0	4	0	1	0	0	5	0	0	0	0	0	0	0	0	0	2	1	0	0	3	1	1	0	1	0	0	3	0	0	0	0	0	0	0	13
Total Volume	5	0	4	2	0	0	11	1	24	0	2	0	0	27	0	0	0	0	0	0	0	0	0	5	2	0	0	7	4	6	0	3	0	0	13	0	0	0	0	0	0	0	58
% Approach Total	45.5	0.0	36.4	18.2	0.0	0.0		3.7	88.9	0.0	7.4	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	71.4	28.6	0.0	0.0		30.8	46.2	0.0	23.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.417	0.000	0.500	0.500	0.000	0.000	0.550	0.250	0.750	0.000	0.500	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.500	0.000	0.000	0.583	0.500	0.750	0.000	0.375	0.000	0.000	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.806
Buses	1	0	1	0	0	0	2	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	2	0	0	3	0	0	0	0	0	0	0	13
Buses %	20.0	0.0	25.0	0.0	0.0	0.0	18.2	0.0	20.8	0.0	0.0	0.0	0.0	18.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	42.9	25.0	0.0	0.0	66.7	0.0	0.0	23.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.4
Single-Unit Trucks	4	0	3	2	0	0	9	1	17	0	2	0	0	20	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3	6	0	1	0	0	10	0	0	0	0	0	0	0	42
Single-Unit %	80.0	0.0	75.0	100.0	0.0	0.0	81.8	100.0	70.8	0.0	100.0	0.0	0.0	74.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	100.0	0.0	0.0	42.9	75.0	100.0	0.0	33.3	0.0	0.0	76.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	72.4
Articulated Trucks	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2
Buses	1	0	1	0	0	0	2	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	2	0	0	3	0	0	0	0	0	0	0	13
Single-Unit Trucks	4	0	3	2	0	0	9	1	17	0	2	0	0	20	0	0	0	0	0	0	0	0	0	1	2	0	0	3	3	6	0	1	0	0	10	0	0	0	0	0	0	0	42
Articulated Trucks	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Entering Leg	5	0	4	2	0	0	11	1	24	0	2	0	0	27	0	0	0	0	0	0	0	0	0	5	2	0	0	7	4	6	0	3	0	0	13	0	0	0	0	0	0	0	58
Buses							5							0							0							2							0							6	13
Single-Unit Trucks							3							0							8							8							0							23	42
Articulated Trucks							1							0							0							0							0							2	3
Total Exiting Leg							9							0							8							10							0							31	58

PDI File #: **186121 B**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	8	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	14
7:15 AM	1	0	1	0	0	0	0	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	15	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	20
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	7	0	3	0	0	0	1	11	0	0	0	0	0	0	0	0	0	16
7:45 AM	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	1	2	0	6	0	0	0	0	0	8	0	13	0	0	0	0	2	1	16	0	0	0	0	0	0	1	0	1	29
Total	1	0	2	0	0	0	0	0	3	0	8	0	0	0	0	0	0	8	0	0	0	0	1	0	0	0	1	2	0	13	0	0	0	0	0	15	1	43	0	3	0	0	2	2	51	0	0	0	0	0	0	1	0	1	79
8:00 AM	0	0	3	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	8	0	0	0	0	0	10	0	18	0	2	0	0	0	0	20	0	0	0	0	0	0	0	1	1	37
8:15 AM	1	0	1	0	0	0	0	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	1	16	0	5	0	0	0	0	22	0	0	0	0	0	0	0	0	0	33
8:30 AM	0	0	2	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	14	0	0	0	0	0	15	0	14	0	5	0	0	0	0	19	0	0	0	0	0	0	0	0	0	38
8:45 AM	0	0	3	0	0	0	0	0	3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0	6	0	22	0	3	0	0	0	0	25	0	0	0	0	0	0	1	0	1	36
Total	1	0	9	0	0	0	0	0	10	0	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	5	0	34	0	0	0	0	0	39	1	70	0	15	0	0	0	0	86	0	0	0	0	0	0	1	1	2	144
Grand Total	2	0	11	0	0	0	0	0	13	0	15	0	0	0	0	0	0	15	0	0	0	0	1	0	0	0	1	7	0	47	0	0	0	0	0	54	2	113	0	18	0	0	2	2	137	0	0	0	0	0	0	2	1	3	223
Approach %	15.4	0.0	84.6	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0		13.0	0.0	87.0	0.0	0.0	0.0	0.0	0.0		1.5	82.5	0.0	13.1	0.0	0.0	1.5	1.5		0.0	0.0	0.0	0.0	0.0	0.0	66.7	33.3		
Total %	0.9	0.0	4.9	0.0	0.0	0.0	0.0	0.0	5.8	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4	3.1	0.0	21.1	0.0	0.0	0.0	0.0	0.0	24.2	0.9	50.7	0.0	8.1	0.0	0.0	0.9	0.9	61.4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	1.3	
Exiting Leg Total									65									0									120									14									4									20	223

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	0	3	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	8	0	0	0	0	0	10	0	18	0	2	0	0	0	0	20	0	0	0	0	0	0	0	1	1	37
8:15 AM	1	0	1	0	0	0	0	0	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8	1	16	0	5	0	0	0	0	22	0	0	0	0	0	0	0	0	0	33
8:30 AM	0	0	2	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	14	0	0	0	0	0	15	0	14	0	5	0	0	0	0	19	0	0	0	0	0	0	0	0	0	38
8:45 AM	0	0	3	0	0	0	0	0	3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	4	0	0	0	0	0	6	0	22	0	3	0	0	0	0	25	0	0	0	0	0	0	1	0	1	36
Total Volume	1	0	9	0	0	0	0	0	10	0	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	5	0	34	0	0	0	0	0	39	1	70	0	15	0	0	0	0	86	0	0	0	0	0	0	1	1	2	144
% Approach Total	10.0	0.0	90.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		12.8	0.0	87.2	0.0	0.0	0.0	0.0	0.0		1.2	81.4	0.0	17.4	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0		
PHF	0.250	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.607	0.000	0.000	0.000	0.000	0.000	0.650	0.250	0.795	0.000	0.750	0.000	0.000	0.000	0.000	0.860	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.500	0.947
Entering Leg	1	0	9	0	0	0	0	0	10	0	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	5	0	34	0	0	0	0	0	39	1	70	0	15	0	0	0	0	86	0	0	0	0	0	0	1	1	2	144
Exiting Leg									49									0									75									10									0									10	144
Total									59									7									75									49									86									12	288

PDI File #: **186121 B**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Pedestrians

	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	8	4	12	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	2	6	8	0	0	0	0	0	0	8	4	12	0	0	0	0	0	0	4	8	12	52
7:15 AM	0	0	0	0	0	0	10	9	19	0	0	0	0	0	0	3	4	7	0	0	0	0	0	0	3	2	5	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	14	3	17	0	0	0	0	0	0	3	8	11	68
7:30 AM	0	0	0	0	0	0	20	16	36	0	0	0	0	0	0	7	2	9	0	0	0	0	0	0	5	1	6	0	0	0	0	0	0	4	10	14	0	0	0	0	0	0	11	24	35	0	0	0	0	0	0	4	30	34	134
7:45 AM	0	0	0	0	0	0	13	6	19	0	0	0	0	0	0	10	7	17	0	0	0	0	0	0	10	3	13	0	0	0	0	0	0	7	15	22	0	0	0	0	0	0	16	13	29	0	0	0	0	0	0	2	25	27	127
Total	0	0	0	0	0	0	51	35	86	0	0	0	0	0	0	20	17	37	0	0	0	0	0	0	18	10	28	0	0	0	0	0	0	18	35	53	0	0	0	0	0	0	49	44	93	0	0	0	0	0	0	13	71	84	381
8:00 AM	0	0	0	0	0	0	19	2	21	0	0	0	0	0	0	7	10	17	0	0	0	0	0	0	8	11	19	0	0	0	0	0	0	2	20	22	0	0	0	0	0	0	12	6	18	0	0	0	0	0	0	5	14	19	116
8:15 AM	0	0	0	0	0	0	27	6	33	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	8	14	22	0	0	0	0	0	0	10	8	18	0	0	0	0	0	0	6	24	30	117
8:30 AM	0	0	0	0	0	0	29	5	34	0	0	0	0	0	0	13	3	16	0	0	0	0	0	0	7	5	12	0	0	0	0	0	0	8	12	20	0	0	0	0	0	0	11	3	14	0	0	0	0	0	0	6	20	26	122
8:45 AM	0	0	0	0	0	0	16	8	24	0	0	0	0	0	0	1	11	12	0	0	0	0	0	0	1	12	13	0	0	0	0	0	0	5	22	27	0	0	0	0	0	0	16	8	24	0	0	0	0	0	0	8	16	24	124
Total	0	0	0	0	0	0	91	21	112	0	0	0	0	0	0	26	27	53	0	0	0	0	0	0	20	30	50	0	0	0	0	0	0	23	68	91	0	0	0	0	0	0	49	25	74	0	0	0	0	0	0	25	74	99	479
Grand Total	0	0	0	0	0	0	142	56	198	0	0	0	0	0	0	46	44	90	0	0	0	0	0	0	38	40	78	0	0	0	0	0	0	41	103	144	0	0	0	0	0	0	98	69	167	0	0	0	0	0	0	38	145	183	860
Approach %	0	0	0	0	0	0	72	28		0	0	0	0	0	0	51	49		0	0	0	0	0	0	49	51		0	0	0	0	0	0	28	72		0	0	0	0	0	0	59	41		0	0	0	0	0	0	21	79		
Total %	0	0	0	0	0	0	17	6.5	23	0	0	0	0	0	0	5.3	5.1	10	0	0	0	0	0	0	4.4	4.7	9.1	0	0	0	0	0	0	4.8	12	17	0	0	0	0	0	0	11	8	19	0	0	0	0	0	0	4.4	17	21	
Exiting Leg Total									198									90									78								144									167									183	860

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:30 AM	0	0	0	0	0	0	20	16	36	0	0	0	0	0	0	7	2	9	0	0	0	0	0	0	5	1	6	0	0	0	0	0	0	4	10	14	0	0	0	0	0	0	11	24	35	0	0	0	0	0	0	4	30	34	134
7:45 AM	0	0	0	0	0	0	13	6	19	0	0	0	0	0	0	10	7	17	0	0	0	0	0	0	10	3	13	0	0	0	0	0	0	7	15	22	0	0	0	0	0	0	16	13	29	0	0	0	0	0	0	2	25	27	127
8:00 AM	0	0	0	0	0	0	19	2	21	0	0	0	0	0	0	7	10	17	0	0	0	0	0	0	8	11	19	0	0	0	0	0	0	2	20	22	0	0	0	0	0	0	12	6	18	0	0	0	0	0	0	5	14	19	116
8:15 AM	0	0	0	0	0	0	27	6	33	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	4	2	6	0	0	0	0	0	0	8	14	22	0	0	0	0	0	0	10	8	18	0	0	0	0	0	0	6	24	30	117
Total Volume	0	0	0	0	0	0	79	30	109	0	0	0	0	0	0	29	22	51	0	0	0	0	0	0	27	17	44	0	0	0	0	0	0	21	59	80	0	0	0	0	0	0	49	51	100	0	0	0	0	0	0	17	93	110	494
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	72.5	27.5		0.0	0.0	0.0	0.0	0.0	0.0	56.9	43.1		0.0	0.0	0.0	0.0	0.0	0.0	61.4	38.6		0.0	0.0	0.0	0.0	0.0	0.0	26.3	73.8		0.0	0.0	0.0	0.0	0.0	0.0	49.0	51.0		0.0	0.0	0.0	0.0	0.0	0.0	15.5	84.5		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.731	0.469	0.757	0.000	0.000	0.000	0.000	0.000	0.000	0.725	0.550	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.675	0.386	0.579	0.000	0.000	0.000	0.000	0.000	0.000	0.656	0.738	0.909	0.000	0.000	0.000	0.000	0.000	0.000	0.766	0.531	0.714	0.000	0.000	0.000	0.000	0.000	0.000	0.708	0.775	0.809	0.922
Entering Leg	0	0	0	0	0	0	79	30	109	0	0	0	0	0	0	29	22	51	0	0	0	0	0	0	27	17	44	0	0	0	0	0	0	21	59	80	0	0	0	0	0	0	49	51	100	0	0	0	0	0	0	17	93	110	494
Exiting Leg									109									51									44								80									100									110	494
Total									218									102									88								160									200									220	988

PDI File #: **186121 BB**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street from North							Beacon Street from East							Beacon Street from Southeast							St. Paul Street from South							Beacon Street from Southwest							Beacon Street from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	13	0	65	7	0	0	85	6	173	0	32	6	0	217	0	0	0	0	0	0	0	16	0	46	16	0	0	78	15	91	0	25	4	0	135	0	0	0	0	0	0	0	515
4:15 PM	9	0	86	4	0	0	99	6	170	0	42	5	0	223	0	0	0	0	0	0	0	23	0	55	12	0	0	90	23	96	0	34	1	0	154	0	0	0	0	0	0	0	566
4:30 PM	19	0	72	4	0	0	95	8	205	0	49	7	0	269	0	0	0	0	0	0	0	20	0	46	17	0	0	83	17	98	0	25	2	0	142	0	0	0	0	0	0	0	589
4:45 PM	20	0	72	10	0	0	102	5	164	0	42	3	0	214	0	0	0	0	0	0	0	14	0	49	13	0	0	76	18	78	0	31	1	0	128	0	0	0	0	0	0	0	520
Total	61	0	295	25	0	0	381	25	712	0	165	21	0	923	0	0	0	0	0	0	0	73	0	196	58	0	0	327	73	363	0	115	8	0	559	0	0	0	0	0	0	0	2190
5:00 PM	16	0	81	13	0	0	110	5	211	0	42	6	0	264	0	0	0	0	0	0	0	22	0	59	10	0	0	91	32	125	0	44	1	0	202	0	0	0	0	0	0	0	667
5:15 PM	24	0	68	13	0	0	105	8	203	0	48	1	0	260	0	0	0	0	0	0	0	26	0	54	15	0	0	95	20	121	0	29	2	0	172	0	0	0	0	0	0	0	632
5:30 PM	12	0	81	8	0	0	101	6	224	0	53	3	0	286	0	0	0	0	0	0	0	17	0	55	13	0	0	85	32	93	0	22	2	0	149	0	0	0	0	0	0	0	621
5:45 PM	12	0	58	14	0	0	84	24	177	0	50	3	0	254	0	0	0	0	0	0	0	10	0	71	10	0	0	91	19	114	0	22	4	0	159	0	0	0	0	0	0	0	588
Total	64	0	288	48	0	0	400	43	815	0	193	13	0	1064	0	0	0	0	0	0	0	75	0	239	48	0	0	362	103	453	0	117	9	0	682	0	0	0	0	0	0	0	2508
Grand Total	125	0	583	73	0	0	781	68	1527	0	358	34	0	1987	0	0	0	0	0	0	0	148	0	435	106	0	0	689	176	816	0	232	17	0	1241	0	0	0	0	0	0	0	4698
Approach %	16.0	0.0	74.6	9.3	0.0	0.0		3.4	76.8	0.0	18.0	1.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0		21.5	0.0	63.1	15.4	0.0	0.0		14.2	65.8	0.0	18.7	1.4	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	2.7	0.0	12.4	1.6	0.0	0.0	16.6	1.4	32.5	0.0	7.6	0.7	0.0	42.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	9.3	2.3	0.0	0.0	14.7	3.7	17.4	0.0	4.9	0.4	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							735							0							1071							1117							0							1775	4698
Cars	125	0	581	73	0	0	779	68	1518	0	358	33	0	1977	0	0	0	0	0	0	0	146	0	431	103	0	0	680	176	800	0	232	17	0	1225	0	0	0	0	0	0	0	4661
% Cars	100.0	0.0	99.7	100.0	0.0	0.0	99.7	100.0	99.4	0.0	100.0	97.1	0.0	99.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.6	0.0	99.1	97.2	0.0	0.0	98.7	100.0	98.0	0.0	100.0	100.0	0.0	98.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.2
Exiting Leg Total							731							0							1052							1115							0							1763	4661
Heavy Vehicles	0	0	2	0	0	0	2	0	9	0	0	1	0	10	0	0	0	0	0	0	0	2	0	4	3	0	0	9	0	16	0	0	0	0	16	0	0	0	0	0	0	0	37
% Heavy Vehicles	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.6	0.0	0.0	2.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.9	2.8	0.0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Exiting Leg Total							4							0							19							2							0							12	37

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street from North							Beacon Street from East							Beacon Street from Southeast							St. Paul Street from South							Beacon Street from Southwest							Beacon Street from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
5:00 PM	16	0	81	13	0	0	110	5	211	0	42	6	0	264	0	0	0	0	0	0	0	22	0	59	10	0	0	91	32	125	0	44	1	0	202	0	0	0	0	0	0	0	667
5:15 PM	24	0	68	13	0	0	105	8	203	0	48	1	0	260	0	0	0	0	0	0	0	26	0	54	15	0	0	95	20	121	0	29	2	0	172	0	0	0	0	0	0	0	632
5:30 PM	12	0	81	8	0	0	101	6	224	0	53	3	0	286	0	0	0	0	0	0	0	17	0	55	13	0	0	85	32	93	0	22	2	0	149	0	0	0	0	0	0	0	621
5:45 PM	12	0	58	14	0	0	84	24	177	0	50	3	0	254	0	0	0	0	0	0	0	10	0	71	10	0	0	91	19	114	0	22	4	0	159	0	0	0	0	0	0	0	588
Total Volume	64	0	288	48	0	0	400	43	815	0	193	13	0	1064	0	0	0	0	0	0	0	75	0	239	48	0	0	362	103	453	0	117	9	0	682	0	0	0	0	0	0	0	2508
% Approach Total	16.0	0.0	72.0	12.0	0.0	0.0		4.0	76.6	0.0	18.1	1.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0		20.7	0.0	66.0	13.3	0.0	0.0		15.1	66.4	0.0	17.2	1.3	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.667	0.000	0.889	0.857	0.000	0.000	0.909	0.448	0.910	0.000	0.910	0.542	0.000	0.930	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.721	0.000	0.842	0.800	0.000	0.000	0.953	0.805	0.906	0.000	0.665	0.563	0.000	0.844	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.940
Cars	64	0	287	48	0	0	399	43	811	0	193	13	0	1060	0	0	0	0	0	0	0	74	0	238	47	0	0	359	103	449	0	117	9	0	678	0	0	0	0	0	0	0	2496
Cars %	100.0	0.0	99.7	100.0	0.0	0.0	99.8	100.0	99.5	0.0	100.0	100.0	0.0	99.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.7	0.0	99.6	97.9	0.0	0.0	99.2	100.0	99.1	0.0	100.0	100.0	0.0	99.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.5
Heavy Vehicles	0	0	1	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	1	0	1	1	0	0	3	0	4	0	0	0	0	4	0	0	0	0	0	0	0	12
Heavy Vehicles %	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.4	2.1	0.0	0.0	0.8	0.0	0.9	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Cars Enter Leg	64	0	287	48	0	0	399	43	811	0	193	13	0	1060	0	0	0	0	0	0	0	74	0	238	47	0	0	359	103	449	0	117	9	0	678	0	0	0	0	0	0	0	2496
Heavy Enter Leg	0	0	1	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	1	0	1	1	0	0	3	0	4	0	0	0	0	4	0	0	0	0	0	0	0	12
Total Entering Leg	64	0	288	48	0	0	400	43	815	0	193	13	0	1064	0	0	0	0	0	0	0	75	0	239	48	0	0	362	103	453	0	117	9	0	682	0	0	0	0	0	0	0	2508
Cars Exiting Leg							398							0							584							583							0							931	2496
Heavy Exiting Leg							1							0							5							1							0							5	12
Total Exiting Leg							399							0							589							584							0							936	2508

PDI File #: **186121 BB**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	13	0	65	7	0	0	85	6	172	0	32	6	0	216	0	0	0	0	0	0	0	16	0	45	16	0	0	77	15	87	0	25	4	0	131	0	0	0	0	0	0	0	509
4:15 PM	9	0	86	4	0	0	99	6	168	0	42	4	0	220	0	0	0	0	0	0	0	23	0	53	11	0	0	87	23	93	0	34	1	0	151	0	0	0	0	0	0	0	557
4:30 PM	19	0	71	4	0	0	94	8	205	0	49	7	0	269	0	0	0	0	0	0	0	19	0	46	16	0	0	81	17	96	0	25	2	0	140	0	0	0	0	0	0	0	584
4:45 PM	20	0	72	10	0	0	102	5	162	0	42	3	0	212	0	0	0	0	0	0	0	14	0	49	13	0	0	76	18	75	0	31	1	0	125	0	0	0	0	0	0	0	515
Total	61	0	294	25	0	0	380	25	707	0	165	20	0	917	0	0	0	0	0	0	0	72	0	193	56	0	0	321	73	351	0	115	8	0	547	0	0	0	0	0	0	0	2165
5:00 PM	16	0	81	13	0	0	110	5	211	0	42	6	0	264	0	0	0	0	0	0	0	22	0	58	10	0	0	90	32	123	0	44	1	0	200	0	0	0	0	0	0	0	664
5:15 PM	24	0	68	13	0	0	105	8	202	0	48	1	0	259	0	0	0	0	0	0	0	25	0	54	15	0	0	94	20	119	0	29	2	0	170	0	0	0	0	0	0	0	628
5:30 PM	12	0	80	8	0	0	100	6	222	0	53	3	0	284	0	0	0	0	0	0	0	17	0	55	12	0	0	84	32	93	0	22	2	0	149	0	0	0	0	0	0	0	617
5:45 PM	12	0	58	14	0	0	84	24	176	0	50	3	0	253	0	0	0	0	0	0	0	10	0	71	10	0	0	91	19	114	0	22	4	0	159	0	0	0	0	0	0	0	587
Total	64	0	287	48	0	0	399	43	811	0	193	13	0	1060	0	0	0	0	0	0	0	74	0	238	47	0	0	359	103	449	0	117	9	0	678	0	0	0	0	0	0	0	2496
Grand Total	125	0	581	73	0	0	779	68	1518	0	358	33	0	1977	0	0	0	0	0	0	0	146	0	431	103	0	0	680	176	800	0	232	17	0	1225	0	0	0	0	0	0	0	4661
Approach %	16.0	0.0	74.6	9.4	0.0	0.0		3.4	76.8	0.0	18.1	1.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0		21.5	0.0	63.4	15.1	0.0	0.0		14.4	65.3	0.0	18.9	1.4	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	2.7	0.0	12.5	1.6	0.0	0.0	16.7	1.5	32.6	0.0	7.7	0.7	0.0	42.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	9.2	2.2	0.0	0.0	14.6	3.8	17.2	0.0	5.0	0.4	0.0	26.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							731							0							1052							1115							0							1763	4661

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
5:00 PM	16	0	81	13	0	0	110	5	211	0	42	6	0	264	0	0	0	0	0	0	0	22	0	58	10	0	0	90	32	123	0	44	1	0	200	0	0	0	0	0	0	0	664
5:15 PM	24	0	68	13	0	0	105	8	202	0	48	1	0	259	0	0	0	0	0	0	0	25	0	54	15	0	0	94	20	119	0	29	2	0	170	0	0	0	0	0	0	0	628
5:30 PM	12	0	80	8	0	0	100	6	222	0	53	3	0	284	0	0	0	0	0	0	0	17	0	55	12	0	0	84	32	93	0	22	2	0	149	0	0	0	0	0	0	0	617
5:45 PM	12	0	58	14	0	0	84	24	176	0	50	3	0	253	0	0	0	0	0	0	0	10	0	71	10	0	0	91	19	114	0	22	4	0	159	0	0	0	0	0	0	0	587
Total Volume	64	0	287	48	0	0	399	43	811	0	193	13	0	1060	0	0	0	0	0	0	0	74	0	238	47	0	0	359	103	449	0	117	9	0	678	0	0	0	0	0	0	0	2496
% Approach Total	16.0	0.0	71.9	12.0	0.0	0.0		4.1	76.5	0.0	18.2	1.2	0.0		0.0	0.0	0.0	0.0	0.0	0.0		20.6	0.0	66.3	13.1	0.0	0.0		15.2	66.2	0.0	17.3	1.3	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.667	0.000	0.886	0.857	0.000	0.000	0.907	0.448	0.913	0.000	0.910	0.542	0.000	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.740	0.000	0.838	0.783	0.000	0.000	0.955	0.805	0.913	0.000	0.665	0.563	0.000	0.848	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.940
Entering Leg	64	0	287	48	0	0	399	43	811	0	193	13	0	1060	0	0	0	0	0	0	0	74	0	238	47	0	0	359	103	449	0	117	9	0	678	0	0	0	0	0	0	0	2496
Exiting Leg							398							0							584							583							0							931	2496
Total							797							1060							584							942							678							931	4992

PDI File #: **186121 BB**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	0	0	9
4:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	5
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	5
Total	0	0	1	0	0	0	1	0	5	0	0	1	0	6	0	0	0	0	0	0	0	1	0	3	2	0	0	6	0	12	0	0	0	0	12	0	0	0	0	0	0	0	25
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	4
5:30 PM	0	0	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	1	0	1	1	0	0	3	0	4	0	0	0	0	4	0	0	0	0	0	0	0	12
Grand Total	0	0	2	0	0	0	2	0	9	0	0	1	0	10	0	0	0	0	0	0	0	2	0	4	3	0	0	9	0	16	0	0	0	0	16	0	0	0	0	0	0	0	37
Approach %	0.0	0.0	100.0	0.0	0.0	0.0		0.0	90.0	0.0	0.0	10.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		22.2	0.0	44.4	33.3	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
Total %	0.0	0.0	5.4	0.0	0.0	0.0	5.4	0.0	24.3	0.0	0.0	2.7	0.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	10.8	8.1	0.0	0.0	24.3	0.0	43.2	0.0	0.0	0.0	0.0	43.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total							4							0							19							2							0							12	37
Buses	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	12	0	0	0	0	12	0	0	0	0	0	0	0	18
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	33.3	0.0	0.0	33.3	0.0	75.0	0.0	0.0	0.0	0.0	75.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.6
Exiting Leg Total							2							0							12							0							0							4	18
Single-Unit Trucks	0	0	2	0	0	0	2	0	6	0	0	1	0	7	0	0	0	0	0	0	0	2	0	2	2	0	0	6	0	3	0	0	0	0	3	0	0	0	0	0	0	0	18
% Single-Unit	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	66.7	0.0	0.0	100.0	0.0	70.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	50.0	66.7	0.0	0.0	66.7	0.0	18.8	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.6
Exiting Leg Total							2							0							6							2							0							8	18
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Exiting Leg Total							0							0							1							0							0							0	1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	St. Paul Street							Beacon Street							Beacon Street							St. Paul Street							Beacon Street							Beacon Street							
	from North							from East							from Southeast							from South							from Southwest							from West							
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	3	0	0	0	0	3	0	0	0	0	0	0	0	9
4:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	5
4:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	5
Total Volume	0	0	1	0	0	0	1	0	5	0	0	1	0	6	0	0	0	0	0	0	0	1	0	3	2	0	0	6	0	12	0	0	0	0	12	0	0	0	0	0	0	0	25
% Approach Total	0.0	0.0	100.0	0.0	0.0	0.0		0.0	83.3	0.0	0.0	16.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0		16.7	0.0	50.0	33.3	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.625	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.500	0.000	0.000	0.500	0.000	0.750	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.694
Buses	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	10	0	0	0	0	10	0	0	0	0	0	0	0	14
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	33.3	0.0	83.3	0.0	0.0	0.0	0.0	83.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.0
Single-Unit Trucks	0	0	1	0	0	0	1	0	3	0	0	1	0	4	0	0	0	0	0	0	0	1	0	1	2	0	0	4	0	2	0	0	0	0	2	0	0	0	0	0	0	0	11
Single-Unit %	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	60.0	0.0	0.0	100.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	33.3	100.0	0.0	0.0	66.7	0.0	16.7	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	10	0	0	0	0	10	0	0	0	0	0	0	0	14
Single-Unit Trucks	0	0	1	0	0	0	1	0	3	0	0	1	0	4	0	0	0	0	0	0	0	1	0	1	2	0	0	4	0	2	0	0	0	0	2	0	0	0	0	0	0	0	11
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	0	1	0	0	0	1	0	5	0	0	1	0	6	0	0	0	0	0	0	0	1	0	3	2	0	0	6	0	12	0	0	0	0	12	0	0	0	0	0	0	0	25
Buses							2							0							10							0							0							2	14
Single-Unit Trucks							1							0							4							1							0							5	11
Articulated Trucks							0							0							0							0							0							0	0
Total Exiting Leg							3							0							14							1							0							7	25

PDI File #: **186121 BB**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	1	0	1	0	0	0	0	0	2	0	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	9
4:15 PM	1	0	1	0	0	0	0	0	2	0	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	9
4:30 PM	0	0	3	0	0	0	0	0	3	1	11	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	18
4:45 PM	2	0	1	0	0	0	0	0	3	0	11	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	4	0	1	0	0	1	0	6	0	0	0	0	0	0	0	0	0	22
Total	4	0	6	0	0	0	0	0	10	1	32	0	0	0	0	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	7	0	4	0	0	1	0	12	0	0	0	0	0	0	0	0	0	58
5:00 PM	0	0	3	0	0	0	0	0	3	0	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	1	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	24
5:15 PM	0	0	2	0	0	0	0	0	2	0	17	0	2	0	0	0	0	19	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	1	0	1	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	27
5:30 PM	0	0	3	0	0	0	0	1	4	0	16	0	1	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	25
5:45 PM	2	0	6	0	0	0	0	1	9	0	23	0	0	0	0	0	0	23	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	37
Total	2	0	14	0	0	0	0	2	18	0	72	0	3	0	0	0	0	75	0	0	0	0	1	0	2	0	3	0	0	3	0	0	0	3	0	6	2	7	0	2	0	0	0	0	11	0	0	0	0	0	0	0	0	0	113
Grand Total	6	0	20	0	0	0	0	2	28	1	104	0	3	0	0	0	0	108	0	0	0	0	1	0	2	0	3	0	0	3	3	0	0	3	0	9	2	14	0	6	0	0	1	0	23	0	0	0	0	0	0	0	0	0	171
Approach %	21.4	0.0	71.4	0.0	0.0	0.0	0.0	7.1		0.9	96.3	0.0	2.8	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	33.3	0.0	66.7	0.0		0.0	0.0	33.3	33.3	0.0	0.0	33.3	0.0		8.7	60.9	0.0	26.1	0.0	0.0	4.3	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total %	3.5	0.0	11.7	0.0	0.0	0.0	0.0	1.2	16.4	0.6	60.8	0.0	1.8	0.0	0.0	0.0	0.0	63.2	0.0	0.0	0.0	0.0	0.6	0.0	1.2	0.0	1.8	0.0	0.0	1.8	1.8	0.0	0.0	1.8	0.0	5.3	1.2	8.2	0.0	3.5	0.0	0.0	0.6	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total									12									0									16									29									1									113	171

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	3	0	0	0	0	0	3	0	16	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	1	2	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	24
5:15 PM	0	0	2	0	0	0	0	0	2	0	17	0	2	0	0	0	0	19	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	1	0	1	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	27
5:30 PM	0	0	3	0	0	0	0	1	4	0	16	0	1	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	25
5:45 PM	2	0	6	0	0	0	0	1	9	0	23	0	0	0	0	0	0	23	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	2	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	37
Total Volume	2	0	14	0	0	0	0	2	18	0	72	0	3	0	0	0	0	75	0	0	0	0	1	0	2	0	3	0	0	3	0	0	0	3	0	6	2	7	0	2	0	0	0	0	11	0	0	0	0	0	0	0	0	0	113
% Approach Total	11.1	0.0	77.8	0.0	0.0	0.0	0.0	11.1		0.0	96.0	0.0	4.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	33.3	0.0	66.7	0.0		0.0	0.0	50.0	0.0	0.0	0.0	50.0	0.0		18.2	63.6	0.0	18.2	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.250	0.000	0.583	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.783	0.000	0.375	0.000	0.000	0.000	0.000	0.815	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.375	0.000	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.750	0.500	0.583	0.000	0.250	0.000	0.000	0.000	0.000	0.917	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.764
Entering Leg	2	0	14	0	0	0	0	2	18	0	72	0	3	0	0	0	0	75	0	0	0	0	1	0	2	0	3	0	0	3	0	0	0	3	0	6	2	7	0	2	0	0	0	0	11	0	0	0	0	0	0	0	0	0	113
Exiting Leg									7									0									9									23									0									74	113
Total									25									75									12									29									11									74	226

PDI File #: **186121 BB**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Beacon Street W: Beacon Street SE: Beacon Street SW: Beacon Street**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Pedestrians

	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	19	19	38	0	0	0	0	0	0	8	10	18	0	0	0	0	0	0	18	8	26	0	0	0	0	0	0	17	10	27	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	3	5	8	124
4:15 PM	0	0	0	0	0	0	12	25	37	0	0	0	0	0	0	4	8	12	0	0	0	0	0	0	7	2	9	0	0	0	0	0	0	11	3	14	0	0	0	0	0	0	9	3	12	0	0	0	0	0	0	12	5	17	101
4:30 PM	0	0	0	0	0	0	9	23	32	0	0	0	0	0	0	9	16	25	0	0	0	0	0	0	8	9	17	0	0	0	0	0	0	15	9	24	0	0	0	0	0	0	5	3	8	0	0	0	0	0	0	4	7	11	117
4:45 PM	0	0	0	0	0	0	17	18	35	0	0	0	0	0	0	6	8	14	0	0	0	0	0	0	14	5	19	0	0	0	0	0	0	33	12	45	0	0	0	0	0	0	12	4	16	0	0	0	0	0	0	9	12	21	150
Total	0	0	0	0	0	0	57	85	142	0	0	0	0	0	0	27	42	69	0	0	0	0	0	0	47	24	71	0	0	0	0	0	0	76	34	110	0	0	0	0	0	0	30	13	43	0	0	0	0	0	0	28	29	57	492
5:00 PM	0	0	0	0	0	0	11	20	31	0	0	0	0	0	0	13	11	24	0	0	0	0	0	0	19	7	26	0	0	0	0	0	0	19	10	29	0	0	0	0	0	0	13	3	16	0	0	0	0	0	0	5	4	9	135
5:15 PM	0	0	0	0	0	0	15	45	60	0	0	0	0	0	0	11	19	30	0	0	0	0	0	0	16	6	22	0	0	0	0	0	0	36	19	55	0	0	0	0	0	0	9	10	19	0	0	0	0	0	0	7	10	17	203
5:30 PM	0	0	0	0	0	0	22	33	55	0	0	0	0	0	0	7	13	20	0	0	0	0	0	0	14	10	24	0	0	0	0	0	0	31	16	47	0	0	0	0	0	0	12	14	26	0	0	0	0	0	0	8	17	25	197
5:45 PM	0	0	0	0	0	0	18	43	61	0	0	0	0	0	0	9	22	31	0	0	0	0	0	0	15	9	24	0	0	0	0	0	0	22	8	30	0	0	0	0	0	0	11	6	17	0	0	0	0	0	0	10	7	17	180
Total	0	0	0	0	0	0	66	141	207	0	0	0	0	0	0	40	65	105	0	0	0	0	0	0	64	32	96	0	0	0	0	0	0	108	53	161	0	0	0	0	0	0	45	33	78	0	0	0	0	0	0	30	38	68	715
Grand Total	0	0	0	0	0	0	123	226	349	0	0	0	0	0	0	67	107	174	0	0	0	0	0	0	111	56	167	0	0	0	0	0	0	184	87	271	0	0	0	0	0	0	75	46	121	0	0	0	0	0	0	58	67	125	1207
Approach %	0	0	0	0	0	0	35	65		0	0	0	0	0	0	39	61		0	0	0	0	0	0	66	34		0	0	0	0	0	0	68	32		0	0	0	0	0	0	62	38		0	0	0	0	0	0	46	54		
Total %	0	0	0	0	0	0	10	19	29	0	0	0	0	0	0	5.6	8.9	14	0	0	0	0	0	0	9.2	4.6	14	0	0	0	0	0	0	15	7.2	22	0	0	0	0	0	0	6.2	3.8	10	0	0	0	0	0	0	4.8	5.6	10	
Exiting Leg Total									349									174									167								271									121									125	1207

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street from North									Beacon Street from East									Beacon Street from Southeast									St. Paul Street from South									Beacon Street from Southwest									Beacon Street from West									
	Right	Bear Righ	Thru	Bear Left	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Bear Left	Left	Hard Left	U-Turn	CW-SB	CW-NB	Total	Hard Righ	Bear Righ	Bear Left	Left	Hard Left	U-Turn	CW-SWB	CW-NEB	Total	Hard Righ	Right	Thru	Left	Hard Left	U-Turn	CW-WB	CW-EB	Total	Hard Righ	Right	Bear Righ	Bear Left	Hard Left	U-Turn	CW-NWB	CW-SEB	Total	Hard Righ	Right	Bear Righ	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	0	0	11	20	31	0	0	0	0	0	0	13	11	24	0	0	0	0	0	0	19	7	26	0	0	0	0	0	0	19	10	29	0	0	0	0	0	0	13	3	16	0	0	0	0	0	0	5	4	9	135
5:15 PM	0	0	0	0	0	0	15	45	60	0	0	0	0	0	0	11	19	30	0	0	0	0	0	0	16	6	22	0	0	0	0	0	0	36	19	55	0	0	0	0	0	0	9	10	19	0	0	0	0	0	0	7	10	17	203
5:30 PM	0	0	0	0	0	0	22	33	55	0	0	0	0	0	0	7	13	20	0	0	0	0	0	0	14	10	24	0	0	0	0	0	0	31	16	47	0	0	0	0	0	0	12	14	26	0	0	0	0	0	0	8	17	25	197
5:45 PM	0	0	0	0	0	0	18	43	61	0	0	0	0	0	0	9	22	31	0	0	0	0	0	0	15	9	24	0	0	0	0	0	0	22	8	30	0	0	0	0	0	0	11	6	17	0	0	0	0	0	0	10	7	17	180
Total Volume	0	0	0	0	0	0	66	141	207	0	0	0	0	0	0	40	65	105	0	0	0	0	0	0	64	32	96	0	0	0	0	0	0	108	53	161	0	0	0	0	0	0	45	33	78	0	0	0	0	0	0	30	38	68	715
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0	31.9	68.1		0.0	0.0	0.0	0.0	0.0	0.0	38.1	61.9		0.0	0.0	0.0	0.0	0.0	0.0	66.7	33.3		0.0	0.0	0.0	0.0	0.0	0.0	67.1	32.9		0.0	0.0	0.0	0.0	0.0	0.0	57.7	42.3		0.0	0.0	0.0	0.0	0.0	0.0	44.1	55.9		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.783	0.848	0.000	0.000	0.000	0.000	0.000	0.000	0.769	0.739	0.847	0.000	0.000	0.000	0.000	0.000	0.000	0.842	0.800	0.923	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.697	0.732	0.000	0.000	0.000	0.000	0.000	0.000	0.865	0.589	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.559	0.680	0.881
Entering Leg	0	0	0	0	0	0	66	141	207	0	0	0	0	0	0	40	65	105	0	0	0	0	0	0	64	32	96	0	0	0	0	0	0	108	53	161	0	0	0	0	0	0	45	33	78	0	0	0	0	0	0	30	38	68	715
Exiting Leg									207									105									96								161									78									68	715
Total									414									210									192								322									156									136	1430

PDI File #: **186121 C**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	2	78	5	0	85	4	4	3	0	11	4	61	3	0	68	4	2	4	0	10	174
7:15 AM	2	99	4	0	105	6	2	2	0	10	11	102	2	0	115	5	3	4	0	12	242
7:30 AM	1	126	7	0	134	4	4	5	0	13	6	81	3	0	90	2	9	3	0	14	251
7:45 AM	4	121	5	0	130	3	5	4	0	12	14	97	7	1	119	5	10	2	0	17	278
Total	9	424	21	0	454	17	15	14	0	46	35	341	15	1	392	16	24	13	0	53	945
8:00 AM	2	100	9	0	111	2	6	5	0	13	18	93	4	0	115	5	13	9	0	27	266
8:15 AM	3	77	5	0	85	4	3	6	0	13	10	87	2	0	99	6	12	2	0	20	217
8:30 AM	4	77	3	0	84	3	0	5	0	8	6	86	6	0	98	4	10	2	0	16	206
8:45 AM	0	66	3	0	69	5	0	5	0	10	9	75	4	0	88	7	9	3	0	19	186
Total	9	320	20	0	349	14	9	21	0	44	43	341	16	0	400	22	44	16	0	82	875
Grand Total	18	744	41	0	803	31	24	35	0	90	78	682	31	1	792	38	68	29	0	135	1820
Approach %	2.2	92.7	5.1	0.0		34.4	26.7	38.9	0.0		9.8	86.1	3.9	0.1		28.1	50.4	21.5	0.0		
Total %	1.0	40.9	2.3	0.0	44.1	1.7	1.3	1.9	0.0	4.9	4.3	37.5	1.7	0.1	43.5	2.1	3.7	1.6	0.0	7.4	
Exiting Leg Total					742					187					818					73	1820
Cars	18	723	39	0	780	31	21	34	0	86	77	666	30	1	774	33	67	27	0	127	1767
% Cars	100.0	97.2	95.1	0.0	97.1	100.0	87.5	97.1	0.0	95.6	98.7	97.7	96.8	100.0	97.7	86.8	98.5	93.1	0.0	94.1	97.1
Exiting Leg Total					724					183					791					69	1767
Heavy Vehicles	0	21	2	0	23	0	3	1	0	4	1	16	1	0	18	5	1	2	0	8	53
% Heavy Vehicles	0.0	2.8	4.9	0.0	2.9	0.0	12.5	2.9	0.0	4.4	1.3	2.3	3.2	0.0	2.3	13.2	1.5	6.9	0.0	5.9	2.9
Exiting Leg Total					18					4					27					4	53

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	2	99	4	0	105	6	2	2	0	10	11	102	2	0	115	5	3	4	0	12	242
7:30 AM	1	126	7	0	134	4	4	5	0	13	6	81	3	0	90	2	9	3	0	14	251
7:45 AM	4	121	5	0	130	3	5	4	0	12	14	97	7	1	119	5	10	2	0	17	278
8:00 AM	2	100	9	0	111	2	6	5	0	13	18	93	4	0	115	5	13	9	0	27	266
Total Volume	9	446	25	0	480	15	17	16	0	48	49	373	16	1	439	17	35	18	0	70	1037
% Approach Total	1.9	92.9	5.2	0.0		31.3	35.4	33.3	0.0		11.2	85.0	3.6	0.2		24.3	50.0	25.7	0.0		
PHF	0.563	0.885	0.694	0.000	0.896	0.625	0.708	0.800	0.000	0.923	0.681	0.914	0.571	0.250	0.922	0.850	0.673	0.500	0.000	0.648	0.933
Cars	9	435	24	0	468	15	16	15	0	46	49	363	16	1	429	13	34	17	0	64	1007
Cars %	100.0	97.5	96.0	0.0	97.5	100.0	94.1	93.8	0.0	95.8	100.0	97.3	100.0	100.0	97.7	76.5	97.1	94.4	0.0	91.4	97.1
Heavy Vehicles	0	11	1	0	12	0	1	1	0	2	0	10	0	0	10	4	1	1	0	6	30
Heavy Vehicles %	0.0	2.5	4.0	0.0	2.5	0.0	5.9	6.3	0.0	4.2	0.0	2.7	0.0	0.0	2.3	23.5	2.9	5.6	0.0	8.6	2.9
Cars Enter Leg	9	435	24	0	468	15	16	15	0	46	49	363	16	1	429	13	34	17	0	64	1007
Heavy Enter Leg	0	11	1	0	12	0	1	1	0	2	0	10	0	0	10	4	1	1	0	6	30
Total Entering Leg	9	446	25	0	480	15	17	16	0	48	49	373	16	1	439	17	35	18	0	70	1037
Cars Exiting Leg					395					107					464					41	1007
Heavy Exiting Leg					11					2					16					1	30
Total Exiting Leg					406					109					480					42	1037

PDI File #: **186121 C**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	2	76	5	0	83	4	2	3	0	9	4	61	3	0	68	4	2	3	0	9	169
7:15 AM	2	96	3	0	101	6	2	2	0	10	11	100	2	0	113	4	3	4	0	11	235
7:30 AM	1	123	7	0	131	4	4	4	0	12	6	81	3	0	90	2	8	3	0	13	246
7:45 AM	4	118	5	0	127	3	5	4	0	12	14	95	7	1	117	3	10	2	0	15	271
Total	9	413	20	0	442	17	13	13	0	43	35	337	15	1	388	13	23	12	0	48	921
8:00 AM	2	98	9	0	109	2	5	5	0	12	18	87	4	0	109	4	13	8	0	25	255
8:15 AM	3	75	5	0	83	4	3	6	0	13	10	85	2	0	97	6	12	2	0	20	213
8:30 AM	4	74	2	0	80	3	0	5	0	8	5	85	5	0	95	3	10	2	0	15	198
8:45 AM	0	63	3	0	66	5	0	5	0	10	9	72	4	0	85	7	9	3	0	19	180
Total	9	310	19	0	338	14	8	21	0	43	42	329	15	0	386	20	44	15	0	79	846
Grand Total	18	723	39	0	780	31	21	34	0	86	77	666	30	1	774	33	67	27	0	127	1767
Approach %	2.3	92.7	5.0	0.0		36.0	24.4	39.5	0.0		9.9	86.0	3.9	0.1		26.0	52.8	21.3	0.0		
Total %	1.0	40.9	2.2	0.0	44.1	1.8	1.2	1.9	0.0	4.9	4.4	37.7	1.7	0.1	43.8	1.9	3.8	1.5	0.0	7.2	
Exiting Leg Total					724					183					791					69	1767

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	2	96	3	0	101	6	2	2	0	10	11	100	2	0	113	4	3	4	0	11	235
7:30 AM	1	123	7	0	131	4	4	4	0	12	6	81	3	0	90	2	8	3	0	13	246
7:45 AM	4	118	5	0	127	3	5	4	0	12	14	95	7	1	117	3	10	2	0	15	271
8:00 AM	2	98	9	0	109	2	5	5	0	12	18	87	4	0	109	4	13	8	0	25	255
Total Volume	9	435	24	0	468	15	16	15	0	46	49	363	16	1	429	13	34	17	0	64	1007
% Approach Total	1.9	92.9	5.1	0.0		32.6	34.8	32.6	0.0		11.4	84.6	3.7	0.2		20.3	53.1	26.6	0.0		
PHF	0.563	0.884	0.667	0.000	0.893	0.625	0.800	0.750	0.000	0.958	0.681	0.908	0.571	0.250	0.917	0.813	0.654	0.531	0.000	0.640	0.929
Entering Leg	9	435	24	0	468	15	16	15	0	46	49	363	16	1	429	13	34	17	0	64	1007
Exiting Leg					395					107					464					41	1007
Total					863					153					893					105	2014

PDI File #: **186121 C**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	5
7:15 AM	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	7
7:30 AM	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	5
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	7
Total	0	11	1	0	12	0	2	1	0	3	0	4	0	0	4	3	1	1	0	5	24
8:00 AM	0	2	0	0	2	0	1	0	0	1	0	6	0	0	6	1	0	1	0	2	11
8:15 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
8:30 AM	0	3	1	0	4	0	0	0	0	0	1	1	1	0	3	1	0	0	0	1	8
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
Total	0	10	1	0	11	0	1	0	0	1	1	12	1	0	14	2	0	1	0	3	29
Grand Total	0	21	2	0	23	0	3	1	0	4	1	16	1	0	18	5	1	2	0	8	53
Approach %	0.0	91.3	8.7	0.0		0.0	75.0	25.0	0.0		5.6	88.9	5.6	0.0		62.5	12.5	25.0	0.0		
Total %	0.0	39.6	3.8	0.0	43.4	0.0	5.7	1.9	0.0	7.5	1.9	30.2	1.9	0.0	34.0	9.4	1.9	3.8	0.0	15.1	
Exiting Leg Total					18					4					27					4	53
Buses	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8
% Buses	0.0	14.3	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	31.3	0.0	0.0	27.8	0.0	0.0	0.0	0.0	0.0	15.1
Exiting Leg Total					5					0					3					0	8
Single-Unit Trucks	0	17	2	0	19	0	3	1	0	4	1	10	1	0	12	5	1	2	0	8	43
% Single-Unit	0.0	81.0	100.0	0.0	82.6	0.0	100.0	100.0	0.0	100.0	100.0	62.5	100.0	0.0	66.7	100.0	100.0	100.0	0.0	100.0	81.1
Exiting Leg Total					12					4					23					4	43
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% Articulated	0.0	4.8	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	3.8
Exiting Leg Total					1					0					1					0	2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	3	1	0	4	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	7
7:30 AM	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	5
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	7
8:00 AM	0	2	0	0	2	0	1	0	0	1	0	6	0	0	6	1	0	1	0	2	11
Total Volume	0	11	1	0	12	0	1	1	0	2	0	10	0	0	10	4	1	1	0	6	30
% Approach Total	0.0	91.7	8.3	0.0		0.0	50.0	50.0	0.0		0.0	100.0	0.0	0.0		66.7	16.7	16.7	0.0		
PHF	0.000	0.917	0.250	0.000	0.750	0.000	0.250	0.250	0.000	0.500	0.000	0.417	0.000	0.000	0.417	0.500	0.250	0.250	0.000	0.750	0.682
Buses	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Buses %	0.0	18.2	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0	0.0	16.7
Single-Unit Trucks	0	9	1	0	10	0	1	1	0	2	0	6	0	0	6	4	1	1	0	6	24
Single-Unit %	0.0	81.8	100.0	0.0	83.3	0.0	100.0	100.0	0.0	100.0	0.0	60.0	0.0	0.0	60.0	100.0	100.0	100.0	0.0	100.0	80.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	3.3
Buses	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
Single-Unit Trucks	0	9	1	0	10	0	1	1	0	2	0	6	0	0	6	4	1	1	0	6	24
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Entering Leg	0	11	1	0	12	0	1	1	0	2	0	10	0	0	10	4	1	1	0	6	30
Buses					3					0					2					0	5
Single-Unit Trucks					7					2					14					1	24
Articulated Trucks					1					0					0					0	1
Total Exiting Leg					11					2					16					1	30

PDI File #: **186121 C**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
7:15 AM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	7	0	0	0	0	7	0	1	0	0	0	0	1	9
Total	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	12	0	0	0	0	12	0	1	0	0	0	0	1	17
8:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	6	2	0	1	0	0	0	3	11
8:15 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	9	0	0	0	0	9	1	2	1	0	0	0	4	15
8:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	1	6	0	0	0	0	7	1	0	5	0	0	0	6	15
8:45 AM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	5	0	0	0	0	5	1	2	0	0	0	0	3	11
Total	0	9	0	0	0	0	9	0	0	0	0	0	0	0	1	26	0	0	0	0	27	5	4	7	0	0	0	16	52
Grand Total	0	13	0	0	0	0	13	0	0	0	0	0	0	0	1	38	0	0	0	0	39	5	5	7	0	0	0	17	69
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		2.6	97.4	0.0	0.0	0.0	0.0		29.4	29.4	41.2	0.0	0.0	0.0		
Total %	0.0	18.8	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	55.1	0.0	0.0	0.0	0.0	56.5	7.2	7.2	10.1	0.0	0.0	0.0	24.6	
Exiting Leg Total							45							6							18							0	69

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	6	0	0	0	0	6	2	0	1	0	0	0	3	11
8:15 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	9	0	0	0	0	9	1	2	1	0	0	0	4	15
8:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	1	6	0	0	0	0	7	1	0	5	0	0	0	6	15
8:45 AM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	5	0	0	0	0	5	1	2	0	0	0	0	3	11
Total Volume	0	9	0	0	0	0	9	0	0	0	0	0	0	0	1	26	0	0	0	0	27	5	4	7	0	0	0	16	52
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		3.7	96.3	0.0	0.0	0.0	0.0		31.3	25.0	43.8	0.0	0.0	0.0		
PHF	0.000	0.750	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.722	0.000	0.000	0.000	0.000	0.750	0.625	0.500	0.350	0.000	0.000	0.000	0.667	0.867
Entering Leg	0	9	0	0	0	0	9	0	0	0	0	0	0	0	1	26	0	0	0	0	27	5	4	7	0	0	0	16	52
Exiting Leg							33							5							14							0	52
Total							42							5							41							16	104

PDI File #: **186121 C**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Pedestrians

	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	1	1	2	0	0	0	0	1	1	2	0	0	0	0	1	2	3	0	0	0	0	5	0	5	12
7:15 AM	0	0	0	0	0	3	3	0	0	0	0	6	3	9	0	0	0	0	2	2	4	0	0	0	0	7	3	10	26
7:30 AM	0	0	0	0	8	1	9	0	0	0	0	10	2	12	0	0	0	0	2	3	5	0	0	0	0	3	22	25	51
7:45 AM	0	0	0	0	7	3	10	0	0	0	0	10	12	22	0	0	0	0	5	11	16	0	0	0	0	7	15	22	70
Total	0	0	0	0	16	8	24	0	0	0	0	27	18	45	0	0	0	0	10	18	28	0	0	0	0	22	40	62	159
8:00 AM	0	0	0	0	7	2	9	0	0	0	0	5	3	8	0	0	0	0	5	11	16	0	0	0	0	11	5	16	49
8:15 AM	0	0	0	0	4	4	8	0	0	0	0	1	5	6	0	0	0	0	2	5	7	0	0	0	0	7	5	12	33
8:30 AM	0	0	0	0	7	2	9	0	0	0	0	4	2	6	0	0	0	0	1	7	8	0	0	0	0	15	5	20	43
8:45 AM	0	0	0	0	3	1	4	0	0	0	0	3	5	8	0	0	0	0	4	8	12	0	0	0	0	9	4	13	37
Total	0	0	0	0	21	9	30	0	0	0	0	13	15	28	0	0	0	0	12	31	43	0	0	0	0	42	19	61	162
Grand Total	0	0	0	0	37	17	54	0	0	0	0	40	33	73	0	0	0	0	22	49	71	0	0	0	0	64	59	123	321
Approach %	0	0	0	0	68.5	31.5		0	0	0	0	54.8	45.2		0	0	0	0	31	69		0	0	0	0	52	48		
Total %	0	0	0	0	11.5	5.3	16.8	0	0	0	0	12.5	10.3	22.7	0	0	0	0	6.85	15.3	22.1	0	0	0	0	19.9	18.4	38.3	
Exiting Leg Total							54							73							71							123	321

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:30 AM	0	0	0	0	8	1	9	0	0	0	0	10	2	12	0	0	0	0	2	3	5	0	0	0	0	3	22	25	51
7:45 AM	0	0	0	0	7	3	10	0	0	0	0	10	12	22	0	0	0	0	5	11	16	0	0	0	0	7	15	22	70
8:00 AM	0	0	0	0	7	2	9	0	0	0	0	5	3	8	0	0	0	0	5	11	16	0	0	0	0	11	5	16	49
8:15 AM	0	0	0	0	4	4	8	0	0	0	0	1	5	6	0	0	0	0	2	5	7	0	0	0	0	7	5	12	33
Total Volume	0	0	0	0	26	10	36	0	0	0	0	26	22	48	0	0	0	0	14	30	44	0	0	0	0	28	47	75	203
% Approach Total	0.0	0.0	0.0	0.0	72.2	27.8		0.0	0.0	0.0	0.0	54.2	45.8		0.0	0.0	0.0	0.0	31.8	68.2		0.0	0.0	0.0	0.0	37.3	62.7		
PHF	0.000	0.000	0.000	0.000	0.813	0.625	0.900	0.000	0.000	0.000	0.000	0.650	0.458	0.545	0.000	0.000	0.000	0.000	0.700	0.682	0.688	0.000	0.000	0.000	0.000	0.636	0.534	0.750	0.725
Entering Leg	0	0	0	0	26	10	36	0	0	0	0	26	22	48	0	0	0	0	14	30	44	0	0	0	0	28	47	75	203
Exiting Leg							36							48							44							75	203
Total							72							96							88							150	406

PDI File #: **186121 CC**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	3	106	3	0	112	5	5	3	0	13	3	66	6	0	75	9	3	3	0	15	215
4:15 PM	2	140	2	0	144	3	1	2	0	6	5	90	2	0	97	7	4	3	0	14	261
4:30 PM	5	129	2	0	136	5	0	3	0	8	3	75	3	0	81	7	4	4	1	16	241
4:45 PM	5	131	4	0	140	4	3	2	0	9	5	75	4	0	84	7	0	1	0	8	241
Total	15	506	11	0	532	17	9	10	0	36	16	306	15	0	337	30	11	11	1	53	958
5:00 PM	3	147	2	0	152	4	6	7	0	17	5	83	5	0	93	6	4	6	0	16	278
5:15 PM	4	136	3	0	143	5	0	7	0	12	7	90	3	0	100	5	5	3	0	13	268
5:30 PM	5	153	4	0	162	6	2	4	0	12	5	75	2	0	82	21	5	2	0	28	284
5:45 PM	2	124	5	0	131	4	2	7	0	13	4	83	5	0	92	8	3	6	0	17	253
Total	14	560	14	0	588	19	10	25	0	54	21	331	15	0	367	40	17	17	0	74	1083
Grand Total	29	1066	25	0	1120	36	19	35	0	90	37	637	30	0	704	70	28	28	1	127	2041
Approach %	2.6	95.2	2.2	0.0		40.0	21.1	38.9	0.0		5.3	90.5	4.3	0.0		55.1	22.0	22.0	0.8		
Total %	1.4	52.2	1.2	0.0	54.9	1.8	0.9	1.7	0.0	4.4	1.8	31.2	1.5	0.0	34.5	3.4	1.4	1.4	0.0	6.2	
Exiting Leg Total					701					90					1171					79	2041
Cars	29	1063	25	0	1117	36	19	34	0	89	36	630	29	0	695	68	24	26	1	119	2020
% Cars	100.0	99.7	100.0	0.0	99.7	100.0	100.0	97.1	0.0	98.9	97.3	98.9	96.7	0.0	98.7	97.1	85.7	92.9	100.0	93.7	99.0
Exiting Leg Total					692					85					1165					78	2020
Heavy Vehicles	0	3	0	0	3	0	0	1	0	1	1	7	1	0	9	2	4	2	0	8	21
% Heavy Vehicles	0.0	0.3	0.0	0.0	0.3	0.0	0.0	2.9	0.0	1.1	2.7	1.1	3.3	0.0	1.3	2.9	14.3	7.1	0.0	6.3	1.0
Exiting Leg Total					9					5					6					1	21

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	3	147	2	0	152	4	6	7	0	17	5	83	5	0	93	6	4	6	0	16	278
5:15 PM	4	136	3	0	143	5	0	7	0	12	7	90	3	0	100	5	5	3	0	13	268
5:30 PM	5	153	4	0	162	6	2	4	0	12	5	75	2	0	82	21	5	2	0	28	284
5:45 PM	2	124	5	0	131	4	2	7	0	13	4	83	5	0	92	8	3	6	0	17	253
Total Volume	14	560	14	0	588	19	10	25	0	54	21	331	15	0	367	40	17	17	0	74	1083
% Approach Total	2.4	95.2	2.4	0.0		35.2	18.5	46.3	0.0		5.7	90.2	4.1	0.0		54.1	23.0	23.0	0.0		
PHF	0.700	0.915	0.700	0.000	0.907	0.792	0.417	0.893	0.000	0.794	0.750	0.919	0.750	0.000	0.918	0.476	0.850	0.708	0.000	0.661	0.953
Cars	14	558	14	0	586	19	10	25	0	54	21	329	14	0	364	40	15	16	0	71	1075
Cars %	100.0	99.6	100.0	0.0	99.7	100.0	100.0	100.0	0.0	100.0	100.0	99.4	93.3	0.0	99.2	100.0	88.2	94.1	0.0	95.9	99.3
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	2	1	0	3	8
Heavy Vehicles %	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	6.7	0.0	0.8	0.0	11.8	5.9	0.0	4.1	0.7
Cars Enter Leg	14	558	14	0	586	19	10	25	0	54	21	329	14	0	364	40	15	16	0	71	1075
Heavy Enter Leg	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	2	1	0	3	8
Total Entering Leg	14	560	14	0	588	19	10	25	0	54	21	331	15	0	367	40	17	17	0	74	1083
Cars Exiting Leg					364					50					623					38	1075
Heavy Exiting Leg					3					2					2					1	8
Total Exiting Leg					367					52					625					39	1083

PDI File #: **186121 CC**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	3	106	3	0	112	5	5	3	0	13	3	65	6	0	74	9	3	3	0	15	214
4:15 PM	2	140	2	0	144	3	1	2	0	6	5	87	2	0	94	5	3	3	0	11	255
4:30 PM	5	128	2	0	135	5	0	3	0	8	2	74	3	0	79	7	3	3	1	14	236
4:45 PM	5	131	4	0	140	4	3	1	0	8	5	75	4	0	84	7	0	1	0	8	240
Total	15	505	11	0	531	17	9	9	0	35	15	301	15	0	331	28	9	10	1	48	945
5:00 PM	3	147	2	0	152	4	6	7	0	17	5	82	4	0	91	6	4	5	0	15	275
5:15 PM	4	135	3	0	142	5	0	7	0	12	7	90	3	0	100	5	4	3	0	12	266
5:30 PM	5	152	4	0	161	6	2	4	0	12	5	74	2	0	81	21	4	2	0	27	281
5:45 PM	2	124	5	0	131	4	2	7	0	13	4	83	5	0	92	8	3	6	0	17	253
Total	14	558	14	0	586	19	10	25	0	54	21	329	14	0	364	40	15	16	0	71	1075
Grand Total	29	1063	25	0	1117	36	19	34	0	89	36	630	29	0	695	68	24	26	1	119	2020
Approach %	2.6	95.2	2.2	0.0		40.4	21.3	38.2	0.0		5.2	90.6	4.2	0.0		57.1	20.2	21.8	0.8		
Total %	1.4	52.6	1.2	0.0	55.3	1.8	0.9	1.7	0.0	4.4	1.8	31.2	1.4	0.0	34.4	3.4	1.2	1.3	0.0	5.9	
Exiting Leg Total					692					85					1165					78	2020

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	3	147	2	0	152	4	6	7	0	17	5	82	4	0	91	6	4	5	0	15	275
5:15 PM	4	135	3	0	142	5	0	7	0	12	7	90	3	0	100	5	4	3	0	12	266
5:30 PM	5	152	4	0	161	6	2	4	0	12	5	74	2	0	81	21	4	2	0	27	281
5:45 PM	2	124	5	0	131	4	2	7	0	13	4	83	5	0	92	8	3	6	0	17	253
Total Volume	14	558	14	0	586	19	10	25	0	54	21	329	14	0	364	40	15	16	0	71	1075
% Approach Total	2.4	95.2	2.4	0.0		35.2	18.5	46.3	0.0		5.8	90.4	3.8	0.0		56.3	21.1	22.5	0.0		
PHF	0.700	0.918	0.700	0.000	0.910	0.792	0.417	0.893	0.000	0.794	0.750	0.914	0.700	0.000	0.910	0.476	0.938	0.667	0.000	0.657	0.956
Entering Leg	14	558	14	0	586	19	10	25	0	54	21	329	14	0	364	40	15	16	0	71	1075
Exiting Leg					364					50					623					38	1075
Total					950					104					987					109	2150

PDI File #: **186121 CC**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	2	1	0	0	3	6
4:30 PM	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	1	1	0	2	5
4:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	1	0	1	1	5	0	0	6	2	2	1	0	5	13
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	3
5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	2	1	0	3	8
Grand Total	0	3	0	0	3	0	0	1	0	1	1	7	1	0	9	2	4	2	0	8	21
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		11.1	77.8	11.1	0.0		25.0	50.0	25.0	0.0		
Total %	0.0	14.3	0.0	0.0	14.3	0.0	0.0	4.8	0.0	4.8	4.8	33.3	4.8	0.0	42.9	9.5	19.0	9.5	0.0	38.1	
Exiting Leg Total					9					5					6					1	21
Buses	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	4
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.9	0.0	0.0	33.3	0.0	25.0	0.0	0.0	12.5	19.0
Exiting Leg Total					3					1					0					0	4
Single-Unit Trucks	0	3	0	0	3	0	0	1	0	1	1	4	1	0	6	2	3	2	0	7	17
% Single-Unit	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	57.1	100.0	0.0	66.7	100.0	75.0	100.0	0.0	87.5	81.0
Exiting Leg Total					6					4					6					1	17
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	St. Paul Street					Sewall Avenue					St. Paul Street					Sewall Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	2	1	0	0	3	6
4:30 PM	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	1	1	0	2	5
4:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	0	1	3
Total Volume	0	1	0	0	1	0	0	1	0	1	1	5	1	0	7	2	2	2	0	6	15
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	100.0	0.0		14.3	71.4	14.3	0.0		33.3	33.3	33.3	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.250	0.250	0.417	0.250	0.000	0.583	0.250	0.500	0.500	0.000	0.500	0.625
Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	13.3
Single-Unit Trucks	0	1	0	0	1	0	0	1	0	1	1	3	1	0	5	2	2	2	0	6	13
Single-Unit %	0.0	100.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	100.0	100.0	60.0	100.0	0.0	71.4	100.0	100.0	100.0	0.0	100.0	86.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Single-Unit Trucks	0	1	0	0	1	0	0	1	0	1	1	3	1	0	5	2	2	2	0	6	13
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	1	0	0	1	0	0	1	0	1	1	5	1	0	7	2	2	2	0	6	15
Buses					2					0					0					0	2
Single-Unit Trucks					5					3					4					1	13
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					7					3					4					1	15

PDI File #: **186121 CC**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3
4:30 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	4
Total	0	6	0	0	0	0	6	0	2	0	0	0	0	2	1	3	0	0	0	0	4	0	0	0	0	0	0	0	12
5:00 PM	0	3	0	0	0	0	3	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	2	2	8
5:15 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	5
5:30 PM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	4
5:45 PM	1	4	0	0	1	0	6	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1	1	9
Total	1	12	0	0	1	0	14	0	2	0	0	0	0	2	0	5	0	0	0	1	6	0	0	0	0	0	4	4	26
Grand Total	1	18	0	0	1	0	20	0	4	0	0	0	0	4	1	8	0	0	0	1	10	0	0	0	0	0	4	4	38
Approach %	5.0	90.0	0.0	0.0	5.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		10.0	80.0	0.0	0.0	0.0	10.0		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	2.6	47.4	0.0	0.0	2.6	0.0	52.6	0.0	10.5	0.0	0.0	0.0	0.0	10.5	2.6	21.1	0.0	0.0	0.0	2.6	26.3	0.0	0.0	0.0	0.0	0.0	10.5	10.5	
Exiting Leg Total							9							1							19							9	38

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3
4:30 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	4
Total Volume	0	6	0	0	0	0	6	0	2	0	0	0	0	2	1	3	0	0	0	0	4	0	0	0	0	0	0	0	12
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		25.0	75.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.250	0.375	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	6	0	0	0	0	6	0	2	0	0	0	0	2	1	3	0	0	0	0	4	0	0	0	0	0	0	0	12
Exiting Leg							3							1							6							2	12
Total							9							3							10							2	24

PDI File #: **186121 CC**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Sewall Avenue W: Sewall Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Pedestrians

	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	6	9	15	0	0	0	0	9	7	16	0	0	0	0	4	3	7	0	0	0	0	2	6	8	46
4:15 PM	0	0	0	0	2	2	4	0	0	0	0	4	3	7	0	0	0	0	2	7	9	0	0	0	0	4	1	5	25
4:30 PM	0	0	0	0	2	5	7	0	0	0	0	7	3	10	0	0	0	0	2	2	4	0	0	0	0	2	4	6	27
4:45 PM	0	0	0	0	2	2	4	0	0	0	0	7	8	15	0	0	0	0	8	2	10	0	0	0	0	5	2	7	36
Total	0	0	0	0	12	18	30	0	0	0	0	27	21	48	0	0	0	0	16	14	30	0	0	0	0	13	13	26	134
5:00 PM	0	0	0	0	1	5	6	0	0	0	0	8	6	14	0	0	0	0	5	1	6	0	0	0	0	7	5	12	38
5:15 PM	0	0	0	0	1	10	11	0	0	0	0	4	7	11	0	0	0	0	6	5	11	0	0	0	0	4	8	12	45
5:30 PM	0	0	0	0	6	7	13	0	0	0	0	5	5	10	0	0	0	0	5	3	8	0	0	0	0	6	11	17	48
5:45 PM	0	0	0	0	2	6	8	0	0	0	0	12	5	17	0	0	0	0	7	5	12	0	0	0	0	6	6	12	49
Total	0	0	0	0	10	28	38	0	0	0	0	29	23	52	0	0	0	0	23	14	37	0	0	0	0	23	30	53	180
Grand Total	0	0	0	0	22	46	68	0	0	0	0	56	44	100	0	0	0	0	39	28	67	0	0	0	0	36	43	79	314
Approach %	0	0	0	0	32.4	67.6		0	0	0	0	56	44		0	0	0	0	58.2	41.8		0	0	0	0	45.6	54.4		
Total %	0	0	0	0	7.01	14.6	21.7	0	0	0	0	17.8	14	31.8	0	0	0	0	12.4	8.92	21.3	0	0	0	0	11.5	13.7	25.2	
Exiting Leg Total							68							100							67							79	314

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street							Sewall Avenue							St. Paul Street							Sewall Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	1	5	6	0	0	0	0	8	6	14	0	0	0	0	5	1	6	0	0	0	0	7	5	12	38
5:15 PM	0	0	0	0	1	10	11	0	0	0	0	4	7	11	0	0	0	0	6	5	11	0	0	0	0	4	8	12	45
5:30 PM	0	0	0	0	6	7	13	0	0	0	0	5	5	10	0	0	0	0	5	3	8	0	0	0	0	6	11	17	48
5:45 PM	0	0	0	0	2	6	8	0	0	0	0	12	5	17	0	0	0	0	7	5	12	0	0	0	0	6	6	12	49
Total Volume	0	0	0	0	10	28	38	0	0	0	0	29	23	52	0	0	0	0	23	14	37	0	0	0	0	23	30	53	180
% Approach Total	0.0	0.0	0.0	0.0	26.3	73.7		0.0	0.0	0.0	0.0	55.8	44.2		0.0	0.0	0.0	0.0	62.2	37.8		0.0	0.0	0.0	0.0	43.4	56.6		
PHF	0.000	0.000	0.000	0.000	0.417	0.700	0.731	0.000	0.000	0.000	0.000	0.604	0.821	0.765	0.000	0.000	0.000	0.000	0.821	0.700	0.771	0.000	0.000	0.000	0.000	0.821	0.682	0.779	0.918
Entering Leg	0	0	0	0	10	28	38	0	0	0	0	29	23	52	0	0	0	0	23	14	37	0	0	0	0	23	30	53	180
Exiting Leg							38							52							37							53	180
Total							76							104							74							106	360

PDI File #: **186121 E**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	13	64	8	0	85	6	27	10	0	43	17	57	2	0	76	6	73	1	0	80	284
7:15 AM	13	79	7	0	99	11	48	9	0	68	9	99	6	0	114	5	86	5	0	96	377
7:30 AM	17	99	17	0	133	8	47	13	0	68	10	77	1	0	88	13	81	6	0	100	389
7:45 AM	30	94	4	0	128	13	41	2	0	56	9	98	7	0	114	19	50	6	0	75	373
Total	73	336	36	0	445	38	163	34	0	235	45	331	16	0	392	43	290	18	0	351	1423
8:00 AM	29	75	9	0	113	13	42	23	0	78	6	99	4	0	109	7	49	8	1	65	365
8:15 AM	17	66	11	0	94	12	45	9	0	66	14	73	2	1	90	9	73	4	0	86	336
8:30 AM	13	61	13	0	87	9	49	8	0	66	13	85	5	0	103	5	71	7	0	83	339
8:45 AM	11	54	9	0	74	5	33	2	0	40	25	80	2	0	107	7	78	3	0	88	309
Total	70	256	42	0	368	39	169	42	0	250	58	337	13	1	409	28	271	22	1	322	1349
Grand Total	143	592	78	0	813	77	332	76	0	485	103	668	29	1	801	71	561	40	1	673	2772
Approach %	17.6	72.8	9.6	0.0		15.9	68.5	15.7	0.0		12.9	83.4	3.6	0.1		10.5	83.4	5.9	0.1		
Total %	5.2	21.4	2.8	0.0	29.3	2.8	12.0	2.7	0.0	17.5	3.7	24.1	1.0	0.0	28.9	2.6	20.2	1.4	0.0	24.3	
Exiting Leg Total					785					742					740					505	2772
Cars	137	575	74	0	786	76	320	75	0	471	102	654	29	1	786	70	548	38	1	657	2700
% Cars	95.8	97.1	94.9	0.0	96.7	98.7	96.4	98.7	0.0	97.1	99.0	97.9	100.0	100.0	98.1	98.6	97.7	95.0	100.0	97.6	97.4
Exiting Leg Total					768					724					721					487	2700
Heavy Vehicles	6	17	4	0	27	1	12	1	0	14	1	14	0	0	15	1	13	2	0	16	72
% Heavy Vehicles	4.2	2.9	5.1	0.0	3.3	1.3	3.6	1.3	0.0	2.9	1.0	2.1	0.0	0.0	1.9	1.4	2.3	5.0	0.0	2.4	2.6
Exiting Leg Total					17					18					19					18	72

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	13	79	7	0	99	11	48	9	0	68	9	99	6	0	114	5	86	5	0	96	377
7:30 AM	17	99	17	0	133	8	47	13	0	68	10	77	1	0	88	13	81	6	0	100	389
7:45 AM	30	94	4	0	128	13	41	2	0	56	9	98	7	0	114	19	50	6	0	75	373
8:00 AM	29	75	9	0	113	13	42	23	0	78	6	99	4	0	109	7	49	8	1	65	365
Total Volume	89	347	37	0	473	45	178	47	0	270	34	373	18	0	425	44	266	25	1	336	1504
% Approach Total	18.8	73.4	7.8	0.0		16.7	65.9	17.4	0.0		8.0	87.8	4.2	0.0		13.1	79.2	7.4	0.3		
PHF	0.742	0.876	0.544	0.000	0.889	0.865	0.927	0.511	0.000	0.865	0.850	0.942	0.643	0.000	0.932	0.579	0.773	0.781	0.250	0.840	0.967
Cars	86	336	35	0	457	45	170	46	0	261	34	364	18	0	416	44	259	25	1	329	1463
Cars %	96.6	96.8	94.6	0.0	96.6	100.0	95.5	97.9	0.0	96.7	100.0	97.6	100.0	0.0	97.9	100.0	97.4	100.0	100.0	97.9	97.3
Heavy Vehicles	3	11	2	0	16	0	8	1	0	9	0	9	0	0	9	0	7	0	0	7	41
Heavy Vehicles %	3.4	3.2	5.4	0.0	3.4	0.0	4.5	2.1	0.0	3.3	0.0	2.4	0.0	0.0	2.1	0.0	2.6	0.0	0.0	2.1	2.7
Cars Enter Leg	86	336	35	0	457	45	170	46	0	261	34	364	18	0	416	44	259	25	1	329	1463
Heavy Enter Leg	3	11	2	0	16	0	8	1	0	9	0	9	0	0	9	0	7	0	0	7	41
Total Entering Leg	89	347	37	0	473	45	178	47	0	270	34	373	18	0	425	44	266	25	1	336	1504
Cars Exiting Leg					434					328					426					275	1463
Heavy Exiting Leg					9					9					12					11	41
Total Exiting Leg					443					337					438					286	1504

PDI File #: **186121 E**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	12	63	8	0	83	6	26	10	0	42	17	57	2	0	76	6	71	1	0	78	279
7:15 AM	13	77	7	0	97	11	45	9	0	65	9	97	6	0	112	5	86	5	0	96	370
7:30 AM	17	94	16	0	127	8	44	13	0	65	10	77	1	0	88	13	79	6	0	98	378
7:45 AM	28	92	3	0	123	13	40	2	0	55	9	96	7	0	112	19	48	6	0	73	363
Total	70	326	34	0	430	38	155	34	0	227	45	327	16	0	388	43	284	18	0	345	1390
8:00 AM	28	73	9	0	110	13	41	22	0	76	6	94	4	0	104	7	46	8	1	62	352
8:15 AM	16	66	11	0	93	12	43	9	0	64	14	73	2	1	90	9	73	2	0	84	331
8:30 AM	12	59	11	0	82	8	48	8	0	64	12	82	5	0	99	4	70	7	0	81	326
8:45 AM	11	51	9	0	71	5	33	2	0	40	25	78	2	0	105	7	75	3	0	85	301
Total	67	249	40	0	356	38	165	41	0	244	57	327	13	1	398	27	264	20	1	312	1310
Grand Total	137	575	74	0	786	76	320	75	0	471	102	654	29	1	786	70	548	38	1	657	2700
Approach %	17.4	73.2	9.4	0.0		16.1	67.9	15.9	0.0		13.0	83.2	3.7	0.1		10.7	83.4	5.8	0.2		
Total %	5.1	21.3	2.7	0.0	29.1	2.8	11.9	2.8	0.0	17.4	3.8	24.2	1.1	0.0	29.1	2.6	20.3	1.4	0.0	24.3	
Exiting Leg Total					768					724					721					487	2700

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	13	77	7	0	97	11	45	9	0	65	9	97	6	0	112	5	86	5	0	96	370
7:30 AM	17	94	16	0	127	8	44	13	0	65	10	77	1	0	88	13	79	6	0	98	378
7:45 AM	28	92	3	0	123	13	40	2	0	55	9	96	7	0	112	19	48	6	0	73	363
8:00 AM	28	73	9	0	110	13	41	22	0	76	6	94	4	0	104	7	46	8	1	62	352
Total Volume	86	336	35	0	457	45	170	46	0	261	34	364	18	0	416	44	259	25	1	329	1463
% Approach Total	18.8	73.5	7.7	0.0		17.2	65.1	17.6	0.0		8.2	87.5	4.3	0.0		13.4	78.7	7.6	0.3		
PHF	0.768	0.894	0.547	0.000	0.900	0.865	0.944	0.523	0.000	0.859	0.850	0.938	0.643	0.000	0.929	0.579	0.753	0.781	0.250	0.839	0.968
Entering Leg	86	336	35	0	457	45	170	46	0	261	34	364	18	0	416	44	259	25	1	329	1463
Exiting Leg					434					328					426					275	1463
Total					891					589					842					604	2926

PDI File #: **186121 E**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	5
7:15 AM	0	2	0	0	2	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	7
7:30 AM	0	5	1	0	6	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	11
7:45 AM	2	2	1	0	5	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	10
Total	3	10	2	0	15	0	8	0	0	8	0	4	0	0	4	0	6	0	0	6	33
8:00 AM	1	2	0	0	3	0	1	1	0	2	0	5	0	0	5	0	3	0	0	3	13
8:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	2	0	2	5
8:30 AM	1	2	2	0	5	1	1	0	0	2	1	3	0	0	4	1	1	0	0	2	13
8:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	3	0	0	3	8
Total	3	7	2	0	12	1	4	1	0	6	1	10	0	0	11	1	7	2	0	10	39
Grand Total	6	17	4	0	27	1	12	1	0	14	1	14	0	0	15	1	13	2	0	16	72
Approach %	22.2	63.0	14.8	0.0		7.1	85.7	7.1	0.0		6.7	93.3	0.0	0.0		6.3	81.3	12.5	0.0		
Total %	8.3	23.6	5.6	0.0	37.5	1.4	16.7	1.4	0.0	19.4	1.4	19.4	0.0	0.0	20.8	1.4	18.1	2.8	0.0	22.2	
Exiting Leg Total					17					18					19					18	72
Buses	0	4	0	0	4	0	0	1	0	1	0	5	0	0	5	1	4	0	0	5	15
% Buses	0.0	23.5	0.0	0.0	14.8	0.0	0.0	100.0	0.0	7.1	0.0	35.7	0.0	0.0	33.3	100.0	30.8	0.0	0.0	31.3	20.8
Exiting Leg Total					5					4					6					0	15
Single-Unit Trucks	6	12	4	0	22	1	11	0	0	12	1	8	0	0	9	0	9	2	0	11	54
% Single-Unit	100.0	70.6	100.0	0.0	81.5	100.0	91.7	0.0	0.0	85.7	100.0	57.1	0.0	0.0	60.0	0.0	69.2	100.0	0.0	68.8	75.0
Exiting Leg Total					11					14					12					17	54
Articulated Trucks	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	3
% Articulated	0.0	5.9	0.0	0.0	3.7	0.0	8.3	0.0	0.0	7.1	0.0	7.1	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	4.2
Exiting Leg Total					1					0					1					1	3

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	2	0	0	2	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	7
7:30 AM	0	5	1	0	6	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	11
7:45 AM	2	2	1	0	5	0	1	0	0	1	0	2	0	0	2	0	2	0	0	2	10
8:00 AM	1	2	0	0	3	0	1	1	0	2	0	5	0	0	5	0	3	0	0	3	13
Total Volume	3	11	2	0	16	0	8	1	0	9	0	9	0	0	9	0	7	0	0	7	41
% Approach Total	18.8	68.8	12.5	0.0		0.0	88.9	11.1	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.375	0.550	0.500	0.000	0.667	0.000	0.667	0.250	0.000	0.750	0.000	0.450	0.000	0.000	0.450	0.000	0.583	0.000	0.000	0.583	0.788
Buses	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	3	0	0	3	9
Buses %	0.0	18.2	0.0	0.0	12.5	0.0	0.0	100.0	0.0	11.1	0.0	33.3	0.0	0.0	33.3	0.0	42.9	0.0	0.0	42.9	22.0
Single-Unit Trucks	3	9	2	0	14	0	8	0	0	8	0	5	0	0	5	0	4	0	0	4	31
Single-Unit %	100.0	81.8	100.0	0.0	87.5	0.0	100.0	0.0	0.0	88.9	0.0	55.6	0.0	0.0	55.6	0.0	57.1	0.0	0.0	57.1	75.6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	2.4
Buses	0	2	0	0	2	0	0	1	0	1	0	3	0	0	3	0	3	0	0	3	9
Single-Unit Trucks	3	9	2	0	14	0	8	0	0	8	0	5	0	0	5	0	4	0	0	4	31
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Entering Leg	3	11	2	0	16	0	8	1	0	9	0	9	0	0	9	0	7	0	0	7	41
Buses					3					3					3					0	9
Single-Unit Trucks					5					6					9					11	31
Articulated Trucks					1					0					0					0	1
Total Exiting Leg					9					9					12					11	41

PDI File #: **186121 E**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	9	0	0	0	0	9	11
7:15 AM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	14	0	0	0	0	14	17
7:30 AM	0	0	1	0	0	0	1	0	1	0	0	0	0	1	1	1	0	0	0	1	3	0	12	1	0	0	1	14	19
7:45 AM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	7	0	0	0	0	7	0	29	0	0	0	0	29	38
Total	0	2	1	0	0	0	3	0	3	0	0	0	0	3	1	11	0	0	0	1	13	0	64	1	0	0	1	66	85
8:00 AM	0	0	1	0	0	0	1	0	1	0	0	1	2	4	0	7	0	0	0	0	7	0	12	0	0	0	0	12	24
8:15 AM	1	0	1	0	0	0	2	0	2	0	0	1	1	4	0	9	0	0	0	0	9	0	14	0	0	0	0	14	29
8:30 AM	1	0	2	0	0	0	3	0	1	0	0	1	0	2	1	3	0	0	0	2	6	0	13	2	0	0	0	15	26
8:45 AM	0	0	2	0	0	0	2	0	2	0	0	0	0	2	0	5	0	0	0	4	9	0	19	0	0	0	0	19	32
Total	2	0	6	0	0	0	8	0	6	0	0	3	3	12	1	24	0	0	0	6	31	0	58	2	0	0	0	60	111
Grand Total	2	2	7	0	0	0	11	0	9	0	0	3	3	15	2	35	0	0	0	7	44	0	122	3	0	0	1	126	196
Approach %	18.2	18.2	63.6	0.0	0.0	0.0		0.0	60.0	0.0	0.0	20.0	20.0		4.5	79.5	0.0	0.0	0.0	15.9		0.0	96.8	2.4	0.0	0.0	0.8		
Total %	1.0	1.0	3.6	0.0	0.0	0.0	5.6	0.0	4.6	0.0	0.0	1.5	1.5	7.7	1.0	17.9	0.0	0.0	0.0	3.6	22.4	0.0	62.2	1.5	0.0	0.0	0.5	64.3	
Exiting Leg Total							38							137							9							12	196

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:45 AM	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	7	0	0	0	0	7	0	29	0	0	0	0	29	38
8:00 AM	0	0	1	0	0	0	1	0	1	0	0	1	2	4	0	7	0	0	0	0	7	0	12	0	0	0	0	12	24
8:15 AM	1	0	1	0	0	0	2	0	2	0	0	1	1	4	0	9	0	0	0	0	9	0	14	0	0	0	0	14	29
8:30 AM	1	0	2	0	0	0	3	0	1	0	0	1	0	2	1	3	0	0	0	2	6	0	13	2	0	0	0	15	26
Total Volume	2	1	4	0	0	0	7	0	5	0	0	3	3	11	1	26	0	0	0	2	29	0	68	2	0	0	0	70	117
% Approach Total	28.6	14.3	57.1	0.0	0.0	0.0		0.0	45.5	0.0	0.0	27.3	27.3		3.4	89.7	0.0	0.0	0.0	6.9		0.0	97.1	2.9	0.0	0.0	0.0		
PHF	0.500	0.250	0.500	0.000	0.000	0.000	0.583	0.000	0.625	0.000	0.000	0.750	0.375	0.688	0.250	0.722	0.000	0.000	0.000	0.250	0.806	0.000	0.586	0.250	0.000	0.000	0.000	0.603	0.770
Entering Leg	2	1	4	0	0	0	7	0	5	0	0	3	3	11	1	26	0	0	0	2	29	0	68	2	0	0	0	70	117
Exiting Leg							28							79							3							7	117
Total							35							90							32							77	234

PDI File #: **186121 E**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Pedestrians

	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	31	3	34	0	0	0	0	2	2	4	0	0	0	0	1	4	5	0	0	0	0	10	1	11	54
7:15 AM	0	0	0	0	26	5	31	0	0	0	0	4	3	7	0	0	0	0	2	6	8	0	0	0	0	7	4	11	57
7:30 AM	0	0	0	0	33	5	38	0	0	0	0	12	4	16	0	0	0	0	2	17	19	0	0	0	0	20	20	40	113
7:45 AM	0	0	0	0	33	7	40	0	0	0	0	15	19	34	0	0	0	0	3	60	63	0	0	0	0	23	23	46	183
Total	0	0	0	0	123	20	143	0	0	0	0	33	28	61	0	0	0	0	8	87	95	0	0	0	0	60	48	108	407
8:00 AM	0	0	0	0	27	14	41	0	0	0	0	3	12	15	0	0	0	0	6	33	39	0	0	0	0	16	1	17	112
8:15 AM	0	0	0	0	39	8	47	0	0	0	0	3	15	18	0	0	0	0	4	29	33	0	0	0	0	34	1	35	133
8:30 AM	0	0	0	0	28	3	31	0	0	0	0	0	7	7	0	0	0	0	5	32	37	0	0	0	0	27	3	30	105
8:45 AM	0	0	0	0	37	8	45	0	0	0	0	3	5	8	0	0	0	0	1	36	37	0	0	0	0	33	3	36	126
Total	0	0	0	0	131	33	164	0	0	0	0	9	39	48	0	0	0	0	16	130	146	0	0	0	0	110	8	118	476
Grand Total	0	0	0	0	254	53	307	0	0	0	0	42	67	109	0	0	0	0	24	217	241	0	0	0	0	170	56	226	883
Approach %	0	0	0	0	82.7	17.3		0	0	0	0	38.5	61.5		0	0	0	0	9.96	90		0	0	0	0	75.2	24.8		
Total %	0	0	0	0	28.8	6	34.8	0	0	0	0	4.76	7.59	12.3	0	0	0	0	2.72	24.6	27.3	0	0	0	0	19.3	6.34	25.6	
Exiting Leg Total							307							109							241							226	883

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:30 AM	0	0	0	0	33	5	38	0	0	0	0	12	4	16	0	0	0	0	2	17	19	0	0	0	0	20	20	40	113
7:45 AM	0	0	0	0	33	7	40	0	0	0	0	15	19	34	0	0	0	0	3	60	63	0	0	0	0	23	23	46	183
8:00 AM	0	0	0	0	27	14	41	0	0	0	0	3	12	15	0	0	0	0	6	33	39	0	0	0	0	16	1	17	112
8:15 AM	0	0	0	0	39	8	47	0	0	0	0	3	15	18	0	0	0	0	4	29	33	0	0	0	0	34	1	35	133
Total Volume	0	0	0	0	132	34	166	0	0	0	0	33	50	83	0	0	0	0	15	139	154	0	0	0	0	93	45	138	541
% Approach Total	0.0	0.0	0.0	0.0	79.5	20.5		0.0	0.0	0.0	0.0	39.8	60.2		0.0	0.0	0.0	0.0	9.7	90.3		0.0	0.0	0.0	0.0	67.4	32.6		
PHF	0.000	0.000	0.000	0.000	0.846	0.607	0.883	0.000	0.000	0.000	0.000	0.550	0.658	0.610	0.000	0.000	0.000	0.000	0.625	0.579	0.611	0.000	0.000	0.000	0.000	0.684	0.489	0.750	0.739
Entering Leg	0	0	0	0	132	34	166	0	0	0	0	33	50	83	0	0	0	0	15	139	154	0	0	0	0	93	45	138	541
Exiting Leg							166							83							154							138	541
Total							332							166							308							276	1082

PDI File #: **186121 EE**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	25	86	15	0	126	11	57	17	0	85	17	56	4	0	77	8	41	6	0	55	343
4:15 PM	22	103	9	0	134	14	58	9	0	81	12	73	5	0	90	10	38	7	0	55	360
4:30 PM	23	107	17	0	147	13	60	12	0	85	16	58	8	0	82	6	42	6	0	54	368
4:45 PM	27	94	13	0	134	14	79	12	0	105	16	67	8	0	91	11	48	4	0	63	393
Total	97	390	54	0	541	52	254	50	0	356	61	254	25	0	340	35	169	23	0	227	1464
5:00 PM	26	116	18	0	160	6	65	20	0	91	5	78	8	0	91	14	50	8	0	72	414
5:15 PM	22	110	12	0	144	11	77	11	0	99	15	82	4	0	101	17	46	5	0	68	412
5:30 PM	36	127	15	0	178	9	57	19	0	85	15	71	8	0	94	7	55	2	0	64	421
5:45 PM	28	102	11	0	141	18	71	14	0	103	20	76	6	0	102	8	64	2	0	74	420
Total	112	455	56	0	623	44	270	64	0	378	55	307	26	0	388	46	215	17	0	278	1667
Grand Total	209	845	110	0	1164	96	524	114	0	734	116	561	51	0	728	81	384	40	0	505	3131
Approach %	18.0	72.6	9.5	0.0		13.1	71.4	15.5	0.0		15.9	77.1	7.0	0.0		16.0	76.0	7.9	0.0		
Total %	6.7	27.0	3.5	0.0	37.2	3.1	16.7	3.6	0.0	23.4	3.7	17.9	1.6	0.0	23.3	2.6	12.3	1.3	0.0	16.1	
Exiting Leg Total					697					610					1040					784	3131
Cars	209	843	108	0	1160	94	518	111	0	723	116	555	50	0	721	80	380	40	0	500	3104
% Cars	100.0	99.8	98.2	0.0	99.7	97.9	98.9	97.4	0.0	98.5	100.0	98.9	98.0	0.0	99.0	98.8	99.0	100.0	0.0	99.0	99.1
Exiting Leg Total					689					604					1034					777	3104
Heavy Vehicles	0	2	2	0	4	2	6	3	0	11	0	6	1	0	7	1	4	0	0	5	27
% Heavy Vehicles	0.0	0.2	1.8	0.0	0.3	2.1	1.1	2.6	0.0	1.5	0.0	1.1	2.0	0.0	1.0	1.2	1.0	0.0	0.0	1.0	0.9
Exiting Leg Total					8					6					6					7	27

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	26	116	18	0	160	6	65	20	0	91	5	78	8	0	91	14	50	8	0	72	414
5:15 PM	22	110	12	0	144	11	77	11	0	99	15	82	4	0	101	17	46	5	0	68	412
5:30 PM	36	127	15	0	178	9	57	19	0	85	15	71	8	0	94	7	55	2	0	64	421
5:45 PM	28	102	11	0	141	18	71	14	0	103	20	76	6	0	102	8	64	2	0	74	420
Total Volume	112	455	56	0	623	44	270	64	0	378	55	307	26	0	388	46	215	17	0	278	1667
% Approach Total	18.0	73.0	9.0	0.0		11.6	71.4	16.9	0.0		14.2	79.1	6.7	0.0		16.5	77.3	6.1	0.0		
PHF	0.778	0.896	0.778	0.000	0.875	0.611	0.877	0.800	0.000	0.917	0.688	0.936	0.813	0.000	0.951	0.676	0.840	0.531	0.000	0.939	0.990
Cars	112	454	56	0	622	43	268	63	0	374	55	306	26	0	387	45	212	17	0	274	1657
Cars %	100.0	99.8	100.0	0.0	99.8	97.7	99.3	98.4	0.0	98.9	100.0	99.7	100.0	0.0	99.7	97.8	98.6	100.0	0.0	98.6	99.4
Heavy Vehicles	0	1	0	0	1	1	2	1	0	4	0	1	0	0	1	1	3	0	0	4	10
Heavy Vehicles %	0.0	0.2	0.0	0.0	0.2	2.3	0.7	1.6	0.0	1.1	0.0	0.3	0.0	0.0	0.3	2.2	1.4	0.0	0.0	1.4	0.6
Cars Enter Leg	112	454	56	0	622	43	268	63	0	374	55	306	26	0	387	45	212	17	0	274	1657
Heavy Enter Leg	0	1	0	0	1	1	2	1	0	4	0	1	0	0	1	1	3	0	0	4	10
Total Entering Leg	112	455	56	0	623	44	270	64	0	378	55	307	26	0	388	46	215	17	0	278	1667
Cars Exiting Leg					366					323					562					406	1657
Heavy Exiting Leg					2					3					3					2	10
Total Exiting Leg					368					326					565					408	1667

PDI File #: **186121 EE**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	25	86	15	0	126	11	57	17	0	85	17	55	3	0	75	8	41	6	0	55	341
4:15 PM	22	103	7	0	132	13	57	9	0	79	12	70	5	0	87	10	38	7	0	55	353
4:30 PM	23	106	17	0	146	13	59	12	0	84	16	57	8	0	81	6	41	6	0	53	364
4:45 PM	27	94	13	0	134	14	77	10	0	101	16	67	8	0	91	11	48	4	0	63	389
Total	97	389	52	0	538	51	250	48	0	349	61	249	24	0	334	35	168	23	0	226	1447
5:00 PM	26	116	18	0	160	6	64	19	0	89	5	77	8	0	90	14	49	8	0	71	410
5:15 PM	22	110	12	0	144	11	76	11	0	98	15	82	4	0	101	17	46	5	0	68	411
5:30 PM	36	126	15	0	177	8	57	19	0	84	15	71	8	0	94	6	55	2	0	63	418
5:45 PM	28	102	11	0	141	18	71	14	0	103	20	76	6	0	102	8	62	2	0	72	418
Total	112	454	56	0	622	43	268	63	0	374	55	306	26	0	387	45	212	17	0	274	1657
Grand Total	209	843	108	0	1160	94	518	111	0	723	116	555	50	0	721	80	380	40	0	500	3104
Approach %	18.0	72.7	9.3	0.0		13.0	71.6	15.4	0.0		16.1	77.0	6.9	0.0		16.0	76.0	8.0	0.0		
Total %	6.7	27.2	3.5	0.0	37.4	3.0	16.7	3.6	0.0	23.3	3.7	17.9	1.6	0.0	23.2	2.6	12.2	1.3	0.0	16.1	
Exiting Leg Total					689					604					1034					777	3104

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	26	116	18	0	160	6	64	19	0	89	5	77	8	0	90	14	49	8	0	71	410
5:15 PM	22	110	12	0	144	11	76	11	0	98	15	82	4	0	101	17	46	5	0	68	411
5:30 PM	36	126	15	0	177	8	57	19	0	84	15	71	8	0	94	6	55	2	0	63	418
5:45 PM	28	102	11	0	141	18	71	14	0	103	20	76	6	0	102	8	62	2	0	72	418
Total Volume	112	454	56	0	622	43	268	63	0	374	55	306	26	0	387	45	212	17	0	274	1657
% Approach Total	18.0	73.0	9.0	0.0		11.5	71.7	16.8	0.0		14.2	79.1	6.7	0.0		16.4	77.4	6.2	0.0		
PHF	0.778	0.901	0.778	0.000	0.879	0.597	0.882	0.829	0.000	0.908	0.688	0.933	0.813	0.000	0.949	0.662	0.855	0.531	0.000	0.951	0.991
Entering Leg	112	454	56	0	622	43	268	63	0	374	55	306	26	0	387	45	212	17	0	274	1657
Exiting Leg					366					323					562					406	1657
Total					988					697					949					680	3314

PDI File #: **186121 EE**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
4:15 PM	0	0	2	0	2	1	1	0	0	2	0	3	0	0	3	0	0	0	0	0	7
4:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	4
4:45 PM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	4
Total	0	1	2	0	3	1	4	2	0	7	0	5	1	0	6	0	1	0	0	1	17
5:00 PM	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	0	1	0	0	1	4
5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	1	0	0	1	1	2	1	0	4	0	1	0	0	1	1	3	0	0	4	10
Grand Total	0	2	2	0	4	2	6	3	0	11	0	6	1	0	7	1	4	0	0	5	27
Approach %	0.0	50.0	50.0	0.0		18.2	54.5	27.3	0.0		0.0	85.7	14.3	0.0		20.0	80.0	0.0	0.0		
Total %	0.0	7.4	7.4	0.0	14.8	7.4	22.2	11.1	0.0	40.7	0.0	22.2	3.7	0.0	25.9	3.7	14.8	0.0	0.0	18.5	
Exiting Leg Total					8					6					6					7	27
Buses	0	0	0	0	0	1	3	1	0	5	0	2	1	0	3	0	2	0	0	2	10
% Buses	0.0	0.0	0.0	0.0	0.0	50.0	50.0	33.3	0.0	45.5	0.0	33.3	100.0	0.0	42.9	0.0	50.0	0.0	0.0	40.0	37.0
Exiting Leg Total					3					2					1					4	10
Single-Unit Trucks	0	2	1	0	3	1	3	2	0	6	0	4	0	0	4	1	2	0	0	3	16
% Single-Unit	0.0	100.0	50.0	0.0	75.0	50.0	50.0	66.7	0.0	54.5	0.0	66.7	0.0	0.0	57.1	100.0	50.0	0.0	0.0	60.0	59.3
Exiting Leg Total					5					3					5					3	16
Articulated Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Articulated	0.0	0.0	50.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
Exiting Leg Total					0					1					0					0	1

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	St. Paul Street					Longwood Avenue					St. Paul Street					Longwood Avenue					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	0	0	2	0	2	1	1	0	0	2	0	3	0	0	3	0	0	0	0	0	7
4:30 PM	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	4
4:45 PM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	1	1	0	2	0	1	0	0	1	0	1	0	0	1	4
Total Volume	0	1	2	0	3	1	5	3	0	9	0	5	0	0	5	0	2	0	0	2	19
% Approach Total	0.0	33.3	66.7	0.0		11.1	55.6	33.3	0.0		0.0	100.0	0.0	0.0		0.0	100.0	0.0	0.0		
PHF	0.000	0.250	0.250	0.000	0.375	0.250	0.625	0.375	0.000	0.563	0.000	0.417	0.000	0.000	0.417	0.000	0.500	0.000	0.000	0.500	0.679
Buses	0	0	0	0	0	0	2	1	0	3	0	2	0	0	2	0	1	0	0	1	6
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	40.0	33.3	0.0	33.3	0.0	40.0	0.0	0.0	40.0	0.0	50.0	0.0	0.0	50.0	31.6
Single-Unit Trucks	0	1	1	0	2	1	3	2	0	6	0	3	0	0	3	0	1	0	0	1	12
Single-Unit %	0.0	100.0	50.0	0.0	66.7	100.0	60.0	66.7	0.0	66.7	0.0	60.0	0.0	0.0	60.0	0.0	50.0	0.0	0.0	50.0	63.2
Articulated Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Articulated %	0.0	0.0	50.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3
Buses	0	0	0	0	0	0	2	1	0	3	0	2	0	0	2	0	1	0	0	1	6
Single-Unit Trucks	0	1	1	0	2	1	3	2	0	6	0	3	0	0	3	0	1	0	0	1	12
Articulated Trucks	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Entering Leg	0	1	2	0	3	1	5	3	0	9	0	5	0	0	5	0	2	0	0	2	19
Buses					2					1					1					2	6
Single-Unit Trucks					4					2					3					3	12
Articulated Trucks					0					1					0					0	1
Total Exiting Leg					6					4					4					5	19

PDI File #: **186121 EE**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	1	0	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	3	6
4:15 PM	0	1	0	0	0	0	1	0	5	0	0	0	0	5	0	1	0	0	0	0	1	0	0	0	0	0	0	0	7
4:30 PM	0	2	1	0	0	0	3	0	10	0	0	0	0	10	0	0	0	0	0	1	1	0	1	0	0	0	0	1	15
4:45 PM	1	0	0	0	0	0	1	0	7	0	0	0	0	7	0	1	0	0	0	0	1	0	2	0	0	0	0	2	11
Total	1	4	1	0	0	0	6	0	24	0	0	0	0	24	0	2	0	0	0	1	3	0	6	0	0	0	0	6	39
5:00 PM	0	1	0	0	0	0	1	2	18	0	0	0	0	20	0	0	0	0	0	1	1	0	0	0	0	0	1	1	23
5:15 PM	1	5	0	0	0	0	6	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	3	0	0	0	0	3	29
5:30 PM	0	3	0	0	0	0	3	2	23	1	0	0	0	26	0	0	1	0	0	0	1	1	2	0	0	0	0	3	33
5:45 PM	0	4	0	0	0	0	4	0	20	2	0	2	0	24	0	0	0	0	0	1	1	0	2	0	0	0	0	2	31
Total	1	13	0	0	0	0	14	4	81	3	0	2	0	90	0	0	1	0	0	2	3	1	7	0	0	0	1	9	116
Grand Total	2	17	1	0	0	0	20	4	105	3	0	2	0	114	0	2	1	0	0	3	6	1	13	0	0	0	1	15	155
Approach %	10.0	85.0	5.0	0.0	0.0	0.0		3.5	92.1	2.6	0.0	1.8	0.0		0.0	33.3	16.7	0.0	0.0	50.0		6.7	86.7	0.0	0.0	0.0	6.7		
Total %	1.3	11.0	0.6	0.0	0.0	0.0	12.9	2.6	67.7	1.9	0.0	1.3	0.0	73.5	0.0	1.3	0.6	0.0	0.0	1.9	3.9	0.6	8.4	0.0	0.0	0.0	0.6	9.7	
Exiting Leg Total							6							16							24							109	155

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	1	0	0	0	0	1	2	18	0	0	0	0	20	0	0	0	0	0	1	1	0	0	0	0	0	1	1	23
5:15 PM	1	5	0	0	0	0	6	0	20	0	0	0	0	20	0	0	0	0	0	0	0	0	3	0	0	0	0	3	29
5:30 PM	0	3	0	0	0	0	3	2	23	1	0	0	0	26	0	0	1	0	0	0	1	1	2	0	0	0	0	3	33
5:45 PM	0	4	0	0	0	0	4	0	20	2	0	2	0	24	0	0	0	0	0	1	1	0	2	0	0	0	0	2	31
Total Volume	1	13	0	0	0	0	14	4	81	3	0	2	0	90	0	0	1	0	0	2	3	1	7	0	0	0	1	9	116
% Approach Total	7.1	92.9	0.0	0.0	0.0	0.0		4.4	90.0	3.3	0.0	2.2	0.0		0.0	0.0	33.3	0.0	0.0	66.7		11.1	77.8	0.0	0.0	0.0	11.1		
PHF	0.250	0.650	0.000	0.000	0.000	0.000	0.583	0.500	0.880	0.375	0.000	0.250	0.000	0.865	0.000	0.000	0.250	0.000	0.000	0.500	0.750	0.250	0.583	0.000	0.000	0.000	0.250	0.750	0.879
Entering Leg	1	13	0	0	0	0	14	4	81	3	0	2	0	90	0	0	1	0	0	2	3	1	7	0	0	0	1	9	116
Exiting Leg							4							9							19							84	116
Total							18							99							22							93	232

PDI File #: **186121 EE**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Longwood Avenue W: Longwood Avenue**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Pedestrians

	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	8	33	41	0	0	0	0	10	10	20	0	0	0	0	4	13	17	0	0	0	0	6	9	15	93
4:15 PM	0	0	0	0	9	57	66	0	0	0	0	4	7	11	0	0	0	0	4	3	7	0	0	0	0	10	3	13	97
4:30 PM	0	0	0	0	4	52	56	0	0	0	0	4	7	11	0	0	0	0	3	8	11	0	0	0	0	1	5	6	84
4:45 PM	0	0	0	0	6	45	51	0	0	0	0	7	7	14	0	0	0	0	10	3	13	0	0	0	0	2	10	12	90
Total	0	0	0	0	27	187	214	0	0	0	0	25	31	56	0	0	0	0	21	27	48	0	0	0	0	19	27	46	364
5:00 PM	0	0	0	0	7	50	57	0	0	0	0	5	9	14	0	0	0	0	10	1	11	0	0	0	0	5	5	10	92
5:15 PM	0	0	0	0	10	75	85	0	0	0	0	3	4	7	0	0	0	0	14	4	18	0	0	0	0	4	4	8	118
5:30 PM	0	0	0	0	6	80	86	0	0	0	0	9	3	12	0	0	0	0	11	5	16	0	0	0	0	4	10	14	128
5:45 PM	0	0	0	0	5	79	84	0	0	0	0	12	7	19	0	0	0	0	7	5	12	0	0	0	0	4	11	15	130
Total	0	0	0	0	28	284	312	0	0	0	0	29	23	52	0	0	0	0	42	15	57	0	0	0	0	17	30	47	468
Grand Total	0	0	0	0	55	471	526	0	0	0	0	54	54	108	0	0	0	0	63	42	105	0	0	0	0	36	57	93	832
Approach %	0	0	0	0	10.5	89.5		0	0	0	0	50	50		0	0	0	0	60	40		0	0	0	0	38.7	61.3		
Total %	0	0	0	0	6.61	56.6	63.2	0	0	0	0	6.49	6.49	13	0	0	0	0	7.57	5.05	12.6	0	0	0	0	4.33	6.85	11.2	
Exiting Leg Total							526							108							105							93	832

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street							Longwood Avenue							St. Paul Street							Longwood Avenue							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
5:00 PM	0	0	0	0	7	50	57	0	0	0	0	5	9	14	0	0	0	0	10	1	11	0	0	0	0	5	5	10	92
5:15 PM	0	0	0	0	10	75	85	0	0	0	0	3	4	7	0	0	0	0	14	4	18	0	0	0	0	4	4	8	118
5:30 PM	0	0	0	0	6	80	86	0	0	0	0	9	3	12	0	0	0	0	11	5	16	0	0	0	0	4	10	14	128
5:45 PM	0	0	0	0	5	79	84	0	0	0	0	12	7	19	0	0	0	0	7	5	12	0	0	0	0	4	11	15	130
Total Volume	0	0	0	0	28	284	312	0	0	0	0	29	23	52	0	0	0	0	42	15	57	0	0	0	0	17	30	47	468
% Approach Total	0.0	0.0	0.0	0.0	9.0	91.0		0.0	0.0	0.0	0.0	55.8	44.2		0.0	0.0	0.0	0.0	73.7	26.3		0.0	0.0	0.0	0.0	36.2	63.8		
PHF	0.000	0.000	0.000	0.000	0.700	0.888	0.907	0.000	0.000	0.000	0.000	0.604	0.639	0.684	0.000	0.000	0.000	0.000	0.750	0.750	0.792	0.000	0.000	0.000	0.000	0.850	0.682	0.783	0.900
Entering Leg	0	0	0	0	28	284	312	0	0	0	0	29	23	52	0	0	0	0	42	15	57	0	0	0	0	17	30	47	468
Exiting Leg							312							52							57							47	468
Total							624							104							114							94	936

PDI File #: **186121 F**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	84	0	0	84	2	0	2	0	4	0	67	0	0	67	0	0	0	0	0	155
7:15 AM	0	102	0	0	102	0	0	0	0	0	2	104	0	0	106	1	0	0	0	1	209
7:30 AM	0	125	0	0	125	5	0	1	0	6	1	96	0	1	98	2	0	0	0	2	231
7:45 AM	0	124	0	0	124	1	0	1	0	2	1	94	2	0	97	0	0	0	0	0	223
Total	0	435	0	0	435	8	0	4	0	12	4	361	2	1	368	3	0	0	0	3	818
8:00 AM	0	104	0	0	104	0	0	2	0	2	1	100	0	0	101	1	0	0	0	1	208
8:15 AM	0	82	1	0	83	1	0	2	0	3	1	96	0	0	97	2	0	0	0	2	185
8:30 AM	0	77	1	0	78	1	0	4	0	5	1	92	0	0	93	0	0	0	0	0	176
8:45 AM	0	69	1	0	70	1	0	0	0	1	3	81	0	0	84	0	0	0	0	0	155
Total	0	332	3	0	335	3	0	8	0	11	6	369	0	0	375	3	0	0	0	3	724
Grand Total	0	767	3	0	770	11	0	12	0	23	10	730	2	1	743	6	0	0	0	6	1542
Approach %	0.0	99.6	0.4	0.0		47.8	0.0	52.2	0.0		1.3	98.3	0.3	0.1		100.0	0.0	0.0	0.0		
Total %	0.0	49.7	0.2	0.0	49.9	0.7	0.0	0.8	0.0	1.5	0.6	47.3	0.1	0.1	48.2	0.4	0.0	0.0	0.0	0.4	
Exiting Leg Total					741					13					786					2	1542
Cars	0	745	2	0	747	11	0	11	0	22	10	718	2	1	731	6	0	0	0	6	1506
% Cars	0.0	97.1	66.7	0.0	97.0	100.0	0.0	91.7	0.0	95.7	100.0	98.4	100.0	100.0	98.4	100.0	0.0	0.0	0.0	100.0	97.7
Exiting Leg Total					729					12					763					2	1506
Heavy Vehicles	0	22	1	0	23	0	0	1	0	1	0	12	0	0	12	0	0	0	0	0	36
% Heavy Vehicles	0.0	2.9	33.3	0.0	3.0	0.0	0.0	8.3	0.0	4.3	0.0	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	2.3
Exiting Leg Total					12					1					23					0	36

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	102	0	0	102	0	0	0	0	0	2	104	0	0	106	1	0	0	0	1	209
7:30 AM	0	125	0	0	125	5	0	1	0	6	1	96	0	1	98	2	0	0	0	2	231
7:45 AM	0	124	0	0	124	1	0	1	0	2	1	94	2	0	97	0	0	0	0	0	223
8:00 AM	0	104	0	0	104	0	0	2	0	2	1	100	0	0	101	1	0	0	0	1	208
Total Volume	0	455	0	0	455	6	0	4	0	10	5	394	2	1	402	4	0	0	0	4	871
% Approach Total	0.0	100.0	0.0	0.0		60.0	0.0	40.0	0.0		1.2	98.0	0.5	0.2		100.0	0.0	0.0	0.0		
PHF	0.000	0.910	0.000	0.000	0.910	0.300	0.000	0.500	0.000	0.417	0.625	0.947	0.250	0.250	0.948	0.500	0.000	0.000	0.000	0.500	0.943
Cars	0	444	0	0	444	6	0	4	0	10	5	387	2	1	395	4	0	0	0	4	853
Cars %	0.0	97.6	0.0	0.0	97.6	100.0	0.0	100.0	0.0	100.0	100.0	98.2	100.0	100.0	98.3	100.0	0.0	0.0	0.0	100.0	97.9
Heavy Vehicles	0	11	0	0	11	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	18
Heavy Vehicles %	0.0	2.4	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	2.1
Cars Enter Leg	0	444	0	0	444	6	0	4	0	10	5	387	2	1	395	4	0	0	0	4	853
Heavy Enter Leg	0	11	0	0	11	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	18
Total Entering Leg	0	455	0	0	455	6	0	4	0	10	5	394	2	1	402	4	0	0	0	4	871
Cars Exiting Leg					393					5					453					2	853
Heavy Exiting Leg					7					0					11					0	18
Total Exiting Leg					400					5					464					2	871

PDI File #: **186121 F**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	81	0	0	81	2	0	2	0	4	0	66	0	0	66	0	0	0	0	0	151
7:15 AM	0	98	0	0	98	0	0	0	0	0	2	102	0	0	104	1	0	0	0	1	203
7:30 AM	0	123	0	0	123	5	0	1	0	6	1	96	0	1	98	2	0	0	0	2	229
7:45 AM	0	121	0	0	121	1	0	1	0	2	1	92	2	0	95	0	0	0	0	0	218
Total	0	423	0	0	423	8	0	4	0	12	4	356	2	1	363	3	0	0	0	3	801
8:00 AM	0	102	0	0	102	0	0	2	0	2	1	97	0	0	98	1	0	0	0	1	203
8:15 AM	0	79	1	0	80	1	0	2	0	3	1	94	0	0	95	2	0	0	0	2	180
8:30 AM	0	74	0	0	74	1	0	3	0	4	1	92	0	0	93	0	0	0	0	0	171
8:45 AM	0	67	1	0	68	1	0	0	0	1	3	79	0	0	82	0	0	0	0	0	151
Total	0	322	2	0	324	3	0	7	0	10	6	362	0	0	368	3	0	0	0	3	705
Grand Total	0	745	2	0	747	11	0	11	0	22	10	718	2	1	731	6	0	0	0	6	1506
Approach %	0.0	99.7	0.3	0.0		50.0	0.0	50.0	0.0		1.4	98.2	0.3	0.1		100.0	0.0	0.0	0.0		
Total %	0.0	49.5	0.1	0.0	49.6	0.7	0.0	0.7	0.0	1.5	0.7	47.7	0.1	0.1	48.5	0.4	0.0	0.0	0.0	0.4	
Exiting Leg Total					729					12					763					2	1506

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:15 AM	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:15 AM	0	98	0	0	98	0	0	0	0	0	2	102	0	0	104	1	0	0	0	1	203
7:30 AM	0	123	0	0	123	5	0	1	0	6	1	96	0	1	98	2	0	0	0	2	229
7:45 AM	0	121	0	0	121	1	0	1	0	2	1	92	2	0	95	0	0	0	0	0	218
8:00 AM	0	102	0	0	102	0	0	2	0	2	1	97	0	0	98	1	0	0	0	1	203
Total Volume	0	444	0	0	444	6	0	4	0	10	5	387	2	1	395	4	0	0	0	4	853
% Approach Total	0.0	100.0	0.0	0.0		60.0	0.0	40.0	0.0		1.3	98.0	0.5	0.3		100.0	0.0	0.0	0.0		
PHF	0.000	0.902	0.000	0.000	0.902	0.300	0.000	0.500	0.000	0.417	0.625	0.949	0.250	0.250	0.950	0.500	0.000	0.000	0.000	0.500	0.931
Entering Leg	0	444	0	0	444	6	0	4	0	10	5	387	2	1	395	4	0	0	0	4	853
Exiting Leg					393					5					453					2	853
Total					837					15					848					6	1706

PDI File #: **186121 F**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)

	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:00 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
7:15 AM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6
7:30 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
Total	0	12	0	0	12	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	17
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
8:15 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
8:30 AM	0	3	1	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Total	0	10	1	0	11	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	19
Grand Total	0	22	1	0	23	0	0	1	0	1	0	12	0	0	12	0	0	0	0	0	36
Approach %	0.0	95.7	4.3	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	61.1	2.8	0.0	63.9	0.0	0.0	2.8	0.0	2.8	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					12					1					23					0	36
Buses	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7
% Buses	0.0	18.2	0.0	0.0	17.4	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	19.4
Exiting Leg Total					3					0					4					0	7
Single-Unit Trucks	0	17	1	0	18	0	0	1	0	1	0	8	0	0	8	0	0	0	0	0	27
% Single-Unit	0.0	77.3	100.0	0.0	78.3	0.0	0.0	100.0	0.0	100.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	75.0
Exiting Leg Total					8					1					18					0	27
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% Articulated	0.0	4.5	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0	5.6
Exiting Leg Total					1					0					1					0	2

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:45 AM	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
7:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
8:00 AM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
8:15 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5
8:30 AM	0	3	1	0	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	5
Total Volume	0	11	1	0	12	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	20
% Approach Total	0.0	91.7	8.3	0.0		0.0	0.0	100.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.917	0.250	0.000	0.750	0.000	0.000	0.250	0.000	0.250	0.000	0.583	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	1.000
Buses	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Buses %	0.0	18.2	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	20.0
Single-Unit Trucks	0	9	1	0	10	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	15
Single-Unit %	0.0	81.8	100.0	0.0	83.3	0.0	0.0	100.0	0.0	100.0	0.0	57.1	0.0	0.0	57.1	0.0	0.0	0.0	0.0	0.0	75.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	5.0
Buses	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	4
Single-Unit Trucks	0	9	1	0	10	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	15
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Entering Leg	0	11	1	0	12	0	0	1	0	1	0	7	0	0	7	0	0	0	0	0	20
Buses					2					0					2					0	4
Single-Unit Trucks					4					1					10					0	15
Articulated Trucks					1					0					0					0	1
Total Exiting Leg					7					1					12					0	20

PDI File #: **186121 F**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	2
7:15 AM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	1	2
7:45 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	6
Total	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	9	0	0	0	0	9	0	0	0	0	0	1	1	14
8:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	9
8:15 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	9
8:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	10
8:45 AM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	9
Total	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	29	0	0	0	0	29	0	0	0	0	0	0	0	37
Grand Total	0	12	0	0	0	0	12	0	0	0	0	0	0	0	0	38	0	0	0	0	38	0	0	0	0	0	1	1	51
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	23.5	0.0	0.0	0.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.5	0.0	0.0	0.0	0.0	74.5	0.0	0.0	0.0	0.0	0.0	2.0	2.0	
Exiting Leg Total							38							0							12							1	51

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

8:00 AM	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
8:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	9
8:15 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	7	0	0	0	0	7	0	0	0	0	0	0	0	9
8:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	10
8:45 AM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	9
Total Volume	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	29	0	0	0	0	29	0	0	0	0	0	0	0	37
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.667	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.906	0.000	0.000	0.000	0.000	0.906	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.925
Entering Leg	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	29	0	0	0	0	29	0	0	0	0	0	0	0	37
Exiting Leg							29							0							8							0	37
Total							37							0							37							0	74

PDI File #: **186121 F**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **7:00 AM**
End Time: **9:00 AM**
Class:

Pedestrians

	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:00 AM	0	0	0	0	1	0	1	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	0	8	1	9	14
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	9	5	14	0	0	0	0	0	0	0	0	0	0	0	8	1	9	23
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0	0	0	0	0	0	6	23	29	38
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	8	9	17	0	0	0	0	0	0	0	0	0	0	0	9	12	21	38
Total	0	0	0	0	1	0	1	0	0	0	0	28	16	44	0	0	0	0	0	0	0	0	0	0	0	31	37	68	113
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	0	8	7	15	22
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	6	9	0	0	0	0	0	0	0	0	0	0	0	9	8	17	26
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	0	15	6	21	29
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	4	5	9	0	0	0	0	0	0	0	0	0	0	0	10	5	15	24
Total	0	0	0	0	0	0	0	0	0	0	0	14	19	33	0	0	0	0	0	0	0	0	0	0	0	42	26	68	101
Grand Total	0	0	0	0	1	0	1	0	0	0	0	42	35	77	0	0	0	0	0	0	0	0	0	0	0	73	63	136	214
Approach %	0	0	0	0	100	0		0	0	0	0	54.5	45.5		0	0	0	0	0	0		0	0	0	0	53.7	46.3		
Total %	0	0	0	0	0.47	0	0.47	0	0	0	0	19.6	16.4	36	0	0	0	0	0	0	0	0	0	0	0	34.1	29.4	63.6	
Exiting Leg Total							1							77							0							136	214

Peak Hour Analysis from 07:00 AM to 09:00 AM begins at:

7:30 AM	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0	0	0	0	0	0	6	23	29	38
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	8	9	17	0	0	0	0	0	0	0	0	0	0	0	9	12	21	38
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	0	8	7	15	22
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	6	9	0	0	0	0	0	0	0	0	0	0	0	9	8	17	26
Total Volume	0	0	0	0	0	0	0	0	0	0	0	23	19	42	0	0	0	0	0	0	0	0	0	0	0	32	50	82	124
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	54.8	45.2		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	39.0	61.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.719	0.528	0.618	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.889	0.543	0.707	0.816
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	23	19	42	0	0	0	0	0	0	0	0	0	0	0	32	50	82	124
Exiting Leg							0							42							0							82	124
Total							0							84							0							164	248

PDI File #: **186121 FF**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars and Heavy Vehicles (Combined)

	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	112	0	0	112	0	0	0	0	0	1	76	0	0	77	0	0	0	0	0	189
4:15 PM	0	150	0	0	150	0	0	0	0	0	0	91	0	0	91	0	0	0	0	0	241
4:30 PM	0	138	2	0	140	0	0	0	0	0	2	83	0	0	85	0	0	0	0	0	225
4:45 PM	0	132	0	0	132	1	0	0	0	1	2	76	0	0	78	0	0	1	0	1	212
Total	0	532	2	0	534	1	0	0	0	1	5	326	0	0	331	0	0	1	0	1	867
5:00 PM	1	152	2	0	155	2	0	2	0	4	1	88	0	0	89	0	0	0	0	0	248
5:15 PM	1	136	0	0	137	2	0	3	0	5	2	97	0	0	99	0	0	0	0	0	241
5:30 PM	1	162	3	0	166	2	0	1	0	3	1	82	0	0	83	0	0	0	0	0	252
5:45 PM	0	125	1	0	126	1	0	1	0	2	3	89	0	0	92	0	0	0	0	0	220
Total	3	575	6	0	584	7	0	7	0	14	7	356	0	0	363	0	0	0	0	0	961
Grand Total	3	1107	8	0	1118	8	0	7	0	15	12	682	0	0	694	0	0	1	0	1	1828
Approach %	0.3	99.0	0.7	0.0		53.3	0.0	46.7	0.0		1.7	98.3	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.2	60.6	0.4	0.0	61.2	0.4	0.0	0.4	0.0	0.8	0.7	37.3	0.0	0.0	38.0	0.0	0.0	0.1	0.0	0.1	
Exiting Leg Total					691					20					1114					3	1828
Cars	3	1105	8	0	1116	8	0	7	0	15	12	673	0	0	685	0	0	1	0	1	1817
% Cars	100.0	99.8	100.0	0.0	99.8	100.0	0.0	100.0	0.0	100.0	100.0	98.7	0.0	0.0	98.7	0.0	0.0	100.0	0.0	100.0	99.4
Exiting Leg Total					682					20					1112					3	1817
Heavy Vehicles	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	11
% Heavy Vehicles	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.6
Exiting Leg Total					9					0					2					0	11

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	1	152	2	0	155	2	0	2	0	4	1	88	0	0	89	0	0	0	0	0	248
5:15 PM	1	136	0	0	137	2	0	3	0	5	2	97	0	0	99	0	0	0	0	0	241
5:30 PM	1	162	3	0	166	2	0	1	0	3	1	82	0	0	83	0	0	0	0	0	252
5:45 PM	0	125	1	0	126	1	0	1	0	2	3	89	0	0	92	0	0	0	0	0	220
Total Volume	3	575	6	0	584	7	0	7	0	14	7	356	0	0	363	0	0	0	0	0	961
% Approach Total	0.5	98.5	1.0	0.0		50.0	0.0	50.0	0.0		1.9	98.1	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.750	0.887	0.500	0.000	0.880	0.875	0.000	0.583	0.000	0.700	0.583	0.918	0.000	0.000	0.917	0.000	0.000	0.000	0.000	0.000	0.953
Cars	3	574	6	0	583	7	0	7	0	14	7	353	0	0	360	0	0	0	0	0	957
Cars %	100.0	99.8	100.0	0.0	99.8	100.0	0.0	100.0	0.0	100.0	100.0	99.2	0.0	0.0	99.2	0.0	0.0	0.0	0.0	0.0	99.6
Heavy Vehicles	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Heavy Vehicles %	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.4
Cars Enter Leg	3	574	6	0	583	7	0	7	0	14	7	353	0	0	360	0	0	0	0	0	957
Heavy Enter Leg	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Total Entering Leg	3	575	6	0	584	7	0	7	0	14	7	356	0	0	363	0	0	0	0	0	961
Cars Exiting Leg					360					13					581					3	957
Heavy Exiting Leg					3					0					1					0	4
Total Exiting Leg					363					13					582					3	961

PDI File #: **186121 FF**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Cars-Combined (Motorcycles, Cars, Light Goods)

	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	112	0	0	112	0	0	0	0	0	1	75	0	0	76	0	0	0	0	0	188
4:15 PM	0	150	0	0	150	0	0	0	0	0	0	88	0	0	88	0	0	0	0	0	238
4:30 PM	0	137	2	0	139	0	0	0	0	0	2	81	0	0	83	0	0	0	0	0	222
4:45 PM	0	132	0	0	132	1	0	0	0	1	2	76	0	0	78	0	0	1	0	1	212
Total	0	531	2	0	533	1	0	0	0	1	5	320	0	0	325	0	0	1	0	1	860
5:00 PM	1	152	2	0	155	2	0	2	0	4	1	86	0	0	87	0	0	0	0	0	246
5:15 PM	1	136	0	0	137	2	0	3	0	5	2	97	0	0	99	0	0	0	0	0	241
5:30 PM	1	161	3	0	165	2	0	1	0	3	1	81	0	0	82	0	0	0	0	0	250
5:45 PM	0	125	1	0	126	1	0	1	0	2	3	89	0	0	92	0	0	0	0	0	220
Total	3	574	6	0	583	7	0	7	0	14	7	353	0	0	360	0	0	0	0	0	957
Grand Total	3	1105	8	0	1116	8	0	7	0	15	12	673	0	0	685	0	0	1	0	1	1817
Approach %	0.3	99.0	0.7	0.0		53.3	0.0	46.7	0.0		1.8	98.2	0.0	0.0		0.0	0.0	100.0	0.0		
Total %	0.2	60.8	0.4	0.0	61.4	0.4	0.0	0.4	0.0	0.8	0.7	37.0	0.0	0.0	37.7	0.0	0.0	0.1	0.0	0.1	
Exiting Leg Total					682					20					1112					3	1817

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

5:00 PM	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
5:00 PM	1	152	2	0	155	2	0	2	0	4	1	86	0	0	87	0	0	0	0	0	246
5:15 PM	1	136	0	0	137	2	0	3	0	5	2	97	0	0	99	0	0	0	0	0	241
5:30 PM	1	161	3	0	165	2	0	1	0	3	1	81	0	0	82	0	0	0	0	0	250
5:45 PM	0	125	1	0	126	1	0	1	0	2	3	89	0	0	92	0	0	0	0	0	220
Total Volume	3	574	6	0	583	7	0	7	0	14	7	353	0	0	360	0	0	0	0	0	957
% Approach Total	0.5	98.5	1.0	0.0		50.0	0.0	50.0	0.0		1.9	98.1	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.750	0.891	0.500	0.000	0.883	0.875	0.000	0.583	0.000	0.700	0.583	0.910	0.000	0.000	0.909	0.000	0.000	0.000	0.000	0.000	0.957
Entering Leg	3	574	6	0	583	7	0	7	0	14	7	353	0	0	360	0	0	0	0	0	957
Exiting Leg					360					13					581					3	957
Total					943					27					941					3	1914

PDI File #: **186121 FF**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class: **Heavy Vehicles-Combined (Buses, Single-Unit Trucks, Articulated Trucks)**

	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	7
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
Grand Total	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	11
Approach %	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	18.2	0.0	0.0	18.2	0.0	0.0	0.0	0.0	0.0	0.0	81.8	0.0	0.0	81.8	0.0	0.0	0.0	0.0	0.0	
Exiting Leg Total					9					0					2					0	11
Buses	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
% Buses	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	27.3
Exiting Leg Total					3					0					0					0	3
Single-Unit Trucks	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	8
% Single-Unit	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	72.7
Exiting Leg Total					6					0					2					0	8
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exiting Leg Total					0					0					0					0	0

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:15 PM	St. Paul Street					Driveway					St. Paul Street					Driveway					
	from North					from East					from South					from West					
	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Right	Thru	Left	U-Turn	Total	Total
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	3
4:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
% Approach Total	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		
PHF	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.667
Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Buses %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.6	0.0	0.0	28.6	0.0	0.0	0.0	0.0	0.0	25.0
Single-Unit Trucks	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Single-Unit %	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	75.0
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Articulated %	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Buses	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Single-Unit Trucks	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Entering Leg	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	8
Buses					2					0					0					0	2
Single-Unit Trucks					5					0					1					0	6
Articulated Trucks					0					0					0					0	0
Total Exiting Leg					7					0					1					0	8

PDI File #: **186121 FF**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Bicycles (on Roadway and Crosswalks)

	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	3
Total	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	9
5:00 PM	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	7
5:15 PM	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:30 PM	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	6
5:45 PM	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2	2	8
Total	0	19	0	0	0	0	19	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	2	2	26
Grand Total	0	25	0	0	0	0	25	0	0	0	0	0	0	0	0	8	0	0	0	0	8	0	0	0	0	0	2	2	35
Approach %	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	100.0		
Total %	0.0	71.4	0.0	0.0	0.0	0.0	71.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	22.9	0.0	0.0	0.0	0.0	0.0	5.7	5.7	
Exiting Leg Total							8							0							25							2	35

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:00 PM	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	3
Total Volume	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	9
% Approach Total	0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	100.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		
PHF	0.000	0.500	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
Entering Leg	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	9
Exiting Leg							3							0							6							0	9
Total							9							0							9							0	18

PDI File #: **186121 FF**
Location: **N: St. Paul Street S: St. Paul Street**
Location: **E: Driveway W: Driveway**
City, State: **Brookline, MA**
Client: **Stantec/ D. DeBaie**
Site Code: **210801529**
Count Date: **Tuesday, February 27, 2018**
Start Time: **4:00 PM**
End Time: **6:00 PM**
Class:

Pedestrians

	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	13	9	22	0	0	0	0	2	0	2	0	0	0	0	3	3	6	30
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	7	2	9	0	0	0	0	0	0	0	0	0	0	0	3	2	5	14
4:30 PM	0	0	0	0	1	0	1	0	0	0	0	4	6	10	0	0	0	0	0	0	0	0	0	0	0	4	5	9	20
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	0	0	5	8	13	32
Total	0	0	0	0	1	0	1	0	0	0	0	37	23	60	0	0	0	0	2	0	2	0	0	0	0	15	18	33	96
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	12	6	18	0	0	0	0	0	0	0	0	0	0	0	7	5	12	30
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	6	9	15	0	0	0	0	1	0	1	0	0	0	0	10	10	20	36
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	7	6	13	0	0	0	0	0	0	0	0	0	0	0	9	12	21	34
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	0	0	3	7	10	29
Total	0	0	0	0	0	0	0	0	0	0	0	38	27	65	0	0	0	0	1	0	1	0	0	0	0	29	34	63	129
Grand Total	0	0	0	0	1	0	1	0	0	0	0	75	50	125	0	0	0	0	3	0	3	0	0	0	0	44	52	96	225
Approach %	0	0	0	0	100	0		0	0	0	0	60	40		0	0	0	0	100	0		0	0	0	0	45.8	54.2		
Total %	0	0	0	0	0.44	0	0.44	0	0	0	0	33.3	22.2	55.6	0	0	0	0	1.33	0	1.33	0	0	0	0	19.6	23.1	42.7	
Exiting Leg Total							1							125							3							96	225

Peak Hour Analysis from 04:00 PM to 06:00 PM begins at:

4:45 PM	St. Paul Street							Driveway							St. Paul Street							Driveway							
	from North							from East							from South							from West							
	Right	Thru	Left	U-Turn	CW-EB	CW-WB	Total	Right	Thru	Left	U-Turn	CW-SB	CW-NB	Total	Right	Thru	Left	U-Turn	CW-WB	CW-EB	Total	Right	Thru	Left	U-Turn	CW-NB	CW-SB	Total	Total
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	0	0	5	8	13	32
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	12	6	18	0	0	0	0	0	0	0	0	0	0	0	7	5	12	30
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	6	9	15	0	0	0	0	1	0	1	0	0	0	0	10	10	20	36
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	7	6	13	0	0	0	0	0	0	0	0	0	0	0	9	12	21	34
Total Volume	0	0	0	0	0	0	0	0	0	0	0	38	27	65	0	0	0	0	1	0	1	0	0	0	0	31	35	66	132
% Approach Total	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	58.5	41.5		0.0	0.0	0.0	0.0	100.0	0.0		0.0	0.0	0.0	0.0	47.0	53.0		
PHF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.731	0.750	0.855	0.000	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.775	0.729	0.786	0.917
Entering Leg	0	0	0	0	0	0	0	0	0	0	0	38	27	65	0	0	0	0	1	0	1	0	0	0	0	31	35	66	132
Exiting Leg							0							65							1							66	132
Total							0							130							2							132	264

Appendix B Existing Intersection Operations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	837	59	119	558	20	46	245	103	33	269	63
Future Volume (vph)	195	837	59	119	558	20	46	245	103	33	269	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			-2%	
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1608	3185		1562	3108		1609	1618		1593	1629	
Flt Permitted	0.95	1.00		0.95	1.00		0.30	1.00		0.30	1.00	
Satd. Flow (perm)	1608	3185		1562	3108		504	1618		505	1629	
Peak-hour factor, PHF	0.88	0.88	0.88	0.96	0.96	0.96	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	222	951	67	124	581	21	47	250	105	35	289	68
RTOR Reduction (vph)	0	6	0	0	3	0	0	17	0	0	10	0
Lane Group Flow (vph)	222	1012	0	124	599	0	47	338	0	35	347	0
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	15.1	39.3		8.0	32.2		21.7	21.7		21.7	21.7	
Effective Green, g (s)	15.1	39.3		8.0	32.2		21.7	21.7		21.7	21.7	
Actuated g/C Ratio	0.17	0.44		0.09	0.36		0.24	0.24		0.24	0.24	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	269	1390		138	1111		121	390		121	392	
v/s Ratio Prot	0.14	c0.32		c0.08	0.19			0.21			c0.21	
v/s Ratio Perm							0.09			0.07		
v/c Ratio	0.83	0.73		0.90	0.54		0.39	0.87		0.29	0.89	
Uniform Delay, d1	36.2	20.9		40.6	23.0		28.6	32.8		27.9	33.0	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.60		1.00	1.00	
Incremental Delay, d2	18.3	3.4		46.9	1.9		1.7	15.0		1.3	20.5	
Delay (s)	54.4	24.3		87.5	24.9		18.6	34.7		29.2	53.5	
Level of Service	D	C		F	C		B	C		C	D	
Approach Delay (s)		29.7			35.6			32.8			51.3	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	222	1018	124	602	47	355	35	357
v/c Ratio	0.83	0.73	0.90	0.54	0.39	0.87	0.29	0.89
Control Delay	61.6	24.9	96.9	25.8	24.8	38.7	34.3	57.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	24.9	96.9	25.8	24.8	38.7	34.3	57.0
Queue Length 50th (ft)	122	248	71	146	20	198	16	186
Queue Length 95th (ft)	#226	315	#175	201	m30	m#328	45	#338
Internal Link Dist (ft)		202		254		214		120
Turn Bay Length (ft)	175		150		120		125	
Base Capacity (vph)	285	1397	138	1115	129	430	129	425
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.73	0.90	0.54	0.36	0.83	0.27	0.84

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	453	103	193	815	43	48	239	73	48	288	64
Future Volume (vph)	126	453	103	193	815	43	48	239	73	48	288	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			-2%	
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1593	3097		1608	3193		1609	1634		1609	1647	
Flt Permitted	0.95	1.00		0.95	1.00		0.28	1.00		0.34	1.00	
Satd. Flow (perm)	1593	3097		1608	3193		482	1634		584	1647	
Peak-hour factor, PHF	0.91	0.91	0.91	0.86	0.86	0.86	0.91	0.91	0.91	0.93	0.93	0.93
Adj. Flow (vph)	138	498	113	224	948	50	53	263	80	52	310	69
RTOR Reduction (vph)	0	21	0	0	4	0	0	13	0	0	9	0
Lane Group Flow (vph)	138	590	0	224	994	0	53	330	0	52	370	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	10.2	33.8		12.1	35.7		23.1	23.1		23.1	23.1	
Effective Green, g (s)	10.2	33.8		12.1	35.7		23.1	23.1		23.1	23.1	
Actuated g/C Ratio	0.11	0.38		0.13	0.40		0.26	0.26		0.26	0.26	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	180	1163		216	1266		123	419		149	422	
v/s Ratio Prot	c0.09	0.19		c0.14	c0.31			0.20			c0.22	
v/s Ratio Perm							0.11			0.09		
v/c Ratio	0.77	0.51		1.04	0.78		0.43	0.79		0.35	0.88	
Uniform Delay, d1	38.7	21.7		39.0	23.8		28.0	31.2		27.3	32.1	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.80		1.00	1.00	
Incremental Delay, d2	17.6	1.6		71.2	4.9		2.0	8.1		1.4	18.1	
Delay (s)	56.3	23.3		110.2	28.7		24.4	33.1		28.7	50.2	
Level of Service	E	C		F	C		C	C		C	D	
Approach Delay (s)		29.3			43.7			31.9			47.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	138	611	224	998	53	343	52	379
v/c Ratio	0.77	0.51	1.05	0.78	0.43	0.80	0.35	0.88
Control Delay	67.2	22.8	114.7	29.6	31.8	36.3	33.8	53.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	22.8	114.7	29.6	31.8	36.3	33.8	53.6
Queue Length 50th (ft)	78	135	~140	263	27	188	23	195
Queue Length 95th (ft)	#174	188	#263	322	m46	#299	58	#344
Internal Link Dist (ft)		202		254		214		120
Turn Bay Length (ft)	175		150		120		125	
Base Capacity (vph)	184	1188	214	1272	134	466	162	466
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.51	1.05	0.78	0.40	0.74	0.32	0.81

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	266	44	47	178	45	18	373	34	37	347	89
Future Volume (vph)	26	266	44	47	178	45	18	373	34	37	347	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.98			0.99		1.00	0.97	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1823			1788			1839		1752	1788	
Flt Permitted		0.96			0.88			0.81		0.33	1.00	
Satd. Flow (perm)		1753			1583			1491		612	1788	
Peak-hour factor, PHF	0.84	0.84	0.84	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89
Adj. Flow (vph)	31	317	52	54	205	52	19	401	37	42	390	100
RTOR Reduction (vph)	0	5	0	0	7	0	0	4	0	0	12	0
Lane Group Flow (vph)	0	395	0	0	304	0	0	453	0	42	478	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		48.1			48.1			29.9		29.9	29.9	
Effective Green, g (s)		48.1			48.1			29.9		29.9	29.9	
Actuated g/C Ratio		0.53			0.53			0.33		0.33	0.33	
Clearance Time (s)		6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		936			846			495		203	594	
v/s Ratio Prot											0.27	
v/s Ratio Perm		c0.23			0.19			c0.30		0.07		
v/c Ratio		0.42			0.36			0.92		0.21	0.80	
Uniform Delay, d1		12.6			12.1			28.8		21.5	27.4	
Progression Factor		1.00			1.00			1.00		1.45	1.37	
Incremental Delay, d2		1.4			1.2			21.5		0.4	5.9	
Delay (s)		14.0			13.3			50.3		31.7	43.4	
Level of Service		B			B			D		C	D	
Approach Delay (s)		14.0			13.3			50.3			42.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	400	311	457	42	490
v/c Ratio	0.42	0.37	0.92	0.21	0.81
Control Delay	15.5	14.6	52.2	29.9	43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	14.6	52.2	29.9	43.7
Queue Length 50th (ft)	127	93	241	23	283
Queue Length 95th (ft)	215	174	327	m32	m341
Internal Link Dist (ft)	163	181	233		224
Turn Bay Length (ft)				60	
Base Capacity (vph)	942	852	632	258	764
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.37	0.72	0.16	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	215	46	64	270	44	26	307	55	56	455	112
Future Volume (vph)	17	215	46	64	270	44	26	307	55	56	455	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.98			0.98		1.00	0.97	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1834			1836			1857		1805	1844	
Flt Permitted		0.97			0.89			0.67		0.43	1.00	
Satd. Flow (perm)		1775			1647			1249		826	1844	
Peak-hour factor, PHF	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88
Adj. Flow (vph)	18	229	49	70	293	48	27	323	58	64	517	127
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	11	0
Lane Group Flow (vph)	0	289	0	0	406	0	0	400	0	64	633	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		41.2			41.2			36.8		36.8	36.8	
Effective Green, g (s)		41.2			41.2			36.8		36.8	36.8	
Actuated g/C Ratio		0.46			0.46			0.41		0.41	0.41	
Clearance Time (s)		6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		812			753			510		337	753	
v/s Ratio Prot											c0.34	
v/s Ratio Perm		0.16			c0.25			0.32		0.08		
v/c Ratio		0.36			0.54			0.78		0.19	0.84	
Uniform Delay, d1		15.8			17.6			23.2		17.0	24.0	
Progression Factor		1.00			1.00			1.00		1.41	1.36	
Incremental Delay, d2		1.2			2.8			7.8		0.2	6.1	
Delay (s)		17.0			20.3			30.9		24.2	38.7	
Level of Service		B			C			C		C	D	
Approach Delay (s)		17.0			20.3			30.9			37.4	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	296	411	408	64	644
v/c Ratio	0.36	0.54	0.79	0.19	0.84
Control Delay	18.3	22.2	33.4	22.3	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	22.2	33.4	22.3	38.8
Queue Length 50th (ft)	104	164	185	31	374
Queue Length 95th (ft)	185	283	278	m43	m436
Internal Link Dist (ft)	163	181	233		224
Turn Bay Length (ft)				60	
Base Capacity (vph)	819	758	603	394	890
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.54	0.68	0.16	0.72

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	4	6	0	4	3	394	5	0	445	0
Future Volume (Veh/h)	0	0	4	6	0	4	3	394	5	0	445	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.41	0.41	0.41	0.95	0.95	0.95	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	8	15	0	10	3	415	5	0	489	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								577			294	
pX, platoon unblocked	0.90	0.90	0.81	0.90	0.90	0.84	0.81			0.84		
vC, conflicting volume	922	915	489	920	912	418	489			420		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	445	437	259	443	434	206	259			209		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	97	100	99	100			100		
cM capacity (veh/h)	464	461	639	467	463	702	1064			1139		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	25	423	489
Volume Left	0	15	3	0
Volume Right	8	10	5	0
cSH	639	539	1064	1139
Volume to Capacity	0.01	0.05	0.00	0.00
Queue Length 95th (ft)	1	4	0	0
Control Delay (s)	10.7	12.0	0.1	0.0
Lane LOS	B	B	A	
Approach Delay (s)	10.7	12.0	0.1	0.0
Approach LOS	B	B		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	7	0	7	0	356	7	6	575	3
Future Volume (Veh/h)	0	0	0	7	0	7	0	356	7	6	575	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.70	0.70	0.70	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	10	0	10	0	387	8	7	653	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								577			294	
pX, platoon unblocked	0.86	0.86	0.80	0.86	0.86	0.88	0.80			0.88		
vC, conflicting volume	1070	1064	654	1060	1061	391	656			395		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	679	672	438	668	669	238	440			243		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	97	100	99	100			99		
cM capacity (veh/h)	307	321	493	320	324	708	896			1163		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	20	395	663
Volume Left	0	10	0	7
Volume Right	0	10	8	3
cSH	1700	440	896	1163
Volume to Capacity	0.00	0.05	0.00	0.01
Queue Length 95th (ft)	0	4	0	0
Control Delay (s)	0.0	13.6	0.0	0.2
Lane LOS	A	B		A
Approach Delay (s)	0.0	13.6	0.0	0.2
Approach LOS	A	B		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	35	17	16	17	15	17	373	49	25	446	9
Future Volume (Veh/h)	18	35	17	16	17	15	17	373	49	25	446	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.65	0.65	0.65	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	28	54	26	17	18	16	18	405	53	28	496	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								304			567	
pX, platoon unblocked	0.87	0.87	0.84	0.87	0.87	0.79	0.84			0.79		
vC, conflicting volume	1050	1051	501	1078	1030	432	506			458		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	558	560	305	590	535	144	311			177		
tC, single (s)	7.2	6.6	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	85	96	94	95	98	98			97		
cM capacity (veh/h)	342	357	603	296	374	708	1045			1102		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	108	51	476	534
Volume Left	28	17	18	28
Volume Right	26	16	53	10
cSH	391	398	1045	1102
Volume to Capacity	0.28	0.13	0.02	0.03
Queue Length 95th (ft)	28	11	1	2
Control Delay (s)	17.7	15.4	0.5	0.7
Lane LOS	C	C	A	A
Approach Delay (s)	17.7	15.4	0.5	0.7
Approach LOS	C	C		

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	17	40	25	10	19	15	330	21	14	560	14
Future Volume (Veh/h)	17	17	40	25	10	19	15	330	21	14	560	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	18	43	27	11	21	16	359	23	15	609	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								304			567	
pX, platoon unblocked	0.90	0.90	0.82	0.90	0.90	0.84	0.82			0.84		
vC, conflicting volume	1076	1060	616	1101	1056	370	624			382		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	642	625	429	670	621	162	438			176		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	95	92	91	97	97	98			99		
cM capacity (veh/h)	324	351	516	288	353	745	925			1182		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	79	59	398	639
Volume Left	18	27	16	15
Volume Right	43	21	23	15
cSH	416	386	925	1182
Volume to Capacity	0.19	0.15	0.02	0.01
Queue Length 95th (ft)	17	13	1	1
Control Delay (s)	15.7	16.0	0.6	0.3
Lane LOS	C	C	A	A
Approach Delay (s)	15.7	16.0	0.6	0.3
Approach LOS	C	C		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix C Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : Feb-18

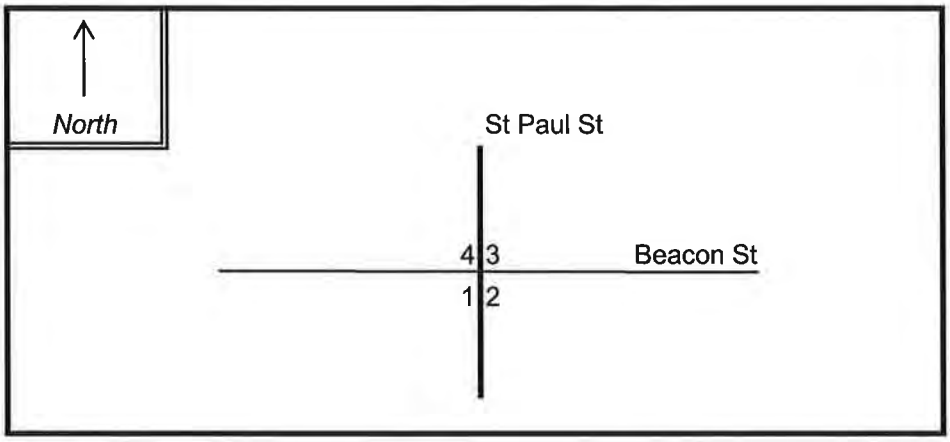
DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : [x]

~ INTERSECTION DATA ~

MAJOR STREET : Beacon Street

MINOR STREET(S) : St Paul Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	NB	WB	SB		
PEAK HOURLY VOLUMES (AM) :	1,091	394	704	365		**2,554**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **28,378**

TOTAL # OF CRASHES : 21 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.20**

CRASH RATE CALCULATION : 0.41

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

Comments : Crash rate is less than District 6 average crash rate.

Project Title & Date: Proposed Residential Development 1223 Beacon Street Brookline 4/2018

Moving Massachusetts Forward
massDOT
Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : Feb-18

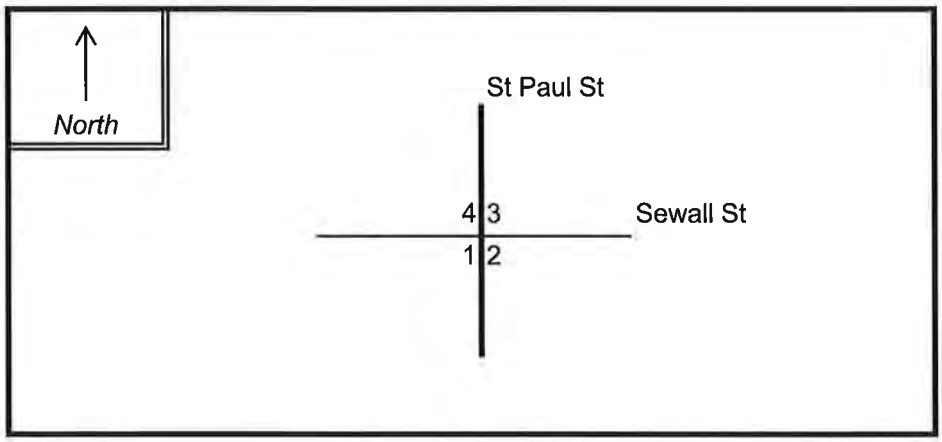
DISTRICT : 6 UNSIGNALIZED : x SIGNALIZED :

~ INTERSECTION DATA ~

MAJOR STREET : St Paul Street

MINOR STREET(S) : Sewall Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	NB	WB	SB		
PEAK HOURLY VOLUMES (PM) :	70	439	48	480		1,037

" K " FACTOR : 0.090 INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : 11,522

TOTAL # OF CRASHES : 7 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : 1.40

CRASH RATE CALCULATION : 0.33 RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : Crash rate is less than District 6 average crash rate.

Project Title & Date: Proposed Residential Developmet 1223 Beacon Street Brookline 4/2018

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Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Brookline COUNT DATE : Feb-18

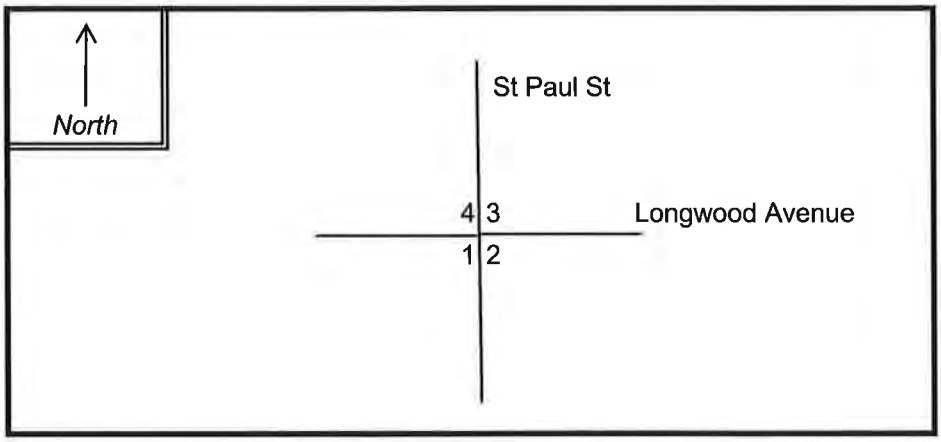
DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : [x]

~ INTERSECTION DATA ~

MAJOR STREET : St Paul Street

MINOR STREET(S) : Longwood Avenue

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

APPROACH :	1	2	3	4	5	Total Peak Hourly Approach Volume
DIRECTION :	EB	NB	WB	SB		
PEAK HOURLY VOLUMES (PM) :	336	425	270	473		1,504

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **16,711**

TOTAL # OF CRASHES : 9 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **1.80**

CRASH RATE CALCULATION : 0.30

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

Comments : Crash rate is less than District 6 average crash rate.

Project Title & Date: Proposed Residential Development 1223 Beacon Street Brookline 4/2018

Traffic Engineering

- Policies and Design Guidelines
- Temporary Traffic Control
- Highway Safety
- Traffic Signals
- Signs
- Crash Data
- Speed Limits

Intersection Crash Rates

The intersection average crash rates are based upon a database of signalized and unsignalized intersection crash rates that are compiled by MassDOT. The database contains intersection crash rates, obtained from crash rate worksheets that have been submitted to MassDOT as part of the review process for an Environmental Impact Report or Functional Design Report. MassDOT enters the information directly from the crash rate worksheet into the database. The statewide average crash rates merely reflect the average of those rates contained in the database and the district-wide crash rates reflect the average of those crash rates in the particular district, calculated for both signalized and unsignalized locations. The most recent average crash rates, which are updated on a nearly yearly basis, are based on all entries in the database not just those entries made within the past year.

Average Crash Rates, per Million Entering Vehicles, by Intersection Type
(Based upon crash information queried on February 9, 2016)

Location	Signalized Intersections	Unsignalized Intersections
Statewide	0.77	0.58
District 1*	0.92*	0.43*
District 2	0.82	0.70
District 3	0.90	0.65
District 4	0.73	0.56
District 5	0.76	0.58
District 6	0.70	0.53

* - District 1 should use Statewide Rates due to low sample total

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massDOT 2011

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	from Nearest Roadway
3134020	BROOKLINE	07-Feb-2011	9:10 AM	Non-fatal injury	2	1	0	Rear-end	V1: Turning left / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Wet	Daylight	Cloudy		1180 BEACON STREET
2790989	BROOKLINE	07-Mar-2011	12:30 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1:Northbound	V1: Collision with pedestrian	V1: Not reported	Dry	Daylight	Cloudy/Cloudy	SAINT PAUL STREET / BEACON STREET	
2789627	BROOKLINE	04-May-2011	3:50 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Turning left / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Daylight	Rain	SEWALL AVENUE / SAINT PAUL STREET	
2789625	BROOKLINE	05-May-2011	4:30 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Parked / V2:Overtaking/ passing	V1:Not reported / V2:Westbound	V1: Not reported / V2: Collision with parked motor vehicle	V1: Not reported / V2:Passenger car	Wet	Daylight	Cloudy/ Rain		1200 BEACON STREET
2792555	BROOKLINE	17-Jul-2011	11:30 AM	Property damage only (none injured)	3	0	0	Angle	V1: Travelling straight ahead / V2:Entering traffic lane / V3:Parked	V1:Eastbound / V2:Eastbound / V3:Not reported	motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Not reported	V1: Passenger car / V2:Passenger car / V3:Passenger car	Dry	Daylight	Clear	SAINT PAUL STREET / SEWALL AVENUE	
2853599	BROOKLINE	17-Oct-2011	1:53 PM	Non-fatal injury	2	2	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Eastbound	motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	SAINT PAUL STREET / LONGWOOD AVENUE	
2900587	BROOKLINE	22-Oct-2011	10:45 PM	Non-fatal injury	1	2	0	Single vehicle crash	V1: Travelling straight ahead	V1:Northbound	V1: Collision with embankment	V1: Passenger car	Dry	Dark - lighted roadway	Clear	SAINT PAUL STREET / BEACON STREET	

massDOT 2012

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection
3020753	BROOKLINE	28-Jan-2012	2:00 AM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Westbound / V2:Westbound	V1: Not reported / V2: Unknown	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	BEACON STREET / SAINT PAUL STREET	
3348946	BROOKLINE	16-Dec-2012	4:30 PM	Property damage only (none injured)	2	0	0	Single vehicle crash	V1: Turning right / V2:Parked	V1:Southbound / V2:Not reported	V1: Collision with parked motor vehicle / V2: Collision with parked motor vehicle	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Rain	SAINT PAUL STREET / BEACON STREET	
3069396	BROOKLINE	08-Mar-2012	2:00 AM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1:Westbound	V1: Collision with tree	V1: Passenger car	Dry	Dark - lighted roadway	Clear		1200 BEACON STREET

massDOT 2013

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection
3390274	BROOKLINE	07-Feb-2013	10:15 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	SAINT PAUL STREET / SEWALL AVENUE	
3482049	BROOKLINE	10-Jun-2013	6:00 PM	Property damage only (none injured)	3	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:Eastbound / V2:Northbound / V3:Southbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Wet	Daylight	Rain	SEWALL AVENUE / SAINT PAUL STREET	
3618032	BROOKLINE	22-Jul-2013	12:40 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Turning left / V2:Backing	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	LONGWOOD AVENUE / SAINT PAUL STREET	
3620572	BROOKLINE	14-Aug-2013	7:30 AM	Non-fatal injury	2	2	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	BEACON STREET / SAINT PAUL STREET	
3620571	BROOKLINE	14-Aug-2013	7:50 PM	Non-fatal injury	2	1	0	Sideswipe, opposite direction	V1: Turning right / V2:Slowing or stopped in traffic	V1:Eastbound / V2:Northbound	V1: Not reported / V2: Not reported	V1: Motorcycle / V2:Passenger car	Dry	Dusk	Clear	BEACON STREET / SAINT PAUL STREET	
3613800	BROOKLINE	18-Sep-2013	6:08 PM	Non-fatal injury	1	1	0	Head-on	V1: Turning left	V1:Westbound	V1: Collision with motor vehicle in traffic	V1: Passenger car	Dry	Daylight	Clear	LONGWOOD AVENUE / SAINT PAUL STREET	

massDOT 2014

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Nearest Roadway Intersection
3785972	BROOKLINE	15-Feb-2014	9:43 PM	Non-fatal injury	2	1	0	Angle	V1: Turning left / V2:Travelling straight ahead	V1:Northbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Bus (seats for 7-15 people, including driver)	Snow	Dark - lighted roadway	Snow	BEACON STREET / SAINT PAUL STREET	
3804006	BROOKLINE	22-Feb-2014	10:19 PM	Non-fatal injury	2	2	0	Rear-end	stopped in traffic / V2:Travelling straight ahead	V1:Westbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	BEACON STREET / SAINT PAUL STREET	
3798942	BROOKLINE	28-Mar-2014	5:25 PM	Non-fatal injury	3	1	0	Rear-end	stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or	V1:Northbound / V2:Northbound / V3:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Wet	Dusk	Rain		ST PAUL ST / 155
3834631	BROOKLINE	07-Apr-2014	5:30 AM	Non-fatal injury	3	2	0	Rear-end	V1: Travelling straight ahead / V2:Travelling straight ahead / V3:Travelling straight ahead	V1:Eastbound / V2:Eastbound / V3:Eastbound	V1: Collision with other movable object / V2: Collision with other movable object / V3: Collision with other movable object	V1: Passenger car / V2:Passenger car / V3:Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Dawn	Clear	LONGWOOD AVENUE / SAINT PAUL STREET	
3820134	BROOKLINE	25-Apr-2014	8:40 AM	Non-fatal injury	1	1	0	Angle	V1: Entering traffic lane	V1:Northbound	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Passenger car	Dry	Daylight	Clear		LONGWOOD AVE / 63
3820131	BROOKLINE	25-Apr-2014	10:10 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Eastbound / V2:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	BEACON STREET / SAINT PAUL STREET	
4074872	BROOKLINE	18-Jun-2014	6:15 PM	Non-fatal injury	3	1	0	Rear-end	stopped in traffic / V2:Slowing or stopped in traffic / V3:Slowing or	V1:Westbound / V2:Westbound / V3:Westbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic / V3: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car / V3:Passenger car	Dry	Daylight	Clear	BEACON ST / ST PAUL ST	
4074908	BROOKLINE	18-Aug-2014	9:51 AM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Eastbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Dry	Daylight	Clear	SEWALL AVE / SAINT PAUL ST.	
4074996	BROOKLINE	25-Nov-2014	7:00 PM	Property damage only (none injured)	2	0	0	Sideswipe, same direction	V1: Travelling straight ahead / V2:Turning left	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	BEACON STREET / SAINT PAUL STREET	
4075002	BROOKLINE	28-Nov-2014	8:30 PM	Property damage only (none injured)	2	0	0	Sideswipe, opposite direction	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Northbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Dark - lighted roadway	Clear	ST PAUL ST / LONGWOOD AVE	
4075009	BROOKLINE	03-Dec-2014	5:35 PM	Non-fatal injury	1	2	0	Sideswipe, same direction	V1: Changing lanes	V1:Westbound	V1: Collision with cyclist (bicycle, tricycle, unicycle, pedal car)	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Wet	Dark - lighted roadway	Rain/Severe crosswinds	BEACON ST / ST PAUL ST	

massDOT 2015

Crash Number	City/Town Name	Crash Date	Crash Time	Crash Severity	Number of Vehicles	Total Nonfatal Injuries	Total Fatal Injuries	Manner of Collision	Vehicle Action Prior to Crash	Vehicle Travel Directions	Most Harmful Events	Vehicle Configuration	Road Surface Condition	Ambient Light	Weather Condition	At Roadway Intersection	Distance from Nearest Roadway Intersection
4096217	BROOKLINE	01-Jan-2015	5:01 PM	Non-fatal injury	1	1	0	Single vehicle crash	V1: Travelling straight ahead	V1:Southbound	V1: Collision with other fixed object (wall, building, tunnel, etc.)	V1: Passenger car	Dry	Dark - lighted roadway	Clear	SAINT PAUL STREET / BEACON STREET	
4075041	BROOKLINE	06-Jan-2015	12:55 PM	Property damage only (none injured)	2	0	0	Rear-end	V1: Slowing or stopped in traffic / V2:Slowing or stopped in traffic	V1:Eastbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Snow	Daylight	Snow	BEACON STREET / SAINT PAUL STREET	
4075060	BROOKLINE	26-Jan-2015	6:51 PM	Property damage only (none injured)	1	0	0	Single vehicle crash	V1: Travelling straight ahead	V1:Northbound	V1: Collision with light pole or other post/support	V1: Passenger car	Snow	Dark - lighted roadway	Snow/Blowing sand, snow		ST PAUL ST / 159
4075067	BROOKLINE	06-Feb-2015	8:00 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Southbound / V2:Eastbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Wet	Dark - lighted roadway	Clear	BEACON STREET / ST PAUL STREET	
4075123	BROOKLINE	02-Apr-2015	10:55 AM	Non-fatal injury	2	1	0	Angle	V1: Travelling straight ahead / V2:Turning left	V1:Southbound / V2:Northbound	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Passenger car / V2:Passenger car	Dry	Daylight	Cloudy	BEACON ST / ST PAUL ST	
4075159	BROOKLINE	02-May-2015	4:21 PM	Non-fatal injury	1	1	0	Single vehicle crash	V1: Turning left	V1:Southbound	V1: Collision with pedestrian	V1: Passenger car	Dry	Daylight	Clear	LONGWOOD AVE / ST PAUL ST	
4075220	BROOKLINE	12-Aug-2015	4:24 PM	Non-fatal injury	2	1	0	Rear-end	V1: Slowing or stopped in traffic / V2:Travelling straight ahead	V1:Eastbound / V2:Eastbound	motor vehicle in traffic / V2: Reported but invalid	V1: Passenger car / V2:Passenger car	Dry	Daylight	Clear	BEACON ST / ST PAUL ST	
4096212	BROOKLINE	30-Sep-2015	12:26 PM	Property damage only (none injured)	2	0	0	Angle	V1: Travelling straight ahead / V2:Travelling straight ahead	V1:Not reported / V2:Not reported	V1: Collision with motor vehicle in traffic / V2: Collision with motor vehicle in traffic	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires / V2:Passenger car	Wet	Daylight	Rain	SAINT PAUL STREET / BEACON STREET	
4121780	BROOKLINE	12-Dec-2015	11:40 AM	Property damage only (none injured)	1	0	0	Sideswipe, same direction	V1: Turning right	V1:Eastbound	V1: Collision with light pole or other post/support	V1: Light truck(van, mini-van, panel, pickup, sport utility) with only four tires	Dry	Daylight	Clear	LONGWOOD AVENUE / SAINT PAUL STREET	
4124300	BROOKLINE	17-Dec-2015	6:50 PM	Non-fatal injury	1	1	0	Single vehicle crash	V1: Turning left	V1:Westbound	V1: Collision with pedestrian	V1: Passenger car	Wet	Dark - lighted roadway	Rain	SAINT PAUL STREET / LONGWOOD AVENUE	

Appendix D Public Transportation Information

Fares

PRICE PER TRIP	Local Bus	Bus + Bus	Rapid Transit	Bus + Rapid Transit
CharlieCard	$1.70	$1.50	$2.25	$2.25
CharlieTicket	$2.00	$2.00	$2.75	$4.75***
Cash-on-Board	$2.00	$4.00	$2.75	$4.75***
Student*	$0.85	$0.85	$1.10	$1.10
Senior/TAP**	$0.85	$0.85	$1.10	$1.10
UNLIMITED TRIP PASSES				
1-Day	$12.00	$12.00	$12.00	$12.00
7-Day	$21.25	$21.25	$21.25	$21.25
Monthly	$55.00	$55.00	$84.50	$84.50
Senior/TAP Monthly$30.00/month for unlimited travel on Local Bus and Rapid Transit				

VALID PASSES: LinkPass ($84.50/mo.); Student LinkPass* ($30/mo.) ; Senior/TAP LinkPass* ($30/mo.); and express bus, commuter rail, and boat passes.

FREE FARES: Children 11 and under ride free when accompanied by an adult; Blind Access CharlieCard holders ride free: if using a guide, the guide rides free

* Available to students through participating middle schools and high schools.

** Available to Medicare cardholders, seniors 65+, and persons with disabilities.

*** For Silver Line SL4 or SL5 pay $2.75. Also see "transfers."

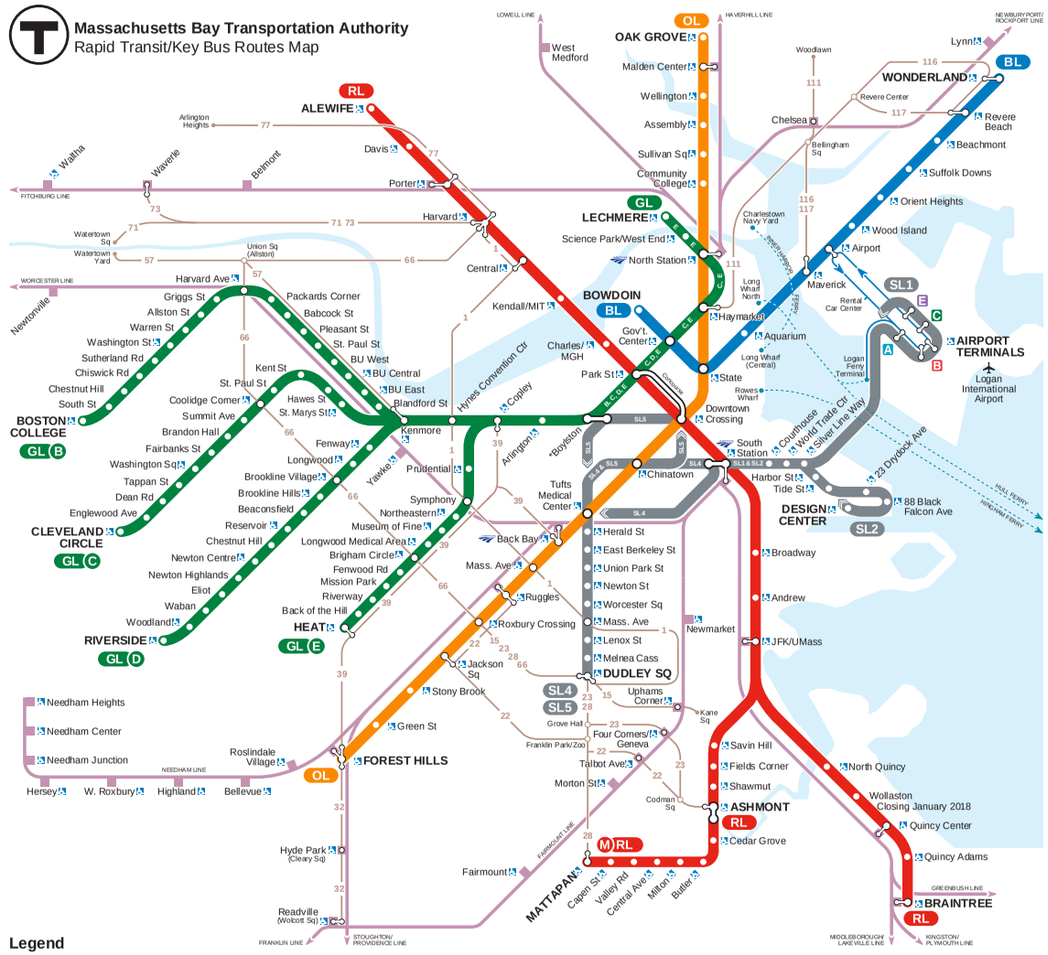
TRANSFERS

If paying with a CharlieTicket or CharlieCard, discounted transfers that are available are automatic — just use the same ticket or card throughout your trip. If paying with cash onboard a vehicle, free transfers are only allowed between rapid transit lines and inside paid platform areas at gated stations.

SCHEDULES

Schedules are available at the following stations: Park Street, Airport, Malden, Harvard, Haymarket (Green Line Level), Back Bay, Downtown Crossing (Orange Line Level), and Quincy Center, or ask a Customer Service Agent. Schedules are also available at the State Transportation Building (10 Park Plaza), 45 High St, and online at mbta.com.

Massachusetts Bay Transportation Authority
Rapid Transit/Key Bus Routes Map



Rapid Transit

Winter December 31, 2017 - March 31, 2018

Massachusetts Bay Transportation Authority
massDOT Massachusetts Department of Transportation

Information 617-222-3200 • 1-800-392-6100 (TTY) 617-222-5146 • www.mbta.com

Weekday

Rapid Transit Line	First Trip	AM Peak	Midday	PM Peak	Evening	Late Night	Last Trip
Red Line							
Alewife	5:24AM	9 min	14 min	9 min	12 min	12 min	12:15AM
Braintree*	5:15AM	9 min	14 min	9 min	12 min	12 min	12:17AM
Alewife	5:16AM	9 min	14 min	9 min	12 min	12 min	w 12:22AM
Ashmont	5:16AM	9 min	14 min	9 min	12 min	12 min	w 12:30AM
"M" Ashmont	5:17AM	5 min	8 min	5 min	12 min	12 min	w 1:05AM
Mattapan	5:05AM	5 min	8 min	5 min	12 min	12 min	12:53AM
Blue Line							
Wonderland	5:13AM	5 min	9 min	5 min	9 min	9 min	12:28AM
Orient Heights	5:13AM	5 min	9 min	5 min	9 min	9 min	12:33AM
Bowdoin	5:29AM	5 min	9 min	5 min	9 min	9 min	w 1:00AM
Orange Line							
Oak Grove	5:16AM	6 min	9 min	6 min	10 min	10 min	w 12:30AM
Forest Hills	5:16AM	6 min	9 min	6 min	10 min	10 min	w 12:28AM
Green Line							
B Boston College	5:01AM	6 min	8 min	6 min	8 min	9 min	12:10AM
Park Street	5:42AM	6 min	8 min	6 min	8 min	9 min	w 12:52AM
C Cleveland Circle	5:01AM[1]	6 min	9 min	7 min	7 min	10 min	12:10AM
North Station	5:55AM	6 min	9 min	7 min	7 min	10 min	w 12:46AM
D Riverside	4:56AM	6 min	8 min	6 min	8 min	11 min	12:05AM
Government Ctr.	5:41AM	6 min	8 min	6 min	8 min	11 min	w 12:49AM
E Lechmere	5:01AM	6 min	8 min	6 min	9 min	9 min	12:30AM
Heath Street	5:38AM	6 min	8 min	6 min	9 min	9 min	12:47AM[3]
Silver Line							
SL1 Logan Airport	5:38AM	8 min	8 min	10 min	8 min	12 min	f 12:44AM
South Station	5:40AM	8 min	8 min	10 min	8 min	12 min	12:30AM
SL2 Design Center	6:03AM	5 min	10 min	5 min	9 min	15 min	12:30AM
South Station	5:45AM	5 min	10 min	5 min	9 min	15 min	w 12:50AM
Additional Waterfront-only service							
Silver Line Way	5:28AM	5 min	Use SL1/SL2				
South Station	5:35AM	5 min					12:53AM
SL4 Dudley Station	5:20AM	12 min	16 min	14 min	12 min	19 min	12:20AM
South Station	5:35AM	12 min	16 min	14 min	12 min	19 min	12:39AM
SL5 Dudley Station	5:15AM	8 min	10 min	8 min	7 min	17 min	12:53AM
Downtown Xing	5:32AM	8 min	10 min	8 min	7 min	17 min	w 1:07AM

Saturday

Rapid Transit Line	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip
Red Line						
Alewife	5:24AM	14 min	14 min	14 min	14 min	12:15AM
Braintree*	5:15AM	14 min	14 min	14 min	14 min	12:17AM
Alewife	5:16AM	14 min	14 min	14 min	14 min	w 12:22AM
Ashmont	5:16AM	14 min	14 min	14 min	14 min	w 12:30AM
"M" Ashmont	5:15AM	26 min	12 min	12 min	26 min	w 1:05AM
Mattapan	5:05AM	26 min	12 min	12 min	26 min	12:53AM
Blue Line						
Wonderland	5:25AM	9 min	9 min	9 min	13 min	12:28AM
Orient Heights	5:13AM	9 min	9 min	9 min	13 min	12:33AM
Bowdoin	5:29AM	9 min	9 min	9 min	13 min	w 1:00AM
Orange Line						
Oak Grove	5:16AM	10 min	9 min	11 min	11 min	w 12:30AM
Forest Hills	5:16AM	10 min	9 min	11 min	11 min	w 12:28AM
Green Line						
B Boston College	4:45AM[2]	11 min	7 min	7 min	11 min	12:09AM
Park Street	5:40AM	11 min	7 min	7 min	11 min	w 12:52AM
C Cleveland Circle	4:50AM[2]	10 min	9 min	8 min	10 min	12:10AM
North Station	5:30AM	10 min	9 min	8 min	10 min	w 12:46AM
D Riverside	4:55AM	13 min	9 min	8 min	10 min	12:02AM
Government Ctr.	5:38AM	13 min	9 min	8 min	10 min	w 12:49AM
E Lechmere	5:01AM	11 min	9 min	11 min	11 min	12:30AM
Heath Street	5:39AM	11 min	9 min	11 min	11 min	12:47AM[3]
Silver Line						
SL1 Logan Airport	5:33AM	12 min	12 min	12 min	12 min	f 12:45AM
South Station	5:35AM	12 min	12 min	12 min	12 min	12:30AM
SL2 Design Center	6:10AM	15 min	15 min	15 min	15 min	12:35AM
South Station	5:50AM	15 min	15 min	15 min	15 min	w 12:49AM
Additional Waterfront-only service						
Silver Line Way	5:28AM	Use SL1/SL2				
South Station						12:26AM
SL4 Dudley Station	5:23AM	15 min	15 min	15 min	20 min	12:20AM
South Station	5:40AM	15 min	15 min	15 min	20 min	12:40AM
SL5 Dudley Station	5:19AM	10 min	10 min	11 min	11 min	12:46AM
Downtown Xing	5:34AM	10 min	10 min	11 min	11 min	w 1:00AM

Sunday

Rapid Transit Line	First Trip	AM Peak	PM Peak	Evening	Late Night	Last Trip
Red Line						
Alewife	6:08AM	15 min	15 min	15 min	16 min	12:15AM
Braintree*	6:00AM	15 min	15 min	15 min	16 min	12:17AM
Alewife	6:00AM	15 min	15 min	15 min	16 min	w 12:22AM
Ashmont	6:00AM	15 min	15 min	15 min	16 min	w 12:30AM
"M" Ashmont	6:03AM	26 min	12 min	12 min	26 min	w 1:05AM
Mattapan	5:51AM	26 min	12 min	12 min	26 min	12:53AM
Blue Line						
Wonderland	5:58AM	13 min	9 min	9 min	13 min	12:28AM
Orient Heights	6:03AM	13 min	9 min	9 min	13 min	12:33AM
Bowdoin	6:21AM	13 min	9 min	9 min	13 min	w 1:00AM
Orange Line						
Oak Grove	6:00AM	13 min	11 min	11 min	11 min	w 12:30AM
Forest Hills	6:00AM	13 min	11 min	11 min	11 min	w 12:28AM
Green Line						
B Boston College	5:20AM[2]	12 min	9 min	7 min	10 min	12:10AM
Park Street	6:12AM	12 min	9 min	7 min	10 min	w 12:52AM
C Cleveland Circle	5:30AM[2]	12 min	11 min	9 min	12 min	12:10AM
North Station	6:06AM	12 min	11 min	9 min	12 min	w 12:46AM
D Riverside	5:25AM	13 min	11 min	11 min	11 min	12:05AM
Government Ctr.	6:10AM	13 min	11 min	11 min	11 min	w 12:49AM
E Lechmere	5:35AM	12 min	12 min	12 min	12 min	12:30AM
Heath Street	6:15AM	12 min	12 min	12 min	12 min	12:47AM[3]
Silver Line						
SL1 Logan Airport	5:50AM	12 min	8 min	8 min	8 min	f 12:45AM
South Station	6:12AM	12 min	8 min	8 min	8 min	12:30AM
SL2 Design Center	6:50AM	15 min	15 min	15 min	15 min	12:34AM
South Station	6:35AM	15 min	15 min	15 min	15 min	w 12:48AM
Additional Waterfront-only service						
Silver Line Way	6:05AM	Use SL1/SL2				
South Station						1:01AM
SL4 Dudley Station	6:02AM	15 min	15 min	15 min	20 min	12:20AM
South Station	6:20AM	15 min	15 min	15 min	20 min	12:40AM
SL5 Dudley Station	6:00AM	10 min	8 min	9 min	9 min	12:25AM
Downtown Xing	6:15AM	10 min	8 min	9 min	9 min	w 12:47AM

Schedule Periods (approximate):

AM Rush Hour:	6:30 AM - 9:00 AM
Midday:	9:00 AM - 3:30 PM
PM Rush Hour:	3:30 PM - 6:30 PM
Evening:	6:30 PM - 8:00 PM
Late Night:	8:00 PM - CLOSE

Red Line Note:
*Braintree Line:
Construction on Wollaston Station will begin in January 2018. Wollaston Station will be closed during construction and shuttle buses will operate between Wollaston and North Quincy Stations. Please visit mbta.com/alerts for updated service information.

Mattapan Note:
Saturday and Sunday before 10:00 AM and after 8:00 PM trips depart every 26 minutes and the rest of the day every 12 minutes. Also, see Mattapan Line Schedule Card.

Green Line Notes:
1 - The first two C Line AM inbound trips run through to Lechmere Station on weekdays.

2 - The first B Line and second C Line AM inbound trips run through to Lechmere Station on weekends.

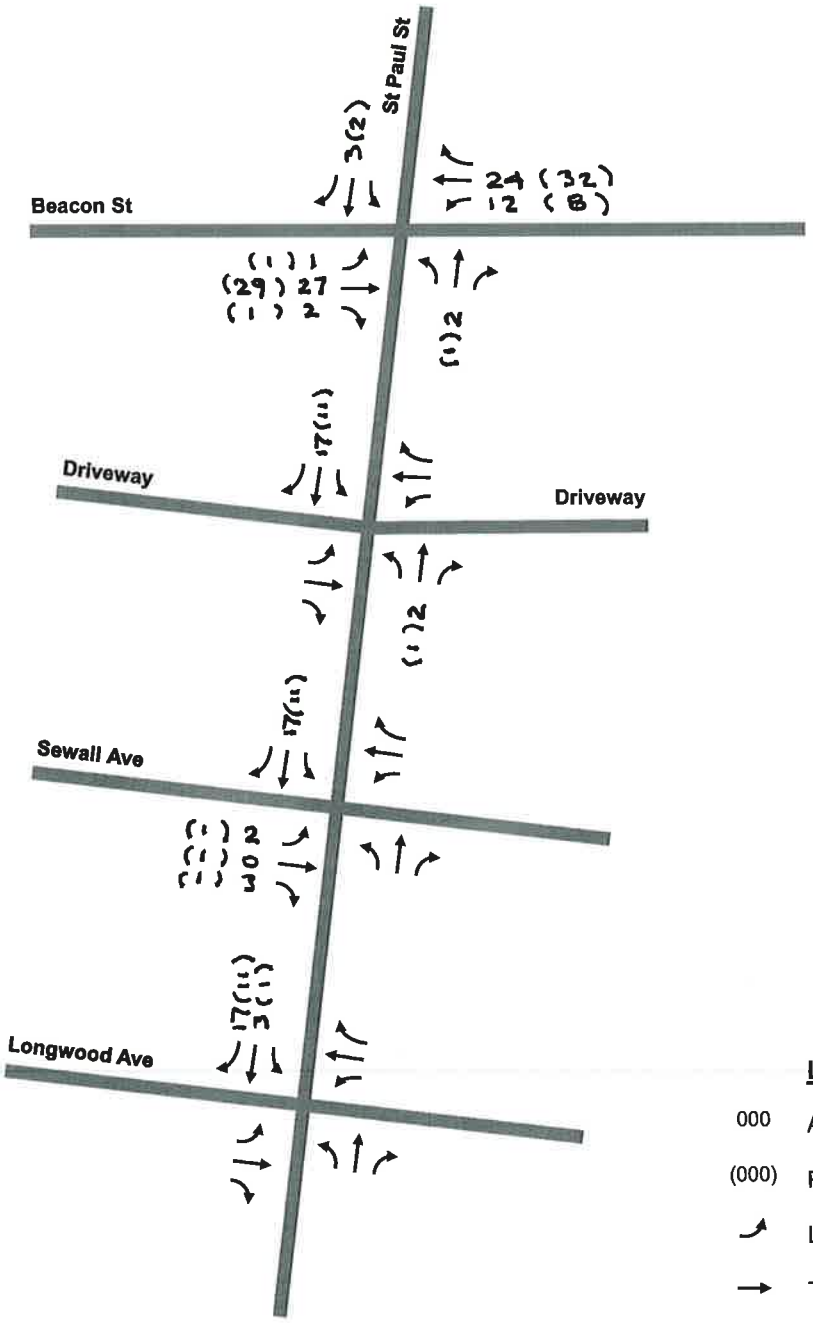
3 - The 12:32AM trip from Heath St is the last connecting train to other lines downtown. The 12:47AM trip from Heath St. runs in service to Lechmere with no guaranteed connections.

f - After exiting Ted Williams Tunnel bus will only service World Trade Center and South Station stops.

w - Last trips wait at some stations, primarily in the Downtown area, for connecting service. Departure times are approximate.

Winter 2018 Holidays
January 1: see Sunday
January 15 & February 19: see Saturday
Silver Line see Weekday

Appendix E Background Project Trips



Legend

000	AM Peak Hour Volume
(000)	PM Peak Hour Volume
	Left turns
	Through movements
	Right turns

Schematic Diagram:
Not to Scale

Proposed Residential Development
Brookline, Massachusetts

Stantec Consulting Services Inc.

Stantec

Background Project Trips

Appendix F Trip Generation

TRIP GENERATION ESTIMATE 6/18/2018

11 Story Residential Expansion (Existing four story Residential)
1223 Beacon Street Brookline MA

Description

Existing: Residential - 70 small units

Restaurant – Small Shushi restaurant with no on-site parking

Doctors' offices – 6 small with no onsite parking

Proposed: Residential - 123 units

Doctors' offices – 6 small with no onsite parking

Assumptions

1. Existing residential units equivalent to ½ proposed residential units regarding trip generation.
2. No restaurant proposed and insignificant vehicle trips to site.
3. Doctors' offices generate insignificant vehicle trips to site due to no patient parking.
4. Transit / Walk / Bicycle usage in this Census Tract (4001) is 64 percent – conservatively apply ITE LUC 222 – Dense Multi-Use Urban.
5. Apply rates for Peak Hour of Adjacent Street

Estimate of Vehicle Trips

	Weekday			Weekday AM Peak Hour			Weekday PM Peak Hour		
	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Percent		50%	50%		12%	88%		70%	30%
123 units	285	142	143	30	4	26	27	19	8
35 units	109	54	55	10	1	9	10	7	3
New Vehicle Trips	176	88	88	20	3	17	17	12	5

Multifamily Housing (High-Rise)
(222)

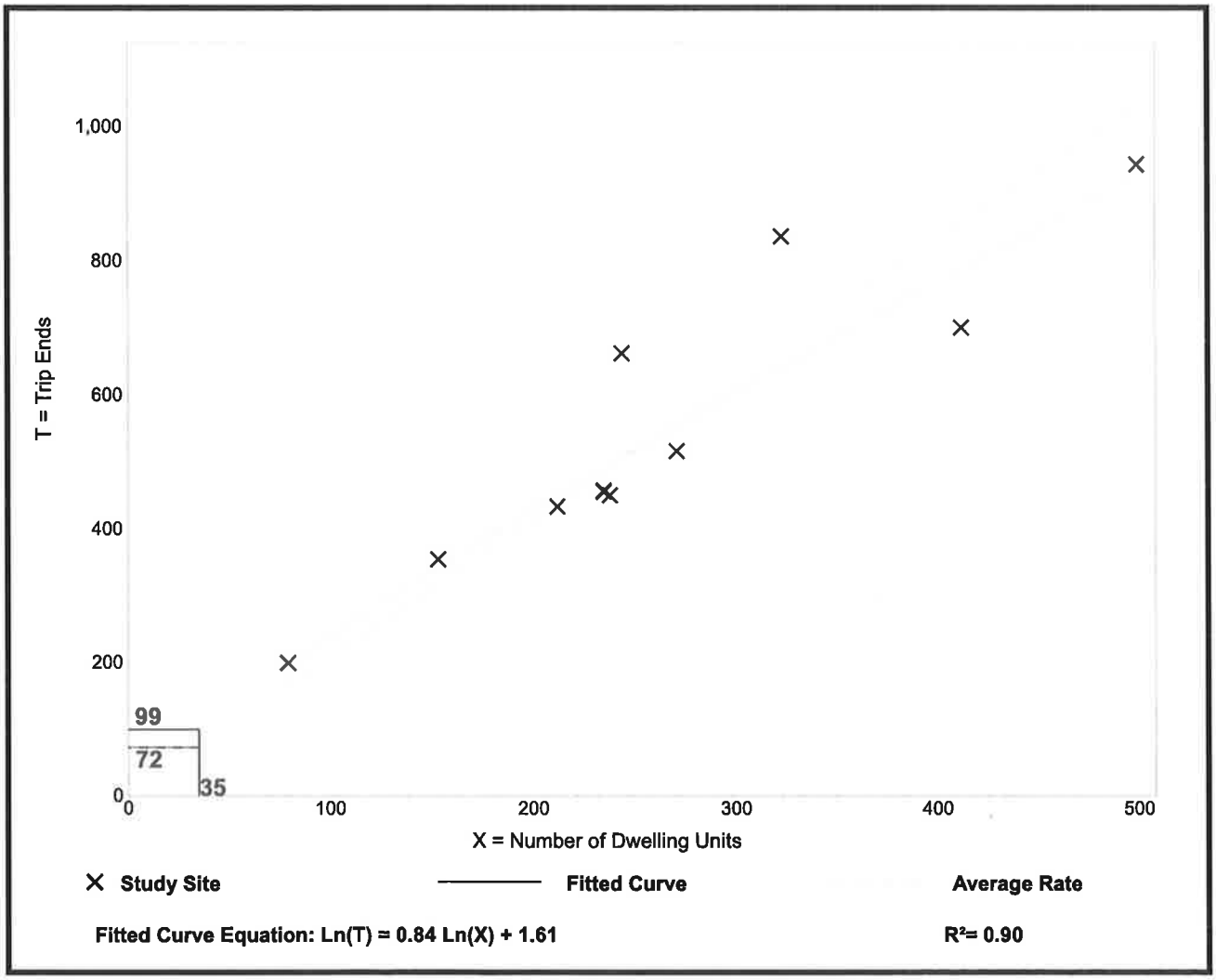
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 11
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
2.07	1.70 - 2.71	0.34

Data Plot and Equation



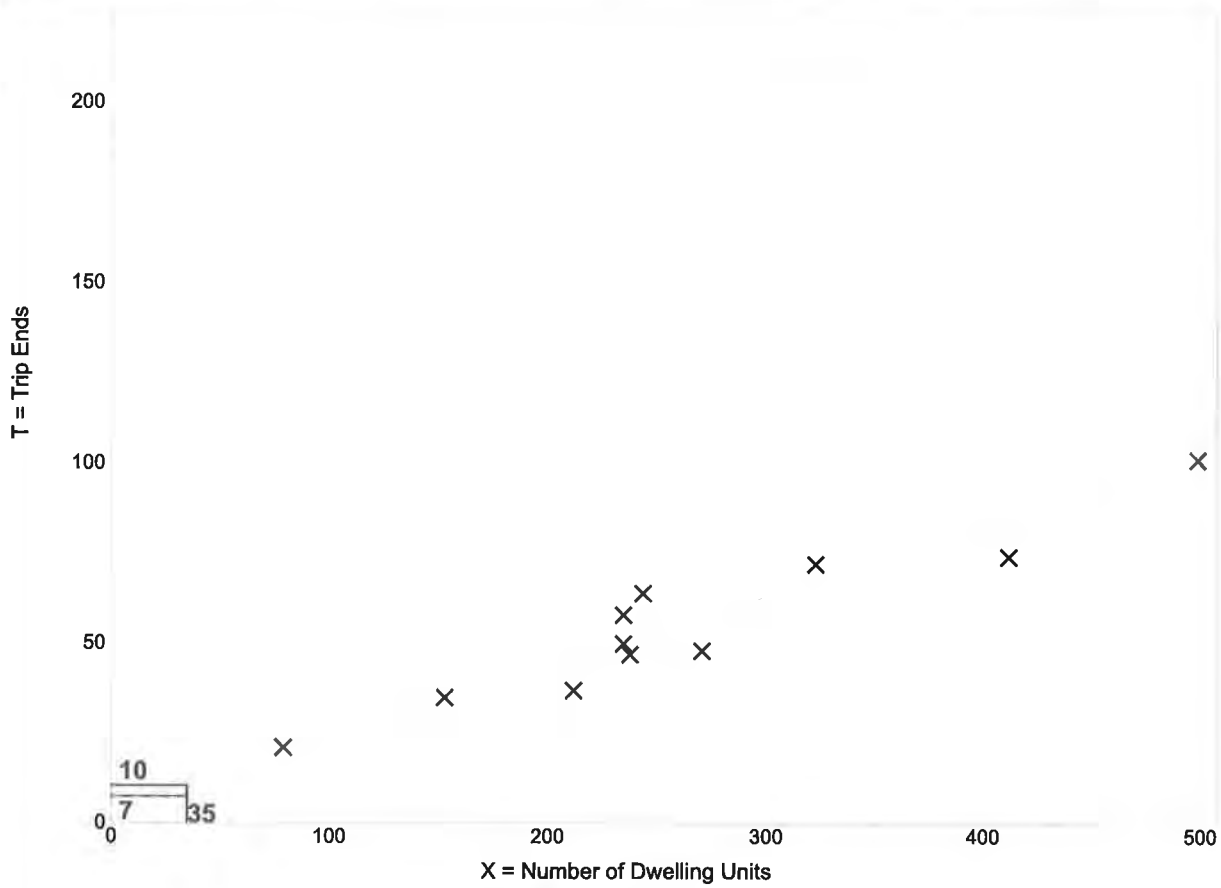
Multifamily Housing (High-Rise)
(222)

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: **Dense Multi-Use Urban**
Number of Studies: 11
Avg. Num. of Dwelling Units: 264
Directional Distribution: 12% entering, 88% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.21	0.17 - 0.27	0.03

Data Plot and Equation



× **Study Site** —— **Fitted Curve** **Average Rate**

Fitted Curve Equation: Ln(T) = 0.84 Ln(X) - 0.65 **R^2= 0.91**

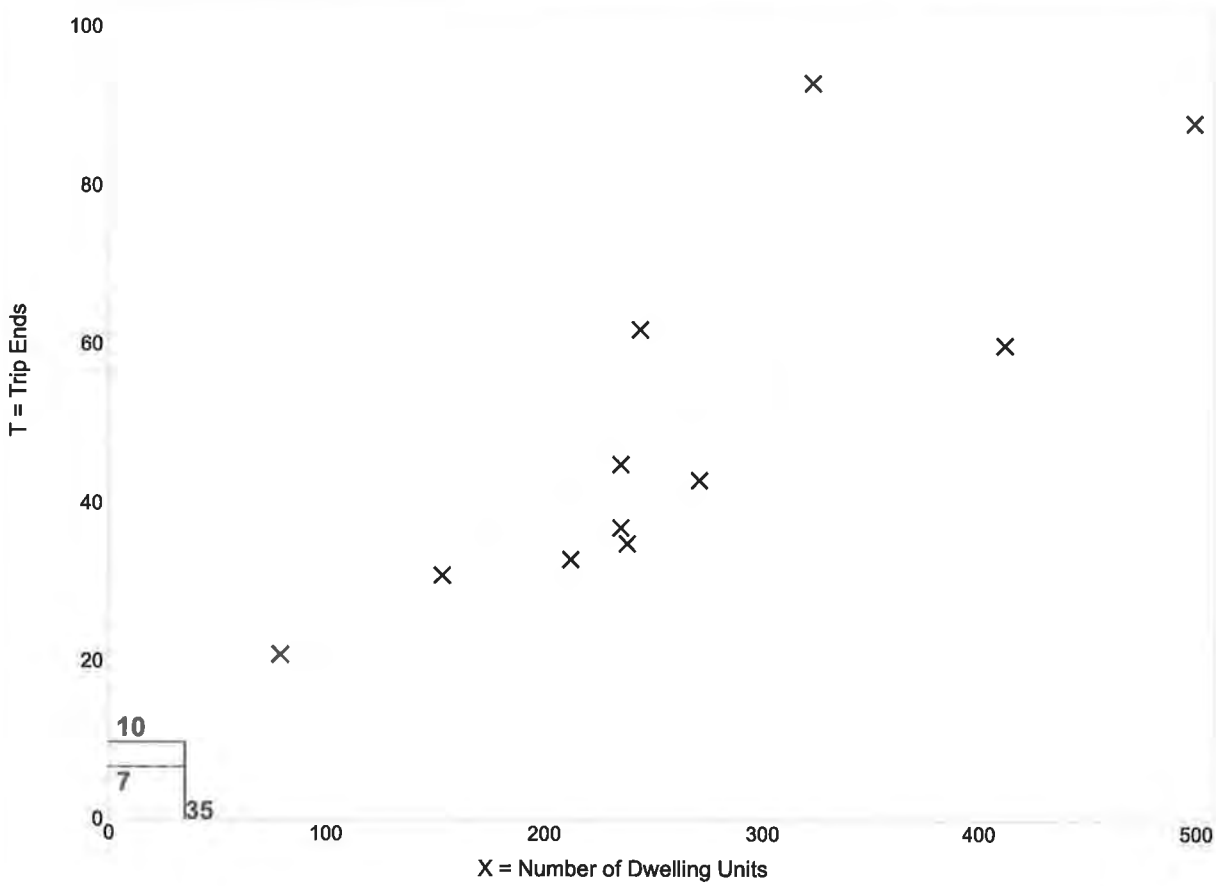
Multifamily Housing (High-Rise)
(222)

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:	**Dense Multi-Use Urban**
Number of Studies:	11
Avg. Num. of Dwelling Units:	264
Directional Distribution:	70% entering, 30% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.19	0.15 - 0.29	0.05

Data Plot and Equation



× **Study Site** ——— **Fitted Curve** **Average Rate**

Fitted Curve Equation: Ln(T) = 0.81 Ln(X) - 0.60 **R^2= 0.74**

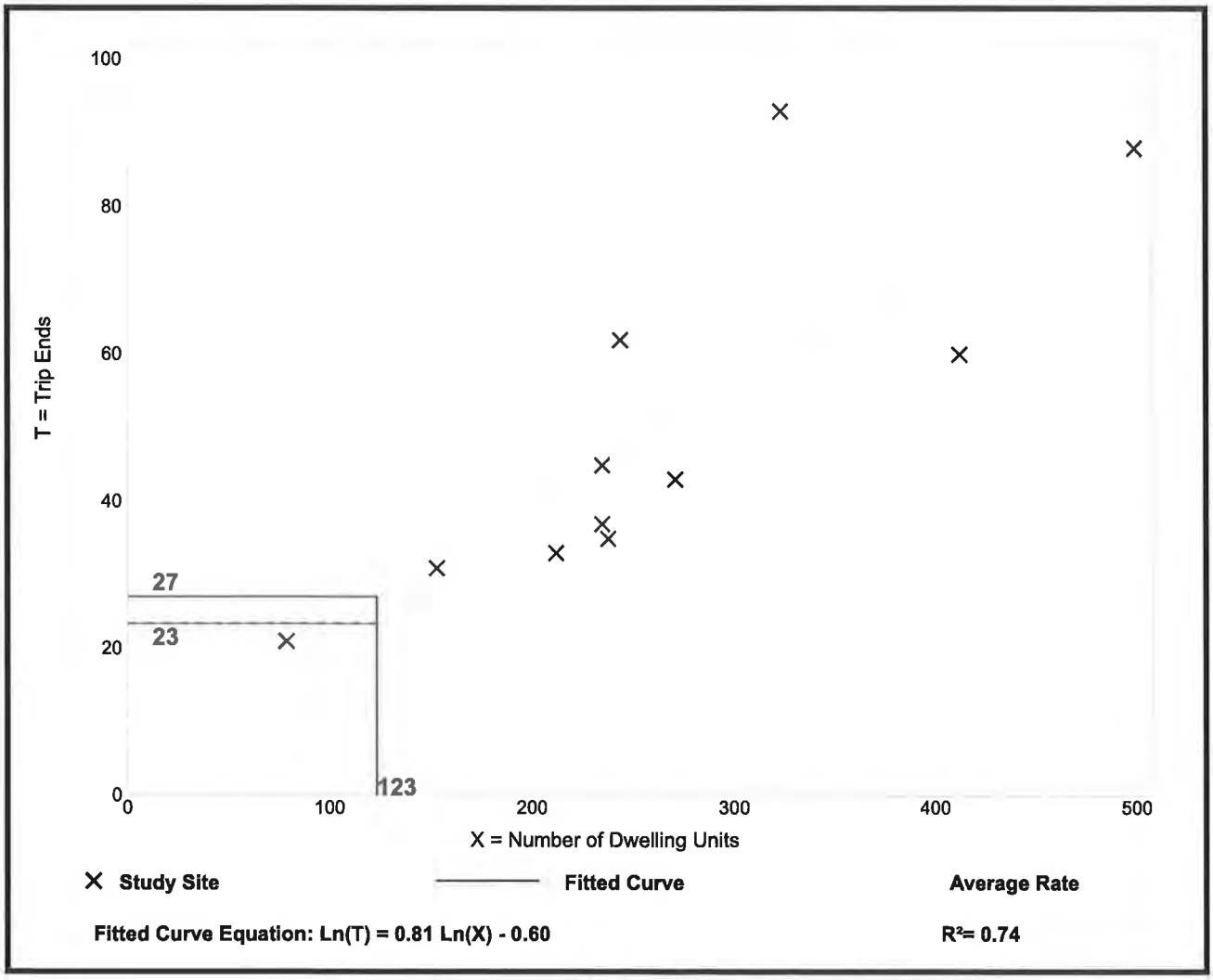
Multifamily Housing (High-Rise)
(222)

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:	**Dense Multi-Use Urban**
Number of Studies:	11
Avg. Num. of Dwelling Units:	264
Directional Distribution:	70% entering, 30% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.19	0.15 - 0.29	0.05

Data Plot and Equation



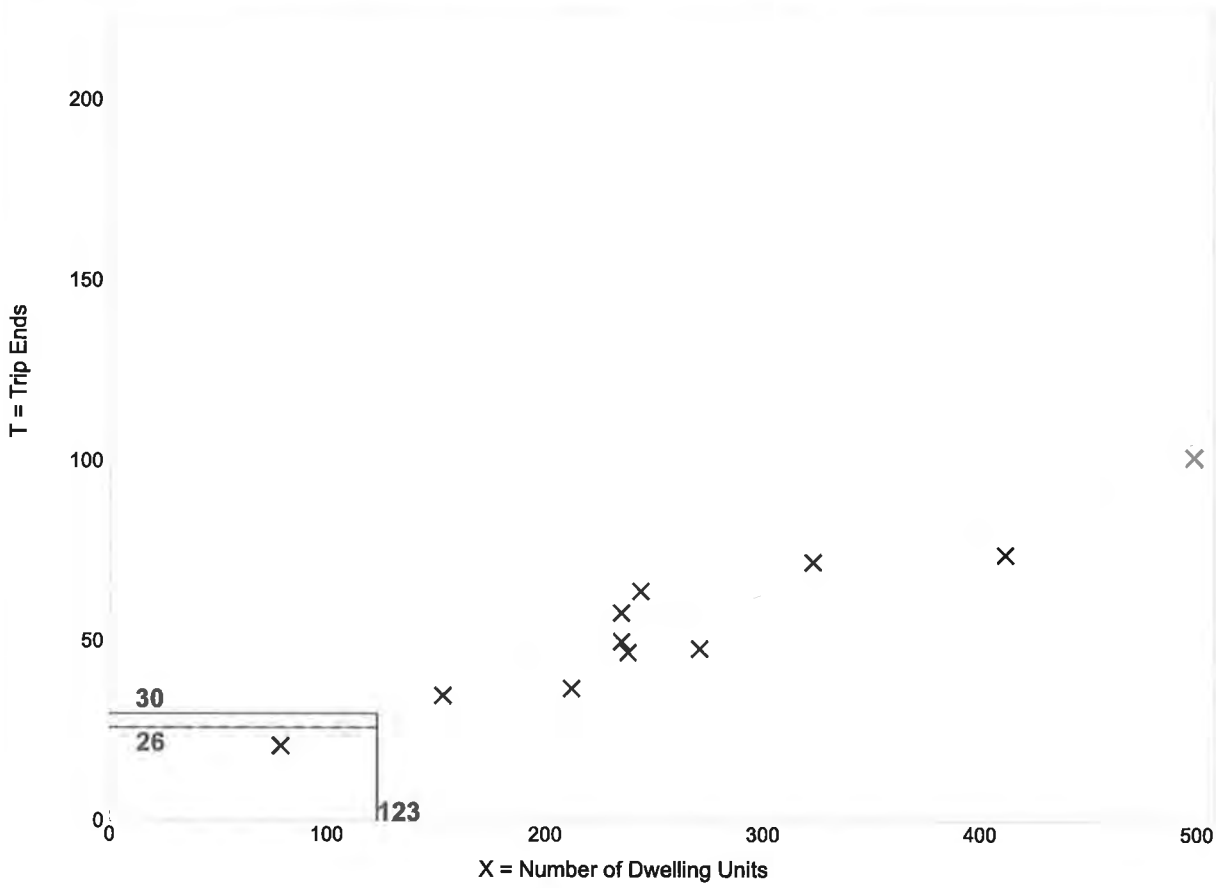
Multifamily Housing (High-Rise)
(222)

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:	**Dense Multi-Use Urban**
Number of Studies:	11
Avg. Num. of Dwelling Units:	264
Directional Distribution:	12% entering, 88% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.21	0.17 - 0.27	0.03

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.84 Ln(X) - 0.65

R^2= 0.91

Multifamily Housing (High-Rise)
(222)

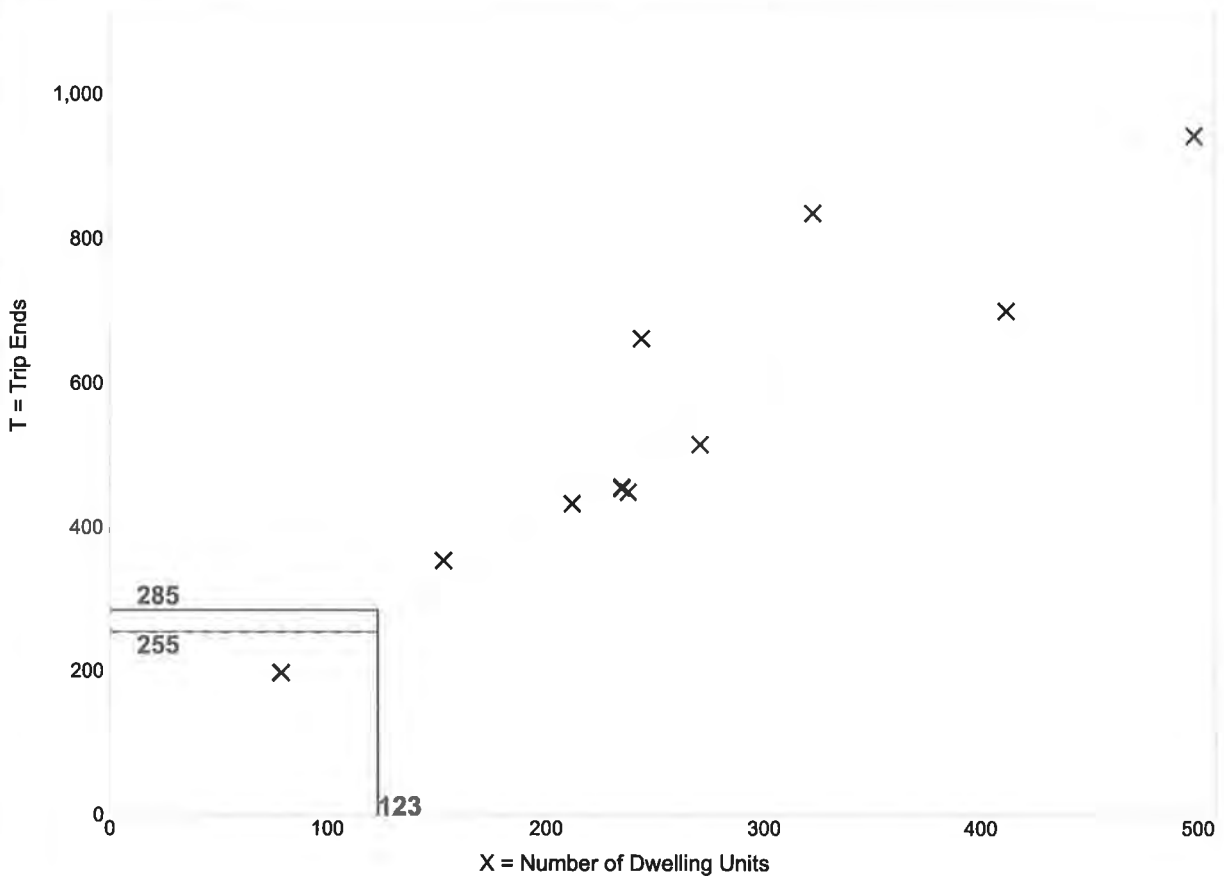
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **Dense Multi-Use Urban**
Number of Studies: 11
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
2.07	1.70 - 2.71	0.34

Data Plot and Equation



× **Study Site** ——— **Fitted Curve** **Average Rate**

Fitted Curve Equation: Ln(T) = 0.84 Ln(X) + 1.61 **R^2= 0.90**

Town of Brookline, Massachusetts

Census Tract Map

(Based upon 2000 census)

Legend

Census Tract

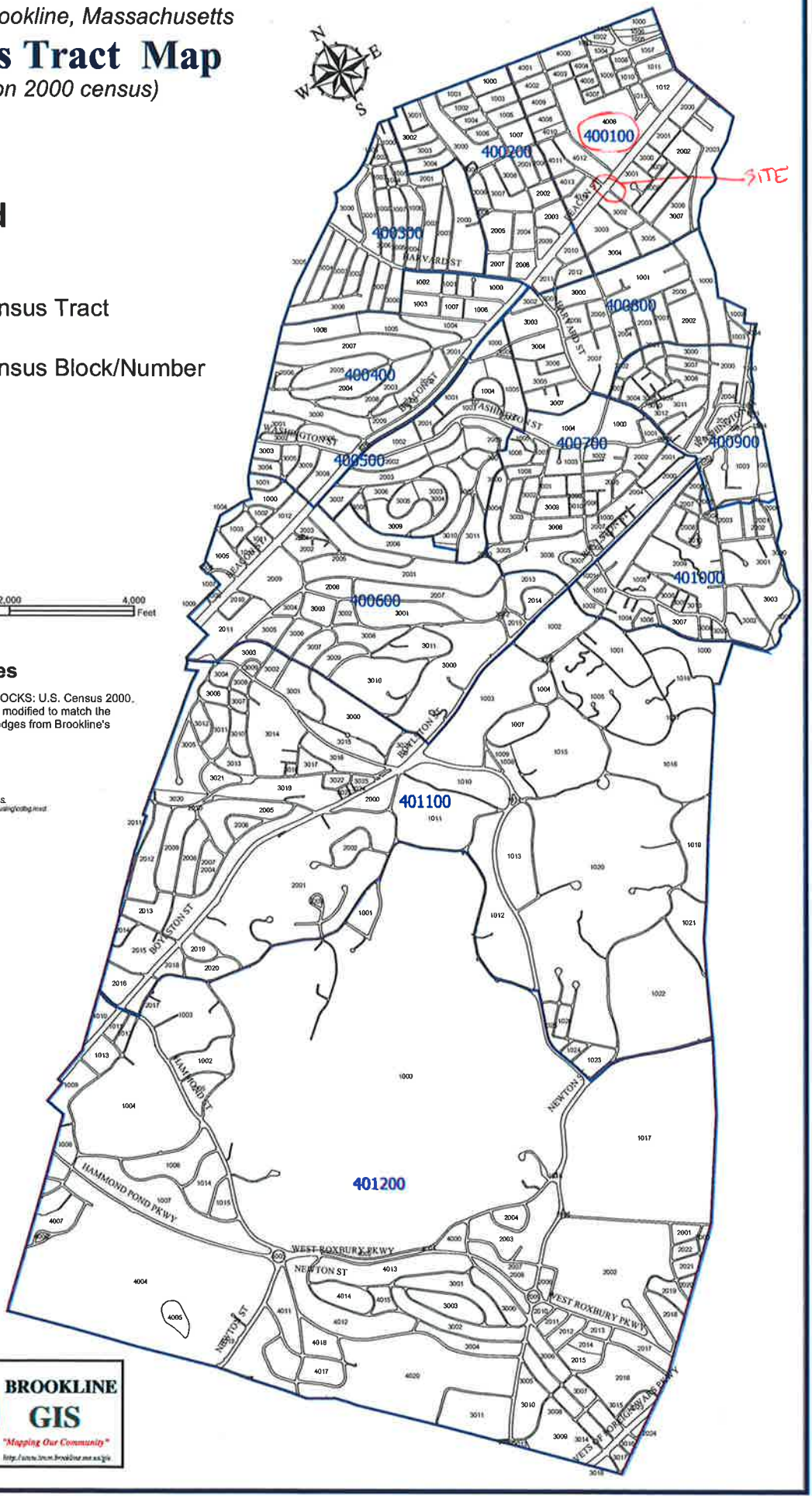
3001 Census Block/Number

0 1,000 2,000 4,000 Feet

Data Sources

CENSUS TRACTS/BLOCKS: U.S. Census 2000. The TIGER lines were modified to match the more accurate street edges from Brookline's GIS database.

Map created by Town of Brookline GIS.
Map doc: \\theme\apps\planning\housing\cdbg.mxd



BROOKLINE GIS

"Mapping Our Community"

http://www.town.brookline.ma.us/gis

9 of 9

B08301

MEANS OF TRANSPORTATION TO WORK
Universe: Workers 16 years and over
2012-2016 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:

- **2016**
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009

1 - 21 of 21

	Census Tract 4001, Norfolk County, Massachusetts	
	Estimate	**Margin of Error**
Total:	3,120	+/-328
Car, truck, or van:	975	+/-240
Drove alone	830	+/-240
Carpooled:	145	+/-105
In 2-person carpool	126	+/-96
In 3-person carpool	3	+/-5
In 4-person carpool	16	+/-25
In 5- or 6-person carpool	0	+/-17
In 7-or-more-person carpool	0	+/-17
Public transportation (excluding taxicab):	999	+/-293
Bus or trolley bus	106	+/-62
Streetcar or trolley car (carro publico in Puerto Rico)	174	+/-135
Subway or elevated	719	+/-267
Railroad	0	+/-17
Ferryboat	0	+/-17
Taxicab	15	+/-24
Motorcycle	0	+/-17
Bicycle	53	+/-46
Walked	937	+/-186
Other means	8	+/-12
Worked at home	133	+/-76

Source: U.S. Census Bureau, 2012-2016 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.

Appendix G Future Intersection Operations

G.1 2025 NO BUILD OPERATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	928	63	139	621	21	49	265	110	35	291	67
Future Volume (vph)	210	928	63	139	621	21	49	265	110	35	291	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			-2%	
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1608	3186		1562	3109		1609	1619		1593	1630	
Flt Permitted	0.95	1.00		0.95	1.00		0.26	1.00		0.27	1.00	
Satd. Flow (perm)	1608	3186		1562	3109		444	1619		448	1630	
Peak-hour factor, PHF	0.88	0.88	0.88	0.96	0.96	0.96	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	239	1055	72	145	647	22	50	270	112	38	313	72
RTOR Reduction (vph)	0	6	0	0	3	0	0	17	0	0	9	0
Lane Group Flow (vph)	239	1121	0	145	666	0	50	365	0	38	376	0
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	15.4	38.6		8.0	31.2		22.4	22.4		22.4	22.4	
Effective Green, g (s)	15.4	38.6		8.0	31.2		22.4	22.4		22.4	22.4	
Actuated g/C Ratio	0.17	0.43		0.09	0.35		0.25	0.25		0.25	0.25	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	275	1366		138	1077		110	402		111	405	
v/s Ratio Prot	0.15	c0.35		c0.09	0.21			0.23			c0.23	
v/s Ratio Perm							0.11			0.08		
v/c Ratio	0.87	0.82		1.05	0.62		0.45	0.91		0.34	0.93	
Uniform Delay, d1	36.3	22.7		41.0	24.5		28.6	32.8		27.8	33.0	
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.60		1.00	1.00	
Incremental Delay, d2	24.0	5.6		90.8	2.7		2.2	19.1		1.8	27.2	
Delay (s)	60.3	28.3		131.8	27.1		19.4	38.9		29.6	60.2	
Level of Service	E	C		F	C		B	D		C	E	
Approach Delay (s)		33.9			45.8			36.7			57.5	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	40.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	239	1127	145	669	50	382	38	385
v/c Ratio	0.87	0.82	1.05	0.62	0.45	0.91	0.34	0.93
Control Delay	66.9	28.9	133.4	27.8	28.1	42.6	37.4	63.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	28.9	133.4	27.8	28.1	42.6	37.4	63.3
Queue Length 50th (ft)	133	290	~90	167	21	219	18	206
Queue Length 95th (ft)	#250	365	#207	227	m31	m#319	49	#376
Internal Link Dist (ft)		202		254		214		120
Turn Bay Length (ft)	175		150		120		125	
Base Capacity (vph)	285	1372	138	1079	113	430	114	425
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.82	1.05	0.62	0.44	0.89	0.33	0.91

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	514	111	215	904	46	51	257	80	51	310	69
Future Volume (vph)	136	514	111	215	904	46	51	257	80	51	310	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			-2%	
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1624	3137		1624	3195		1641	1653		1641	1666	
Flt Permitted	0.95	1.00		0.95	1.00		0.24	1.00		0.34	1.00	
Satd. Flow (perm)	1624	3137		1624	3195		417	1653		586	1666	
Peak-hour factor, PHF	0.84	0.84	0.84	0.93	0.93	0.93	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	162	612	132	231	972	49	54	271	84	56	341	76
RTOR Reduction (vph)	0	20	0	0	4	0	0	12	0	0	9	0
Lane Group Flow (vph)	162	724	0	231	1017	0	54	343	0	56	408	0
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	10.2	32.9		12.0	34.7		24.1	24.1		24.1	24.1	
Effective Green, g (s)	10.2	32.9		12.0	34.7		24.1	24.1		24.1	24.1	
Actuated g/C Ratio	0.11	0.37		0.13	0.39		0.27	0.27		0.27	0.27	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	184	1146		216	1231		111	442		156	446	
v/s Ratio Prot	0.10	c0.23		c0.14	c0.32			0.21			c0.24	
v/s Ratio Perm							0.13			0.10		
v/c Ratio	0.88	0.63		1.07	0.83		0.49	0.78		0.36	0.92	
Uniform Delay, d1	39.3	23.5		39.0	24.9		27.7	30.4		26.7	32.0	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.79		1.00	1.00	
Incremental Delay, d2	35.2	2.6		80.9	6.4		2.6	6.6		1.4	23.2	
Delay (s)	74.5	26.2		119.9	31.4		24.4	30.6		28.1	55.2	
Level of Service	E	C		F	C		C	C		C	E	
Approach Delay (s)		34.8			47.7			29.8			52.0	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	162	744	231	1021	54	355	56	417
v/c Ratio	0.88	0.64	1.07	0.83	0.48	0.78	0.36	0.92
Control Delay	82.9	25.8	120.6	32.1	34.5	33.7	33.9	58.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.9	25.8	120.6	32.1	34.5	33.7	33.9	58.4
Queue Length 50th (ft)	92	176	~147	272	29	197	25	221
Queue Length 95th (ft)	#187	217	#289	#361	m43	m#282	62	#392
Internal Link Dist (ft)		202		254		214		120
Turn Bay Length (ft)	175		150		120		125	
Base Capacity (vph)	184	1167	216	1236	116	471	162	471
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.64	1.07	0.83	0.47	0.75	0.35	0.89

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	285	47	50	191	48	19	399	36	40	374	112
Future Volume (vph)	28	285	47	50	191	48	19	399	36	40	374	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.98			0.99		1.00	0.97	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1823			1788			1839		1752	1781	
Flt Permitted		0.95			0.87			0.77		0.33	1.00	
Satd. Flow (perm)		1747			1570			1412		613	1781	
Peak-hour factor, PHF	0.84	0.84	0.84	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89
Adj. Flow (vph)	33	339	56	57	220	55	20	429	39	45	420	126
RTOR Reduction (vph)	0	5	0	0	7	0	0	4	0	0	14	0
Lane Group Flow (vph)	0	423	0	0	325	0	0	484	0	45	532	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		45.9			45.9			32.1		32.1	32.1	
Effective Green, g (s)		45.9			45.9			32.1		32.1	32.1	
Actuated g/C Ratio		0.51			0.51			0.36		0.36	0.36	
Clearance Time (s)		6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		890			800			503		218	635	
v/s Ratio Prot											0.30	
v/s Ratio Perm		c0.24			0.21			c0.34		0.07		
v/c Ratio		0.47			0.41			0.96		0.21	0.84	
Uniform Delay, d1		14.3			13.6			28.4		20.1	26.6	
Progression Factor		1.00			1.00			1.00		1.53	1.43	
Incremental Delay, d2		1.8			1.5			30.6		0.3	6.5	
Delay (s)		16.1			15.2			58.9		31.1	44.5	
Level of Service		B			B			E		C	D	
Approach Delay (s)		16.1			15.2			58.9			43.5	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	428	332	488	45	546
v/c Ratio	0.48	0.41	0.96	0.21	0.84
Control Delay	17.5	16.4	59.7	29.6	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	16.4	59.7	29.6	44.5
Queue Length 50th (ft)	150	109	260	24	315
Queue Length 95th (ft)	233	188	#413	m32	m350
Internal Link Dist (ft)	163	181	233		224
Turn Bay Length (ft)				60	
Base Capacity (vph)	895	807	599	258	763
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.81	0.17	0.72

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	230	49	69	289	47	28	329	59	60	464	131
Future Volume (vph)	18	230	49	69	289	47	28	329	59	60	464	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.98			0.98		1.00	0.97	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1834			1836			1857		1805	1837	
Flt Permitted		0.96			0.89			0.63		0.42	1.00	
Satd. Flow (perm)		1771			1647			1182		800	1837	
Peak-hour factor, PHF	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88
Adj. Flow (vph)	19	245	52	75	314	51	29	346	62	68	527	149
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	309	0	0	435	0	0	429	0	68	663	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		40.1			40.1			37.9		37.9	37.9	
Effective Green, g (s)		40.1			40.1			37.9		37.9	37.9	
Actuated g/C Ratio		0.45			0.45			0.42		0.42	0.42	
Clearance Time (s)		6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		789			733			497		336	773	
v/s Ratio Prot											0.36	
v/s Ratio Perm		0.17			c0.26			c0.36		0.09		
v/c Ratio		0.39			0.59			0.86		0.20	0.86	
Uniform Delay, d1		16.8			18.8			23.7		16.5	23.6	
Progression Factor		1.00			1.00			1.00		1.40	1.35	
Incremental Delay, d2		1.5			3.5			14.5		0.2	6.0	
Delay (s)		18.2			22.3			38.2		23.2	38.0	
Level of Service		B			C			D		C	D	
Approach Delay (s)		18.2			22.3			38.2			36.6	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	316	440	437	68	676
v/c Ratio	0.40	0.60	0.87	0.20	0.86
Control Delay	19.4	24.1	40.9	21.8	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	24.1	40.9	21.8	38.2
Queue Length 50th (ft)	116	186	206	33	392
Queue Length 95th (ft)	199	309	#359	m42	m428
Internal Link Dist (ft)	163	181	233		224
Turn Bay Length (ft)				60	
Base Capacity (vph)	797	739	571	382	889
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.60	0.77	0.18	0.76

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	4	6	0	4	3	424	5	0	493	0
Future Volume (Veh/h)	0	0	4	6	0	4	3	424	5	0	493	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.41	0.41	0.41	0.95	0.95	0.95	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	8	15	0	10	3	446	5	0	542	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								577			294	
pX, platoon unblocked	0.88	0.88	0.79	0.88	0.88	0.82	0.79			0.82		
vC, conflicting volume	1006	999	542	1004	996	448	542			451		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	491	483	294	489	480	223	294			226		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	96	100	99	100			100		
cM capacity (veh/h)	426	428	596	428	430	676	1007			1105		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	25	454	542
Volume Left	0	15	3	0
Volume Right	8	10	5	0
cSH	596	502	1007	1105
Volume to Capacity	0.01	0.05	0.00	0.00
Queue Length 95th (ft)	1	4	0	0
Control Delay (s)	11.1	12.6	0.1	0.0
Lane LOS	B	B	A	
Approach Delay (s)	11.1	12.6	0.1	0.0
Approach LOS	B	B		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	7	0	7	0	382	7	6	626	3
Future Volume (Veh/h)	0	0	0	7	0	7	0	382	7	6	626	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.70	0.70	0.70	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	10	0	10	0	415	8	7	711	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								577			294	
pX, platoon unblocked	0.84	0.84	0.78	0.84	0.84	0.87	0.78			0.87		
vC, conflicting volume	1156	1150	712	1146	1147	419	714			423		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	733	725	486	721	722	251	488			255		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	97	100	99	100			99		
cM capacity (veh/h)	278	295	451	290	298	686	839			1133		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	20	423	721
Volume Left	0	10	0	7
Volume Right	0	10	8	3
cSH	1700	408	839	1133
Volume to Capacity	0.00	0.05	0.00	0.01
Queue Length 95th (ft)	0	4	0	0
Control Delay (s)	0.0	14.3	0.0	0.2
Lane LOS	A	B		A
Approach Delay (s)	0.0	14.3	0.0	0.2
Approach LOS	A	B		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	38	21	17	18	16	18	399	52	27	494	10
Future Volume (Veh/h)	21	38	21	17	18	16	18	399	52	27	494	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.65	0.65	0.65	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	32	58	32	18	20	17	20	434	57	30	549	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								304			567	
pX, platoon unblocked	0.87	0.87	0.82	0.87	0.87	0.77	0.82			0.77		
vC, conflicting volume	1144	1146	554	1178	1122	462	560			491		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	611	613	341	650	586	161	347			198		
tC, single (s)	7.2	6.6	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	90	82	94	93	94	98	98			97		
cM capacity (veh/h)	310	330	561	259	347	681	988			1065		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	55	511	590
Volume Left	32	18	20	30
Volume Right	32	17	57	11
cSH	363	361	988	1065
Volume to Capacity	0.34	0.15	0.02	0.03
Queue Length 95th (ft)	36	13	2	2
Control Delay (s)	19.8	16.7	0.6	0.8
Lane LOS	C	C	A	A
Approach Delay (s)	19.8	16.7	0.6	0.8
Approach LOS	C	C		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	19	50	27	11	20	16	353	23	15	610	15
Future Volume (Veh/h)	19	19	50	27	11	20	16	353	23	15	610	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	21	54	29	12	22	17	384	25	16	663	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								304			567	
pX, platoon unblocked	0.89	0.89	0.81	0.89	0.89	0.83	0.81			0.83		
vC, conflicting volume	1162	1146	671	1198	1142	396	679			409		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	692	675	471	733	670	172	481			187		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	94	89	88	96	97	98			99		
cM capacity (veh/h)	293	324	477	246	326	724	871			1153		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	96	63	426	695
Volume Left	21	29	17	16
Volume Right	54	22	25	16
cSH	385	340	871	1153
Volume to Capacity	0.25	0.19	0.02	0.01
Queue Length 95th (ft)	24	17	1	1
Control Delay (s)	17.4	18.0	0.6	0.4
Lane LOS	C	C	A	A
Approach Delay (s)	17.4	18.0	0.6	0.4
Approach LOS	C	C		

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		

G.2 2025 BUILD OPERATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	928	64	140	621	21	53	267	115	35	291	67
Future Volume (vph)	210	928	64	140	621	21	53	267	115	35	291	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			-2%	
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1608	3186		1562	3109		1609	1617		1593	1630	
Flt Permitted	0.95	1.00		0.95	1.00		0.26	1.00		0.26	1.00	
Satd. Flow (perm)	1608	3186		1562	3109		444	1617		428	1630	
Peak-hour factor, PHF	0.88	0.88	0.88	0.96	0.96	0.96	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	239	1055	73	146	647	22	54	272	117	38	313	72
RTOR Reduction (vph)	0	6	0	0	3	0	0	17	0	0	9	0
Lane Group Flow (vph)	239	1122	0	146	666	0	54	372	0	38	376	0
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	15.4	38.6		8.0	31.2		22.4	22.4		22.4	22.4	
Effective Green, g (s)	15.4	38.6		8.0	31.2		22.4	22.4		22.4	22.4	
Actuated g/C Ratio	0.17	0.43		0.09	0.35		0.25	0.25		0.25	0.25	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	275	1366		138	1077		110	402		106	405	
v/s Ratio Prot	0.15	c0.35		c0.09	0.21			0.23			c0.23	
v/s Ratio Perm							0.12			0.09		
v/c Ratio	0.87	0.82		1.06	0.62		0.49	0.92		0.36	0.93	
Uniform Delay, d1	36.3	22.7		41.0	24.5		28.9	33.0		27.9	33.0	
Progression Factor	1.00	1.00		1.00	1.00		0.63	0.63		1.00	1.00	
Incremental Delay, d2	24.0	5.7		92.9	2.7		2.7	22.5		2.1	27.2	
Delay (s)	60.3	28.3		133.9	27.1		21.0	43.1		29.9	60.2	
Level of Service	E	C		F	C		C	D		C	E	
Approach Delay (s)		33.9			46.3			40.4			57.5	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	239	1128	146	669	54	389	38	385
v/c Ratio	0.87	0.82	1.06	0.62	0.49	0.93	0.36	0.93
Control Delay	66.9	28.9	135.3	27.8	31.2	46.7	38.6	63.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	28.9	135.3	27.8	31.2	46.7	38.6	63.3
Queue Length 50th (ft)	133	290	~92	167	23	222	18	206
Queue Length 95th (ft)	#250	366	#210	227	m36	m#328	50	#376
Internal Link Dist (ft)		202		254		214		120
Turn Bay Length (ft)	175		150		120		125	
Base Capacity (vph)	285	1372	138	1079	113	430	109	425
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.82	1.06	0.62	0.48	0.90	0.35	0.91

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	514	114	218	904	46	52	258	81	51	312	69
Future Volume (vph)	136	514	114	218	904	46	52	258	81	51	312	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			-2%	
Total Lost time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.99		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1608	3129		1624	3226		1624	1649		1641	1680	
Flt Permitted	0.95	1.00		0.95	1.00		0.24	1.00		0.34	1.00	
Satd. Flow (perm)	1608	3129		1624	3226		408	1649		581	1680	
Peak-hour factor, PHF	0.84	0.84	0.84	0.93	0.93	0.93	0.95	0.95	0.95	0.91	0.91	0.91
Adj. Flow (vph)	162	612	136	234	972	49	55	272	85	56	343	76
RTOR Reduction (vph)	0	21	0	0	4	0	0	12	0	0	9	0
Lane Group Flow (vph)	162	727	0	234	1017	0	55	345	0	56	410	0
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	10.3	32.9		12.0	34.6		24.1	24.1		24.1	24.1	
Effective Green, g (s)	10.3	32.9		12.0	34.6		24.1	24.1		24.1	24.1	
Actuated g/C Ratio	0.11	0.37		0.13	0.38		0.27	0.27		0.27	0.27	
Clearance Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	184	1143		216	1240		109	441		155	449	
v/s Ratio Prot	0.10	c0.23		c0.14	c0.32			0.21			c0.24	
v/s Ratio Perm							0.13			0.10		
v/c Ratio	0.88	0.64		1.08	0.82		0.50	0.78		0.36	0.91	
Uniform Delay, d1	39.2	23.6		39.0	24.9		27.9	30.5		26.7	31.9	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.79		1.00	1.00	
Incremental Delay, d2	35.2	2.7		85.2	6.2		2.9	7.0		1.4	22.9	
Delay (s)	74.4	26.3		124.2	31.1		25.2	31.2		28.1	54.8	
Level of Service	E	C		F	C		C	C		C	D	
Approach Delay (s)		34.9			48.4			30.4			51.7	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	162	748	234	1021	55	357	56	419
v/c Ratio	0.89	0.64	1.08	0.82	0.50	0.79	0.36	0.91
Control Delay	84.0	25.9	124.6	31.7	36.4	34.4	34.0	57.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.0	25.9	124.6	31.7	36.4	34.4	34.0	57.6
Queue Length 50th (ft)	93	177	~150	271	29	198	25	221
Queue Length 95th (ft)	#188	218	#294	355	m44	m#290	63	#393
Internal Link Dist (ft)		202		254		214		120
Turn Bay Length (ft)	175		150		120		125	
Base Capacity (vph)	183	1166	216	1245	113	470	161	475
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.64	1.08	0.82	0.49	0.76	0.35	0.88

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	285	47	50	191	48	19	400	36	42	376	114
Future Volume (vph)	28	285	47	50	191	48	19	400	36	42	376	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.98			0.99		1.00	0.97	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1823			1788			1839		1752	1780	
Flt Permitted		0.95			0.87			0.77		0.33	1.00	
Satd. Flow (perm)		1747			1570			1411		615	1780	
Peak-hour factor, PHF	0.84	0.84	0.84	0.87	0.87	0.87	0.93	0.93	0.93	0.89	0.89	0.89
Adj. Flow (vph)	33	339	56	57	220	55	20	430	39	47	422	128
RTOR Reduction (vph)	0	5	0	0	7	0	0	4	0	0	13	0
Lane Group Flow (vph)	0	423	0	0	325	0	0	485	0	47	537	0
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	2%	2%	2%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		45.7			45.7			32.3		32.3	32.3	
Effective Green, g (s)		45.7			45.7			32.3		32.3	32.3	
Actuated g/C Ratio		0.51			0.51			0.36		0.36	0.36	
Clearance Time (s)		6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		887			797			506		220	638	
v/s Ratio Prot											0.30	
v/s Ratio Perm		c0.24			0.21			c0.34		0.08		
v/c Ratio		0.48			0.41			0.96		0.21	0.84	
Uniform Delay, d1		14.4			13.8			28.2		20.0	26.5	
Progression Factor		1.00			1.00			1.00		1.49	1.40	
Incremental Delay, d2		1.8			1.5			29.4		0.3	6.4	
Delay (s)		16.2			15.3			57.6		30.2	43.5	
Level of Service		B			B			E		C	D	
Approach Delay (s)		16.2			15.3			57.6			42.4	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	428	332	489	47	550
v/c Ratio	0.48	0.41	0.96	0.21	0.84
Control Delay	17.6	16.5	59.1	28.8	43.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	16.5	59.1	28.8	43.4
Queue Length 50th (ft)	151	110	259	25	315
Queue Length 95th (ft)	233	188	#414	m31	m349
Internal Link Dist (ft)	163	181	233		224
Turn Bay Length (ft)				60	
Base Capacity (vph)	893	805	599	260	763
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.41	0.82	0.18	0.72

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	230	49	69	289	48	28	330	59	60	465	132
Future Volume (vph)	19	230	49	69	289	48	28	330	59	60	465	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0		6.0	6.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.98			0.98		1.00	0.97	
Flt Protected		1.00			0.99			1.00		0.95	1.00	
Satd. Flow (prot)		1834			1836			1858		1805	1837	
Flt Permitted		0.96			0.89			0.63		0.42	1.00	
Satd. Flow (perm)		1767			1647			1182		800	1837	
Peak-hour factor, PHF	0.94	0.94	0.94	0.92	0.92	0.92	0.95	0.95	0.95	0.88	0.88	0.88
Adj. Flow (vph)	20	245	52	75	314	52	29	347	62	68	528	150
RTOR Reduction (vph)	0	7	0	0	5	0	0	8	0	0	13	0
Lane Group Flow (vph)	0	310	0	0	436	0	0	430	0	68	665	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		40.0			40.0			38.0		38.0	38.0	
Effective Green, g (s)		40.0			40.0			38.0		38.0	38.0	
Actuated g/C Ratio		0.44			0.44			0.42		0.42	0.42	
Clearance Time (s)		6.0			6.0			6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		785			732			499		337	775	
v/s Ratio Prot											0.36	
v/s Ratio Perm		0.18			c0.26			c0.36		0.09		
v/c Ratio		0.39			0.60			0.86		0.20	0.86	
Uniform Delay, d1		16.8			18.9			23.6		16.4	23.6	
Progression Factor		1.00			1.00			1.00		1.40	1.35	
Incremental Delay, d2		1.5			3.6			14.3		0.2	6.0	
Delay (s)		18.3			22.4			37.9		23.1	37.9	
Level of Service		B			C			D		C	D	
Approach Delay (s)		18.3			22.4			37.9			36.5	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	317	441	438	68	678
v/c Ratio	0.40	0.60	0.87	0.20	0.86
Control Delay	19.5	24.3	40.6	21.7	38.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	24.3	40.6	21.7	38.0
Queue Length 50th (ft)	117	187	207	32	392
Queue Length 95th (ft)	200	310	#360	m42	m428
Internal Link Dist (ft)	163	181	233		224
Turn Bay Length (ft)				60	
Base Capacity (vph)	791	736	571	382	889
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.60	0.77	0.18	0.76

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	4	12	0	15	3	424	6	2	493	0
Future Volume (Veh/h)	0	0	4	12	0	15	3	424	6	2	493	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.41	0.41	0.41	0.95	0.95	0.95	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	8	29	0	37	3	446	6	2	542	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								577			294	
pX, platoon unblocked	0.88	0.88	0.79	0.88	0.88	0.82	0.79			0.82		
vC, conflicting volume	1038	1004	542	1009	1001	449	542			452		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	527	489	294	494	485	224	294			227		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	93	100	95	100			100		
cM capacity (veh/h)	387	424	596	424	426	676	1007			1104		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	66	455	544
Volume Left	0	29	3	2
Volume Right	8	37	6	0
cSH	596	536	1007	1104
Volume to Capacity	0.01	0.12	0.00	0.00
Queue Length 95th (ft)	1	10	0	0
Control Delay (s)	11.1	12.7	0.1	0.1
Lane LOS	B	B	A	A
Approach Delay (s)	11.1	12.7	0.1	0.1
Approach LOS	B	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	9	0	10	0	382	12	14	626	3
Future Volume (Veh/h)	0	0	0	9	0	10	0	382	12	14	626	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.25	0.70	0.70	0.70	0.92	0.92	0.92	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	13	0	14	0	415	13	16	711	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								577			294	
pX, platoon unblocked	0.84	0.84	0.78	0.84	0.84	0.87	0.78			0.87		
vC, conflicting volume	1180	1172	712	1166	1168	422	714			428		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	779	770	489	762	764	263	491			271		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	95	100	98	100			99		
cM capacity (veh/h)	256	275	451	270	279	680	839			1127		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	0	27	428	730
Volume Left	0	13	0	16
Volume Right	0	14	13	3
cSH	1700	393	839	1127
Volume to Capacity	0.00	0.07	0.00	0.01
Queue Length 95th (ft)	0	6	0	1
Control Delay (s)	0.0	14.8	0.0	0.4
Lane LOS	A	B		A
Approach Delay (s)	0.0	14.8	0.0	0.4
Approach LOS	A	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	38	21	17	18	16	18	400	52	27	500	10
Future Volume (Veh/h)	21	38	21	17	18	16	18	400	52	27	500	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.65	0.65	0.65	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Hourly flow rate (vph)	32	58	32	18	20	17	20	435	57	30	556	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								304			567	
pX, platoon unblocked	0.87	0.87	0.82	0.87	0.87	0.78	0.82			0.78		
vC, conflicting volume	1152	1154	562	1186	1130	464	567			492		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	622	623	350	661	597	163	357			199		
tC, single (s)	7.2	6.6	6.3	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	82	94	93	94	97	98			97		
cM capacity (veh/h)	304	325	555	254	341	680	981			1064		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	122	55	512	597
Volume Left	32	18	20	30
Volume Right	32	17	57	11
cSH	358	356	981	1064
Volume to Capacity	0.34	0.15	0.02	0.03
Queue Length 95th (ft)	37	14	2	2
Control Delay (s)	20.2	17.0	0.6	0.8
Lane LOS	C	C	A	A
Approach Delay (s)	20.2	17.0	0.6	0.8
Approach LOS	C	C		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	19	50	27	11	21	16	356	23	15	612	15
Future Volume (Veh/h)	19	19	50	27	11	21	16	356	23	15	612	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	21	54	29	12	23	17	387	25	16	665	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								304			567	
pX, platoon unblocked	0.89	0.89	0.81	0.89	0.89	0.84	0.81			0.84		
vC, conflicting volume	1168	1151	673	1203	1146	400	681			412		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	717	699	479	757	694	187	489			202		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	93	89	88	96	97	98			99		
cM capacity (veh/h)	281	313	475	237	316	717	870			1148		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	96	64	429	697
Volume Left	21	29	17	16
Volume Right	54	23	25	16
cSH	376	332	870	1148
Volume to Capacity	0.26	0.19	0.02	0.01
Queue Length 95th (ft)	25	18	1	1
Control Delay (s)	17.8	18.4	0.6	0.4
Lane LOS	C	C	A	A
Approach Delay (s)	17.8	18.4	0.6	0.4
Approach LOS	C	C		

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		