

## TECHNICAL MEMO

February 13, 2023

To: Brooke McKenna, Stephen Meuse, PE, City of Cambridge

From: Michelle L. Danila, PE, Toole Design  
Sneha Adhikari, EIT, Toole Design

Project: Inner Mount Auburn Street Corridor Safety Improvement Project

**Re: Inner Mount Auburn Street Corridor Safety Improvement Project**

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### Project Background

Mount Auburn Street between Brattle Street and Putnam Avenue is one-way eastbound from Harvard Square toward Central Square. It is a multimodal corridor where people use various means to get around, including walking, biking, taking transit, and driving. It was identified in the 2020 City of Cambridge (“City”) Bike Plan for the implementation of separated bike lanes. In spring 2016, the Cambridge City Council adopted a Vision Zero Policy aimed at eliminating traffic fatalities and serious injuries, as well as a formal Complete Streets Policy, which reflects the City’s commitment to ensuring that our streets work for people traveling by all modes. In 2019, the Cycling Safety Ordinance (CSO) passed, requiring separated bike lanes when roadways are reconstructed. Amended in 2020, the CSO requires that the City install 22.6 miles of separated bike lanes by 2026. Informed by these planning and policy documents, separated bike lanes along this segment of Mount Auburn Street would serve as an important and safe network connection between various destinations near Brattle Square/Harvard Square and Massachusetts Avenue towards Central Square.

In 2019, the City started the process for the design of Mount Auburn Street’s separated bike lanes using quick-build materials. The City has been implementing quick-build separated bike lanes at multiple locations as it allows for a design with flexible materials that are faster to install and can be modified based on evaluation. Toole Design worked with the City and solicited feedback through various community engagement processes to develop concept alternatives. The goals of the project were to improve accessibility and safety for all users and make this section of Mount Auburn Street more comfortable for people biking, walking, taking transit, and accessing businesses in the area. Toole Design also looked at existing traffic data that would inform the preferred design. In Fall 2020, the preferred design was installed on Mount Auburn Street (**Figure 1**). A majority of the section includes separated bike lanes on the south side of the street adjacent to one travel lane, and parking spaces on the north side of the street.

In order to evaluate the impacts of the project, Toole Design worked with the City to collect before and after data including vehicle and bike volumes and vehicular speed at key locations along the segment. Before data was collected in April 2019 and the after data was collected in October 2022. The delay in after data was due to the COVID-19 pandemic and the impacts to vehicular traffic. Toole Design has prepared this technical memo presenting vehicular and bike volume changes as a result of the implementation of separated bike lanes on Mount Auburn Street.

## Traffic Volume and Speeds

The following section provides a comparison of volumes (bicycles and vehicles) and vehicular speeds before and after the implementation of separated bikes lanes on Mt Auburn Street. Data was collected on Mt Auburn Street east of Dunster Street, with the before data gathered on Thursday, April 25, 2019 and the after data gathered on Thursday, October 20, 2022. Attachments A and B provide the peak hour turning movement count (TMC) diagrams for the before and after conditions for vehicles, bicyclists, and pedestrians. Attachments C and D provide the Automated Traffic Recorder (ATR) volumes for vehicles and bicycles, as well as observed speed of vehicles during the before and after conditions.

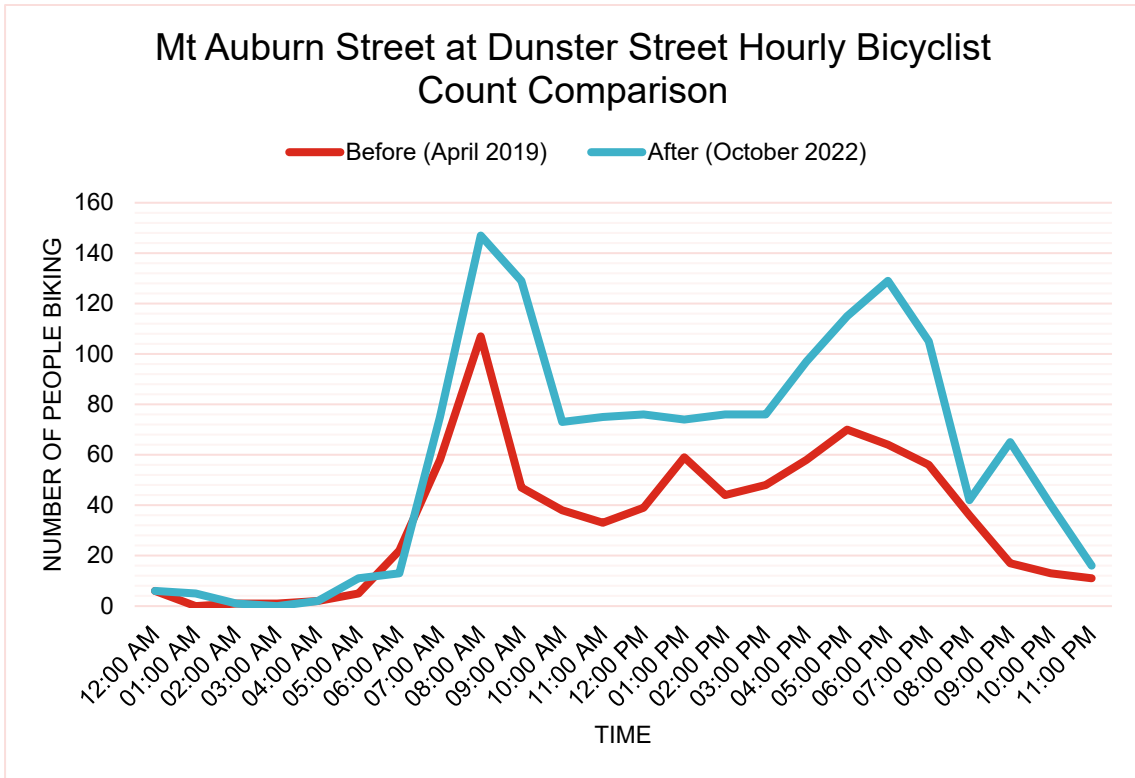
## Bicycle Volumes

**Figure 2** illustrates the hourly number of bicycles observed on Mt Auburn Street east of Dunster Street before and after implementation of separated bike lanes. For almost all times, more people were observed riding bikes after the implementation compared to before, with the highest differences observed between 9 am – 10 am, and between 6 pm – 7 pm. On average, the after data shows an increase of people riding bikes by 73% compared to the before data for all time periods. **Figure 3** shows the comparison of bicycle volumes in the before and after scenario during weekday AM and PM Peak Hours. The number of people biking increased by 49% and by 106% in the AM Peak Hour and PM Peak Hour, respectively.

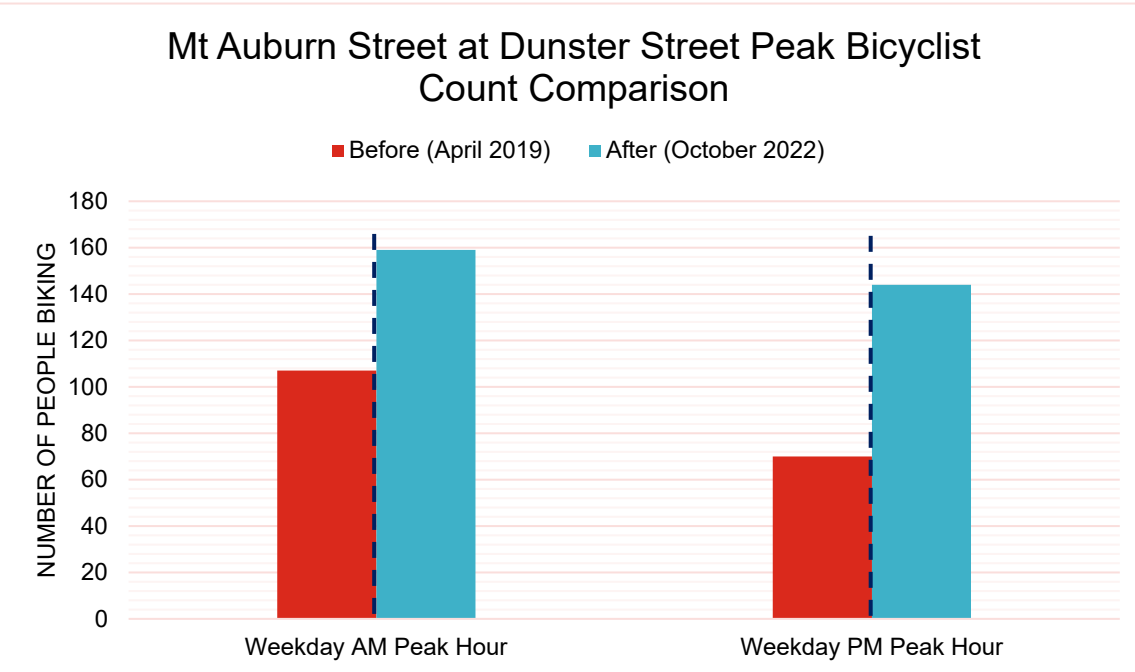
The before and after TMCs for bicycles at key intersections show more bicycle riders in the after data traveling along Mt Auburn Street at JFK Street and DeWolfe Street. In particular, the after counts show many people riding bicycles heading northbound on DeWolfe Street during peak hours, likely due to the implementation of contraflow bike lanes on DeWolfe Street in 2020. Many bicycle riders on Massachusetts Avenue were observed crossing in the Trowbridge Street crosswalk in the before condition. However, in the after condition, more bicycle riders crossed Trowbridge Street via the new separated bike lane on Massachusetts Avenue instead of using the crosswalk.



**Figure 1: Person riding a bike on separated bike lanes on Mt Auburn Street**



**Figure 2: Comparison of hourly count of bicyclists traveling along Mt Auburn Street before and after the implementation of separated bike lanes**

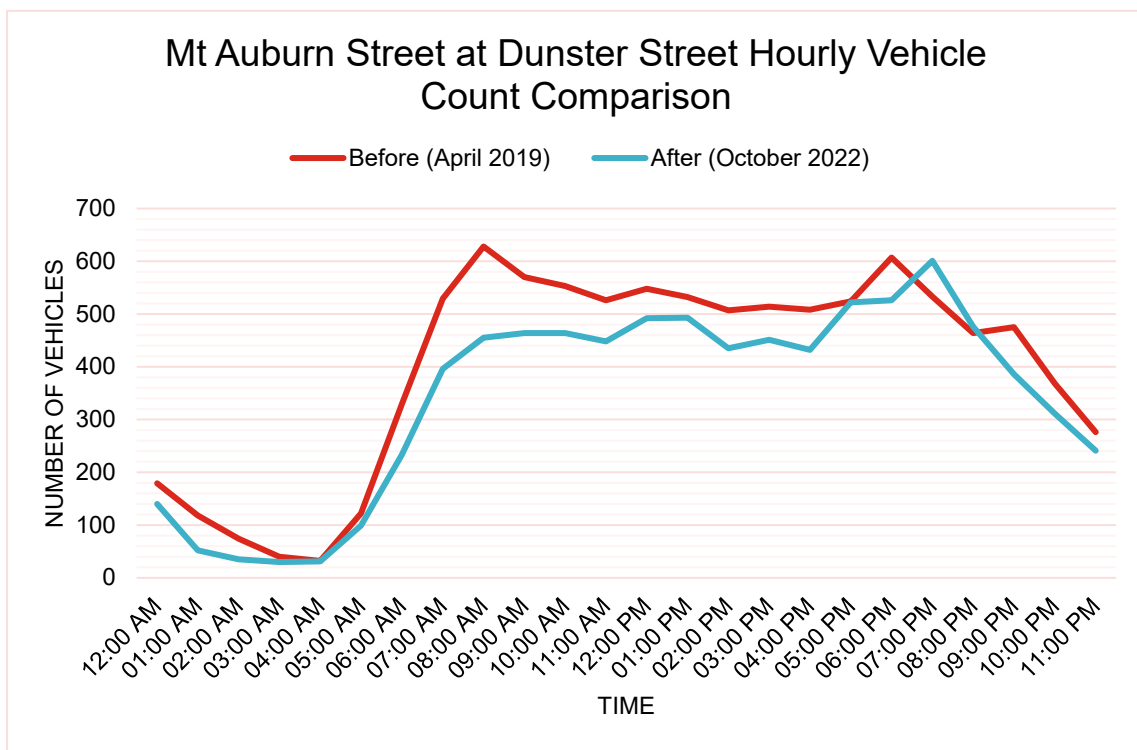


**Figure 3: Comparison of AM and PM peak hour bicycle volume along Mt Auburn Street before and after the implementation of separated bike lanes**

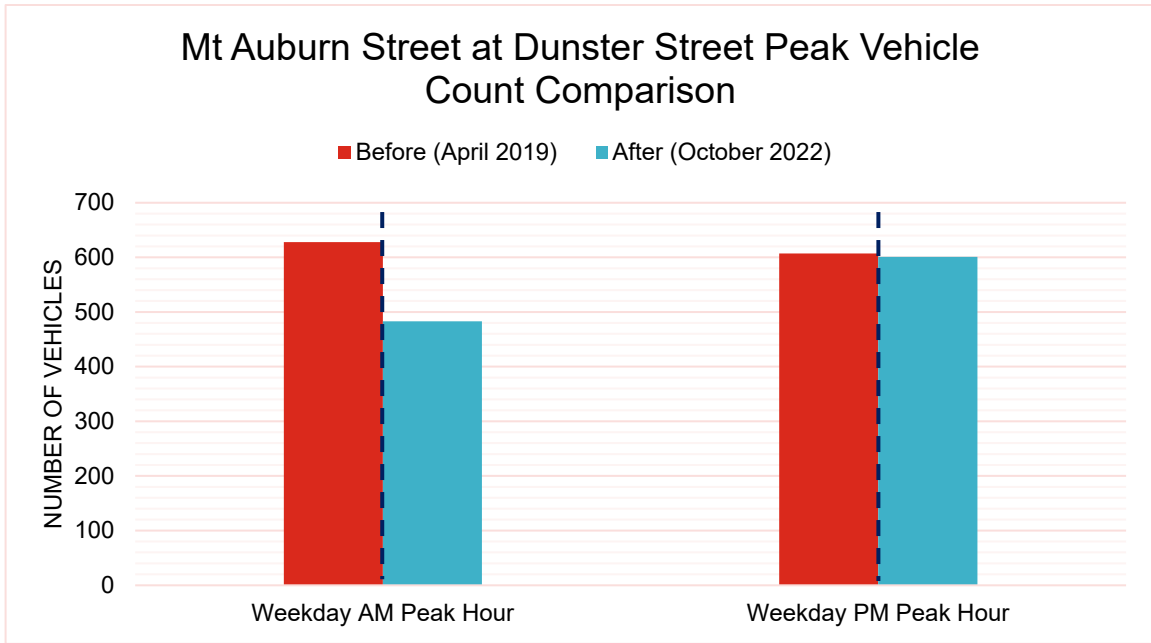
## Vehicle Volumes

**Figure 4** illustrates the hourly number of vehicles observed on Mt Auburn Street east of Dunster Street before and after the implementation of separated bike lanes. On average, there was a 14% decrease in vehicles observed in the after condition compared to before. The highest decrease was observed in the morning between 7 am – 9 am. The hours of 7 pm – 9 pm were the only time where there were more vehicles observed in the after data compared to the before data. **Figure 5** shows the comparison of vehicle volumes in the before and after scenarios during weekday AM and PM Peak Hours. The number of people driving decreased by 23% and by 1% in the AM Peak Hour and PM Peak Hour, respectively.

The TMCs for vehicles show that in general, fewer traveled through and made turning movements at Mt Auburn Street/Dunster Street in the after data compared to the before data for both AM and PM Peak Hours. Turning movements from side streets to Mt Auburn Street are similar for both before and after times.



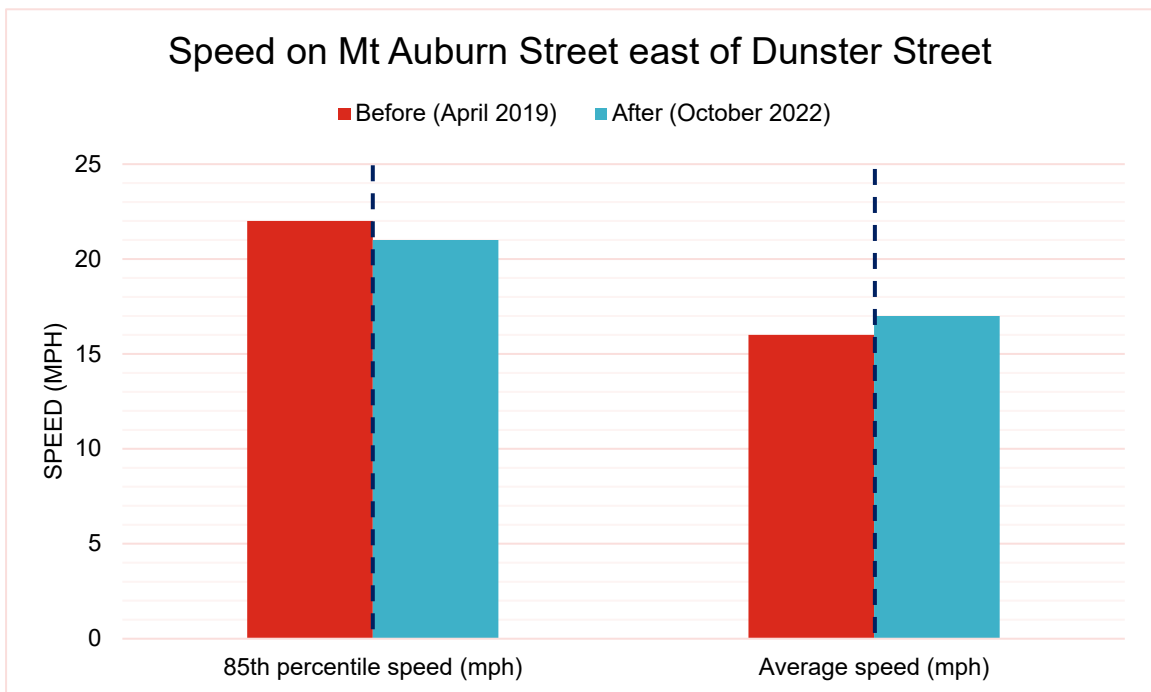
**Figure 4: Comparison of hourly count of vehicles traveling along Mt Auburn Street before and after the implementation of separated bike lanes**



**Figure 5: Comparison of AM and PM peak hour vehicle volume along Mt Auburn Street before and after the implementation of separated bike lanes**

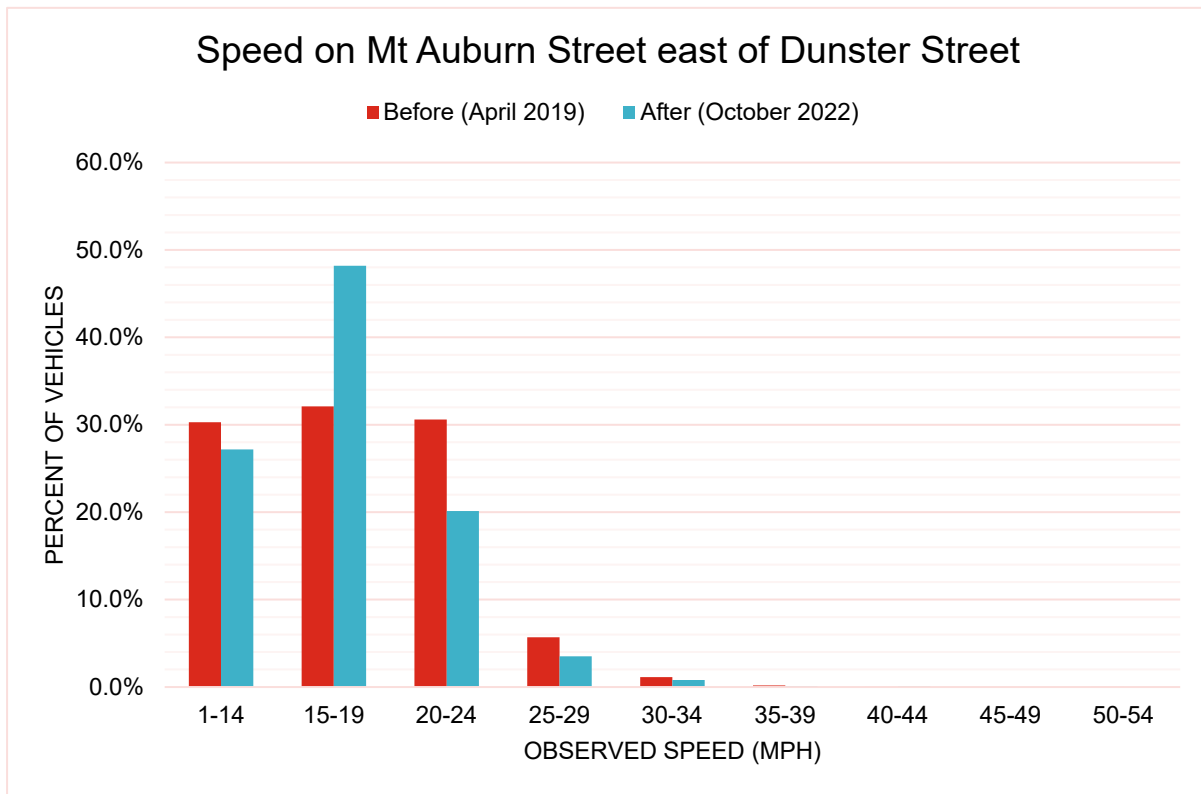
### Vehicular Speeds

**Figure 6** highlights the speed data collected at Mt Auburn Street before the implementation of separated bike lanes on April 25, 2019, and after implementation on October 20, 2022. The 85<sup>th</sup> percentile speed and average speed are similar for both before and after scenarios.



**Figure 6: Comparison of 85th and average speeds (mph) on Mt Auburn Street before and after the implementation of separated bike lanes**

**Figure 7** illustrates the percent of vehicles that were traveling at specific range of speeds on Mt Auburn Street east of Dunster Street before and after implementation of separated bike lanes. While the 85<sup>th</sup> percentile speed and average speed for before and after time periods were similar, the chart shows that a greater percentage of vehicles were traveling at speeds lower than the 20 mph speed limit after implementation of separated bike lanes compared to before.

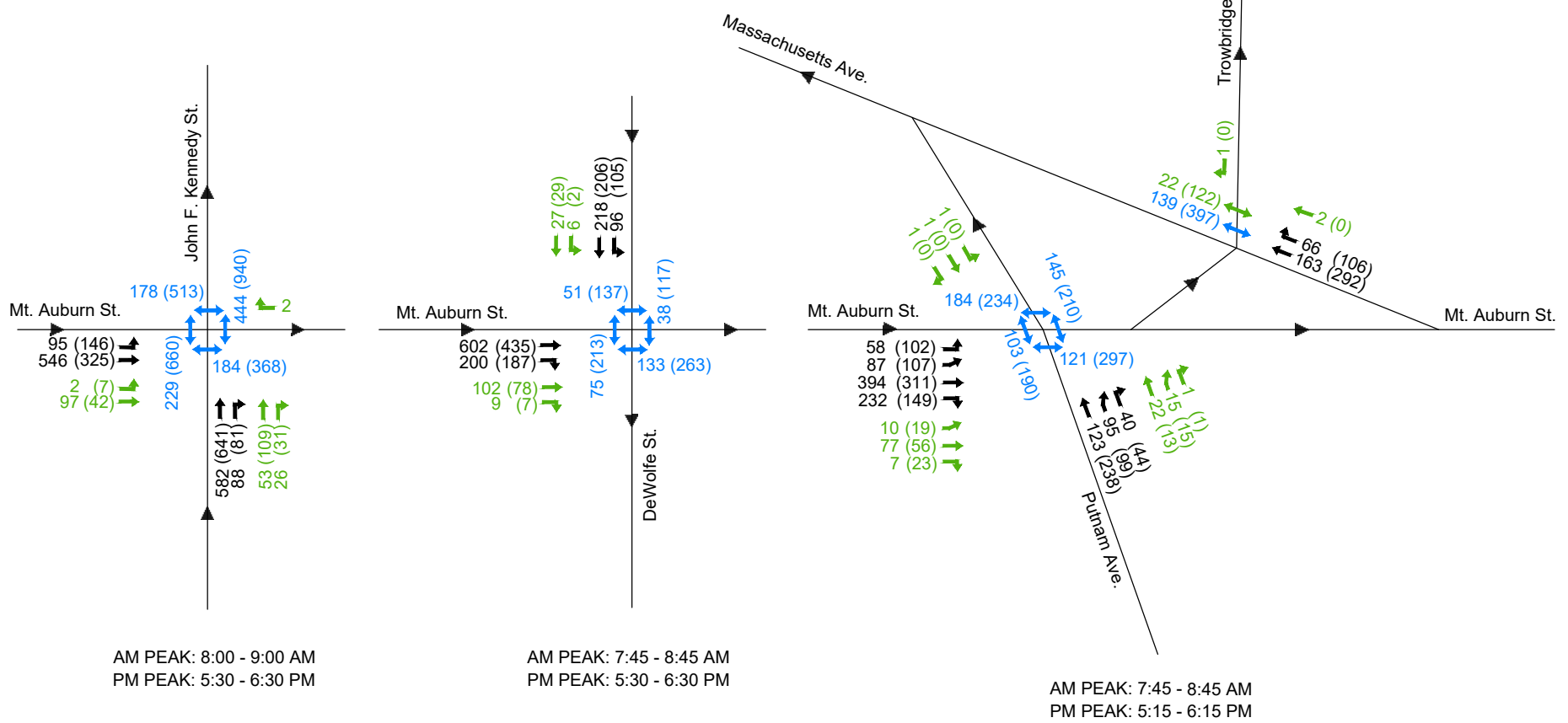
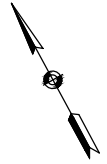


**Figure 7: Comparison of observed vehicular speeds along Mt Auburn Street before and after the implementation of separated bike lanes.**

## Conclusion

In Fall 2020, Mt Auburn Street between Brattle Street and Putnam Avenue was reconfigured with the implementation of separated bike lanes in that segment. Data collected before the implementation in April 2019 and after implementation on October 2022 showed a significant increase in the number of people biking through this segment for all time periods including the AM and PM Hour Peaks. The vehicular volumes show a decreasing trend in the AM hours, with a less significant difference observed during the PM hours. These trends are highlighted in the TMC data as well, where more bicycles and fewer vehicles were observed making through and turning movements along Mt Auburn Street. While the average and 85<sup>th</sup> percentile speeds before and after did not show much change, a greater percentage of vehicles were shown to travel at lower speeds, specifically between 15-19 mph after the implementation of separated bike lanes. Overall, the project has provided bicyclists exclusive comfortable space, which may have contributed to the observed increase in bike volumes. In addition, more vehicles are now traveling at speeds lower or near the posted speed limit of 20 mph, which increases safety for all road users.

# **ATTACHMENT A: 2019 TURNING MOVEMENT COUNTS**

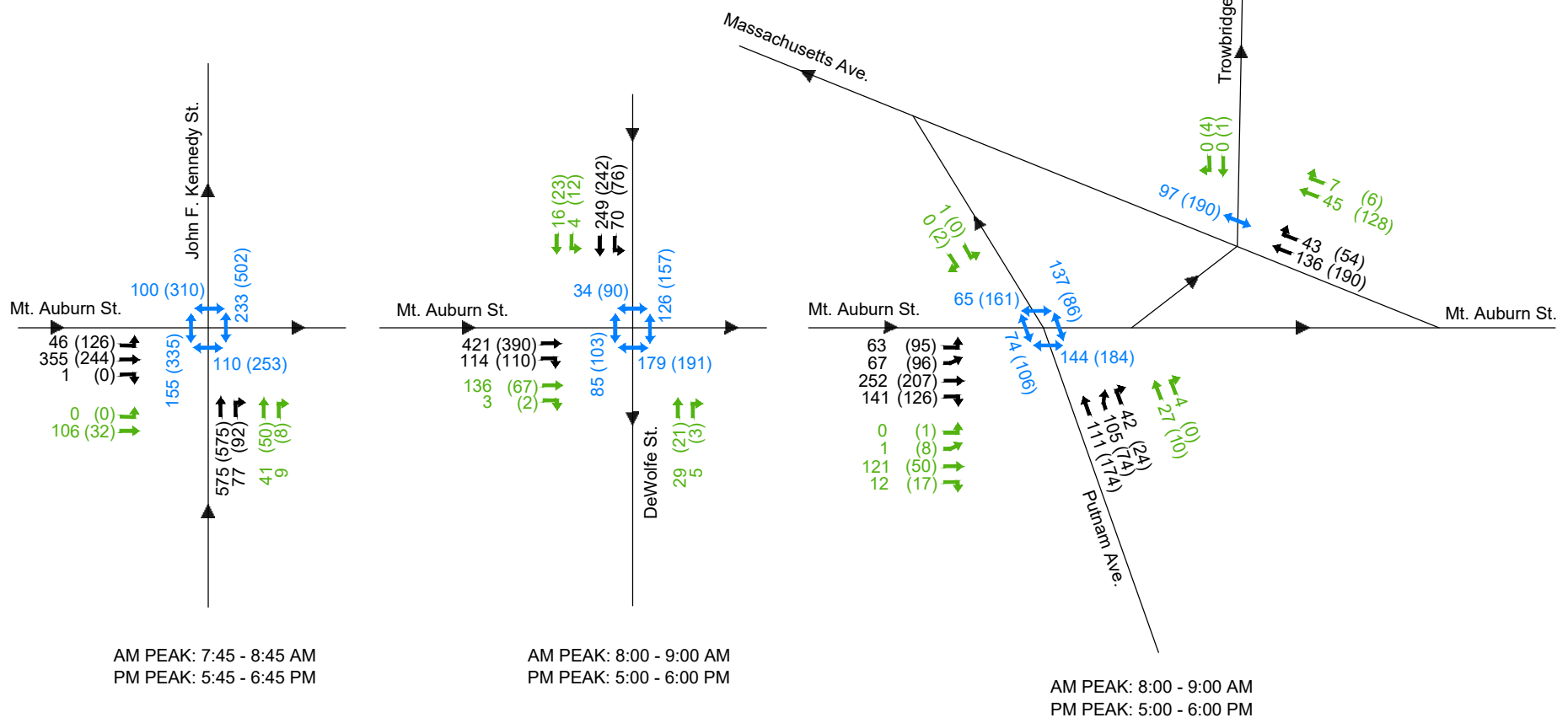
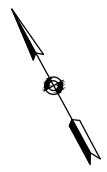


AM (PM): VEHICLE PEAK VOLUMES  
 AM (PM): PEDESTRIAN PEAK VOLUMES (INCLUDING BICYCLES USING THE CROSSWALK)  
 AM (PM): BICYCLE PEAK VOLUMES





# **ATTACHMENT B: 2022 TURNING MOVEMENT COUNTS**



AM (PM): VEHICLE PEAK VOLUMES  
 AM (PM): PEDESTRIAN PEAK VOLUMES (INCLUDING BICYCLES USING THE CROSSWALK)  
 AM (PM): BICYCLE PEAK VOLUMES



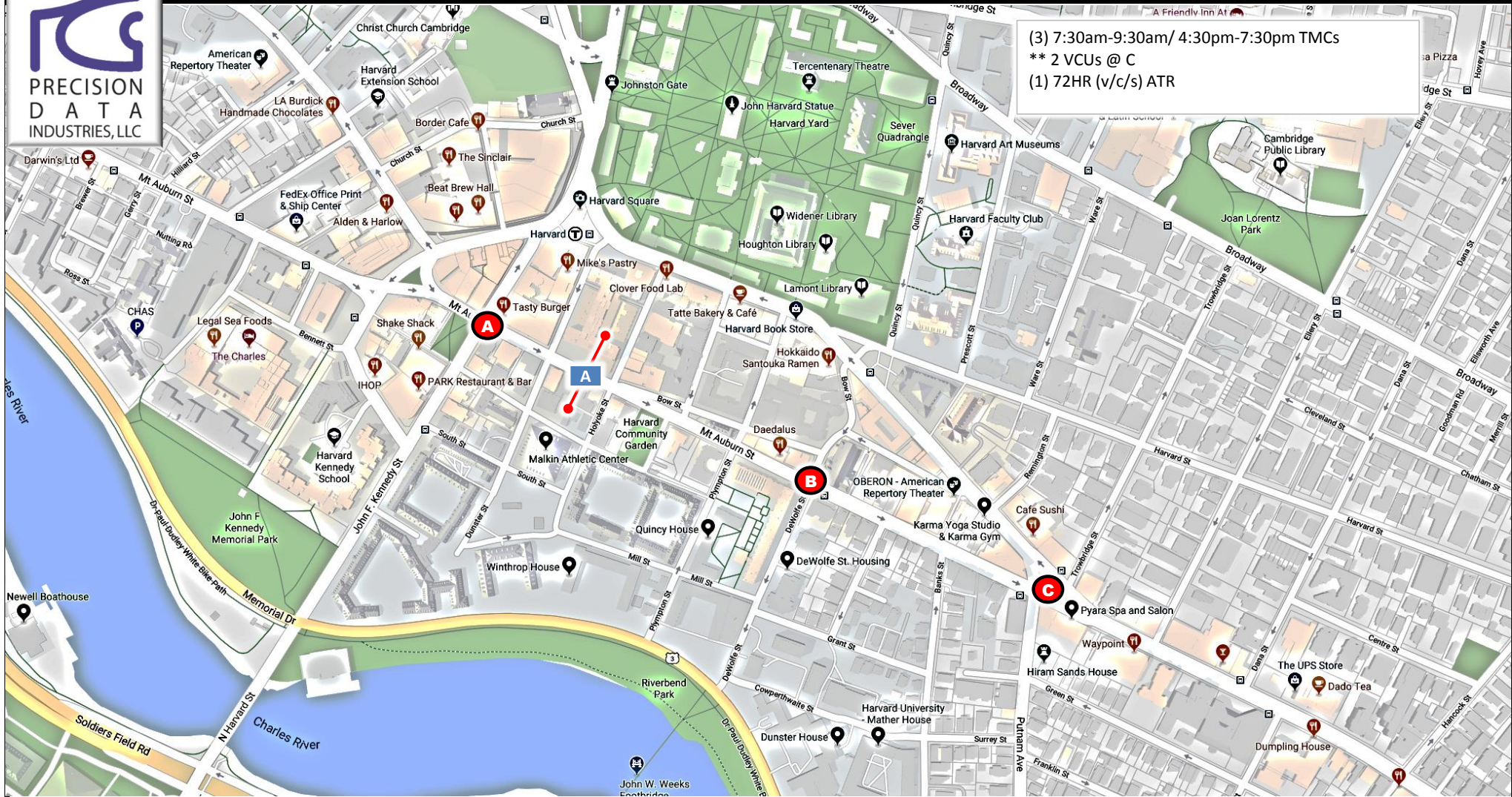
**ATTACHMENT C: 2019 AUTOMATIC TRAFFIC  
RECORDER SPEED AND VOLUME DATA**



# Location Map: 196883 Cambridge, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com

(3) 7:30am-9:30am/ 4:30pm-7:30pm TMCs  
\*\* 2 VCUs @ C  
(1) 72HR (v/c/s) ATR



<b>Client:</b> Toole Design	<b>Engineer:</b> J. Boudart	<b>Site Code:</b>	<b>Date:</b> Tues 4/23 thru Thurs 4/25/2019	<b>PDI Job #</b> 196883	<b>City, State:</b> Cambridge, MA
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76 Mount Auburn Street  
 east of Dunster Street  
 City, State: Cambridge, MA  
 Client: Toole/ J. Boudart



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

196883 A Volume  
 Site Code: TBD

Start Time	A.M.	EB	P.M.										
12:00	*		81										
12:15	*		148										
12:30	*		128										
12:45	*	0	131	488									
01:00	*		129										
01:15	*		141										
01:30	*		125										
01:45	*	0	125	520									
02:00	*		154										
02:15	*		144										
02:30	*		139										
02:45	*	0	148	585									
03:00	*		146										
03:15	*		146										
03:30	*		139										
03:45	*	0	129	560									
04:00	*		100										
04:15	*		138										
04:30	*		124										
04:45	*	0	138	500									
05:00	*		140										
05:15	*		129										
05:30	*		133										
05:45	*	0	159	561									
06:00	*		167										
06:15	*		142										
06:30	*		146										
06:45	*	0	143	598									
07:00	*		122										
07:15	*		104										
07:30	*		114										
07:45	*	0	113	453									
08:00	*		110										
08:15	*		121										
08:30	*		112										
08:45	*	0	90	433									
09:00	*		83										
09:15	*		97										
09:30	*		67										
09:45	*	0	90	337									
10:00	*		71										
10:15	*		59										
10:30	*		42										
10:45	*	0	71	243									
11:00	*		64										
11:15	*		45										
11:30	*		39										
11:45	*	0	36	184									
Total	0		5462										
Percent			100.0%	0.0%	0.0%								
Day Total		5462											
Peak	-	-	05:45	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	614	-	-	-	-	-	-	-	-	-	-
P.H.F.			0.919										

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196883 A Volume  
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Start Time	A.M.	EB	P.M.											Tue 04/23/19						
12:00	42		*																	
12:15	23		*																	
12:30	45		*																	
12:45	22	132	*	0																
01:00	32		*																	
01:15	14		*																	
01:30	24		*																	
01:45	15	85	*	0																
02:00	15		*																	
02:15	11		*																	
02:30	9		*																	
02:45	10	45	*	0																
03:00	10		*																	
03:15	13		*																	
03:30	15		*																	
03:45	6	44	*	0																
04:00	8		*																	
04:15	10		*																	
04:30	5		*																	
04:45	*	*	*	*																
05:00	*	*	*	*																
05:15	*	*	*	*																
05:30	*	*	*	*																
05:45	*	*	*	*																
06:00	*	*	*	*																
06:15	*	*	*	*																
06:30	*	*	*	*																
06:45	*	*	*	*																
07:00	*	*	*	*																
07:15	*	*	*	*																
07:30	*	*	*	*																
07:45	*	*	*	*																
08:00	*	*	*	*																
08:15	*	*	*	*																
08:30	*	*	*	*																
08:45	*	*	*	*																
09:00	*	*	*	*																
09:15	*	*	*	*																
09:30	*	*	*	*																
09:45	*	*	*	*																
10:00	*	*	*	*																
10:15	*	*	*	*																
10:30	*	*	*	*																
10:45	*	*	*	*																
11:00	*	*	*	*																
11:15	*	*	*	*																
11:30	*	*	*	*																
11:45	*	*	*	*																
Total	329		0																	
Percent			0.0%		0.0%															
Day Total		306																		
Peak	12:00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vol.	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.733																			

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 Email: datarequests@pdillc.com

196883 A Class  
 Site Code: TBD

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/22/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	16	399	69	4	19	9	0	4	0	0	0	0	0	520
14:00	36	445	58	5	21	17	0	1	0	0	0	0	0	583
15:00	6	474	45	5	24	4	0	0	0	1	0	0	0	559
16:00	5	433	44	1	12	2	0	0	0	1	0	0	0	498
17:00	4	488	51	2	9	1	1	2	0	0	0	0	0	558
18:00	10	527	43	3	7	2	0	2	1	0	1	0	0	596
19:00	2	396	41	4	6	0	1	0	0	1	1	0	0	452
20:00	1	398	24	0	8	2	0	0	0	0	0	0	0	433
21:00	2	306	27	1	1	0	0	0	0	0	0	0	0	337
22:00	0	219	16	3	4	1	0	0	0	0	0	0	0	243
23:00	0	169	8	0	5	2	0	0	0	0	0	0	0	184
Total	82	4254	426	28	116	40	2	9	1	3	2	0	0	4963
Percent	1.7%	85.7%	8.6%	0.6%	2.3%	0.8%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	

AM  
 Peak  
 Vol.

PM Peak Vol.	14:00	18:00	13:00	14:00	15:00	14:00	17:00	13:00	18:00	15:00	18:00		18:00
	36	527	69	5	24	17	1	4	1	1	1		596

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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/23/1														
9	0	120	11	0	1	0	0	0	0	0	0	0	0	132
01:00	0	73	8	1	3	0	0	0	0	0	0	0	0	85
02:00	0	37	5	0	2	1	0	0	0	0	0	0	0	45
03:00	0	32	6	1	4	1	0	0	0	0	0	0	0	44
04:00	0	14	4	1	4	0	0	0	0	0	0	0	0	23
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	276	34	3	14	2	0	0	0	0	0	0	0	329
Percent	0.0%	83.9%	10.3%	0.9%	4.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak		00:00	00:00	01:00	03:00	02:00								00:00
Vol.		120	11	1	4	1								132
PM Peak														
Vol.														



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196883 A Speed  
 Site Code: TBD

EB

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th Perce	Avera (Mean
	14	19	24	29	34	39	44	49	54	59	64	69	9999			
04/22/																
19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	<b>229</b>	175	81	3	0	0	0	0	0	0	0	0	0	488	19	13
13:00	224	168	126	1	1	0	0	0	0	0	0	0	0	520	20	14
14:00	188	<b>257</b>	127	13	0	0	0	0	0	0	0	0	0	585	21	15
15:00	166	211	166	16	1	0	0	0	0	0	0	0	0	560	21	16
16:00	106	223	151	20	0	0	0	0	0	0	0	0	0	500	22	17
17:00	180	232	133	15	1	0	0	0	0	0	0	0	0	561	21	15
18:00	155	251	<b>171</b>	19	2	0	0	0	0	0	0	0	0	<b>598</b>	21	16
19:00	165	174	100	13	1	0	0	0	0	0	0	0	0	453	21	15
20:00	103	164	149	16	1	0	0	0	0	0	0	0	0	433	22	17
21:00	38	114	138	<b>44</b>	3	0	0	0	0	0	0	0	0	337	23	19
22:00	17	83	104	32	<b>7</b>	0	0	0	0	0	0	0	0	243	24	20
23:00	10	61	73	34	4	<b>2</b>	0	0	0	0	0	0	0	184	25	21
Total	1581	2113	1519	226	21	2	0	0	0	0	0	0	0	5462		
%	28.9%	38.7%	27.8%	4.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

AM Peak Vol.	12:00	14:00	18:00	21:00	22:00	23:00	18:00
PM Peak Vol.	229	257	171	44	7	2	598

Stats

15th Percentile : 7 MPH  
 50th Percentile : 16 MPH  
 85th Percentile : 22 MPH  
 95th Percentile : 23 MPH

Mean Speed(Average) : 16 MPH  
 10 MPH Pace Speed : 15-24 MPH  
 Number in Pace : 3632  
 Percent in Pace : 66.5%  
 Number of Vehicles > 25 MPH : 204  
 Percent of Vehicles > 25 MPH : 3.7%

76 Mount Auburn Street  
 east of Dunster Street  
 City, State: Cambridge, MA  
 Client: Toole/ J. Boudart



46 Morton Street, Framingham, MA 01702  
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 Email: datarequests@pdillc.com

196883 A Speed  
 Site Code: TBD

EB

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th Perce	Avera (Mean
04/23/19	6	26	69	27	4	0	0	0	0	0	0	0	0	132	26	22
01:00	2	27	37	17	2	0	0	0	0	0	0	0	0	85	25	21
02:00	1	12	23	4	5	0	0	0	0	0	0	0	0	45	26	22
03:00	7	8	14	13	2	0	0	0	0	0	0	0	0	44	27	21
04:00	0	3	7	11	2	0	0	0	0	0	0	0	0	23	28	25
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	16	76	150	72	15	0	0	0	0	0	0	0	0	329		
%	4.9%	23.1%	45.6%	21.9%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	03:00	01:00	00:00	00:00	02:00										00:00	
Vol.	7	27	69	27	5									132		
PM Peak																
Vol.																

Stats

15th Percentile : 16 MPH  
 50th Percentile : 21 MPH  
 85th Percentile : 26 MPH  
 95th Percentile : 28 MPH

Mean Speed(Average) : 22 MPH  
 10 MPH Pace Speed : 15-24 MPH  
 Number in Pace : 226  
 Percent in Pace : 68.7%  
 Number of Vehicles > 25 MPH : 73  
 Percent of Vehicles > 25 MPH : 22.1%

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196883 AA Volume  
 Site Code: TBD

Start Time	A.M.	EB	P.M.										
12:00	*		*										
12:15	*		*										
12:30	*		*										
12:45	*	0	*	0									
01:00	*		*										
01:15	*		*										
01:30	*		*										
01:45	*	0	*	0									
02:00	*		41										
02:15	*		148										
02:30	*		137										
02:45	*	0	132	458									
03:00	*		141										
03:15	*		151										
03:30	*		131										
03:45	*	0	145	568									
04:00	*		143										
04:15	*		114										
04:30	*		145										
04:45	*	0	118	520									
05:00	*		142										
05:15	*		148										
05:30	*		156										
05:45	*	0	161	607									
06:00	*		179										
06:15	*		154										
06:30	*		161										
06:45	*	0	165	659									
07:00	*		153										
07:15	*		107										
07:30	*		141										
07:45	*	0	121	522									
08:00	*		132										
08:15	*		132										
08:30	*		112										
08:45	*	0	113	489									
09:00	*		117										
09:15	*		105										
09:30	*		118										
09:45	*	0	96	436									
10:00	*		101										
10:15	*		102										
10:30	*		84										
10:45	*	0	66	353									
11:00	*		75										
11:15	*		70										
11:30	*		49										
11:45	*	0	71	265									
Total	0		4877										
Percent			100.0%	0.0%	0.0%								
Day Total		4877											
Peak	-	-	06:00	-	-	-	-	-	-	-	-	-	-
Vol.	-	-	659	-	-	-	-	-	-	-	-	-	-
P.H.F.			0.920										

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196883 AA Volume  
 Site Code: TBD

Start Time	A.M.	EB	P.M.										
12:00	54		154										
12:15	31		148										
12:30	43		127										
12:45	57	185	161	590									
01:00	32		147										
01:15	32		158										
01:30	27		144										
01:45	28	119	147	596									
02:00	26		130										
02:15	16		131										
02:30	20		136										
02:45	13	75	158	555									
03:00	15		127										
03:15	9		153										
03:30	12		142										
03:45	7	43	150	572									
04:00	5		140										
04:15	7		145										
04:30	12		139										
04:45	12	36	146	570									
05:00	15		154										
05:15	32		137										
05:30	38		146										
05:45	50	135	160	597									
06:00	61		188										
06:15	88		180										
06:30	99		160										
06:45	114	362	146	674									
07:00	124		170										
07:15	162		154										
07:30	145		140										
07:45	170	601	129	593									
08:00	196		133										
08:15	177		122										
08:30	175		131										
08:45	194	742	116	502									
09:00	144		125										
09:15	158		127										
09:30	156		127										
09:45	168	626	114	493									
10:00	167		116										
10:15	119		96										
10:30	138		87										
10:45	177	601	83	382									
11:00	144		81										
11:15	130		83										
11:30	132		59										
11:45	162	568	64	287									
Total	4093		6411										
Percent			100.0%	0.0%	0.0%								
Day Total		10504											
Peak	08:00	-	05:45	-	-	-	-	-	-	-	-	-	-
Vol.	742	-	688	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.946		0.915										

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196883 AA Volume  
 Site Code: TBD

Start Time	A.M.	EB	P.M.										
				Fri 04/26/19									
12:00	61		193										
12:15	67		145										
12:30	53		170										
12:45	34	215	151	659									
01:00	46		142										
01:15	46		157										
01:30	36		158										
01:45	30	158	151	608									
02:00	37		135										
02:15	31		153										
02:30	25		147										
02:45	11	104	173	608									
03:00	12		172										
03:15	20		*										
03:30	14		*										
03:45	14	60	*	172									
04:00	9		*										
04:15	12		*										
04:30	9		*										
04:45	11	41	*	0									
05:00	23		*										
05:15	33		*										
05:30	38		*										
05:45	49	143	*	0									
06:00	59		*										
06:15	62		*										
06:30	93		*										
06:45	116	330	*	0									
07:00	120		*										
07:15	149		*										
07:30	154		*										
07:45	163	586	*	0									
08:00	137		*										
08:15	174		*										
08:30	176		*										
08:45	176	663	*	0									
09:00	161		*										
09:15	139		*										
09:30	156		*										
09:45	153	609	*	0									
10:00	174		*										
10:15	152		*										
10:30	119		*										
10:45	162	607	*	0									
11:00	163		*										
11:15	145		*										
11:30	147		*										
11:45	150	605	*	0									
Total	4121		2047										
Percent			100.0%	0.0%	0.0%								
Day Total		6168											
Peak	08:15	-	12:00	-	-	-	-	-	-	-	-	-	-
Vol.	687	-	659	-	-	-	-	-	-	-	-	-	-
P.H.F.	0.976		0.854										

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196883 AA Class  
 Site Code: TBD

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/24/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	68	284	70	4	26	0	1	4	0	1	0	0	0	458
15:00	37	419	74	8	26	1	0	3	0	0	0	0	0	568
16:00	35	392	59	2	28	1	0	3	0	0	0	0	0	520
17:00	95	422	71	2	12	1	0	4	0	0	0	0	0	607
18:00	87	506	53	3	5	2	0	3	0	0	0	0	0	659
19:00	51	403	52	4	6	1	0	4	0	1	0	0	0	522
20:00	37	381	55	4	8	0	1	3	0	0	0	0	0	489
21:00	22	357	46	2	7	0	0	2	0	0	0	0	0	436
22:00	18	286	39	1	9	0	0	0	0	0	0	0	0	353
23:00	13	209	31	0	10	0	0	1	1	0	0	0	0	265
Total	463	3659	550	30	137	6	2	27	1	2	0	0	0	4877
Percent	9.5%	75.0%	11.3%	0.6%	2.8%	0.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak Vol.														
PM Peak Vol.	17:00	18:00	15:00	15:00	16:00	18:00	14:00	14:00	23:00	14:00				18:00
	95	506	74	8	28	2	1	4	1	1				659

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EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/25/1														
9	6	153	19	0	7	0	0	0	0	0	0	0	0	185
01:00	0	99	13	1	5	1	0	0	0	0	0	0	0	119
02:00	1	54	15	0	5	0	0	0	0	0	0	0	0	75
03:00	1	25	5	2	7	2	0	0	1	0	0	0	0	43
04:00	2	13	7	2	10	1	0	0	1	0	0	0	0	36
05:00	5	56	35	8	27	4	0	0	0	0	0	0	0	135
06:00	22	220	71	11	31	3	0	3	1	0	0	0	0	362
07:00	58	401	79	14	39	6	0	4	0	0	0	0	0	601
08:00	107	541	56	7	21	2	1	6	0	0	1	0	0	742
09:00	47	440	81	9	35	6	1	5	0	1	0	1	0	626
10:00	38	396	103	10	42	6	1	5	0	0	0	0	0	601
11:00	33	396	79	9	44	3	0	4	0	0	0	0	0	568
12 PM	39	412	98	3	29	3	0	5	0	0	0	0	1	590
13:00	59	404	93	5	29	2	0	4	0	0	0	0	0	596
14:00	44	369	92	4	36	3	0	6	0	1	0	0	0	555
15:00	48	413	71	10	26	1	0	3	0	0	0	0	0	572
16:00	58	419	65	4	17	1	0	4	0	1	0	1	0	570
17:00	70	452	58	3	9	0	0	4	0	0	1	0	0	597
18:00	64	529	52	3	15	0	1	7	1	1	1	0	0	674
19:00	56	473	53	4	5	1	0	1	0	0	0	0	0	593
20:00	36	402	52	2	7	0	0	3	0	0	0	0	0	502
21:00	17	409	54	1	9	0	0	3	0	0	0	0	0	493
22:00	13	311	49	1	7	0	0	1	0	0	0	0	0	382
23:00	11	232	35	0	8	1	0	0	0	0	0	0	0	287
Total	835	7619	1335	113	470	46	4	68	4	4	3	2	1	10504
Percent	7.9%	72.5%	12.7%	1.1%	4.5%	0.4%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	10:00	07:00	11:00	07:00	08:00	08:00	03:00	09:00	08:00	09:00		08:00
Vol.	107	541	103	14	44	6	1	6	1	1	1	1		742
PM Peak	17:00	18:00	12:00	15:00	14:00	12:00	18:00	18:00	18:00	14:00	17:00	16:00	12:00	18:00
Vol.	70	529	98	10	36	3	1	7	1	1	1	1	1	674

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EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
04/26/1														
9	8	167	33	0	6	0	0	0	0	1	0	0	0	215
01:00	2	116	28	3	8	0	0	1	0	0	0	0	0	158
02:00	2	76	17	0	8	1	0	0	0	0	0	0	0	104
03:00	3	38	7	1	10	1	0	0	0	0	0	0	0	60
04:00	0	18	8	2	12	1	0	0	0	0	0	0	0	41
05:00	2	57	44	5	23	9	0	2	1	0	0	0	0	143
06:00	14	200	56	15	36	6	0	3	0	0	0	0	0	330
07:00	25	374	105	18	46	7	0	6	2	3	0	0	0	586
08:00	46	486	84	6	28	3	1	8	1	0	0	0	0	663
09:00	36	432	76	10	45	4	0	6	0	0	0	0	0	609
10:00	32	476	61	5	28	1	0	4	0	0	0	0	0	607
11:00	43	447	81	2	26	5	0	1	0	0	0	0	0	605
12 PM	54	495	80	2	24	3	0	1	0	0	0	0	0	659
13:00	24	448	86	8	35	1	0	6	0	0	0	0	0	608
14:00	23	441	95	6	38	3	0	2	0	0	0	0	0	608
15:00	14	272	38	7	10	1	0	2	0	0	0	0	0	344
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	328	4543	899	90	383	46	1	42	4	4	0	0	0	6340
Percent	5.2%	71.7%	14.2%	1.4%	6.0%	0.7%	0.0%	0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	07:00	07:00	07:00	05:00	08:00	08:00	07:00	07:00				08:00
Vol.	46	486	105	18	46	9	1	8	2	3				663
PM Peak	12:00	12:00	14:00	13:00	14:00	12:00		13:00						12:00
Vol.	54	495	95	8	38	3		6						659



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 Client: Toole/ J. Boudart



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

196883 AA Speed  
 Site Code: TBD

EB

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th Perce	Avera (Mean
	14	19	24	29	34	39	44	49	54	59	64	69	9999			
04/24/19	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	139	163	146	8	1	1	0	0	0	0	0	0	0	458	21	16
15:00	143	<b>234</b>	151	34	6	0	0	0	0	0	0	0	0	568	22	17
16:00	174	193	142	8	3	0	0	0	0	0	0	0	0	520	21	15
17:00	214	207	<b>171</b>	14	1	0	0	0	0	0	0	0	0	607	21	15
18:00	<b>284</b>	215	154	6	0	0	0	0	0	0	0	0	0	<b>659</b>	20	14
19:00	152	229	130	10	1	0	0	0	0	0	0	0	0	522	21	16
20:00	113	211	134	24	7	0	0	0	0	0	0	0	0	489	22	17
21:00	82	177	140	34	2	1	0	0	0	0	0	0	0	436	22	18
22:00	27	112	149	<b>57</b>	8	0	0	0	0	0	0	0	0	353	25	20
23:00	16	66	110	56	<b>12</b>	<b>3</b>	<b>2</b>	0	0	0	0	0	0	265	26	22
Total	1344	1807	1427	251	41	5	2	0	0	0	0	0	0	4877		
%	27.6%	37.1%	29.3%	5.1%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

AM Peak Vol.	18:00	15:00	17:00	22:00	23:00	23:00	23:00	18:00
PM Peak Vol.	284	234	171	57	12	3	2	659

Stats

15th Percentile : 7 MPH  
 50th Percentile : 17 MPH  
 85th Percentile : 22 MPH  
 95th Percentile : 25 MPH

Mean Speed(Average) : 17 MPH  
 10 MPH Pace Speed : 15-24 MPH  
 Number in Pace : 3234  
 Percent in Pace : 66.3%  
 Number of Vehicles > 25 MPH : 249  
 Percent of Vehicles > 25 MPH : 5.1%

76 Mount Auburn Street  
 east of Dunster Street  
 City, State: Cambridge, MA  
 Client: Toole/ J. Boudart



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

196883 AA Speed  
 Site Code: TBD

EB	Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th Perce	Avera (Mean
		14	19	24	29	34	39	44	49	54	59	64	69	9999			
04/25/																	
	19	10	40	78	46	10	1	0	0	0	0	0	0	0	185	27	22
	01:00	4	22	44	42	6	1	0	0	0	0	0	0	0	119	27	23
	02:00	1	21	21	17	11	3	0	0	1	0	0	0	0	75	30	24
	03:00	3	8	16	9	6	1	0	0	0	0	0	0	0	43	29	23
	04:00	1	4	7	15	6	3	0	0	0	0	0	0	0	36	31	26
	05:00	3	32	39	39	18	3	1	0	0	0	0	0	0	135	29	24
	06:00	44	100	126	70	20	2	0	0	0	0	0	0	0	362	26	20
	07:00	137	174	223	57	9	1	0	0	0	0	0	0	0	601	23	18
	08:00	223	178	328	13	0	0	0	0	0	0	0	0	0	742	22	17
	09:00	160	206	229	28	3	0	0	0	0	0	0	0	0	626	22	17
	10:00	256	146	191	8	0	0	0	0	0	0	0	0	0	601	21	15
	11:00	243	160	156	8	1	0	0	0	0	0	0	0	0	568	21	14
	12 PM	230	188	161	11	0	0	0	0	0	0	0	0	0	590	21	15
	13:00	293	170	126	7	0	0	0	0	0	0	0	0	0	596	20	14
	14:00	201	208	136	10	0	0	0	0	0	0	0	0	0	555	21	15
	15:00	176	206	171	17	2	0	0	0	0	0	0	0	0	572	22	16
	16:00	202	210	149	9	0	0	0	0	0	0	0	0	0	570	21	15
	17:00	210	231	138	15	3	0	0	0	0	0	0	0	0	597	21	15
	18:00	247	256	164	7	0	0	0	0	0	0	0	0	0	674	21	15
	19:00	228	186	158	20	1	0	0	0	0	0	0	0	0	593	21	15
	20:00	126	210	141	23	1	1	0	0	0	0	0	0	0	502	22	17
	21:00	117	203	134	32	5	1	0	0	1	0	0	0	0	493	22	17
	22:00	37	139	154	44	8	0	0	0	0	0	0	0	0	382	23	20
	23:00	30	73	124	51	8	1	0	0	0	0	0	0	0	287	25	20
	Total	3182	3371	3214	598	118	18	1	0	2	0	0	0	0	10504		
	%	30.3%	32.1%	30.6%	5.7%	1.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	Vol.	256	206	328	70	20	3	1		1					742		
PM Peak	Vol.	293	256	171	51	8	1			1					674		

Stats

15th Percentile : 6 MPH  
 50th Percentile : 17 MPH  
 85th Percentile : 22 MPH  
 95th Percentile : 25 MPH

Mean Speed(Average) : 16 MPH  
 10 MPH Pace Speed : 15-24 MPH  
 Number in Pace : 6585  
 Percent in Pace : 62.7%  
 Number of Vehicles > 25 MPH : 617  
 Percent of Vehicles > 25 MPH : 5.9%

76 Mount Auburn Street  
 east of Dunster Street  
 City, State: Cambridge, MA  
 Client: Toole/ J. Boudart



46 Morton Street, Framingham, MA 01702  
 Office: 508-875-0100 Fax: 508-875-0118  
 Email: datarequests@pdillc.com

196883 AA Speed  
 Site Code: TBD

EB

Start Time	1	15	20	25	30	35	40	45	50	55	60	65	70	Total	85th Perce	Avera (Mean
	14	19	24	29	34	39	44	49	54	59	64	69	9999			
04/26/																
19	24	55	89	40	7	0	0	0	0	0	0	0	0	215	25	20
01:00	10	33	66	39	7	1	1	1	0	0	0	0	0	158	27	22
02:00	7	18	37	37	4	0	0	1	0	0	0	0	0	104	27	23
03:00	4	11	26	13	3	2	1	0	0	0	0	0	0	60	27	23
04:00	0	5	9	14	10	1	2	0	0	0	0	0	0	41	32	27
05:00	6	23	43	32	35	4	0	0	0	0	0	0	0	143	31	25
06:00	34	107	116	62	10	1	0	0	0	0	0	0	0	330	25	20
07:00	127	204	201	44	8	2	0	0	0	0	0	0	0	586	23	18
08:00	258	217	176	12	0	0	0	0	0	0	0	0	0	663	21	15
09:00	248	149	203	8	1	0	0	0	0	0	0	0	0	609	21	15
10:00	235	88	281	3	0	0	0	0	0	0	0	0	0	607	22	16
11:00	247	90	265	3	0	0	0	0	0	0	0	0	0	605	22	15
12 PM	352	73	232	2	0	0	0	0	0	0	0	0	0	659	21	14
13:00	291	160	148	7	1	1	0	0	0	0	0	0	0	608	21	14
14:00	207	222	166	13	0	0	0	0	0	0	0	0	0	608	21	15
15:00	163	102	78	1	0	0	0	0	0	0	0	0	0	344	20	14
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	2213	1557	2136	330	86	12	4	2	0	0	0	0	0	6340		
%	34.9%	24.6%	33.7%	5.2%	1.4%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	08:00	08:00	10:00	06:00	05:00	05:00	04:00	01:00						08:00		
Vol.	258	217	281	62	35	4	2	1						663		
PM Peak	12:00	14:00	12:00	14:00	13:00	13:00								12:00		
Vol.	352	222	232	13	1	1								659		

Stats

15th Percentile : 6 MPH  
 50th Percentile : 17 MPH  
 85th Percentile : 22 MPH  
 95th Percentile : 25 MPH

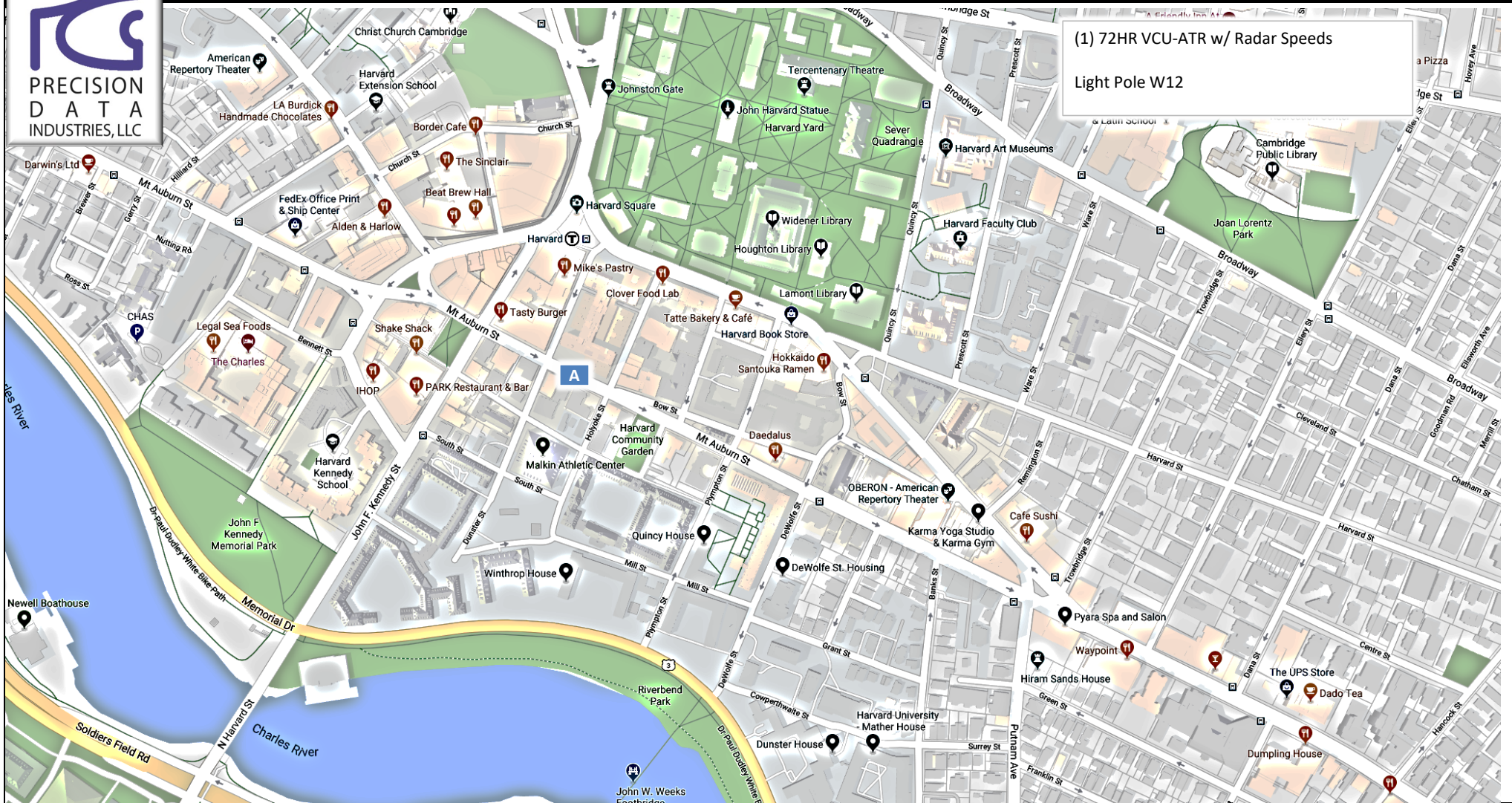
Mean Speed(Average) : 16 MPH  
 10 MPH Pace Speed : 15-24 MPH  
 Number in Pace : 3693  
 Percent in Pace : 58.2%  
 Number of Vehicles > 25 MPH : 368  
 Percent of Vehicles > 25 MPH : 5.8%

**ATTACHMENT D: 2022 AUTOMATIC TRAFFIC  
RECORDER SPEED AND VOLUME DATA**



# Location Map: 228912 Cambridge, MA

Precision Data Industries, LLC 46 Morton Street, Framingham, MA 01702 ph: 508-875-0100 email: datarequests@pdillc.com



(1) 72HR VCU-ATR w/ Radar Speeds  
Light Pole W12

<b>Client:</b> Toole Design	<b>Engineer:</b> M. Danilla	<b>Site Code:</b>	<b>Date:</b> Tues 10/18 thru Thurs 10/20/2022	<b>PDI Job #</b> 228912	<b>City, State:</b> Cambridge, MA
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Mt Auburn Street  
 just west of Holyoke Street  
 City, State: Cambridge, MA  
 Client: Toole Design/ M. Danila  
 Site Code: BOS.06085.07



PDI File #: 228912 ATR-A

Count Date: Tuesday, October 18, 2022  
 Direction: EB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	0	0	23	2	2	0	27
12:15 AM	4	1	19	1	1	0	26
12:30 AM	4	0	14	3	0	0	21
12:45 AM	0	1	18	2	1	0	22
1:00 AM	0	0	18	2	0	0	20
1:15 AM	0	0	10	0	0	0	10
1:30 AM	0	0	8	1	0	0	9
1:45 AM	0	0	11	1	0	0	12
2:00 AM	0	0	4	0	0	1	5
2:15 AM	1	0	11	1	0	0	13
2:30 AM	1	0	10	0	0	0	11
2:45 AM	1	0	4	1	1	0	7
3:00 AM	0	0	4	0	0	1	5
3:15 AM	0	0	1	0	1	0	2
3:30 AM	0	0	4	0	0	0	4
3:45 AM	0	0	4	0	0	0	4
4:00 AM	0	0	2	0	6	0	8
4:15 AM	0	0	2	0	0	0	2
4:30 AM	1	0	4	0	2	0	7
4:45 AM	1	0	4	0	4	0	9
5:00 AM	0	0	9	1	3	0	13
5:15 AM	2	0	19	2	4	0	27
5:30 AM	4	0	29	1	5	0	39
5:45 AM	2	0	28	3	3	0	36
6:00 AM	0	0	27	1	6	0	34
6:15 AM	1	0	41	2	4	0	48
6:30 AM	3	0	35	2	3	0	43
6:45 AM	8	0	43	5	5	0	61
7:00 AM	6	0	64	5	3	0	78
7:15 AM	7	1	66	4	5	0	83
7:30 AM	12	0	106	4	9	0	131
7:45 AM	15	0	106	7	5	1	134
8:00 AM	18	0	116	3	7	1	145
8:15 AM	29	0	101	2	10	1	143
8:30 AM	34	2	124	2	12	1	175
8:45 AM	32	0	140	1	8	0	181
9:00 AM	21	0	108	2	8	0	139
9:15 AM	23	0	106	5	9	0	143
9:30 AM	24	0	93	4	7	0	128
9:45 AM	28	1	78	4	7	0	118
10:00 AM	23	1	92	3	12	0	131
10:15 AM	24	0	91	3	14	0	132
10:30 AM	13	0	109	5	9	1	137
10:45 AM	16	0	99	6	8	0	129
11:00 AM	18	0	117	2	9	1	147
11:15 AM	4	3	110	3	8	1	129
11:30 AM	6	0	107	3	3	1	120
11:45 AM	25	0	114	1	4	0	144

<b>AM Total</b>	<b>411</b>	<b>10</b>	<b>2453</b>	<b>100</b>	<b>208</b>	<b>10</b>	<b>3192</b>
<b>Percentage</b>	<b>12.88%</b>	<b>0.31%</b>	<b>76.85%</b>	<b>3.13%</b>	<b>6.52%</b>	<b>0.31%</b>	
<b>AM Peak</b>	<b>8:15 AM</b>	<b>10:30 AM</b>	<b>8:00 AM</b>	<b>7:00 AM</b>	<b>10:00 AM</b>	<b>7:45 AM</b>	<b>8:00 AM</b>
<b>Volume</b>	<b>116</b>	<b>3</b>	<b>481</b>	<b>20</b>	<b>43</b>	<b>4</b>	<b>644</b>

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	25	0	121	3	4	1	154
12:15 PM	17	1	121	2	16	0	157
12:30 PM	22	0	123	3	9	0	157
12:45 PM	17	0	123	5	5	0	150
1:00 PM	17	0	121	1	7	0	146
1:15 PM	29	0	109	3	7	1	149
1:30 PM	16	1	96	3	8	0	124
1:45 PM	17	0	92	4	9	0	122
2:00 PM	19	0	109	1	9	1	139
2:15 PM	15	0	92	4	5	0	116
2:30 PM	21	0	108	4	3	0	136
2:45 PM	26	1	87	4	6	0	124
3:00 PM	14	2	121	4	2	0	143
3:15 PM	19	0	88	4	5	0	116
3:30 PM	18	1	102	3	3	1	128
3:45 PM	21	0	99	4	3	0	127
4:00 PM	17	1	112	3	1	0	134
4:15 PM	17	0	107	3	1	0	128
4:30 PM	20	0	85	2	4	0	111
4:45 PM	32	0	123	0	5	0	160
5:00 PM	32	0	109	3	1	0	145
5:15 PM	37	2	137	2	1	0	179
5:30 PM	30	0	125	1	2	0	158
5:45 PM	35	0	110	4	1	1	151
6:00 PM	40	0	107	6	2	1	156
6:15 PM	36	1	106	2	0	0	145
6:30 PM	33	0	88	1	0	0	122
6:45 PM	31	0	111	4	0	1	147
7:00 PM	23	1	103	3	0	0	130
7:15 PM	24	0	118	3	0	0	145
7:30 PM	22	0	112	4	1	1	140
7:45 PM	26	0	105	3	0	0	134
8:00 PM	21	1	102	3	0	0	127
8:15 PM	11	0	90	3	0	0	104
8:30 PM	7	0	100	3	1	0	111
8:45 PM	9	0	96	1	1	0	107
9:00 PM	12	0	109	3	0	0	124
9:15 PM	9	1	78	2	0	0	90
9:30 PM	14	0	89	3	1	0	107
9:45 PM	10	0	77	3	0	0	90
10:00 PM	2	0	76	1	0	0	79
10:15 PM	10	0	56	4	0	0	70
10:30 PM	8	0	62	4	0	0	74
10:45 PM	6	0	44	3	0	0	53
11:00 PM	6	0	43	2	0	0	51
11:15 PM	9	0	57	1	0	0	67
11:30 PM	4	0	45	4	1	0	54
11:45 PM	3	0	33	2	1	0	39

<b>PM Total</b>	<b>909</b>	<b>13</b>	<b>4627</b>	<b>138</b>	<b>125</b>	<b>8</b>	<b>5820</b>
<b>Percentage</b>	<b>15.62%</b>	<b>0.22%</b>	<b>79.50%</b>	<b>2.37%</b>	<b>2.15%</b>	<b>0.14%</b>	
<b>PM Peak</b>	<b>5:45 PM</b>	<b>2:45 PM</b>	<b>4:45 PM</b>	<b>2:15 PM</b>	<b>12:15 PM</b>	<b>1:15 PM</b>	<b>5:15 PM</b>
<b>Volume</b>	<b>144</b>	<b>4</b>	<b>494</b>	<b>16</b>	<b>37</b>	<b>2</b>	<b>644</b>

<b>Day Total</b>	<b>1320</b>	<b>23</b>	<b>7080</b>	<b>238</b>	<b>333</b>	<b>18</b>	<b>9012</b>
<b>Percentage</b>	<b>14.65%</b>	<b>0.26%</b>	<b>78.56%</b>	<b>2.64%</b>	<b>3.70%</b>	<b>0.20%</b>	

Mt Auburn Street  
 just west of Holyoke Street  
 City, State: Cambridge, MA  
 Client: Toole Design/ M. Danila  
 Site Code: BOS.06085.07



PDI File #: 228912 ATR-A

Count Date: Wednesday, October 19, 2022  
 Direction: EB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	6	0	27	1	1	0	35
12:15 AM	6	0	23	0	0	0	29
12:30 AM	2	0	22	3	0	0	27
12:45 AM	1	1	22	2	0	0	26
1:00 AM	1	0	12	1	0	0	14
1:15 AM	2	0	10	0	0	0	12
1:30 AM	2	0	3	3	1	0	9
1:45 AM	0	0	6	0	0	1	7
2:00 AM	0	0	4	0	0	0	4
2:15 AM	2	0	11	1	3	0	17
2:30 AM	0	0	5	0	0	0	5
2:45 AM	0	0	1	0	1	0	2
3:00 AM	0	0	4	0	1	0	5
3:15 AM	0	0	8	1	1	0	10
3:30 AM	0	0	3	0	2	0	5
3:45 AM	1	0	2	0	2	0	5
4:00 AM	0	0	2	0	2	0	4
4:15 AM	1	0	2	0	1	0	4
4:30 AM	1	0	3	0	4	0	8
4:45 AM	0	0	5	0	2	0	7
5:00 AM	1	0	11	1	2	0	15
5:15 AM	2	1	20	1	3	0	27
5:30 AM	1	0	23	1	2	0	27
5:45 AM	4	0	36	1	8	0	49
6:00 AM	3	1	28	2	5	0	39
6:15 AM	3	0	42	1	2	0	48
6:30 AM	7	0	26	2	5	0	40
6:45 AM	6	2	67	4	6	0	85
7:00 AM	11	0	57	4	5	0	77
7:15 AM	19	0	76	3	4	0	102
7:30 AM	13	2	105	3	3	0	126
7:45 AM	31	0	106	5	16	1	159
8:00 AM	36	0	107	3	6	1	153
8:15 AM	37	0	114	2	9	0	162
8:30 AM	43	0	121	7	10	2	183
8:45 AM	33	0	127	1	5	2	168
9:00 AM	42	0	122	3	7	0	174
9:15 AM	29	0	124	4	12	0	169
9:30 AM	29	1	91	2	11	0	134
9:45 AM	27	0	89	4	9	0	129
10:00 AM	16	0	88	6	2	0	112
10:15 AM	25	1	86	1	9	0	122
10:30 AM	14	0	89	4	9	0	116
10:45 AM	17	0	87	4	11	0	119
11:00 AM	19	0	93	2	8	0	122
11:15 AM	21	2	102	5	5	0	135
11:30 AM	18	0	118	5	4	0	145
11:45 AM	26	1	93	3	3	1	127

<b>AM Total</b>	<b>558</b>	<b>12</b>	<b>2423</b>	<b>96</b>	<b>202</b>	<b>8</b>	<b>3299</b>
<b>Percentage</b>	<b>16.91%</b>	<b>0.36%</b>	<b>73.45%</b>	<b>2.91%</b>	<b>6.12%</b>	<b>0.24%</b>	
<b>AM Peak</b>	<b>8:15 AM</b>	<b>6:45 AM</b>	<b>8:30 AM</b>	<b>7:45 AM</b>	<b>7:45 AM</b>	<b>8:00 AM</b>	<b>8:30 AM</b>
<b>Volume</b>	<b>155</b>	<b>4</b>	<b>494</b>	<b>17</b>	<b>41</b>	<b>5</b>	<b>694</b>

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	25	0	121	1	6	0	153
12:15 PM	14	1	131	2	7	0	155
12:30 PM	14	0	117	3	7	1	142
12:45 PM	16	0	97	5	8	0	126
1:00 PM	12	1	106	2	7	1	129
1:15 PM	25	0	112	4	7	1	149
1:30 PM	25	0	98	1	5	0	129
1:45 PM	24	0	114	3	6	0	147
2:00 PM	19	0	110	5	4	0	138
2:15 PM	14	0	110	5	1	0	130
2:30 PM	12	1	100	3	5	1	122
2:45 PM	31	0	102	2	2	1	138
3:00 PM	25	1	105	4	2	0	137
3:15 PM	17	1	110	1	2	0	131
3:30 PM	15	0	106	1	3	0	125
3:45 PM	15	1	120	4	5	0	145
4:00 PM	17	0	105	2	1	0	125
4:15 PM	28	0	94	3	3	1	129
4:30 PM	16	1	106	0	1	0	124
4:45 PM	18	1	110	2	1	0	132
5:00 PM	35	0	108	2	3	0	148
5:15 PM	35	0	121	3	0	0	159
5:30 PM	34	0	123	2	2	0	161
5:45 PM	42	2	123	1	5	0	173
6:00 PM	35	0	120	4	1	0	160
6:15 PM	34	3	123	0	2	0	162
6:30 PM	36	0	113	2	1	0	152
6:45 PM	39	1	120	3	0	0	163
7:00 PM	35	1	118	2	0	0	156
7:15 PM	24	3	138	3	1	0	169
7:30 PM	27	1	141	2	0	0	171
7:45 PM	18	0	99	3	2	0	122
8:00 PM	18	0	118	5	0	0	141
8:15 PM	20	2	106	2	2	0	132
8:30 PM	15	0	102	3	1	0	121
8:45 PM	7	1	94	2	0	0	104
9:00 PM	19	1	90	2	0	0	112
9:15 PM	13	0	109	2	0	0	124
9:30 PM	10	0	84	3	0	0	97
9:45 PM	11	2	84	2	1	0	100
10:00 PM	11	2	67	2	0	0	82
10:15 PM	9	1	64	4	0	0	78
10:30 PM	9	2	61	1	0	0	73
10:45 PM	5	1	57	2	0	0	65
11:00 PM	6	0	55	3	0	0	64
11:15 PM	10	0	54	0	0	0	64
11:30 PM	1	0	35	8	0	0	44
11:45 PM	6	0	51	1	1	0	59

<b>PM Total</b>	<b>946</b>	<b>31</b>	<b>4852</b>	<b>122</b>	<b>105</b>	<b>6</b>	<b>6062</b>
<b>Percentage</b>	<b>15.61%</b>	<b>0.51%</b>	<b>80.04%</b>	<b>2.01%</b>	<b>1.73%</b>	<b>0.10%</b>	
<b>PM Peak</b>	<b>5:45 PM</b>	<b>9:45 PM</b>	<b>6:45 PM</b>	<b>1:45 PM</b>	<b>12:15 PM</b>	<b>12:30 PM</b>	<b>6:45 PM</b>
<b>Volume</b>	<b>147</b>	<b>7</b>	<b>517</b>	<b>16</b>	<b>29</b>	<b>3</b>	<b>659</b>
<b>Day Total</b>	<b>1504</b>	<b>43</b>	<b>7275</b>	<b>218</b>	<b>307</b>	<b>14</b>	<b>9361</b>
<b>Percentage</b>	<b>16.07%</b>	<b>0.46%</b>	<b>77.72%</b>	<b>2.33%</b>	<b>3.28%</b>	<b>0.15%</b>	

Mt Auburn Street  
 just west of Holyoke Street  
 City, State: Cambridge, MA  
 Client: Toole Design/ M. Danila  
 Site Code: BOS.06085.07



PDI File #: 228912 ATR-A

Count Date: Thursday, October 20, 2022  
 Direction: EB

AM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 AM	5	0	47	3	1	0	56
12:15 AM	0	0	31	1	0	0	32
12:30 AM	1	0	26	4	0	0	31
12:45 AM	0	1	23	3	0	0	27
1:00 AM	0	0	24	2	0	0	26
1:15 AM	3	0	9	0	0	0	12
1:30 AM	2	0	7	2	0	0	11
1:45 AM	0	0	6	1	1	0	8
2:00 AM	0	0	8	0	0	0	8
2:15 AM	1	0	15	1	0	0	17
2:30 AM	0	0	3	0	0	0	3
2:45 AM	0	0	7	0	1	0	8
3:00 AM	0	0	7	0	3	0	10
3:15 AM	0	0	8	1	2	0	11
3:30 AM	0	0	3	0	2	0	5
3:45 AM	0	0	3	0	1	0	4
4:00 AM	0	0	9	0	0	0	9
4:15 AM	1	0	2	0	3	0	6
4:30 AM	0	0	5	0	3	0	8
4:45 AM	1	0	7	0	2	0	10
5:00 AM	0	0	9	1	5	0	15
5:15 AM	5	0	24	2	3	0	34
5:30 AM	5	0	23	1	2	0	31
5:45 AM	1	0	21	2	6	0	30
6:00 AM	2	1	40	2	3	0	48
6:15 AM	3	0	40	7	4	1	55
6:30 AM	3	0	49	4	4	1	61
6:45 AM	5	0	68	5	4	0	82
7:00 AM	7	1	57	5	8	0	78
7:15 AM	19	1	93	6	6	0	125
7:30 AM	22	0	89	7	8	1	127
7:45 AM	27	1	102	4	7	0	141
8:00 AM	28	0	108	2	6	0	144
8:15 AM	32	0	99	2	4	1	138
8:30 AM	37	1	122	5	10	0	175
8:45 AM	50	0	83	1	11	0	145
9:00 AM	40	0	98	6	4	0	148
9:15 AM	27	0	127	4	11	0	169
9:30 AM	32	0	90	2	11	1	136
9:45 AM	30	1	94	4	11	0	140
10:00 AM	14	0	103	3	8	0	128
10:15 AM	22	0	106	2	8	2	140
10:30 AM	26	0	101	4	9	0	140
10:45 AM	11	0	111	1	6	0	129
11:00 AM	16	0	83	3	7	0	109
11:15 AM	21	0	100	1	15	0	137
11:30 AM	13	0	101	3	8	0	125
11:45 AM	25	0	118	2	7	0	152

<b>AM Total</b>	<b>537</b>	<b>7</b>	<b>2509</b>	<b>109</b>	<b>215</b>	<b>7</b>	<b>3384</b>
<b>Percentage</b>	<b>15.87%</b>	<b>0.21%</b>	<b>74.14%</b>	<b>3.22%</b>	<b>6.35%</b>	<b>0.21%</b>	
<b>AM Peak</b>	<b>8:15 AM</b>	<b>7:00 AM</b>	<b>7:45 AM</b>	<b>6:45 AM</b>	<b>9:15 AM</b>	<b>9:30 AM</b>	<b>8:30 AM</b>
<b>Volume</b>	<b>159</b>	<b>3</b>	<b>431</b>	<b>23</b>	<b>41</b>	<b>3</b>	<b>637</b>

PM	Bicycles	Motorcycle	Cars & Light Goods	Buses	Single Unit Heavy	Multi Unit Heavy	Total
12:00 PM	17	1	118	2	3	0	141
12:15 PM	16	4	112	2	4	0	138
12:30 PM	20	1	113	3	4	1	142
12:45 PM	23	0	110	3	11	0	147
1:00 PM	17	0	98	1	7	0	123
1:15 PM	20	1	112	4	8	0	145
1:30 PM	24	2	126	2	8	0	162
1:45 PM	13	0	113	2	9	0	137
2:00 PM	8	1	99	2	5	0	115
2:15 PM	19	0	104	3	5	0	131
2:30 PM	19	1	96	4	3	0	123
2:45 PM	30	1	102	2	7	0	142
3:00 PM	24	0	111	3	1	0	139
3:15 PM	18	2	109	4	2	0	135
3:30 PM	15	1	112	4	1	0	133
3:45 PM	19	0	96	2	3	0	120
4:00 PM	21	1	104	4	2	0	132
4:15 PM	28	0	98	4	6	0	136
4:30 PM	22	0	111	1	1	0	135
4:45 PM	26	2	96	1	1	0	126
5:00 PM	21	1	123	6	0	0	151
5:15 PM	23	3	133	3	0	0	162
5:30 PM	30	0	120	0	2	0	152
5:45 PM	41	0	127	2	2	0	172
6:00 PM	35	1	124	4	4	0	168
6:15 PM	27	0	139	2	1	0	169
6:30 PM	41	0	109	0	0	0	150
6:45 PM	26	1	139	1	1	0	168
7:00 PM	37	1	127	7	0	0	172
7:15 PM	18	0	152	3	0	0	173
7:30 PM	29	0	136	3	1	0	169
7:45 PM	21	1	165	5	0	0	192
8:00 PM	13	0	103	4	0	0	120
8:15 PM	13	0	131	1	0	0	145
8:30 PM	7	0	103	2	0	0	112
8:45 PM	9	1	127	2	2	0	141
9:00 PM	12	0	113	6	0	0	131
9:15 PM	23	0	93	1	1	0	118
9:30 PM	16	0	82	3	1	0	102
9:45 PM	14	0	85	1	0	0	100
10:00 PM	10	1	86	3	0	0	100
10:15 PM	11	1	80	3	1	0	96
10:30 PM	6	0	64	3	0	0	73
10:45 PM	13	0	67	2	0	0	82
11:00 PM	7	0	53	1	0	0	61
11:15 PM	4	0	68	6	2	0	80
11:30 PM	3	0	51	3	0	0	57
11:45 PM	2	0	50	5	2	0	59

<b>PM Total</b>	<b>911</b>	<b>29</b>	<b>5090</b>	<b>135</b>	<b>111</b>	<b>1</b>	<b>6277</b>
<b>Percentage</b>	<b>14.51%</b>	<b>0.46%</b>	<b>81.09%</b>	<b>2.15%</b>	<b>1.77%</b>	<b>0.02%</b>	
<b>PM Peak</b>	<b>5:45 PM</b>	<b>12:00 PM</b>	<b>7:00 PM</b>	<b>7:00 PM</b>	<b>12:45 PM</b>	<b>12:00 PM</b>	<b>7:00 PM</b>
<b>Volume</b>	<b>144</b>	<b>6</b>	<b>580</b>	<b>18</b>	<b>34</b>	<b>1</b>	<b>706</b>

<b>Day Total</b>	<b>1448</b>	<b>36</b>	<b>7599</b>	<b>244</b>	<b>326</b>	<b>8</b>	<b>9661</b>
<b>Percentage</b>	<b>14.99%</b>	<b>0.37%</b>	<b>78.66%</b>	<b>2.53%</b>	<b>3.37%</b>	<b>0.08%</b>	



Mt Auburn Street  
 just west of Holyoke Street  
 City, State: Cambridge, MA  
 Client: Toole Design/ M. Danila  
 Site Code: BOS.06085.07



PRECISION  
 DATA  
 INDUSTRIES, LLC  
 157 Washington Street, Suite 2  
 Hudson, MA 01749  
 Office: 508-875-0100 Fax: 508-875-0118

PDI File # 228912 ATR-A

Direction: EB

Weekly Report

Day Date	Tuesday 10/18/22		Wednesday 10/19/22		Thursday 10/20/22										Week Ave	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
12:00	27	154	35	153	56	141	0	0	0	0	0	0	0	0	39	149
12:15	26	157	29	155	32	138	0	0	0	0	0	0	0	0	29	150
12:30	21	157	27	142	31	142	0	0	0	0	0	0	0	0	26	147
12:45	22	150	26	126	27	147	0	0	0	0	0	0	0	0	25	141
1:00	20	146	14	129	26	123	0	0	0	0	0	0	0	0	20	133
1:15	10	149	12	149	12	145	0	0	0	0	0	0	0	0	11	148
1:30	9	124	9	129	11	162	0	0	0	0	0	0	0	0	10	138
1:45	12	122	7	147	8	137	0	0	0	0	0	0	0	0	9	135
2:00	5	139	4	138	8	115	0	0	0	0	0	0	0	0	6	131
2:15	13	116	17	130	17	131	0	0	0	0	0	0	0	0	16	126
2:30	11	136	5	122	3	123	0	0	0	0	0	0	0	0	6	127
2:45	7	124	2	138	8	142	0	0	0	0	0	0	0	0	6	135
3:00	5	143	5	137	10	139	0	0	0	0	0	0	0	0	7	140
3:15	2	116	10	131	11	135	0	0	0	0	0	0	0	0	8	127
3:30	4	128	5	125	5	133	0	0	0	0	0	0	0	0	5	129
3:45	4	127	5	145	4	120	0	0	0	0	0	0	0	0	4	131
4:00	8	134	4	125	9	132	0	0	0	0	0	0	0	0	7	130
4:15	2	128	4	129	6	136	0	0	0	0	0	0	0	0	4	131
4:30	7	111	8	124	8	135	0	0	0	0	0	0	0	0	8	123
4:45	9	160	7	132	10	126	0	0	0	0	0	0	0	0	9	139
5:00	13	145	15	148	15	151	0	0	0	0	0	0	0	0	14	148
5:15	27	179	27	159	34	162	0	0	0	0	0	0	0	0	29	167
5:30	39	158	27	161	31	152	0	0	0	0	0	0	0	0	32	157
5:45	36	151	49	173	30	172	0	0	0	0	0	0	0	0	38	165
6:00	34	156	39	160	48	168	0	0	0	0	0	0	0	0	40	161
6:15	48	145	48	162	55	169	0	0	0	0	0	0	0	0	50	159
6:30	43	122	40	152	61	150	0	0	0	0	0	0	0	0	48	141
6:45	61	147	85	163	82	168	0	0	0	0	0	0	0	0	76	159
7:00	78	130	77	156	78	172	0	0	0	0	0	0	0	0	78	153
7:15	83	145	102	169	125	173	0	0	0	0	0	0	0	0	103	162
7:30	131	140	126	171	127	169	0	0	0	0	0	0	0	0	128	160
7:45	134	134	159	122	141	192	0	0	0	0	0	0	0	0	145	149
8:00	145	127	153	141	144	120	0	0	0	0	0	0	0	0	147	129
8:15	143	104	162	132	138	145	0	0	0	0	0	0	0	0	148	127
8:30	175	111	183	121	175	112	0	0	0	0	0	0	0	0	178	115
8:45	181	107	168	104	145	141	0	0	0	0	0	0	0	0	165	117
9:00	139	124	174	112	148	131	0	0	0	0	0	0	0	0	154	122
9:15	143	90	169	124	169	118	0	0	0	0	0	0	0	0	160	111
9:30	128	107	134	97	136	102	0	0	0	0	0	0	0	0	133	102
9:45	118	90	129	100	140	100	0	0	0	0	0	0	0	0	129	97
10:00	131	79	112	82	128	100	0	0	0	0	0	0	0	0	124	87
10:15	132	70	122	78	140	96	0	0	0	0	0	0	0	0	131	81
10:30	137	74	116	73	140	73	0	0	0	0	0	0	0	0	131	73
10:45	129	53	119	65	129	82	0	0	0	0	0	0	0	0	126	67
11:00	147	51	122	64	109	61	0	0	0	0	0	0	0	0	126	59
11:15	129	67	135	64	137	80	0	0	0	0	0	0	0	0	134	70
11:30	120	54	145	44	125	57	0	0	0	0	0	0	0	0	130	52
11:45	144	39	127	59	152	59	0	0	0	0	0	0	0	0	141	52
<b>Total</b>	<b>3192</b>	<b>5820</b>	<b>3299</b>	<b>6062</b>	<b>3384</b>	<b>6277</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3292</b>	<b>6053</b>
<b>Day Total</b>	<b>9012</b>		<b>9361</b>		<b>9661</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9345</b>		
<b>Peak HR</b>	<b>8:00 AM</b>	<b>5:15 PM</b>	<b>8:30 AM</b>	<b>6:45 PM</b>	<b>8:30 AM</b>	<b>7:00 PM</b>								<b>8:30 AM</b>	<b>5:15 PM</b>	
<b>Volume</b>	<b>644</b>	<b>644</b>	<b>694</b>	<b>659</b>	<b>637</b>	<b>706</b>								<b>656</b>	<b>650</b>	

Mt Auburn Street  
just west of Holyoke Street  
City, State: Cambridge, MA

Client: Toole Design/ M. Danila

Site Code: 00BOS.06085.07



PDI File #: 228912 ATR-A (Speed)

Count Date

Tuesday, April 27, 2021

Speed (60-minute)

EB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	12	29	36	15	1	0	0	0	0	0	0	0	0	93	25.0	20.0
1:00 AM	4	9	21	12	0	1	0	0	0	0	0	0	0	47	26.1	21.7
2:00 AM	7	6	17	4	1	0	0	0	0	0	0	0	0	35	24.0	20.2
3:00 AM	0	5	5	2	1	0	0	0	0	0	0	0	0	13	25.2	22.0
4:00 AM	1	5	9	7	1	1	0	0	0	0	0	0	0	24	27.6	23.0
5:00 AM	13	41	34	16	0	0	2	0	0	0	0	0	0	106	25.0	19.8
6:00 AM	27	53	66	15	1	0	0	0	0	0	0	0	0	162	23.0	19.0
7:00 AM	31	112	105	17	2	1	1	0	0	0	0	0	0	269	23.0	19.2
8:00 AM	38	138	76	6	1	2	0	0	0	0	0	0	0	261	22.0	18.1
9:00 AM	61	122	75	8	1	3	0	0	0	0	0	0	0	270	22.0	17.7
10:00 AM	89	113	19	3	1	0	0	0	0	0	0	0	0	225	19.0	15.1
11:00 AM	98	98	21	1	0	0	0	0	0	0	0	0	0	218	19.0	15.1
12:00 PM	88	78	15	2	0	0	0	0	0	0	0	0	0	183	18.0	14.6
1:00 PM	95	106	15	3	1	0	0	0	0	0	0	0	0	220	19.0	14.8
2:00 PM	70	138	32	3	1	0	0	0	0	0	0	0	0	244	19.0	16.3
3:00 PM	70	149	49	6	1	1	0	0	0	0	0	0	0	276	20.0	16.8
4:00 PM	79	143	28	3	0	0	0	0	0	0	0	0	0	253	19.0	16.1
5:00 PM	78	123	21	1	0	0	0	0	0	0	0	0	0	223	19.0	15.5
6:00 PM	96	126	23	1	0	1	0	0	0	0	0	0	0	247	19.0	15.3
7:00 PM	87	131	32	2	0	0	0	0	0	0	0	0	0	252	19.0	15.7
8:00 PM	53	127	54	1	0	0	0	0	0	0	0	0	0	235	20.0	16.7
9:00 PM	41	142	72	10	1	1	0	0	0	0	0	0	0	267	21.0	17.8
10:00 PM	25	120	80	14	0	0	0	0	0	0	0	0	0	239	23.0	18.6
11:00 PM	19	67	74	14	2	1	0	0	0	0	0	0	0	177	24.0	19.4
Total	1182	2181	979	166	16	12	3	0	0	0	0	0	0	4539	21.0	17.0
Percent	26.04%	48.05%	21.57%	3.66%	0.35%	0.26%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	11:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	9:00 AM	5:00 AM									9:00 AM
Volume	98	138	105	17	2	3	2	0	0	0	0	0	0	0	0	270

PM Peak	6:00 PM	3:00 PM	10:00 PM	10:00 PM	11:00 PM	3:00 PM										3:00 PM
Volume	96	149	80	14	2	1	0	0	0	0	0	0	0	0	276	

15th Percentile:	13.0 MPH	Average Speed:	17.0 MPH	Posted Speed Limit:	20 MPH
50th Percentile:	17.0 MPH	10 MPH Pace:	13 to 22 MPH	Number of Vehicles > 20 MPH:	876
85th Percentile:	21.0 MPH	Number in Pace:	3545	Percent of Vehicles > 20 MPH:	19.3%
95th Percentile:	24.0 MPH	Percent in Pace:	78.1%		

Mt Auburn Street  
 just west of Holyoke Street  
 City, State: Cambridge, MA  
 Client: Toole Design/ M. Danila  
 Site Code: 00BOS.06085.07



PDI File #: 228912 ATR-A (Speed)

Count Date  
 Wednesday, October 19, 2022

Speed (60-minute)

EB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	16	33	47	14	1	0	0	0	0	0	0	0	0	111	24.0	19.6
1:00 AM	4	11	14	6	2	0	0	0	0	0	0	0	0	37	25.0	20.9
2:00 AM	1	6	12	5	2	0	0	0	0	0	0	0	0	26	28.0	21.9
3:00 AM	3	5	13	5	1	0	0	0	0	0	0	0	0	27	26.1	21.2
4:00 AM	2	7	6	8	0	0	1	0	0	0	0	0	0	24	26.0	21.8
5:00 AM	14	39	36	19	5	0	0	0	0	0	0	0	0	113	25.0	20.0
6:00 AM	31	64	78	21	0	0	0	0	0	0	0	0	0	194	24.0	18.7
7:00 AM	28	113	117	27	2	1	0	0	0	0	0	0	0	288	24.0	19.4
8:00 AM	49	155	69	7	2	2	1	0	0	0	0	0	0	285	21.4	17.8
9:00 AM	62	171	35	10	2	2	0	0	0	0	0	0	0	282	20.0	17.0
10:00 AM	86	106	35	3	5	0	0	0	0	0	0	0	0	235	20.0	15.9
11:00 AM	84	121	17	0	0	1	0	0	0	0	0	0	0	223	19.0	15.2
12:00 PM	80	106	24	5	0	1	0	0	0	0	0	0	0	216	19.0	15.6
1:00 PM	92	91	20	3	0	0	0	0	0	0	0	0	0	206	19.0	14.8
2:00 PM	85	123	35	3	2	0	0	0	0	0	0	0	0	248	20.0	16.0
3:00 PM	71	136	40	2	0	0	0	0	0	0	0	0	0	249	20.0	16.2
4:00 PM	73	149	30	1	0	0	0	0	0	0	0	0	0	253	19.0	15.7
5:00 PM	84	136	38	2	0	0	0	0	0	0	0	0	0	260	20.0	15.9
6:00 PM	80	148	38	4	0	0	0	0	0	0	0	0	0	270	20.0	15.9
7:00 PM	84	158	32	1	0	0	0	0	0	0	0	0	0	275	19.0	15.7
8:00 PM	62	148	44	2	0	0	0	0	0	0	0	0	0	256	20.0	16.4
9:00 PM	59	147	56	6	1	0	0	0	0	0	0	0	0	269	20.0	17.1
10:00 PM	49	97	59	11	1	0	0	0	0	0	0	0	0	217	21.0	17.4
11:00 PM	37	83	86	8	1	0	0	0	0	0	0	0	0	215	22.0	18.1
Total	1236	2353	981	173	27	7	2	0	0	0	0	0	0	4779	21.0	16.9
Percent	25.86%	49.24%	20.53%	3.62%	0.56%	0.15%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	10:00 AM	9:00 AM	7:00 AM	7:00 AM	5:00 AM	8:00 AM	4:00 AM									7:00 AM
Volume	86	171	117	27	5	2	1	0	0	0	0	0	0	0	0	288
PM Peak	1:00 PM	7:00 PM	11:00 PM	10:00 PM	2:00 PM	12:00 PM										7:00 PM
Volume	92	158	86	11	2	1	0	0	0	0	0	0	0	0	275	

15th Percentile:	13.0 MPH	Average Speed:	16.9 MPH	Posted Speed Limit:	20 MPH
50th Percentile:	17.0 MPH	10 MPH Pace:	12 to 21 MPH	Number of Vehicles > 20 MPH:	847
85th Percentile:	21.0 MPH	Number in Pace:	3751	Percent of Vehicles > 20 MPH:	17.7%
95th Percentile:	24.0 MPH	Percent in Pace:	78.5%		

Mt Auburn Street  
 just west of Holyoke Street  
 City, State: Cambridge, MA  
 Client: Toole Design/ M. Danila  
 Site Code: 00BOS.06085.07



PDI File #: 228912 ATR-A (Speed)

Count Date  
 Thursday, October 20, 2022

Speed (60-minute)

EB																
Start Time:	1 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70+	Total	85th %ile	Ave Speed
12:00 AM	13	39	69	16	2	0	0	0	0	0	0	0	0	139	24.0	20.4
1:00 AM	9	20	17	6	4	0	0	0	0	0	0	0	0	56	25.0	20.0
2:00 AM	3	11	16	8	2	0	0	0	0	0	0	0	0	40	25.0	21.0
3:00 AM	1	7	14	9	0	1	0	0	0	0	0	0	0	32	27.0	22.7
4:00 AM	4	4	17	7	2	0	0	0	0	0	0	0	0	34	27.1	21.6
5:00 AM	10	40	37	12	1	0	0	0	0	0	0	0	0	100	24.0	19.8
6:00 AM	7	64	89	26	2	0	2	0	0	0	0	0	0	190	25.0	20.8
7:00 AM	34	128	114	13	3	2	2	0	0	0	0	0	0	296	23.0	19.1
8:00 AM	48	179	89	13	4	1	0	0	0	0	0	0	0	334	22.0	18.3
9:00 AM	75	190	57	12	2	0	0	0	0	0	0	0	0	336	20.0	16.9
10:00 AM	103	138	39	4	1	0	0	0	0	0	0	0	0	285	20.0	15.7
11:00 AM	85	113	20	3	1	1	0	0	0	0	0	0	0	223	19.0	15.6
12:00 PM	64	97	13	1	2	0	0	0	0	0	0	0	0	177	19.0	15.5
1:00 PM	86	83	11	4	0	0	0	0	0	0	0	0	0	184	18.0	14.5
2:00 PM	74	127	20	2	2	0	0	0	0	0	0	0	0	225	19.0	15.5
3:00 PM	81	149	37	5	0	0	0	0	0	0	0	0	0	272	20.0	16.3
4:00 PM	106	91	28	2	0	0	0	0	0	0	0	0	0	227	19.0	15.0
5:00 PM	85	101	16	0	0	0	0	0	0	0	0	0	0	202	18.0	14.9
6:00 PM	77	89	18	1	2	0	0	0	0	0	0	0	0	187	18.0	15.3
7:00 PM	59	102	8	0	0	0	0	0	0	0	0	0	0	169	18.0	15.1
8:00 PM	76	100	18	0	0	0	0	0	0	0	0	0	0	194	19.0	15.1
9:00 PM	72	156	48	7	1	0	0	0	0	0	0	0	0	284	21.0	16.6
10:00 PM	37	107	79	10	5	0	0	0	0	0	0	0	0	238	22.5	18.2
11:00 PM	47	93	57	1	1	0	0	0	0	0	0	0	0	199	21.0	17.1
Total	1256	2228	931	162	37	5	4	0	0	0	0	0	0	4623	21.0	16.9
Percent	27.17%	48.19%	20.14%	3.50%	0.80%	0.11%	0.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			

AM Peak	10:00 AM	9:00 AM	7:00 AM	6:00 AM	1:00 AM	7:00 AM	6:00 AM									9:00 AM
Volume	103	190	114	26	4	2	2	0	0	0	0	0	0	0	0	336
PM Peak	4:00 PM	9:00 PM	10:00 PM	10:00 PM	10:00 PM											9:00 PM
Volume	106	156	79	10	5	0	0	0	0	0	0	0	0	0	284	

15th Percentile:	13.0 MPH	Average Speed:	16.9 MPH	Posted Speed Limit:	20 MPH
50th Percentile:	17.0 MPH	10 MPH Pace:	12 to 21 MPH	Number of Vehicles > 20 MPH:	846
85th Percentile:	21.0 MPH	Number in Pace:	3587	Percent of Vehicles > 20 MPH:	18.3%
95th Percentile:	24.0 MPH	Percent in Pace:	77.6%		