



***Ron Müller & Associates***

*Traffic Engineering and Consulting Services*

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## Traffic Assessment

**Townhouse Development  
778 Main Street  
Leicester, Massachusetts**

**Prepared for:**

**G&C Real Estate, LLC  
P.O. Box 174  
Shrewsbury, MA 01545**

**May 9, 2022**



### Quality



### Accuracy



### Integrity





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## **Traffic Assessment**

To: Mr. Steven Greene  
G&C Real Estate, LLC  
P.O. Box 174  
Shrewsbury, MA 01545

Reg: Townhouse Development  
778 Main Street  
Leicester, MA

From: Kirsten Braun, P.E., Associate  
Ron Müller, P.E., Principal

Date: May 9, 2023  
Project #: 22036

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### **INTRODUCTION**

***Ron Müller & Associates*** (RMA) has conducted this Traffic Assessment for the proposed townhouse development project to be constructed at 778 Main Street (Route 9) in Leicester, Massachusetts. As proposed, the project consists of razing the existing house on site and constructing 13 townhouse units of which 10 units will be attached in groups of two while the remaining three units will be attached. Each townhouse unit will have one garage parking space as well as two additional spaces in a shared driveway. Site access will be provided via a new driveway to be constructed on Main Street along the site's western property line. The existing residential driveway on Main Street will be closed. The site location in relation to the surrounding roadways is shown on Figure 1.

This report has been prepared to estimate the project traffic generation, evaluate the safety of the site access points, and provide a qualitative assessment of the impacts of this traffic on the adjacent streets. As documented in this report, the proposed driveway intersection with Main Street exceeds the minimum required sight distances and therefore safe operation can be expected. It is recommended that any proposed landscaping, signs or fencing in the vicinity of the driveways be kept low (maximum 2 feet in height from street level), or set back sufficiently so as not to impede the available sight distances.

Traffic increases on Main Street are expected in the range of 1 to 3 additional vehicles during peak hours, or an increase of about one additional vehicle every 20 minutes to an hour. These increases are minimal and are well within the daily fluctuation of traffic. Route 9 adjacent to the site is under MassDOT jurisdiction and therefore the project will require a Highway Access Permit from MassDOT for the construction of a new driveway and the closure of the existing residential

driveway. The project does not exceed any thresholds that would require the filing of an Environmental Notification Form with the Massachusetts Environmental Policy Act office.

**Figure 1**  
**Site Location Map**



The Main Street driveway should be constructed in accordance with MassDOT standard details and the driveway apron should be bituminous concrete, consistent with the existing sidewalk along Main Street. A sidewalk is proposed along the east side of the site driveway connecting to the existing Main Street sidewalk.

## **TRAFFIC VOLUMES**

Traffic volume and vehicle speed information along Main Street near the site were obtained from an automatic traffic recorder (ATR) count conducted in May 2022. To determine if the count data needed to be adjusted to represent annual average-month conditions consistent with state and local

guidelines for traffic impact assessment, historical traffic volume data were obtained from MassDOT. Based on the nearest MassDOT permanent count station, with the most complete data, located on Route 146 north of I-90 (Station 3991), traffic during the month of May is approximately eight percent above annual average-month conditions. Accordingly, no seasonal adjustments were made to the collected data. The ATR counts and the MassDOT permanent count station data are provided in the Appendix.

The MassDOT *Traffic and Safety Engineering 25% Design Submission Guidelines* were updated on May 31, 2022. These new directives note that traffic volume data collected after March 1, 2022, are no longer subject to any adjustments to represent pre-pandemic traffic volume conditions, except in areas where land use is predominantly office. However, historic traffic counts in the area were still reviewed to determine if the counts collected needed to be adjusted to represent normal, pre-COVID traffic conditions. Using the nearest MassDOT permanent count station, with the most complete data, located on Route 146 north of I-90 (Station 3991), it was found that traffic in May 2018 was approximately 9.3 percent higher than May 2022 (when the counts were collected). Therefore, the counts were adjusted upwardly by 9.3 percent to represent normal, pre-pandemic conditions. Table 1 summarizes the adjusted 2022 Existing traffic volumes on Main Street.

**Table 1**  
**Existing Traffic Volume Summary**

Location	Daily Volume <sup>a</sup>	Peak Hour Volume <sup>b</sup>	K-Factor <sup>c</sup>	Directional Distribution <sup>d</sup>
<b>Main Street (Route 9):</b>				
Weekday	20,090	AM: 1,470 PM: 1,830	7.3% 9.1%	72% EB 59% WB

<sup>a</sup> In vehicles per day.

<sup>b</sup> In vehicles per hour.

<sup>c</sup> Percentage of daily traffic occurring during the peak hour.

<sup>d</sup> EB = eastbound, WB = westbound.

## VEHICLE SPEEDS

Speed measurements were conducted along Main Street near the site in May of 2022 by measuring the elapsed time for vehicles traveling a short, pre-measured distance between two checkpoints. The travel time was recorded using the automatic traffic recorders and the speed is derived by dividing the elapsed time into the measured distance between checkpoints. The results of the speed measurements are summarized in Table 2.

**Table 2**  
**Observed Travel Speeds <sup>a</sup>**

Location/Direction	Posted Speed Limit	Average Speed	85 <sup>th</sup> Percentile Speed <sup>b</sup>
<b>Main Street (Route 9)</b>			
Eastbound	35	42	46
Westbound	35	40	44

<sup>a</sup> In miles per hour (mph).

<sup>b</sup> Speed at, or below which 85 percent of all observed vehicles travel.

As shown in Table 2, average travel speeds along Main Street adjacent to the site are higher than the posted speed limit of 35 miles per hour (mph), with 42 mph traveling eastbound and 40 mph traveling westbound. The 85<sup>th</sup> percentile speeds were much higher than the posted speed limit with 46 mph traveling eastbound and 44 mph traveling westbound. The higher 85<sup>th</sup> percentile speeds were accordingly used in the calculation of minimum sight distance requirements, as described below.

## SIGHT DISTANCE

To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the proposed driveway intersection with Main Street to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances were compared with minimum requirements, as established by the American Association of State Highway and Transportation Officials (AASHTO).<sup>1</sup> AASHTO is the national standard by which vehicle sight distance is calculated, measured, and reported. The MassDOT and the Executive Office of Energy and Environmental Affairs (EEA) require the use of AASHTO sight distance standards when preparing traffic impact assessments and studies, as stated in their guidelines for traffic impact assessments.

Sight distance is the length of roadway ahead that is visible to the driver. Stopping Sight Distance (SSD) is the minimum distance required for a vehicle traveling at a certain speed to safely stop before reaching a stationary object in its path. The values are based on a driver perception and reaction time of 2.5 seconds and a braking distance calculated for wet, level pavements. When the roadway is either on an upgrade or downgrade, grade correction factors are applied. Stopping sight distance is measured from an eye height of 3.5 feet to an object height of 2 feet above street level,

<sup>1</sup>A *Policy on Geometric Design of Highways and Streets*; American Association of State Highway and Transportation Officials (AASHTO); 2004.



equivalent to the taillight height of a passenger car. The SSD is measured along the centerline of the traveled way of the major road.

Intersection sight distance (ISD) is provided on minor street approaches to allow the drivers of stopped vehicles a sufficient view of the major roadway to decide when to enter the major roadway. By definition, ISD is the minimum distance required for a motorist exiting a minor street to turn onto the major street, without being overtaken by an approaching vehicle reducing its speed from the design speed to 70 percent of the design speed. ISD is measured from an eye height of 3.5 feet to an object height of 3.5 feet above street level. The use of an object height equal to the driver eye height makes intersection sight distances reciprocal (i.e., if one driver can see another vehicle, then the driver of that vehicle can also see the first vehicle). When the minor street is on an upgrade that exceeds 3 percent, grade correction factors are applied.

SSD is generally more important as it represents the minimum distance required for safe stopping while ISD is based only upon acceptable speed reductions to the approaching traffic stream. However, the ISD must be equal to or greater than the minimum required SSD in order to provide safe operations at the intersection. In accordance with the AASHTO manual, *“If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient sight distance to anticipate and avoid collisions. However, in some cases, this may require a major-road vehicle to stop or slow to accommodate the maneuver by a minor-road vehicle. To enhance traffic operations, intersection sight distances that exceed stopping sight distances are desirable along the major road.”* Accordingly, ISD should be at least equal to the distance required to allow a driver approaching the minor road to safely stop.

The available SSD and ISD at the proposed site driveway intersection with Main Street were measured and compared to minimum requirements as established by AASHTO. Since the requirements are based on the adjacent street speed of traffic, the observed 85<sup>th</sup> percentile speeds were used to calculate the minimum sight distance requirements. The required minimum sight distances for these speeds are compared to the available distances, as shown in Table 3.

**Table 3**  
**Sight Distance Summary**

Location/Direction	Sight Distance (feet)		
	Measured	Minimum Required (SSD) <sup>a</sup>	Desirable (ISD) <sup>b</sup>
<b>Main St at Proposed Driveway</b>			
East of intersection	495	350	390
West of intersection	500+	375	390

<sup>a</sup> Values based on AASHTO SSD requirements for the observed 85<sup>th</sup> percentile speed of 46 mph traveling eastbound and 44 mph traveling westbound on Main Street.

<sup>b</sup> Values based on AASHTO ISD requirements for the posted speed limit of 35 mph on Main Street.

As shown in the table, both the minimum required and desirable sight distances are exceeded at the proposed site driveway intersection with Main Street and safe operation can therefore be expected. To ensure that minimum required sight distances are maintained at both site driveway intersections, it is recommended that any proposed landscaping, fencing, or signs in the vicinity of the driveways be kept low (maximum 2 feet in height from street level), or set back sufficiently so as not to impede the available sight distances.

## TRIP GENERATION

The traffic to be generated by the proposed townhouse development was estimated using the Institute of Transportation Engineering (ITE) *Trip Generation Manual*.<sup>2</sup> As proposed, 13 townhouse units are to be built on site, ten of which will be attached in groups of two with the remaining three units attached. Accordingly, Land Use Code 215 (Single Family – Attached Housing) was used in estimating the traffic generation characteristics of the project, as shown in Table 4. The trip generation calculations are provided in the Appendix.

<sup>2</sup> *Trip Generation Manual, 11<sup>th</sup> Edition*; Institute of Transportation Engineers; Washington, DC; 2021.

**Table 4**  
**Trip Generation Summary**

<u>Time Period</u>	<u>Townhouse Units <sup>a</sup></u>
Weekday Daily	50
Weekday AM Peak Hour	
Enter	0
Exit	1
Total	1
Weekday PM Peak Hour	
Enter	2
Exit	2
Total	4

<sup>a</sup> ITE Land Use Code 215 (Single Family – Attached Housing) applied to 13 units.

As shown, the proposed residential development will generate 50 trips (25 in and 25 out) on a weekday daily basis, of which 1 trip (0 in and 1 out) would occur during the weekday AM peak hour and 4 trips (2 in and 2 out) would occur during the weekday PM peak hour.

## TRIP DISTRIBUTION

The distribution of traffic generated by the project is based on Journey-to-Work data provided by the U.S. Census Bureau for people residing in Leicester as well as the observed travel routes/patterns of the existing traffic. It is accordingly expected that approximately 75 percent of the site traffic will be oriented to/from the east on Route 9 and 25 percent to and from the west. The U.S. Census data are provided in the Appendix.

## TRAFFIC INCREASES

Based on the traffic generation and distribution patterns, the largest increase in traffic is expected on Main Street east of the site, where an additional 1 to 3 vehicles are expected during peak hours. These increases represent approximately one additional vehicle every 20 minutes to an hour during peak hours. Traffic increases on Main Street, west of the site, are expected to be negligible. These increases are minimal and well within the daily fluctuation of traffic.



## **SITE ACCESS**

Access to the 13 townhouse units is proposed via a new full access driveway on Main Street. It is recommended that the driveways be a minimum of 22 feet wide. It is further recommended that a STOP sign (R1-1) and stop line be installed on the driveway exit to Main Street. As the Main Street driveway is under MassDOT jurisdiction, it is recommended that the driveway be constructed in accordance with MassDOT standard detail 107.7.0 or 107.8.0, copies of which are provided in the Appendix. The existing sidewalk along the Main Street frontage is bituminous concrete so the driveway apron should match this sidewalk material. A sidewalk is proposed along the east side of the site driveway connecting to the existing Main Street sidewalk.

## **MEPA THRESHOLDS**

The site abuts and proposes to access a state highway (Route 9) and therefore will require a Highway Access Permit from MassDOT. Massachusetts Environmental Policy Act (MEPA) review of the project is required if the project requires a Highway Access Permit from MassDOT and exceeds one or more of the following review thresholds:

- Generation of 2,000 or more daily vehicle trips
- Creation of 300 or more new parking spaces
- Generation of 1,000 or more daily vehicle trips plus 150 or more parking spaces
- Creation of 5 or more acres of additional impervious surface
- Alteration of 25 or more acres of additional land
- Site is located within an Area of Critical Environmental Concern (ACEC)

As shown in Table 4, the project will generate 50 weekday daily vehicle trips. The site plan shows a total of 39 parking spaces are proposed on site. The transportation review thresholds are accordingly not exceeded. The total site area is 3.2 acres and the land thresholds regarding impervious surface and land alteration will accordingly not be exceeded. Finally, the site is not located within an ACEC as designated by the Secretary of Environmental Affairs. MEPA review of the project will therefore not be required.

## **CONCLUSIONS**

- The project consists of razing the existing house on site and constructing 13 townhouse units of which 10 units will be attached in groups of two while the remaining three units will be attached. Access to the site is proposed via a new driveway to be constructed on Main Street along the site's western property line.

- The development project is expected to generate 1 vehicle trip during the weekday AM peak hour (0 entering and 1 exiting) and 4 vehicle trips during the weekday PM peak hour (2 entering and 2 exiting).
- Once distributed onto the adjacent streets, traffic increases as a result of the development of the site are expected in the range of 1 to 3 additional vehicles on Main Street. These increases represent on average approximately one additional vehicle every 20 minutes to an hour during peak hours.
- It is recommended that all internal roadways be a minimum of 22 feet wide. It is further recommended that a STOP sign (R1-1) and stop line be installed on the driveway exit onto Main Street.
- As the Route 9 driveway is under MassDOT jurisdiction, it is recommended that the driveway be constructed in accordance with MassDOT standard detail 107.7.0 or 107.8.0. The existing sidewalk along the Route 9 frontage is bituminous concrete so the driveway apron should match this sidewalk material.
- A sidewalk is proposed along the east side of the site driveway connecting to the existing Main Street sidewalk.
- The minimum required sight distances are exceeded at the proposed site driveway intersection with Main Street and therefore safe operation can be expected.
- It is recommended that any proposed landscaping or signs in the vicinity of the site driveways be kept low to the ground (less than two feet above street level) or set back sufficiently so as not to impede sight distances for drivers exiting the site.
- The project will require a Highway Access Permit from MassDOT for access to a state highway to close the existing residential curb cut and to construct the new curb cut on Route 9. MEPA review of the project will not be required as the total project traffic generation, number of parking spaces, and size of the site do not exceed any of the MEPA thresholds that would otherwise require such review.

## **APPENDIX**

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Traffic Count and Vehicle Speed Data  
Traffic Count Adjustment Data  
Trip Generation Calculations  
Journey-to-Work Data  
MassDOT Standard Details

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**Main Street (Route 9)**  
**west of Waite Street**  
**City, State: Leicester, MA**  
**Client: RMA/ R. Muller**  
**Site Code: TBA**



**PDI File #: 228625 ATR-A**

**Count Date:**  
**Wednesday, May 11, 2022**

Volume											
EB						WB					
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	9		12:00 PM	137		12:00 AM	25		12:00 PM	138	
12:15 AM	5		12:15 PM	110		12:15 AM	16		12:15 PM	129	
12:30 AM	9		12:30 PM	138		12:30 AM	11		12:30 PM	115	
12:45 AM	1	24	12:45 PM	121	506	12:45 AM	14	66	12:45 PM	109	491
1:00 AM	1		1:00 PM	120		1:00 AM	9		1:00 PM	115	
1:15 AM	4		1:15 PM	125		1:15 AM	9		1:15 PM	112	
1:30 AM	10		1:30 PM	137		1:30 AM	6		1:30 PM	131	
1:45 AM	3	18	1:45 PM	134	516	1:45 AM	3	27	1:45 PM	130	488
2:00 AM	4		2:00 PM	136		2:00 AM	10		2:00 PM	150	
2:15 AM	11		2:15 PM	131		2:15 AM	3		2:15 PM	157	
2:30 AM	4		2:30 PM	168		2:30 AM	1		2:30 PM	163	
2:45 AM	3	22	2:45 PM	110	545	2:45 AM	4	18	2:45 PM	144	614
3:00 AM	5		3:00 PM	141		3:00 AM	7		3:00 PM	141	
3:15 AM	12		3:15 PM	130		3:15 AM	0		3:15 PM	159	
3:30 AM	11		3:30 PM	173		3:30 AM	2		3:30 PM	169	
3:45 AM	8	36	3:45 PM	122	566	3:45 AM	9	18	3:45 PM	190	659
4:00 AM	16		4:00 PM	117		4:00 AM	6		4:00 PM	214	
4:15 AM	34		4:15 PM	109		4:15 AM	7		4:15 PM	230	
4:30 AM	26		4:30 PM	117		4:30 AM	11		4:30 PM	201	
4:45 AM	44	120	4:45 PM	147	490	4:45 AM	14	38	4:45 PM	194	839
5:00 AM	64		5:00 PM	137		5:00 AM	13		5:00 PM	232	
5:15 AM	96		5:15 PM	144		5:15 AM	28		5:15 PM	167	
5:30 AM	106		5:30 PM	133		5:30 AM	26		5:30 PM	180	
5:45 AM	117	383	5:45 PM	121	535	5:45 AM	39	106	5:45 PM	192	771
6:00 AM	149		6:00 PM	127		6:00 AM	35		6:00 PM	148	
6:15 AM	182		6:15 PM	112		6:15 AM	60		6:15 PM	152	
6:30 AM	197		6:30 PM	101		6:30 AM	78		6:30 PM	119	
6:45 AM	223	751	6:45 PM	87	427	6:45 AM	78	251	6:45 PM	123	542
7:00 AM	241		7:00 PM	89		7:00 AM	93		7:00 PM	128	
7:15 AM	252		7:15 PM	92		7:15 AM	113		7:15 PM	94	
7:30 AM	242		7:30 PM	71		7:30 AM	81		7:30 PM	100	
7:45 AM	228	963	7:45 PM	77	329	7:45 AM	92	379	7:45 PM	105	427
8:00 AM	176		8:00 PM	74		8:00 AM	113		8:00 PM	80	
8:15 AM	205		8:15 PM	76		8:15 AM	103		8:15 PM	93	
8:30 AM	182		8:30 PM	56		8:30 AM	89		8:30 PM	78	
8:45 AM	176	739	8:45 PM	54	260	8:45 AM	102	407	8:45 PM	71	322
9:00 AM	107		9:00 PM	52		9:00 AM	98		9:00 PM	77	
9:15 AM	123		9:15 PM	51		9:15 AM	89		9:15 PM	53	
9:30 AM	137		9:30 PM	31		9:30 AM	86		9:30 PM	56	
9:45 AM	132	499	9:45 PM	38	172	9:45 AM	128	401	9:45 PM	49	235
10:00 AM	100		10:00 PM	39		10:00 AM	103		10:00 PM	51	
10:15 AM	131		10:15 PM	36		10:15 AM	88		10:15 PM	33	
10:30 AM	182		10:30 PM	26		10:30 AM	98		10:30 PM	29	
10:45 AM	141	554	10:45 PM	23	124	10:45 AM	115	404	10:45 PM	24	137
11:00 AM	120		11:00 PM	17		11:00 AM	117		11:00 PM	35	
11:15 AM	151		11:15 PM	23		11:15 AM	135		11:15 PM	30	
11:30 AM	150		11:30 PM	13		11:30 AM	118		11:30 PM	28	
11:45 AM	136	557	11:45 PM	11	64	11:45 AM	95	465	11:45 PM	16	109
Total	4666			4534		Total	2580			5634	
Percent	50.72%			49.28%		Percent	31.41%			68.59%	
Day Total			9200			Day Total			8214		
Peak Hour	7:00 AM			1:45 PM		Peak Hour	10:45 AM			4:15 PM	
Volume	963			569		Volume	485			857	
P.H.F.	0.955			0.847		P.H.F.	0.898			0.923	
Combined											
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	34		12:00 PM	275		12:00 AM	34		12:00 PM	275	
12:15 AM	21		12:15 PM	239		12:15 AM	21		12:15 PM	239	
12:30 AM	20		12:30 PM	253		12:30 AM	20		12:30 PM	253	
12:45 AM	15	90	12:45 PM	230	997	12:45 AM	15	90	12:45 PM	230	997
1:00 AM	10		1:00 PM	235		1:00 AM	10		1:00 PM	235	
1:15 AM	13		1:15 PM	237		1:15 AM	13		1:15 PM	237	
1:30 AM	16		1:30 PM	268		1:30 AM	16		1:30 PM	268	
1:45 AM	6	45	1:45 PM	264	1004	1:45 AM	6	45	1:45 PM	264	1004
2:00 AM	14		2:00 PM	286		2:00 AM	14		2:00 PM	286	
2:15 AM	14		2:15 PM	288		2:15 AM	14		2:15 PM	288	
2:30 AM	5		2:30 PM	331		2:30 AM	5		2:30 PM	331	
2:45 AM	7	40	2:45 PM	254	1159	2:45 AM	7	40	2:45 PM	254	1159
3:00 AM	12		3:00 PM	282		3:00 AM	12		3:00 PM	282	
3:15 AM	12		3:15 PM	289		3:15 AM	12		3:15 PM	289	
3:30 AM	13		3:30 PM	342		3:30 AM	13		3:30 PM	342	
3:45 AM	17	54	3:45 PM	312	1225	3:45 AM	17	54	3:45 PM	312	1225
4:00 AM	22		4:00 PM	331		4:00 AM	22		4:00 PM	331	
4:15 AM	41		4:15 PM	339		4:15 AM	41		4:15 PM	339	
4:30 AM	37		4:30 PM	318		4:30 AM	37		4:30 PM	318	
4:45 AM	58	158	4:45 PM	341	1329	4:45 AM	58	158	4:45 PM	341	1329
5:00 AM	77		5:00 PM	369		5:00 AM	77		5:00 PM	369	
5:15 AM	124		5:15 PM	311		5:15 AM	124		5:15 PM	311	
5:30 AM	132		5:30 PM	313		5:30 AM	132		5:30 PM	313	
5:45 AM	156	489	5:45 PM	313	1306	5:45 AM	156	489	5:45 PM	313	1306
6:00 AM	184		6:00 PM	275		6:00 AM	184		6:00 PM	275	
6:15 AM	242		6:15 PM	264		6:15 AM	242		6:15 PM	264	
6:30 AM	275		6:30 PM	220		6:30 AM	275		6:30 PM	220	
6:45 AM	301	1002	6:45 PM	210	969	6:45 AM	301	1002	6:45 PM	210	969
7:00 AM	334		7:00 PM	217		7:00 AM	334		7:00 PM	217	
7:15 AM	365		7:15 PM	186		7:15 AM	365		7:15 PM	186	
7:30 AM	323		7:30 PM	171		7:30 AM	323		7:30 PM	171	
7:45 AM	320	1342	7:45 PM	182	756	7:45 AM	320	1342	7:45 PM	182	756
8:00 AM	289		8:00 PM	154		8:00 AM	289		8:00 PM	154	
8:15 AM	308		8:15 PM	169		8:15 AM	308		8:15 PM	169	
8:30 AM	271		8:30 PM	134		8:30 AM	271		8:30 PM	134	
8:45 AM	278	1146	8:45 PM	125	582	8:45 AM	278	1146	8:45 PM	125	582
9:00 AM	205		9:00 PM	129		9:00 AM	205		9:00 PM	129	
9:15 AM	212		9:15 PM	104		9:15 AM	212		9:15 PM	104	
9:30 AM	223		9:30 PM	87		9:30 AM	223		9:30 PM	87	
9:45 AM	260	900	9:45 PM	87	407	9:45 AM	260	900	9:45 PM	87	407
10:00 AM	203		10:00 PM	90		10:00 AM	203		10:00 PM	90	
10:15 AM	219		10:15 PM	69		10:15 AM	219		10:15 PM	69	
10:30 AM	280		10:30 PM	55		10:30 AM	280		10:30 PM	55	
10:45 AM	256	958	10:45 PM	47	261	10:45 AM	256	958	10:45 PM	47	261
11:00 AM	237		11:00 PM	52		11:00 AM	237		11:00 PM	52	
11:15 AM	286		11:15 PM	53		11:15 AM	286		11:15 PM	53	
11:30 AM	268		11:30 PM	41		11:30 AM	268		11:30 PM	41	
11:45 AM	231	1022	11:45 PM	27	173	11:45 AM	231	1022	11:45 PM	27	173
Total	7246			10168		Total	7246			10168	
Percent	41.61%			58.39%		Percent	41.61%			58.39%	
Day Total			17414			Day Total			17414		
Peak Hour	7:00 AM			4:15 PM		Peak Hour	7:00 AM			4:15 PM	
Volume	1342			1367		Volume	1342			1367	
P.H.F.	0.919			0.926		P.H.F.	0.919			0.926	

**Main Street (Route 9)**  
**west of Waite Street**  
**City, State:** Leicester, MA  
**Client:** RMA/ R. Muller  
**Site Code:** TBA



**PDI File #: 228625 ATR-A**

**Count Date:**  
**Thursday, May 12, 2022**

Volume											
EB						WB					
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	11		12:00 PM	122		12:00 AM	14		12:00 PM	133	
12:15 AM	3		12:15 PM	123		12:15 AM	18		12:15 PM	112	
12:30 AM	7		12:30 PM	132		12:30 AM	17		12:30 PM	124	
12:45 AM	3	24	12:45 PM	127	504	12:45 AM	8	57	12:45 PM	110	479
1:00 AM	9		1:00 PM	114		1:00 AM	8		1:00 PM	118	
1:15 AM	8		1:15 PM	138		1:15 AM	5		1:15 PM	112	
1:30 AM	8		1:30 PM	142		1:30 AM	11		1:30 PM	140	
1:45 AM	2	27	1:45 PM	165	559	1:45 AM	6	30	1:45 PM	170	540
2:00 AM	3		2:00 PM	146		2:00 AM	8		2:00 PM	136	
2:15 AM	6		2:15 PM	161		2:15 AM	3		2:15 PM	162	
2:30 AM	1		2:30 PM	145		2:30 AM	3		2:30 PM	157	
2:45 AM	3	13	2:45 PM	145	597	2:45 AM	6	20	2:45 PM	179	634
3:00 AM	6		3:00 PM	152		3:00 AM	5		3:00 PM	142	
3:15 AM	8		3:15 PM	135		3:15 AM	3		3:15 PM	214	
3:30 AM	15		3:30 PM	147		3:30 AM	0		3:30 PM	196	
3:45 AM	11	40	3:45 PM	141	575	3:45 AM	2	10	3:45 PM	208	760
4:00 AM	14		4:00 PM	131		4:00 AM	5		4:00 PM	229	
4:15 AM	23		4:15 PM	156		4:15 AM	10		4:15 PM	255	
4:30 AM	34		4:30 PM	185		4:30 AM	14		4:30 PM	256	
4:45 AM	39	110	4:45 PM	177	649	4:45 AM	10	39	4:45 PM	233	973
5:00 AM	61		5:00 PM	159		5:00 AM	18		5:00 PM	244	
5:15 AM	103		5:15 PM	169		5:15 AM	24		5:15 PM	249	
5:30 AM	98		5:30 PM	137		5:30 AM	22		5:30 PM	236	
5:45 AM	104	366	5:45 PM	132	597	5:45 AM	36	100	5:45 PM	193	922
6:00 AM	153		6:00 PM	146		6:00 AM	35		6:00 PM	162	
6:15 AM	185		6:15 PM	122		6:15 AM	53		6:15 PM	171	
6:30 AM	202		6:30 PM	126		6:30 AM	93		6:30 PM	130	
6:45 AM	207	747	6:45 PM	124	518	6:45 AM	92	273	6:45 PM	132	595
7:00 AM	237		7:00 PM	115		7:00 AM	80		7:00 PM	112	
7:15 AM	205		7:15 PM	110		7:15 AM	92		7:15 PM	111	
7:30 AM	244		7:30 PM	71		7:30 AM	94		7:30 PM	104	
7:45 AM	226	912	7:45 PM	91	387	7:45 AM	100	366	7:45 PM	100	427
8:00 AM	187		8:00 PM	72		8:00 AM	117		8:00 PM	98	
8:15 AM	201		8:15 PM	90		8:15 AM	113		8:15 PM	84	
8:30 AM	216		8:30 PM	78		8:30 AM	89		8:30 PM	60	
8:45 AM	142	746	8:45 PM	59	299	8:45 AM	111	430	8:45 PM	90	332
9:00 AM	100		9:00 PM	66		9:00 AM	110		9:00 PM	77	
9:15 AM	126		9:15 PM	47		9:15 AM	88		9:15 PM	73	
9:30 AM	128		9:30 PM	41		9:30 AM	87		9:30 PM	81	
9:45 AM	111	465	9:45 PM	43	197	9:45 AM	101	386	9:45 PM	77	308
10:00 AM	113		10:00 PM	45		10:00 AM	100		10:00 PM	49	
10:15 AM	133		10:15 PM	32		10:15 AM	99		10:15 PM	38	
10:30 AM	150		10:30 PM	37		10:30 AM	119		10:30 PM	24	
10:45 AM	117	513	10:45 PM	21	135	10:45 AM	121	439	10:45 PM	30	141
11:00 AM	111		11:00 PM	19		11:00 AM	119		11:00 PM	27	
11:15 AM	110		11:15 PM	28		11:15 AM	98		11:15 PM	32	
11:30 AM	140		11:30 PM	16		11:30 AM	120		11:30 PM	31	
11:45 AM	130	491	11:45 PM	11	74	11:45 AM	125	462	11:45 PM	24	114
Total	4454			5091		Total	2612			6225	
Percent	46.66%			53.34%		Percent	29.56%			70.44%	
Day Total			9545			Day Total			8837		
Peak Hour	7:00 AM			4:30 PM		Peak Hour	11:00 AM			4:15 PM	
Volume	912			690		Volume	462			988	
P.H.F.	0.934			0.932		P.H.F.	0.924			0.965	
Combined											
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	25		12:00 PM	255		12:00 AM	25		12:00 PM	255	
12:15 AM	21		12:15 PM	235		12:15 AM	21		12:15 PM	235	
12:30 AM	24		12:30 PM	256		12:30 AM	24		12:30 PM	256	
12:45 AM	11	81	12:45 PM	237	983	12:45 AM	11	81	12:45 PM	237	983
1:00 AM	17		1:00 PM	232		1:00 AM	17		1:00 PM	232	
1:15 AM	13		1:15 PM	250		1:15 AM	13		1:15 PM	250	
1:30 AM	19		1:30 PM	282		1:30 AM	19		1:30 PM	282	
1:45 AM	8	57	1:45 PM	335	1099	1:45 AM	8	57	1:45 PM	335	1099
2:00 AM	11		2:00 PM	282		2:00 AM	11		2:00 PM	282	
2:15 AM	9		2:15 PM	323		2:15 AM	9		2:15 PM	323	
2:30 AM	4		2:30 PM	302		2:30 AM	4		2:30 PM	302	
2:45 AM	9	33	2:45 PM	324	1231	2:45 AM	9	33	2:45 PM	324	1231
3:00 AM	11		3:00 PM	294		3:00 AM	11		3:00 PM	294	
3:15 AM	11		3:15 PM	349		3:15 AM	11		3:15 PM	349	
3:30 AM	15		3:30 PM	343		3:30 AM	15		3:30 PM	343	
3:45 AM	13	50	3:45 PM	349	1335	3:45 AM	13	50	3:45 PM	349	1335
4:00 AM	19		4:00 PM	360		4:00 AM	19		4:00 PM	360	
4:15 AM	33		4:15 PM	411		4:15 AM	33		4:15 PM	411	
4:30 AM	48		4:30 PM	441		4:30 AM	48		4:30 PM	441	
4:45 AM	49	149	4:45 PM	410	1622	4:45 AM	49	149	4:45 PM	410	1622
5:00 AM	79		5:00 PM	403		5:00 AM	79		5:00 PM	403	
5:15 AM	127		5:15 PM	418		5:15 AM	127		5:15 PM	418	
5:30 AM	120		5:30 PM	373		5:30 AM	120		5:30 PM	373	
5:45 AM	140	466	5:45 PM	325	1519	5:45 AM	140	466	5:45 PM	325	1519
6:00 AM	188		6:00 PM	308		6:00 AM	188		6:00 PM	308	
6:15 AM	238		6:15 PM	293		6:15 AM	238		6:15 PM	293	
6:30 AM	295		6:30 PM	256		6:30 AM	295		6:30 PM	256	
6:45 AM	299	1020	6:45 PM	256	1113	6:45 AM	299	1020	6:45 PM	256	1113
7:00 AM	317		7:00 PM	227		7:00 AM	317		7:00 PM	227	
7:15 AM	297		7:15 PM	221		7:15 AM	297		7:15 PM	221	
7:30 AM	338		7:30 PM	175		7:30 AM	338		7:30 PM	175	
7:45 AM	326	1278	7:45 PM	191	814	7:45 AM	326	1278	7:45 PM	191	814
8:00 AM	304		8:00 PM	170		8:00 AM	304		8:00 PM	170	
8:15 AM	314		8:15 PM	174		8:15 AM	314		8:15 PM	174	
8:30 AM	305		8:30 PM	138		8:30 AM	305		8:30 PM	138	
8:45 AM	253	1176	8:45 PM	149	631	8:45 AM	253	1176	8:45 PM	149	631
9:00 AM	210		9:00 PM	143		9:00 AM	210		9:00 PM	143	
9:15 AM	214		9:15 PM	120		9:15 AM	214		9:15 PM	120	
9:30 AM	215		9:30 PM	122		9:30 AM	215		9:30 PM	122	
9:45 AM	212	851	9:45 PM	120	505	9:45 AM	212	851	9:45 PM	120	505
10:00 AM	213		10:00 PM	94		10:00 AM	213		10:00 PM	94	
10:15 AM	232		10:15 PM	70		10:15 AM	232		10:15 PM	70	
10:30 AM	269		10:30 PM	61		10:30 AM	269		10:30 PM	61	
10:45 AM	238	952	10:45 PM	51	276	10:45 AM	238	952	10:45 PM	51	276
11:00 AM	230		11:00 PM	46		11:00 AM	230		11:00 PM	46	
11:15 AM	208		11:15 PM	60		11:15 AM	208		11:15 PM	60	
11:30 AM	260		11:30 PM	47		11:30 AM	260		11:30 PM	47	
11:45 AM	255	953	11:45 PM	35	188	11:45 AM	255	953	11:45 PM	35	188
Total	7066			11316		Total	7066			11316	
Percent	38.44%			61.56%		Percent	38.44%			61.56%	
Day Total			18382			Day Total			18382		
Peak Hour	7:30 AM			4:30 PM		Peak Hour	7:30 AM			4:30 PM	
Volume	1282			1672		Volume	1282			1672	
P.H.F.	0.948			0.948		P.H.F.	0.948			0.948	

Main Street (Route 9)  
west of Waite Street  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-A

Count Date  
Wednesday, May 11, 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	0	0	0	0	0	5	8	8	2	1	0	0	0	24	48.6	43.8
1:00 AM	0	0	0	0	1	6	7	2	2	0	0	0	0	18	46.9	41.3
2:00 AM	0	0	0	0	1	7	5	6	3	0	0	0	0	22	47.9	42.6
3:00 AM	0	0	0	0	1	10	15	8	2	0	0	0	0	36	47.0	42.0
4:00 AM	0	0	0	0	0	9	58	44	9	0	0	0	0	120	48.0	43.9
5:00 AM	0	0	0	0	6	38	164	145	27	2	1	0	0	383	48.0	44.1
6:00 AM	0	0	1	3	9	107	413	193	22	2	1	0	0	751	46.0	42.8
7:00 AM	0	0	2	14	62	257	432	178	17	0	0	0	1	963	45.0	40.9
8:00 AM	1	1	2	14	41	216	332	118	11	2	1	0	0	739	45.0	40.6
9:00 AM	0	0	2	5	30	119	231	100	11	1	0	0	0	499	46.0	41.3
10:00 AM	0	0	4	10	33	141	257	92	16	1	0	0	0	554	45.1	40.9
11:00 AM	0	0	0	10	35	151	269	76	16	0	0	0	0	557	45.0	40.7
12:00 PM	0	1	2	16	33	112	224	99	19	0	0	0	0	506	46.0	41.1
1:00 PM	0	0	1	5	37	155	227	78	11	1	1	0	0	516	45.0	40.7
2:00 PM	0	0	3	10	31	159	230	99	11	1	0	0	1	545	46.0	40.8
3:00 PM	0	3	5	23	23	148	262	85	15	2	0	0	0	566	45.0	40.3
4:00 PM	0	1	8	12	32	110	214	97	13	3	0	0	0	490	46.0	40.9
5:00 PM	0	1	4	6	28	87	248	132	24	5	0	0	0	535	47.0	42.1
6:00 PM	0	0	0	2	10	87	186	111	26	3	2	0	0	427	47.0	42.7
7:00 PM	0	0	1	0	7	67	165	77	9	2	0	0	1	329	46.0	42.3
8:00 PM	0	1	1	2	13	55	129	52	7	0	0	0	0	260	46.0	41.5
9:00 PM	0	0	2	0	5	39	69	43	11	2	1	0	0	172	48.0	42.5
10:00 PM	0	0	1	1	9	32	41	32	5	2	1	0	0	124	47.0	42.0
11:00 PM	0	0	0	0	1	14	28	18	3	0	0	0	0	64	47.0	42.4
Total	1	8	39	133	448	2131	4214	1893	292	30	8	0	3	9200	46.0	41.5
Percent	0.01%	0.09%	0.42%	1.45%	4.87%	23.16%	45.80%	20.58%	3.17%	0.33%	0.09%	0.00%	0.03%			

AM Peak	8:00 AM	8:00 AM	10:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM	5:00 AM		7:00 AM	7:00 AM
Volume	1	1	4	14	62	257	432	193	27	2	1	0	1	963

PM Peak		3:00 PM	4:00 PM	3:00 PM	1:00 PM	2:00 PM	3:00 PM	5:00 PM	6:00 PM	5:00 PM	6:00 PM		2:00 PM	3:00 PM
Volume	0	3	8	23	37	159	262	132	26	5	2	0	1	566

15th Percentile:	37.0 MPH	Average Speed:	41.5 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	42.0 MPH	10 MPH Pace:	38 to 47 MPH	Number of Vehicles > 40 MPH:	5584
85th Percentile:	46.0 MPH	Number in Pace:	6918	Percent of Vehicles > 40 MPH:	60.7%
95th Percentile:	49.0 MPH	Percent in Pace:	75.2%		

Main Street (Route 9)  
west of Waite Street  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-A

Count Date  
Wednesday, May 11, 2022

### Speed (60-minute)

WB																
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	0	0	0	0	1	18	31	13	2	0	1	0	0	66	45.0	41.9
1:00 AM	0	0	0	0	1	8	12	4	1	0	0	0	1	27	47.0	42.1
2:00 AM	0	0	0	0	1	7	8	1	1	0	0	0	0	18	44.0	41.1
3:00 AM	0	0	0	1	1	3	9	4	0	0	0	0	0	18	45.5	40.9
4:00 AM	0	0	0	1	0	11	19	6	0	1	0	0	0	38	45.0	40.8
5:00 AM	0	0	0	0	1	27	32	36	8	2	0	0	0	106	48.0	43.4
6:00 AM	0	1	3	5	8	30	115	79	9	1	0	0	0	251	47.0	42.5
7:00 AM	0	4	11	9	14	94	183	58	6	0	0	0	0	379	45.0	40.1
8:00 AM	4	5	15	5	15	106	204	49	3	1	0	0	0	407	44.0	39.6
9:00 AM	3	9	14	7	19	93	211	41	4	0	0	0	0	401	44.0	39.2
10:00 AM	1	5	7	3	18	135	197	37	1	0	0	0	0	404	44.0	39.6
11:00 AM	2	2	11	4	18	135	239	53	1	0	0	0	0	465	44.0	39.9
12:00 PM	1	6	7	6	32	177	216	44	2	0	0	0	0	491	44.0	39.2
1:00 PM	1	3	13	3	36	227	185	18	2	0	0	0	0	488	42.0	38.3
2:00 PM	0	0	3	7	24	196	323	56	4	0	0	1	0	614	44.0	40.3
3:00 PM	0	6	13	8	23	168	364	75	2	0	0	0	0	659	44.0	40.2
4:00 PM	1	4	16	19	35	250	444	68	1	0	0	1	0	839	44.0	39.7
5:00 PM	1	2	11	5	37	190	417	104	4	0	0	0	0	771	44.0	40.5
6:00 PM	0	1	3	0	14	148	272	100	4	0	0	0	0	542	45.0	41.2
7:00 PM	0	0	1	12	42	174	161	33	4	0	0	0	0	427	43.0	38.9
8:00 PM	2	1	3	3	17	88	164	43	1	0	0	0	0	322	44.0	40.2
9:00 PM	0	0	1	0	8	89	107	30	0	0	0	0	0	235	44.0	40.3
10:00 PM	0	0	0	0	2	57	56	20	1	0	1	0	0	137	45.0	40.8
11:00 PM	0	0	0	1	2	29	60	13	4	0	0	0	0	109	44.8	41.5
Total	16	49	132	99	369	2460	4029	985	65	5	2	2	1	8214	44.0	40.1
Percent	0.19%	0.60%	1.61%	1.21%	4.49%	29.95%	49.05%	11.99%	0.79%	0.06%	0.02%	0.02%	0.01%			

AM Peak	8:00 AM	9:00 AM	8:00 AM	7:00 AM	9:00 AM	10:00 AM	11:00 AM	6:00 AM	6:00 AM	5:00 AM	12:00 AM		1:00 AM	11:00 AM
Volume	4	9	15	9	19	135	239	79	9	2	1	0	1	465
PM Peak	8:00 PM	12:00 PM	4:00 PM	4:00 PM	7:00 PM	4:00 PM	4:00 PM	5:00 PM	2:00 PM		10:00 PM	2:00 PM		4:00 PM
Volume	2	6	16	19	42	250	444	104	4	0	1	1	0	839

15th Percentile:	36.0 MPH	Average Speed:	40.1 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	41.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	4168
85th Percentile:	44.0 MPH	Number in Pace:	6610	Percent of Vehicles > 40 MPH:	50.7%
95th Percentile:	47.0 MPH	Percent in Pace:	80.5%		



Main Street (Route 9)  
west of Waite Street  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-A

Count Date  
Wednesday, May 11, 2022

Speed (60-minute) Combined EB and WB																
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	0	0	0	0	1	23	39	21	4	1	1	0	0	90	46.7	42.4
1:00 AM	0	0	0	0	2	14	19	6	3	0	0	0	1	45	47.0	41.8
2:00 AM	0	0	0	0	2	14	13	7	4	0	0	0	0	40	47.0	41.9
3:00 AM	0	0	0	1	2	13	24	12	2	0	0	0	0	54	46.1	41.6
4:00 AM	0	0	0	1	0	20	77	50	9	1	0	0	0	158	47.0	43.2
5:00 AM	0	0	0	0	7	65	196	181	35	4	1	0	0	489	48.0	43.9
6:00 AM	0	1	4	8	17	137	528	272	31	3	1	0	0	1002	46.0	42.7
7:00 AM	0	4	13	23	76	351	615	236	23	0	0	0	1	1342	45.0	40.7
8:00 AM	5	6	17	19	56	322	536	167	14	3	1	0	0	1146	45.0	40.3
9:00 AM	3	9	16	12	49	212	442	141	15	1	0	0	0	900	45.0	40.3
10:00 AM	1	5	11	13	51	276	454	129	17	1	0	0	0	958	45.0	40.3
11:00 AM	2	2	11	14	53	286	508	129	17	0	0	0	0	1022	44.0	40.3
12:00 PM	1	7	9	22	65	289	440	143	21	0	0	0	0	997	45.0	40.2
1:00 PM	1	3	14	8	73	382	412	96	13	1	1	0	0	1004	44.0	39.6
2:00 PM	0	0	6	17	55	355	553	155	15	1	0	1	1	1159	44.0	40.6
3:00 PM	0	9	18	31	46	316	626	160	17	2	0	0	0	1225	44.0	40.3
4:00 PM	1	5	24	31	67	360	658	165	14	3	0	1	0	1329	44.0	40.1
5:00 PM	1	3	15	11	65	277	665	236	28	5	0	0	0	1306	46.0	41.2
6:00 PM	0	1	3	2	24	235	458	211	30	3	2	0	0	969	46.0	41.9
7:00 PM	0	0	2	12	49	241	326	110	13	2	0	0	1	756	45.0	40.4
8:00 PM	2	2	4	5	30	143	293	95	8	0	0	0	0	582	45.0	40.8
9:00 PM	0	0	3	0	13	128	176	73	11	2	1	0	0	407	46.0	41.3
10:00 PM	0	0	1	1	11	89	97	52	6	2	2	0	0	261	46.0	41.4
11:00 PM	0	0	0	1	3	43	88	31	7	0	0	0	0	173	46.0	41.8
Total	17	57	171	232	817	4591	8243	2878	357	35	10	2	4	17414	45.0	40.8
Percent	0.10%	0.33%	0.98%	1.33%	4.69%	26.36%	47.34%	16.53%	2.05%	0.20%	0.06%	0.01%	0.02%			

AM Peak	8:00 AM	9:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM	12:00 AM		1:00 AM	7:00 AM
Volume	5	9	17	23	76	351	615	272	35	4	1	0	1	1342
PM Peak	8:00 PM	3:00 PM	4:00 PM	3:00 PM	1:00 PM	1:00 PM	5:00 PM	5:00 PM	6:00 PM	5:00 PM	6:00 PM	2:00 PM	2:00 PM	4:00 PM
Volume	2	9	24	31	73	382	665	236	30	5	2	1	1	1329

15th Percentile:	37.0 MPH	Average Speed:	40.8 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	41.0 MPH	10 MPH Pace:	37 to 46 MPH	Number of Vehicles > 40 MPH:	9752
85th Percentile:	45.0 MPH	Number in Pace:	13380	Percent of Vehicles > 40 MPH:	56.0%
95th Percentile:	48.0 MPH	Percent in Pace:	76.8%		

Main Street (Route 9)  
west of Waite Street  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-A

Count Date  
Thursday, May 12, 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	0	0	0	0	0	5	13	4	2	0	0	0	0	24	47.7	42.6
1:00 AM	0	0	1	0	2	5	13	5	1	0	0	0	0	27	45.1	41.1
2:00 AM	0	0	0	0	0	4	7	2	0	0	0	0	0	13	44.4	41.5
3:00 AM	0	0	0	0	2	8	20	10	0	0	0	0	0	40	45.0	41.7
4:00 AM	0	0	0	0	0	12	54	34	10	0	0	0	0	110	48.0	44.0
5:00 AM	0	0	0	0	3	37	163	144	17	1	1	0	0	366	48.0	44.1
6:00 AM	0	1	2	15	17	131	383	174	23	1	0	0	0	747	46.0	41.9
7:00 AM	0	0	1	12	44	194	450	188	22	1	0	0	0	912	46.0	41.6
8:00 AM	0	0	1	20	46	185	350	123	20	0	0	1	0	746	45.0	40.8
9:00 AM	1	1	1	6	27	104	201	103	17	4	0	0	0	465	46.0	41.5
10:00 AM	0	1	0	3	17	142	227	104	18	1	0	0	0	513	46.0	41.7
11:00 AM	1	0	0	6	26	120	227	98	12	1	0	0	0	491	46.0	41.3
12:00 PM	0	0	1	1	22	123	240	105	10	1	1	0	0	504	46.0	41.5
1:00 PM	0	0	1	6	32	178	226	95	19	2	0	0	0	559	45.0	40.9
2:00 PM	0	2	2	6	57	183	226	104	15	2	0	0	0	597	46.0	40.4
3:00 PM	1	0	3	9	34	139	269	106	14	0	0	0	0	575	45.0	40.9
4:00 PM	0	3	6	15	54	159	271	114	23	4	0	0	0	649	46.0	40.5
5:00 PM	1	2	5	14	47	170	257	87	13	0	1	0	0	597	45.0	40.1
6:00 PM	1	1	7	11	23	98	220	135	13	7	2	0	0	518	47.0	41.7
7:00 PM	0	0	0	2	8	102	169	86	16	4	0	0	0	387	46.0	42.0
8:00 PM	0	0	0	2	10	79	153	41	12	1	1	0	0	299	45.0	41.4
9:00 PM	0	0	0	1	6	40	85	50	11	2	2	0	0	197	47.0	42.8
10:00 PM	0	1	1	1	14	25	49	33	8	2	1	0	0	135	47.0	42.0
11:00 PM	0	0	1	1	1	24	28	15	2	2	0	0	0	74	46.0	41.5
Total	5	12	33	131	492	2267	4301	1960	298	36	9	1	0	9545	46.0	41.4
Percent	0.05%	0.13%	0.35%	1.37%	5.15%	23.75%	45.06%	20.53%	3.12%	0.38%	0.09%	0.01%	0.00%			

AM Peak	9:00 AM	6:00 AM	6:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	6:00 AM	9:00 AM	5:00 AM	8:00 AM		7:00 AM
Volume	1	1	2	20	46	194	450	188	23	4	1	1	0	912
PM Peak	3:00 PM	4:00 PM	6:00 PM	4:00 PM	2:00 PM	2:00 PM	4:00 PM	6:00 PM	4:00 PM	6:00 PM	6:00 PM			4:00 PM
Volume	1	3	7	15	57	183	271	135	23	7	2	0	0	649

15th Percentile:	37.0 MPH	Average Speed:	41.4 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	42.0 MPH	10 MPH Pace:	37 to 46 MPH	Number of Vehicles > 40 MPH:	5768
85th Percentile:	46.0 MPH	Number in Pace:	7062	Percent of Vehicles > 40 MPH:	60.4%
95th Percentile:	49.0 MPH	Percent in Pace:	74.0%		

Main Street (Route 9)  
west of Waite Street  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-A

Count Date  
Thursday, May 12, 2022

### Speed (60-minute)

WB																
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	0	0	0	0	1	14	24	12	4	1	1	0	0	57	47.6	43.2
1:00 AM	0	0	0	0	1	6	14	7	1	0	1	0	0	30	46.0	43.1
2:00 AM	0	0	0	0	1	5	10	4	0	0	0	0	0	20	46.0	41.8
3:00 AM	0	0	0	0	0	3	5	2	0	0	0	0	0	10	45.3	42.5
4:00 AM	0	0	0	0	1	12	20	5	1	0	0	0	0	39	44.3	41.2
5:00 AM	0	0	0	0	1	16	36	40	6	1	0	0	0	100	48.2	43.9
6:00 AM	0	0	3	3	8	50	137	66	4	2	0	0	0	273	46.0	41.8
7:00 AM	1	1	8	3	7	65	183	88	9	1	0	0	0	366	46.0	41.8
8:00 AM	1	5	13	2	33	127	198	43	8	0	0	0	0	430	44.0	39.5
9:00 AM	1	3	7	3	17	121	180	45	9	0	0	0	0	386	44.0	40.2
10:00 AM	0	1	3	2	11	128	261	32	1	0	0	0	0	439	43.0	40.3
11:00 AM	0	0	1	7	23	110	231	86	3	1	0	0	0	462	45.0	41.0
12:00 PM	0	2	4	4	16	113	277	60	3	0	0	0	0	479	44.0	40.8
1:00 PM	0	0	4	20	28	189	249	47	3	0	0	0	0	540	44.0	39.5
2:00 PM	0	0	10	8	44	181	325	66	0	0	0	0	0	634	44.0	39.9
3:00 PM	0	5	18	25	27	212	401	71	1	0	0	0	0	760	43.0	39.5
4:00 PM	1	8	17	10	84	389	420	42	2	0	0	0	0	973	43.0	38.6
5:00 PM	0	2	11	11	38	288	485	81	5	1	0	0	0	922	44.0	40.1
6:00 PM	0	0	1	3	27	196	310	56	2	0	0	0	0	595	44.0	40.3
7:00 PM	0	0	0	4	21	154	201	45	2	0	0	0	0	427	44.0	40.1
8:00 PM	1	0	3	0	6	125	162	34	1	0	0	0	0	332	44.0	40.2
9:00 PM	1	2	1	0	2	98	167	37	0	0	0	0	0	308	44.0	40.6
10:00 PM	0	0	2	1	5	44	62	24	2	1	0	0	0	141	45.0	40.7
11:00 PM	0	0	0	1	2	33	54	23	0	0	0	0	1	114	45.0	41.7
Total	6	29	106	107	404	2679	4412	1016	67	8	2	0	1	8837	44.0	40.2
Percent	0.07%	0.33%	1.20%	1.21%	4.57%	30.32%	49.93%	11.50%	0.76%	0.09%	0.02%	0.00%	0.01%			

AM Peak	7:00 AM	8:00 AM	8:00 AM	11:00 AM	8:00 AM	10:00 AM	10:00 AM	7:00 AM	7:00 AM	6:00 AM	12:00 AM			11:00 AM
Volume	1	5	13	7	33	128	261	88	9	2	1	0	0	462

PM Peak	4:00 PM	4:00 PM	3:00 PM	3:00 PM	4:00 PM	4:00 PM	5:00 PM	5:00 PM	5:00 PM	5:00 PM			11:00 PM	4:00 PM
Volume	1	8	18	25	84	389	485	81	5	1	0	0	1	973

15th Percentile:	37.0 MPH	Average Speed:	40.2 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	41.0 MPH	10 MPH Pace:	36 to 45 MPH	Number of Vehicles > 40 MPH:	4490
85th Percentile:	44.0 MPH	Number in Pace:	7217	Percent of Vehicles > 40 MPH:	50.8%
95th Percentile:	47.0 MPH	Percent in Pace:	81.7%		

Main Street (Route 9)  
west of Waite Street  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-A

Count Date  
Thursday, May 12, 2022

Speed (60-minute) Combined EB and WB																
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	0	0	0	0	1	19	37	16	6	1	1	0	0	81	48.0	43.0
1:00 AM	0	0	1	0	3	11	27	12	2	0	1	0	0	57	46.0	42.2
2:00 AM	0	0	0	0	1	9	17	6	0	0	0	0	0	33	46.0	41.6
3:00 AM	0	0	0	0	2	11	25	12	0	0	0	0	0	50	45.0	41.8
4:00 AM	0	0	0	0	1	24	74	39	11	0	0	0	0	149	47.0	43.2
5:00 AM	0	0	0	0	4	53	199	184	23	2	1	0	0	466	48.0	44.1
6:00 AM	0	1	5	18	25	181	520	240	27	3	0	0	0	1020	46.0	41.9
7:00 AM	1	1	9	15	51	259	633	276	31	2	0	0	0	1278	46.0	41.6
8:00 AM	1	5	14	22	79	312	548	166	28	0	0	1	0	1176	45.0	40.3
9:00 AM	2	4	8	9	44	225	381	148	26	4	0	0	0	851	46.0	40.9
10:00 AM	0	2	3	5	28	270	488	136	19	1	0	0	0	952	45.0	41.0
11:00 AM	1	0	1	13	49	230	458	184	15	2	0	0	0	953	45.0	41.1
12:00 PM	0	2	5	5	38	236	517	165	13	1	1	0	0	983	45.0	41.1
1:00 PM	0	0	5	26	60	367	475	142	22	2	0	0	0	1099	45.0	40.2
2:00 PM	0	2	12	14	101	364	551	170	15	2	0	0	0	1231	45.0	40.2
3:00 PM	1	5	21	34	61	351	670	177	15	0	0	0	0	1335	44.0	40.1
4:00 PM	1	11	23	25	138	548	691	156	25	4	0	0	0	1622	44.0	39.4
5:00 PM	1	4	16	25	85	458	742	168	18	1	1	0	0	1519	44.0	40.1
6:00 PM	1	1	8	14	50	294	530	191	15	7	2	0	0	1113	45.0	41.0
7:00 PM	0	0	0	6	29	256	370	131	18	4	0	0	0	814	45.0	41.0
8:00 PM	1	0	3	2	16	204	315	75	13	1	1	0	0	631	44.0	40.7
9:00 PM	1	2	1	1	8	138	252	87	11	2	2	0	0	505	46.0	41.4
10:00 PM	0	1	3	2	19	69	111	57	10	3	1	0	0	276	46.0	41.3
11:00 PM	0	0	1	2	3	57	82	38	2	2	0	0	1	188	46.0	41.6
Total	11	41	139	238	896	4946	8713	2976	365	44	11	1	1	18382	45.0	40.8
Percent	0.06%	0.22%	0.76%	1.29%	4.87%	26.91%	47.40%	16.19%	1.99%	0.24%	0.06%	0.01%	0.01%			

AM Peak	9:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	8:00 AM	7:00 AM	7:00 AM	7:00 AM	9:00 AM	12:00 AM	8:00 AM		7:00 AM
Volume	2	5	14	22	79	312	633	276	31	4	1	1	0	1278
PM Peak	3:00 PM	4:00 PM	4:00 PM	3:00 PM	4:00 PM	4:00 PM	5:00 PM	6:00 PM	4:00 PM	6:00 PM	6:00 PM		11:00 PM	4:00 PM
Volume	1	11	23	34	138	548	742	191	25	7	2	0	1	1622

15th Percentile:	37.0 MPH	Average Speed:	40.8 MPH	Posted Speed Limit:	40 MPH
50th Percentile:	41.0 MPH	10 MPH Pace:	37 to 46 MPH	Number of Vehicles > 40 MPH:	10258
85th Percentile:	45.0 MPH	Number in Pace:	14175	Percent of Vehicles > 40 MPH:	55.8%
95th Percentile:	48.0 MPH	Percent in Pace:	77.1%		

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date:  
Wednesday, May 11, 2022

Volume											
SB						NB					
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	0		12:00 PM	2		12:00 AM	1		12:00 PM	6	
12:15 AM	0		12:15 PM	3		12:15 AM	1		12:15 PM	5	
12:30 AM	0		12:30 PM	1		12:30 AM	0		12:30 PM	5	
12:45 AM	0	0	12:45 PM	5	11	12:45 AM	0	2	12:45 PM	4	20
1:00 AM	0		1:00 PM	3		1:00 AM	0		1:00 PM	9	
1:15 AM	0		1:15 PM	9		1:15 AM	0		1:15 PM	12	
1:30 AM	0		1:30 PM	7		1:30 AM	0		1:30 PM	6	
1:45 AM	0	0	1:45 PM	6	25	1:45 AM	1	1	1:45 PM	7	34
2:00 AM	1		2:00 PM	6		2:00 AM	0		2:00 PM	5	
2:15 AM	1		2:15 PM	6		2:15 AM	1		2:15 PM	4	
2:30 AM	0		2:30 PM	1		2:30 AM	0		2:30 PM	5	
2:45 AM	0	2	2:45 PM	7	20	2:45 AM	0	1	2:45 PM	8	22
3:00 AM	0		3:00 PM	5		3:00 AM	0		3:00 PM	5	
3:15 AM	0		3:15 PM	5		3:15 AM	1		3:15 PM	4	
3:30 AM	0		3:30 PM	3		3:30 AM	0		3:30 PM	9	
3:45 AM	0	0	3:45 PM	9	22	3:45 AM	0	1	3:45 PM	18	36
4:00 AM	0		4:00 PM	4		4:00 AM	0		4:00 PM	5	
4:15 AM	0		4:15 PM	4		4:15 AM	0		4:15 PM	10	
4:30 AM	2		4:30 PM	5		4:30 AM	0		4:30 PM	8	
4:45 AM	0	2	4:45 PM	2	15	4:45 AM	0	0	4:45 PM	7	30
5:00 AM	4		5:00 PM	3		5:00 AM	1		5:00 PM	3	
5:15 AM	3		5:15 PM	1		5:15 AM	0		5:15 PM	8	
5:30 AM	2		5:30 PM	8		5:30 AM	3		5:30 PM	3	
5:45 AM	6	15	5:45 PM	5	17	5:45 AM	2	6	5:45 PM	6	20
6:00 AM	4		6:00 PM	4		6:00 AM	5		6:00 PM	7	
6:15 AM	2		6:15 PM	1		6:15 AM	3		6:15 PM	5	
6:30 AM	3		6:30 PM	4		6:30 AM	4		6:30 PM	2	
6:45 AM	6	15	6:45 PM	4	13	6:45 AM	1	13	6:45 PM	7	21
7:00 AM	7		7:00 PM	8		7:00 AM	8		7:00 PM	8	
7:15 AM	5		7:15 PM	3		7:15 AM	2		7:15 PM	8	
7:30 AM	4		7:30 PM	3		7:30 AM	6		7:30 PM	3	
7:45 AM	3	19	7:45 PM	3	17	7:45 AM	2	18	7:45 PM	6	25
8:00 AM	5		8:00 PM	2		8:00 AM	1		8:00 PM	3	
8:15 AM	7		8:15 PM	2		8:15 AM	2		8:15 PM	8	
8:30 AM	2		8:30 PM	1		8:30 AM	7		8:30 PM	3	
8:45 AM	10	24	8:45 PM	3	8	8:45 AM	7	17	8:45 PM	0	14
9:00 AM	2		9:00 PM	1		9:00 AM	6		9:00 PM	2	
9:15 AM	6		9:15 PM	0		9:15 AM	6		9:15 PM	0	
9:30 AM	2		9:30 PM	5		9:30 AM	1		9:30 PM	1	
9:45 AM	2	12	9:45 PM	1	7	9:45 AM	2	15	9:45 PM	3	6
10:00 AM	9		10:00 PM	0		10:00 AM	5		10:00 PM	1	
10:15 AM	2		10:15 PM	4		10:15 AM	3		10:15 PM	1	
10:30 AM	5		10:30 PM	1		10:30 AM	12		10:30 PM	0	
10:45 AM	5	21	10:45 PM	0	5	10:45 AM	7	27	10:45 PM	1	3
11:00 AM	3		11:00 PM	0		11:00 AM	1		11:00 PM	0	
11:15 AM	3		11:15 PM	0		11:15 AM	6		11:15 PM	0	
11:30 AM	3		11:30 PM	0		11:30 AM	5		11:30 PM	0	
11:45 AM	4	13	11:45 PM	0	0	11:45 AM	5	17	11:45 PM	0	0
Total	123		160			Total	118		231		
Percent	43.46%		56.54%			Percent	33.81%		66.19%		
Day Total			283			Day Total			349		
Peak Hour	8:00 AM		1:15 PM			Peak Hour	10:00 AM		3:30 PM		
Volume	24		28			Volume	27		42		
P.H.F.	0.600		0.778			P.H.F.	0.563		0.583		

Total 241 391  
Percent 38.13% 61.87%  
Day Total 632  
Peak Hour 10:00 AM 3:45 PM  
Volume 48 63  
P.H.F. 0.706 0.583

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date:  
Thursday, May 12, 2022

Volume											
SB						NB					
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	0		12:00 PM	4		12:00 AM	0		12:00 PM	1	
12:15 AM	0		12:15 PM	5		12:15 AM	0		12:15 PM	5	
12:30 AM	0		12:30 PM	2		12:30 AM	0		12:30 PM	5	
12:45 AM	0	0	12:45 PM	8	19	12:45 AM	0	0	12:45 PM	8	19
1:00 AM	0		1:00 PM	3		1:00 AM	2		1:00 PM	2	
1:15 AM	0		1:15 PM	4		1:15 AM	0		1:15 PM	5	
1:30 AM	0		1:30 PM	3		1:30 AM	0		1:30 PM	4	
1:45 AM	0	0	1:45 PM	5	15	1:45 AM	0	2	1:45 PM	1	12
2:00 AM	0		2:00 PM	7		2:00 AM	0		2:00 PM	9	
2:15 AM	0		2:15 PM	2		2:15 AM	0		2:15 PM	9	
2:30 AM	0		2:30 PM	5		2:30 AM	0		2:30 PM	3	
2:45 AM	0	0	2:45 PM	4	18	2:45 AM	0	0	2:45 PM	5	26
3:00 AM	0		3:00 PM	5		3:00 AM	0		3:00 PM	7	
3:15 AM	0		3:15 PM	3		3:15 AM	0		3:15 PM	9	
3:30 AM	0		3:30 PM	6		3:30 AM	0		3:30 PM	8	
3:45 AM	0	0	3:45 PM	2	16	3:45 AM	0	0	3:45 PM	17	41
4:00 AM	0		4:00 PM	5		4:00 AM	0		4:00 PM	6	
4:15 AM	0		4:15 PM	2		4:15 AM	0		4:15 PM	14	
4:30 AM	2		4:30 PM	8		4:30 AM	0		4:30 PM	8	
4:45 AM	0	2	4:45 PM	5	20	4:45 AM	0	0	4:45 PM	9	37
5:00 AM	4		5:00 PM	8		5:00 AM	0		5:00 PM	11	
5:15 AM	4		5:15 PM	13		5:15 AM	0		5:15 PM	10	
5:30 AM	1		5:30 PM	5		5:30 AM	0		5:30 PM	12	
5:45 AM	3	12	5:45 PM	12	38	5:45 AM	1	1	5:45 PM	22	55
6:00 AM	3		6:00 PM	8		6:00 AM	1		6:00 PM	10	
6:15 AM	6		6:15 PM	9		6:15 AM	4		6:15 PM	12	
6:30 AM	4		6:30 PM	2		6:30 AM	3		6:30 PM	11	
6:45 AM	3	16	6:45 PM	5	24	6:45 AM	4	12	6:45 PM	11	44
7:00 AM	2		7:00 PM	7		7:00 AM	0		7:00 PM	9	
7:15 AM	7		7:15 PM	6		7:15 AM	4		7:15 PM	6	
7:30 AM	2		7:30 PM	6		7:30 AM	3		7:30 PM	8	
7:45 AM	4	15	7:45 PM	7	26	7:45 AM	2	9	7:45 PM	5	28
8:00 AM	5		8:00 PM	2		8:00 AM	3		8:00 PM	3	
8:15 AM	10		8:15 PM	2		8:15 AM	1		8:15 PM	4	
8:30 AM	3		8:30 PM	2		8:30 AM	8		8:30 PM	7	
8:45 AM	5	23	8:45 PM	4	10	8:45 AM	5	17	8:45 PM	4	18
9:00 AM	3		9:00 PM	1		9:00 AM	4		9:00 PM	3	
9:15 AM	3		9:15 PM	0		9:15 AM	3		9:15 PM	0	
9:30 AM	3		9:30 PM	0		9:30 AM	6		9:30 PM	1	
9:45 AM	2	11	9:45 PM	2	3	9:45 AM	3	16	9:45 PM	2	6
10:00 AM	4		10:00 PM	1		10:00 AM	1		10:00 PM	0	
10:15 AM	4		10:15 PM	0		10:15 AM	1		10:15 PM	1	
10:30 AM	4		10:30 PM	1		10:30 AM	1		10:30 PM	1	
10:45 AM	5	17	10:45 PM	0	2	10:45 AM	3	6	10:45 PM	0	2
11:00 AM	3		11:00 PM	1		11:00 AM	6		11:00 PM	1	
11:15 AM	4		11:15 PM	0		11:15 AM	1		11:15 PM	2	
11:30 AM	4		11:30 PM	0		11:30 AM	6		11:30 PM	0	
11:45 AM	5	16	11:45 PM	1	2	11:45 AM	9	22	11:45 PM	0	3
Total	112			193		Total	85			291	
Percent	36.72%			63.28%		Percent	22.61%			77.39%	
Day Total				305		Day Total				376	
Peak Hour	8:00 AM			5:00 PM		Peak Hour	11:00 AM			5:30 PM	
Volume	23			38		Volume	22			56	
P.H.F.	0.575			0.731		P.H.F.	0.611			0.636	
Combined											
Start Time:	15 min	60 min	15 min	60 min		Start Time:	15 min	60 min	15 min	60 min	
12:00 AM	0		12:00 PM	5		12:00 AM	0		12:00 PM	5	
12:15 AM	0		12:15 PM	10		12:15 AM	0		12:15 PM	10	
12:30 AM	0		12:30 PM	7		12:30 AM	0		12:30 PM	7	
12:45 AM	0	0	12:45 PM	16	38	12:45 AM	0	0	12:45 PM	16	38
1:00 AM	2		1:00 PM	5		1:00 AM	2		1:00 PM	5	
1:15 AM	0		1:15 PM	9		1:15 AM	0		1:15 PM	9	
1:30 AM	0		1:30 PM	7		1:30 AM	0		1:30 PM	7	
1:45 AM	0	2	1:45 PM	6	27	1:45 AM	0	2	1:45 PM	6	27
2:00 AM	0		2:00 PM	16		2:00 AM	0		2:00 PM	16	
2:15 AM	0		2:15 PM	11		2:15 AM	0		2:15 PM	11	
2:30 AM	0		2:30 PM	8		2:30 AM	0		2:30 PM	8	
2:45 AM	0	0	2:45 PM	9	44	2:45 AM	0	0	2:45 PM	9	44
3:00 AM	0		3:00 PM	12		3:00 AM	0		3:00 PM	12	
3:15 AM	0		3:15 PM	12		3:15 AM	0		3:15 PM	12	
3:30 AM	0		3:30 PM	14		3:30 AM	0		3:30 PM	14	
3:45 AM	0	0	3:45 PM	19	57	3:45 AM	0	0	3:45 PM	19	57
4:00 AM	0		4:00 PM	11		4:00 AM	0		4:00 PM	11	
4:15 AM	0		4:15 PM	16		4:15 AM	0		4:15 PM	16	
4:30 AM	2		4:30 PM	16		4:30 AM	2		4:30 PM	16	
4:45 AM	0	2	4:45 PM	14	57	4:45 AM	0	2	4:45 PM	14	57
5:00 AM	4		5:00 PM	19		5:00 AM	4		5:00 PM	19	
5:15 AM	4		5:15 PM	23		5:15 AM	4		5:15 PM	23	
5:30 AM	1		5:30 PM	17		5:30 AM	1		5:30 PM	17	
5:45 AM	4	13	5:45 PM	34	93	5:45 AM	4	13	5:45 PM	34	93
6:00 AM	4		6:00 PM	18		6:00 AM	4		6:00 PM	18	
6:15 AM	10		6:15 PM	21		6:15 AM	10		6:15 PM	21	
6:30 AM	7		6:30 PM	13		6:30 AM	7		6:30 PM	13	
6:45 AM	7	28	6:45 PM	16	68	6:45 AM	7	28	6:45 PM	16	68
7:00 AM	2		7:00 PM	16		7:00 AM	2		7:00 PM	16	
7:15 AM	11		7:15 PM	12		7:15 AM	11		7:15 PM	12	
7:30 AM	5		7:30 PM	14		7:30 AM	5		7:30 PM	14	
7:45 AM	6	24	7:45 PM	12	54	7:45 AM	6	24	7:45 PM	12	54
8:00 AM	8		8:00 PM	5		8:00 AM	8		8:00 PM	5	
8:15 AM	11		8:15 PM	6		8:15 AM	11		8:15 PM	6	
8:30 AM	11		8:30 PM	9		8:30 AM	11		8:30 PM	9	
8:45 AM	10	40	8:45 PM	8	28	8:45 AM	10	40	8:45 PM	8	28
9:00 AM	7		9:00 PM	4		9:00 AM	7		9:00 PM	4	
9:15 AM	6		9:15 PM	0		9:15 AM	6		9:15 PM	0	
9:30 AM	9		9:30 PM	1		9:30 AM	9		9:30 PM	1	
9:45 AM	5	27	9:45 PM	4	9	9:45 AM	5	27	9:45 PM	4	9
10:00 AM	5		10:00 PM	1		10:00 AM	5		10:00 PM	1	
10:15 AM	5		10:15 PM	1		10:15 AM	5		10:15 PM	1	
10:30 AM	5		10:30 PM	2		10:30 AM	5		10:30 PM	2	
10:45 AM	8	23	10:45 PM	0	4	10:45 AM	8	23	10:45 PM	0	4
11:00 AM	9		11:00 PM	2		11:00 AM	9		11:00 PM	2	
11:15 AM	5		11:15 PM	2		11:15 AM	5		11:15 PM	2	
11:30 AM	10		11:30 PM	0		11:30 AM	10		11:30 PM	0	
11:45 AM	14	38	11:45 PM	1	5	11:45 AM	14	38	11:45 PM	1	5
Total	197			484		Total	197			484	
Percent	28.93%			71.07%		Percent	28.93%			71.07%	
Day Total				681		Day Total				681	
Peak Hour	8:00 AM			5:00 PM		Peak Hour	8:00 AM			5:00 PM	
Volume	40			93		Volume	40			93	
P.H.F.	0.909			0.684		P.H.F.	0.909			0.684	

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date  
Wednesday, May 11, 2022

### Speed (60-minute)

SB																
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	24.9	24.5
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	32.0	32.0
5:00 AM	0	0	2	3	8	2	0	0	0	0	0	0	0	15	33.9	31.0
6:00 AM	0	1	1	4	6	2	1	0	0	0	0	0	0	15	34.9	30.5
7:00 AM	0	0	1	6	8	3	0	1	0	0	0	0	0	19	35.0	31.1
8:00 AM	0	0	0	11	9	4	0	0	0	0	0	0	0	24	34.1	30.2
9:00 AM	1	0	2	4	3	2	0	0	0	0	0	0	0	12	34.7	27.9
10:00 AM	1	1	7	10	2	0	0	0	0	0	0	0	0	21	29.0	25.0
11:00 AM	0	1	4	5	2	0	0	0	0	1	0	0	0	13	30.6	27.3
12:00 PM	0	0	0	2	7	1	1	0	0	0	0	0	0	11	35.5	32.9
1:00 PM	0	0	0	5	15	5	0	0	0	0	0	0	0	25	35.0	31.8
2:00 PM	0	0	4	9	5	2	0	0	0	0	0	0	0	20	31.3	28.3
3:00 PM	1	1	1	7	10	1	1	0	0	0	0	0	0	22	33.0	29.5
4:00 PM	0	0	3	2	5	5	0	0	0	0	0	0	0	15	38.8	31.6
5:00 PM	0	0	1	9	5	1	0	1	0	0	0	0	0	17	32.0	30.0
6:00 PM	0	0	0	7	5	1	0	0	0	0	0	0	0	13	32.4	29.2
7:00 PM	0	0	1	3	11	2	0	0	0	0	0	0	0	17	32.0	30.8
8:00 PM	0	0	0	5	2	1	0	0	0	0	0	0	0	8	33.9	29.8
9:00 PM	0	0	1	3	3	0	0	0	0	0	0	0	0	7	31.3	28.9
10:00 PM	0	1	0	2	1	1	0	0	0	0	0	0	0	5	34.2	29.0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Total	3	5	29	98	109	33	3	2	0	1	0	0	0	283	34.0	29.7
Percent	1.06%	1.77%	10.25%	34.63%	38.52%	11.66%	1.06%	0.71%	0.00%	0.35%	0.00%	0.00%	0.00%			

AM Peak	9:00 AM	6:00 AM	10:00 AM	8:00 AM	8:00 AM	8:00 AM	6:00 AM	7:00 AM		11:00 AM				8:00 AM
Volume	1	1	7	11	9	4	1	1	0	1	0	0	0	24
PM Peak	3:00 PM	3:00 PM	2:00 PM	2:00 PM	1:00 PM	1:00 PM	12:00 PM	5:00 PM						1:00 PM
Volume	1	1	4	9	15	5	1	1	0	0	0	0	0	25

15th Percentile:	25.0 MPH	Average Speed:	29.7 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	30.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 30 MPH:	127
85th Percentile:	34.0 MPH	Number in Pace:	207	Percent of Vehicles > 30 MPH:	44.9%
95th Percentile:	37.0 MPH	Percent in Pace:	73.1%		



Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date  
Wednesday, May 11, 2022

### Speed (60-minute)

NB																
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	0	0	0	1	1	0	0	0	0	0	0	0	0	2	31.4	30.0
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28.0	28.0
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	24.0	24.0
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	27.0	27.0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
5:00 AM	0	0	0	3	2	1	0	0	0	0	0	0	0	6	33.0	30.5
6:00 AM	0	0	3	2	1	6	0	1	0	0	0	0	0	13	37.0	31.6
7:00 AM	0	0	2	7	4	5	0	0	0	0	0	0	0	18	37.0	30.8
8:00 AM	1	0	3	5	7	1	0	0	0	0	0	0	0	17	33.0	28.2
9:00 AM	1	2	3	6	3	0	0	0	0	0	0	0	0	15	31.7	25.3
10:00 AM	1	1	5	8	8	3	1	0	0	0	0	0	0	27	34.2	28.2
11:00 AM	0	0	4	6	6	1	0	0	0	0	0	0	0	17	32.2	27.9
12:00 PM	0	1	2	11	4	2	0	0	0	0	0	0	0	20	31.2	28.2
1:00 PM	1	3	3	14	6	4	2	0	1	0	0	0	0	34	35.1	28.7
2:00 PM	0	3	3	11	4	1	0	0	0	0	0	0	0	22	30.0	26.8
3:00 PM	0	0	6	12	15	1	2	0	0	0	0	0	0	36	33.5	29.0
4:00 PM	0	0	2	13	9	5	1	0	0	0	0	0	0	30	37.0	30.3
5:00 PM	0	1	5	8	4	0	2	0	0	0	0	0	0	20	32.2	28.2
6:00 PM	0	0	2	8	4	5	2	0	0	0	0	0	0	21	36.0	30.8
7:00 PM	0	0	1	13	6	3	2	0	0	0	0	0	0	25	35.4	30.1
8:00 PM	0	0	0	8	4	1	0	1	0	0	0	0	0	14	33.3	31.5
9:00 PM	0	0	0	3	2	0	1	0	0	0	0	0	0	6	33.8	30.8
10:00 PM	1	0	0	0	2	0	0	0	0	0	0	0	0	3	33.1	25.0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Total	5	11	45	141	92	39	13	2	1	0	0	0	0	349	35.0	29.0
Percent	1.43%	3.15%	12.89%	40.40%	26.36%	11.17%	3.72%	0.57%	0.29%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	9:00 AM	10:00 AM	10:00 AM	10:00 AM	6:00 AM	10:00 AM	6:00 AM							10:00 AM
Volume	1	2	5	8	8	6	1	1	0	0	0	0	0	27	
PM Peak	1:00 PM	1:00 PM	3:00 PM	1:00 PM	3:00 PM	4:00 PM	1:00 PM	8:00 PM	1:00 PM						3:00 PM
Volume	1	3	6	14	15	5	2	1	1	0	0	0	0	36	

15th Percentile:	24.0 MPH	Average Speed:	29.0 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 30 MPH:	122
85th Percentile:	35.0 MPH	Number in Pace:	237	Percent of Vehicles > 30 MPH:	35.0%
95th Percentile:	39.0 MPH	Percent in Pace:	67.9%		

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date  
Wednesday, May 11, 2022

Speed (60-minute) Combined SB and NB																
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	0	0	0	1	1	0	0	0	0	0	0	0	0	2	31.4	30.0
1:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	28.0	28.0
2:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	3	24.7	24.3
3:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	27.0	27.0
4:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	32.0	32.0
5:00 AM	0	0	2	6	10	3	0	0	0	0	0	0	0	21	34.0	30.9
6:00 AM	0	1	4	6	7	8	1	1	0	0	0	0	0	28	37.0	31.0
7:00 AM	0	0	3	13	12	8	0	1	0	0	0	0	0	37	36.2	30.9
8:00 AM	1	0	3	16	16	5	0	0	0	0	0	0	0	41	33.0	29.4
9:00 AM	2	2	5	10	6	2	0	0	0	0	0	0	0	27	32.1	26.4
10:00 AM	2	2	12	18	10	3	1	0	0	0	0	0	0	48	32.0	26.8
11:00 AM	0	1	8	11	8	1	0	0	0	1	0	0	0	30	32.3	27.6
12:00 PM	0	1	2	13	11	3	1	0	0	0	0	0	0	31	34.0	29.9
1:00 PM	1	3	3	19	21	9	2	0	1	0	0	0	0	59	35.0	30.0
2:00 PM	0	3	7	20	9	3	0	0	0	0	0	0	0	42	30.9	27.5
3:00 PM	1	1	7	19	25	2	3	0	0	0	0	0	0	58	33.5	29.2
4:00 PM	0	0	5	15	14	10	1	0	0	0	0	0	0	45	38.0	30.8
5:00 PM	0	1	6	17	9	1	2	1	0	0	0	0	0	37	32.0	29.0
6:00 PM	0	0	2	15	9	6	2	0	0	0	0	0	0	34	35.1	30.2
7:00 PM	0	0	2	16	17	5	2	0	0	0	0	0	0	42	34.7	30.4
8:00 PM	0	0	0	13	6	2	0	1	0	0	0	0	0	22	33.9	30.9
9:00 PM	0	0	1	6	5	0	1	0	0	0	0	0	0	13	31.6	29.8
10:00 PM	1	1	0	2	3	1	0	0	0	0	0	0	0	8	34.0	27.5
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Total	8	16	74	239	201	72	16	4	1	1	0	0	0	632	34.0	29.3
Percent	1.27%	2.53%	11.71%	37.82%	31.80%	11.39%	2.53%	0.63%	0.16%	0.16%	0.00%	0.00%	0.00%			

AM Peak	9:00 AM	9:00 AM	10:00 AM	10:00 AM	8:00 AM	6:00 AM	6:00 AM	6:00 AM		11:00 AM				10:00 AM
Volume	2	2	12	18	16	8	1	1	0	1	0	0	0	48
PM Peak	1:00 PM	1:00 PM	2:00 PM	2:00 PM	3:00 PM	4:00 PM	3:00 PM	5:00 PM	1:00 PM					1:00 PM
Volume	1	3	7	20	25	10	3	1	1	0	0	0	0	59

15th Percentile:	24.0 MPH	Average Speed:	29.3 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 30 MPH:	249
85th Percentile:	34.0 MPH	Number in Pace:	440	Percent of Vehicles > 30 MPH:	39.4%
95th Percentile:	38.4 MPH	Percent in Pace:	69.6%		

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date  
Thursday, May 12, 2022

### Speed (60-minute)

SB																
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	2	27.0	27.0
5:00 AM	0	0	1	2	7	2	0	0	0	0	0	0	0	12	34.7	31.5
6:00 AM	0	1	3	5	7	0	0	0	0	0	0	0	0	16	32.5	27.6
7:00 AM	0	0	2	7	4	2	0	0	0	0	0	0	0	15	34.0	28.9
8:00 AM	1	1	3	8	8	1	0	1	0	0	0	0	0	23	32.7	28.4
9:00 AM	1	1	1	4	3	1	0	0	0	0	0	0	0	11	31.5	25.7
10:00 AM	1	1	1	4	4	4	0	2	0	0	0	0	0	17	39.0	31.0
11:00 AM	0	0	4	5	6	1	0	0	0	0	0	0	0	16	31.8	28.1
12:00 PM	0	0	3	10	4	1	1	0	0	0	0	0	0	19	32.3	28.5
1:00 PM	0	0	4	4	3	4	0	0	0	0	0	0	0	15	35.0	29.0
2:00 PM	0	1	1	5	8	3	0	0	0	0	0	0	0	18	34.5	30.1
3:00 PM	0	1	1	7	6	1	0	0	0	0	0	0	0	16	30.8	27.7
4:00 PM	0	1	3	6	5	4	1	0	0	0	0	0	0	20	35.2	30.0
5:00 PM	1	2	6	11	13	5	0	0	0	0	0	0	0	38	33.0	28.2
6:00 PM	0	4	4	7	7	2	0	0	0	0	0	0	0	24	31.0	26.4
7:00 PM	0	2	6	11	5	1	0	0	1	0	0	0	0	26	31.0	27.0
8:00 PM	0	1	0	5	2	2	0	0	0	0	0	0	0	10	35.6	29.2
9:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	3	27.0	25.7
10:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	37.0	37.0
11:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	30.9	30.5
Total	4	16	44	105	94	36	2	3	1	0	0	0	0	305	34.0	28.5
Percent	1.31%	5.25%	14.43%	34.43%	30.82%	11.80%	0.66%	0.98%	0.33%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	6:00 AM	11:00 AM	8:00 AM	8:00 AM	10:00 AM		10:00 AM							8:00 AM
Volume	1	1	4	8	8	4	0	2	0	0	0	0	0	0	23

PM Peak	5:00 PM	6:00 PM	5:00 PM	5:00 PM	5:00 PM	5:00 PM	12:00 PM		7:00 PM						5:00 PM
Volume	1	4	6	11	13	5	1	0	1	0	0	0	0	0	38

15th Percentile:	23.0 MPH	Average Speed:	28.5 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	29.0 MPH	10 MPH Pace:	25 to 34 MPH	Number of Vehicles > 30 MPH:	106
85th Percentile:	34.0 MPH	Number in Pace:	199	Percent of Vehicles > 30 MPH:	34.8%
95th Percentile:	37.0 MPH	Percent in Pace:	65.2%		

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date  
Thursday, May 12, 2022

### Speed (60-minute)

NB																
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
1:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	2	36.5	33.0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
5:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26.0	26.0
6:00 AM	0	0	2	7	1	1	1	0	0	0	0	0	0	12	33.4	28.8
7:00 AM	0	0	1	3	5	0	0	0	0	0	0	0	0	9	33.0	29.3
8:00 AM	0	0	3	7	2	3	1	0	1	0	0	0	0	17	37.6	31.1
9:00 AM	0	2	5	7	1	1	0	0	0	0	0	0	0	16	28.8	25.6
10:00 AM	0	0	0	4	2	0	0	0	0	0	0	0	0	6	33.3	29.0
11:00 AM	1	1	2	11	3	3	1	0	0	0	0	0	0	22	36.3	28.5
12:00 PM	0	0	1	11	4	3	0	0	0	0	0	0	0	19	33.6	29.1
1:00 PM	0	0	3	5	4	0	0	0	0	0	0	0	0	12	31.4	27.6
2:00 PM	0	0	4	6	10	6	0	0	0	0	0	0	0	26	35.3	30.6
3:00 PM	1	1	7	17	12	2	1	0	0	0	0	0	0	41	33.0	28.1
4:00 PM	0	3	11	13	7	2	1	0	0	0	0	0	0	37	33.0	26.7
5:00 PM	5	5	13	14	9	6	3	0	0	0	0	0	0	55	34.8	26.2
6:00 PM	0	8	13	14	5	4	0	0	0	0	0	0	0	44	30.0	25.3
7:00 PM	1	2	12	7	5	1	0	0	0	0	0	0	0	28	31.0	24.5
8:00 PM	0	1	3	8	2	2	1	0	1	0	0	0	0	18	37.9	30.2
9:00 PM	0	0	0	3	2	0	1	0	0	0	0	0	0	6	34.8	31.7
10:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	32.9	32.5
11:00 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	3	31.0	30.7
Total	8	23	80	139	79	35	10	0	2	0	0	0	0	376	33.0	27.6
Percent	2.13%	6.12%	21.28%	36.97%	21.01%	9.31%	2.66%	0.00%	0.53%	0.00%	0.00%	0.00%	0.00%			

AM Peak	11:00 AM	9:00 AM	9:00 AM	11:00 AM	7:00 AM	8:00 AM	6:00 AM		8:00 AM					11:00 AM
Volume	1	2	5	11	5	3	1	0	1	0	0	0	0	22
PM Peak	5:00 PM	6:00 PM	5:00 PM	3:00 PM	3:00 PM	2:00 PM	5:00 PM		8:00 PM					5:00 PM
Volume	5	8	13	17	12	6	3	0	1	0	0	0	0	55

15th Percentile:	22.0 MPH	Average Speed:	27.6 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	23 to 32 MPH	Number of Vehicles > 30 MPH:	107
85th Percentile:	33.0 MPH	Number in Pace:	234	Percent of Vehicles > 30 MPH:	28.5%
95th Percentile:	38.0 MPH	Percent in Pace:	62.2%		

Waite Street  
north of Main Street (Route 9)  
City, State: Leicester, MA  
Client: RMA/ R. Muller  
Site Code: TBA



PDI File #: 228625 ATR-B

Count Date  
Thursday, May 12, 2022

Speed (60-minute) Combined SB and NB																
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
1:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	2	36.5	33.0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
4:00 AM	0	0	0	2	0	0	0	0	0	0	0	0	0	2	27.0	27.0
5:00 AM	0	0	1	3	7	2	0	0	0	0	0	0	0	13	34.4	31.1
6:00 AM	0	1	5	12	8	1	1	0	0	0	0	0	0	28	33.0	28.1
7:00 AM	0	0	3	10	9	2	0	0	0	0	0	0	0	24	33.6	29.1
8:00 AM	1	1	6	15	10	4	1	1	1	0	0	0	0	40	35.3	29.5
9:00 AM	1	3	6	11	4	2	0	0	0	0	0	0	0	27	31.1	25.6
10:00 AM	1	1	1	8	6	4	0	2	0	0	0	0	0	23	38.1	30.5
11:00 AM	1	1	6	16	9	4	1	0	0	0	0	0	0	38	32.9	28.3
12:00 PM	0	0	4	21	8	4	1	0	0	0	0	0	0	38	33.0	28.8
1:00 PM	0	0	7	9	7	4	0	0	0	0	0	0	0	27	34.1	28.4
2:00 PM	0	1	5	11	18	9	0	0	0	0	0	0	0	44	35.0	30.4
3:00 PM	1	2	8	24	18	3	1	0	0	0	0	0	0	57	32.6	28.0
4:00 PM	0	4	14	19	12	6	2	0	0	0	0	0	0	57	34.0	27.9
5:00 PM	6	7	19	25	22	11	3	0	0	0	0	0	0	93	33.4	27.0
6:00 PM	0	12	17	21	12	6	0	0	0	0	0	0	0	68	31.0	25.7
7:00 PM	1	4	18	18	10	2	0	0	1	0	0	0	0	54	31.0	25.7
8:00 PM	0	2	3	13	4	4	1	0	1	0	0	0	0	28	38.0	29.8
9:00 PM	0	0	1	5	2	0	1	0	0	0	0	0	0	9	32.6	29.7
10:00 PM	0	0	0	0	2	2	0	0	0	0	0	0	0	4	37.0	34.8
11:00 PM	0	0	0	0	5	0	0	0	0	0	0	0	0	5	31.0	30.6
Total	12	39	124	244	173	71	12	3	3	0	0	0	0	681	34.0	28.0
Percent	1.76%	5.73%	18.21%	35.83%	25.40%	10.43%	1.76%	0.44%	0.44%	0.00%	0.00%	0.00%	0.00%			

AM Peak	8:00 AM	9:00 AM	8:00 AM	11:00 AM	8:00 AM	8:00 AM	6:00 AM	10:00 AM	8:00 AM					8:00 AM
Volume	1	3	6	16	10	4	1	2	1	0	0	0	0	40

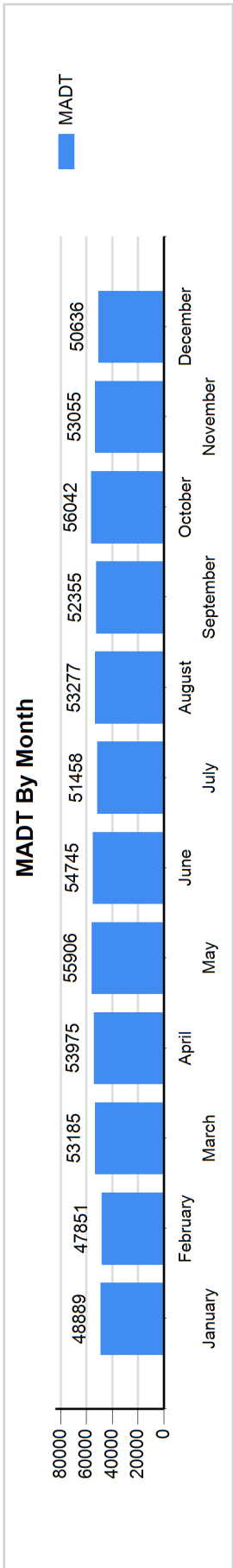
PM Peak	5:00 PM	6:00 PM	5:00 PM	5:00 PM	5:00 PM	5:00 PM	5:00 PM		7:00 PM					5:00 PM
Volume	6	12	19	25	22	11	3	0	1	0	0	0	0	93

15th Percentile:	22.0 MPH	Average Speed:	28.0 MPH	Posted Speed Limit:	30 MPH
50th Percentile:	28.0 MPH	10 MPH Pace:	24 to 33 MPH	Number of Vehicles > 30 MPH:	213
85th Percentile:	34.0 MPH	Number in Pace:	428	Percent of Vehicles > 30 MPH:	31.3%
95th Percentile:	38.0 MPH	Percent in Pace:	62.8%		

**ADT by Day of Week by Month for 1/1/2018 - 12/31/2018**  
**Criteria: Location ID = 3991, From 1/1/1900 To 12/31/2049 12:00:00 AM**

<b>District</b>	Location ID 3991	Located On ROUTE 146
<b>Community</b>	Worcester	
<b>County</b>	WORCESTER	
<b>Factor Group</b>	U3	
	<b>Direction</b> 2-WAY	<b>AAADT</b> 52827
	<b>RoadBed</b> ML	
	<b>Collection Type</b>	
	<b>Functional Class</b> (3) Other Principal Arterial	

	Average Daily Number of Vehicles							Avg. Day as % of Year Avg.	Avg. Weekday (Mon-Thu)	Avg. Day as % of Avg. Weekday (Mon-Thu)	Avg. Weekday (Mon-Fri)	Avg. Day as % of Avg. Weekday (Mon-Fri)
	Sun	Mon	Tue	Wed	Thu	Fri	Sat					
JAN	37,511	46,500	51,504	49,763	56,341	54,628	45,980	92.92%	51,027	95.81%	51,747	94.48%
FEB	33,377	50,702	53,472	34,947	57,336	56,885	48,242	90.95%	49,114	97.43%	50,668	94.44%
MAR	41,876	54,188	56,503	52,314	54,330	60,930	52,160	101.08%	54,334	97.89%	55,653	95.57%
APR	41,321	52,315	56,219	56,836	57,703	60,456	52,980	102.59%	55,768	96.78%	56,706	95.18%
MAY	42,245	56,391	58,539	58,980	59,641	61,771	53,780	106.26%	58,388	95.75%	59,064	94.65%
JUN	41,848	55,764	58,568	58,776	57,944	60,467	49,853	104.05%	57,763	94.78%	58,304	93.90%
JUL	39,591	53,800	55,138	50,412	56,519	57,367	47,383	97.80%	53,967	95.35%	54,647	94.16%
AUG	42,993	54,443	56,383	56,988	58,171	57,176	46,789	101.26%	56,496	94.30%	56,632	94.08%
SEP	39,244	47,266	56,852	51,388	58,628	62,201	50,915	99.51%	53,534	97.80%	55,267	94.73%
OCT	44,006	55,453	58,267	58,601	60,394	63,294	52,280	106.51%	58,179	96.33%	59,202	94.66%
NOV	42,262	54,237	56,182	57,319	52,344	57,342	51,705	100.84%	55,021	96.43%	55,485	95.62%
DEC	39,726	51,405	50,207	54,670	58,304	57,458	50,154	96.24%	53,647	94.39%	54,409	93.07%
Year	40,500	52,705	55,653	53,416	57,305	59,165	50,185		54,770	96.06%	55,649	94.55%

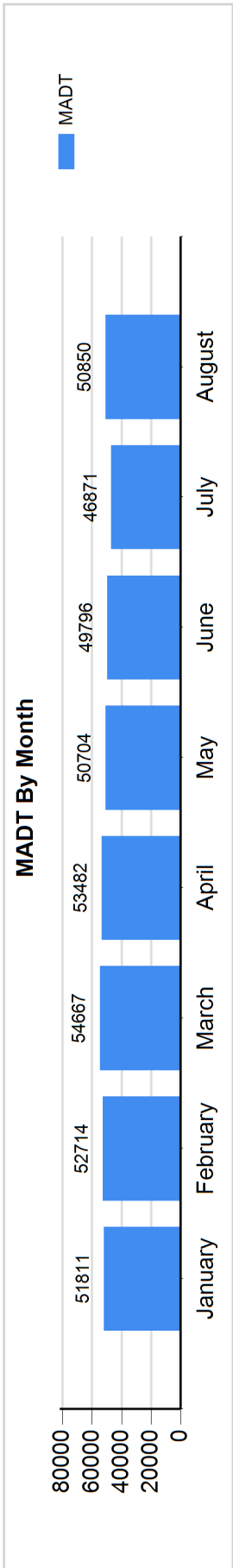


NOTE: VALUES ARE ROUNDED; TOTALS AND PERCENTS MAY NOT ADD UP.

**ADT by Day of Week by Month for 1/1/2022 - 12/31/2022**  
**Criteria: Location ID = 3991, From 1/1/1900 To 12/31/2049 12:00:00 AM**

<b>District</b>	Location ID 3991	Located On ROUTE 146
<b>Community</b> Worcester	<b>Direction</b> 2-WAY	<b>AADT</b>
<b>County</b> WORCESTER	<b>RoadBed</b> ML	<b>Collection Type</b>
<b>Factor Group</b> U3		<b>Functional Class</b> (3) Other Principal Arterial

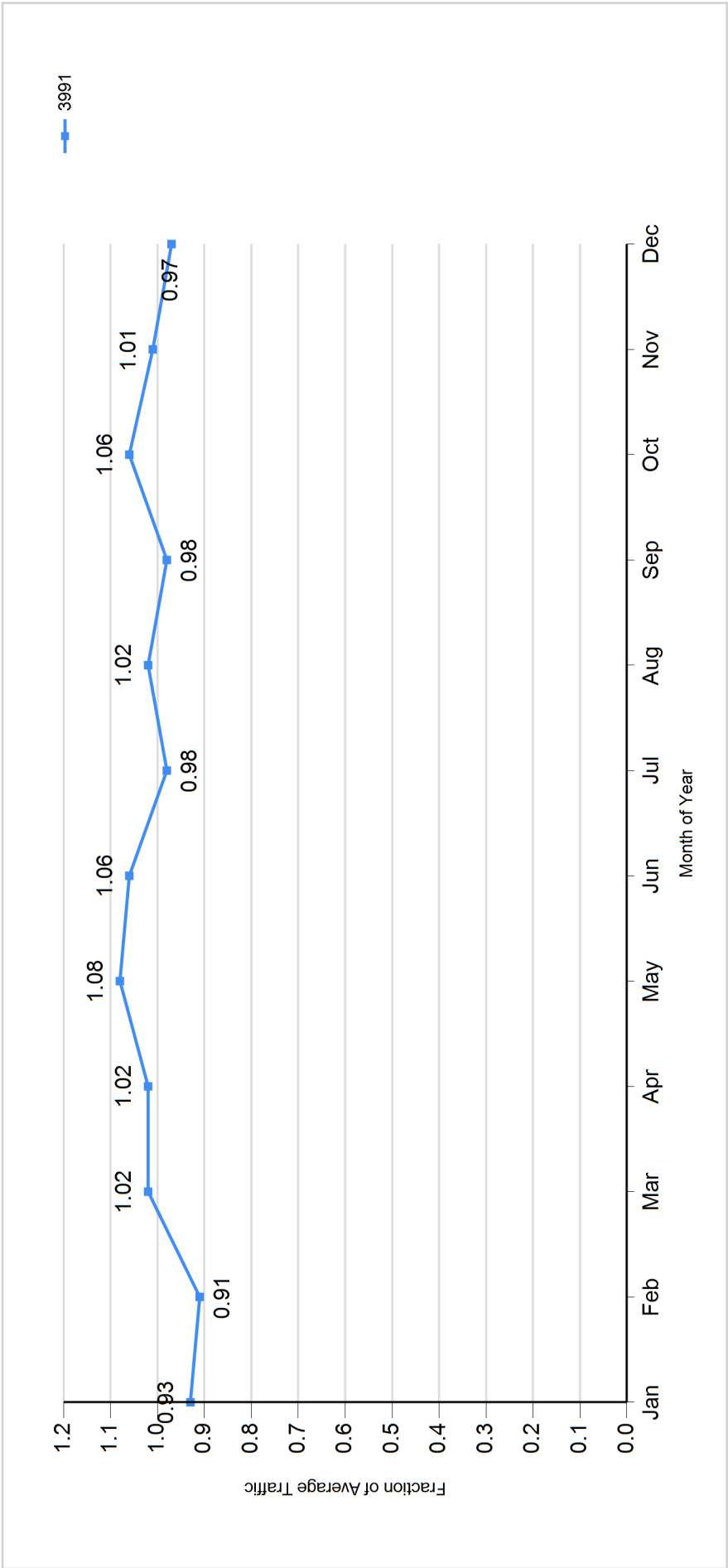
	Average Daily Number of Vehicles							Avg. Day as % of Year Avg.	Avg. Weekday (Mon-Thu)	Avg. Day as % of Avg. Weekday (Mon-Thu)	Avg. Weekday (Mon-Fri)	Avg. Day as % of Avg. Weekday (Mon-Fri)	
	Sun	Mon	Tue	Wed	Thu	Fri	Sat						
JAN	37,854	51,572	54,698	59,041	57,116	56,633	45,770	51,811	100.87%	55,607	93.17%	55,812	92.83%
FEB	44,024	54,051	54,242	55,605	57,262	51,223	52,600	52,714	102.63%	55,290	95.34%	54,477	96.76%
MAR	45,856	54,201	57,612	56,849	56,964	59,683	51,512	54,667	106.43%	56,407	96.92%	57,062	95.80%
APR	43,001	52,750	56,451	54,209	58,653	57,998	51,315	53,482	104.13%	55,516	96.34%	56,012	95.48%
MAY	42,081	47,516	53,347	53,537	57,307	53,448	47,697	50,704	98.72%	52,927	95.80%	53,031	95.61%
JUN	42,119	49,791	51,558	51,473	52,019	53,743	47,879	49,796	96.95%	51,210	97.24%	51,717	96.29%
JUL	38,122	44,674	48,975	50,002	51,326	51,324	43,680	46,871	91.26%	48,744	96.16%	49,260	95.15%
AUG	42,057	49,315	52,817	53,930	54,816	54,366	48,657	50,850	99.00%	52,720	96.45%	53,049	95.86%
SEP													
OCT													
NOV													
DEC													
Year	41,889	50,484	53,713	54,331	55,683	54,802	48,639	51,362		53,552	95.91%	53,802	95.46%



NOTE: VALUES ARE ROUNDED; TOTALS AND PERCENTS MAY NOT ADD UP.



Traffic Pattern by Month for 1/1/2018 - 12/31/2018  
Criteria: Location ID = 3991, From 1/1/1900 To 12/31/2049 12:00:00 AM



**Traffic Pattern by Month for 1/1/2018 - 12/31/2018**  
**Criteria: Location ID = 3991, From 1/1/1900 To 12/31/2049 12:00:00 AM**

Factor Group	Station	Weight	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
U3	3991	0	0.927	0.912	1.022	1.017	1.078	1.062	0.978	1.020	0.981	1.064	1.014	0.970
	Average of Weighted Factors		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

***Institute of Transportation Engineers (ITE); 11th Edition***  
**Land Use Code (LUC) 220 - Multifamily Housing (Low-Rise)**

Average Vehicle Trips Ends vs: Dwelling Units  
Independent Variable (X): 25 Units

**AVERAGE WEEKDAY DAILY (33-494 Units)**

$T = 6.41 * (X) + 75.31$   
 $T = 235.56$   
 $T = 240$  vehicle trips  
with 50% ( 120 vpd) entering and 50% ( 120 vpd) exiting.

**Weekday Daily Average Rate**

$T = 6.74 * (X)$   
 $T = 168.50$   
 $T = 170$  vehicle trips  
with 85 vpd entering and 85 vpd exiting.

**WEEKDAY AM PEAK HOUR OF ADJACENT STREET TRAFFIC (12-1103 Units)**

$T = 0.31 * (X) + 22.85$   
 $T = 30.60$   
 $T = 31$  vehicle trips  
with 24% ( 7 vpd) entering and 76% ( 24 vpd) exiting.

**Weekday AM Peak Hour Average Rate**

$T = 0.40 * (X)$   
 $T = 10.00$   
 $T = 10$  vehicle trips  
with 2 vph entering and 8 vph exiting.

**WEEKDAY PM PEAK HOUR OF ADJACENT STREET TRAFFIC (12-1103 Units)**

$T = 0.43 * (X) + 20.55$   
 $T = 31.30$   
 $T = 31$  vehicle trips  
with 63% ( 20 vpd) entering and 37% ( 11 vpd) exiting.

**Weekday PM Peak Hour Average Rate**

$T = 0.51 * (X)$   
 $T = 12.75$   
 $T = 13$  vehicle trips  
with 8 vph entering and 5 vph exiting.

**SATURDAY DAILY (Caution: Only 1 study at 282 Units)**

$T = 4.55 * (X)$   
 $T = 113.75$   
 $T = 110$  vehicle trips  
with 50% ( 55 vpd) entering and 50% ( 55 vpd) exiting.

**SATURDAY MIDDAY PEAK HOUR OF GENERATOR (Caution: Only 1 study at 282 Units)**

$T = 0.41 * (X)$   
 $T = 10.25$   
 $T = 10$  vehicle trips  
with 50% ( 5 vph) entering and 50% ( 5 vph) exiting.

From	To	# of Commuters
Leicester town	Worcester city	2,288
Leicester town	Leicester town	931
Leicester town	Auburn town	374
Leicester town	Shrewsbury town	324
Leicester town	Westborough town	159
Leicester town	West Boylston town	117
Leicester town	Millford town	102
Leicester town	Hudson town	99
Leicester town	Spencer town	93
Leicester town	Holden town	91
Leicester town	Leominster city	77
Leicester town	Charlton town	75
Leicester town	Northbridge town	75
Leicester town	Framingham town	71
Leicester town	Oxford town	71
Leicester town	Paxton town	67
Leicester town	Marlborough city	52
Leicester town	Sturbridge town	50
Leicester town	Gardner city	49
Leicester town	Boston city	43

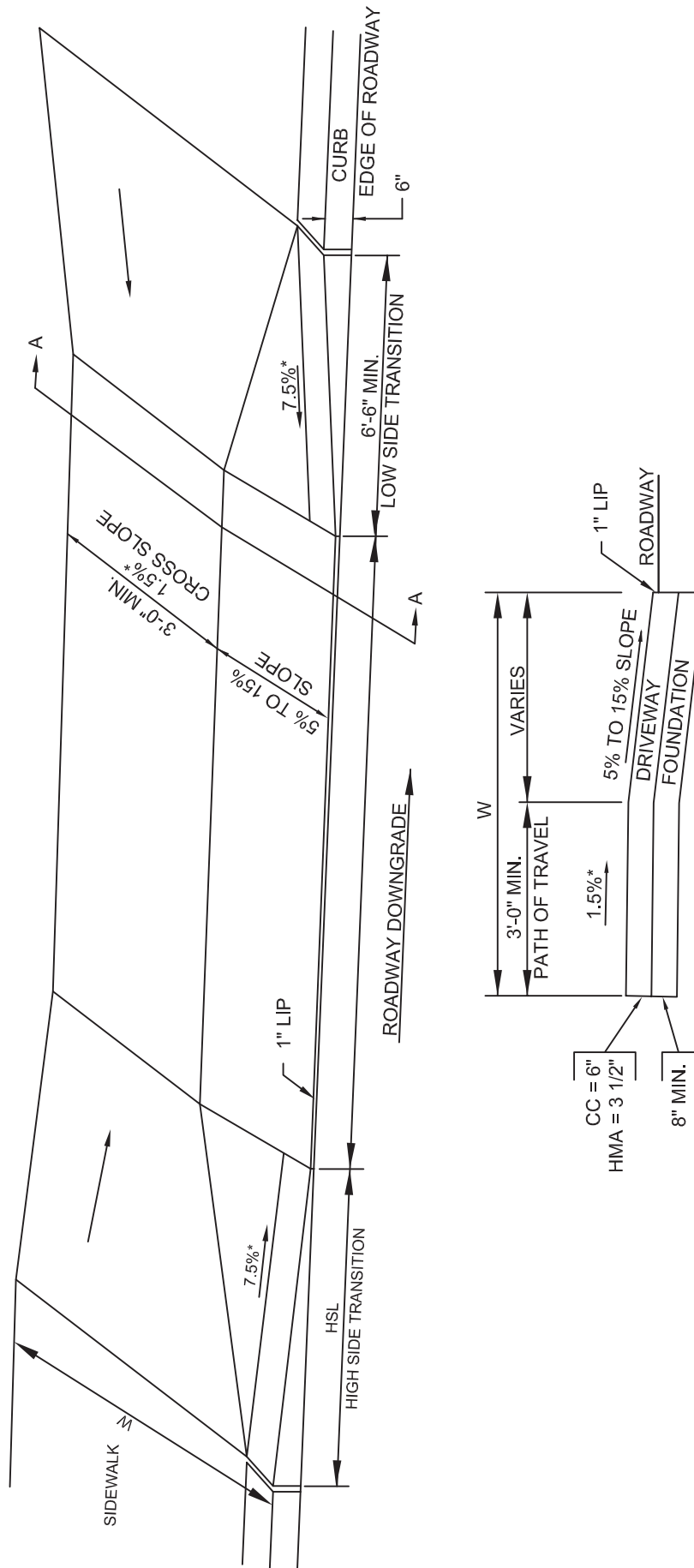
Route 9 - East	Route 9 - West	Route 56 - North	Route 56 - South	Total
100%	25%	25%	25%	100%
25%	100%			100%
100%		10%		100%
90%				100%
100%		60%		100%
	40%			100%
100%				100%
100%	100%			100%
		60%		100%
40%		50%		100%
50%	30%		70%	100%
100%				100%
100%			60%	100%
40%		100%		100%
100%	60%		40%	100%
		100%		100%
100%				100%

Route 9 - East	Route 9 - West	Route 56 - North	Route 56 - South	Total
44%	0%	0%	0%	44%
4%	4%	4%	4%	18%
7%	0%	0%	0%	7%
6%	0%	1%	0%	6%
3%	0%	0%	0%	3%
0%	1%	1%	0%	2%
2%	0%	0%	0%	2%
2%	0%	0%	0%	2%
0%	2%	0%	0%	2%
1%	0%	1%	0%	2%
1%	0%	1%	0%	1%
0%	0%	0%	1%	1%
1%	0%	0%	0%	1%
1%	0%	0%	0%	1%
1%	0%	0%	1%	1%
0%	0%	1%	0%	1%
1%	0%	0%	0%	1%
0%	1%	0%	0%	1%
0%	0%	1%	0%	1%
1%	0%	0%	0%	1%
1%	0%	0%	0%	1%
75%	8%	10%	7%	100%

SAY:

5,208

# SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS



SECTION A-A

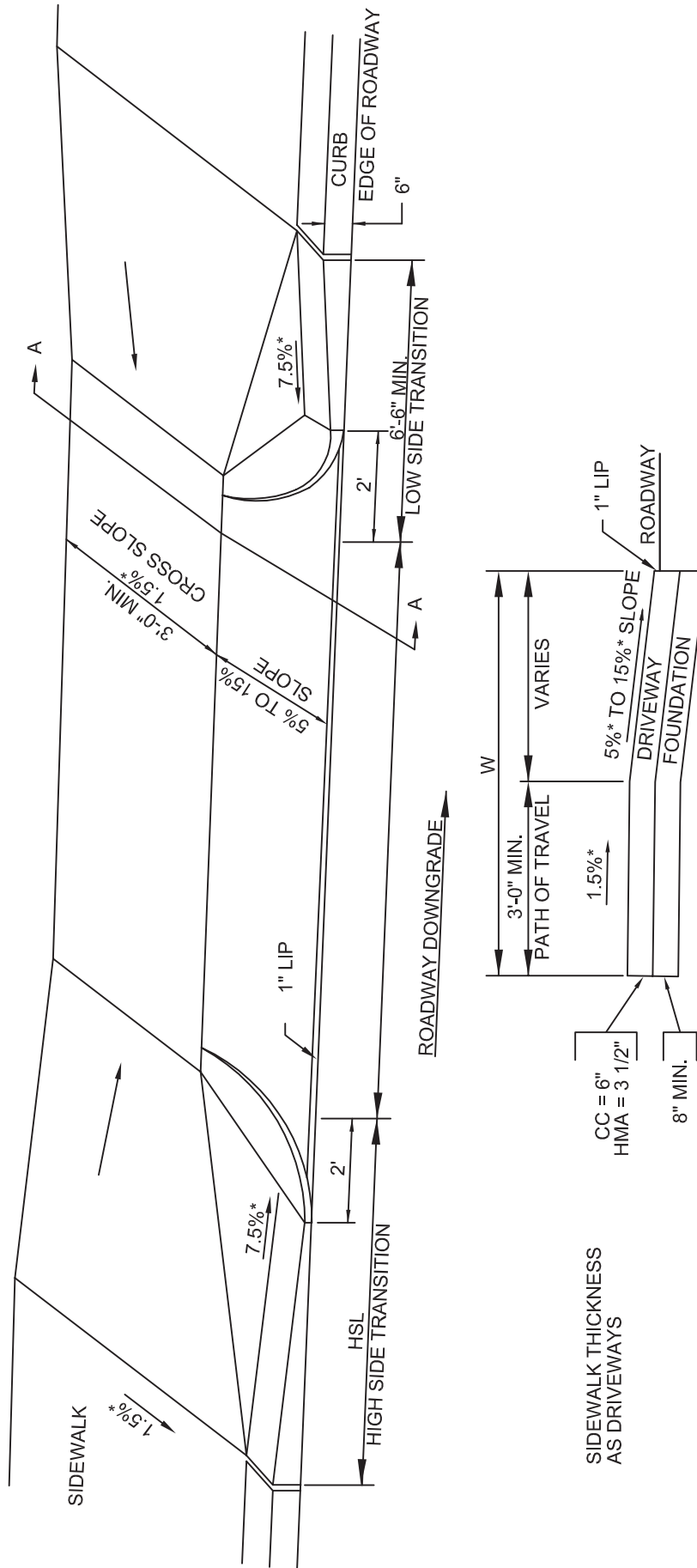
## LEGEND

HSL = HIGH SIDE TRANSITION LENGTH. SEE E 107.9.0  
W = SIDEWALK WIDTH  
\* = TOLERANCE FOR CONSTRUCTION  $\pm 0.5\%$   
CC = CEMENT CONCRETE  
HMA = HOT MIX ASPHALT

# SIDEWALK THROUGH DRIVEWAYS WITH CURB RETURNS 2' CURB CORNERS

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**E 107.8.0**



SECTION A-A

## LEGEND

HSL = HIGH SIDE TRANSITION LENGTH  
W = SIDEWALK WIDTH  
\* = TOLERANCE FOR CONSTRUCTION  $\pm 0.5\%$   
CC = CEMENT CONCRETE  
HMA = HOT MIX ASPHALT