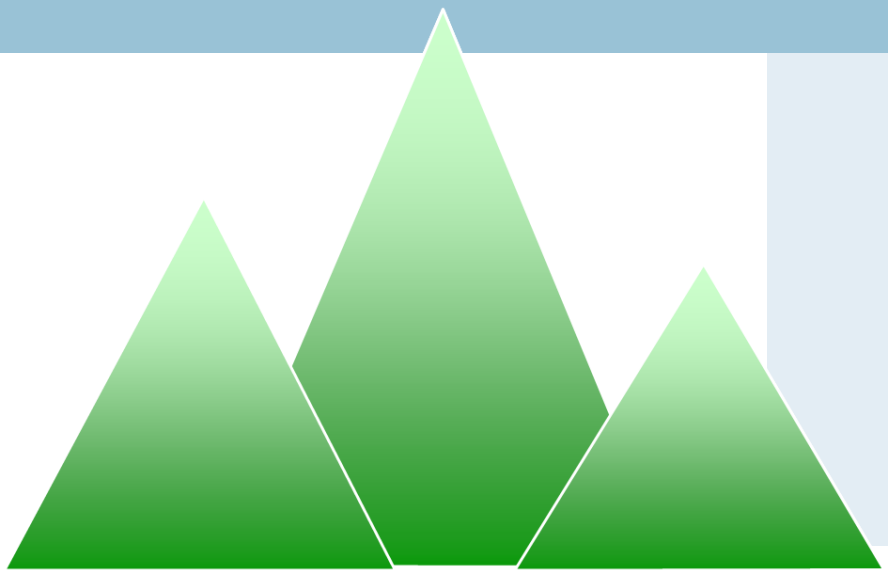
MONTACHUSETT REGIONAL PLANNING COMMISSION

Walkability Report

2024



For the town of Groton

September 2024

Walkability Study Update
For
Groton, MA

Walk Audit - 6/15/2024
Main Street, Groton

Prepared for the Town of Groton

Prepared in cooperation with the Massachusetts Department of Transportation and the U.S. Department of Transportation. The views and opinions of the Montachusett Regional Planning Commission expressed herein do not necessarily state or reflect those of the Massachusetts Department of Transportation or the U.S. Department of Transportation.
Contract # 123110

September 2024

MONTACHUSETT METROPOLITAN PLANNING ORGANIZATION SIGNATORIES

Massachusetts Department of Transportation (MassDOT) Secretary & CEO	Monica Tibbits-Nutt
MassDOT Highway Division Administrator	Jonathan L. Gulliver
Montachusett Regional Planning Commission (MRPC) Chair	Laura Shifrin
Montachusett Regional Transit Authority (MART) Chair/Mayor City of Gardner	Mayor Michael Nicholson
Mayor City of Fitchburg	Mayor Samantha Squailia
Mayor City of Leominster	Mayor Dean Mazzarella
Winchendon Board of Selectmen *Subregion 1*	Barbara Anderson
Ashburnham Board of Selectmen *Subregion 2*	Rosemarie Meissner
Lunenburg Board of Selectmen *Subregion 3*	Caesar Nuzzolo
Lancaster Board of Selectmen *Subregion 4*	Jason Allison

MPO SUB-SIGNATORY COMMITTEE MEMBERS

David Mohler, Director OTP, MassDOT, for Secretary & CEO Monica Tibbits-Nutt
Ann Sullivan, Assistant Project Development Engineer for Administrator Jonathan L. Gulliver
Glenn Eaton, Executive Director, MRPC, for Chair Laura Shifrin
Bruno Fisher, Administrator, MART, for Chair Mayor Michael J. Nicholson

EX OFFICIO MEMBERS

Joi Singh, Division Administrator	Federal Highway Administration
Peter Butler, Region 1 Administrator	Federal Transit Administration

MONTACHUSETT REGIONAL PLANNING COMMISSION (MRPC) OFFICERS

Laura Shifrin, Chair	Townsend
Kristofer Munroe, Vice Chair	Hubbardston
Robert Swartz, Treasurer	Gardner
Guy Corbosiero, Assistant Treasurer	Winchendon
Kyle Nartowicz, Secretary	Royalston
Mary Jo Bohart, At-Large Member	Fitchburg
Peter Cunningham, At-Large Member	Groton

MONTACHUSETT JOINT TRANSPORTATION COMMITTEE (MJTC) OFFICERS

Robert Swartz., Chair	Gardner
Travis Condon, Vice Chair	North Central MA Chamber of Commerce
Beth Faxon, Secretary	Townsend

MONTACHUSETT REGIONAL PLANNING COMMISSION STAFF

Glenn Eaton, Executive Director
Holly Ford, Administrative & Human Resources Director
Linda Quinlivan, Fiscal Director
Christopher McNamara, Fiscal Manager
Brian Doherty, AICP, Transportation Project Director
Sheri Bean, Senior Planner
George Snow, Principal Transportation Planner
Tyler Godin, Principal Planner
Grace Belmont, Principal Planner
Karen Chapman, Planning and Development Director
Jeffrey Legros, Senior Planner
Tracy Murphy, Senior Planner
Joe Boyle, Principal Planner
Bernard Cahill, Principal Planner
Zach Kay, Regional Planner
Irene Congdon, Central Mass Municipal Assistance Coordinator
Jason Stanton, GIS & IT Director
Kayla Kress, GIS & IT Analyst

MONTACHUSETT JOINT TRANSPORTATION COMMITTEE

COMMUNITY	APPOINTED BY SELECTMEN/MAYOR	APPOINTED BY PLANNING BOARD
Ashburnham	Randy Williams	Roger Hoyt
Ashby		Alan Pease
Athol	Dick Kilhart	Heidi Murphy
Ayer	Shaun Copeland	
Clinton	Phil Duffy	
Fitchburg	Nicholas Erickson	Paula Caron
Gardner	Trevor Beauregard	Robert Swartz
Groton		Russell Burke
Harvard	Tim Kilhart	Stacia Donahue
Hubbardston	Travis Brown	Alice Livdahl
Lancaster	Alexandra Turner	Roy Mirabito
Leominster	David DiGiovanni	Elizabeth Wood
Lunenburg	Todd Dwyer	Matthew Brenner
Petersham	Nancy Allen	
Phillipston	Gordon Robertson	
Royalston	Roland Hamel	
Shirley		Janet Tice
Sterling	Richard Maki	Carl Corrinne
Templeton	Tim Toth	Charles Carroll II
Townsend	Charles Sexton-Diranian	Beth Faxon
Westminster		Marie Auger

EX OFFICIO MEMBERS

Derek Krevat	Office of Transportation Planning (OTP), Massachusetts Department of Transportation
Joi Singh	Federal Highway Administration (FHWA), Administrator
Peter Butler	Federal Transit Administration (FTA), Acting Administrator
	Department of Environmental Protection (DEP)
Paula Simmons	MassDOT Highway Division - District 2
Ann Sullivan	MassDOT Highway Division - District 3
	Montachusett Regional Planning Commission (MRPC)
Bruno Fisher	Montachusett Regional Transit Authority (MART)

ORGANIZATION MEMBERS

Ralph Baker	Nashua River Watershed Association (NRWA)
	Amalgamated Transit Union #690 (ATU 690)
Richard Liberatore	Fitchburg Airport Commission
Travis Condon	North Central MA Chamber of Commerce
Amanda Koeck	Fitchburg Senior Center
	Mass Development
Neil Angus/Beth Suedmeyer	Devens Enterprise Commission (DEC)
Colby O'Brien	Making Opportunity Count (MOC)
David Kline	The Arc of Opportunity

I. EXECUTIVE SUMMARY

Walkability is a measure of how friendly an area is for walking. There are many factors that influence walkability such as the presence of sidewalks or footpaths, roadway and traffic conditions, safety, accessibility for all users, etc. A walkable community not only benefits people by providing increased accessibility for walkers, it also has been known to provide health benefits for its residents, increased social interaction, reduction in crime, an increased sense of pride and volunteerism. This report serves as an update to the MRPC's 2012 Groton Walkability Study with the addition of some trail access analysis. The 2012 study, as well as this current study, was conducted at the request of the community of Groton through the Unified Planning Work Program (UPWP).

A Walkability Steering Committee was developed which comprised of the Groton Planning Department, DPW, local interest groups and residents. With input from the Steering Committee, an updated study area was developed, which incorporated critical infrastructure locations within the downtown area and a ¼ mile buffer was placed around those locations. Data was then collected within the study area that included traffic volume, speed and classification counts, turning movement counts, sidewalks and related infrastructure inventory, trailhead locations, as well as public input.

The residents and business owners were invited to participate in a walking audit where they had the opportunity to walk as a group within the study area and provide their individual experiences and thoughts regarding how walkable they felt the area is. Topic areas included sidewalks, roadways, crosswalks, trails, parks and public gathering spots, shade trees and benches, parking, and local attractions. All comments and feedback are provided throughout the document as well as a more detailed attachment is provided at the end of the report.

Based on the data collected, a recommendations section was included. These recommendations comprised of sidewalk maintenance and connections, traffic calming measures for speeding and crosswalk locations, improved roadway striping, additional and improved parking, wayfinding, and trail connections.

II. INTRODUCTION

For this report, a walkable community is one that allows residents access to major community elements that are within a 10-minute walking distance. Those community elements may include shopping centers, town hall, library, post office, and the senior center. The term "Walkability" refers to how friendly an area is to pedestrians. Factors that make a community walkable include street connectivity and design, pedestrian amenities (benches, restrooms, etc.), access for all roadway users (vehicles and pedestrians), desirable streetscapes, and pedestrian safety features. Being a walkable community does not necessarily refer to only transportation features; aspects like socialization and walking for exercise can also play a part.

This report will outline the process of how the Town of Groton was evaluated for walkability as well as providing some recommendations to help boost pedestrian friendliness within the study area and throughout the community.

III. STUDY PROCESS

A. Study Area

The study area for this report was determined by the Walkability Steering Committee and MRPC staff. The Walkability Steering Committee was established based on volunteers from community departments and interested residents. The study area is located within the Groton center and includes key community elements such as Town Hall, the public safety building, schools, parks, religious facilities, library, post office, senior center, shopping centers, banks, restaurants, etc. A ¼ mile buffer was placed around these locations (see Map Figure 1). This selected area is broad enough to incorporate all the key locations and to have it be realistic for walkers.

The community was also interested in access to existing trails throughout town. The MRPC received guidance from members of the Groton Trails Committee and identified 17 trailheads that they felt were important for pedestrian access. These locations were also incorporated into the study area although some extended beyond the study area.

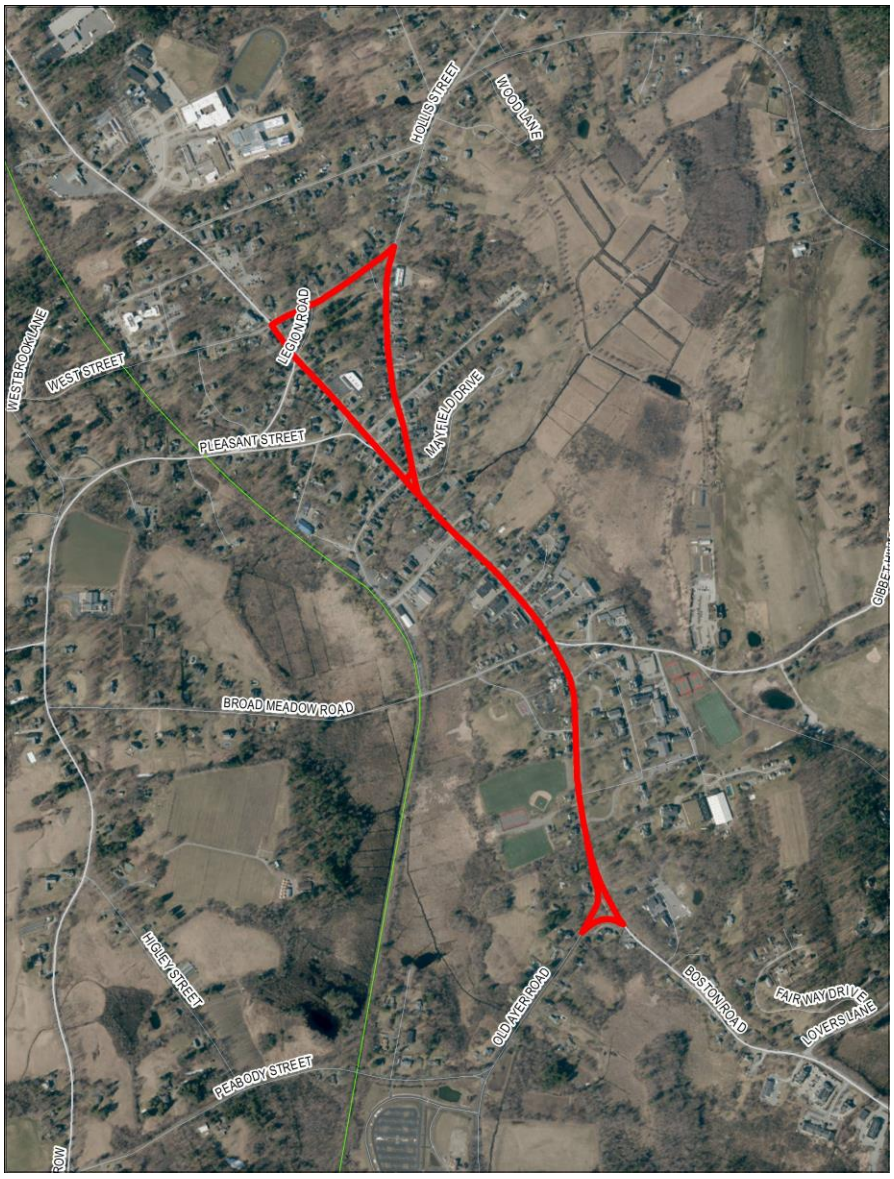
B. Walking Audit

Once the study area was established, the MRPC and the Groton Planning Department led a walking audit of the study area in downtown Groton on June 15, 2024 (see flyer and handout in Appendix A). The walking audit was conducted to provide an assessment of walkability within the downtown study area. Approximately 15 participants met in the Town Hall and walked the

designated route throughout downtown. (See Map Figure 2 and route description below).

Walk Audit Route

Two separate walking routes were established prior to the meeting based on what was done in the previous 2012 Walkability study but it was felt by the meeting attendees that both routes could be done within the timeframe given. Therefore, one larger route was incorporated in the walk audit. The route that was taken is shown on the map below.



During the walk audit participants were asked to observe the following:

- Sidewalks – Are there sidewalks within the study area? Is the width/condition acceptable (at least four feet wide)? Do they have handicap access ramps at each crossing and crosswalk? Are there large cracks, bumps, dips, etc., present?

- Roadways – Are the current roadways in good condition? Is speeding a problem? Are large trucks an issue? Are drivers able to see pedestrians in crosswalks – is there adequate sight distance?

- Crosswalks – Are the current crosswalks adequate? Do you feel safe while crossing at the crosswalks? Are vehicles parked closer than 10 feet to the crosswalks? Are there "no parking" zones near crosswalks? Is the striping on the crosswalk visible?

- Trails – Are the trails in the area accessible to the study area? Are there guide signs to help people navigate to those trails and trail parking areas?

- Parks/Public Gathering spots – Are these located nearby? Are they accessible? Is the number of parks/gathering spots adequate for the area?

- Shade Trees/Benches – Are there sufficient areas to take a rest? Will you be walking in the sun most of the time or are there shaded areas to cool off in the summer?

- Parking – Is there ample parking available within the study area? Are parked cars a problem within the study area? Are there guide signs to show where the parking areas are?

- Attractions – What are the local attractions or key destinations that you walked past (ex. library, parks, shops)? Is there a local attraction guide or signs for visitors?

Other questions to consider were:

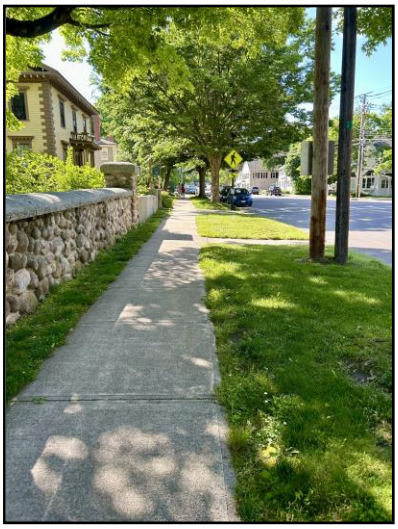
1. What are the positive aspects of your walking route?
2. Would this walk be adequate for a young child, elderly person, or a disabled person?
3. What would make this area more walkable for all users?
4. What would encourage more walking in the area? What is missing?
5. What are the concerns regarding walking within the study area?
6. Are the neighborhoods in the area considered mixed income? Is there a variety of housing types in the area?
7. Did you see other people out walking within the study area?

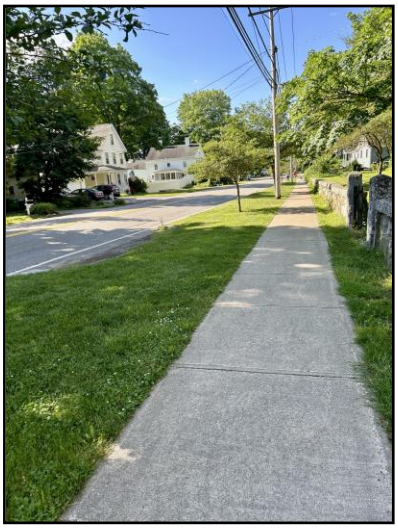
After the walking audit was conducted, participants were asked to provide feedback on each topic, both positive and negative, based on their walking experiences. Comments made by the participants have been documented and included in this report in Appendix B.

Summary of Findings Based Upon Input

The following summarizes a sample of the responses that participants developed regarding the positives and negatives of walkability for the Groton study area based on the observation topics mentioned above.

Sidewalks - Overall, most of the major roadways downtown have sidewalks in good condition and they are plowed in the winter, which is great. There are many areas where there is a grassy protective strip between the roadway and the sidewalk which provides a safer, and more pleasant, walking experience. However, there could be improvements made to the sidewalk angle at the intersection of Hollis Street & School Street. This acute angle makes it difficult to navigate the turn, in a wheelchair or pushing a stroller from School Street, taking a right on Hollis Street. There is a missing sidewalk link along Hollis Street in front of the Congregational Church, poor sidewalk conditions along Legion Road, a few locations lacking a crosswalk ramp, and there is brush extending into the sidewalk at a few locations.





Grassy protective buffer

Hollis Street & School Street

Hollis Street – missing sidewalk link

Legion Road – poor sidewalk condition

Missing Ramp

Brush blocking sidewalk

Roadways – Route 119 is in good condition with clear street lines and crosswalks. The flashing signage for crosswalks makes them more visible to drivers, although, the crosswalk lights near Lawrence Academy will go off when walking by, without pressing the button, which could create driver fatigue where drivers no longer notice the signs if they flash too often. Overall, there seems to be a perception of speeding and distracted drivers by the people walking around downtown. Adding edge lines along Main Street would help with narrowing the lanes, which should help slow traffic down naturally. The intersection of Main Street & Lowell Road is mentioned most often as the most unsafe intersection within the study and the crash map shows a concentrated number of crashes at that location as well. This location was also mentioned as being unsafe for both drivers and pedestrians due to the crossing at Main Street and Broadmeadow where vehicles may be increasing their speed at the crossing to get through the intersection safely.

Main Street – Wide roadway without edge lines

Flashing lights at Lawrence Academy

Route 119 & Route 40 intersection

Broadmeadow Road at Main Street crosswalk

Crosswalks - There are a high number of curb cuts throughout Route 119 which creates a dangerous situation for pedestrians. The wide streets also create a long crosswalk which is more time in the roadway when walking across. Cars parked too close to the crosswalks create a sight distance problem for both drivers and walkers. Bump outs and raised crosswalks were recommended to reduce the distance across and make pedestrians more visible and for slowing vehicles down. The Broadmeadow Road at Main Street crossing was brought up again as being a dangerous location for walkers as well as the wide curb cut at the Main Street Dunkin Donuts Plaza and in front of Filho's, which do not have a crosswalk or sidewalk. There is an abundance of crosswalks downtown, but it was still felt that a crossing was needed neat the Bruno's Pizza shop on Main Street near Hollis Street.

Person pushing a stroller across a wide section of Main Street

Small bump out in front of Town Hall

Wide curb cut at Filho's

Wide curb cut at Dunkin'

Trails – The Nashua River Rail Trail was mentioned several times as a positive aspect of the Groton town center. Many people use the trail for recreation as well as commuting. This trail provides a major connection to the Ayer town center as well as the Town of Pepperell and into New Hampshire. Members of the Groton Trails Committee provided input for trail access points throughout the study area and beyond. Various trailheads were mentioned as being important to the walkability network throughout town. These locations are further analyzed below in section C-7.

Broadmeadow Road – no connection from Main Street to the Rail Trail. Pedestrian walking along roadway

Nashua River Rail Trail parking off Broadmeadow Road

Parks/Public Gathering Spots- Many of the smaller parks and monument locations downtown have nice walkways and benches. Places like Prescott Community Center, intersection of Pleasant Street & Main Street and the Playground by the Library were mentioned as nice spots within the town center to gather. It was also noted that better connections to the Country Club were needed and there is a lack of public restrooms and trash receptacles within the town center.

Park at Pleasant Street & Main Street

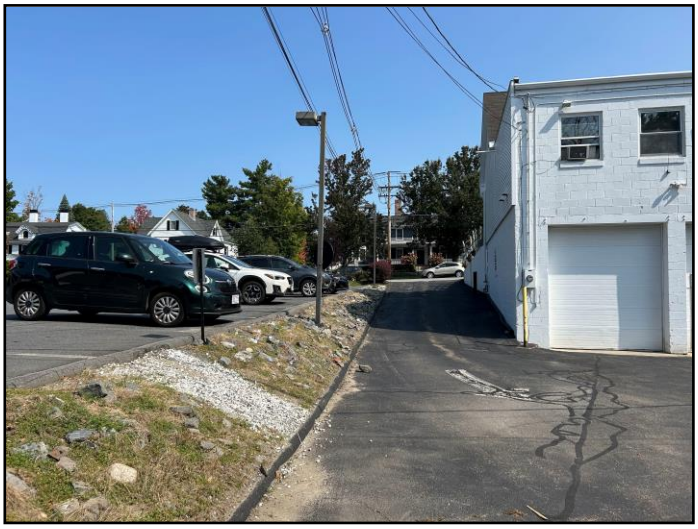
Prescott Community Center

Shade Trees/Benches – One of the positive comments mentioned was the abundance of flower gardens and foliage along the routes that make the area more aesthetically pleasing. There are also many shade trees located along Main Street and the surrounding areas. Areas that could use benches or resting areas include the intersection of Farmers Row/Pleasant Street/Mill Street and improvements to the Legion Hall bench.

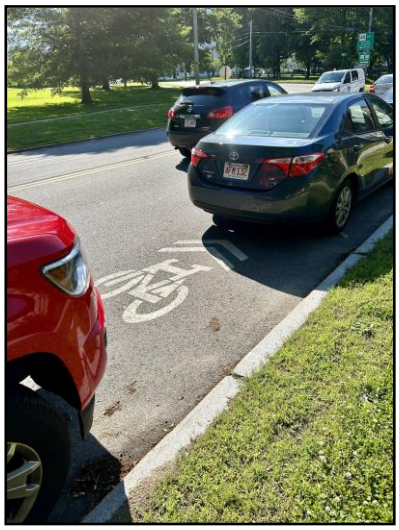
Intersection of Farmers Row/Pleasant Street/Mill Street

Bench at Legion Hall

Parking – It was noted that there is not adequate public parking available within the study area or, perhaps, it is not known where it is or there is not enough signage for the parking that exists. A business owner mentioned that there is parking behind their building at 125-137 Main Street but there is a steep decline to access the lot and not many people park there. A designated municipal lot with parking signs would be beneficial. Many vehicles park along Route 119 but it is not clear where parking is allowed. Painting designated parking spaces in this area would be helpful to show clearly where vehicles should and should not park along the roadway and also to prevent cars from parking too close to crosswalks and driveways, which could prevent pedestrians from being visible to drivers approaching the crossings.



Parking behind building on Main Street



Parked vehicles blocking sharrow along Main Street

Vehicle entering parking area while pedestrians try to cross

Attractions – Most people felt that there were an abundance of attractions and shops in the area. Many local businesses, restaurants, cafes, and parks are located within the town center. The study area is also located in the historic district.

Local establishments along Route 119

Groton Town Hall on Main Street

Groton Public Library

C. Data Collection

a) Traffic Volume Data:

The following traffic volumes were collected by MRPC as part of this study as well as part of the annual count program and/or various other studies in the area. This data is uploaded and processed through the MDOT supported MS2 website – https://mhd.ms2soft.com/tcds/tsearch.asp?loc=Mhd&mod=TCDS . This program takes the raw count data and uses a series of factors to find the Annual Average Daily Traffic (AADT). Some of the 2024 data has yet to be factored at the time of this report. Those locations are indicated with a double asterisk (**).

Location	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Boston Rd (Rt. 119/225) east of Lovers Lane	15,921	16,096	16,305	16,484	16,715	16,782	13,828	15,570	15,804	16,167	-
Boston Rd (Rt. 119/225) east of Old Ayer Rd	-	-	-	-	-	-	-	-	-	*16423.	
Boston Rd (Rt. 119/225) east of Skyfields Dr.	-	-	-	-	-	-	-	-	-	-	**15,555
Broadmeadow Rd. west of Main Street (Rt. 119/225)	*1,103	1,128	1,198	1,218	1,222	*978	807	904	903	923	-
Farmers Row south of Long Hill Rd (Rt. 225)	7,051	7,129	7,222	7,301	7,403	*7,198	5,927	6,674	6,774	6,930	-
Hollis St north of Main St (Rt. 119/225)	4,318	4,417	4,691	4,771	4,785	4,766	3,932	4,404	4,400	4,497	*3,701
Long Hill Rd (Rt. 225) west of Farmers Row (Rt. 111)	*4800	4,910	5,214	5,303	5,319	*4927	4,065	4,553	4,548	4,648	-
Lowell Rd (Rt. 40) east of Main St (Rt. 119/225)	*5,240	5,298	5,367	5,426	5,502	*5741	4,731	5,327	5,407	5,531	-
Main Street (Rt. 119) west of Elementary School											**14,767
Main Street (Rt. 119) east of Elementary School											**13,990
Main Street (Rt. 119/225) west of Lowell Rd (Rt. 40)	*19,737	19,954	20,213	20,435	20,721	*21,650	17,840	20,088	20,389	*20,858	-
Main Street (Rt. 119/225) east of Lowell Rd (Rt. 40)	*16,813	16,998	17,219	17,408	17,652	*17,468	14,394	16,208	16,451	*16,829	-
Main Street (Rt. 119/225) west of Old Ayer Rd										*12,799	-
Main Street (Rt. 119) west of Pleasant Street	13,462	13,610	13,787	*12,859	13,039	13,091	10,787	12,146	12,328	12,612	-
Main Street (Rt. 119) west of School Street	14,091	14,246	14,431	*15,112	15,324	15,385	11,745	13,225	13,423	*13,175	-
Old Ayer Rd south of Main St (Rt. 119)										*4099	-
Pleasant Street west of Main Street (Rt. 119/225)	-	-	-	-	-	-	-	-	-	-	**3567
Playground Road south of Main Street (Rt. 119/225)	542	548	-	-	584	582	480	538	537	549	-

*Year count was conducted
**Unfactored Count

Traffic volumes along Route 119/225 vary from 13,000-20,000 at the center of town, 15,000-16,000 further east and 14,000-15,000 to the west. This roadway is a major connector from Townsend to the west, which also includes traffic coming from New Hampshire, and Routes 2 and 495. Route 40 is a major connector to Route 3 to the north and averages 5,500 vehicles per day. The side streets vary from just under 7,000 to only 550 vehicles per day. These streets are generally for local traffic. See Map Figure 3 for locations.

Traffic has remained steady over the past 10 years as there has not been much of an increase along most roadways. You can see a decrease in traffic volumes in 2020 as a result of the COVID 19 pandemic. This is also seen within the Montachusett Region and throughout the state. Traffic seems to be remaining at the low levels seen during the pandemic; this could be a result of an increase in people working from home or remotely and/or having goods delivered to their homes instead of shopping in a physical location.

b) Turning Movement Counts:

Turning Movement counts (TMCs) were conducted at specified intersections within the study area during the morning and afternoon traffic peak hours. The results of the TMC analyses found that the peak hour start time for the three (3) intersections to be 4:30 PM which is used in conducting the LOS analysis below. See Map Figure 5 for the locations.

From the TMC data collected, a Level of Service (LOS) analysis was conducted. The LOS of a roadway traffic facility represents the quality of traffic flow and is used to assess the operation of that traffic facility. LOS analyses are based on the methods in the *Highway Capacity Manual (2010)* (HCM). LOS is defined differently for each type of traffic facility, such as an unsignalized intersection, signalized intersection, two-lane road, or multi-lane road. For intersections, the LOS criteria are defined by the average amount of delay experienced by a vehicle at the intersection due to the traffic controls (i.e., signs or signals). Each approach is assessed independently for a stop-controlled intersection since the LOS of the major and minor approaches may differ greatly. Table 1 summarized the LOS average control delay criteria for intersections controlled by stop signs and those controlled by traffic signals.

Table 1 – Average Control Delay

LOS	Average Control Delay (seconds per vehicle)	
	Stop-Controlled	Signalized
A	≤10.0	≤10.0
B	10.1 – 15.0	10.1 – 20.0
C	15.1 – 25.0	20.1 – 35.0
D	25.1 – 35.0	35.1 – 55.0
E	35.1 – 50.0	55.1 – 80.0
F	>50.0	>80.0

The following LOS descriptions apply to intersections:

- **LOS A** describes operations with little or no delay due to very low major street traffic with many acceptable gaps and traffic flows easily.
- **LOS B** describes operations where stopped vehicles experience short traffic delays but there are still many acceptable gaps in the major street traffic.
- **LOS C** describes operations where stopped vehicles experience average traffic delays due to less frequent acceptable gaps in the major street traffic.
- **LOS D** describes operations where stopped vehicles experience long traffic delays due to a limited number of acceptable gaps in the major street traffic.
- **LOS E** describes operations where stopped vehicles experience very long traffic delays due to a very small number of acceptable gaps in the major street traffic. This level is considered by many agencies to be the limit of acceptable delay.
- **LOS F** describes operations where stopped vehicles experience extreme traffic delays due to virtually no acceptable gaps in the major street traffic. This level, considered to be unacceptable to most drivers, often occurs with ***oversaturation***, that is, when arrival flow rates exceed the capacity of the intersection.

Intersection at Main Street (Route 119) and Pleasant Street (Route 225)

Approach	*Left Turn*	*Through*	*Right Turn*	*Pedestrians*	*Total*	*LOS*
Main Street – Eastbound	na	485	0	0	485	na
Main Street – Westbound	139	766	na	2	907	A
Pleasant St – S. Eastbound	1	na	175	1	177	C

Analysis at this intersection was complicated since it is a skewed design where the traffic taking a right from Pleasant Street must yield to traffic on Main Street and taking the left turn is particularly challenging. With only one (1) vehicle turning left from Pleasant Street, the high number of right turning vehicles experience an acceptable LOS (LOS C) during the 4:30 PM peak hour. Vehicles take Elm Street to the north to take a left turn onto Main Street.

Intersection at Boston Road (Route 119) and Old Ayer Road (north leg)

Approach	*Left Turn*	*Through*	*Right Turn*	*Pedestrians*	*Total*	*LOS*
Boston Road – Eastbound	na	397	91	2	490	na
Boston Road – Westbound	0	932	na	0	932	A
Old Ayer Road – Northbound	107	na	1	12	120	F

Analysis at this intersection shows that the intersection congestion during peak hour makes it difficult for the vehicles traveling northbound on Old Ayer Road to take a left turn onto Main Street. The westbound direction of Main Street experiences a high number of vehicles that make it difficult to take the left turn and results in unacceptable LOS (LOS F) during the 4:30 PM peak hour.

Intersection at Boston Road (Route 119) and Old Ayer Road (south leg)

Approach	*Left Turn*	*Through*	*Right Turn*	*Pedestrians*	*Total*	*LOS*
Boston Road – Eastbound	na	397	1	1	399	na
Boston Road – Westbound	110	922	na	0	1,032	A
Old Ayer Road – Northbound	11	na	95	1	107	C

Analysis at this intersection shows that the intersection congestion during peak hour does not make it difficult for the vehicles traveling northbound on Old Ayer Road to take a left turn onto Main Street. With only 11 vehicles turning left from Old Ayer Road the result is an acceptable LOS (LOS C) during the 4:30 PM peak hour despite the westbound direction of Main Street experiencing a high number of vehicles.

Intersection at Main Street (Route 119) and Lowell Road (Route 40)

Approach	*Left Turn*		*Through*	*Right Turn*	*Pedestrians*	*Total*	*LOS*
Main Street – Eastbound	215		482	33	0	730	A
Main Street – Westbound	24		736	61	0	821	A
Lowell Road – Southbound	42		33	272	0	347	F
Broadmeadow Road – Northbound	0		0	0	24	24	na

Analysis at this intersection shows that the intersection congestion during peak hour does make it difficult for the vehicles traveling southbound on Lowell Road to take a through movement and left turn on Main Street. With 42 vehicles turning left onto Main Street and 33 vehicles traveling through Main Street to Broadmeadow Road, the result is an unacceptable LOS (LOS F) during the 3:15 PM peak hour.

c) Traffic Speed Data:

Generally, when determining the speed limit for a roadway the 85th percentile speed is used. This is considered the speed at or below which most drivers feel safe driving. The speed data that was collected on Main Street east & west of the Elementary school was done so during the last week of school before summer break to reflect typical school activity and the remaining counts were conducted over the summer, which is standard practice for data collection.

Due to the congestion in the town center, speeds within this area were generally adequate. It seems that when you move away from the congestion the speeds increase. This is particularly true at the following locations - Pleasant Street west of Main Street, Boston Road east of Old Ayer Road and east of Skyfields Drive, Main Street west of Old Ayer Road and Old Ayer Road south of Main Street.

Main Street (Rt. 119) west of Elementary School (2024)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	25 MPH	31 MPH	35 MPH	37 MPH
	Eastboud			
	23 MPH	32 MPH	38 MPH	40 MPH

Speed limit 35

Main Street (Rt. 119) east of Elementary School (2024)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	24 MPH	31 MPH	36 MPH	38 MPH
	Eastbound			
	22 MPH	30 MPH	36 MPH	38 MPH

Speed limit 35

Boston Road (Rt. 225/119) east of Skyfields Dr. (2024)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	37 MPH	41 MPH	44 MPH	46 MPH
	Eastbound			
	37 MPH	40 MPH	44 MPH	46 MPH

Speed limit 35

Hollis Street north of Main St (Rt. 225/119) (2024)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Southbound			
% of Vehicles in 24 Hrs	24 MPH	28 MPH	32 MPH	34 MPH
	Northbound			
	26 MPH	30 MPH	34 MPH	36 MPH

Speed limit 30

Pleasant Street west of Main St (Rt. 119) (2024)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Eastbound			
% of Vehicles in 24 Hrs	27 MPH	30 MPH	34 MPH	36 MPH
	Westbound			
	27 MPH	32 MPH	36 MPH	38 MPH

Speed limit 25

Main St (Rt. 119/225) west of Lowell Rd (Rt. 40) (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	20 MPH	26 MPH	31 MPH	34 MPH
	Eastbound			
	19 MPH	27 MPH	32 MPH	34 MPH

Speed limit 30

Main St (Rt. 119/225) east of Lowell Rd (Rt. 40) (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	19 MPH	25 MPH	29 MPH	32 MPH
	Eastbound			
	22 MPH	27 MPH	32 MPH	34 MPH

Speed limit 30

Broadmeadow Road west of Main St (Rt. 119/225) (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Eastbound (one way)			
% of Vehicles in 24 Hrs	16 MPH	21 MPH	26 MPH	29 MPH

Speed limit 30

Lowell Road (Rt. 40) northeast of Main St (Rt. 119/225) (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Northbound			
% of Vehicles in 24 Hrs	20 MPH	23 MPH	28 MPH	29 MPH
	Southbound			
	16 MPH	22 MPH	26 MPH	28 MPH
Speed limit 25				

Main Street (Rt. 119/225) west of Old Ayer Road (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	26 MPH	31 MPH	36 MPH	39 MPH
	Eastbound			
	30 MPH	34 MPH	38 MPH	39 MPH
Speed limit 30				

Boston road (Rt. 119/225) east of Old Ayer Road (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Westbound			
% of Vehicles in 24 Hrs	31 MPH	35 MPH	39 MPH	42 MPH
	Eastbound			
	29 MPH	34 MPH	39 MPH	41 MPH
Speed limit 30				

Old Ayer Road south of Main Street (Rt. 119/225) (2023)

	15th Percentile	50th Percentile	85th Percentile	95th Percentile
	Northbound			
% of Vehicles in 24 Hrs	27 MPH	32 MPH	37 MPH	39 MPH
	Southbound			
	28 MPH	33 MPH	38 MPH	40 MPH
Speed limit 30				

d) Traffic Classification Data:

Classification data is based on the FHWA Vehicle Classification Scheme F (see Appendix C for a graphical representation of the classes and class data). Heavy trucks are classified as having four or more axles. As you can see from the data below, the locations with the highest number of heavy trucks are Main Street (Route 119) east and west of the Elementary School, Boston Road (Route 119/225) east of Old Ayer Road, Hollis Street east of Main Street (Route 119/225) and Pleasant Street (Route 225) west of Main Street (Route 119).

Main Street (Rt. 119) west of Elementary School (2024)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.7%	66.5%	17.8%	1.9%	8.8%	0.5%	0.1%	1.0%	0.7%

Main Street (Rt. 119) east of Elementary School (2024)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.6%	66.0%	18.8%	2.0%	8.2%	0.5%	0.1%	1.0%	0.6%

Boston Road (Rt. 225/119) east of Skyfields Dr. (2024)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.4%	69.2%	18.2%	1.1%	8.8%	0.3%	0.2%	0.7%	0.3%

Hollis Street east of Main St (Rt. 225/119) (2024)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.5%	73.9%	18.3%	0.6%	5.1%	0.3%	0.2%	0.5%	0.5%

Pleasant Street (Rt. 225) west of Main St (Rt. 119) (2024)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.5%	70.3%	19.3%	0.5%	7.5%	0.4%	0.2%	0.6%	0.2%

Main St (Rt. 119/225) west of Lowell Rd (Rt. 40) (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.7%	77.1%	17.1%	0.5%	3.0%	0.8%	0.1%	0.5%	0.3%

Main St (Rt. 119/225) east of Lowell Rd (Rt. 40) (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.6%	80.3%	15.5%	0.5%	2.3%	0.2%	0.1%	0.4%	0.3%

Broadmeadow Road west of Main St (Rt. 119/225) (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.5%	83.5%	14.7%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%

Lowell Road (Rt. 40) northeast of Main St (Rt. 119/225) (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.8%	81.8%	14.6%	0.6%	1.5%	0.3%	0.1%	0.2%	0.0%

Main Street (Rt. 119/225) west of Old Ayer Road (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.6%	79.5%	15.8%	0.5%	2.6%	0.2%	0.0%	0.4%	0.3%

Boston road (Rt. 119/225) east of Old Ayer Road (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.4%	81.1%	14.8%	0.4%	2.1%	0.2%	0.1%	0.6%	0.6%

Old Ayer Road south of Main Street (Rt. 119/225) (2023)

% of Vehicles in 24 Hrs	Motor-cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double +
	0.6%	83.6%	13.1%	0.3%	1.9%	0.2%	0.0%	0.3%	0.0%

e) Crash History

The MRPC has accident data available from the Massachusetts Department of Transportation (MassDOT) for the years of 2021-2023. All recorded crashes in the study area were mapped in Map Figure 4-A. For the Town of Groton there were 205 total crashes recorded within the study area. Of those 205 reported crashes, zero were reported as fatal injury crashes, 34 were considered non-fatal injury crashes, 165 were considered property damage only, six were considered unknown/severity unspecified. Two of the crashes were with a cyclist or pedestrian. A separate map was created that shows cyclist and pedestrian crashes (Map Figure 4-B). These crashes were based on a 10-year timeframe, as opposed to a 3-year timeframe for vehicular crashes, to help show more potentially concerning locations since these types of crashes are not as common.

As shown on the map, there are clearly an abundance of vehicle crashes that occurred along Route 119 with the intersection of Route 40 and the area around Pleasant Street & Hollis Street appearing to be the most concentrated. This is where three out of the six cyclist and pedestrian crashes occurred as well, making it the most dangerous location within the study area.

f) Inventory of Road Facilities

This inventory incorporated all roadways (local streets, collectors, arterials, and highways) and any pedestrian-related infrastructure that may exist within the study area. Data that was collected included sidewalks, crosswalks, and signage. (See Map Figure 5)

Sidewalks are one of the most important aspects of a walkable community. In most downtown areas, simply walking along the side of the road with traffic is far too dangerous for most pedestrians. Since the average daily traffic through downtown Groton is 15,000- 16,000 vehicles it is imperative that sidewalks exist and are in good condition to accommodate pedestrians of all ages and abilities. There are many miles of sidewalks within the study area and a substantial percentage of them are in excellent condition.

g) Trail Access

Trail access can have a significant impact on quality of life and economic well-being. Studies have shown that trail projects can provide community benefits, such as increased public health, quality of life, and economic diversification. Groton has an abundance of trails within the study area as well as throughout the entire town. The Groton Trails Committee is active and does a great job of creating and maintaining the trails. They led the development of the Groton Trails Vision in 2014. This document highlights the past and future of trail development and maintenance for the Town of Groton.

As part of this study, the community asked that MRPC look at access to trails within the study area and beyond. The Groton Trails Committee provided these trailhead locations. This analysis

looked at existing infrastructure, such as sidewalks, crosswalks, parking and signage near each trailhead and recommendations were made if appropriate.

The following table shows each trailhead and the existing infrastructure within a ½ mile. The numbers on the far-left column will reflect the trail locations on Map Figure 6.

	Trail Name	Trail Head location	Sidewalk within 1/2 mile?	Crosswalk to access trail?	Parking at location?
1	J. Harry Rich State Forest/John Tinker Trail	Nod Rd near Nod Brook	Y	N	Y
2	J. Harry Rich State Forest/John Tinker Trail	Sand Hill Rd/Nod Rd/Common St	N	N	Y
3	Nashua River Rail Trail (NRRT)	Common St	N	N	N
4	Nashua River Rail Trail (NRRT)	Rte 119	Y	Y	N
5	Nashua River Rail Trail (NRRT)	Pleasant St/Whistle Post Ln	Y	Y	N
6	Nashua River Rail Trail (NRRT)	Broadmeadow Rd	Y	Y	Y
7	Nashua River Rail Trail (NRRT)	Temple Dr cul-de-sac	Y	Y	Y
8	Williams Barn/Sorhaug	Chicopee Row/Mahoney Ln	N	N	Y
9	Gibbet Hill	Gibbet Hill Grill	Y	Y	Y
10	Bates-Blackman	Old Ayer Rd/Peabody St	Y	Y	Y
11	Hurd	Rte 119/Skyfields Dr	Y	N	Y
12	Phebe Keyes Woods	Peabody St/near Higley St	Y	Y	Y
13	Groton Place/Sabine Woods	Long Hill Rd near Nashua River	Y	Y	Y
14	Lawrence Woods/Taisey CR	Long Hill Rd near Nashua River	Y	Y	Y
15	Lawrence Woods/Taisey CR	Long Hill Rd/Riverbend Dr	Y	Y	Y

- **J. Harry Rich State Forest** - There are no sidewalks or bike lanes near these locations, but the Nashua River Rail Trail is nearby with access on Sand Hill Road and Common Street.

    - Nod Road – This access point has signage and a great off street parking area with handicap parking spots to access the accessible John Tinker Trail.



    - Sand Hill Road – This location has a few on street parking spots with very visible signage.

- **Nashua River Rail Trail** - this well-known rail trail has a high number of daily users year-round for recreation and as a transportation corridor connecting to the Ayer MBTA rail station to the south. There are multiple access points throughout the Town of Groton.

    - Common Street – This access point does not have any on or off-street parking, signage, or sidewalk access.

    - Route 119 – Although there are sidewalks and crosswalks nearby, there does not appear to be any signage or direct access to the trail at this location.

    - Pleasant Street/Whistle Post Lane – There does not appear to be on or off-street parking at this location. The trail can be accessed from Whistle Post Road where there is a sidewalk nearby on Pleasant Street. Trial signage and a crosswalk to this location would be beneficial.

    - Broadmeadow Road – This location had a large off-street parking area that provides direct access to the rail trail. It is approximately 400ft to the nearest sidewalk which is near the library. A sidewalk connection would be beneficial here.

    - Temple Drive – Trail access is located within the cul-de-sac at the end of this roadway. There is on street parking with no trail signage and the nearest sidewalk is just over 800ft away.

- **Williams Barn/Sorhaug Woods**- Parking for this trail network is allowed at Williams Barn on Chicopee Row although it was hard to determine the access point on either side of the street or parking locations due to a lack of signage. The nearest sidewalk on Hollis Street was just under a mile away.

- **Gibbet Hill** – Connecting sidewalks were under construction at the time of this report. This will provide a connection from the town center to the trails in this area as well as to Lawrence Academy and the athletic fields nearby. There is parking available at the adjacent Gibbet Hill Grill as well as a few on-street parking spots along Lowell Road where there are a few different access points.

- **Bates-Blackman** – There is a wonderful signage and off-street parking area at this location with handicap parking and access. An existing sidewalk runs directly across the street where adding a crosswalk would provide suitable access.



- **Hurd** – there is a small parking area along Skyfields Drive where the signage is very visible and clear. There is also a sidewalk located along Route 119 that ends just shy of Skyfields Drive. A continuation of this sidewalk, along with another small missing link on the other side the Pediatrics West entrance to CVS, would provide pedestrian access all the way to the center of town.



- **Phebe Keyes Woods** – There is a small one vehicle parking space at the entrance to this trail system and clear signage to the trail access. There is not a direct sidewalk link, but a connection could be made by continuing the existing sidewalk to the west from Temple Drive for approximately 0.14 miles.

- **Groton Place/Sabine Woods** – There is a large off-street parking area on the south side of West Main Street (Route 225) that has great signage with clear access points. A sidewalk runs along the roadway to a flashing pedestrian crosswalk which provides direct access to the property.


- **Lawrence Woods/Taisey** – This trail network is accessible by West Main Street, directly across from Groton Place/Sabine Woods as well as from Riverbend Drive. There is on-street parking along Long Hill Road near the trail entrance and parking for a couple of cars on Riverbend Drive. There is access to the sidewalk along Long Hill Road at the

Riverbend Drive location and a crosswalk would be beneficial at the connection from Groton Place/Sabine Woods to the Long Hill Road entrance. A crosswalk at this location might also help get the cars off the roadway and, instead, into the safer designated parking area across the street.



D. Recommendations

When streets and town centers are designed only for cars, they become barriers for pedestrians of all abilities, who cannot get from point A to point B safely. As a result, many people end up in their cars and thereby miss opportunities for much needed fresh air, socialization, and physical activity.

Based upon the data collected and the analysis conducted, the following recommendations resulted:

Sidewalks

- Repair all damaged, cracked, chipped and uneven portions of the existing sidewalks.
- Continue to maintain existing sidewalks, keeping them free of debris, vegetation, snow, etc.
- Add sidewalks that would make connections with key areas of town that were mentioned during the walk audit and elsewhere (see Figure 5).
- Mandate sidewalks in all developments, along with bicycle lanes and trail connections where appropriate.
- Be sure to accommodate all abilities for existing and future sidewalks by making them ADA compliant.

Crosswalks

- Consider traffic calming techniques such as a road diet or adding bump outs at major crosswalk locations along Route 119
- Place “No Parking” signs for areas near a crosswalk, driveway, or intersection to improve visibility. Reference the Manual on Uniform Traffic Control Devices (MUTCD) for more detailed information.
- Improve faded crosswalks & keep them visible.
- Adjust the crossing in front of Lawrence Academy to only activate when the button is pressed.

Roadways

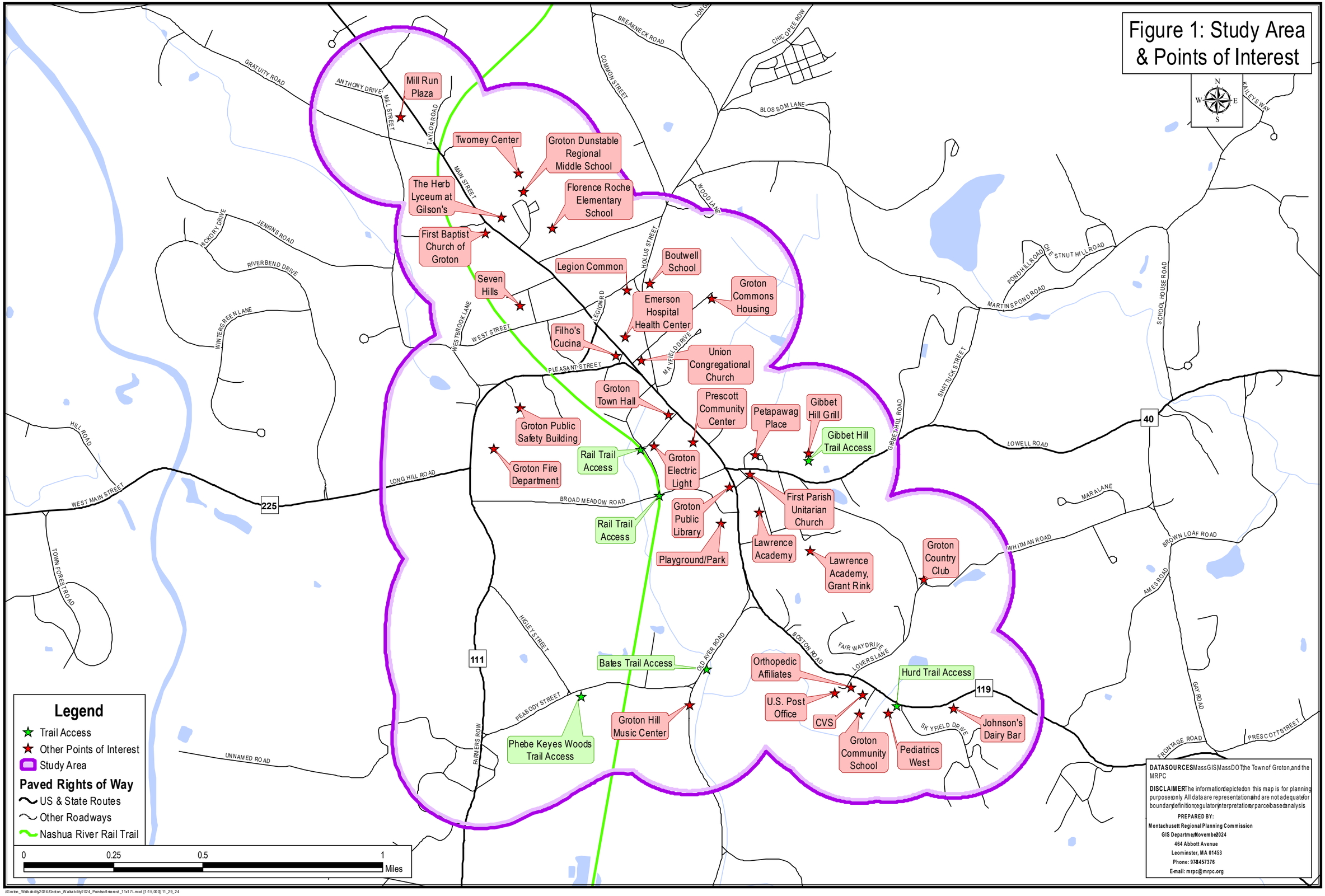
- Conduct a safety analysis that consists of engineered concepts for improvements to the Main Street (Route 119) & Lowell Road (Route 40) intersection. This is the most dangerous intersection within the study area. Seek improvements that would benefit both vehicles and pedestrians.
- Paint fog lines along Main Street – this will narrow the travel lanes and help reduce vehicle speed.
- Provide designated parking spaces along Main Street. This will not only direct people to where they should (and should not) park but will also make it easier to spot violations.
- Warning signs should continue to be placed and maintained in the school areas to warn all drivers of pedestrians, cyclists, and children. Placement of all regulatory and guidance signs should conform to guidelines established by Massachusetts Department of Transportation (MassDOT) – Highway Division and the Manual on Uniform Traffic Control Devices (MUTCD).
- Consider Bike Lanes along Route 119, if feasible.
- Clear away vegetation and obstructions to allow improved sight distance at all intersections and driveway entrances and exits.
- Continue to monitor and regulate speeding along Route 119.

Other

- Encourage major businesses to put out trash barrels outside their buildings or consider having the town put barrels out at various locations.
- Study the placement of parking for future businesses along Main Street (parking lots in the rear of the buildings or designated parking lots).
- Municipal parking lot locations and public restrooms should be visible with proper signage.
- Be sure public benches/seating areas are maintained.
- Continue the Complete Streets and Safe Routes to School Programs by ensuring that pedestrians and cyclists are considered when roadway projects occur.
- Consider grant opportunities such as Community One Stop for Growth, Shared Streets & Spaces, and securing transportation projects on the Transportation Improvement Program (TIP).

MAP FIGURES

Figure 1: Study Area & Points of Interest



Legend

- Trail Access
- Other Points of Interest
- Study Area

Paved Rights of Way

- US & State Routes
- Other Roadways
- Nashua River Rail Trail

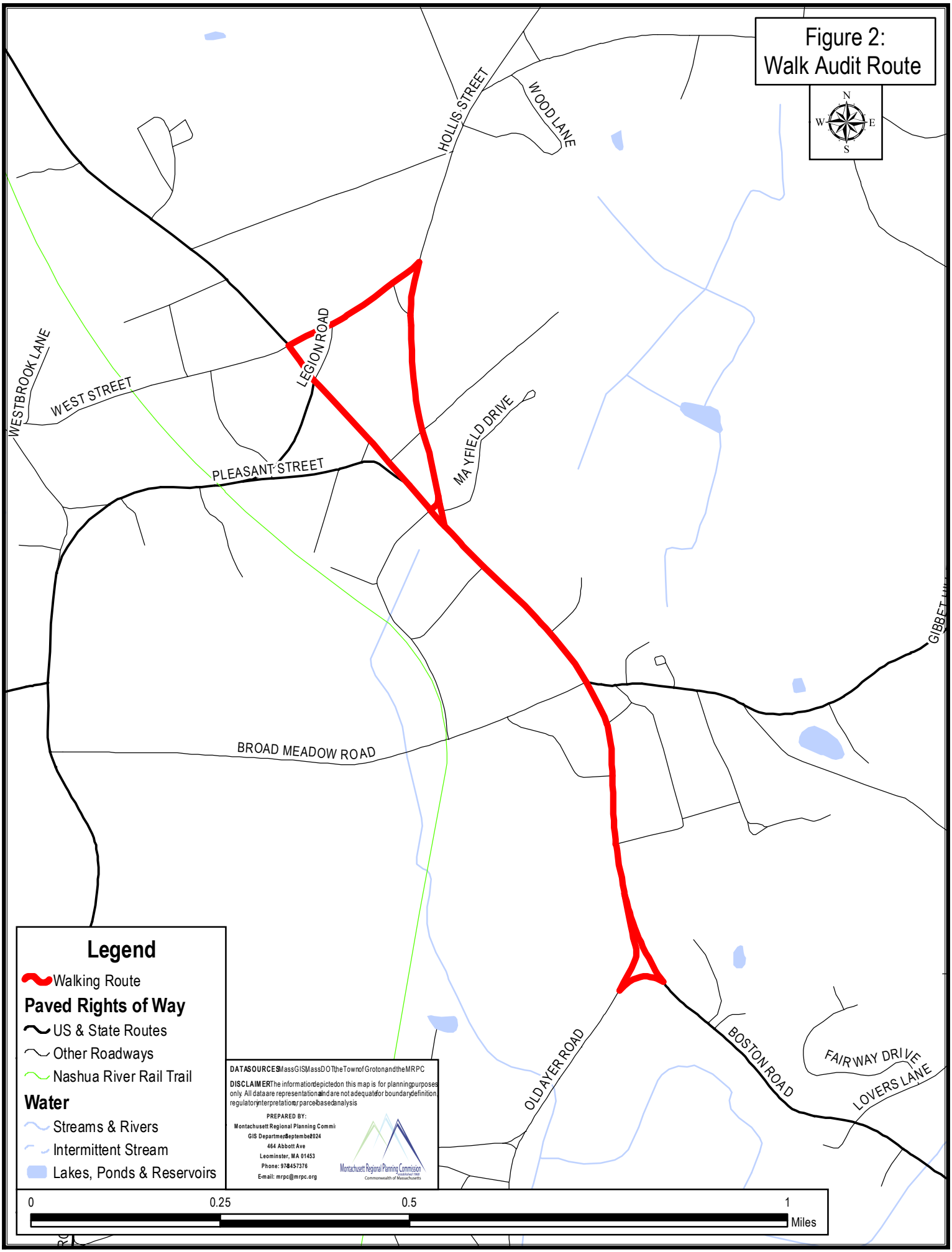
0 0.25 0.5 1 Miles

DATA SOURCES: MassGIS, MassDOT, the Town of Groton, and the MRPC

DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis

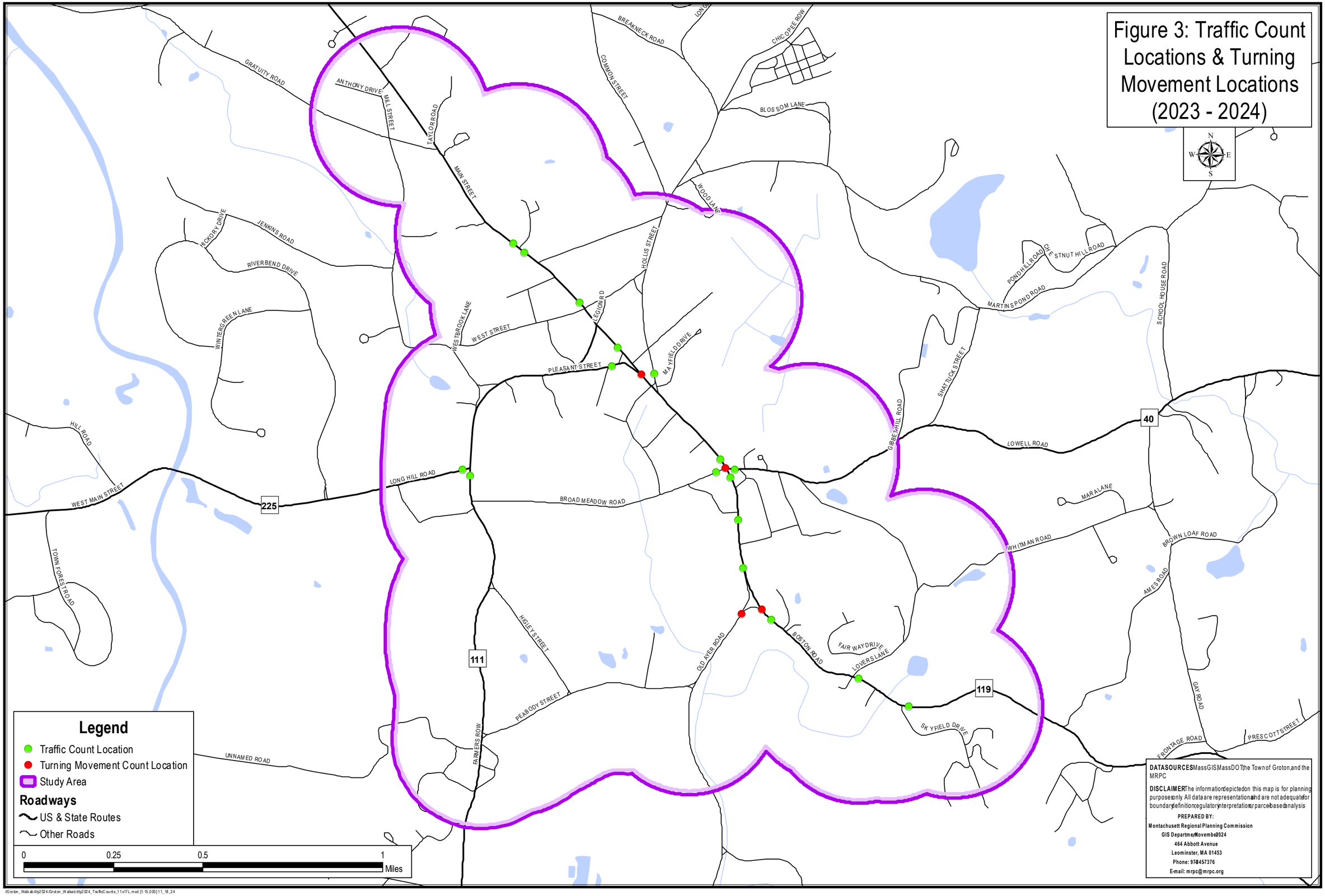
PREPARED BY:
Montachusett Regional Planning Commission
GIS Department, November 2024
464 Abbott Avenue
Leominster, MA 01453
Phone: 978 457 376
E-mail: mrpc@mrpc.org

I:\Groton_Walkability\2024\Groton_Walkability2024_PointsofInterest_11x17Lmxd [1:15,000] 11_29_24



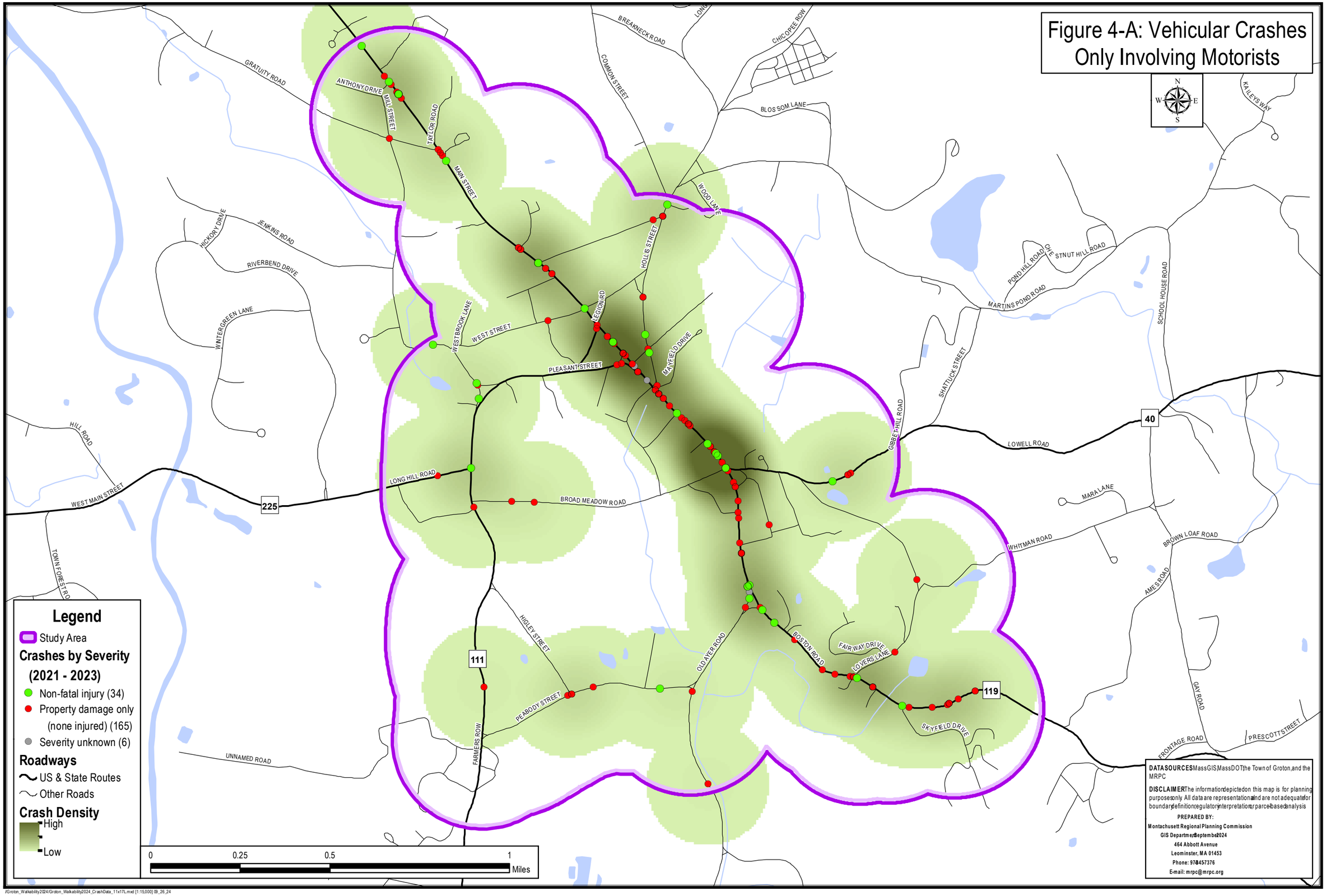
/Groton/Groton_Walkability_2024/Groton_Walkability2024_WalkingRoutes_85x11P.mxd [1:10,000] 09_26_24

Figure 3: Traffic Count Locations & Turning Movement Locations (2023 - 2024)



I:\Groton_Walkability\2024\Groton_Walkability2024_TrafficCounts_11x17L.mxd [1:15,000] 11_18_24

Figure 4-A: Vehicular Crashes Only Involving Motorists



Legend

- Study Area

Crashes by Severity (2021 - 2023)

- Non-fatal injury (34)
- Property damage only (none injured) (165)
- Severity unknown (6)

Roadways

- US & State Routes
- Other Roads

Crash Density

- High
- Low

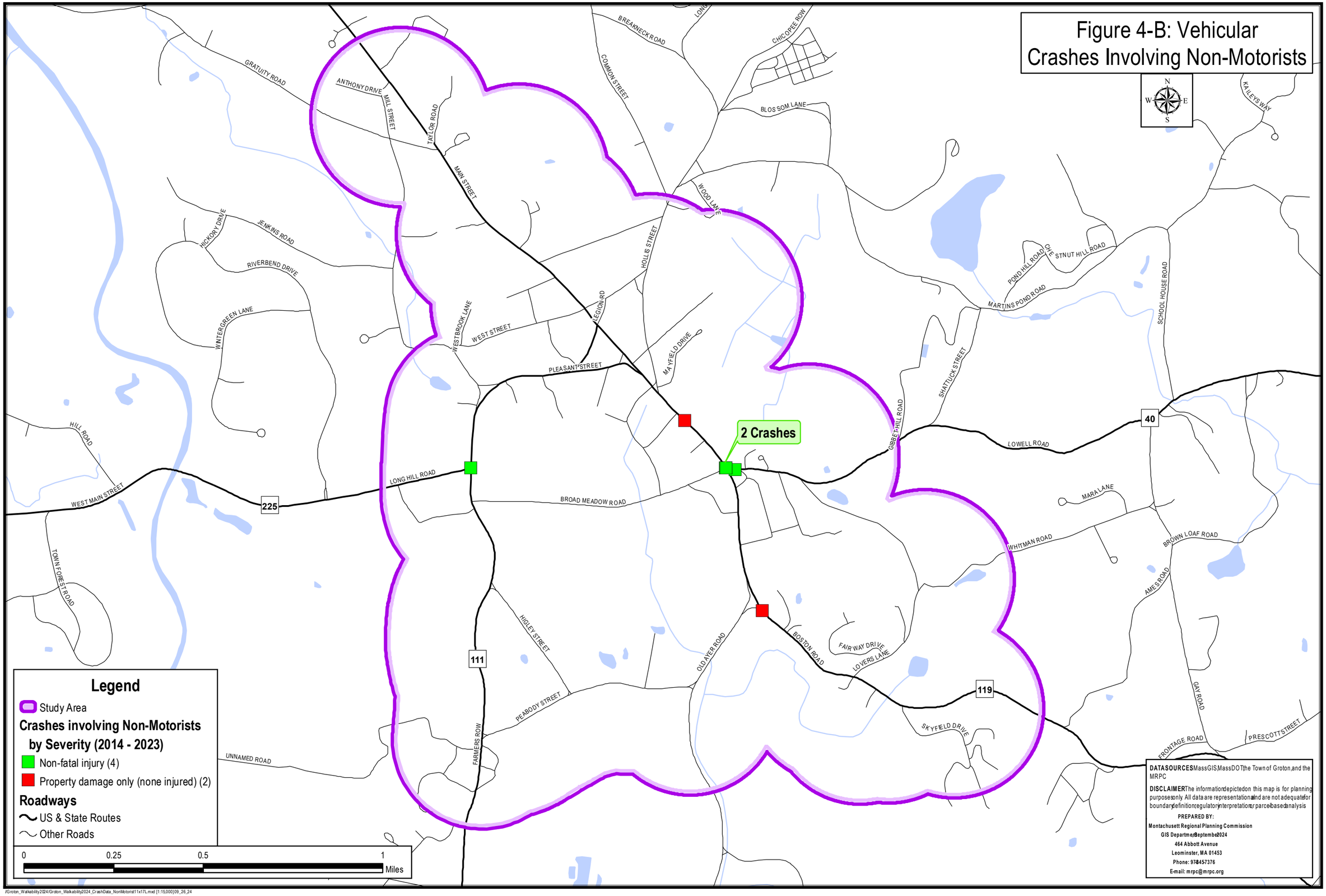
DATA SOURCES MassGIS, MassDOT, the Town of Groton, and the MRPC

DISCLAIMER The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis

PREPARED BY:
Montachusett Regional Planning Commission
GIS Department, September 2024
464 Abbott Avenue
Leominster, MA 01453
Phone: 978 457376
E-mail: mrpc@mrpc.org

I:\Groton_Walkability2024\Groton_Walkability2024_CrashData_11x17L.mxd [1:15,000] 09_26_24

Figure 4-B: Vehicular Crashes Involving Non-Motorists



Legend

- Study Area

Crashes involving Non-Motorists by Severity (2014 - 2023)

- Non-fatal injury (4)
- Property damage only (none injured) (2)

Roadways

- US & State Routes
- Other Roads

0 0.25 0.5 1 Miles

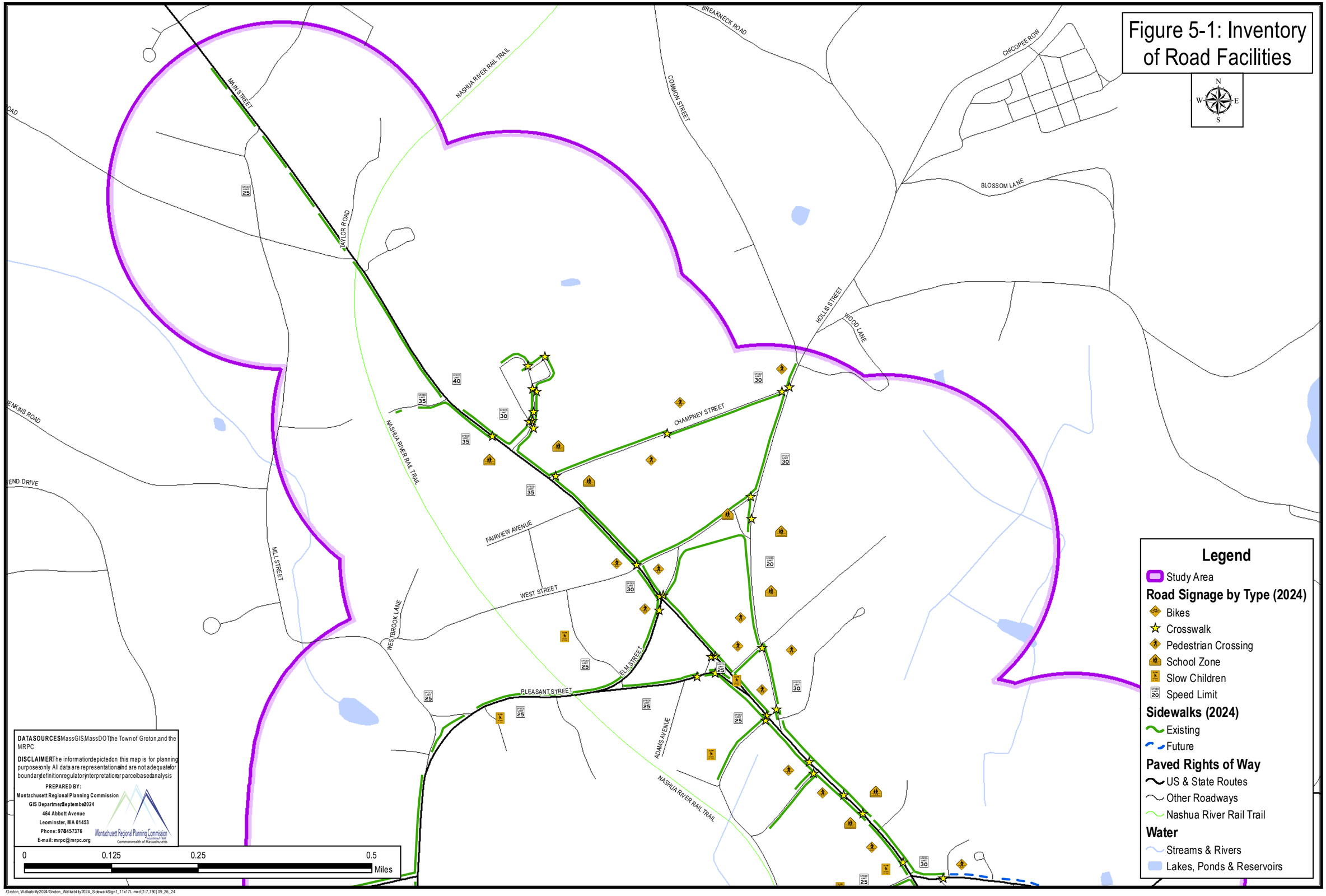
DATA SOURCES MassGIS, MassDOT, the Town of Groton, and the MRPC

DISCLAIMER The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel based analysis

PREPARED BY:
Montachusett Regional Planning Commission
GIS Department, September 2024
464 Abbott Avenue
Leominster, MA 01453
Phone: 978 457376
E-mail: mrpc@mrpc.org

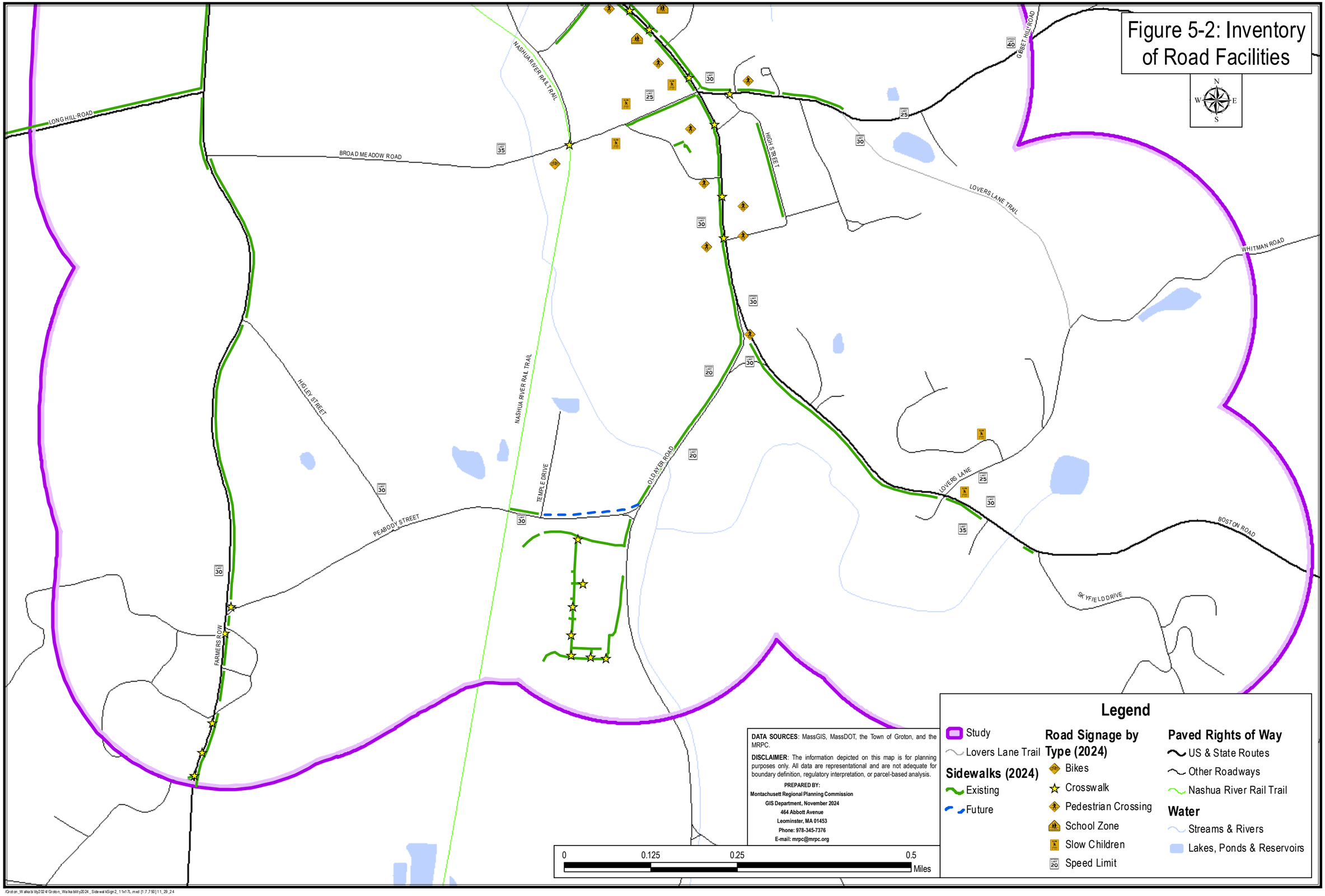
I:\Groton_Walkability2024\Groton_Walkability2024_CrashData_NonMotorist11x17L.mxd [1:15,000] 09_26_24

Figure 5-1: Inventory of Road Facilities



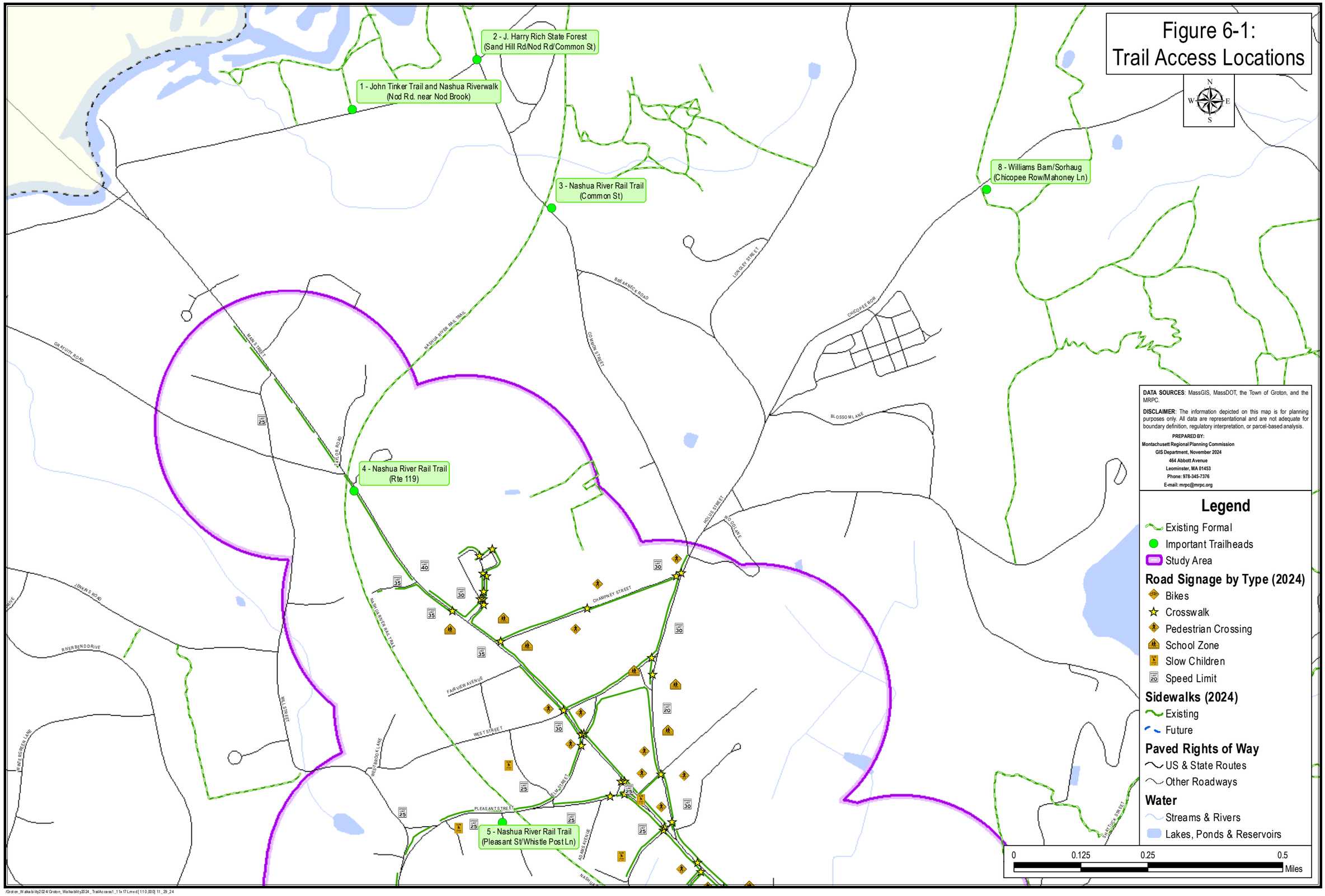
J:\Groton_Walkability2024\Groton_Walkability2024_SidewalkSign1_11x17L.mxd [1:7,750] 09_26_24

Figure 5-2: Inventory of Road Facilities



/Groton_Walkability2024/Groton_Walkability2024_SidewalkSign2_11x17L.mxd [1:7,750] 11_29_24

Figure 6-1: Trail Access Locations



DATA SOURCES: MassGIS, MassDOT, the Town of Groton, and the MRPC.

DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.

PREPARED BY:
Montachusett Regional Planning Commission
GIS Department, November 2024
464 Abbott Avenue
Leominster, MA 01453
Phone: 978-345-7376
E-mail: mrpc@mrpc.org

Legend

- Existing Formal
- Important Trailheads
- Study Area

Road Signage by Type (2024)

- Bikes
- Crosswalk
- Pedestrian Crossing
- School Zone
- Slow Children
- Speed Limit

Sidewalks (2024)

- Existing
- Future

Paved Rights of Way

- US & State Routes
- Other Roadways

Water

- Streams & Rivers
- Lakes, Ponds & Reservoirs

0 0.125 0.25 0.5 Miles

/Groton_Walkability2024/Groton_Walkability2024_TrailAccess1_11x17Limx[1:10,000]_11_29_24

Figure 6-2: Trail Access Locations

N
W E
S

5 - Nashua River Rail Trail (Pleasant St/Whistle Post Ln)

6 - Nashua River Rail Trail (Broadmeadow Rd)

7 - Nashua River Rail Trail (Temple Dr cul-de-sac)

9 - Gibbet Hill (Gibbet Hill Grill)

10 - Bates-Blackman (Old Ayer Rd/Peabody St)

11 - Hurd (Rte 119/Skyfields Dr)

12 - Phebe Keyes Woods (Peabody St/near Higley St)

13 - Groton Place/Sabine Woods (Long Hill Road near Nashua River)

14 - Lawrence Woods/Taisey CR (Long Hill Road near Nashua River)

15 - Lawrence Woods/Taisey CR (Long Hill Road/Riverbend Dr)

PLEASANT STREET
ELM STREET
WEST MAIN
ADAMS AVENUE
NASHUA RIVER RAIL TRAIL
LONG HILL ROAD
BROADMEADOW ROAD
HIGH STREET
GIBBET HILL ROAD
LOWELL ROAD
MATTUCK STREET
WHITMAN ROAD
HIGLEY STREET
PEABODY STREET
FARMERS ROW
OLD DAYER ROAD
DAYER DRIVE
LOVERS LANE
BOSTON ROAD
SKYFIELD DRIVE

Legend

- Existing Formal
- Important Trailheads
- Study Area

Road Signage by Type (2024)

- Bikes
- Crosswalk
- Pedestrian Crossing
- School Zone
- Slow Children
- Speed Limit

Sidewalks (2024)

- Existing
- Future

Paved Rights of Way

- US & State Routes
- Other Roadways

Water

- Streams & Rivers
- Lakes, Ponds & Reservoirs

DATA SOURCES: MassGIS, MassDOT, the Town of Groton, and the MRPC.

DISCLAIMER: The information depicted on this map is for planning purposes only. All data are representational and are not adequate for boundary definition, regulatory interpretation, or parcel-based analysis.

PREPARED BY:
Montachusett Regional Planning Commission
GIS Department, November 2024
464 Abbott Avenue
Leominster, MA 01453
Phone: 978-345-7376
E-mail: mrpc@mrpc.org

0 0.125 0.25 0.5 Miles

/Groton_Walkability2024/Groton_Walkability2024_TrailAccess2_11x17.mxd [1:10,000] 11_29_24

APPENDIX A – Walking Audit Flyer and Handout

WALK GROTON!

When: June 15, 8:00 AM *(rain or shine)* **Where: GROTON TOWN HALL**

By walking the streets of Groton's Town Center, we can identify positive and negative aspects affecting pedestrian travel and prioritize specific solutions that will increase safety and accessibility for pedestrians. Potential solutions could include addressing missing sidewalk links, intersections, crosswalks, signage and traffic calming. Come let us know how Groton can be more pedestrian friendly! Coffee & light breakfast will be provided.

Agenda

8:00 - 8:15 – Introduction & project overview

8:15 - 9:45 – Walking audit

10:00 - 10:30 – Review findings, come up with possible solutions & wrap up

---

All Groton residents, business owners, public officials, young & old! All are welcome!

Montachusett Regional Planning Commission

Questions? Contact Sheri Bean – sbean@mrpc.org
Montachusett Regional Planning Commission

APPENDIX B – Walking Audit Comments

6/15 Meeting Notes

Sidewalks

- Overall, the sidewalks are in good condition
- Grassy protective strip is a positive
- Almost all crossings had ramps to crosswalks
- Some areas had bushes/brush extending into the sidewalk area
- Missing link of sidewalk near Congregational Church on Hollis Street near the Legion Hall
- Acute turn at the corner of Hollis Street & School Street – difficult for strollers and wheelchairs

Roadways

- Pavement is in good shape
- Striping of crosswalks and street lines are good
- Crosswalk signage is good, and the flashing lights are great (except the one near the Lawrence Academy that goes off they go off just by walking by. This seems to confuse and frustrate drivers which can lead to driver desensitization)
- Speeding is a big problem along Main Street. The need for a road diet was mentioned
- Route 40 at Main Street intersection is dangerous
- Main Street is very wide and open

Crosswalks

- Wide distance to cross across Main Street
- Crosswalk needed along Main Street near Hollis Street to the Pizza shop
- Crosswalk along Main Street at Broadmeadow is dangerous with traffic not paying attention to pedestrians and speeding through the intersection
- Large curb cut at the Dunkin' Donuts Plaza. There is also a parking area behind the building that is not visible or accessible.
- Crosswalk and curb cut not aligned by church on Hollis Street.

Trails

- There are multiple access points for the Nashua River Rail Trail throughout the town center.
- A potential pathway behind the Prescott building was mentioned

Parks/Public Gathering, Benches, Shade Trees

- Prescott Community Center Park w/ benches is great
- Nice Park w/ benches in between Pleasant Street & Main Street
- Benches needed near the Legion
- Benches would be nice at the intersection of Farmers Row/Pleasant Street/Mill Street
- Connections to the Country Club to avoid major roads
- Lots of shade trees along the streets throughout the center
- More trees needed near Filho's
- Lack of garbage receptacles throughout for dog waste, food waste, etc.

Parking

- Signage needed to indicate parking areas (especially where parking is available behind buildings)
- Signage for municipal lots

- On street parking is confusing (no designated spots or signage)
- Is there handicap parking?
- Parking is often too close to crosswalks – poor visibility for pedestrians

Attractions

- Many attractions in the town center – municipal buildings, community centers, restaurants, schools, trails, churches, etc.

APPENDIX C – FHWA Classification Scheme